

## **RST**®

Pluggable electrical installation with highest IP rating (IP6X)

Catalog 2018







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# The idea of pluggable installation

## As easy as brilliant

# 20 min.

#### Work steps:

#### Power distribution:

- Cut the cable to length
- Strip the cable sheath
- Insert the cable into the junction box
- Strip the wire insulation
- Connect the individual wires
- Close the junction box

#### **Luminaire installation:**

- Open the luminaire
- Cut the cable to length
- Insert the wire into the luminaire
- Strip the wire insulation
- Connect the individual wires
- Close the luminaire



# The *gesis*®-installation philosophy:

#### The idea is as easy as it is brilliant.

An extensive network of components of electrical connection technology, preassembled and most carefully tested, enables a consistently pluggable solution from the distribution board to each point of demand.

This saves time and reduces costs!

A great number of renowned manufacturers have recognized this positive trend and, as system partners, already offer their components with pluggable **gesis**® connectors.

The system's fields of application are as versatile as the system itself. In short: wherever electrical power or signals need to be distributed, *gesis*\* has set a standard.



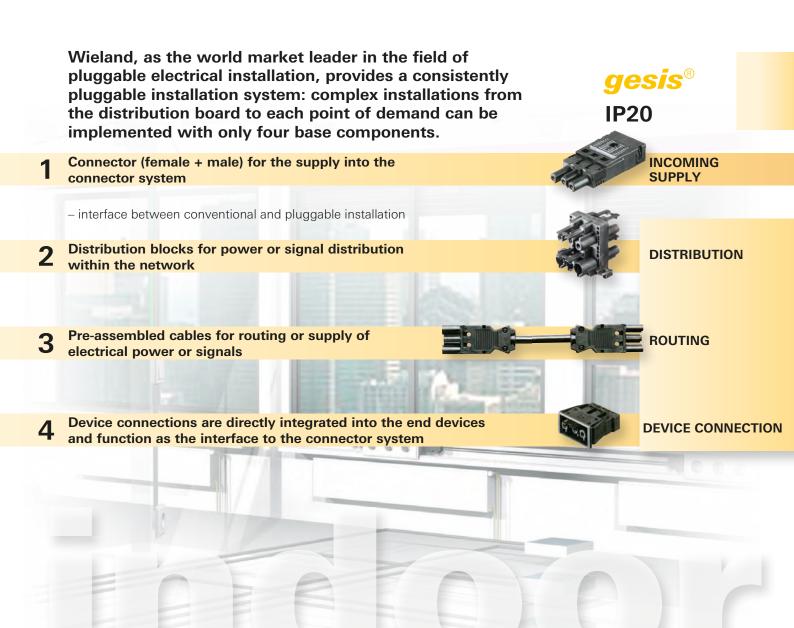






# Electrical installation with a system

# A concept for all situations



Transfer of the successful gesis® installation philosophy ...





Unique to the market thus far, Wieland transferred its successful *gesis*<sup>®</sup> installation philosophy to new outdoor applications and with it set new standards.

#### Degree of protection achieved:

IP65	Jet water					
IP66	Powerful jet water					
IP67	Temporary immersion					
IP68	Lasting immersion					
	(3m; 2h)					
IP69	High-pressure water jets					



#### ... in areas with increased protection requirements



In many applications, electrical devices and systems must work safely under difficult environmental conditions for many years. For a reliable function, the ingress of water or foreign particles (such as dust, oil, and soot) into production systems, parking garages or outer premises must be avoided. Within the scope of the specified degree of protection the *RST*® system even withstands unplanned immersion.

The system is not designed for permanent operation under water.

# Overview of the fields of application

Power everywhere - safe and quick!

POWER CONNECTION FOR ELECTRICAL DEVICES

CONSTRUCTION POWER SYSTEMS



**OUTDOOR LIGHTING** 

SYSTEM ENGINEERING









**EVENT TECHNOLOGY** 





OBJECT AND SHIP BUILDING



## Complete system for industrial use

# Connecting quickly and safely

# SYSTEM ENGINEERING

# The pluggable electrical installation also for industrial use

#### ■ The challenge:

Whether individual applications or complex systems – the tasks are the same: electrical consumer devices must be connected quickly and safely.

Conventional installations do not meet these requirements. Cutting the cables to length, stripping the cable sheath and wire insulation, and finally connecting the components, are not only time-consuming operations, but frequently also cause errors and result in reworking. Cooperation of different trades (mechanical and electrical installation) during the setup of a system impedes the continuous progress of operations. This does not just apply to initial installations.

For expansions, regular servicing or replacement of defective devices, the same installation steps recur over and over again.

#### Possible applications:

- Motor connection (3~)
- Power distribution 250/400 V ~
- Power supply up to 50 V, bus
- Voltage supply 24 V. AS-i
- Workstation illumination
- Painting checks



#### ■ The solution:

As a complete installation system, **RST**® provides definite time savings during installation. The components are preassembled in the factory and simply plugged together in the field.

Troublesome cutting to length, stripping of sheath and insulation, and connecting is now a matter of the past.

Operational downtimes are thus clearly reduced. In the case of defective devices or regular servicing, the consumer devices can be disconnected from the network quickly. As an additional advantage the installer does not have to open the device for completion of the electrical connection, which means that incorrect assembly especially of water-protected devices can be excluded.



Pre-assembly in a separate location:
The *RST*® installation system enables completely new possibilities. Entire system sections can be pre-assembled and tested independent of the location of operation.
The individual modules are simply plugged together on site.



#### **Cost reductions:**

Connections in system sections are frequently over-dimensioned. This was not least due to a lack of alternatives. But this is where a major savings potential is provided.

The **RST**® system counts on completely pre-assembled components which only have to be plugged in on site.

#### Making electrical devices pluggable

Device connectors function as an interface between the electrical consumer devices and the RST® installation system. The consumer device becomes pluggable through the integrated device connector and can therefore be incorporated into the installation system as required.

The device connectors have been equipped with standard threads (M16 and M25) and can therefore be replaced easily by conventional feed-through facilities.



**RST16i2** AS-i or 24 V

RST16i3 Power with (=)

RST16i4 Power with (=)

AS-i and 24V

RST16i5 Power with

Compact and multi-distribution units

**RST**® CLASSIC: (examples of application)

RST20i2 AS-i or 24V

RST20i3 Power with

RST20i4 Power with (4)

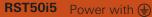
AS-i and 24V

RST20i5 Power with

**Compact and multi-distribution units** 

**RST®** POWER: (examples of application)

RST50i4 Power with (4), without N







# Rapid mounting system

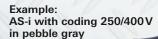
## Flexible and modular AS Interface



# Separate routing of AS-i and extra-low voltage

AS-i and extra-low voltage up to ~50/-120 V

It is possible to select an individual mechanical coding for each circuit. Mechanically coded means that only the matching male and female connector pairs can be plugged together. This ensures a clear separation of the two circuits.



Example:
Extra-low voltages with coding ~50/-120V in signal brown

# Four basic components for a consistent installation:

- Connectors can be pre-assembled on site and are available either for connection of a round cable or of the AS-i profile cable.
- Distribution blocks enable distribution of electrical power and signals throughout the network.
- Pre-assembled cables are available in various lengths and designs and are used for the routing and supply of auxiliary power / signals.
- Device connections are directly integrated into the end devices and function as the interface to the connector system.

#### **Technical data:**

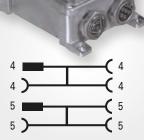
- Voltage supply 50/120 V, 20 A
- IP66 / 68 (3m; 2h) / 69
- Temperatures between -40 and +100° C
- Screw connection 0.5 4.0 mm<sup>2</sup>







4 4 4



## **RST**®CLASSIC

# $\langle \epsilon_x \rangle$

# Pluggable electrical installation with ATEX, IEC Ex certification

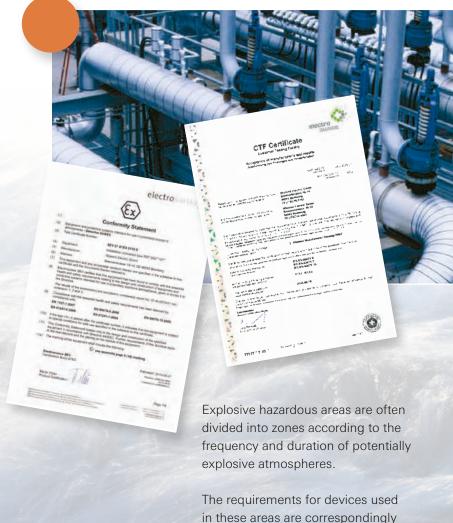
# SYSTEM ENGINEERING

# Used in different industries

Definition of explosive hazardous areas

When talking about explosive hazardous areas, everybody thinks of the chemical industry or mining. However, explosion protection is an important topic for many sectors of the processing industry. In some cases, even carpenter's workshops and industrial bakeries may be affected. Special explosion protection measures are necessary wherever a dangerously high concentration of gas/air or dust/air mixtures occurs.

Areas where a potentially explosive atmosphere is possible must be clearly identified as explosive hazardous areas.



#### Please note the current rating reduction

- when using H07RN-F cables:

2- and 3-pole  $1.5 \, \text{mm}^2 - \text{max}$ .  $14.5 \, \text{A}$   $2.5 \, \text{mm}^2 - \text{max}$ .  $17.5 \, \text{A}$  4- and 5-pole  $1.5 \, \text{mm}^2 - \text{max}$ .  $12.5 \, \text{A}$   $2.5 \, \text{mm}^2 - \text{max}$ .  $17.0 \, \text{A}$ 

- when using the splitter connection:

2-, 3-, 4- and 5-pole  $1.5\,\mathrm{mm^2}$  – max. 16 A and when using the distribution blocks 2- and 3-pole with a cable cross section of  $2.5\,\mathrm{mm^2}$  to max. 17.5 A

#### Coding:

Electrical connectors and equipment connections:

CE1258 🔂 II 3G Ex ec IIC T6 Gc

CE1258 ⟨ II 3D Ex tc IIIC T85 ° C Dc

IECEx SEV 15.0024 X

high.

SEV 07ATEX0110X

With cable assembly H05VV-F:

CE1258 🔂 II 3G Ex ec IIC T6 Gc

CE1258 ( II 3D Ex to IIIC T70 °C Dc

IECEx SEV 15.0024 X

SEV 07ATEX0110X

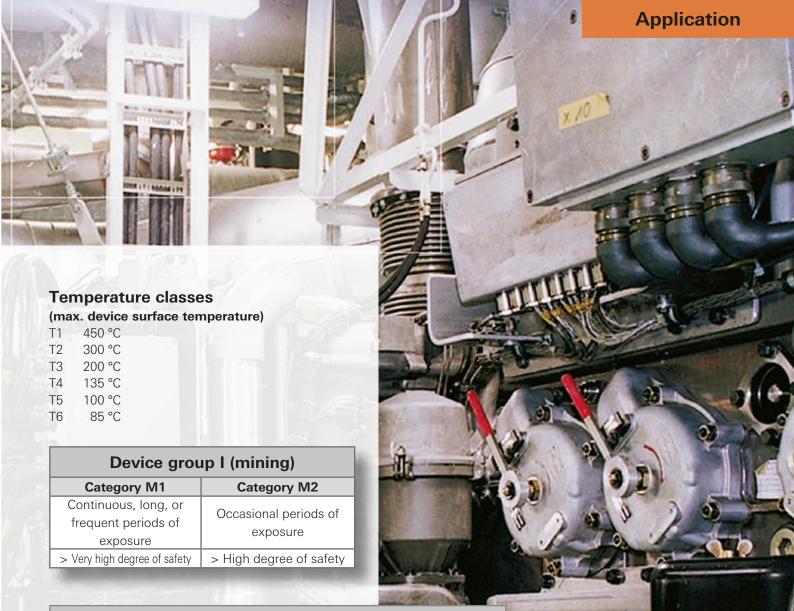
With cable assembly H07RN-F:

CE1258 ( II 3G Ex ec IIC T6 Gc

CE1258 ( II 3D Ex tc IIIC T60 °C Dc

IECEx SEV 15.0024 X

SEV 07ATEX0110X



Device group II (other areas)								
Categ	jory 1	Category 2		Category 3				
Continuo	us, long or	Occasional periods of		Infrequent, short periods				
frequent p	periods of							
expc	sure	exposure		or exposure				
> Very high de	egree of safety	ety > High degree of safety		> Normal degree of safety				
Zone 0	Zone 20	Zone 1	Zone 21	Zone 2	Zone 22			
Material	Material	Material	Material	Material	Material			
group G	group D	group G	group D	group G	group D			

#### Example:

Part number

**9**6.031.4053.1

**X**6.031.4053.1

To obtain the part numbers for the components with ATEX certificate, the first digit of the regular part number "9" must be replaced with an "X".

The minimum order quantity is 100 units per part.

ATEX sample kits 3-pole: 99.663.0000.0 5-pole: 99.664.0000.0



# podis® flat cable power bus

# Remote power distribution without stripping

# SYSTEM ENGINEERING

#### Power bus

The *podis*® power bus is the innovative solution for remote power distribution.

The system comprises supply and distribution modules, maintenance switches, fixed and pluggable power branches, pre-assembled cable harnesses and functional motors, motor starter, LED-luminaires or service sockets.

The power (main and auxiliary power or AS-i) is distributed through an uncut 7 pole flat cable. The flat cable is tapped near the consumer device in any position required using connection modules with IDC technology. Branching and tapping to motor starters and frequency converters are implemented in a fixed or pluggable design.

# Advantages of **podis**® – at a glance:

- 5x faster installation
- Fast start-up through error-free connectivity
- Modular system for various functions
  - Smallest remote motor starter in IP65 up to 1.5 kW
  - Robust LED lamps for extreme temperature range

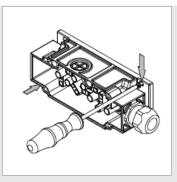


podis® power bus solutions shorten installation times, reduce production costs and increase flexibility during system expansions or later modifications to the planning.

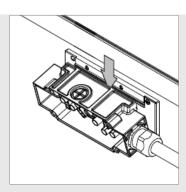
#### **Features**

- Termination without stripping of the sheath
- Easy implementation of customer-specific solutions
  - Field distributors for SEW MOV/MOT control
  - Remote motor starters for airports and logistics applications
  - LED emergency lamps for wind power plants
- UL approval for international applications

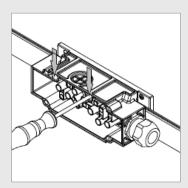




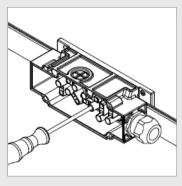
Wall mounting Open the housing



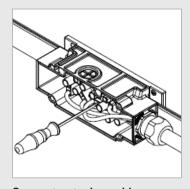
Insert coded flat cable



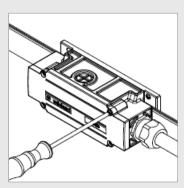
Close the top piece Cable is sealed



Screw in penetrating screws



Connect outgoing cable



Close housing cover - finished!



Further information can be found in the catalog "**podis**" order no. 0830.1



# The safe path into the grid The AC Solar connector system

SOLAR TECHNOLOGY

#### ■ The challenge:

The extraordinary benefits of a pluggable electrical installation have been restricted to the DC side of photovoltaic systems thus far. The connection on the grid side still had to be made in the time-consuming conventional way.

When several inverters are used within an array, the high installation effort becomes apparent.

#### ■ The solution:

With its new AC Solar round connector system, Wieland provides an optimum solution for the AC area. Pre-assembled components with an increased degree of protection ensure a quick and safe installation even under the most adverse conditions.

The system includes distribution panels which are delivered in a pre-assembled design, and cable assemblies for the connection between the inverters and the distribution panels.

The system is supplemented by connectors for assembly on site.

Leading inverter manufacturers preassemble their devices with the relevant connectors, the interface to the system, in their factories.





#### Other fields of application

- Emergency power supply through batteries (in buildings or systems)
- Transformation of on-board voltage (cars, trucks, railroad, caravans, boats)
- Metal working
- Power generation (fuel cell, wind power plants, photovoltaic systems)



More and more manufacturers recognize this positive trend and offer their devices with **RST**° connectors.

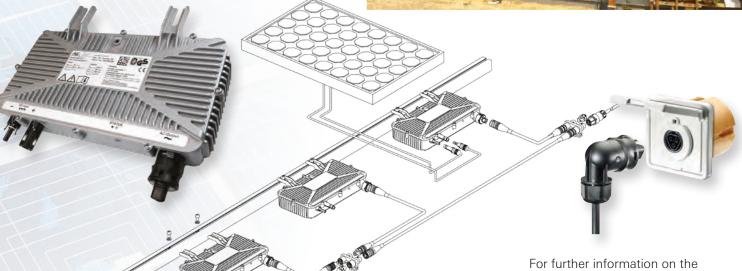


#### ■ Solar systems for the home grid

Mobile solar systems for private use are extremely popular. These systems consisting of solar modules and module inverters do not – as usual – feed the solar power into the power supply system as per the Renewable Energies Law (EEG), but provide the energy directly to the users in the own home grid.

The **RST**® installation system is set up in next to no time while fulfilling highest safety requirements. The new **RST**® system outlet serves as a defined interface between the home grid and the solar system.





**RST**® MINI:

**RST16i3** Single-phase supply **RST16i5** Three-phase supply

**RST®** CLASSIC:

RST25i3 Single-phase supply

(up to 32A)

RST25i5 Three-phase supply

**RST**® system outlet

**RST®** POWER:

RST50i4 Three-phase supply

(without N)

**RST50i5** Three-phase supply

The **RST**® MINI series is particularly suitable for confined installation spaces and therefore ideal for MICRO inverters.

RST20i5.

**RST**® system outlet, see Accessories for **RST20i3** or

The  $\textit{RST}^{\circ}$  CLASSIC series has the vastest portfolio and is designed for cross sections of up to 6.0 mm<sup>2</sup>.

The **RST®** POWER series combines the best possible connection capabilities with the highest possible degree of compactness. The 4- and 5-pole IP 66/67/69 connectors and device connections are designed for 250/400 V and a maximum current of 50 A. The wire range includes cross sections up to 16 mm².

### The flexible electrical installation

## Construction site supply during structural works

# CONSTRUCTION POWER SYSTEMS

#### ■ The challenge:

Time pressure in the project business is greater than ever: it is therefore even more important that all processes function and are attuned to one another without a problem.

The construction power systems make a major contribution, as they ensure the supply of electrical power during structural work. The requirements for such construction site supply systems are extremely high. On the one hand, they must withstand extreme conditions, and on the other hand, provide as much flexibility as possible.

#### ■ The solution:

Only three base modules are required to implement even complex installations in no time and according to the requirements. The pre-assembled cables are at the core. They are ready for use in all required lengths and can be installed as required. Distribution components furthermore enable the distribution of power to the relevant location.

And finally, there are the luminaires. They have been equipped with device connectors and can be integrated into the installation by simply plugging them in.













#### The benefits at a glance:

#### ■ Low investment requirements

All connection cables have been preassembled and tested. With the available range of device connectors almost any standard luminaires can be made pluggable. Therefore, the luminaire manufacturers can easily integrate them into their products.

#### ■ Low stock requirements

In contrast to the luminaires with a fixed connection cable, these luminaires can easily be stockpiled due to their pluggability. Transport becomes easier as well. The cables are stored separately. There are only a few different cable types, as the same lengths can be cascaded.

#### **■** Easy handling

The luminaires can be assembled easily on the construction site, as the electrical connection is made after the luminaires have been installed. Due to the compact dimensions of the pluggable components, the cables can be laid out much more flexibly, as small bore holes or knock-outs are no obstacle.

#### ■ High operational safety

The power supply system at the construction site cannot be used by third parties (unrelated trades), as the construction machines are normally not equipped with **RST**® connectors. Its high degree of protection prevents any failure, even with short-term flooding of the connections.





**RST®** CLASSIC:

**RST20i3** Power 3-pole **RST20i5** Power 5-pole

**RST®** POWER:

**RST50i5** Power 5-pole

# Pluggable solutions for event technology Outdoor installations – no longer an adventure

# **EVENT TECHNOLOGY**

#### ■ The challenge:

Decorative illuminations during Christmas time or for other major events are extremely popular today. The possibilities for creating pleasant atmospheres or spotlighting objects are almost unlimited. But what happens behind the scenes? Standard outlets, carefully packed in PET bottles, or simply wrapped in a plastic bag – this is often common practice (not just in secrecy).

Apart from the fact that improvised solutions like that are questionable in view of safety technology, they are not aesthetically appealing at all. The fact is that there hasn't been an alternative up to now.

#### ■ The solution:

The solution is a system which is suitable for outdoor use without additional protection measures: **RST**®.

Consistently pluggable, and with high protection degree **RST**® enables the outdoor connection of, for example, luminaires quickly and safely. Special attention was put on the design in order to make it match inconspicuously with the existing installation.



**RST**® MINI:

RST16i3/2 2- and 3-pole RST16i5/4 4- and 5-pole

**RST**® CLASSIC: (Sample applications)
RST20i2 Protection class II

RST20i3 Power with 🖶







#### Connectors for illumination cables:

Customary illumination cables can be integrated into the installation through special 2-pole connectors with the corresponding rectangular strain relief. This applies to applications in the professional as well as in the private sector.

The connectors are protected against accidental loosening; they can be unlatched with a tool only. This is a considerable plus in safety for places that are generally accessible. For protected areas (that are only accessible by experts), the connectors can be equipped with a manual disconnect facility for easy disassembly.

#### Post outlet:

The post outlet is simply integrated into existing posts and thus ensures the power supply. It even provides minimal dimensions and optimum weather protection. The post outlet consists of a splash-water-protected device connector which is mounted directly on the post, as well as a firmly connected cable in various lengths for internal wiring.

The cable is strain-relieved and the contacts are protected against condensation.

The protective cover is removed and the decorative component is plugged in with the corresponding flexible light tube – plug & play!













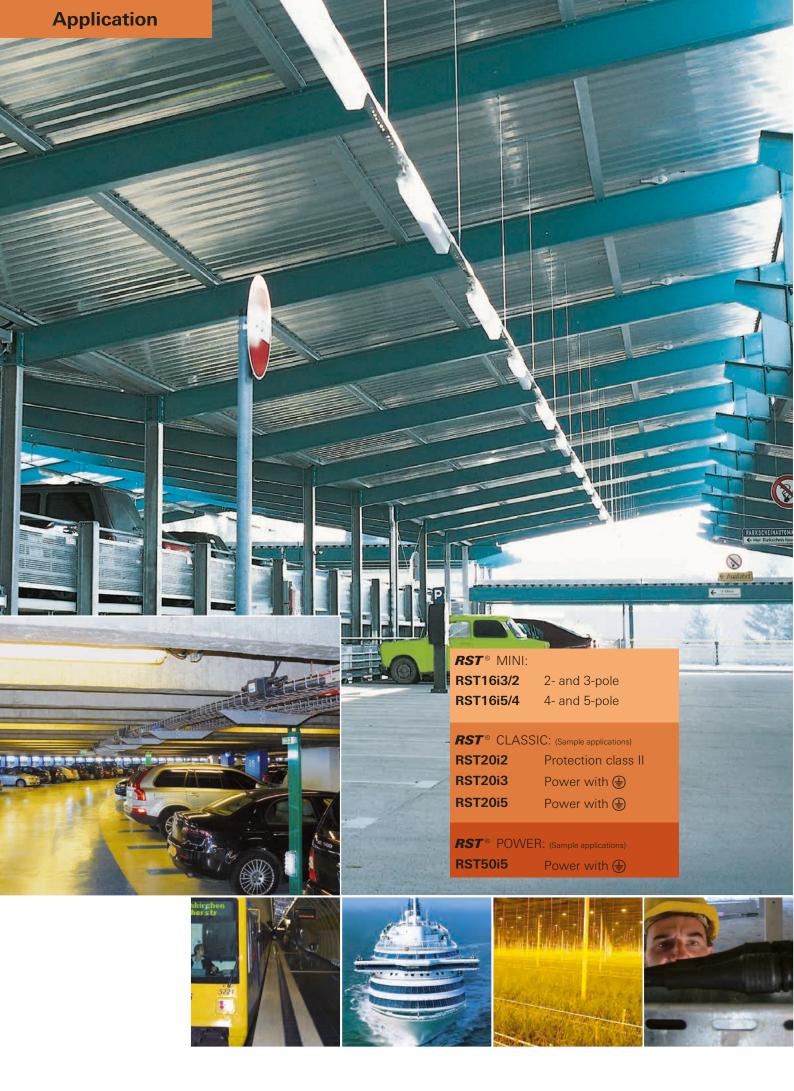




Event technology (project lighting, festivals, leisure parks, fairground rides, exhibitions, concerts, light advertisements)

Post outlet 2-pole (L, N) and 3-pole (L, N, ⊕)





# For requirements with increased protection degree *RST*<sup>®</sup> installation systems provide safety



# **OBJECT AND SHIP BUILDING**

#### The benefits at a glance:

#### ■ Installation up to date:

The **RST**® installation system and its sophisticated concept mirror the state of the art in modern technology.

# ■ Reduced construction times (initial installation): An installation with *RST*® reduces the costs not only for initial installations. Even short-term reorganization

can be carried out without a problem. This is enhanced by the guarantee of continuous installation quality.

#### ■ Continuous operational cost savings:

Maintenance costs and repair during operation are possible even under more difficult work conditions (architecture).

#### ■ Safe power distribution:

The new compact and multi-distribution units are the heart of pluggable electrical installation and can also be customized.

#### ■ The challenge:

Whether in underground garages, greenhouses or in shipbuilding: electrical installations with increased requirements regarding the degree of protection can be found everywhere. Especially in these fields, it is extremely important that the electrical installation is carried out by an expert. But how does it work in practice? Difficult installation conditions and extreme time pressure often lead to errors, loss of protection and finally to the failure of the system.

#### ■ The solution:

The idea is as easy as it is brilliant. An extensive network of components pre-assembled in the plant and most carefully tested enables a consistently pluggable solution from the distributor to the point of use. This saves time and reduces the costs!







# plug & play in outdoor applications

Electrical installations using the "modular system"



# **OUTDOOR LIGHTING**

#### ■ The challenge:

Expert workmanship plays a major role particularly for electrical installations outdoors. Difficult installation conditions and high time pressure often cause errors, loss of the protection degree and finally failure of the system.

Unfortunately customers often send their complaints about such cases to the luminaire manufacturer and are left with a bad impression.

#### ■ The solution:

As a complete installation system, **RST**<sup>®</sup> is optimally adapted to these increased requirements. It is very flexible in its application and has proven technology at its disposal. Luminaires can thus be delivered in a pre-assembled design. They only have to be plugged in on site. The connectors are also touch-safe when they have not yet been plugged in; they provide a locking device against accidental loosening.

The possibility of connecting almost all customary cable types (also underground cables), as well as the IP68 protection degree make the RST® connector a strong partner for outdoor lighting.

It is not possible to lay the components directly in the ground. In order to satisfy VDE 0100-520 the connections must be protected mechanically in addition and must be accessible for inspection, testing and maintenance.

#### Connectors:

For the various luminaire types, power connectors for 250V and therefore not be mismated.

low-voltage connectors for LED technology are available. These are mechanically coded and can This provides additional safety.

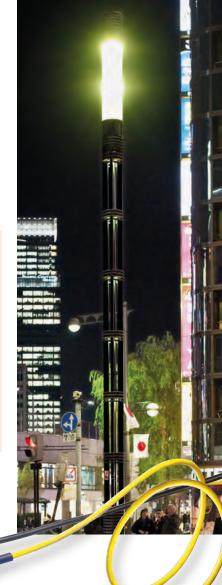
RST® MINI:

RST16i3/2 2- and 3-pole RST16i5/4 4- and 5-pole

RST® CLASSIC: (Sample applications)

RST20i2 Protection class II, low voltage

RST20i3 Power 3-pole RST20i5 Power 5-pole



# **Export-oriented solutions for all nations International operations with** *RST*<sup>®</sup> **connectors**

# POWER CONNECTION FOR ELECTRICAL DEVICES



#### ■ The challenge:

Particularly the export-oriented countries must offer their products in country-specific variations. The products frequently differ only by their power connectors. Stockage of country-specific product variations has, not least, an adverse impact on delivery times and warehouse costs.

#### ■ The solution:

Power connections are made pluggable: one end is pre-assembled with the appropriate national power connector, while the other end always has the same **RST**® connector.

Consequentially, the relevant end devices are equipped with **RST**® device connectors, independently of the country. Thus country-specific power connections are available to you. The connection set required for the target country is simply included in the delivery. This simplifies stockkeeping for particularly exportoriented products.



#### **■** *RST*<sup>®</sup> power connectors:

The cables are pre-assembled with the desired power connector\*) on the grid side. The **RST**® connector is molded to the device side. It is not only extremely compact, but is also protected against bending. The connection between the device and the pre-assembled cable is protected against accidental loosening through an integrated safe locking device. A manual disconnect facility is optionally available.



On request, we can also realize intermediate angles ranging between  $0^\circ$  and  $90^\circ$  in order to provide a solution for specific housing geometries.

# RST° CLASSIC: RST20i2 F RST20i3 F

RST® CLASSIC: (Sample applications)

RST20i2 Protection class II

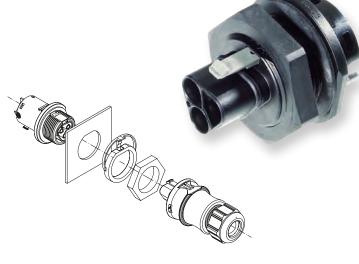
RST20i3 Power with ⊕

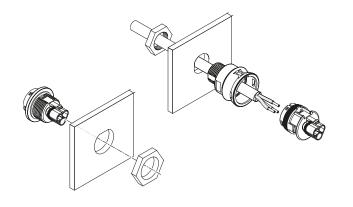
# **DEVICE CONNECTORS**

Device connectors are integrated into the relevant housing knock-outs and function as an outward interface.

There are basically two variations: the single-piece **M25 standard device connectors (one-piece)** are simply installed inside the housing.

The **modular device connectors** (two-piece) are available in M16, M20 and M25 variations as well as in 0°, 7° and 90° angles.





For a plug connector that is not enclosed, protection against electric shocks is provided by the housing of the equipment in which the connector is installed, in accordance with the applicable product safety standard.



# plug & play in outdoor applications

Solutions for most demanding requirements



# Pluggable 3 D distribution units More than just distribution!

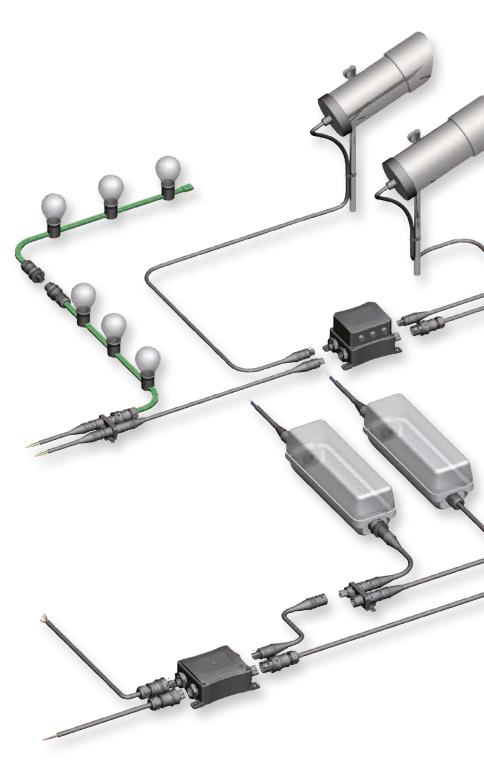
# The *RST*<sup>®</sup> compact distribution unit – more than just distribution!

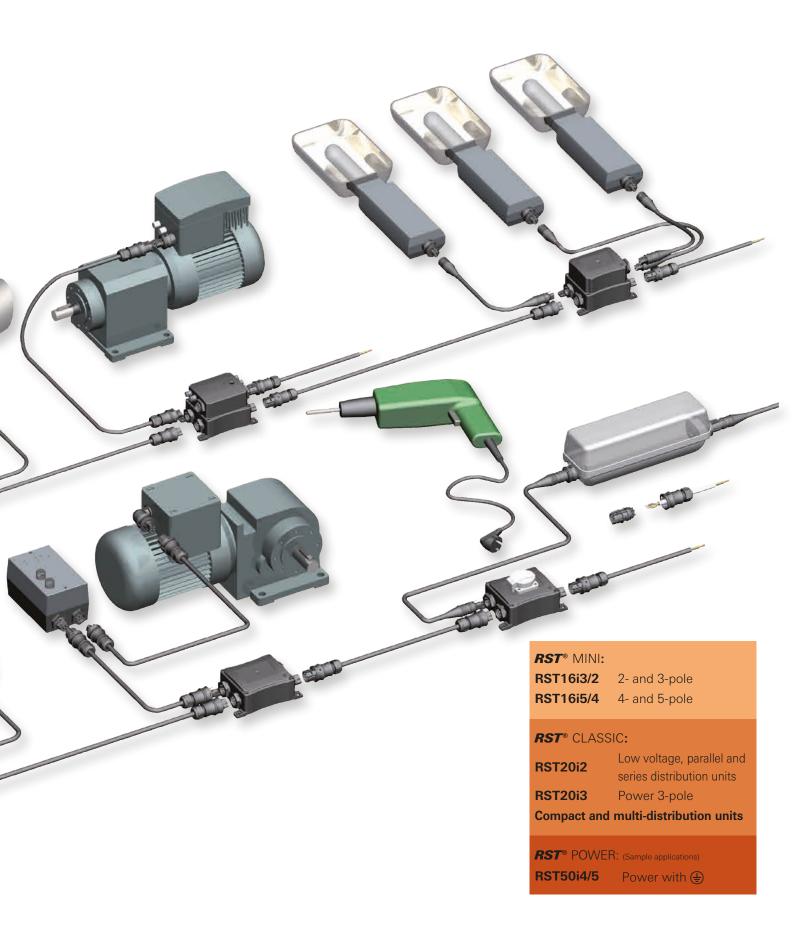
Installations differ from one another. This makes it even more important that the product range is oriented towards the application requirements. A clear separation of different circuits using mechanically coded connectors is as important as pre-assembled cables in various defined lengths.

However, the pluggable distribution units play a major role in power distribution. In their simplest function, they merely have to provide branches in the required locations.

Practice shows, however, that the requirements may be much more complex.

Examples can be found in AC and DC wiring through distribution units with fine fuses up to boxes with integrated safety outlets or switches.





#### 1 Connectors

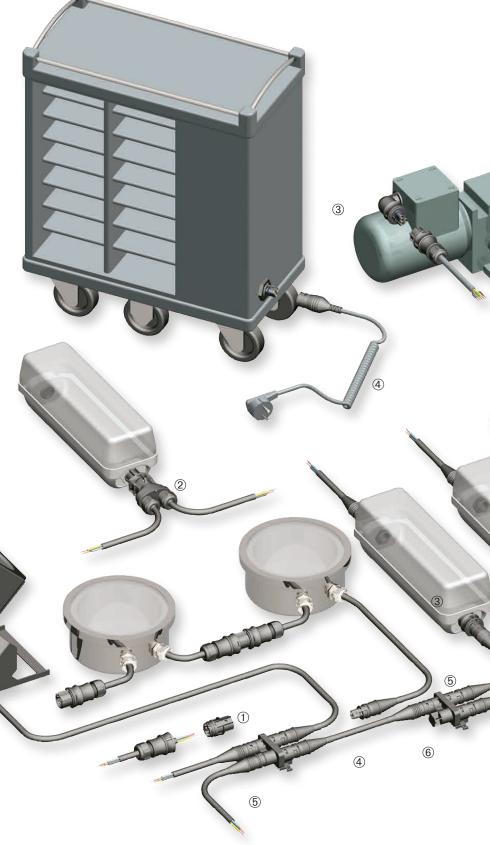
Connectors can be assembled on site. Among other functions they serve as an incoming supply for the *RST*® system. Connectors with male and female components are delivered complete with strain relief and enable the connection of all common cable types. A special version also enables the connection of illumination cables for decorative light chains. Depending on the requirements the connectors are available with spring clamp or screw technology.

#### 2 Connectors, Splitter connectors

Connectors can be pre-assembled on site and serve for the through-wiring of electrical consumer devices (luminaires). All connectors are delivered complete with strain relief and are compatible with all common cable types. Depending on the requirements the connectors are available with spring clamp or screw technology.

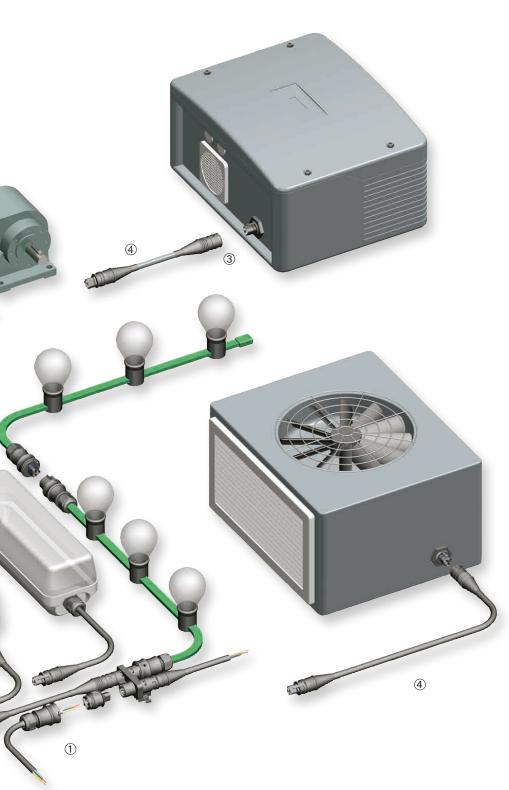
#### **3 Device connectors**

Device connections are integrated in corresponding knock-outs in the housing of devices. They are the device's interface to the *RST*® system. The devices can therefore be plugged in simply on site and integrated into the installation.



# **System description**

## Overview of the electrical installation RST®



Basically two variations are available: the M25 standard device connector as well as a modular version with M16 or M20 connection threads. An angled design completes the system.

#### 4 Cable assemblies

Electrical power is supplied by using cable assemblies. Three basic versions are distinguished: power connection cables provide the incoming supply of the **RST**° system. They have been prepared for a traditional connection or with a standard plug on the supply side and are preassembled with the required female connector on the outgoing side. Extension cables are pre-assembled with a female or male connector on the relevant cable ends, and serve as feed-through wiring. The connection cable is pre-assembled with a male connector and a free end for wiring to the consumer device.

#### **5** Distribution blocks

The pre-assembled plug-in distribution blocks are incorporated in the installation and thus enable a tap-off to the consumer devices. The distribution block is available with or without mounting flanges.

#### 6 End caps

They are used to safely cover unused contacts. The IP protection is therefore maintained when the device is unplugged.

# Overview of the RST® product family

## Pluggable in many dimensions

Since being launched, the **RST**® installation system has consistently met market demands and now presents itself as a complete electrical installation system. Four series are available to meet different requirements:



**RST®** MICRO

The miniature connector for LED lamps, signals and networks

2- to 3-pole design, 250V/400V, 8A



The small connectors for extremely confined spaces

2- to 5-pole design, 250V/400V, 16A



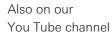
All-rounders with the most comprehensive portfolio

2- to 7-pole design, 250/400V, 20 – 32A



High-current connectors for large cross-sections

4- to 5-pole design, 250/400V, 50A









**RST**® MICRO

*RST*® MINI





**RST® CLASSIC** 

*RST*® POWER

All installation connectors have one thing in common:
They are innately fitter-friendly and adhere strictly to the system philosophy. Complex installations can be built flexibly, and consumers can simply be plugged into the installation.
Mechanical codings within the product lines ensure a clear distinction between different circuits. This practically rules out incorrect connections.







# **RST®** MICRO

# The miniature connector for LED lamps and signals

The **RST**® MICRO is optimized for the interfaces between voltage or current sources and LED modules, and is also the ideal solution for dimming or DMX applications. Thanks to its rated values, network applications are no problem either. The **RST**® MICRO installation system comprises connectors, M14 device connectors, pre-assembled conductors and splitters.

Rated voltage: 250/400 V Rated current: 8 A

**Dimensions:** Diameter: 14.9 mm; Length: approx. 40 mm

Number of poles: 2 and 3

**Connection cross section:** Single-stranded 0.2 mm<sup>2</sup> - 1.0 mm<sup>2</sup>

fine-stranded 0.22 mm<sup>2</sup> - 0.75 mm<sup>2</sup>

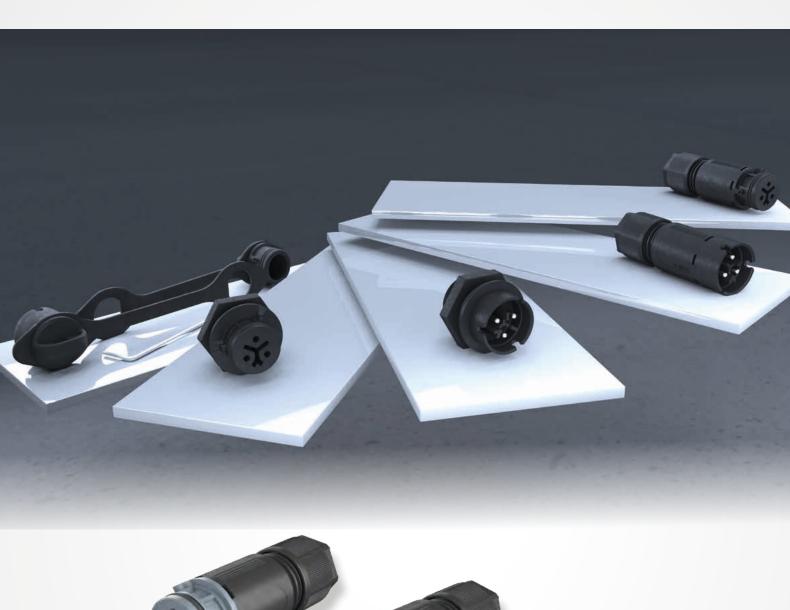
**Protection rating:** IP66/68 (3m; 2h)/69, barrier seal optional

**Coding:** Mechanical and color for low voltages and networks

**Approvals pending:** VDE, cULus, LR, GL/DNV, BV, RINA



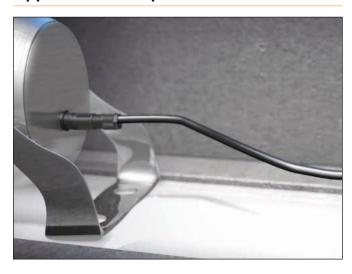
Experience shows Water gets inside the wiring system time and time again. The culprits are incorrectly executed installations, damage to wiring or temperature differences. Before long, the installation is penetrated from the inside by moisture damage. Installed barriers, which stop the water in its tracks, help here. The new **RST08i3** is optionally available with this function, each individual contact being sealed on the inside.





The RST08i2/3 product line – lighting installation, DALI, DMX, applications in the low voltage range (LED technology), loudspeaker applications and network connections

# **Application example**



# General

The 2 to 3-pole connector with a diameter of less than 15 mm is currently the smallest in the range and is optimized for the interface between voltage or current sources and LED modules. It is also perfectly suited for dimming or DMX applications. Thanks to its rated values, network applications are no problem either.

The connectors are optionally available in the barrier seal version (water stop).
All connectors are mechanically coded. This means only the male/female pairs that belong together can be inserted, with the correct polarity.

# **Coding**

County					
	Rateded insulation voltage of the system	250/400V			
	Rated voltage (application)	250V	250V/400V	~50/-120V	~50/-120V
	Mechanical coding (pole assignment of female)	2/N PE	2/N 3	2 3	2 PE
Name	Description	black	light blue	slate gray	pebble gray
Connector					
M14 device connectors					
Distributors	Individual distribution box	on request	on request	on request	on request
	Device connection cable Male – free end				
Cable assemblies	Connection cable Female – free end				
	Extension cable Female — male				<b>/</b>

# Connectors, straight for cables Ø 4 – 7 mm



Unmounted with screwed cable gland. Suitable pin wrench for the cable connection, Accessories. For stripping lengths, refer to Technical Specifications. Cable assemblies on request

# **Rated values**

Rated voltage	250/400V
Rated current	8 A
Rated cross-section	Single-stranded 0.2 mm <sup>2</sup> - 1.0 mm <sup>2</sup> Fine-stranded 0.22 mm <sup>2</sup> - 0.75 mm <sup>2</sup>
Approvals	Pending: VDE, cULus, LR, DNV/GL, RINA, BV

250/400V	8	1, 2/N, PE	black
	8	1, 2/N¹)	black
		1, 2/N, 3	light blue
		1, 2/N¹)	light blue
~50/-120V	8	1, 2, 3	slate gray
	8	1, 2 <sup>1)</sup>	slate gray
	(4)	1, 2, PE	pebble gray
	<b>(3)</b>	1, 21)	pebble gray

Part No.	Part No.
With screw	connection
Without contact seal	With contact seal <sup>2)</sup>
41.031.3053.1	4L.031.3053.1
41.021.3043.1	4L.021.3043.1
41.031.3043.9	4L.031.3043.9
41.021.3043.9	4L.021.3043.9
41.031.3041.4	4L.031.3041.4
41.021.3041.4	4L.021.3041.4
41.031.3041.8	4L.031.3041.8
41.021.3041.8	4L.021.3041.8



Unmounted with screwed cable gland. Suitable pin wrench for the cable connection, Accessories. For stripping lengths, refer to Technical Specifications. Cable assemblies on request

# **Rated values**

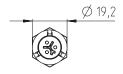
Rated voltage	250/400V
Rated current	8 A
Rated cross-section	Single-stranded 0.2 mm <sup>2</sup> - 1.0 mm <sup>2</sup> Fine-stranded 0.22 mm <sup>2</sup> - 0.75 mm <sup>2</sup>
Approvals	Pending: VDE, cULus, LR, DNV/GL, RINA, BV

Application	Coding	Pole marking	Color	Part No.	Part No.
				With screw Without contact seal	connection With contact seal 2)
		1, 2/N, PE	black	41.032.3053.1	4L.032.3053.1
250/400V		1, 2/N <sup>1)</sup>	black	41.022.3043.1	4L.022.3043.1
250/400 V		1, 2/N, 3	light blue	41.032.3043.9	4L.032.3043.9
		1, 2/N¹¹	light blue	41.022.3043.9	4L.022.3043.9
	8	1, 2, 3	slate gray	41.032.3041.4	4L.032.3041.4
~50/-120V	8	1, 21)	slate gray	41.022.3041.4	4L.022.3041.4
~30/-1201	<b>®</b>	1, 2, PE	pebble gray	41.032.3041.8	4L.032.3041.8
	<b>®</b>	1, 21)	pebble gray	41.022.3041.8	4L.022.3041.8

<sup>&</sup>lt;sup>1)</sup> One pole unassigned <sup>2)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

# **Device connector M14**

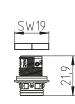
# **Female connector**



Suitable pin wrench for the cable connection, Accessories. For stripping lengths, refer to Technical Specifications.



Application Coding



Pole marking

# **Rated values**

Rated voltage	250/400V
Rated current	8 A
Rated cross-section	Single-stranded 0.2 mm <sup>2</sup> - 1.0 mm <sup>2</sup> Fine-stranded 0.22 mm <sup>2</sup> - 0.75 mm <sup>2</sup>
Approvals	Pending: VDE, cULus, LR, DNV/GL, RINA, BV

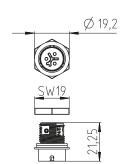
2504004	<b>®</b>	1, 2/N, PE	black
	<b>®</b>	1, 2/N¹)	black
250/400V		1, 2/N, 3	light blue
	<b>&amp;</b>	1, 2/N¹)	light blue
~50/-120V	8	1, 2, 3	slate gray
	8	1, 21)	slate gray
	(4)	1, 2, PE	pebble gray
	(4)	1, 21)	pebble gray

Color	Part No.	Part No.
	With screw	connection
	Without contact seal	With contact seal <sup>2)</sup>
black	41.031.4053.1	4L.031.4053.1
black	41.021.4043.1	4L.021.4043.1
nt blue	41.031.4043.9	4L.031.4043.9
nt blue	41.021.4043.9	4L.021.4043.9
e gray	41.031.4041.4	4L.031.4041.4
e gray	41.021.4041.4	4L.021.4041.4
e gray	41.031.4041.8	4L.031.4041.8
e gray	41.021.4041.8	4L.021.4041.8

# Male connector



Coding



Pole marking

Color

Suitable pin wrench for the cable connection, Accessories. For stripping lengths, refer to Technical Specifications.

# **Rated values**

Rated voltage	250/400V
Rated current	8 A
Rated cross-section	Single-stranded 0.2 mm <sup>2</sup> - 1.0 mm <sup>2</sup> Fine-stranded 0.22 mm <sup>2</sup> - 0.75 mm <sup>2</sup>
Approvals	Pending: VDE, cULus, LR, DNV/GL, RINA, BV

	8	1, 2/N, PE	black
250/400\/	8	1, 2/N¹)	black
250/400V -	<b>®</b>	1, 2/N, 3	light blue
	<b>®</b>	1, 2/N¹)	light blue
~50/-120V	8	1, 2, 3	slate gray
	<b>&amp;</b>	1, 21)	slate gray
	<b>®</b>	1, 2, PE	pebble gray
	<b>®</b>	1, 21)	pebble gray

Part No.	Part No.
With screw of	
Without contact seal	With contact seal <sup>2)</sup>
41.032.4053.1	4L.032.4053.1
41.022.4043.1	4L.022.4043.1
41.032.4043.9	4L.032.4043.9
41.022.4043.9	4L.022.4043.9
41.032.4041.4	4L.032.4041.4
41.022.4041.4	4L.022.4041.4
41.032.4041.8	4L.032.4041.8
41.022.4041.8	4L.022.4041.8

Application

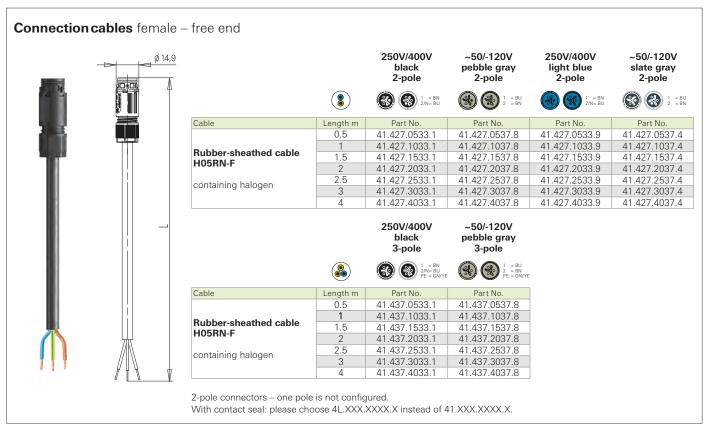
<sup>&</sup>lt;sup>1)</sup> One pole unassigned <sup>2)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

# Cable assemblies 0.75 mm<sup>2</sup>; 6 A

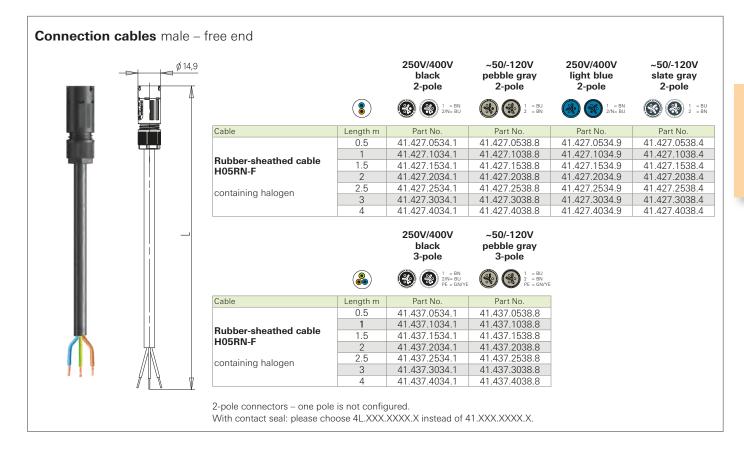
Rated values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Insulation strip length	(open cable end)	9 mm

Connection type of cable	cable gland
Interlock	integrated
Color cable	black
Color handle shell	black

#### Connection cables female - male 250V/400V ~50/-120V 250V/400V ~50/-120V pebble gray Ø14,9 black light blue slate gray 2-pole 2-pole 2-pole 2-pole (8) ( a) 1 = BN 2/N= BU 1 = BU 2 = BN 1 = BU 2 = BN Part No. Cable Length m Part No. Part No. Part No 41.427.0530.1 41.427.0532.8 41.427.0530.9 41.427.0532.4 0.5 41.427.1032.4 41.427.1030.1 41.427.1032.8 41.427.1030.9 Rubber-sheathed cable 41.427.1532.8 41.427.2032.8 41.427.1532.4 41.427.2032.4 1.5 41.427.1530.1 41.427.1530.9 H05RN-F 41.427.2030.1 41.427.2030.9 2.5 41.427.2530.1 41.427.2532.8 41.427.2530.9 41.427.2532.4 containing halogen 41.427.3030.1 41.427.3032.8 41.427.3030.9 41.427.3032.4 41.427.4030.1 41.427.4032.8 41,427,4030,9 41.427.4032.4 250V/400V ~50/-120V black pebble gray 3-pole 3-pole 1 = BU 2 = BN PE = GN/YE 1 = BN 2/N= BU PE = GN/ Cable Length m Part No. Part No. .437.0530. .437.0532.8 41.437.1030.1 41.437.1032.8 Rubber-sheathed cable 41.437.1530.1 41.437.1532.8 H05RN-F 41.437.2030.1 41.437.2032.8 41.437.2530.1 41.437.2532.8 containing halogen 41.437.3030.1 41.437.3032.8 3 41.437.4030.1 41.437.4032.8 Ø 14,9 2-pole connectors - one pole is not configured. With contact seal: please choose 4L.XXX.XXXX.X instead of 41.XXX.XXXX.X.



# Cable assemblies 0.75 mm<sup>2</sup>; 6 A



# **Accessories**

# Cover pieces

# For the safe closure of female and male connectors.

With mounting strap for snapping on

for female

for male



	tor temale	tor male
Color	Part No.	Part No.
black	06.563.5053.1	06.563.5153.1

# Pin wrench

# for RST® MICRO screw terminals



Name	Part No.
Pin wrench	06 502 6100 0

# **Hexagonal wrench**

# for RST® MICRO screw terminals



Name Name	Part No.
Vrench	06.502.6300.0
Charles Book 5	

# Sample kit

Contents:

Connectors and device connectors in all codings, cover cap an hexagonal wrench



 Name
 Part No.

 Sample kit
 99.431.0000.1

# **Technical Specifications** *RST*® MICRO

	RST08i2/3
Rated voltage	250/400V
Rated current	8A
Number of poles	2- bzw. 3-polig

**Connector temperature** 

range: -40°C to +100°C

Material: Contact parts: Brass surface-treated

housing parts: Polyamide, halogen-free, V0, f1

seal material: NBR

**Pollution degree:** 3 (when inserted)

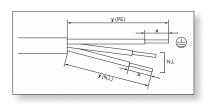
**Protection rating:** IP66/68 (3m; 2h)/69, barrier seal optional

**Approvals:** Pending: VDE (acc. to IEC 61984), cULus, LR, DNV/GL,

RINA, BV

# Wire strip lengths

Fine-stranded (suitable for ferrules)

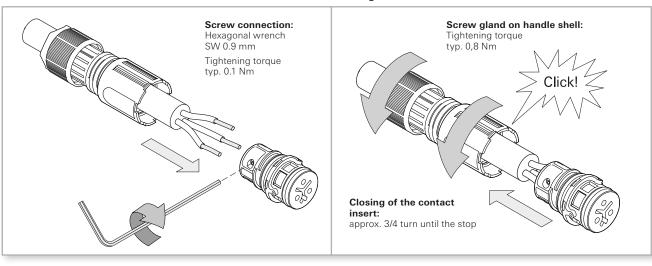


Conductor	PE	N, L
Sheath strip length y (in mm)	19	18
Wire strip length x (mm)	6	6

# Connectors 2-/3-pole

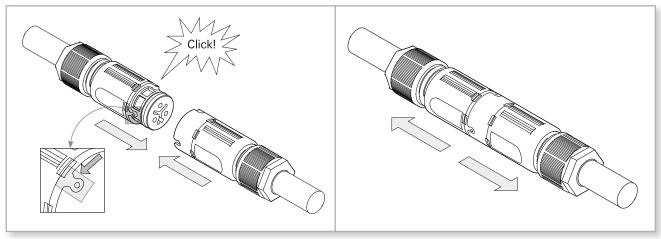
# Wire connection

# Closing the connector

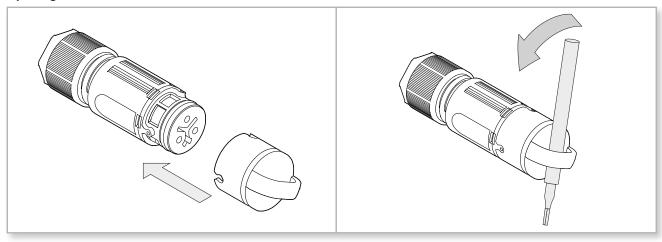


# Plugging and locking

# Unlocking and separating



# Opening the connector

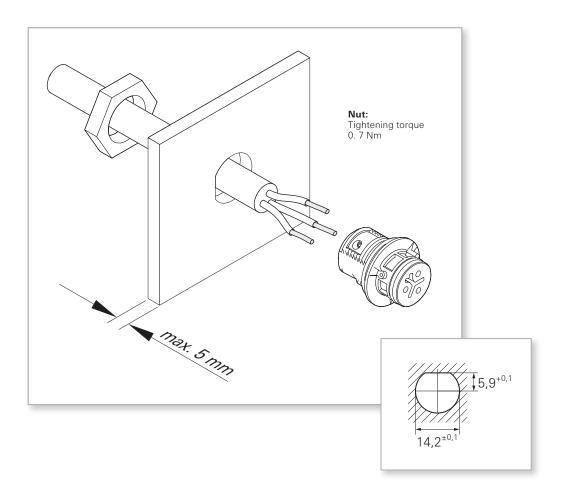


The corresponding installation instruction BA001157 can be found online in the download section of the respective product under: eshop.wieland-electric.com

# Device connections 2-/3-pole

Housing installation with M14 feedthrough

Dimensions in mm



# The **RST**<sup>®</sup> MINI connector series Optimized for installation in confined spaces

The **RST**® MINI series marks a continuation of the story of the RST® installation system's success and logically follows the trend towards compact designs.

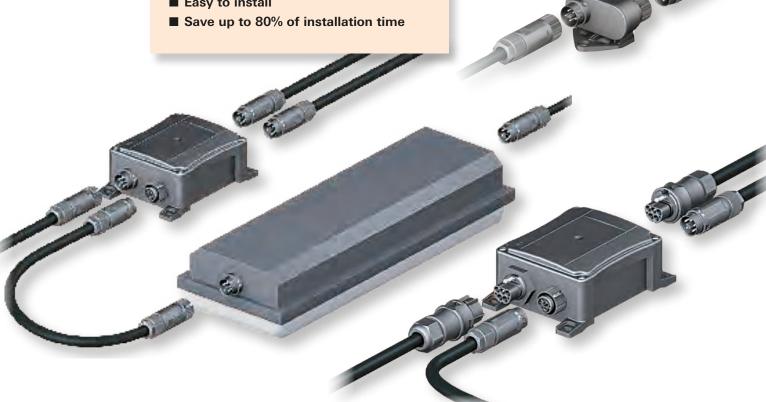
The 2- to 5-pole plug connectors and device connectors have been designed for 250/400V and 16A and are all available in the screw connection technology that electricians trust.

Customized distributors as well as pre-assembled cables round the system off perfectly and offer a huge range of different possible uses, not just in building automation or industry.



# Benefits at a glance

- **TWISTLOCK technology**
- Compact design
- Color-coded and mechanically coded
- Easy to install



**RST**® MINI

# **RST**® MINI click & safe The patented locking device

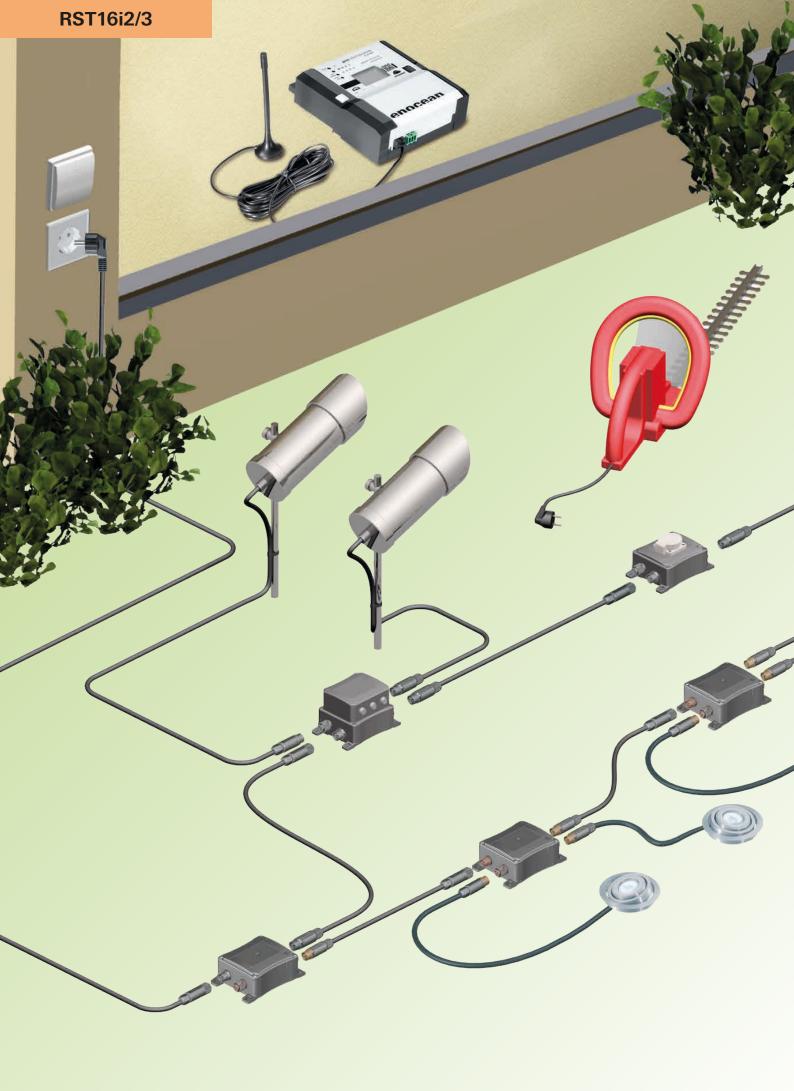
# TWISTLOCK technology

With the smart TWISTLOCK locking mechanism, the connectors lock automatically when plugged together and give the user clear feedback on the correct end position. A slight rotation severs the connection easily.



automatic





The RST16i2/3 product line – mains connection, lighting installation, DALI, DMX, applications in the extra-low voltage range (LED technology), loudspeaker applications

# **Application example**



# General

With the 2-/3-pole connectors, there are five available codings. These can cover applications relating to the mains connection of electrical consumers, the connection of LED luminaires in the extra-low voltage range, and also the electrification of DALI, DMX, or loudspeaker systems. The main focus is the mains connection of electrical equipment with a compact design. The mechanical codings have the advantage that only associated pairs of male and female connectors can be connected, with the correct polarity ensured. This gives you the security of a clear distinction.

The connectors are also available in a 2-pole variant. This is based on the 3-pole housing, but with one pole not configured.

# **Coding**

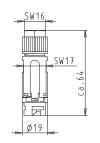
Coung							
	Application		250V		250/400V	250/400V	~50/-120V
		L, N, PE		1, 2, PE	1, 2, 3	1, 2, 3	D1, D2, PE
	Mechanical coding						
Name	Description	black	light gray	green	turquoise	light blue	signal brown
Connectors							
M16 device connections							
Distribution units	RST® compact and multiple distribution unit						
	Distribution block 1E/2A						
	Individual distribution box	on request					
	Device connection cable Male – free end			on request	on request	on request	on request
Cable assemblies	Connection cable Female – free end			on request	on request	on request	on request
	Extension cable Female — male			on request	on request	on request	on request

# Connectors, straight for cables Ø 5.0 - 9.5 mm<sup>2)</sup>



# Male connector





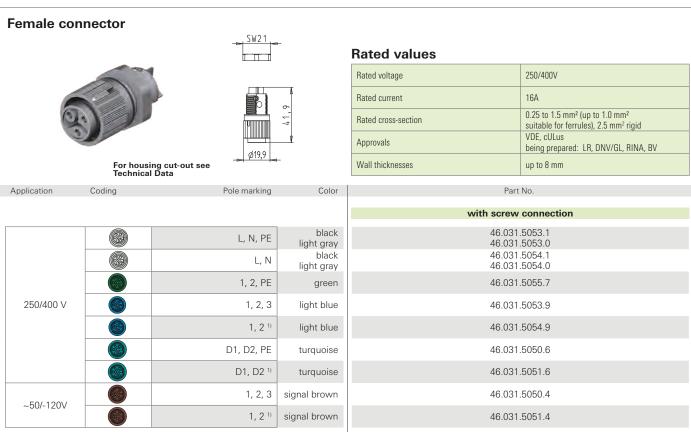
# **Rated values**

Rated voltage	250/400V
Rated current	16A
Rated cross-section	0.25 to 1.5 mm² (up to 1.0 mm² suitable for ferrules), 2.5 mm² rigid
Approvals	VDE, cULus being prepared: LR, DNV/GL, RINA, BV

Application	Coding	Pole marking	Ø Cable mm	Color	Part No.
					with screw connection
		L, N, PE	Ø 5.0 – 9.5 mm <sup>2)</sup>	black light gray	46.032.4553.1 46.032.4553.0
		L, N	Ø 5.0 – 9.5 mm <sup>2)</sup>	black light gray	46.032.4554.1 46.032.4554.0
		1, 2, PE	Ø 5.0 – 9.5 mm <sup>2)</sup>	green	46.032.4555.7
250/400 V		1, 2, 3	Ø 5.0 – 9.5 mm <sup>2)</sup>	light blue	46.032.4553.9
		1, 2 1)	Ø 5.0 – 9.5 mm <sup>2)</sup>	light blue	46.032.4554.9
		D1, D2, PE	Ø 5.0 – 9.5 mm <sup>2)</sup>	turquoise	46.032.4550.6
		D1, D2 <sup>1)</sup>	Ø 5.0 – 9.5 mm <sup>2)</sup>	turquoise	46.032.4551.6
		D1, D2 1)	AS-i profile cable	turquoise	46.032.4951.6
		1, 2, 3	Ø 5.0 – 9.5 mm <sup>2)</sup>	signal brown	46.032.4550.4
~50/-120V		1, 2 1)	Ø 5.0 – 9.5 mm <sup>2)</sup>	signal brown	46.032.4551.4
		1, 2 1)	AS-i profile cable	signal brown	46.032.4951.4

 $<sup>^{\</sup>circ}$  One pole not configured  $^{\circ}$  Other diameters available upon request. Please note: Individual H07RN-F 1.5 cables can have a diameter of more than 9.5 mm.

# M16 device connections straight



#### Male connector Rated values 250/400V Rated voltage Rated current 16A 0.25 to 1.5 mm<sup>2</sup> (up to 1.0 mm<sup>2</sup> Rated cross-section suitable for ferrules), 2.5 mm<sup>2</sup> rigid Approvals being prepared: LR, DNV/GL, RINA, BV Wall thicknesses up to 8 mm For housing cut-out see Technical Data Part No. Pole marking Color Application Coding with screw connection 46.032.5053.1 black L, N, PE 46.032.5053.0 light gray 46.032.5054.1 46.032.5054.0 black L, N light gray 1, 2, PE 46.032.5055.7 green 46.032.5053.9 250/400 V 1, 2, 3 light blue 1, 2 1) light blue 46.032.5054.9 46.032.5050.6 D1, D2, PE turquoise D1, D2 1) 46.032.5051.6 turquoise 46.032.5050.4 1, 2, 3 signal brown ~50/-120V 1, 2 1) 46.032.5051.4 signal brown

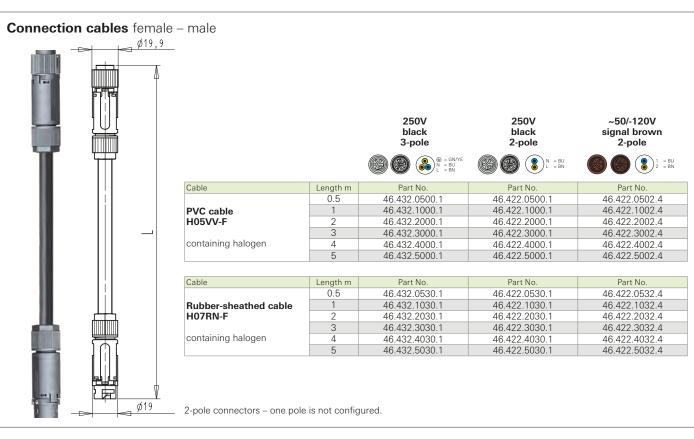
<sup>&</sup>lt;sup>1)</sup> One pole not configured

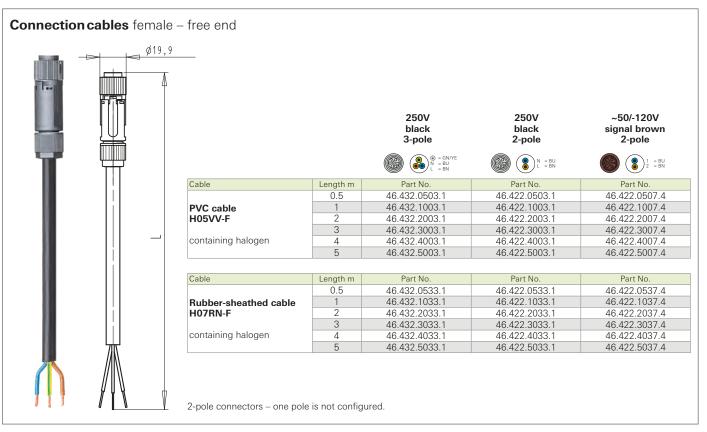
# Cable assemblies

1.5 mm<sup>2</sup>; 16 A

Rated values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Insulation strip length	(open cable end)	9 mm

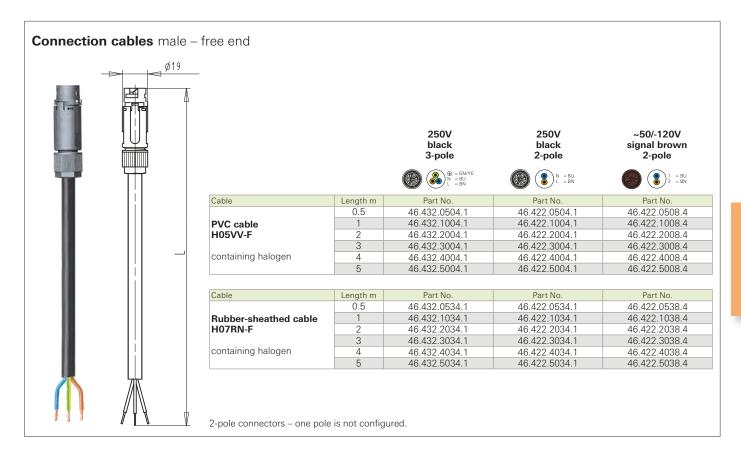
Connection type of cable	cable gland
Interlock	integrated
Color cable	black
Color handle shell	black



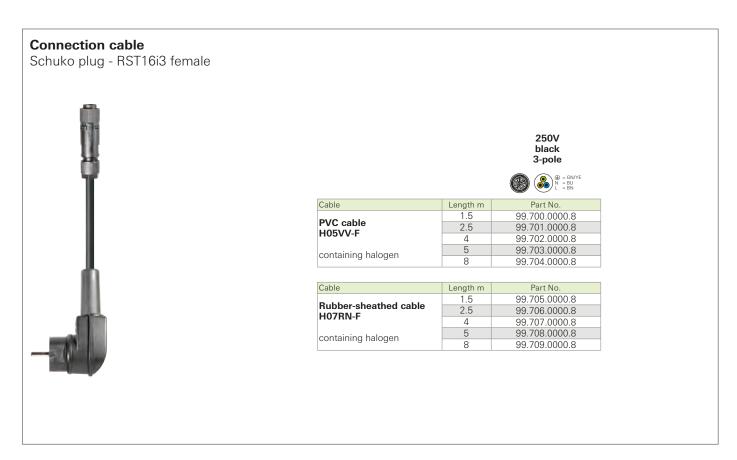


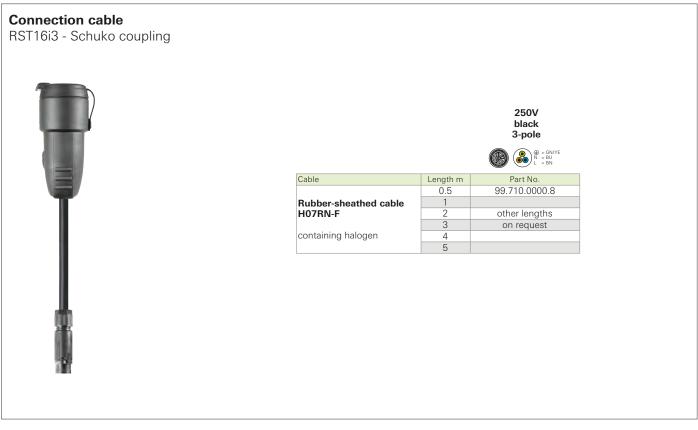
# Cable assemblies

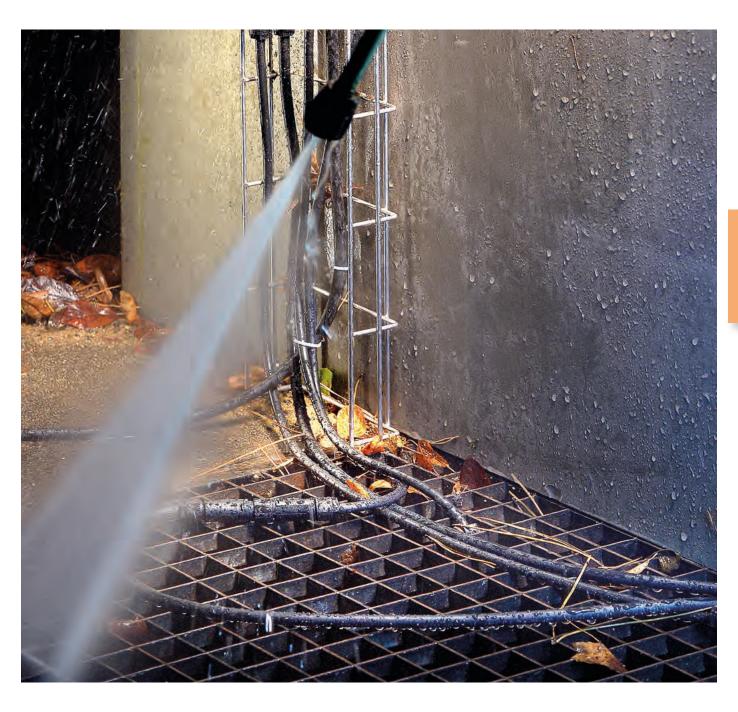
1.5 mm<sup>2</sup>; 16 A



# Cable assemblies 1.5 mm<sup>2</sup>; 16 A







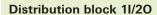
# **Distribution units**

# **Compact distribution units**

Dimensions 104 x 162 x 57.2 mm

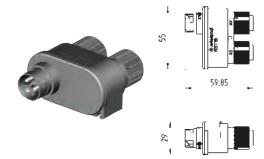
pre-wired with	1.5 mm² (halogen free)
Mounting option	Yes

Color	Application	Pole marking	Input	Outputs	Part No.
■ black	250V	L, N, PE	1	3	46.030.0153.1
■ light gray	250V	L, N, PE	1	3	46.030.0153.0
■ black	250V	L, N	1	3	46.030.0154.1
■ light gray	250V	L, N	1	3	46.030.0154.0
■ leaves green	250/400V	1, 2, PE	1	3	46.030.0155.7
■ light blue	250/400V	1, 2, 3	1	3	46.030.0153.9
■ light blue	250/400V 1)	1, 2	1	3	46.030.0154.9
turquoise blue	250/400V	D1, D2, PE	1	3	46.030.0150.6
turquoise blue	250/400V 1)	D1, D2	1	3	46.030.0151.6
signal brown	~50/-120V	1, 2, 3	1	3	46.030.0150.4
signal brown	~50/-120V 1)	1. 2	1	3	46.030.0151.4



Mounting option

with separate mounting plate



Color	Application	Pole marking	Input	Outputs	Part No.
■ black	250V	L, N, PE	1	2	46.030.1253.1
■ light gray	250V	L, N, PE	1	2	46.030.1253.0
■ black	250V	L, N	1	2	46.030.1254.1
■ light gray	250V	L, N	1	2	46.030.1254.0
leaves green	250/400V	1, 2, PE	1	2	46.030.1255.7
■ light blue	250/400V	1, 2, 3	1	2	46.030.1253.9
■ light blue	250/400V 1)	1, 2	1	2	46.030.1254.9
turquoise blue	250/400V	D1, D2, PE	1	2	46.030.1250.6
turquoise blue	250/400V 1)	D1, D2	1	2	46.030.1251.6
■ signal brown	~50/-120V	1, 2, 3	1	2	46.030.1250.4
signal brown	~50/-120V 1)	1, 2	1	2	46.030.1251.4

# Mounting plate for distribution block



# **Accessories**

# Cover caps

For the safe closure of female and male connectors. With mounting strap for snapping onto plug connectors and device connectors

for female

for male





not captive against loss	for female	for male
Color	Part No.	Part No.
■ light gray	06.563.8653.0	06.563.8853.0
■ black	06.563.8653.1	06.563.8853.1

for female

for male



captive against loss	for female	for male
Color	Part No.	Part No.
■ light gray	06.563.8753.0	06.563.8953.0
■ hlack	06 563 8753 1	06 563 8953 1

The previous version with plug on funcition is under known Part no. available until 12/2018.

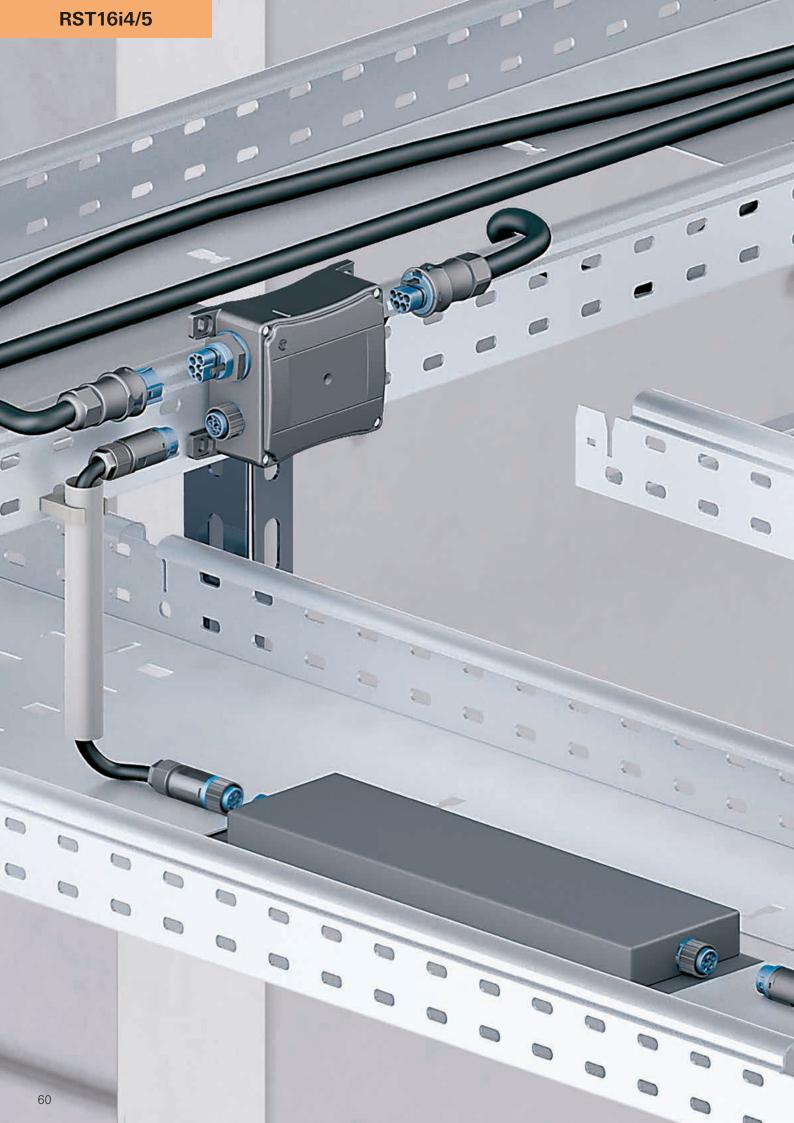
# Sample kit

Contents:

- Connectors
- Device connectors
- Contact parts in various codings
- Cover caps
- Distributor



Name Sample Kit Part No. 99.674.0000.0



The RST16i4/5 product line – general network applications, lighting installation with dimming function, connection of electrical (sunblind) drives, applications in the extra-low voltage range (LED technology)

# **Application example**



# General

The RST16i4/5 product line has a total of four mechanical codings and can therefore cover a wide range of applications from general network applications to applications in the extra-low voltage range. The main focus is the connection of dimmable luminaires with a compact design. This series is also tailored for the electrification of RGB or RGB-W/A outdoor spotlights. There are different mechanical codings available for every application. This means that only associated pairs of male and female connectors can be connected, with the correct polarity ensured. This gives you the security of a clear distinction.

The codings are also available in a 4-pole variant. This is based on the 5-pole housing, but with one pole not configured.

#### Coding

Coding						
	Application	250/	400V	250V	250/400V	~50/- 120V
	Mechanical coding, for example	1, 2, 3	, N, PE	L, N, PE, 1, 2	1, 2, 3, 4, 5	1, 2, 3, 4, 5
Name	Description	black	light gray	turquoise	signal brown	light blue
Connectors						
Device connectors M20,2						
	RST® compact and multiple distributors					
Distribution units	Distribution block 1E/2A					
	Individual distribution box	on request	on request	on request	on request	on request
	Device connector cable Male – free end		on request		on request	on request
Cable assemblies	Connection cable Female – free end		on request		on request	on request
	Extension cable Female – male		on request		on request	on request

# Connectors, straight for cables Ø 7.1 – 13 mm<sup>2)</sup>





#### **Rated values**

Rated voltage	250/400V
Rated current	16 A
Rated cross-section	0.25 to 2.5 mm <sup>2</sup> (up to 1.5 mm <sup>2</sup> suitable for ferrules)
Approvals	VDE, cULus, CSA, LR, DNV/GL, RINA, BV

Application	Coding	Pole marking	Color	Part No.
				with screw connection
		1, 2, 3, N, PE	black light gray	46.052.4553.1 46.052.4553.0
250/400V		1, 2, 3, PE <sup>1)</sup>	black light gray	46.052.4554.1 46.052.4554.0
250/4007		L, N, PE, 1, 2	turquoise	46.052.4553.6
		1, 2, 3, 4, 5	light blue	46.052.4553.9
~50/-120V		1, 2, 3, 4, 5	signal brown	46.052.4550.4
~50/-1200		1, 2, 3, 4 <sup>1)</sup>	signal brown	46.052.4551.4

<sup>&</sup>lt;sup>1)</sup> One pole not configured <sup>2)</sup> Other diameters available upon request

# M20.2 device connector straight

#### Female connector Rated values 250/400V Rated voltage 16A Rated current 0.25 to 2.5 mm<sup>2</sup> (up to 1.5 mm<sup>2</sup> suitable for ferrules) Rated cross-section Ø 24,9 For housing cut-out see Technical Data VDE, cULus, CSA, LR, DNV/GL, RINA, BV Approvals being prepared Wall thicknesses up to 5 mm Application Coding Pole marking Color Part No. with screw connection 46.051.5053.1 46.051.5053.0 black 1, 2, 3, N, PE light gray 46.051.5054.1 black 1, 2, 3, PE 1) light gray 46.051.5054.0 250/400V 46.051.5053.6 L, N, PE, 1, 2 turquoise 1, 2, 3, 4, 5 light blue 46.051.5053.9 46.051.5050.4

# Male connector

~50/-120V





1, 2, 3, 4, 5

1, 2, 3, 4 1)

SW 24

Ħ Ø 24

# Rated values

signal brown

signal brown

Rated voltage	250/400V
Rated current	16A
Rated cross-section	0.25 to 2.5 mm <sup>2</sup> (up to 1.5 mm <sup>2</sup> suitable for ferrules)
Approvals	VDE, cULus, CSA, LR, DNV/GL, RINA, BV being prepared
Wall thicknesses	up to 5 mm

46.051.5051.4

Application	Coding	Pole marking	Color	Part No.
				with screw connection
				With Sciew Connection
		1, 2, 3, N, PE	black light gray	46.052.5053.1 46.052.5053.0
250/400V		1, 2, 3, PE <sup>1)</sup>	black light gray	46.052.5054.1 46.052.5054.0
230/400 V		L, N, PE, 1, 2	turquoise	46.052.5053.6
		1, 2, 3, 4, 5	light blue	46.052.5053.9
~50/-120V		1, 2, 3, 4, 5	signal brown	46.052.5050.4
~50/-1200		1, 2, 3, 4 1)	signal brown	46.052.5051.4
		·		

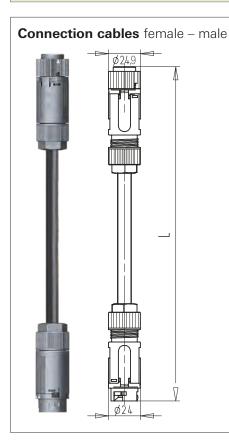
<sup>1)</sup> One pole not configured

# Cable assemblies

1.5 mm<sup>2</sup>; 16 A

Rated values		
nateu values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Insulation strip length	(open cable end)	9 mm

Connection type of cable	cable gland
Interlock	integrated
Color cable	black
Color handle shell	black



250/400V black 5-pole

250V turquoise 5-pole

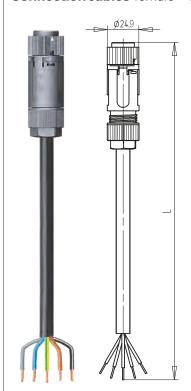




Cable	Length m	Part No.	Part No.
	0.5	46.452.0500.1	46.452.0500.6
PVC cable	1	46.452.1000.1	46.452.1000.6
H05VV-F	2	46.452.2000.1	46.452.2000.6
	3	46.452.3000.1	46.452.3000.6
containing halogen	4	46.452.4000.1	46.452.4000.6
	5	46.452.5000.1	46.452.5000.6

Cable	Length m	Part No.	Part No.
	0.5	46.452.0530.1	46.452.0530.6
Rubber-sheathed cable	1	46.452.1030.1	46.452.1030.6
H07RN-F	2	46.452.2030.1	46.452.2030.6
	3	46.452.3030.1	46.452.3030.6
containing halogen	4	46.452.4030.1	46.452.4030.6
	5	46.452.5030.1	46.452.5030.6

# Connection cables female - free end



250/400V black 5-pole





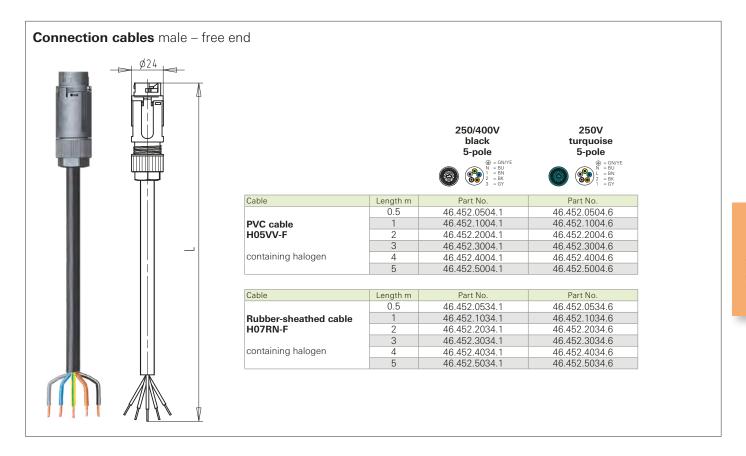
250V
turquoise
5-pole

Cable	Length m	Part No.	Part No.
	0.5	46.452.0503.1	46.452.0503.6
PVC cable	1	46.452.1003.1	46.452.1003.6
H05VV-F	2	46.452.2003.1	46.452.2003.6
	3	46.452.3003.1	46.452.3003.6
containing halogen	4	46.452.4003.1	46.452.4003.6
	5	46.452.5003.1	46.452.5003.6

Cable	Length m	Part No.	Part No.
	0.5	46.452.0533.1	46.452.0533.6
Rubber-sheathed cable	1	46.452.1033.1	46.452.1033.6
H07RN-F	2	46.452.2033.1	46.452.2033.6
	3	46.452.3033.1	46.452.3033.6
containing halogen	4	46.452.4033.1	46.452.4033.6
	5	46.452.5033.1	46.452.5033.6

# Cable assemblies

1.5 mm<sup>2</sup>; 16 A



# **Distribution units**

# **Compact distribution units**

Dimensions 104 x 162 x 57.2 mm

lor	Application
olack	250/400V
ight gray	250/400V
olack	250/400V 1)
ight gray	250/400V 1)
turquoise blue	250V
ight blue	250/400V
signal brown	~50/-120V
signal brown	~50/-120V 1)
	olack ight gray black ight gray turquoise blue ight blue ignal brown

pre-wired with

Mounting option

lication Pole marking Input Part No. 100V 1, 2, 3, N, PE 46.050.0153.1 1, 2, 3, N, PE 1, 2, 3, PE 100V 46.050.0153.0 100V 1) 46.050.0154.1 100V 1) 1, 2, 3, PE 46.050.0154.0 L, N, PE, 1, 2 46.050.0153.6 1, 2, 3, 4, 5 1, 2, 3, 4, 5 100V 46.050.0153.9 -120V 46.050.0150.4

46.050.0151.4

1, 2, 3, 4

1.5 mm<sup>2</sup>

yes

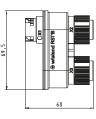


# Distribution block 11/20

Mounting option

with separate mounting plate



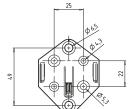




Color	Application	Pole marking	Input	Outputs	Part No.
		0	iliput	Outputs	
■ black	250/400V	1, 2, 3, N, PE	1	2	46.050.1253.1
■ light gray	250/400V	1, 2, 3, N, PE	1	2	46.050.1253.0
■ black	250/400V 1)	1, 2, 3, PE	1	2	46.050.1254.1
light gray	250/400V 1)	1, 2, 3, PE	1	2	46.050.1254.0
turquoise blue	250V	L, N, PE, 1, 2	1	2	46.050.1253.6
■ light blue	250/400V	1, 2, 3, 4, 5	1	2	46.050.1253.9
signal brown	~50/-120V	1, 2, 3, 4, 5	1	2	46.050.1250.4
■ signal brown	~50/-120V 1)	1, 2, 3, 4	1	2	46.050.1251.4

# Mounting plate for distribution block





Color	Part No.
■ black	06.562.5853.1
☐ light gray	06.562.5853.0



# **Accessories**

# **Cover caps**

#### For the safe closure of female and male connectors.

With mounting strap for snapping onto plug connectors and device connectors

for female

# for male





not captive against loss	for female	for male
Color	Part No.	Part No.
■ light gray	06.563.9053.0	06.563.9253.0
■ black	06.563.9053.1	06.563.9253.1

for female

#### for male



captive against loss	for female	for male
Color	Part No.	Part No.
■ light gray	06.563.9153.0	06.563.9353.0
■ hlack	06 563 9153 1	06 563 9353 1

The previous version with plug on funcition is under known Part no. available until 12/2018.

# Sample kit

Contents:

- Connectors
- Device connectors
- Contact parts in various codings
- Cover caps
- Distributor



Part No. 99.675.0000.0 Name Sample kit

# Sample kit SMI

**RST**°/**gesis**° SMI sample kit, shows fitting parts for SMI applications combined out of the installation systems RST16 and GST18.

Content system RST16:

version 5 pole in turquoise blue and 4 pole in signal brown: connectors and device connectors in female and male part with cover

pieces, distributor 11/20 with mounting plate.

version 5 pole in pastel blue: flat cable with adapter, T-distributor 11/20, connector female and male part. Content system GST18:



Name	Part No.
Sample kit SMI	99.688.0000.0

# Technical data RST® MINI

	RST16i2/3	RST16i4/5
Rated voltage	250/400V	250/400V
Rated current	16A	16A
Number of poles	2- bzw. 3-polig	4- bzw. 5-polig

Connector

temperature range:  $-40 \,^{\circ}\text{C}$  to  $+100 \,^{\circ}\text{C}$ 

Material: Contact parts: brass, surface-treated

Housing parts: Polyamide, halogen-free, V2

Sealing material: NBR

Pollution degree:3 (when connected)Degree of protection:IP66/68 (3m; 2h)/69IK-Code:IK07 (2 Joule)

**Plugging cycles:** according to IEC 61535

100x without load and

50x under nominal load (cos phi = 0.6)

**Approvals:** VDE (IEC 61535)

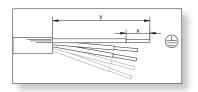
UL (UL 2238 / UL 1977)

CSA (C22.2 No.182.1 / C22.2 No.182.3)

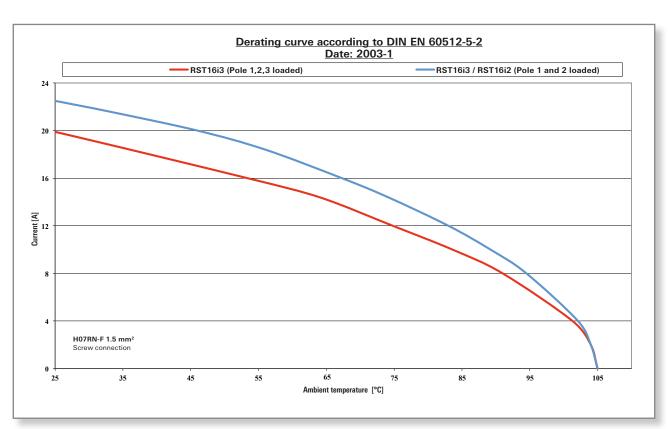
RINA, LR, DNV/GL, BV

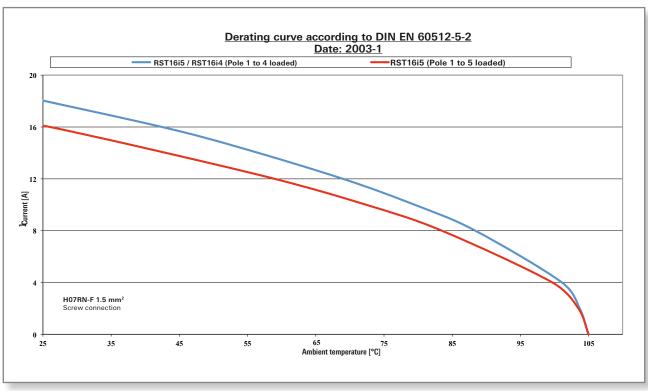
# Wire strip lengths

fine-stranded (suitable for ferrules)



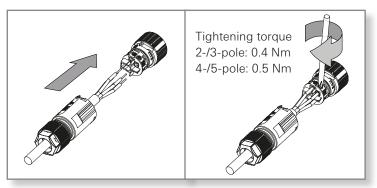
	Conductor	PE	N, L, 1, 2, 3		
	Sheath strip length y (mm)	30	25		
	Wire strip length x (mm)	8	8		



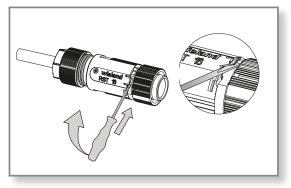


# Connectors 2-/3- and 4-/5-pole

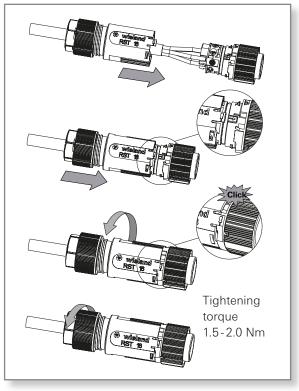
#### Wire connection



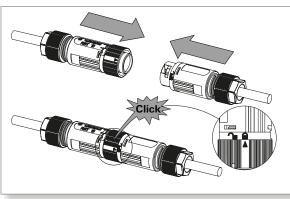
# Opening the connector



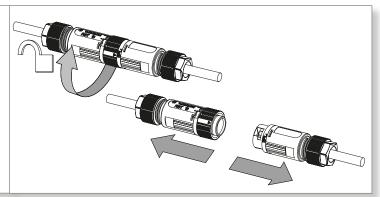
# Closing



# Plugging and locking



# Unlocking and separating

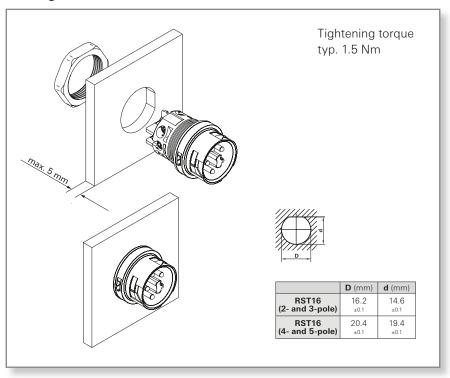


Please note that electrical connections and installation shall only be done by trained experts. Observe the included installation instructions!

The corresponding installation instruction BA000960 can be found online in the download section of the respective product under: eshop.wieland-electric.com

# Device connections 2-/3- and 4-/5-pole

# Housing installation



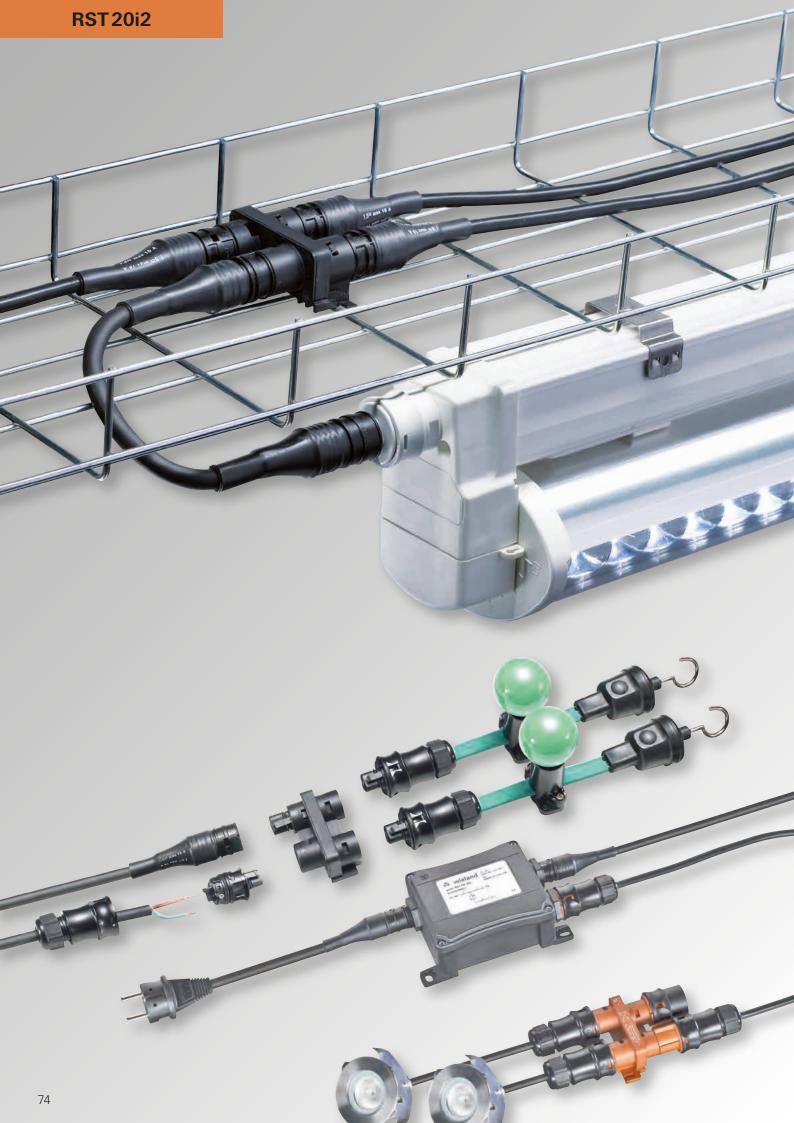
Please note that electrical connections and installation shall only be done by trained experts. Observe the included installation instructions!

The corresponding installation instruction BA000960 can be found online in the download section of the respective product under: eshop.wieland-electric.com

# Overview matrix *RST*® CLASSIC. Codings and applications at a glance

		RST20i2		RST20i3				RST25i3	
		2-pole, 20A		3-pole, 20A			3-pole, 32A		
	Pole marking	L, N	+, -	1, 2	L, N, ⊕	1, 2, 🖶	1, 2, 3	1, 2, 🖶	L, N, 🖶
	Application	250V black or light	~50/-120V pebble gray	~50/-120V signal brown	250V black or light	250/400V leaf green	250/400V light blue	~50/-120V signal brown	250V concrete gray
	Contact insert male and female	gray			gray				
	Spring clamp (F) Screw (S) Crimp (C)	F S	s	F S	F S C	F S	F S	F S	s
	Ø 6 –10 mm								
	≩ Ø 10 −14 mm								
	Ø 10 –14 mm  9 g g g g g g g g g g g g g g g g g g								
Ors	× Flat cable								
Ject	← 13 x 6 mm AS-i	V							
Connectors	profile cable		V						
J	% 0 − 10 mm Ø 6 − 10 mm					<b>✓</b>	<b></b>		
	Ø 6 −10 mm  9 0 10 −14 mm  AS-i  profile cable			$\overline{}$			$\overline{}$		
	AS-i profile cable								
Ø	← .ge M25	$\overline{}$	<b>_</b>	$\overline{}$		<b>_</b>	$\overline{}$		
Device connectors	M16 straight			<b>_</b>		<b>_</b>			
Juec	M16								
00	7° angled M20 straight 7								
<u>Vi</u> Ce	M20								
De	angled M25		V		V	V	V	V	
	angled	V	V	V	V	V	V	V	V
p.	Distribution block 1 I/3 O	$\checkmark$	<b>V</b>	<b>V</b>	<b>V</b>			<b>V</b>	
Distrib. units	RST° compact/ multi-distribution units						$\overline{}$	$\overline{}$	
	Individual distribution box	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	<b>√</b>	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$
	Expansion cable Female – Male		$\sqrt{}$	<b></b>	$\sqrt{}$	<b></b>	$\sqrt{}$	$\sqrt{}$	<b>—</b>
es es	Power connection Female – Free end	$\overline{}$	<b>V</b>	<b>_</b>	<b>1</b>	<b>1</b>	<b>V</b>	<b>V</b>	
Cable assemblies	Power connection Male – Free end	<b>1</b>	<b>1</b>	<b></b>	<b>1</b>	<b></b>	<b></b>		
Ç	Power connection								
	Safety plug – female Power cable/contour cable								
Europ	ean connector, SKII – female	V							

RST20i4			F	RST 20i5	5		RST25i5	RST20i6		RST 20i7	7		
	4-pole	e, 20A			ō-pole, 20A			5-pole, 25 A (3~)	6-pole		7-pole		
	1, 2, 3, 🖶	1, 2, 3, 4	1, 2, 3, N, ⊕	L,N,⊕,D1,D2	1, 2, 3, 4, 5	N, E, 1, 2, 3	1, 2, 3, 4, 5	L, N, ⊕, 1, 2	L,N,⊕,1,2,LS	1,2,3,4/N,5,6, ⊕	1,2,3,4/N,5,6,7	L,N,⊕,1,2,3,4	
	250/400V black or light	~50/-120V signal brown	250/400V black or light	250V turquoise	250/400V light blue	250/400V yellow	~50/-120V signal brown	250/400V concrete gray	250/400V türkisblau	250/400V black or light	250/400V light blue	250/400V turquoise	
	gray		gray							gray			
			_										
	s C	s C	s C	s C	s C	s	s C	s	s C	s C	s C	s C	
					·								
	V	V	<b>V</b>		V								
		V											
	$\checkmark$	<b>✓</b>	<b>✓</b>	<b>✓</b>	$\checkmark$	<b>✓</b>	<b>✓</b>	$\checkmark$					
			$\overline{}$	$\overline{}$						$\overline{}$	$\overline{}$		
	$\overline{}$			$\overline{}$									
	V	V					V	V					
	V	V	V	V	V		V	V			V	V	
		V	V	V	<b>V</b>		<b>V</b>	<b>V</b>			V	V	
	<b>V</b>	<b>V</b>	<b>V</b>	<b>V</b>	<b>V</b>		<b>V</b>	<b>V</b>			<b>√</b>	<b>V</b>	
							<b>V</b>	<b>V</b>				<b>V</b>	

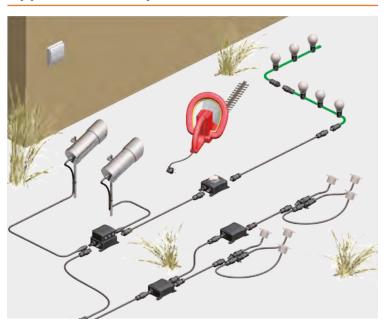


# Applications in the range of protection class II and extra-low voltage for industry and LED technology





### **Application example**



You therefore have the security of a clear separation of different applications without having to redo any incorrect connections. The color of the connectors indicates the links that belong together.

#### General

The two-pole connectors are based on the 3-pole variant, but with one pole not configured.

There are essentially two variants. One coding can be used for protection class II applications and is downwardly compatible with the 3-pole system with ground conductor (RST 20i3). This makes it possible to transition from a system with earthing contact to a 2-pole system – but not the other way round!

The other version is aimed at applications in the extra-low voltage range, such as serial or parallel LED wiring, or at industrial applications with 24 V auxiliary power and AS-i. All connectors are mechanically coded. This means that only associated pairs of male and female can be connected with the correct polarity.

# Coding

Coaing	<u> </u>							
	ites visit the website at			Application	25	0V	~50/-	-120V
Assembly inst	vieland-electric.com. ructions and other technical informa al Data or in eShop.	Mechanical coding	L,	N D	+, -	1, 2		
Name	Description	Connection style	Strain relief housing	Connection points per pole	light gray	black	pebble gray	signal brown
Connector	1 x cable entry	Screw Spring clamp	yes	1 2	$\checkmark$	$\checkmark$	<b>V</b>	$\checkmark$
Connector	2 x cable entry	Screw Spring clamp	yes	1 2	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
	Distribution block 1 I/3 0				$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	<b>V</b>
Distribution	RST compact distribution unit/multi-distribution unit				$\checkmark$	$\checkmark$	on request	$\checkmark$
units	Individual distribution box				on request	on request	on request	on request
	Series distribution unit for power LEDs							<b>V</b>
	M16 device connector, modular, straight				$\sqrt{}$	$\sqrt{}$	<b>V</b>	
	M16 device connector, modular, angled 7°					$\sqrt{}$	$\checkmark$	
Device	M25 device connector, standard				$\sqrt{}$	$\checkmark$	$\checkmark$	$\checkmark$
connectors	M20 device connector, standard				$\sqrt{}$	$\checkmark$	$\checkmark$	<b>V</b>
	M20 device connector, modular, straight				$\sqrt{}$	$\checkmark$	$\sqrt{}$	
	M25 device connector, modular, angled				$\sqrt{}$	$\sqrt{}$	$\checkmark$	$\sqrt{}$
	Connection cable Male – Free end	pre- assembled	pre- assembled	pre- assembled	<b>V</b>	<b>V</b>	<b>V</b>	<b>V</b>
	Connection cable Female – Free end	pre- assembled	pre- assembled	pre- assembled	$\sqrt{}$	$\checkmark$		
Cable	Connection cable Male – Female	pre- assembled	pre- assembled	pre- assembled	<b>V</b>	<b>V</b>	<b>V</b>	<b>V</b>
assemblies	Connection cable Europ. conn. SK II – Female	pre- assembled	pre- assembled	pre- assembled	<b>V</b>	<b>V</b>	<b>V</b>	<b>V</b>
	Round cable	pre- assembled	pre- assembled	pre- assembled	<b>V</b>	$\sqrt{}$	$\checkmark$	$\checkmark$
	AS-i profile cable	pre- assembled	pre- assembled	pre- assembled			<b>V</b>	

## Connectors, straight for cables Ø 6 - 10 mm and 10 -14 mm

#### **Female connector** SW27 Unmounted with cable gland. See the Technical Data for insulation strip 82 lengths as well as the ferrules to be used. 00. 9 with spring clamp connection with screw connection1) Wire Wire mm<sup>2</sup> Ferrules 0.5 - 2.5rigid rigid without with $0.75 - 6.0^{2}$ fine-stranded 0.5 - 1.5 fine-stranded ferrules ferrules with 0.75 - 1.5stranded stranded ferrules ferrules Cable diameter in mm Color Part No. Application Coding Part No. 96.021.0053.0 96.021.4053.0 light gray 6 - 10black 96.021.0053.1 96.021.4053.1 light gray 96.021.0153.0 96.021.4153.0 10 - 14L, N black 96.021.0153.1 96.021.4153.1 250V Illumination cable 13.3x5.3 light gray 96.021.0453.0 96.021.4453.0 H05RNH2-F2 x 1.52 black 96.021.0453.1 96.021.4453.1 leaf green on request 96.021.4055.7 1. 2 10 - 14 leaf green on request 96.021.4155.7 Round cable 6-10 pebble gray 96.021.0050.8 96.021.4050.8 AS-i profile cable pebble gray 96.021.0950.8 96.021.4950.8 6 – 10 signal brown 96.021.0051.4 96.021.4051.4 ~50/-120V AS-i profile cable 96.021.0951.4 96.021.4951.4 signal brown Illumination cable 13.3x5.3 96.021.0451.4 96.021.4451.4 signal brown H05RNH2-F2 x 1.52

#### Male connector

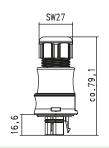
Application Coding

Unmounted with cable gland and locking device.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.







with spring clamp connection			with screw	with screw connection <sup>1)</sup>		
Wire	mm <sup>2</sup>	Ferrules	Wire	mm <sup>2</sup>		
rigid	0.5 - 2.5		rigid			
fine-stranded	0.5 - 1.5	with ferrules	fine-stranded	$0.75 - 6.0^{2}$	without ferrules	
stranded	0.75 – 1.5	with ferrules	stranded		without ferrules	
	Part No			Part No		

County	Cable diameter in min	COIOI	I dit INU.	I dit INO.
		P. 1.	00 000 0050 0	00 000 4050 0
	6 – 10			96.022.4053.0
	0 10	black	96.022.0053.1	96.022.4053.1
( N I	10 14	light gray	96.022.0153.0	96.022.4153.0
IN, L	10 – 14	black	96.022.0153.1	96.022.4153.1
	Illumination cable 13.3x5.3	light gray	96.022.0453.0	96.022.4453.0
	H05RNH2-F2 x 1.5 <sup>2</sup>	black	96.022.0453.1	96.022.4453.1
1 2	6 – 10	leaf green	on request	96.022.4055.7
1, 2	10 – 14	leaf green	on request	96.022.4155.7
	Round cable 6 –10	pebble gray	96.022.0050.8	96.022.4050.8
-, +	AS-i profile cable	pebble gray	96.022.0950.8	96.022.4950.8
	6 – 10	signal brown	96.022.0051.4	96.022.4051.4
	AS-i profile cable	signal brown	96.022.0951.4	96.022.4951.4
2, 1	Illumination cable 13.3x5.3 H05RNH2-F2 x 1.5 <sup>2</sup>	signal brown	96.022.0451.4	96.022.4451.4
	N, L  1, 2  -, +	6 – 10  N, L  10 – 14  Illumination cable 13.3x5.3  H05RNH2-F2 x 1.5²  6 – 10  1, 2  6 – 10  10 – 14  Round cable 6 – 10  AS-i profile cable  6 – 10  AS-i profile cable  11 – 14  AS-i profile cable  12, 1  Illumination cable 13.3x5.3	8 N, L  10 - 14	Section   Sect

Cable diameter in mm

<sup>&</sup>lt;sup>1)</sup> With wire protection available on request <sup>2)</sup> With 6.0 mm<sup>2</sup> wires, the pull and bending forces at the connector must be taken into consideration and compensated using suitable measures if required. See also chapter on Technical Data and eShop.

## Connectors, angled 90° for cables Ø 6 - 10 mm and 10 -14 mm

#### 55,5 **Female connector** Ø34,6 Unmounted with cable gland. 90° angle. 62, See the Technical Data for insulation strip lengths as well as the ferrules to be used. SW27 with spring clamp connection with screw connection1) Wire Ferrules Wire mm<sup>2</sup> 0.5 - 2.5 rigid rigid with without $0.75 - 6.0^{2}$ fine-stranded 0.5 - 1.5fine-stranded ferrules with ferrules without 0.75 - 1.5stranded stranded ferrules ferrules Application Coding Cable diameter in mm Color Part No. Part No. 96.023.0053.0 96.023.4053.0 light gray 6 - 10black 96.023.0053.1 96.023.4053.1 light gray 96.023.0153.0 96.023.4153.0 250V 10 - 14black 96.023.0153.1 96.023.4153.1 Illumination cable 13.3x5.3 light gray 96.023.0453.0 96.023.4453.0 H05RNH2-F2 x 1.52 black 96.023.0453.1 96.023.4453.1 Round cable 6-10 pebble gray 96.023.0050.8 96.023.4050.8 AS-i profile cable pebble gray 96.023.0950.8 96.023.4950.8

#### Male connector

~50/-120V

Unmounted with cable gland. 90° angle.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.



signal brown

signal brown

signal brown

6 - 10

AS-i profile cable

H05RNH2-F2 x 1.52

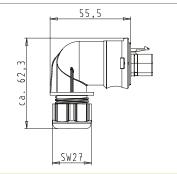
Illumination cable 13.3x5.3



96.023.0051.4

96.023.0951.4

96.023.0451.4



96.023.4051.4

96.023.4951.4

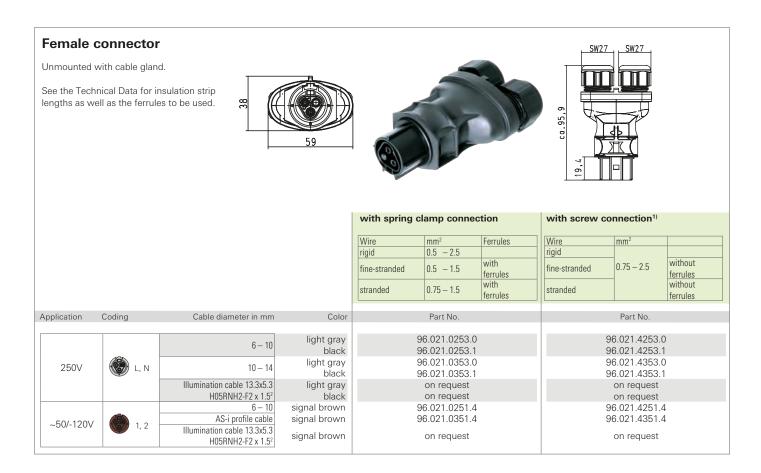
96.023.4451.4

with spring cl	amp connec	tion	with screw connection <sup>1)</sup>			
Wire	mm <sup>2</sup>	Ferrules	Wire	mm <sup>2</sup>		
rigid	0.5 - 2.5		rigid			
fine-stranded	0.5 - 1.5	with ferrules	fine-stranded	$0.75 - 6.0^{2}$	without ferrules	
stranded	0.75 – 1.5	with ferrules	stranded		without ferrules	

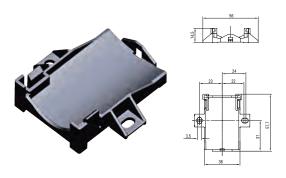
Application	Coding	Cable diameter in mm	Color	Part No.	Part No.
		6 – 10	light gray black	96.024.0053.0 96.024.0053.1	96.024.4053.0 96.024.4053.1
250V	( N, L	10 – 14	light gray black	96.024.0153.0 96.024.0153.1	96.024.4153.0 96.024.4153.1
		Illumination cable 13.3x5.3 H05RNH2-F2 x 1.5 <sup>2</sup>	light gray black	96.024.0453.0 96.024.0453.1	96.024.4453.0 96.024.4453.1
	-, +	Round cable 6 –10 AS-i profile cable	pebble gray pebble gray	96.024.0050.8 96.024.0950.8	96.024.4050.8 96.024.4950.8
~50/-120V	2, 1	6 – 10 AS-i profile cable Illumination cable 13.3x5.3 H05RNH2-F2 x 1.5 <sup>2</sup>	signal brown signal brown signal brown	96.024.0051.4 96.024.0951.4 96.024.0451.4	96.024.4051.4 96.024.4951.4 96.024.4451.4

<sup>&</sup>lt;sup>1)</sup> With wire protection available on request <sup>2)</sup> With 6.0 mm<sup>2</sup> wires, the pull and bending forces at the connector must be taken into consideration and compensated using suitable measures if required. See also chapter on Technical Data and eShop.

# Splitter connector, straight for cables Ø 6 – 10 mm and 10 –14 mm



#### Mounting plate for splitter connectors



Color	Part No.
gray	01.006.1553.0
■ black	01.006.1553.1

<sup>1)</sup> With wire protection available on request

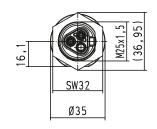
# M25 device connector straight, standard

#### Female connector

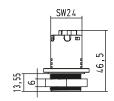
Correct positioning guaranteed due to flattened thread. Fastening with screws from outside.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.

For spacer rings for unlocking at the device connetor, see Accessories.









Application	Coding	Color
250V	<b>&amp;</b> L, N	light gray black
~50/-120V	+, -	pebble gray
~50/-120V	1, 2	signal brown

with spring	clamp conn	with screw connection <sup>1)</sup>			
Wire	mm <sup>2</sup>	Ferrules		Wire	mm <sup>2</sup>
rigid	0.5 - 2.5			rigid	
fine-stranded	0.5 - 1.5	with ferrules		fine-stranded	0.75 – 6.0
stranded	0.75 – 1.5 with ferrules			stranded	
Term. poles	2			Term. poles	1
Thread	M25 x 1.5			Thread	M25 x 1.5
Gland	nutside			Gland	nutside

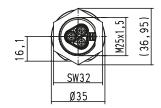
Wire	mm <sup>2</sup>	
rigid		
fine-stranded	0.75 - 6.0	without
	0.75 - 6.0	ferrules
stranded		ferrules
Term. poles	1	Torruics
Thread	M25 x 1.5	
Gland	outside	

Part No.	Part No.
96.021.1053.0 96.021.1053.1 96.021.1050.8	96.021.5053.0 96.021.5053.1 96.021.5050.8
96.021.1051.4	96.021.5051.4

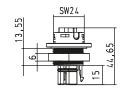
#### Male connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from outside. With locking device.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.







with screw connection1)



Application	Coding	Color
250V	N, L	light gray black
~50/-120V	-, +	pebble gray
~50/-120V	1, 2	signal brown

with spring o	ciamp conne	ection
Wire	mm <sup>2</sup>	Ferrules
rigid	0.5 - 2.5	
fine-stranded	0.5 - 1.5	with ferrules
stranded	0.75 – 1.5	with ferrules
Term. poles	2	
Thread	M25 x 1.5	
Gland	outside	

е	mm <sup>2</sup>	Ferrules		Wire	mm <sup>2</sup>	
d	0.5 - 2.5		Ш	rigid		
-stranded	0.5 - 1.5	with ferrules		fine-stranded	$0.75 - 6.0^{2}$	without ferrules
nded	0.75 – 1.5	with ferrules		stranded		without ferrules
m. poles	2		1	Term. poles	1	
ead	M25 x 1.5			Thread	M25 x 1.5	
nd	outside			Gland	outside	
			1			

r	Part No.	Part No.
	96.022.1053.0	96.022.5053.0
	96.022.1053.1	96.022.5053.1
	96.022.1050.8	96.022.5058.8
	96.022.1051.4	96.022.5051.4

<sup>1)</sup> With wire protection available on request

# M16 device connector straight, modular

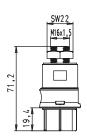
#### Female connector

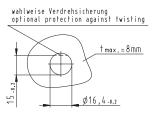
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









Å	Application	Coding	Color
	250V	L, N	light gray black
	~50/-120V	+, -	pebble gray
	~50/-1207	1, 2	signal brown

with spring ci	amp connec	tion
Wire	mm <sup>2</sup>	Ferrules
rigid	0.5 - 2.5	
fine-stranded	0.5 - 1.5	with ferrules
stranded	0.75 – 1.5	with ferrules
Term. poles	2	
Thread	M16 x 1.5	
Gland	inside	

Wire	mm <sup>2</sup>	
rigid		
fine-stranded	0.75 – 6.0	without ferrules
stranded		without ferrules
Term. poles	1	
Thread	M16 x 1.5	
Gland	inside	
	Part No.	

with screw connection1)

Part No.	Part No.
96.021.2153.0	96.021.6153.0
96.021.2153.1	96.021.6153.1
96.021.2150.8	96.021.6150.8
96.021.2151.4	96.021.6151.4

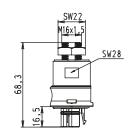
#### Male connector

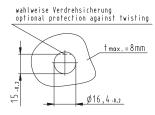
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. With locking device.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









Application	Coding	Color
250V	N, L	light gray black
~50/-120V	-, +	pebble gray
~50/-120V	1, 2	signal brown

with spring	clamp conn	ection
Wire	mm <sup>2</sup>	Ferrules
rigid	0.5 - 2.5	
fine-stranded	0.5 - 1.5	with ferrules
stranded	0.75 – 1.5	with ferrules
Term. poles	2	
Thread	M16 x 1.5	
Gland	inside	

with screw connection <sup>1)</sup>		
Wire	mm <sup>2</sup>	
rigid		
fine-stranded	0.75 – 6.0	without ferrules
stranded		without ferrules
Term. poles	1	
Thread	M16 x 1.5	
Gland	inside	

ı	Part No.	Part No.
	96.022.2153.0 96.022.2153.1 96.022.2150.8	96.022.6153.0 96.022.6153.1 96.022.6150.8
	96.022.2151.4	96.022.6151.4

<sup>1)</sup> With wire protection available on request

# M16 device connector angled 7°, modular

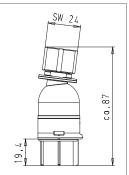
#### Female connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. With locking device.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









Wire	mm <sup>2</sup>	Ferrules
rigid	0.5 - 2.5	
fine-stranded	0.5 - 1.5	with ferrules
stranded	0.75 – 1.5	with ferrules
Term. poles	2	
Thread	M16 x 1.5	
Gland	inside	

with spring clamp connection

with screw	connection <sup>1)</sup>	
Wire	mm <sup>2</sup>	
rigid		
fine-stranded	0.75 – 6.0	without ferrules
stranded		without ferrules
Term. poles	1	
Thread	M16 x 1.5	
Gland	inside	

Application	Coaing	Color
250V	<b>&amp;</b> L, N	light gray black
~50/-120V	+, -	pebble gray
~50/-120V	1, 2	signal brown

Part No.
96.025.2153.0
96.025.2153.1
96.025.2151.4

Part No.
96.025.6153.0
96.025.6153.1
96.025.6150.8
96.025.6151.4

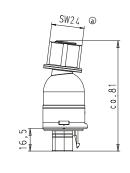
#### Male connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. With locking device.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









Application	Coding	Color
250V	N, L	light gray black
E0/120V	—, +	pebble gray
~50/-120V	1, 2	signal brown

Vire	mm <sup>2</sup>	Ferrules
igid	0.5 - 2.5	
fine-stranded	0.5 - 1.5	with ferrules
tranded	0.75 – 1.5	with ferrules
erm. poles	2	
Thread	M16 x 1.5	
Gland	inside	

Wire	mm <sup>2</sup>	
rigid		
fine-stranded		without
	0.75 – 6.0	ferrules
stranded		without
		ferrules
Term. poles	1	
Thread	M16 x 1.5	
Gland	inside	

with screw connection1)

r	Part No.	Part No.
	96.026.2153.0	96.026.6153.0
	96.026.2153.1	96.026.6153.1
	96.026.2150.8	96.026.6150.8
	96.026.2151.4	96.026.6151.4

<sup>1)</sup> With wire protection available on request

# M20 device connector straight, modular

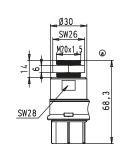
#### Female connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









Wire	mm <sup>2</sup>	Ferrules
rigid	0.5 - 2.5	
fine-stranded	0.5 - 1.5	with ferrules
stranded	0.75 – 1.5	with ferrules
Term. poles	2	
Thread	M20 x 1.5	
Gland	inside	

with spring clamp connection

Wire	mm <sup>2</sup>	
rigid		
fine-stranded	0.75 – 6.0	without
stranded		without ferrules
Term. poles	1	
Thread	M20 x 1.5	
Gland	inside	

Application	Coding	Color
250V	<b>&amp;</b> L, N	light gray black
~50/-120V	+, -	pebble gray
~50/-120V	1, 2	signal brown

Part No.
96.021.2053.0 96.021.2053.1
00.021.2000.1
96.021.2051.4

Part No.
96.021.6053.0
96.021.6053.1
96.021.6050.8
96.021.6051.4

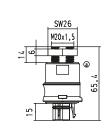
#### Male connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. With locking device.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









Application	Coding	Color
250V	L, N	light gray black
~50/-120V	+, -	pebble gray
~50/-120V	1, 2	signal brown

	with spring clamp connection				
	Wire	mm <sup>2</sup>	Ferrules		
ı	rigid	0.5 - 2.5			
	fine-stranded	0.5 - 1.5	with ferrules		
	stranded	0.75 – 1.5	with ferrules		
l	Term. poles	2			
l	Thread	M20 x 1.5			
I	Gland	inside			

Wire	mm <sup>2</sup>	
rigid		
fine-stranded		without
	0.75 – 6.0	ferrules
stranded		without
Stratiueu		ferrules
Term. poles	1	
Thread	M20 x 1.5	
Gland	inside	

Part No.	Part No.
96.022.2053.0 96.022.2053.1	96.022.6053.0 96.022.6053.1 96.022.6050.8
96.022.2051.4	96.022.6051.4

<sup>1)</sup> With wire protection available on request

# M20 device connector angled 90°, modular

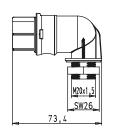
#### Female connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. 90° angle.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









Vire	mm <sup>2</sup>	Ferrules
rigid	0.5 - 2.5	
fine-stranded	0.5 - 1.5	with ferrules
stranded	0.75 – 1.5	with ferrules
Term. poles	2	
Thread	M20 x 1.5	
Gland	inside	

with screw	connection <sup>1)</sup>	
Wire	mm <sup>2</sup>	
rigid		
fine-stranded	0.75 – 6.0	without ferrules
stranded		without ferrules
Term. poles	1	
Thread	M20 x 1.5	
Gland	inside	

Application	Coding	Color
250V	<b>ℰ</b> L, N	light gray black
~50/-120V	+, -	pebble gray
~50/-120V	1, 2	signal brown

i di tivo.
96.023.2053.0
96.023.2053.1
96.023.2050.8
96.023.2051.4

Part No.				
96.023.6053.0 96.023.6053.1				
96.023.6050.8				
96.023.6051.4				

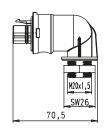
#### Male connector

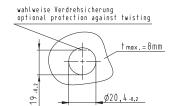
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. With locking device. 90° angle.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









Application	Coding	Color
250V	<b>&amp;</b> L, N	light gray black
FO/ 120V	+, -	pebble gray
~50/-120V	1, 2	signal brown

	with spring o	lamp conne	with scr	with screw connection <sup>1)</sup>		
ı	Wire	mm <sup>2</sup>	Ferrules	Wire	mm <sup>2</sup>	
ı	rigid	0.5 - 2.5		rigid		
	fine-stranded	0.5 - 1.5	with ferrules	fine-strand	ed 0.75 – 6.0	
	stranded	0.75 – 1.5	with ferrules	stranded		
ı	Term. poles	2		Term. poles	1	
ı	Thread	M20 x 1.5		Thread	M20 x 1.5	
ı	Gland	inside		Gland	inside	

Ferrules	Wire	mm <sup>2</sup>	
	rigid		
with ferrules	fine-stranded	0.75 – 6.0	without ferrules
with ferrules	stranded	0.70	without ferrules
	Term. poles	1	
	Thread	M20 x 1.5	
	Gland	inside	

Part No.	Part No.
96.024.2053.0	96.024.6053.0
96.024.2053.1	96.024.6053.1
96.024.2050.8	96.024.6050.8
96.024.2051.4	96.024.6051.4

<sup>1)</sup> With wire protection available on request

# M25 device connector angled 90°, modular

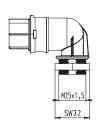
#### Female connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. 90° angle.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









Application	Coding	Color
	_	
250V	<b>&amp;</b> L, N	light gray black
~50/-120V	+, -	pebble gray
~50/-120V	1, 2	signal brown

with spring clamp connection		
Wire	mm²	Ferrules
rigid	0.5 - 2.5	
fine-stranded	0.5 - 1.5	with ferrules
stranded	0.75 – 1.5	with ferrules
Term. poles	2	
Thread	M25 x 1.5	
Gland	inside	

Wire	mm <sup>2</sup>	
rigid		
fine-stranded	0.75 – 6.0	without
illie-strailueu		ferrules
stranded		without
Stratiaca		ferrules
Term. poles	1	
Thread	M25 x 1.5	
Gland	inside	

Part No.	Part No.
96.023.2253.0	96.023.6253.0
96.023.2253.1	96.023.6253.1
96.023.2250.8	96.023.6250.8
96.023.2251.4	96.023.6251.4

#### Male connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. With locking device. 90° angle.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









Application	Coding	Color
250V	L, N	light gray black
F0/ 120//	+, -	pebble gray
~50/-120V	1, 2	signal brown

with spring	clamp conn	ection	with	screw o	connection <sup>1)</sup>
Wire	mm <sup>2</sup>	Ferrules	Wire		mm <sup>2</sup>
rigid	0.5 - 2.5		rigid		
fine-stranded	0.5 - 1.5	with ferrules	fine-stra	anded	0.75 - 6.0
stranded	0.75 – 1.5	with ferrules	strande	d	
Term. poles	2		Term. p	oles	1
Thread	M25 x 1.5		Thread		M25 x 1.5
Gland	inside		Gland		inside

Wire	mm <sup>2</sup>	
rigid		
fine-stranded	0.75 – 6.0	without ferrules
stranded		without ferrules
Term. poles	1	
Thread	M25 x 1.5	
Gland	inside	

Part No.	Part No.
00.004.0050.0	00.004.0050.0
96.024.2253.0 96.024.2253.1	96.024.6253.0 96.024.6253.1
96.024.2250.8	96.024.6250.8
96.024.2251.4	96.024.6251.4

<sup>1)</sup> With wire protection available on request

Rated values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Wire strip length	(open cable end)	9 mm

Pull relief	shrinkage tube
Interlock	integrated
Color cable	black
Color shrinkage tube	black

~50/-120V

signal brown

~50/-120V

signal brown

1 = BU 2 = BN

~50/-120V pebble gray

~50/-120V

pebble gray

- = BU + = BN

# Connection cables female - male

		N = BU L = BN	1 = BU 2 = BN	- = BU + = BN
Cable	Length m	Part No.	Part No.	Part No.
	1	96.222.1000.1	96.222.1002.4	on request
	2	96.222.2000.1	96.222.2002.4	
PVC cable	3	96.222.3000.1	96.222.3002.4	
H05VV-F	4	96.222.4000.1	96.222.4002.4	
	5	96.222.5000.1	96.222.5002.4	
containing halogen	6	96.222.6000.1	96.222.6002.4	
0 0	7	96.222.7000.1	96.222.7002.4	
	8	96.222.8000.1	96.222.8002.4	

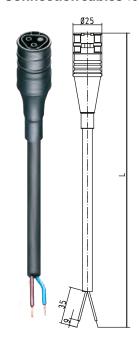
250V

black

Cable	Length m	Part No.	Part No.	Part No.
	1	96.222.1030.1	96.222.1032.4	on request
	2	96.222.2030.1	96.222.2032.4	
Rubber-sheathed cable	3	96.222.3030.1	96.222.3032.4	
H07RN-F	4	96.222.4030.1	96.222.4032.4	
	5	96.222.5030.1	96.222.5032.4	
containing halogen	6	96.222.6030.1	96.222.6032.4	
	7	96.222.7030.1	96.222.7032.4	
	8	96.222.8030.1	96.222.8032.4	

2-pole connectors – one pole is not configured.

#### Connection cables female - free end



Cable	Length m	Part No.	Part No.	Part No.
	1	96.222.1003.1	96.222.1007.4	on request
	2	96.222.2003.1	96.222.2007.4	
PVC cable	3	96.222.3003.1	96.222.3007.4	
H05VV-F	4	96.222.4003.1	96.222.4007.4	
	5	96.222.5003.1	96.222.5007.4	
containing halogen	6	96.222.6003.1	96.222.6007.4	
	7	96.222.7003.1	96.222.7007.4	
	8	96.222.8003.1	96.222.8007.4	

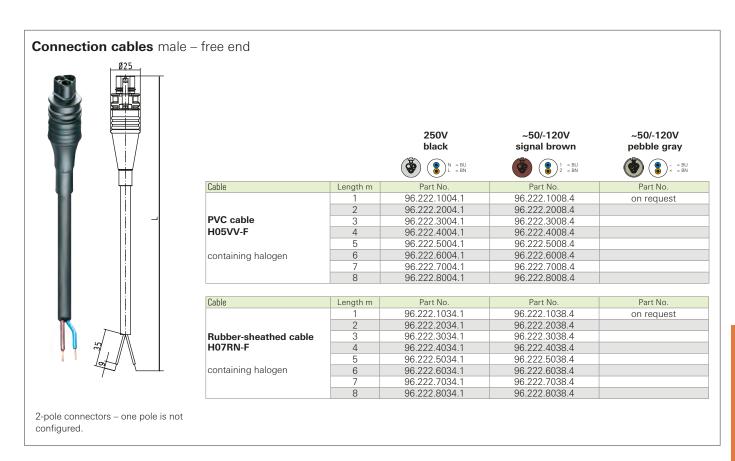
250V

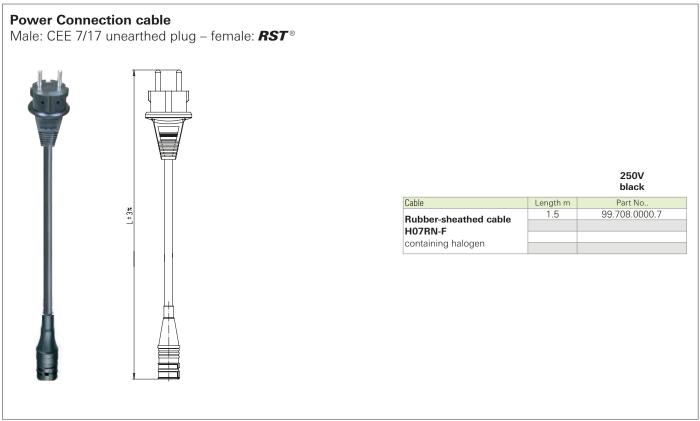
black

N = BU L = BN

Cable	Length m	Part No.	Part No.	Part No.
	1	96.222.1033.1	96.222.1037.4	on request
	2	96.222.2033.1	96.222.2037.4	
Rubber-sheathed cable	3	96.222.3033.1	96.222.3037.4	
H07RN-F	4	96.222.4033.1	96.222.4037.4	
	5	96.222.5033.1	96.222.5037.4	
containing halogen	6	96.222.6033.1	96.222.6037.4	
	7	96.222.7033.1	96.222.7037.4	
	8	96.222.8033.1	96.222.8037.4	

2-pole connectors – one pole is not configured.

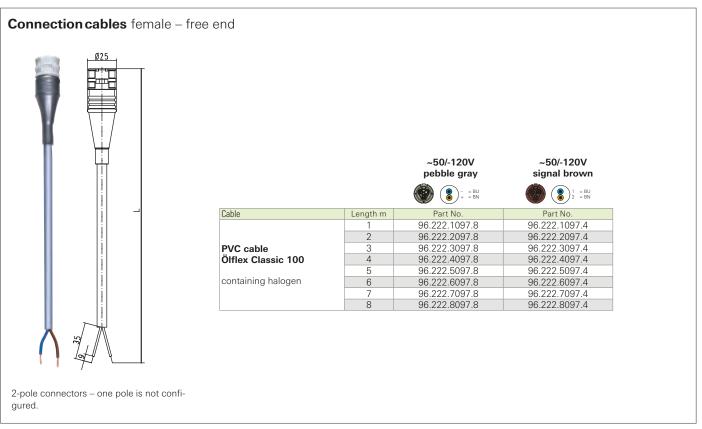


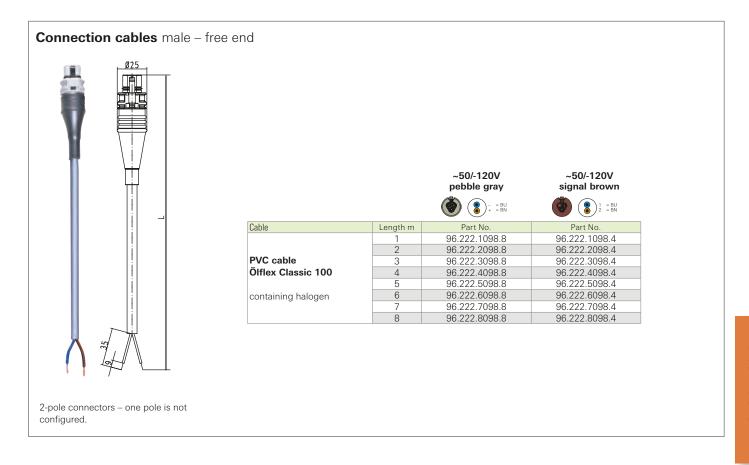


Rated values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Wire strip length	(open cable end)	9 mm

Pull relief	shrinkage tube
Interlock	integrated
Color cable	gray
Color shrinkage tube	black

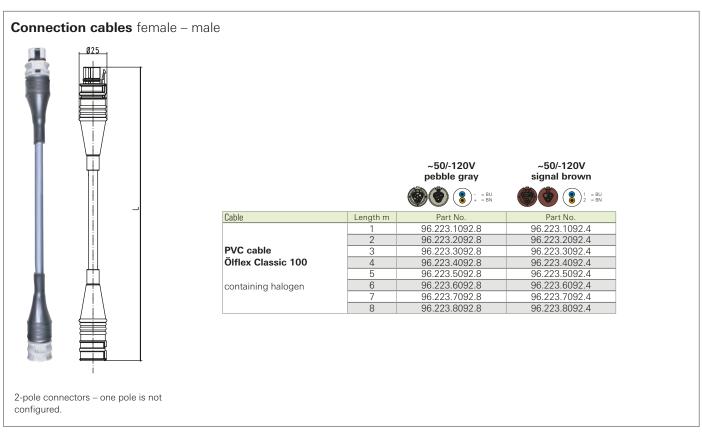




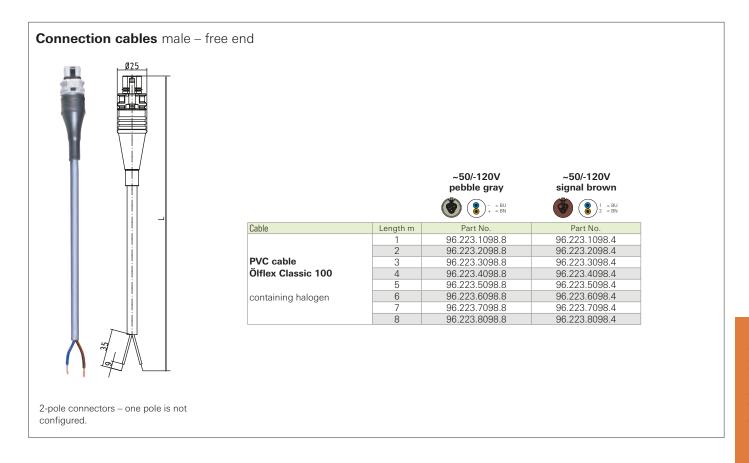


Rated values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Wire strip length	(open cable end)	9 mm

Pull relief	shrinkage tube
Interlock	integrated
Color cable	gray
Color shrinkage tube	black





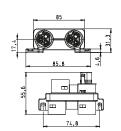


## **Distribution block**

Distribution block 1I/30 (parallel connection), Interlock for protection class II, AS-i or LEDs

Yes



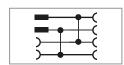


#### with fastening option

Color	Application	Pole marking	Input	Outputs	Part No.
■ black	250V	L, N	1	3	96.020.0153.1
■ light grey	250V	L, N	1	3	96.020.0153.0
pebble gray	~50/-120V	+, -	1	3	96.020.0150.8
signal brown	~50/-120V	1, 2	1	3	96.020.0151.4





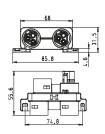


#### without fastening option

Color	Application	Pole marking	Input	Outputs	Part No.
■ black	250V	L, N	1	3	96.020.0253.1
■ light grey	250V	L, N	1	3	96.020.0253.0
■ pebble gray	~50/-120V	+, -	1	3	96.020.0250.8
■ signal brown	~50/-120V	1, 2	1	3	96.020.0251.4

#### Distribution block 1 I/3 O (series connection) for power LEDs

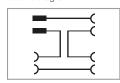




#### with fastening option

Color	Application	Pole marking	Input	Outputs	Part No.
■ signal brown	~50/-120V	1, 2	1	3	99.910.0000.7



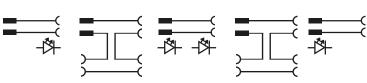




Color	Application	Pole marking	Part No.
■ signal brown	~50/-120V	1, 2	99.537.0000.7

For jumpering od unused slots on the series distribution unit





## **Distribution unit**

#### RST compact distribution unit 11/20

Dimensions

104 x 162 x 57.2 mm

Fitted as required with Pre-wired with

Mounting option

M25 device connectors 2-pole

2.5 mm<sup>2</sup> (halogen free)

Yes

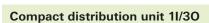




Input

Part No.

Outputs 2, RST20i2 1, RST20i2 99.942.0000.7



Dimensions

104 x 162 x 57.2 mm

Fitted as required with Pre-wired with

2.5 mm<sup>2</sup> (halogen free)

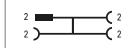
Mounting option



Color	Input	Outputs	Part No.
■ light gray	1, RST20i2	3, RST20i2	99.990.0000.7
■ black	1, RST20i2	3, RST20i2	upon request

M25 device connectors 2-pole

#### Circuit diagram



#### Multi distribution unit 11/70

Dimensions

104 x 162 x 96 mm

Fitted as required with Pre-wired with

Fuses

Color ■ signal brown
■ black

M25 device connectors 2-pole 2,5 mm<sup>2</sup> (halogen free)

Input 1, RST20i2

1, RST20i2

Outputs 7, RST20i2 7, RST20i2

Part No. 99.946.0000.7

99.988.0000.7

6.3 or 10A can be integrated



Circuit diagram	
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2

# Connector for pole socket, straight For cables Ø 6 - 10 mm and Illumination cable 13.3 x 5.3

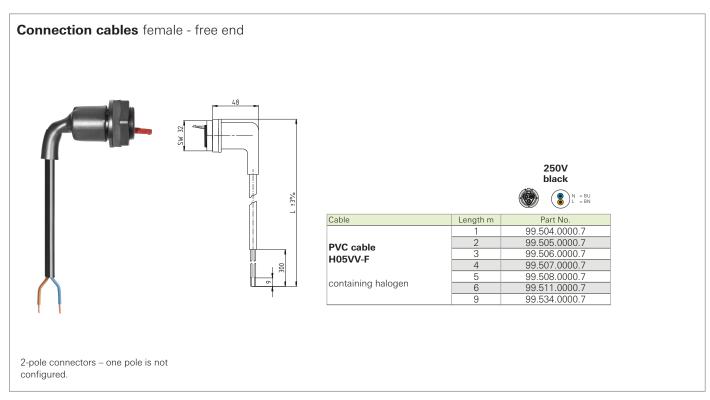


# Cable assembly for pole socket

Cable 2 x 1.5 mm<sup>2</sup>; 16 A

Rated values		
Wire ends	ultrason. welded	
Sheath strip length	30 mm	
Wire strip length	9 mm	

Pull relief	shrinkage tube
Interlock	Integrated
Color cable	black
Color shrinkage tube	black





# Standard variant for network applications – polyphase systems, switching applications 250 V and low voltage

### **Application example**



#### General

With the 3-pole connectors, there are four available variants: Three versions for applications up to 250/400V (e.g. general network applications, switching applications, applications for multiphase systems) and a version for extra-low voltages up to ~50/-120V. All connectors are mechanically coded. This means that only associated pairs of male and female can be connected with the correct polarity. You therefore have the security of a clear separation of different applications without having to redo any incorrect connections.

The color of the connectors indicates the links that belong together.

#### Coding

Coding									
For daily updates visit the website at				Application	250V		250/400V	250/400V	~50/-120V
Assembly instruc	http://leshop.wieland-electric.com. Assembly instructions and other technical information can be found in the Technical Data or in eShop.					L, N, 😩		1, 2, 3	1, 2, 🖶
				Mechanical coding					
Name	Description	Connection style	Strain relief housing	Connection points per pole	light gray	black	leaf green	light blue	signal brown
Connector	1 x cable entry	Screw Spring clamp Crimp	yes	1	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Connector	2 x cable entry	Screw Spring clamp Crimp	yes	2	$\checkmark$	<b>√</b>	<b>√</b>		
	Distribution block 11/30				$\overline{}$	$\checkmark$	<b>V</b>	$\checkmark$	$\overline{}$
Distribution units	RST compact distribution unit / multi-distribution unit				on request	on request	on request	on request	on request
	Individual distribution box				on request	on request	on request	on request	on request
	M16 device connector, modular, straight				$\sqrt{}$	$\checkmark$	$\checkmark$	$\sqrt{}$	$\sqrt{}$
	M16 device connector, modular, angled 7°				<b>V</b>	<b>V</b>	<b>V</b>	<b>V</b>	<b>V</b>
Device	M25 device connector, standard				<b>V</b>	<b>V</b>	V	<b>√</b> .	<b>√</b> .
connectors	M20 device connector, standard				$\checkmark$	$\checkmark$	$\sqrt{}$	$\checkmark$	$\checkmark$
	M20 device connector, modular, straight				$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
	M25 device connector, modular, angled				<b>V</b>	$\sqrt{}$	<b>V</b>	$\sqrt{}$	$\sqrt{}$
	Connection cable Male – Free end	pre- assembled	pre- assembled	pre- assembled	<b>V</b>	$\sqrt{}$	<b>V</b>		$\sqrt{}$
	Connection cable	pre-	pre-	pre-	1		1		
Cable assemblies	Female – Free end Extension cable	assembled pre-	assembled pre-	assembled pre-					
	Male – Female	assembled	assembled	assembled	V	<u> </u>	V		V
	Connection cable Schuko – Female	pre- assembled	pre- assembled	pre- assembled	$\overline{}$	$\checkmark$			

## Connectors, straight for cables Ø 6 - 10 mm and 10 - 14 mm

6 – 10

10 –14

6 – 10

10 –14

light blue

signal-

brown

#### **Female connector** Unmounted with cable gland. See the Technical Data for insulation strip lengths as well as the ferrules to be used. with spring clamp conn. with screw connection1) with crimp connection Wire Wire Wire mm<sup>2</sup> 0.5 - 2.5 0.5 - 1.5 fine-stranded rigid 0.75 - 4.0rigid $0.75 - 6.0^{2}$ fine-stranded fine-stranded stranded stranded 0.75 - 1.5Application Coding Cable diameter in mm Part No. Part No. Part No. 96.031.0053.0 96.031.4053.0 96.131.0053.0 light gray 6 – 10 96.031.0053.1 96.031.4053.1 96.131.0053.1 light gray 96.031.0153.0 96.031.4153.0 96.131.0153.0 10 - 1496.031.0153.1 96.031.4153.1 96.131.0153.1 black 250/400V 6 – 10 96.031.0055.7 96.031.4055.7 leaf green 96.031.0155.7 96.031.4155.7 10 –14

#### Male connector

~50/-120V

Unmounted with cable gland and locking device.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.



with spring clamp conn

96.031.0053.9

96.031.0153.9

96.031.0051.4

96.031.0151.4

Fine-stranded and stranded wires only with

ferrules (see accessories)



with screw connection1)

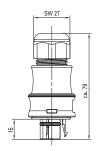
96.031.4053.9

96.031.4153.9

96.031.4051.4

96.031.4151.4

Fine-stranded and stranded wires without



with crimp connection

Contacts separately under Accessories

				with spring clamp conn.	With Sciew connection	with thinp toimetion
				Wire mm <sup>2</sup>	Wire mm <sup>2</sup>	Wire mm <sup>2</sup>
				rigid 0.5 – 2.5	rigid	fine-stranded 0.75 – 4.0
				fine-stranded 0.5 – 1.5	fine-stranded 0.75 – 6.0 <sup>2)</sup>	
				stranded 0.75 – 1.5	stranded	
Application	Coding	Cable diameter in mm	Color	Part No.	Part No.	Part No.
		0 10	light gray	96.032.0053.0	96.032.4053.0	96.132.0053.0
	8 N, L,	6 – 10	black	96.032.0053.1	96.032.4053.1	96.132.0053.1
	<b>(</b> ⊕ N, L,	10 – 14	light gray	96.032.0153.0	96.032.4153.0	96.132.0153.0
250/400V		10 - 14	black	96.032.0153.1	96.032.4153.1	96.132.0153.1
250/4000	2, 1,	6 – 10	leaf green	96.032.0055.7	96.032.4055.7	
	•	10 –14	lear green	96.032.0155.7	96.032.4155.7	
	2,1	6 – 10	light blue	96.032.0053.9	96.032.4053.9	
	3	10 –14	light blue	96.032.0153.9	96.032.4153.9	
~50/-120V	2, 1,	6 – 10	signal-	96.032.0051.4	96.032.4051.4	
~30/-120 V	•	10 –14	brown	96.032.0151.4	96.032.4151.4	
				Fine-stranded and stranded wires <b>only with</b> ferrules (see accessories)	Fine-stranded and stranded wires <b>without</b> ferrules	Contacts separately under Accessories.

## Connectors, angled 90° for cables Ø 6 - 10 mm and 10 - 14 mm

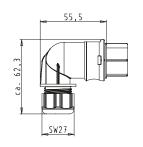
#### **Female connector**

Unmounted with cable gland. 90° angle.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.







				'
Application	Coding	Cable diameter in mm	Color	
L, N,		6 – 10	light gray black	
250/400V	10 – 14	10 – 14	light gray black	
250/4000	1, 2,	6 – 10 10 –14	leaf green	
	1, 2,	6 – 10 10 –14	light blue	
~50/-120V	1, 2,	6 – 10 10 –14	signal- brown	

Wire	mm <sup>2</sup>	
rigid	0.5 - 2.5	
fine-stranded	0.5 - 1.5	
stranded	0.75 – 1.5	
Part	No.	
96.033.0053.0 96.033.0053.1		

with spring clamp conn.

Part No.	
96.033.0053.0 96.033.0053.1 96.033.0153.0 96.033.0153.1 96.033.0055.7 96.033.0155.7	
96.033.0053.9 96.033.0153.9	
96.033.0051.4 96.033.0151.4	
Fine-stranded and stranded wires <b>only with</b> ferrules (see accessories)	Fine-s

	mm <sup>2</sup>
$0.75 - 6.0^{2}$	$0.75 - 6.0^{2}$
	0.70 0.0
Part	No.
	Part

with screw connection1)

Wire	mm²
fine-stranded	0.75 - 4.0
Part	No.
00 100	.0053.0
96.133	.0053.1
96 133	0153.0

with crimp connection

96.033.4053.0	96.133.0053.0
96.033.4053.1	96.133.0053.1
96.033.4153.0	96.133.0153.0
96.033.4153.1	96.133.0153.1
96.033.4055.7	
96.033.4155.7	
96.033.4053.9	
96.033.4153.9	
96.033.4051.4	
96.033.4151.4	
Fine-stranded and stranded wires without	
ferrules	Contacts separately under Accessories.

#### Male connector

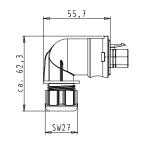
Unmounted with cable gland and locking device. 90° angle.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.





with screw connection1)



with crimp connection

mm<sup>2</sup>

0.75 - 4.0

Wire

fine-stranded

					**110	1111111
					rigid	0.5 - 2.5
					fine-stranded	0.5 - 1.5
					stranded	0.75 - 1.5
,	Application	Coding	Cable diameter in mm	Color	Part	No.
		₩ N I	6 – 10	light gray black		.0053.0 .0053.1
	250/400V	<b>®</b> N, L,	10 – 14	light gray black		.0153.0 .0153.1
		2, 1,	6 – 10 10 –14	leaf green		.0055.7 .0155.7
		2, 1	6 – 10 10 –14	light blue		.0053.9 .0153.9
	~50/-120V	2, 1,	6 – 10 10 –14	signal- brown		.0051.4 .0151.4
					Fine-stranded and strategraphs ferrules (see accessories	

Wire	mm <sup>2</sup>
rigid	0.5 - 2.5
fine-stranded	0.5 - 1.5
stranded	0.75 - 1.5

with spring clamp conn

mm <sup>2</sup>	Wire	mm <sup>2</sup>	
0.5 - 2.5	rigid		
ded 0.5 - 1.5	fine-stranded	$0.75 - 6.0^{2}$	
0.75 – 1.5	stranded		
_			
Part No.	Part No.		
Part No.	Part No.		
96.034.0053.0	96.034.4053.0		

	stranded	
	Part No.	Part No.
	96.034.4053.0 96.034.4053.1	96.134.0053.0 96.134.0053.1
	96.034.4153.0 96.034.4153.1	96.134.0153.0 96.134.0153.1
	96.034.4055.7 96.034.4155.7	
	96.034.4053.9 96.034.4153.9	
	96.034.4051.4 96.034.4151.4	
with	Fine-stranded and stranded wires <b>without</b> ferrules	Contacts separately under Accessories.

# Connectors, straight for cables Ø 13 – 18 mm



#### Male connector

Unmounted with cable gland and locking device.

See Technical Data for sheath and insulation strip



with screw connection1

mm<sup>2</sup>

Wire

Fine-stranded and stranded wires without ferrules

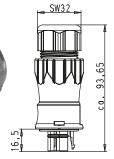


Wire

Contacts separately under Accessories

with crimp connection

mm<sup>2</sup>



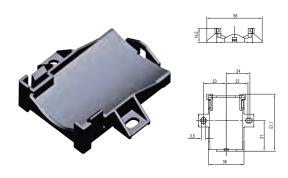
				rigid fine-stranded stranded	$0.75 - 6.0^{2}$	without ferrules without ferrules	fine-stranded	0.75 – 4.0	
Application	Coding	Cable diameter in mm	Color		Part No.			Part No.	
	<b>(</b> N, L, ⊕	13 –18	light gray black		96.032.4553 96.032.4553			96.132.4553 96.132.4553	
250/400V 22.1, 13 –18 leaf green 96.032.4555.7									
	2,1	13 –18	light blue		96.032.4553	1.9			
		,							
				Fine-stranded and s	stranded wires <b>without</b>	ferrules	Contacts separatel	y under Accessories.	

# Splitter connector, straight for cables Ø 6 – 10 mm and 10 – 14 mm



Fine-stranded and stranded wires only with ferrules (see accessories)

#### Mounting plate for splitter connectors



Color	Part No.
gray	01.006.1553.0
■ black	01.006.1553.1

Fine-stranded and stranded wires without ferrules

<sup>1)</sup> With wire protection available on request 101

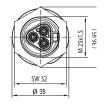
# M25 device connector straight, standard

#### **Female connector**

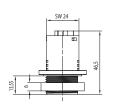
Correct positioning guaranteed due to flattened thread. Fastening with screws from outside.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.

For the spacer rings for unlocking the device connectors, see Accessories.









with spring clamp conn.			
Wire	mm <sup>2</sup>		
rigid	0.5 - 2.5		
fine-stranded	0.5 - 1.5		
stranded	0.75 - 1.5		
Term. poles	2		
Thread	M25 x 1.5		
Gland	outside		

Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 - 6.0
stranded	
Term. poles	1
Thread	M25 x 1.5
Gland	outside

Part No

with screw connection

with crimp of	connection	
Wire	mm <sup>2</sup>	
fine-stranded	0.75 - 4.0	
Term. poles	1	
Thread	M25 x 1.5	
Gland	outside	

Application	Coding	Color
	<b>(</b> L, N, ⊕	light gray black
250/400V	1, 2, 🕀	leaf green
	1, 2, 3	light blue
~50/-120V	1, 2, 🖶	signal brown

	Part No.		
ŭ	6.031.1053.0		
9	6.031.1053.1		
9	6.031.1055.7		
9	6.031.1053.9		
9	6.031.1051.4		
Fine-stranded and stranded wires only with			
ferrules (see accessories)			

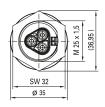
	Tartivo.	Tartivo.
	96.031.5053.0	96.131.1053.0
	96.031.5053.1	96.131.1053.1
	00.001.0000.1	00.101.1000.1
	96.031.5055.7	96.131.1055.7
	96.031.5053.9	
	30.031.3033.3	
	00 004 5054 4	
	96.031.5051.4	
Fine-stranded and stranded wires without		
	ferrules	Contacts separately under Accessories.
		<u> </u>

Part No.
96.131.1053.0 96.131.1053.1
96.131.1055.7

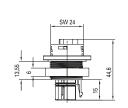
#### Male connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from outside. With locking device.

See the Technical Data for insulation strip lengths.









Wire	mm <sup>2</sup>
rigid	0.5 - 2.5
fine-stranded	0.5 - 1.5
stranded	0.75 - 1.5
Term. poles	2
Γhread	M25 x 1.5
Gland	outside

with screw co	onnection
Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 - 6.0
stranded	
Term. poles	1
Thread	M25 x 1.5
Gland	outside

with chilip c	
Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M25 x 1.5
Gland	outside

with crimp connection

	,		
pplication	Coding		Color
	475		light grov
	(4)	N, L, 🖶	light gray black
250/400V		2, 1, 😩	leaf green
		2, 1, 3	light blue
~50/-120V		2, 1, 🖶	signal brown

Part No.
96.032.1053.0 96.032.1053.1
96.032.1055.7
96.032.1053.9
96.032.1051.4
Fine-stranded and stranded wires <b>only with</b> ferrules (see accessories)

Part No.	Part No.
96.032.5053.0	96.132.1053.0
96.032.5053.1	96.132.1053.1
96.032.5055.7	96.132.1055.7
30.032.3033.7	30.132.1033.7
96.032.5053.9	
30.032.3033.3	
96.032.5051.4	
30.032.3031.4	
Fine-stranded and stranded wires without	
ferrules	Contacts separately under Accessories.

# M20 device connector straight, modular

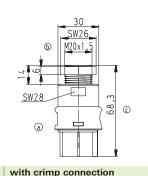
#### **Female connector**

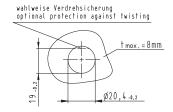
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









ection with screv	v connection
Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 - 6.0
stranded	
Term. poles	1
Thread	M20 x 1.5
Gland	inside
	Wire rigid fine-stranded stranded Term. poles Thread

	Wire	mm <sup>2</sup>
	rigid	
	fine-stranded	0.75 - 6.0
	stranded	
	Term. poles	1
	Thread	M20 x 1.5
	Gland	inside

Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M20 x 1.5
Gland	inside

Application	Coding	Color
	<b>(</b> L, N, ⊕	light gray black
250/400V	1, 2, 😩	leaf green
	1, 2, 3	light blue
~50/-120V	1, 2, 🖶	signal brown
		,

Part No.			
96.031.2053.0			
96.031.2053.1			
96 031 2055 7			
90.031.2033.7			
96 031 2053 9			
90.031.2055.9			
96 031 2051 4			
96.031.2051.4			
Fine-stranded and stranded wires <b>only with</b> errules (see accessories)			

	Part No.	
	96.031.6053.0 96.031.6053.1	
	96.031.6055.7	
	96.031.6053.9	
	96.031.6051.4	
Fine-stranded and stranded wires <b>without</b> ferrules		

Part No.
96.131.2053.0 96.131.2053.1
Contacts separately under Accessories.

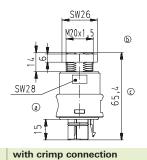
#### Male connector

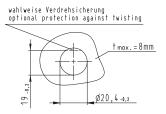
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. With locking device.

See the Technical Data for insulation strip lengths.









Wire	mm <sup>2</sup>
rigid	0.5 - 2.5
fine-stranded	0.5 - 1.5
stranded	0.75 - 1.5
Term. poles	2
Thread	M20 x 1.5
Gland	inside

with spring clamp connection		with screw connection	
Wire	mm <sup>2</sup>	Wire	mm <sup>2</sup>
rigid	0.5 - 2.5	rigid	
fine-stranded	0.5 - 1.5	fine-stranded	0.75 – 6.0
stranded	0.75 – 1.5	stranded	
Term. poles	2	Term. poles	1
Thread	M20 x 1.5	Thread	M20 x 1.5
Gland	inside	Gland	inside

Fine-stranded and stranded wires

Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M20 x 1.5
Gland	inside

Application	Coding		Color
	<b>(4)</b>	N, L, 😩	light gray black
250/400V		2, 1, 🖶	leaf green
		2, 1, 3	light blue
~50/-120V		2, 1, 🖶	signal brown

Part No.
96.032.2053.0
96.032.2053.1
96.032.2055.7
96.032.2053.9
96.032.2051.4
<u>-                                   </u>
Fine-stranded and stranded wires only with ferrules (see accessories)

Part No.	Part No.
96.032.6053.0 96.032.6053.1	96.132.2053.0 96.132.2053.1
96.032.6055.7	
96.032.6053.9	
96.032.6051.4	
d and stranded wires <b>without</b>	Contacts senarately under Accessories

# M16 device connector straight, modular

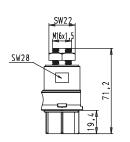
#### **Female connector**

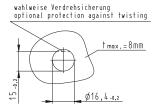
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









with spring clamp connection			
Wire	mm <sup>2</sup>		
rigid	0.5 - 2.5		
fine-stranded	0.5 - 1.5		
stranded	0.75 - 1.5		
Term. poles	2		
Thread	M16 x 1.5		
Gland	inside		

	Wire	mm <sup>2</sup>	
	rigid		
	fine-stranded	0.75 — 6.0	
	stranded		
	Term. poles	1	
	Thread	M16 x 1.5	
	Gland	inside	

with screw connection

with crimp connection		
Wire	mm2	
fine-stranded	0.75 - 4.0	
Term. poles	1	
Thread	M16 x 1.5	
Gland	inside	

Application	Coding	Color
	<b>L</b> , N, ⊕	light gray black
250/400V	1, 2, 😩	leaf green
	1, 2, 3	light blue
~50/-120V	1, 2, 🖶	signal brown

Part	No.
96.031	.2153.0
96.031	.2153.1
00.001	1.2100.1
96.031	2155.7
00.001	.2100.7
96.031	.2153.9
06.001	2151 4
90.031	1.2151.4
Fine-stranded and stra	nded wires only with
ferrules (see accessorie	
	/

Part No.	
96.031.6153.0 96.031.6153.1	
96.031.6155.7	
96.031.6153.9	
96.031.6151.4	
Fine-stranded and stranded wires <b>without</b> ferrules	

Part No.
96.131.2153.0 96.131.2153.1

Contacts separately under Accessories.

#### Male connector

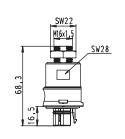
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. With locking device.

See the Technical Data for insulation strip lengths.





with screw connection





with spring ciai	np connection
Wire	mm <sup>2</sup>
rigid	0.5 - 2.5
fine-stranded	0.5 - 1.5
stranded	0.75 - 1.5
Term. poles	2
Thread	M16 x 1.5
Gland	inside

mm <sup>2</sup>
0.75 - 6.0
1
M16 x 1.5
inside

with crimp co	nnection
Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M16 x 1.5
Gland	inside

A 11	0 1	0.1
Application	Coding	Color
	N, L, ⊕	light gray black
250/400V	2, 1, 😩	leaf green
	2, 1, 3	light blue
~50/-120V	2, 1, 😩	signal brown

Part No.	Part N
96.032.2153.0 96.032.2153.1	96.032.6 96.032.6
96.032.2155.7	96.032.6
96.032.2153.9	96.032.6
96.032.2151.4	96.032.6
Fine-stranded and stranded wires <b>only with</b> ferrules (see accessories)	Fine-stranded and strande ferrules

Part No.	Part No.
96.032.6153.0 96.032.6153.1	96.132.2153.0 96.132.2153.1
96.032.6155.7	
96.032.6153.9	
96.032.6151.4	
Fine-stranded and stranded wires <b>without</b> ferrules	Contacts separately under Accessories.

# M16 device connector angled 7°, modular

#### **Female connector**

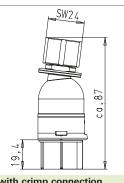
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. Angled 7°, thread M16.

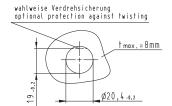
See the Technical Data for insulation strip lengths as well as the ferrules to be used.





with screw connection





Wire	mm <sup>2</sup>
rigid	0.5 - 2.5
fine-stranded	0.5 - 1.5
stranded	0.75 - 1.5
Term. poles	2
Thread	M16 x 1.5
Gland	inside

with spring clamp connection

Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 - 6.0
stranded	
Term. poles	1
Thread	M16 x 1.5
Gland	inside

Vire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M16 x 1.5
Gland	inside

Application	Coding	Color
	<b>(</b> L, N, ⊕	light gray black
250/400V	1, 2, 😩	leaf green
	1, 2, 3	light blue
~50/-120V	1, 2, 😩	signal brown
		,

	Part No.	
	96.035.2153.0	
	96.035.2153.1	
	00.000.2100.1	
	96.035.2155.7	
	96 035 2153 9	
	00.000.2100.0	
	00 005 0454 4	
	96.035.2151.4	
Fine-stranded and stranded wires only with		
ferrules (see accessories)		

Part No.
00.005.0450.0
96.035.6153.0
96.035.6153.1
96.035.6155.7
96.035.6153.9
96 035 6151 4
30.033.0131.4
Fine-stranded and stranded wires <b>without</b> ferrules

Part No.
96.135.2153.0
96.135.2153.1
0011001210011
Contacts separately under Accessories.

#### Male connector

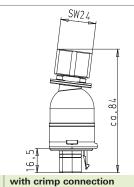
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. With locking device.

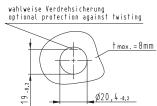
Angled 7°, thread M16.

See the Technical Data for insulation strip lengths.









	Gla
Color	
ght gray black	
af green	
ght blue	

with spring clamp connection		with screw co	onnection
Wire	mm <sup>2</sup>	Wire	mm <sup>2</sup>
rigid	0.5 - 2.5	rigid	
fine-stranded	0.5 - 1.5	fine-stranded	0.75 - 6.0
stranded	0.75 - 1.5	stranded	
Term. poles	2	Term. poles	1
Thread	M16 x 1.5	Thread	M16 x 1.5
Gland	inside	Gland	inside
_			

re	mm <sup>2</sup>	Wire	mm <sup>2</sup>
id	0.5 - 2.5	rigid	
e-stranded	0.5 - 1.5	fine-stranded	0.75 - 6.0
anded	0.75 - 1.5	stranded	
m. poles	2	Term. poles	1
read	M16 x 1.5	Thread	M16 x 1.5
ınd	inside	Gland	inside
Part I	No.	Part	No.

Wire	mm <sup>2</sup>	V
rigid		fi
fine-stranded	0.75 – 6.0	T
stranded		T
Term. poles	1	G
Thread	M16 x 1.5	-
Gland	inside	

mm <sup>2</sup>
0.75 - 4.0
1
M16 x 1.5
inside

Part No. 96.136.2153.0 96.136.2153.1

Contacts separately under Accessories.

Application Coding Color		Part No.	Part No.	
	N, L, ⊕	light gray black	96.036.2153.0 96.036.2153.1	96.036.6153.0 96.036.6153.1
250/400V	2, 1, 😩	leaf green	96.036.2155.7	96.036.6155.7
	2, 1, 3	light blue	96.036.2153.9	96.036.6153.9
~50/-120V	2, 1, 😩	signal brown	96.036.2151.4	96.036.6151.4
			Fine-stranded and stranded wires <b>only with</b> ferrules (see accessories)	Fine-stranded and stranded wires <b>without</b> ferrules

# M20 device connector angled 90°, modular

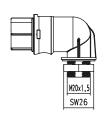
#### **Female connector**

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









with spring clamp connection		with screw o	onnection
Wire	mm <sup>2</sup>	Wire	mm <sup>2</sup>
rigid	0.5 - 2.5	rigid	
fine-stranded	0.5 - 1.5	fine-stranded	0.75 - 6.0
stranded	0.75 - 1.5	stranded	
Term. poles	2	Term. poles	1
Thread	M20 x 1.5	Thread	M20 x 1.5
Gland	inside	Gland	inside

	Wire	mm <sup>2</sup>
	rigid	
	fine-stranded	0.75 - 6.0
	stranded	
	Term. poles	1
	Thread	M20 x 1.5
	Gland	inside
۱		

	with crimp connection		
1	Wire	mm <sup>2</sup>	
1	fine-stranded	0.75 - 4.0	
	Term. poles	1	
	Thread	M20 x 1.5	
1	Gland	inside	

Application	Coding	Color
	<b>(</b> L, N, ⊕	light gray black
250/400V	1, 2, 😩	leaf green
	1, 2, 3	light blue
~50/-120V	1, 2, 🖶	signal brown

Part No.
96.033.2053.0 96.033.2053.1
96.033.2055.7
96.033.2053.9
96.033.2051.4
Fine-stranded and stranded wires <b>only with</b> ierrules (see accessories)

Part No.
96.033.6053.0 96.033.6053.1
96.033.6055.7
96.033.6053.9
96.033.6051.4
Fine-stranded and stranded wires <b>without</b> ferrules

Part No.
96.133.2053.0 96.133.2053.1

Contacts separately under Accessories.

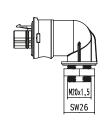
#### Male connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. With locking device.

See the Technical Data for insulation strip lengths.









with spring of	clamp connection	with screw	connection
Wire	mm <sup>2</sup>	Wire	mm <sup>2</sup>
rigid	0.5 - 2.5	rigid	
fine-stranded	0.5 - 1.5	fine-stranded	0.75 - 6.0
stranded	0.75 - 1.5	stranded	
Term. poles	2	Term. poles	1
Thread	M20 x 1.5	Thread	M20 x 1.5
Gland	inside	Gland	inside
-			

	Wire	mm <sup>2</sup>
	rigid	
	fine-stranded	0.75 - 6.0
	stranded	
	Term. poles	1
	Thread	M20 x 1.5
	Gland	inside
۹		

Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M20 x 1.5
Gland	inside

with crimp connection

Application	Coding	Color
	478	light gray
	N, L, ⊕	black
250/400V	2, 1, 😩	leaf green
	2, 1, 3	light blue
~50/-120V	2, 1, 😩	signal brown

Part No.	Part No.
96.034.2053.0	96.034.6053.0
96.034.2053.1	96.034.6053.1
96.034.2055.7	96.034.6055.7
90.034.2055.7	90.034.0055.7
00 004 0050 0	00 004 0050 0
96.034.2053.9	96.034.6053.9
00.004.0054.4	00 004 0054 4
96.034.2051.4	96.034.6051.4
Fine-stranded and stranded wires only with	Fine-stranded and stranded wires without
ferrules (see accessories)	ferrules

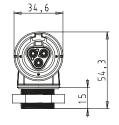
Part No.	Part No.	Part No.
6.034.2053.0	96.034.6053.0	96.134.2053.0
6.034.2053.1	96.034.6053.1	96.134.2053.1
00400557	00 004 0055 7	
3.034.2055.7	96.034.6055.7	
0.004.0050.0	00 004 0050 0	
3.034.2053.9	96.034.6053.9	
0.004.0054.4	00.004.0054.4	
3.034.2051.4	96.034.6051.4	
d stranded wires only with	Fine-stranded and stranded wires without	
essories)	ferrules	Contacts separately under Accessories.

# M25 device connector angled 90°, modular

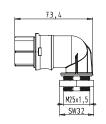
#### **Female connector**

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside.

See the Technical Data for insulation strip lengths as well as the ferrules to be used.









with spring clamp connection		with screw connection	
Wire	mm <sup>2</sup>	Wire	mm <sup>2</sup>
rigid	0.5 - 2.5	rigid	
fine-stranded	0.5 - 1.5	fine-stranded	0.75 - 6.0
stranded	0.75 - 1.5	stranded	
Term. poles	2	Term. poles	1
Thread	M25 x 1.5	Thread	M25 x 1.5
Gland	inside	Gland	inside

Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 - 6.0
stranded	
Term. poles	1
Thread	M25 x 1.5
Gland	inside

	with crimp c	onnection
	Wire	mm <sup>2</sup>
	fine-stranded	0.75 - 4.0
	Term. poles	1
	Thread	M25 x 1.5
	Gland	inside
ı		

A	pplication	Coding		Color
			L, N, 🖶	light gray black
	250/400V		1, 2, 😩	leaf green
			1, 2, 3	light blue
	~50/-120V		1, 2, 🖶	signal brown
-				

	Part No.
	96.033.2253.0
	96.033.2253.1
	96.033.2255.7
	96.033.2253.9
	96 033 2251 4
	00.000.2201.1
F	ine-stranded and stranded wires only with
f	errules (see accessories)
_	

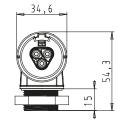
Part No.	Part No.
96.033.6253.0 96.033.6253.1	96.133.2253.0 96.133.2253.1
96.033.6255.7	
96.033.6253.9	
96.033.6251.4	
Fine-stranded and stranded wires <b>without</b> ferrules	Contacts separately under Accessories.

Part No.	
96.133.2253.0 96.133.2253.1	

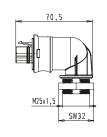
#### Male connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. With locking device.

See the Technical Data for insulation strip lengths.









Wire	mm <sup>2</sup>
rigid	0.5 - 2.5
fine-stranded	0.5 - 1.5
stranded	0.75 - 1.5
Term. poles	2
Thread	M25 x 1.5
Gland	inside

with spring clamp connection

	Wire	mm <sup>2</sup>
	rigid	
	fine-stranded	0.75 - 6.0
	stranded	
	Term. poles	1
	Thread	M25 x 1.5
	Gland	inside
4		

with screw connection

with crimp connection	
Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M25 x 1.5
Gland	inside

Application	Coding		Color
	(4)	N, L, ⊕	light gray black
250/400V		2, 1, 😩	leaf green
		2, 1, 3	light blue
~50/-120V		2, 1, 😩	signal brown

Part No.	Part No.
96.034.2253.0	96.034.6253.0
96.034.2253.1	96.034.6253.1
96.034.2255.7	96.034.6255.7
96.034.2253.9	96.034.6253.9
96.034.2251.4	96.034.6251.4
ine-stranded and stranded wires <b>only with</b> errules (see accessories)	Fine-stranded and stranded wires <b>without</b> ferrules

Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M25 x 1.5
Gland	inside

Part No. 96.134.2253.0 96.134.2253.1

Rated values			
Wire ends	(open cable end)	ultrason. welded	
Sheath strip length	(open cable end)	35 mm	
Wire strip length	(open cable end)	9 mm	

Pull relief	shrinkage tube
Interlock	integrated
Color cable	black
Color shrinkage tube	black

250/400V

leaf green

# Connection cables female - male

		⊕ = GN/YE N = BU L = BN	(a) = GN/YE 1 = BU 2 = BN
Cable	Length m	Part No.	Part No.
	1	96.232.1000.1	96.232.1001.7
	2	96.232.2000.1	96.232.2001.7
PVC cable	3	96.232.3000.1	96.232.3001.7
H05VV-F	4	96.232.4000.1	96.232.4001.7
	5	96.232.5000.1	96.232.5001.7
containing halogen	6	96.232.6000.1	96.232.6001.7
	7	96.232.7000.1	96.232.7001.7
	8	96.232.8000.1	96.232.8001.7

250V

black

Cable	Length m	Part No.	Part No.	Part No.
Cable	Length m			
	1	96.232.1030.1	96.232.1031.7	96.232.1010.9
	2	96.232.2030.1	96.232.2031.7	96.232.2010.9
Rubber-sheathed cable	3	96.232.3030.1	96.232.3031.7	96.232.3010.9
H07RN-F	4	96.232.4030.1	96.232.4031.7	96.232.4010.9
	5	96.232.5030.1	96.232.5031.7	96.232.5010.9
containing halogen	6	96.232.6030.1	96.232.6031.7	96.232.6010.9
	7	96.232.7030.1	96.232.7031.7	96.232.7010.9
	Q	96 232 8030 1	96 232 8031 7	96 232 8010 9

Cable	Length m	Part No.
	1	96.232.1050.1
Bulble and bush and salela	2	96.232.2050.1
Rubber-sheathed cable H07RN-F enhanced version	3	96.232.3050.1
	4	96.232.4050.1
	5	96.232.5050.1
halogen-free	6	96.232.6050.1
Tidiogen-free	7	96.232.7050.1
	8	96.232.8050.1

#### Connection cables female - free end







250/400V

light blue

3 = BN 2 = BU 1 = BK



Cable	Length m	Part No.	Part No.
	1	96.232.1003.1	96.232.1005.7
	2	96.232.2003.1	96.232.2005.7
PVC cable	3	96.232.3003.1	96.232.3005.7
H05VV-F	4	96.232.4003.1	96.232.4005.7
	5	96.232.5003.1	96.232.5005.7
containing halogen	6	96.232.6003.1	96.232.6005.7
	7	96.232.7003.1	96.232.7005.7
	8	96.232.8003.1	96.232.8005.7

Cable	Length m	Part No.	Part No.	Part No.
	1	96.232.1033.1	96.232.1035.7	on request
	2	96.232.2033.1	96.232.2035.7	
Rubber-sheathed cable	3	96.232.3033.1	96.232.3035.7	
H07RN-F	4	96.232.4033.1	96.232.4035.7	
	5	96.232.5033.1	96.232.5035.7	
containing halogen	6	96.232.6033.1	96.232.6035.7	
	7	96.232.7033.1	96.232.7035.7	
	0	06 222 0022 1	06 222 0025 7	

Cable	Length m	Part No.
	1	96.232.1053.1
	2	96.232.2053.1
Rubber-sheathed cable H07RN-F	3	96.232.3053.1
enhanced version	4	96.232.4053.1
ennanced version	5	96.232.5053.1
halogen-free	6	96.232.6053.1
Tidiogeri-iree	7	96.232.7053.1
	8	96.232.8053.1

## Cable assemblies Cable 3 x 1.5 mm<sup>2</sup>; 16 A

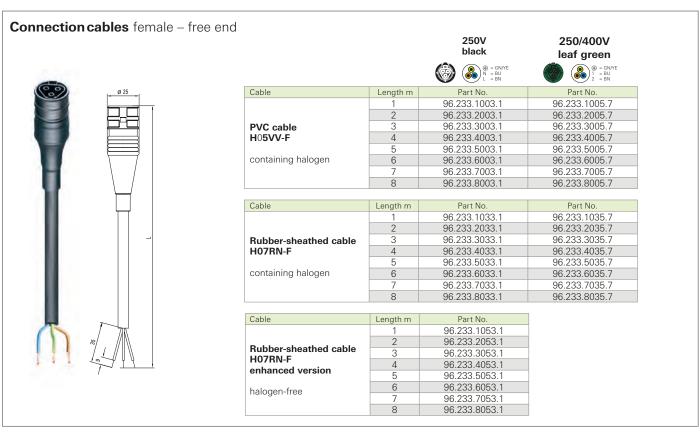
		250V black    O	250/400V leaf green  (**)  (**	250/400V light blue
Cable	Length m	Part No.	Part No.	
nan I i	1	96.232.1004.1	96.232.1006.7	
	2	96.232.2004.1	96.232.2006.7	
PVC cable	3	96.232.3004.1	96.232.3006.7	
H05VV-F	4	96.232.4004.1	96.232.4006.7	
	5	96.232.5004.1	96.232.5006.7	
containing halogen	6	96.232.6004.1	96.232.6006.7	
	7	96.232.7004.1	96.232.7006.7	
	8	96.232.8004.1	96.232.8006.7	
Cable	Length m	Part No.	Part No.	Part No.
	1	96.232.1034.1	96.232.1036.7	on request
	2	96.232.2034.1	96.232.2036.7	
Rubber-sheathed cable	3	96.232.3034.1	96.232.3036.7	
H07RN-F	4	96.232.4034.1	96.232.4036.7	
	5	96.232.5034.1	96.232.5036.7	
containing halogen	6	96.232.6034.1	96.232.6036.7	
	7	96.232.7034.1	96.232.7036.7	
	8	96.232.8034.1	96.232.8036.7	
Cable	Length m	Part No.		
Cable	1	96.232.1054.1		
	2	96.232.2054.1		
Rubber-sheathed cable	3	96.232.3054.1		
H07RN-F	4	96.232.4054.1		
enhanced version	5	96.232.5054.1		
	6	96.232.6054.1		
halogen-free	7	96.232.7054.1		
	8	96.232.8054.1		

## Cable assemblies Cable 3 x 2.5 mm<sup>2</sup>; 20 A

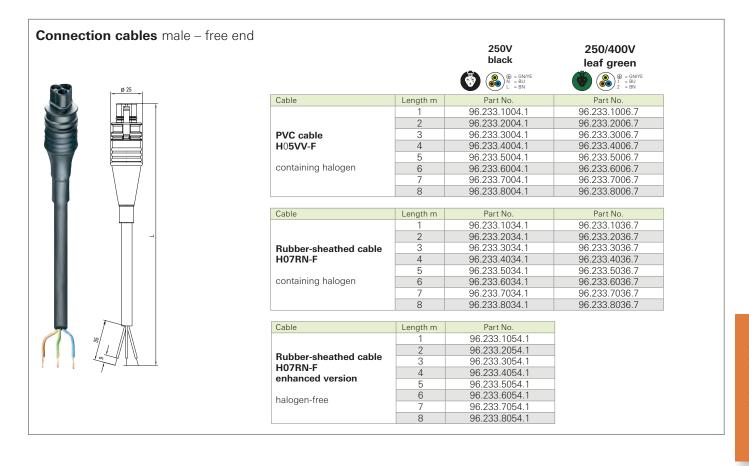
Rated values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Wire strip length	(open cable end)	9 mm

Pull relief	shrinkage tube
Interlock	integrated
Color cable	black
Color shrinkage tube	black

#### Connection cables female - male 250V 250/400V black leaf green ( = GN, N = BU L = BN ( = GN/ 1 = BU 2 = RN Cable Part No. Part No. Length m 96.233.1000.1 96.233.1001.7 96.233.2000.1 96.233.2001.7 **PVC** cable 96 233 3000 1 96 233 3001 7 96.233.4000.1 96.233.4001.7 H05VV-F 4 96.233.5001.7 96.233.5000.1 containing halogen 6 96.233.6000.1 96.233.6001.7 96 233 7000 1 96.233.7001.7 8 96.233.8000.1 96.233.8001.7 Cable Length m Part No Part No. 96.233.1030.1 96.233.1031.7 96.233.2030.1 96.233.2031.7 Rubber-sheathed cable 96.233.3030.1 96.233.3031.7 H07RN-F 4 96.233.4030.1 96.233.4031.7 96.233.5030.1 96.233.5031.7 containing halogen 6 96.233.6030.1 96.233.6031.7 96.233.7030.1 96.233.7031.7 8 96.233.8030.1 96.233.8031.7 Cable Part No. Length m 96.233.1050.1 96.233.2050.1 Rubber-sheathed cable 96.233.3050.1 H07RN-F 96.233.4050.1 enhanced version 96.233.5050.1 6 96.233.6050.1 halogen-free 96.233.7050.1 96.233.8050.1



## Cable assemblies Cable 3 x 2.5 mm<sup>2</sup>; 20 A



## Cable assemblies Cable 3 x 1.5 mm<sup>2</sup>; 20 A

Rated values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Wire strip length	(open cable end)	9 mm

Pull relief	shrinkage tube
Interlock	integrated
Color cable	black
Color shrinkage tube	black

#### **Power Connection cable**

RST 20i3 male - Schuko coupling



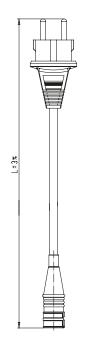
#### 250V black

Cable	Length m	Part No.
Rubber-sheathed cable H07RN-F containing halogen	0.5	99.719.0000.7
	1	
	2	Other lengths
	3	on request
	4	
	5	

#### **Power Connection cable**

Male: Schuko plug – female: **RST**®





#### 250V gray

	Cable	Length m	Part No.
DVCI-I-		1.5	99.714.0000.7
PVC cable H05VV-F	2.5	99.715.0000.7	
	containing halogen		
	containing halogen		

#### 250V black

Cable	Length m	Part No.
	1.5	99.712.0000.7
Rubber-sheathed cable	2.5	99.713.0000.7
H07RN-F	4	99.716.0000.7
containing halogen	5	99.718.0000.7
	8	99.717.0000.7

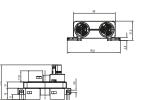
### **Distribution units**

#### Distribution block 1I/30

Interlock

Yes







Color	Application	Pole marking	Input	Outputs	Part No.
black	250V	L, N, PE	1	3	96.030.0153.1
■ light grey	250V	L, N, PE	1	3	96.030.0153.0
leaf green	250/400V	1, 2, PE	1	3	96.030.0155.7
signal brown	~50/-120V	1, 2, PE	1	3	96.030.0151.4

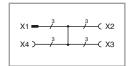
#### without fastening option

Color	Application	Pole marking	Input	Outputs	Part No.
■ black	250V	L, N, PE	1	3	96.030.0253.1
light grey	250V	L, N, PE	1	3	96.030.0253.0
■ leaf green	250/400V	1, 2, PE	1	3	96.030.0255.7
■ signal brown	~50/-120V	1, 2, PE	1	3	96.030.0251.4





Circuit diagram



## RST compact distribution unit 11/30

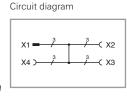
Dimensions

104 x 162 x 57.2 mm

fitted as required with pre-wired with Mounting option

M25 device connectors 3-pole 2.5 mm² (halogen free) Yes

nearming option



ColorApplicationPole markingInputOutputsPart No.■ black1, RST20i33, RST20i399.906.0000.7

## RST multi-distribution unit 11/70

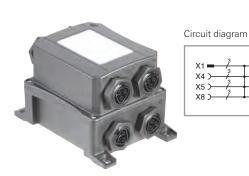
Dimensions

104 x 162 x 96 mm

fitted as required with pre-wired with Fuse

C X3

M25 device connectors 3-pole 2.5 mm² (halogen free) 6.3 or 10A can be integrated



Color	Application	Pole marking	Input	Outputs	Part No.
■ black			1, RST20i3	7, RST20i3	99.929.0000.7

# Connector for pole socket, straight For cables Ø 6 - 10 mm

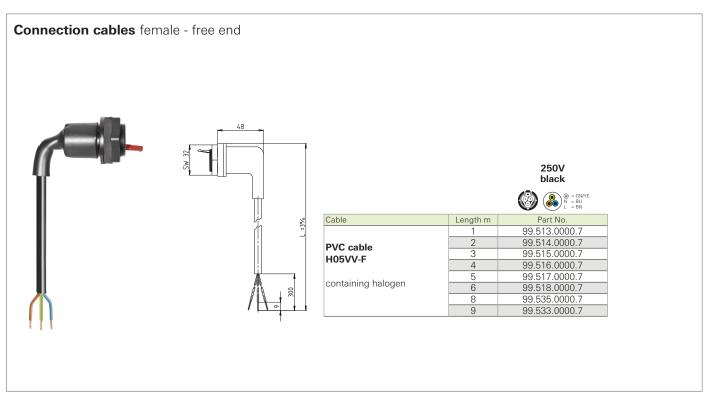


## Cable assembly for pole socket

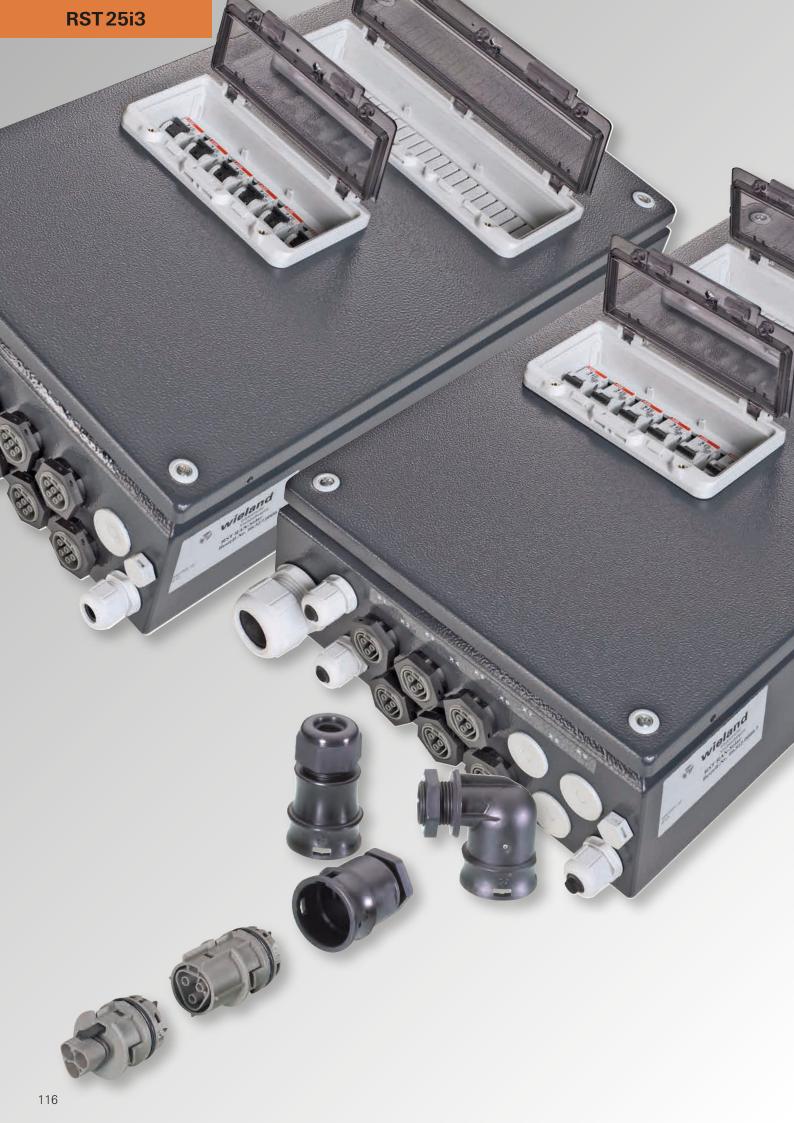
Cable 3 x 1.5 mm<sup>2</sup>; 16 A

Rated values		
Wire ends	ultrason. welded	
Sheath strip length	30 mm	
Wire strip length	9 mm	

Pull relief	shrinkage tube
Interlock	Integrated
Color cable	black
Color shrinkage tube	black

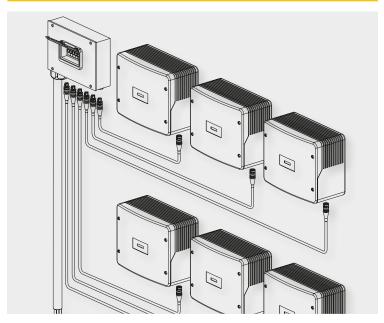






# Solar applications for systems up to 32 A for single-phase power 3-pole

#### **Application example**



#### **General**

The system is specially adapted to the requirements of solar technology. The connectors can be loaded with a maximum of 32 A on two contacts (L, N) and are used for single-phase power with ENS.

Special distribution boxes are used to bundle the electrical power of up to 6 inverters and thus complete the system.

These connectors have their own mechanical coding.

This means that only associated pairs of male and female can be connected with the correct polarity. This ensures a clear separation from the connectors of the other product series.

#### **Features:**

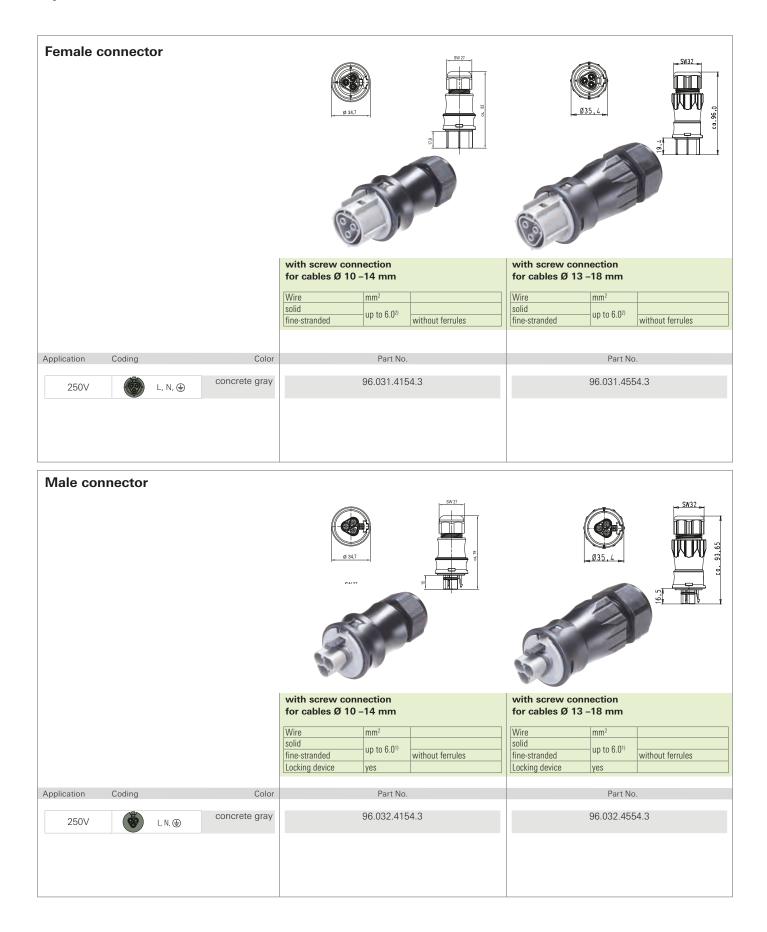
- Fast mounting through easy handling
- UV-resistant
- Rated current up to 32A (with 6.0 mm²)
- Cross-sections up to 6 mm²
- Degree of protection IP66/68 (3m; 2h) /69



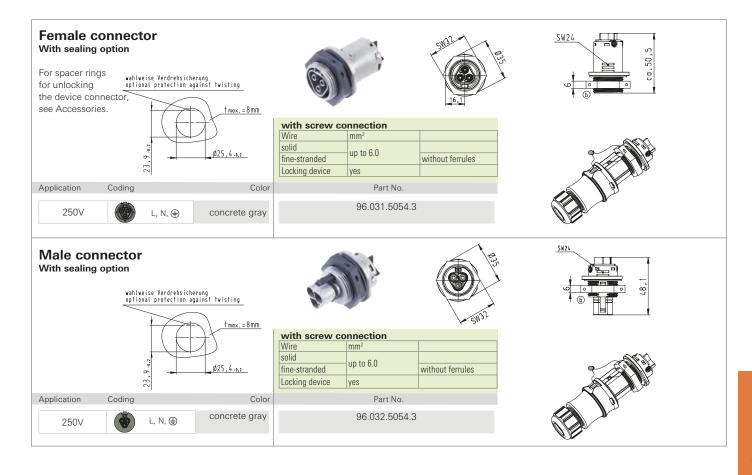
#### **Coding**

	s visit the website at and-electric.com.			Application	250V
Assembly instruc	and-electric.com. Itions and other technical infor Data or in eShop.	mation can be found		Mechanical coding	L, N, ( )
Name	Description	Connection style	Strain relief housing	Connection points per pole	concrete gray
Connector	1 x cable entry	Screw	yes	1	$\checkmark$
Distribution unit	Distribution box RST RAN Solar Distribution box RST Solar				<b>√</b>
Device connectors	M25 device connector, standard				<b>√</b>
Cable assemblies	Connection cable Male – Free end Connection cable Female – Free end Extension cable Male – Female	pre- assembled pre- assembled pre- assembled	pre- assembled pre- assembled pre- assembled	pre- assembled pre- assembled pre- assembled	√ √ √

# Connectors, 25A, straight for cables Ø 10 – 14 mm and 13 – 18 mm (up to 32A with 6.0 mm<sup>2</sup>)



# M25 device connector, 25 A straight (up to 32A with 6.0 mm²)

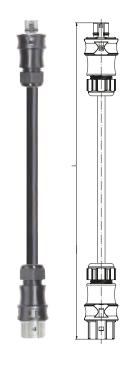


## **Cable assemblies** Cable 3 x 4.0 mm<sup>2</sup>; 25 A

Rated values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Wire strip length	(open cable end)	9 mm

Connection type of cable	Gland nut
Interlock	integrated
Color cable	black
Color handle shell	black

#### Connection cables female - male



#### 250V concrete gray

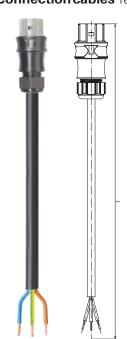




Cable	Length m	Part No.
DV0 11	1.0	96.834.1000.3
	1.5	96.834.1500.3
PVC cable H05VV-F	2.0	96.834.2000.3
HUSVV-F	2.5	96.834.2500.3
containing halogen	3.0	96.834.3000.3
Containing halogen	3.5	96.834.3500.3
	4.0	96.834.4000.3

Cable	Length m	Part No.
	1.0	96.834.1030.3
Bulbles shoothad salds	1.5	96.834.1530.3
Rubber-sheathed cable H07RN-F containing halogen	2.0	96.834.2030.3
	2.5	96.834.2530.3
	3.0	96.834.3030.3
	3.5	96.834.3530.3
	4.0	96.834.4030.3

#### Connection cables female - free end



#### 250V concrete gray



Cable	Length m	Part No.
DV0 11	1.0	96.834.1003.3
	1.5	96.834.1503.3
PVC cable H05VV-F	2.0	96.834.2003.3
HUSVV-F	2.5	96.834.2503.3
containing halogen	3.0	96.834.3003.3
	3.5	96.834.3503.3
	4.0	96.834.4003.3

Cable diameter 11.2 mm  $\pm$  0.2 According to VDE 0281/T5 and VDE 0288/T4

Cable	Length m	Part No.
	1.0	96.834.1033.3
	1.5	96.834.1533.3
Rubber-sheathed cable H07RN-F	2.0	96.834.2033.3
HU/KN-F	2.5	96.834.2533.3
containing halogen	3.0	96.834.3033.3
	3.5	96.834.3533.3
	4.0	96.834.4033.3

Cable diameter 13.4 mm  $\pm$  0.3 According to VDE 0281/T5 and VDE 0288/T4

## Cable assemblies Cable 3 x 4.0 mm<sup>2</sup>; 25 A



## 250V concrete gray



Cable	Length m	Part No.
	1.0	96.834.1004.3
D) (C  - -	1.5	96.834.1504.3
PVC cable H05VV-F containing halogen	2.0	96.834.2004.3
	2.5	96.834.2504.3
	3.0	96.834.3004.3
	3.5	96.834.3504.3
	4.0	96.834.4004.3

Cable diameter 11.2 mm  $\pm$  0.2 According to VDE 0281/T5 and VDE 0288/T4

Cable	Length m	Part No.
	1.0	96.834.1034.3
Rubber-sheathed cable H07RN-F containing halogen	1.5	96.834.1534.3
	2.0	96.834.2034.3
	2.5	96.834.2534.3
	3.0	96.834.3034.3
	3.5	96.834.3534.3
	4.0	96.834.4034.3

Cable diameter 13.4 mm  $\pm$  0.3 According to VDE 0281/T5 and VDE 0288/T4



# 2 versions for connecting electrical drives or for routing AS-i and extra-low voltages up to ~50/-120V

#### **Application example**



#### **General**

The four pole connector is based on the 5-pole variation with one pole not configured.

There are two mechanical codings. The black or light grey coding for applications up to 250/400V (e.g. connection of electrical drives) and the brown coding for extra-low voltages, for example for joint routing of the AS Interface and the 24V auxiliary voltage.

They are mechanically coded. This means that only associated pairs of male and female can be connected with the correct polarity. This ensures a clear separation from the connectors of the other product series.

#### Coding

	visit the website at			Application	250/	400V	~50/-120V
http://eshop.wiela Assembly instruction the Technical I	tions and other technical informat	tion can be found		Mechanical coding	1, 2,	3, ⊕	1, 2, 3, 4
Name	Description	Connection style	Strain relief housing	Connection points per pole	light gray	black	signal brown
Connector	1 x cable entry	Screw Crimp	yes	1	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
Connector	2 x cable entry	Screw	yes	1	$\sim$	$\sqrt{}$	$\sqrt{}$
Distribution units	RST compact distribution unit/ multi-distribution unit				on request	on request	on request
Distribution units	Individual distribution box				on request	on request	on request
	M16 device connector, modular, straight M16 device connector,				<b>√</b>	<b>V</b>	<b>V</b>
Device	modular, angled 7° M25 device connector, standard				<b>V</b>	V	<b>V</b> ✓
connectors	M20 device connector, standard M20 device connector.				$\sqrt{}$	<u> </u>	$\sqrt{}$
	modular, straight M25 device connector, modular, angled				<u> </u>	<u> </u>	<u> </u>
0.11	Connection cable Male – Free end	pre- assembled	pre- assembled	pre- assembled	<b>√</b>	<b>√</b>	<b>1</b>
Cable assemblies	Connection cable Female — Free end Extension cable	pre- assembled pre-	pre- assembled pre-	pre- assembled pre-	$\sqrt{}$	<u> </u>	V
	Male – Female	assembled	assembled	assembled	V	V	V

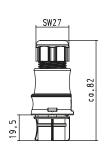
# Connectors, straight for cables Ø 6 – 10 mm and 10 –14 mm

#### Female connector

Unmounted with cable gland. Crimp contacts separately available under Accessories.

See Technical Data for sheath and insulation strip lengths.





with screw o	connection <sup>1)</sup>	with crimp of	connection
Vire	mm <sup>2</sup>	Wire	mm <sup>2</sup>
igid		fine-stranded	0.75 - 4.0
ine-stranded	0.75 – 4.0		
tranded	without ferrules		

A I'	0 - 1		0-1-1	0.1	Down Ma	D. A.N.
Application	Coding		Cable diameter in mm	Color	Part No.	Part No.
			6 – 10	light gray	96.041.4053.0	96.141.0053.0
250/400V			0 - 10	black	96.041.4053.1	96.141.0053.1
250/400V		1, 2, 3, 🖶	10 11	light gray	96.041.4153.0	96.141.0153.0
			10 – 14	black	96.041.4153.1	96.141.0153.1
F0/ 100\/			6 – 10		96.041.4051.4	
~50/-120V		1, 2, 3, 4	1 x AS-i profile cable	signal brown	96.041.4951.4	
	,					
						Contacts separately under Accessories, see following
						pages.
						[ * · · ·

#### Male connector

Unmounted with cable gland and locking device.

Crimp contacts separately available under Accessories.

See Technical Data for sheath and insulation strip lengths.







with crimp connection

				Wire mm² rigid fine-stranded stranded without ferrules	Wire mm² fine-stranded 0.75 – 4.0
Application	Coding	Cable diameter in mm	Color	Part No.	Part No.
250/400V	1, 2, 3, (	6-10	light gray black light gray black	96.042.4053.0 96.042.4053.1 96.042.4153.0 96.042.4153.1	96.142.0053.0 96.142.0053.1 96.142.0153.0 96.142.0153.1
~50/-120V	1, 2, 3, 4	6 – 10 1 x AS-i profile cable	signal brown	96.042.4051.4 96.042.4951.4	
					Contacts separately under Accessories, see following pages.

with screw connection1)

<sup>1)</sup> With wire protection available on request

# Connectors, angled 90° for cables Ø 6 – 10 mm and 10 –14 mm

#### Female connector

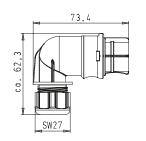
Unmounted with cable gland. 90° angle.

Crimp contacts separately available under Accessories.

See Technical Data for sheath and insulation strip lengths.







with crimp connection

						withou  withou  withou	4.0 t ferrules	fine-stranded	mm <sup>2</sup>  0.75 – 4.0
	A 1' 4'	C - II		California	Calan	Door	N		Part No.
1	Application	Coding		Cable diameter in mm	Color	Part	No.		Part No.
١,									
	050/400//			6 – 10	light gray black		3.4053.0 3.4053.1		96.143.0053.0 96.143.0053.1
	250/400V		1, 2, 3, 🖶	10 – 14	light gray black		3.4153.0 3.4153.1		96.143.0153.0 96.143.0153.1
	~50/-120V		1, 2, 3, 4	6 – 10 1 x AS-i profile cable 2 x AS-i profile cable	signal brown	96.043	3.4051.4 3.4951.4 3.4851.4		
								Contacts separately pages.	under Accessories, see following

with screw connection1)

#### Male connector

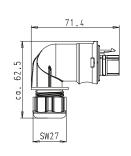
Unmounted with cable gland and locking device. 90° angle.

Crimp contacts separately available under Accessories.

See Technical Data for sheath and insulation strip lengths.







					with screw connection¹¹  Wire mm² rigid	with crimp connection  Wire   mm²
Application	Coding		Cable diameter in mm	Color	Part No.	Part No.
250/400V		1, 2, 3, 🗐	6 – 10 10 – 14	light gray black light gray black	96.044.4053.0 96.044.4053.1 96.044.4153.0 96.044.4153.1	96.144.0053.0 96.144.0053.1 96.144.0153.0 96.144.0153.1
~50/-120V		1, 2, 3, 4	6 – 10 1 x AS-i profile cable 2 x AS-i profile cable	signal brown	96.044.4051.4 96.044.4951.4 96.044.4851.4	
						Contacts separately under Accessories, see following pages.

<sup>1)</sup> With wire protection available on request

# Connectors, straight for cables Ø 13 – 18 mm

#### **Female connector** Unmounted with cable gland. Crimp contacts separately available under Accessories. See Technical Data for sheath and insulation strip with screw connection1) with crimp connection Wire mm<sup>2</sup> Wire mm<sup>2</sup> fine-stranded 0.75 - 4.0rigid fine-stranded up to 4.0 without ferrules stranded Application Coding Cable diameter in mm Color Part No. Part No. 96.041.4553.0 96.141.0553.0 light gray 250/400V 1, 2, 3, 🖶 13 – 18 96.041.4553.1 96.141.0553.1 black Contacts separately under Accessories, see following

#### Male connector

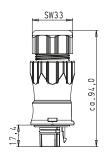
Unmounted with cable gland and locking device.

Crimp contacts separately available under Accessories.

See Technical Data for sheath and insulation strip lengths.







with crimp connection

				Wire mm2 rigid fine-stranded stranded without ferrules	Wire mm² fine-stranded 0.75 – 4.0
Application	Coding	Cable diameter in mm	Color	Part No.	Part No.
250/400V	1, 2, 3, 😩	13 – 18	light gray black	96.042.4553.0 96.042.4553.1	96.142.0553.0 96.142.0553.1
					Contacts separately under Accessories, see following pages.

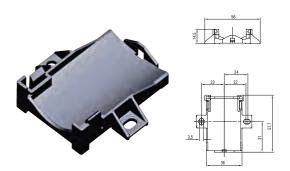
with screw connection1)

<sup>1)</sup> With wire protection available on request

# **Splitter connector,** straight for cables Ø 6 – 10 mm and 10 –14 mm



#### Mounting plate for splitter connectors



Color	Part No.
gray	01.006.1553.0
■ black	01.006.1553.1

<sup>1)</sup> With wire protection available on request

# M25 device connector straight, standard

#### **Female connector**

Correct positioning guaranteed due to flattened thread. Fastening with screws from outside.

Crimp contacts separately available under Accessories.

See the Technical Data for insulation strip lengths. For spacer rings for unlocking the device connector, see Accessories.





with screw o	connection
Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 – 4.0
stranded	without ferrules
Term. poles	1
Thread	M25 x 1.5
Gland	outside

Wire	mm <sup>2</sup>	
fine-stranded	0.75 - 4.0	
Term. poles	1	
Thread	M25 x 1.5	
Gland	outside	

1	Application	Coaing		Color
	250/400V		1, 2, 3, 🖶	light gray black
	~50/-120V		1, 2, 3, 4	signal brown

1 411110.
96.041.5053.0
96.041.5053.1
96.041.5051.4

Part No.

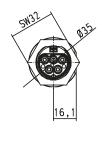
96.141.1053.0 96.141.1053.1
Contacts separately under Accessories, see following pages.

#### Male connector

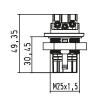
Correct positioning guaranteed due to flattened thread. Fastening with screws from outside. With locking device.

Crimp contacts separately available under Accessories.

See the Technical Data for insulation strip lengths.









Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 – 4.0
stranded	without ferrules
Term. poles	1
Thread	M25 x 1.5
Gland	outside
Locking device	ves

with crimp connection		
Wire	mm <sup>2</sup>	
fine-stranded	0.75 – 4.0	
Term. poles	1	
Thread	M25 x 1.5	
Gland	outside	
Locking device	yes	

Part No. 96.142.1053.0

Application	Coding	Color
250/400V	1, 2, 3, 🥞	light gray black
~50/-120V	1, 2, 3, 4	signal brown

Part No.	
96.042.5053.0 96.042.5053.1	
96.042.5051.4	

96.142.1053.1

Contacts separately under Accessories, see following pages.

# M20 device connector straight, modular

#### Female connector

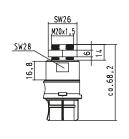
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside.

Crimp contacts separately available under Accessories.

See the Technical Data for insulation strip lengths.









Wire	mm <sup>2</sup>	
rigid		
fine-stranded	0.75 – 4.0	
stranded	without ferrules	
Term. poles	1	
Thread	M20 x 1.5	
Gland	inside	

	with crimp connection		
	Wire	mm <sup>2</sup>	
	fine-stranded	0.75 - 4.0	
	Term. poles	1	
	Thread	M20 x 1.5	
	Gland	inside	

COIOI		Couling	Application	
light gray black	1, 2, 3, 🖶		250/400V	
signal brown	1, 2, 3, 4		~50/-120V	

I dit No.
96.041.6053.0
96.041.6053.1
96.041.6051.4

96.141.2053.0
96.141.2053.1
Contacts separately under Accessories, see following pages.

Part No.

#### Male connector

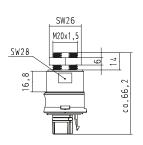
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. With locking device.

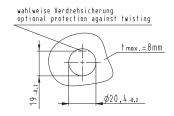
Crimp contacts separately available under Accessories.

See the Technical Data for insulation strip lengths.









Leitungen	mm <sup>2</sup>
rigid	
fine-stranded	0.75 – 4.0
stranded	without ferrules
Term. poles	1
Thread	M20 x 1.5
Gland	inside
Locking device	ves

Leitungen	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M20 x 1.5
Gland	inside
Locking device	yes

with crimp connection

Application	Coding	Color	Part No.	Part No.
250/400V	1, 2, 3, 🖨	light gray black	96.042.6053.0 96.042.6053.1	96.142.2053.0 96.142.2053.1
~50/-120V	1, 2, 3, 4	signal brown	96.042.6051.4	
		·		
				Contacts senarately under Accessories, see following pages

# M16 device connector straight, modular

#### Female connector

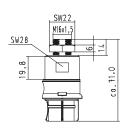
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside.

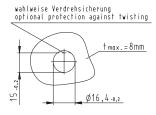
Crimp contacts separately available under Accessories.

See the Technical Data for insulation strip lengths.









with screw connection		
Wire	mm <sup>2</sup>	
rigid		
fine-stranded	0.75 – 4.0	
stranded	without ferrules	
Term. poles	1	
Thread	M16 x 1.5	
Gland	inside	

Wire	mm <sup>2</sup>	
fine-stranded	0.75 - 4.0	
Term. poles	1	
Thread	M16 x 1.5	
Gland	inside	

Application		Coding		Color	
	250/400V		1, 2, 3, 🖶	light gray black	
	~50/-120V		1, 2, 3, 4	signal brown	

Tartivo.
96.041.6153.0
96.041.6153.1
96.041.6151.4

96.141.2153.0 96.141.2153.1
Contacts separately under Accessories, see following pages.

#### Male connector

Cagrefoti prostigionium ghg/Albflandlevel dese Tibrillatte rgestlyährteinstadt. Glastelning with iderews from inside.

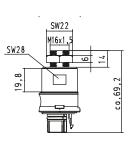
With locking device.

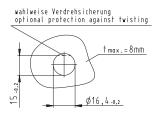
Wire strip lengthn siehe unter Technical data. Crimp contacts separately available under Accessories.

See the Technical Data for insulation strip lengths.









with screw c	onnection
Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 – 4.0
stranded	without ferrules
Term. poles	1
Thread	M16 x 1.5
Gland	inside
Locking device	ves

with crimp connection		
Wire	mm <sup>2</sup>	
fine-stranded	0.75 - 4.0	
Term. poles	1	
Thread	M16 x 1.5	
Gland	inside	
Locking device	yes	

Application	Coding	Color	Part No.	Part No.
250/400V	1, 2, 3, 🖨	light gray black	96.042.6153.0 96.042.6153.1	96.142.2153.0 96.142.2153.1
~50/-120V	1, 2, 3, 4	signal brown	96.042.6151.4	
				Contacts separately under Accessories, see following pages.

<sup>1)</sup> With wire protection available on request

# M16 device connector angled 7°, modular

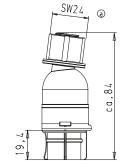
#### **Female connector**

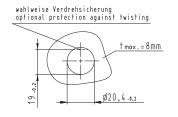
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. Angled  $7^{\circ}$ , thread M16.

Crimp contacts separately available under Accessories

See the Technical Data for insulation strip lengths.







Wire	mm <sup>2</sup>		
rigid			
fine-stranded	0.75 – 4.0		
stranded	without ferrules		
Term. poles	1		
Thread	M16 x 1.5		
Gland	inside		

Wire	mm <sup>2</sup>	
fine-stranded	0.75 – 4.0	
Term. poles	1	
Thread	M16 x 1.5	
Gland	inside	

Application	Coding		Color
250/400V		1, 2, 3, 🖶	light gray black
~50/-120V		1, 2, 3, 4	signal brown

Part No.
96.045.6153.0
96.045.6153.1
96.045.6151.4

96.145.2153.0 96.145.2153.1
Contacts congrataly under Accessories, see following pages

#### Male connector

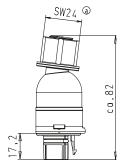
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. Angled 7°, thread M16. With locking device.

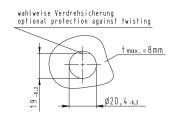
Crimp contacts separately available under Accessories.

See the Technical Data for insulation strip lengths.









Wire	mm <sup>2</sup>	
rigid		
fine-stranded	0.75 – 4.0	
stranded	without ferrules	
Term. poles	1	
Thread	M16 x 1.5	
Gland	inside	
Locking device	ves	

Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M16 x 1.5
Gland	inside
Locking device	yes

Application	Coding	Color	Part No.	Part No.
250/400V	1, 2, 3, 🖶	light gray black	96.046.6153.0 96.046.6153.1	96.146.2153.0 96.146.2153.1
~50/-120V	1, 2, 3, 4	signal brown	96.046.6151.4	
				Contacts separately under Accessories, see following pages.

<sup>1)</sup> With wire protection available on request

# M20 device connector angled 90°, modular

#### Female connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. Angled 90°, thread M20.

Crimp contacts separately available under Accessories

See the Technical Data for insulation strip lengths.









with screw connection	
Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 – 4.0
stranded	without ferrules
Term. poles	1
Thread	M20 x 1.5
Gland	inside

with thinp tolinection		
Wire	mm <sup>2</sup>	
fine-stranded	0.75 – 4.0	
Term. poles	1	
Thread	M20 x 1.5	
Gland	inside	

with origin connection

F	Application	Coding		Color
	250/400V		1, 2, 3, 😩	light gray black
	~50/-120V		1, 2, 3, 4	signal brown

Part No.
96.043.6053.0
96.043.6053.1
00.040.0054.4
96.043.6051.4

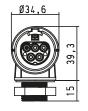
	96.143.2053.0 96.143.2053.1
Contacts separately und	der Accessories, see following pages.

#### Male connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside.
Angled 90°, thread M20.
With locking device.

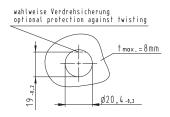
Crimp contacts separately available under Accessories-

See the Technical Data for insulation strip lengths.









Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 – 4.0
stranded	without ferrules
Term. poles	1
Thread	M20 x 1.5
Gland	inside
Locking device	yes

with crimp connection		
Wire	mm <sup>2</sup>	
fine-stranded	0.75 – 4.0	
Term. poles	1	
Thread	M20 x 1.5	
Gland	inside	
Locking device	yes	

Application	Coding	Color	Part No.	Part No.
250/400V	1, 2, 3, 🕀	light gray black	96.044.6053.0 96.044.6053.1	96.144.2053.0 96.144.2053.1
~50/-120V	1, 2, 3, 4	signal brown	96.044.6051.4	
				Contacts separately under Accessories, see following pages.

<sup>1)</sup> With wire protection available on request

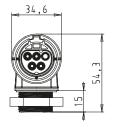
# M25 device connector angled 90°, modular

#### Female connector

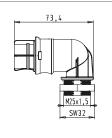
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. Angled 90°, thread M25.

Crimp contacts separately available under Accessories

See the Technical Data for insulation strip lengths.









	with screw connection		
ı	Wire	mm²	
	rigid		
	fine-stranded	0.75 – 4.0	
	stranded	without ferrules	
	Term. poles	1	
	Thread	M25 x 1.5	
	Gland	inside	
п	-		

Wire	mm <sup>2</sup>
fine-stranded	0.75 – 4.0
Term. poles	1
Thread	M25 x 1.5
Gland	inside

Application	Coding	J	Color
250/400V		1, 2, 3, 🖶	light gray black
~50/-120V		1, 2, 3, 4	signal brown

96.043.6253.0
96.043.6253.1
96.043.6251.4

Part No.

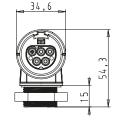
96.143.2253.0 96.143.2253.1
Contacts separately under Accessories, see following pages.

#### Male connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. Angled 90°, thread M25. With locking device.

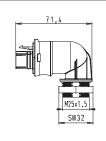
Crimp contacts separately available under Accessories.

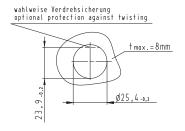
See the Technical Data for insulation strip lengths.



with screw connection







Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 – 4.0
stranded	without ferrules
Term. poles	1
Thread	M25 x 1.5
Gland	inside
Locking device	ves

with crimp connection		
Wire	mm <sup>2</sup>	
fine-stranded	0.75 – 4.0	
Term. poles	1	
Thread	M25 x 1.5	
Gland	inside	
Locking device	yes	
Locking device	yes	

Application	Coding	Color	Part No.	Part No.
250/400V	1, 2, 3, €	light gray black	96.044.6253.0 96.044.6253.1	96.144.2253.0 96.144.2253.1
~50/-120V	1, 2, 3, 4	signal brown	96.044.6251.4	
				Contacts separately under Accessories, see following pages.

<sup>1)</sup> With wire protection available on request

## Cable assemblies Cable 4 x 1.5 mm<sup>2</sup>; 16 A

Rated values			
Wire ends	(open cable end)	ultrason. welded	
Sheath strip length	(open cable end)	35 mm	
Wire strip length	(open cable end)	9 mm	

Pull relief	Gland nut
Interlock	integrated
Color cable	black
Color handle shell	black

# Connection cables female – male

#### 250/400V black



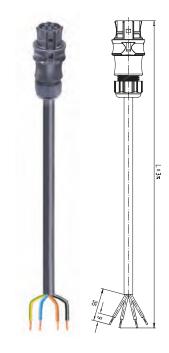
(a) 1 2 3	= GN/YE = BN = BK = BU	
NI.		

Cable	Length m	Part No.
	1	96.442.1000.1
	2	96.442.2000.1
PVC cable	3	96.442.3000.1
H05VV-F	4	96.442.4000.1
	5	96.442.5000.1
containing halogen	6	96.442.6000.1
	7	96.442.7000.1
	8	96.442.8000.1

Cable	Length m	Part No.
	1	96.442.1030.1
	2	96.442.2030.1
Rubber-sheathed cable	3	96.442.3030.1
H07RN-F	4	96.442.4030.1
	5	96.442.5030.1
containing halogen	6	96.442.6030.1
	7	96.442.7030.1
	8	96.442.8030.1

4-pole cables - one pole is not configured

#### Connection cables female - free end



250/400V black
<b>(</b>

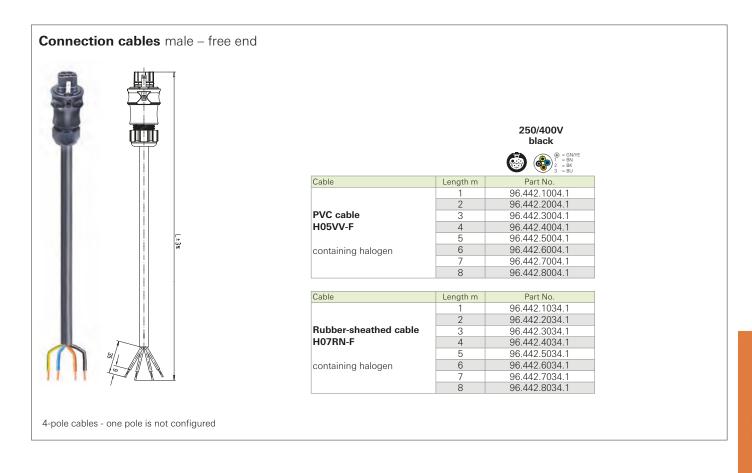


Cable	Length m	Part No.
	1	96.442.1003.1
	2	96.442.2003.1
PVC cable	3	96.442.3003.1
H05VV-F	4	96.442.4003.1
	5	96.442.5003.1
containing halogen	6	96.442.6003.1
	7	96.442.7003.1
	8	96.442.8003.1

Cable	Length m	Part No.
	1	96.442.1033.1
	2	96.442.2033.1
Rubber-sheathed cable	3	96.442.3033.1
H07RN-F	4	96.442.4033.1
	5	96.442.5033.1
containing halogen	6	96.442.6033.1
	7	96.442.7033.1
	8	96.442.8033.1

4-pole cables - one pole is not configured

## Cable assemblies Cable 4 x 1.5 mm<sup>2</sup>; 16 A



## Cable assemblies Cable 4 x 2.5 mm<sup>2</sup>; 20 A

Rated values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Wire strip length	(open cable end)	9 mm

Pull relief	Gland nut
Interlock	integrated
Color cable	black
Color handle shell	black

# Connection cables female – male

#### 250/400V black

250/400V

96.443.8003.1

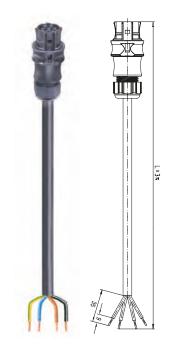


Cable	Length m	Part No.
	1	96.443.1000.1
	2	96.443.2000.1
PVC cable	3	96.443.3000.1
H05VV-F	4	96.443.4000.1
	5	96.443.5000.1
containing halogen	6	96.443.6000.1
	7	96.443.7000.1
	8	96.443.8000.1

Cable	Length m	Part No.
	1	96.443.1030.1
	2	96.443.2030.1
Rubber-sheathed cable	3	96.443.3030.1
H07RN-F	4	96.443.4030.1
	5	96.443.5030.1
containing halogen	6	96.443.6030.1
	7	96.443.7030.1
	8	96.443.8030.1

4-pole cables - one pole is not configured

#### Connection cables female - free end

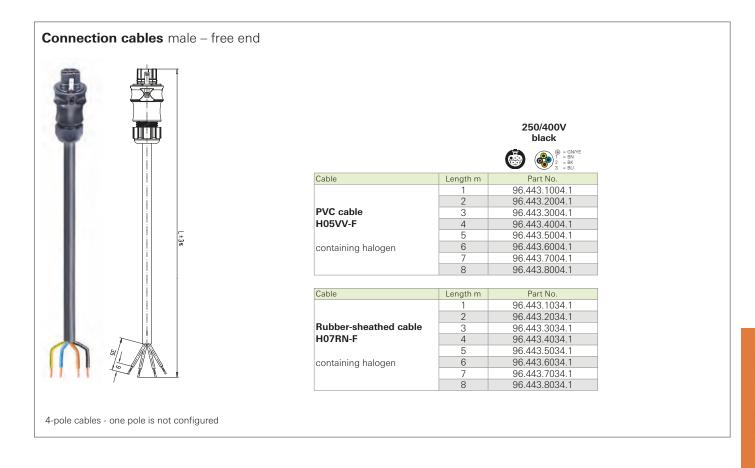


Cable	Length m	Part No.
	1	96.443.1003.1
	2	96.443.2003.1
PVC cable	3	96.443.3003.1
H05VV-F	4	96.443.4003.1
	5	96.443.5003.1
containing halogen	6	96.443.6003.1
	7	96.443.7003.1

Cable	Length m	Part No.
	1	96.443.1033.1
	2	96.443.2033.1
Rubber-sheathed cable	3	96.443.3033.1
H07RN-F	4	96.443.4033.1
	5	96.443.5033.1
containing halogen	6	96.443.6033.1
	7	96.443.7033.1
	8	96.443.8033.1

4-pole cables - one pole is not configured

## Cable assemblies Cable 4 x 2.5 mm<sup>2</sup>; 20 A

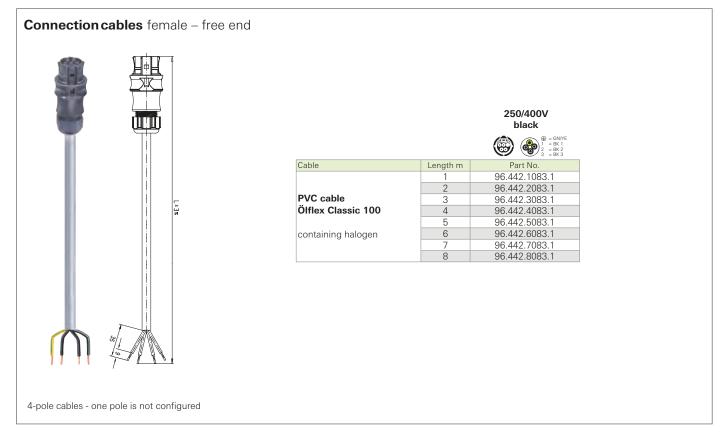


## Cable assemblies Cable 4 x 1.5 mm<sup>2</sup>; 16 A

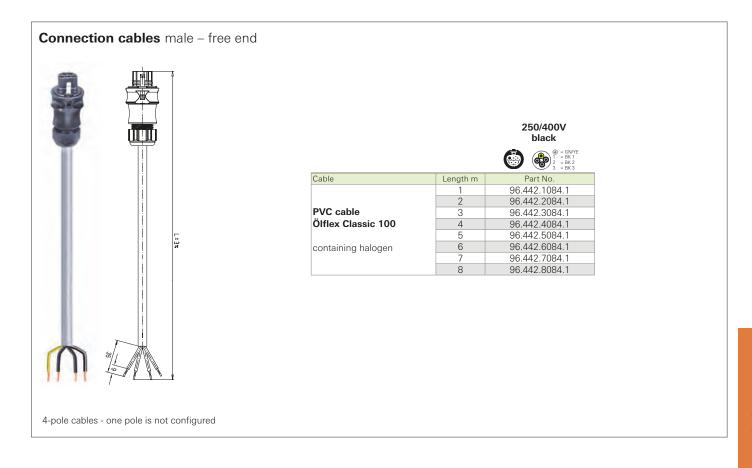
Rated values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Wire strip length	(open cable end)	9 mm

Pull relief	Gland nut
Interlock	integrated
Color cable	grey
Color handle shell	black

## Connection cables female - male 250/400V black Cable Length m 96.442.1080.1 96.442.2080.1 PVC cable 3 96.442.3080.1 Ölflex Classic 100 96.442.4080.1 4 96.442.5080.1 6 96.442.6080.1 containing halogen 96.442.7080.1 96.442.8080.1 4-pole cables - one pole is not configured



## Cable assemblies Cable 4 x 1.5 mm<sup>2</sup>; 16 A



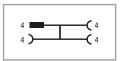
### **Distribution units**

#### **RST** compact distribution unit

104 x 162 x 57.2 mm 2.5 mm<sup>2</sup> Dimensions Pre-wired with M25 device connectors 4-pole Fitted as required with Mounting option Yes



Circuit diagram



#### Input 1, RST20i4 Outputs 3, RST20i4 Part No. 99.911.0000.7 Color ■ black

Outputs 4, RST20i4

5, RST20i4

7, RST20i4

1, RST20i4

1, RST20i4

1, RST20i4

Part No. 99.935.0000.7

99.916.0000.7

99.936.0000.7

#### RST multiple distribution unit

Dimensions 112 x 154 x 94 mm Pre-wired with

Fitted as required with M25 device connectors 4-pole 6.3 or 10A can be integrated

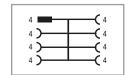
Color

■ black
■ black

■ black



Circuit diagram





# General power applications, switching functions, power/dimming signals and low voltage

#### **Application example**



#### General

Four variations are available for applications up to 250/400 V (for example mains, switching functions, a version to combine power and dimming signals), as well as a version for low-voltage applications up to 50/120 V.

All connectors are mechanically coded. This means that only associated pairs of male and female can be connected with the correct polarity. You therefore have the security of a clear separation of different applications without having to redo any incorrect connections. The color of the connectors indicates the links that belong together.

#### **Coding**

Coung										
	For daily updates visit the website at http://eshop.wieland-electric.com.			Application	250/	400V	250V	250/400V	250/400V	~50/-120V
Assembly instructions and other technical information can be found in the Technical Data or in eShop.		Mechanical	⊕, N, 3, 2, 1		L, N, ⊕,D1, D2	1,2,3, 4,5	N,E,1,2,3	1,2,3,4,5		
				coding						
Name	Description	Connection style	Strain relief housing	Connection points per pole	light gray	black	turquoise	light blue	yellow	signal brown
0	1 x cable entry	Screw Crimp	yes	1	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
Connector	2 x cable entry	Screw Spring clamp	yes	1	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$
Distribution units	RST compact distribution unit/ multi-distribution unit				on request	on request	on request	on request	on request	on request
Distribution units	Individual distribution box				on request	on request	on request	on request	on request	on request
	M16 device connector, modular, straight				$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$
	M16 device connector, modular, angled 7°				<b>V</b>	$\sqrt{}$	$\checkmark$	$\checkmark$		<b>V</b>
Device	M25 device connector, standard				$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
connectors	M20 device connector, standard				$\sqrt{}$	$\sqrt{}$	$\checkmark$	$\sqrt{}$		$\checkmark$
	M20 device connector, modular, straight				$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$
	M25 device connector, modular, angled				$\sqrt{}$	$\sqrt{}$	$\checkmark$	$\sqrt{}$		$\sqrt{}$
	Connection cable Male – Free end	pre- assembled	pre- assembled	pre- assembled	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$		$\sqrt{}$
Cable assemblies	Connection cable Female – Free end	pre- assembled	pre- assembled	pre- assembled	$\sqrt{}$	$\sqrt{}$	$\checkmark$	$\checkmark$		$\sqrt{}$
	Extension cable Male — Female	pre- assembled	pre- assembled	pre- assembled	<b>V</b>	<b>V</b>	<b>V</b>	$\sqrt{}$		<b>V</b>

# Connectors, straight for cables Ø 6 – 10 mm and 10 – 14 mm

#### Female connector

Unmounted with cable gland.

Crimp contacts separately available under Accessories.

See the Technical Data for sheath and insulation strip lengths.



with screw connection1)



with crimp connection

		Wire mm² rigid fine-stranded o.75 – 4.0 stranded without ferrules	Wire mm² fine-stranded 0.75 – 4.0
Application Coding Cable diameter in mm Color		Part No.	Part No.
(a) N, 3, 2, 10 10 10	black	96.051.4053.0 96.051.4053.1 96.051.4153.0	96.151.0053.0 96.151.0053.1 96.151.0153.0
10 – 1	4 black	96.051.4153.1	96.151.0153.1
250/400V		96.051.4053.6 96.051.4153.6	96.151.0053.6 96.151.0153.6
1, 2, 3, 4, 5		96.051.4053.9 96.051.4153.9	96.151.0053.9 96.151.0153.9
N, E, 1, 2, 3 6 – 1	0 yellow	96.051.4053.2	
~50/-120V 1, 2, 3, 4, 5 6 - 1		96.051.4051.4 96.051.4151.4	96.151.0051.4 96.151.0151.4

#### Male connector

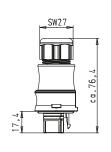
Unmounted with cable gland and locking device.

Crimp contacts separately available under Accessories.

See the Technical Data for sheath and insulation strip lengths.







		with screw connection¹¹  Wire mm² rigid	with crimp connection  Wire mm² fine-stranded 0.75 – 4.0 Locking device yes
		stranded without ferrules  Locking device yes	
		Economy dorner   journal	
Application Coding Cable dia	ameter in mm Color	Part No.	Part No.
<b>₽ P</b> . N. 3.	6 – 10 light gray black		96.152.0053.0 96.152.0053.1
⊕, N, 3, 2, 1	10 – 14 light gray black		96.152.0153.0 96.152.0153.1
250/400V L, 🖶, N, D1, D2	6 - 10 10 -14 turquoise	96.052.4053.6 96.052.4153.6	96.152.0053.6 96.152.0153.6
1, 2, 3, 4, 5	6 - 10 10 -14 light blue	96.052.4053.9 96.052.4153.9	96.152.0053.9 96.152.0153.9
N, E, 1, 2, 3	6 – 10 yellow	96.052.4053.2	
~50/-120V 1, 2, 3, 4, 5	6 – 10 signal 10 –14 brown		96.152.0051.4 96.152.0151.4 Contacts separately under Accessories, see following pages.

<sup>1)</sup> With wire protection available on request

# Connectors, angled 90° for cables Ø 6 – 10 mm and 10 – 14 mm

# Female connector Unmounted with cable gland. 90° angle.

See the Technical Data for sheath and insulation strip length as well as the ferrules to be used.



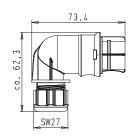
with screw connection1)

mm<sup>2</sup>

Wire

rigid





with crimp connection

mm<sup>2</sup>

0.75 - 4.0

Wire

fine-stranded

				fine-stranded 0.75 – 4.0	
				stranded without ferrules	
Application Cod	ling Cable	diameter in mm	Color	Part No.	Part No.
	⊕. N. 3.	6 – 10	light gray black	96.053.4053.0 96.053.4053.1	96.153.0053.0 96.153.0053.1
250/400V	⊕, N, 3, 2, 1	10 – 14	light gray black	96.053.4153.0 96.053.4153.1	96.153.0153.0 96.153.0153.1
230/4007	L, ⊕, N, D1, D2	6 – 10 10 –14	turquoise	96.053.4053.6 96.053.4153.6	96.153.0053.6 96.153.0153.6
	1, 2, 3, 4, 5	6 – 10 10 –14	light blue	96.053.4053.9 96.053.4153.9	96.153.0053.9 96.153.0153.9
~50/-120V	1, 2, 3, 4, 5	6 – 10 10 –14	signal brown	96.053.4051.4 96.053.4151.4	96.153.0051.4 96.153.0151.4
					Contacts senarately under Accessories, see following pages

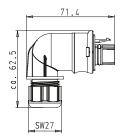
#### Male connector

Unmounted with cable gland and locking device. 90° angle.

See the Technical Data for sheath and i nsulation strip length as well as the ferrules to be used.







							SW2/
				with screw	connection <sup>1)</sup>	with crimp	connection
				Wire rigid	mm²	Wire fine-stranded	mm <sup>2</sup> 0.75 – 4.0
				fine-stranded stranded	0.75 – 4.0 without ferrules	Locking device	yes
				Locking device	yes		
Application	Coding Cable	e diameter in mm	Color		Part No.		Part No.
	AN 3	6 – 10	light gray black		96.054.4053.0 96.054.4053.1		96.154.0053.0 96.154.0053.1
250/400V	⊕, N, 3, 2, 1	10 – 14	light gray black		96.054.4153.0 96.054.4153.1		96.154.0153.0 96.154.0153.1
230/400 V	L, ⊕, N, D1, D2	6 – 10 10 –14	turquoise		96.054.4053.6 96.054.4153.6		96.154.0053.6 96.154.0153.6
	1, 2, 3, 4, 5	6 – 10 10 –14	light blue		96.054.4053.9 96.054.4153.9		96.154.0053.9 96.154.0153.9
~50/-120V	1, 2, 3, 4, 5	6 – 10 10 –14	signal brown		96.054.4051.4 96.054.4151.4		96.154.0051.4 96.154.0151.4
						Contacts separatel	y under Accessories, see following pages.

<sup>1)</sup> With wire protection available on request

# Connectors, straight for cable Ø 13 – 18 mm

#### Female connector

Unmounted with cable gland.

Crimp contacts separately available under Accessories.

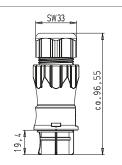
See the Technical Data for sheath and insulation strip lengths.



with screw connection1)



with crimp connection



				rigid mm² fine-stranded 0.75 – 4.0 stranded without ferrules	wire mm² fine-stranded 0.75 – 4.0
Application	Coding Cabl	e diameter in mm	Color	Part No.	Part No.
	⊕, N, 3, 2, 1	13 – 18	light gray black	96.051.4553.0 96.051.4553.1	96.151.0553.0 96.151.0553.1
250/400V	L, ⊕, N, D1, D2	13 – 18	turquoise	96.051.4553.6	96.151.0553.6
250/400V	1, 2, 3, 4, 5	13 – 18	light blue	96.051.4553.9	96.151.0553.9
	N, E, 1, 2, 3	13 – 18	yellow	96.051.4553.2	
~50/-120V	1, 2, 3, 4, 5	13 – 18	signal brown	96.051.4551.4	96.151.0551.4
					Contacts separately under Accessories, see following pages.

#### Male connector

Unmounted with cable gland and locking device. Crimp contacts separately available under Accessories.

See the Technical Data for sheath and insulation strip lengths.





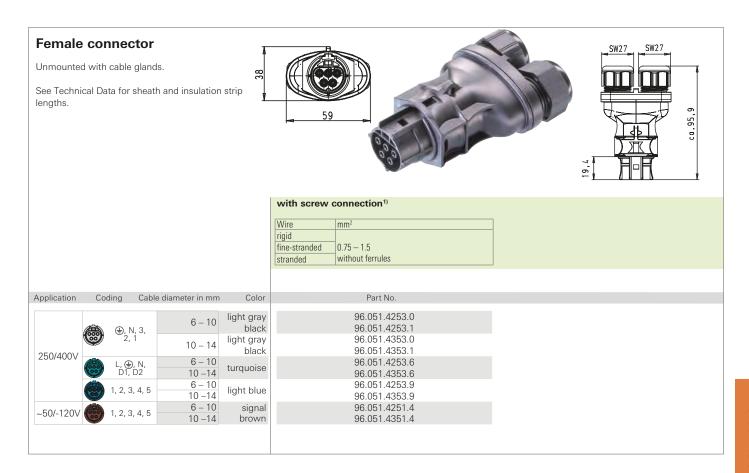


							— <u>I II II I</u>	
				with screw of	connection <sup>1)</sup>	with crimp	connection	
				Wire rigid fine-stranded stranded Locking device	mm² 0.75 – 4.0 without ferrules yes	Wire fine-stranded Locking device	mm <sup>2</sup> 0.75 – 4.0 yes	
Application	Coding Cable	diameter in mm	Color		Part No.		Part No.	
(	(a), N, 3, 2, 1	13 – 18	light gray black		96.052.4553.0 96.052.4553.1		96.152.0553.0 96.152.0553.1	
250/400V	L,⊕, N, D1, D2	13 – 18	turquoise		96.052.4553.6		96.152.0553.6	
250/4000	1, 2, 3, 4, 5	13 – 18	light blue		96.052.4553.9		96.152.0553.9	
(	N, E, 1, 2, 3	13 – 18	yellow		96.052.4553.2			
~50/-120V	1, 2, 3, 4, 5	13 – 18	signal brown		96.052.4551.4		96.152.0551.4	
						Contacts separatel	y under Accessories, see following pages.	

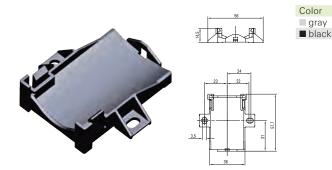
<sup>1)</sup> With wire protection available on request

Part No. 01.006.1553.0 01.006.1553.1

# Splitter connector, straight for cables Ø 6 – 10 mm and 10 – 14 mm



#### Mounting plate for splitter connectors



<sup>1)</sup> With wire protection available on request

# M25 device connector straight, standard

#### Female connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from outside.

Crimp contacts separately available under Accessories.

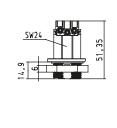
See the Technical Data for insulation strip lengths. For spacer rings for unlocking the device connetor, see Accessories.







with crimp connection



	Wire	mm <sup>2</sup>	
	rigid		
	fine-stranded	0.75 - 4.0	
	stranded	without ferrules	
	Term. poles	1	
	Thread	M25 x 1.5	
	Gland	outside	
or		Part No.	

with screw connection

mm <sup>2</sup>
0.75 – 4.0
1
M25 x 1.5
outside

Application	Color	
	<b>⊕</b> , N, 3, 2, 1	light gray black
250/400V	L, ⊕, N, D1, D2	turquoise
250/4000	1, 2, 3, 4, 5	light blue
	N, E, 1, 2, 3	signal brown
~50/-120V	1, 2, 3, 4, 5	yellow

Part No. 96.051.5053.0 96.051.5053.1 96.051.5053.6		
96.051.5053.0 96.051.5053.1	-	Part No
96.051.5053.1		Tare tvo.
96.051.5053.6		
		96.051.5053.6
96.051.5053.9		96.051.5053.9
96.051.5051.4		96.051.5051.4

Contacts separately under Accessories, see following pages.								
Part No.								
96.151.1053.0 96.151.1053.1								
96.151.1053.6								
96.151.1053.9								
96.151.1053.2								
96.151.1051.4								

#### Male connector

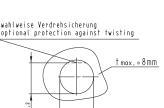
Application Coding

Correct positioning guaranteed due to flattened thread. With locking device. Fastening with screws from outside.

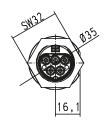
Crimp contacts separately available under Accessories.

See the Technical Data for insulation strip lengths.





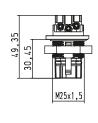
Application Coding C						
	<b>⊕</b> , N, 3, 2, 1	light gray black				
250/400V	L, ⊕, N, D1, D2	turquoise				
230/400 V	1, 2, 3, 4, 5	light blue				
	N, E, 1, 2, 3	signal brown				
~50/-120V	1, 2, 3, 4, 5	yellow				



with screw connection



with crimp connection



	Wire	mm <sup>2</sup>	Wire	mm <sup>2</sup>
	rigid		fine-stranded	0.75 – 4.0
	fine-stranded	0.75 – 4.0	Term. poles	1
	stranded	without ferrules	Thread	M25 x 1.5
	Term. poles	1	Gland	outside
	Thread	M25 x 1.5	Locking device	yes
	Gland	outside		
	Locking device	yes	Contacts separately under	er Accessories, see following pages.
or		Part No.		Part No.
<b>∀</b>		96.052.5053.0 96.052.5053.1		96.152.1053.0 96.152.1053.1
Э		96.052.5053.6		96.152.1053.6
Э		96.052.5053.9		96.152.1053.9
٦				96.152.1053.2
v		96.052.5051.4		96.152.1051.4

# M20 device connector straight, modular

#### Female connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside.

Crimp contacts separately available under Accessories.

See the Technical Data for sheath and insulation strip lengths.







with screw connection	
Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 – 4.0
stranded	without ferrules
Term. poles	1
Thread	M20 x 1.5
Gland	inside

with crimp connection	
Wire	mm <sup>2</sup>
fine-stranded	0.75 – 4.0
Term. poles	1
Thread	M20 x 1.5
Gland	inside

Application	Coding	Color
	⊕, N, 3, 2, 1	light gray black
250/400V	L, ⊕, N, D1, D2	turquoise
	1, 2, 3, 4, 5	light blue
~50/-120V	1, 2, 3, 4, 5	signal brown

r	Part No.
/	96.051.6053.0
(	96.051.6053.1
	96.051.6053.6
,	90.051.0055.0
,	96.051.6053.9
	30.031.0033.3
1	96.051.6051.4
	30.001.0001.4

Part No.
96.151.2053.0
96.151.2053.1
96.151.2053.6
96.151.2053.9
96.151.2051.4
Contacts separately under Accessories, see following pages.

#### Male connector

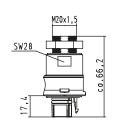
Correct positioning guaranteed due to flattened thread. With locking device. Fastening with screws from inside.

Crimp contacts separately available under Accessories.

See the Technical Data for sheath and insulation strip lengths.







wahlweise Verdrehsicherung optional protection against	twisting
7° 6 Ø20	t max. = 8 mm

Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 - 4.0
stranded	without ferrules
Term. poles	1
Thread	M20 x 1.5
Gland	inside
Locking device	yes

with crimp connection	
Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M20 x 1.5
Gland	inside
Locking device	yes

Application	Coding	Color	Part No.
	<b>⊕</b> , N, 3, 2, 1	light gray black	96.052.6053.0 96.052.6053.1
250/400V	L, ⊕, N, D1, D2	turquoise	96.052.6053.6
	1, 2, 3, 4, 5	light blue	96.052.6053.9
~50/-120\	1, 2, 3, 4, 5	signal brown	96.052.6051.4

96.152.2053.0 96.152.2053.1 96.152.2053.6 96.152.2053.9 96.152.2051.4 Contacts separately under Accessories, see following pages.	Part No.
96.152.2053.1 96.152.2053.6 96.152.2053.9 96.152.2051.4	
96.152.2053.9 96.152.2051.4	
96.152.2051.4	96.152.2053.6
	96.152.2053.9
Contacts separately under Accessories, see following pages.	96.152.2051.4
	Contacts separately under Accessories, see following pages.

# M16 device connector straight, modular

#### Female connector

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside.

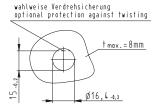
Crimp contacts separately available under Accessories.

See the Technical Data for insulation strip lengths.





with crimp connection



with screw of	onnection
Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 – 4.0
stranded	without ferrules
Term. poles	1
Thread	M16 x 1.5
Gland	inside

Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M16 x 1.5
Gland	inside

Application	Coding	Color
	⊕, N, 3, 2, 1	light gray black
250/400V	L, ⊕, N, D1, D2	turquoise
	1, 2, 3, 4, 5	light blue
~50/-120V	1, 2, 3, 4, 5	signal brown

Part No.  96.051.6153.0 96.051.6153.1 96.051.6153.6 96.051.6153.9 96.051.6151.4		
96.051.6153.1 96.051.6153.6 96.051.6153.9	or	Part No.
96.051.6153.1 96.051.6153.6 96.051.6153.9		
96.051.6153.6 96.051.6153.9	y	
96.051.6153.9	<	96.051.6153.1
	Э	96.051.6153.6
96.051.6151.4	9	96.051.6153.9
	1	96.051.6151.4

Part No.
96.151.2153.0
96.151.2153.1
96.151.2153.6
00.454.0450.0
96.151.2153.9
96.151.2151.4
Contacts separately under Accessories, see following pages.

#### Male connector

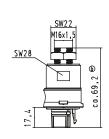
Correct positioning guaranteed due to flattened thread. With locking device. Fastening with screws from inside.

Crimp contacts separately available under Accessories.

See the Technical Data for insulation strip lengths.









with screw c	onnection
Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 – 4.0
stranded	without ferrules
Term. poles	1
Thread	M16 x 1.5
Gland	inside
Locking device	VPS

Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M16 x 1.5
Gland	inside
Locking device	yes

Application	Coding	Colo
250/400V	⊕, N, 3, 2, 1	light gray black
	L, ⊕, N, D1, D2	turquoise
	1, 2, 3, 4, 5	light blue
~50/-120V	1, 2, 3, 4, 5	signal brown

	D N	5
olor	Part No.	Part No.
ay	96.052.6153.0	96.152.2153.0
ick	96.052.6153.1	96.152.2153.1
ise	96.052.6153.6	96.152.2153.6
ue	96.052.6153.9	96.152.2153.9
∧n	96.052.6151.4	96.152.2151.4
		Contacts separately under Accessories, see following pages.

# M16 device connector angled 7°, modular

#### **Female connector**

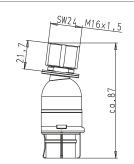
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. Angled 7°, thread M16.

Crimp contacts separately available under

See the Technical Data for insulation strip lengths.









Ø20,4-0,2
-----------

with screw of	connection
Wire	mm <sup>2</sup>
rigid	
fine-stranded	0.75 – 4.0
stranded	without ferrules
Term. poles	1
Thread	M16 x 1.5
Gland	inside

Wire	mm <sup>2</sup>
fine-stranded	0.75 – 4.0
Term. poles	1
Thread	M16 x 1.5
Gland	inside

Application	Coding	Color
	⊕, N, 3, 2, 1	light gray black
250/400V	<b>E</b> , ⊕, N, D1, D2	turquoise
	1, 2, 3, 4, 5	light blue
~50/-120V	1, 2, 3, 4, 5	signal brown

or	Part No.
٧	96.055.6153.0
y k	96.055.6153.1
	30.000.0100.1
е	96.055.6153.6
С	30.000.0100.0
е	96.055.6153.9
	00.055.0454.4
n	96.055.6151.4

Part No.
96.155.2153.0
96.155.2153.1
96.155.2153.6
96.155.2153.9
96.155.2151.4
Contacts separately under Accessories, see following pages.

#### Male connector

Correct positioning guaranteed due to flattened thread. With locking device. Fastening with screws from inside. Angled 7°, thread M16.

Crimp contacts separately available under Accessories.

See the Technical Data for insulation strip lengths.



with screw connection





wahlweise Verdrehsicherung optional protection against	twisting
\$\display \ \phi \ \phi	t max. = 8 mm

- 1		
	Wire	mm <sup>2</sup>
	rigid	
	fine-stranded	0.75 – 4.0
	stranded	without ferrules
	Term. poles	1
	Thread	M16 x 1.5
	Gland	inside
	Locking device	yes

Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M16 x 1.5
Gland	inside
Locking device	yes

Application	Coding	Color
	⊕, N, 3, 2, 1	light gray black
250/400V	L, 😩, N, D1, D2	turquoise
	1, 2, 3, 4, 5	light blue
~50/-120V	1, 2, 3, 4, 5	signal brown

lor	Part No.	Part No.
ay ck	96.056.6153.0 96.056.6153.1	96.156.2153.0 96.156.2153.1
se	96.056.6153.6	96.156.2153.6
ue	96.056.6153.9	96.156.2153.9
/n	96.056.6151.4	96.156.2151.4
		Contacts separately under Accessories, see following pages.

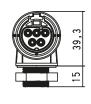
# M20 device connector angled 90°, modular

#### **Female connector**

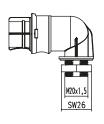
Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. Angled 90°, thread M20.

Crimp contacts separately available under

See the Technical Data for insulation strip lengths.







# wahlweise Verdrehsicherung optional protection against twisting t max. = 8 mm 420, 4-0,2

with screw connection		
Wire	mm <sup>2</sup>	
rigid		
fine-stranded	0.75 - 4.0	
stranded	without ferrules	
Term. poles	1	
Thread	M20 x 1.5	
Gland	inside	

with crimp connection		
Wire	mm <sup>2</sup>	
fine-stranded	0.75 - 4.0	
Term. poles	1	
Thread	M20 x 1.5	
Gland	inside	

Application	Coding	Color
	⊕, N, 3, 2, 1	light gray black
250/400V	<b>E</b> , ⊕, N, D1, D2	turquoise
	1, 2, 3, 4, 5	light blue
~50/-120V	1, 2, 3, 4, 5	signal brown

or	Part No.
y k	96.053.6053.0
K	96.053.6053.1
е	96.053.6053.6
е	96.053.6053.9
n	96.053.6051.4

Part No.
96.153.2053.0 96.153.2053.1
96.153.2053.6 96.153.2053.9
96.153.2051.4
Contacts separately under Accessories, see following pages.

#### Male connector

Correct positioning guaranteed due to flattened thread. With locking device.
Fastening with screws from inside.
Angled 90°, thread M20.

Crimp contacts separately available under Accessories.

See the Technical Data for insulation strip lengths.







wahlweise Verdrehsicherung optional protection against twisting	
† max. = 8 mm	<u>1</u>

with screw connection		
Wire	mm <sup>2</sup>	
rigid		
fine-stranded	0.75 – 4.0	
stranded	without ferrules	
Term. poles	1	
Thread	M20 x 1.5	
Gland	inside	
Locking device	ves	

Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M20 x 1.5
Gland	inside
Locking device	ves

Application Coding			Color	
		€	), N, 3, 2, 1	light gray black
	250/400V	L, (	€), N, D1, D2	turquoise
		1	, 2, 3, 4, 5	light blue
	~50/-120V	1	, 2, 3, 4, 5	signal brown

lor	Part No.	Part No.
ay ck	96.054.6053.0 96.054.6053.1	96.154.2053.0 96.154.2053.1
se	96.054.6053.6	96.154.2053.6
ue	96.054.6053.9	96.154.2053.9
/n	96.054.6051.4	96.154.2051.4
		Contacts separately under Accessories, see following pages.

# M25 device connector angled 90°, modular

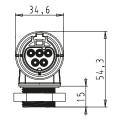
#### **Female connector**

Correct positioning guaranteed due to flattened thread. Fastening with screws from inside. Angled 90°, thread M25.

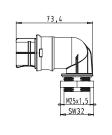
Crimp contacts separately available under

See the Technical Data for insulation strip lengths.









	with screw connection			
	Wire	mm <sup>2</sup>		
	rigid			
	fine-stranded	0.75 - 4.0		
	stranded	without ferrules		
	Term. poles	1		
	Thread	M25 x 1.5		
	Gland	inside		

Wire	mm <sup>2</sup>
fine-stranded	0.75 - 4.0
Term. poles	1
Thread	M25 x 1.5
Gland	inside

with crimp connection

Application	Coding	Color
	⊕, N, 3, 2, 1	light gray black
250/400V	L, ⊕, N, D1, D2	turquoise
	1, 2, 3, 4, 5	light blue
~50/-120V	1, 2, 3, 4, 5	signal brown

Part No.
96.053.6253.0 96.053.6253.1
96.053.6253.6
96.053.6253.9
96.053.6251.4

Part No.	
00.450.0050.0	
96.153.2253.0 96.153.2253.1	
96.153.2253.6	
90.103.2203.0	
96.153.2253.9	
96.153.2251.4	
Contacts separately under Accessories, see following pages.	

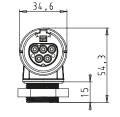
#### Male connector

Correct positioning guaranteed due to flattened thread. With locking device.
Fastening with screws from inside.
Angled 90°, thread M25.

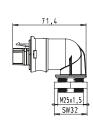
Crimp contacts separately available under Accessories.

See the Technical Data for insulation strip lengths.









with screw connection				
	Wire	mm <sup>2</sup>		
	rigid			
	fine-stranded	0.75 - 4.0		
	stranded	without ferrules		
	Term. poles	1		
	Thread	M25 x 1.5		
	Gland	inside		
	Locking device	ves		

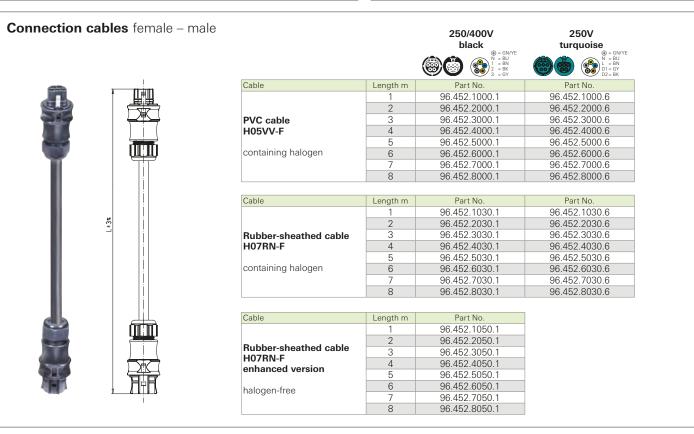
with crimp connection		
Wire	mm²	
fine-stranded	0.75 - 4.0	
Term. poles	1	
Thread	M25 x 1.5	
Gland	inside	
Locking device	yes	

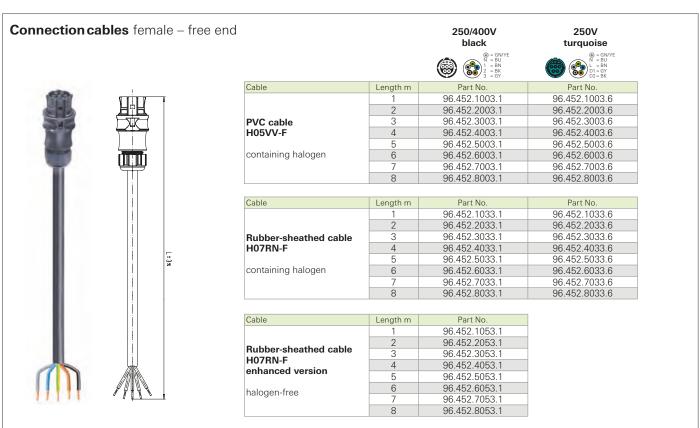
Application	Coding		Color	Part No.	Part No.
		⊕, N, 3, 2, 1	light gray black	96.054.6253.0 96.054.6253.1	96.154.2253.0 96.154.2253.1
250/400V		L, ⊕, N, D1, D2	turquoise	96.054.6253.6	96.154.2253.6
		1, 2, 3, 4, 5	light blue	96.054.6253.9	96.154.2253.9
~50/-120\	/	1, 2, 3, 4, 5	signal brown	96.054.6251.4	96.154.2251.4
			,		Contacts separately under Accessories, see following pages.

### Cable assemblies Cable 5 x 1.5 mm<sup>2</sup>; 16 A

Rated values			
Wire ends	(open cable end)	ultrason. welded	
Sheath strip length	(open cable end)	35 mm	
Wire strip length	(open cable end)	9 mm	

Pull relief	with gland nut
Interlock	integrated
Color cable	black
Color handle shell	black





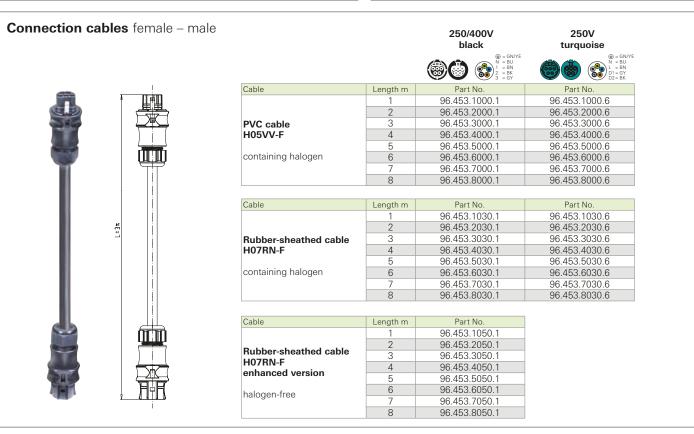
# Cable assemblies Cable 5 x 1.5 mm<sup>2</sup>; 16 A

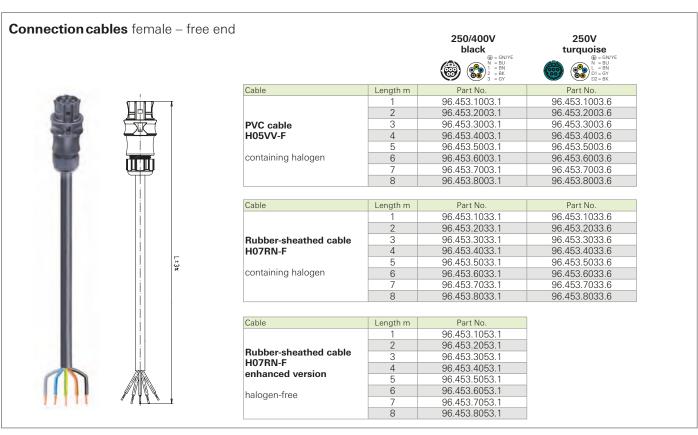
tion cables male – free end			250/400V black • = GN/YE	250V turquoise
			N = BU N = BU 1 = BN 2 = BK 3 = GY	BU   L = BN   D1 = GY   D2 = BK
	Cable	Length m	Part No.	Part No.
T ATT		1	96.452.1004.1	96.452.1004.6
		2	96.452.2004.1	96.452.2004.6
	PVC cable	3	96.452.3004.1	96.452.3004.6
	H05VV-F	4	96.452.4004.1	96.452.4004.6
		5	96.452.5004.1	96.452.5004.6
	containing halogen	6	96.452.6004.1	96.452.6004.6
		7	96.452.7004.1	96.452.7004.6
		8	96.452.8004.1	96.452.8004.6
	Cable	Length m	Part No.	Part No.
i i	Cabic	1	96.452.1034.1	96.452.1034.6
		2	96.452.2034.1	96.452.2034.6
	Rubber-sheathed cable	3	96.452.3034.1	96.452.3034.6
	H07RN-F	4	96.452.4034.1	96.452.4034.6
	110711111	5	96.452.5034.1	96.452.5034.6
ω	containing halogen	6	96.452.6034.1	96.452.6034.6
		7	96.452.7034.1	96.452.7034.6
		8	96.452.8034.1	96.452.8034.6
	Cable	Length m	Part No.	
		1	96.452.1054.1	
	Rubber-sheathed cable	2	96.452.2054.1	
	H07RN-F	3	96.452.3054.1	
	enhanced version	4	96.452.4054.1	
		5	96.452.5054.1	
!!	halogen-free	6	96.452.6054.1	
и ш. у	3	7	96.452.7054.1	
		8	96.452.8054.1	

### Cable assemblies Cable 5 x 2.5 mm<sup>2</sup>; 20 A

	Rated values			
	Wire ends (open cable end)		ultrason. welded	
	Sheath strip length	(open cable end)	35 mm	
	Wire strip length	(open cable end)	9 mm	

Pull relief	with gland nut
Interlock	integrated
Color cable	black
Color handle shell	black





# Cable assemblies Cable 5 x 2.5 mm<sup>2</sup>; 20 A

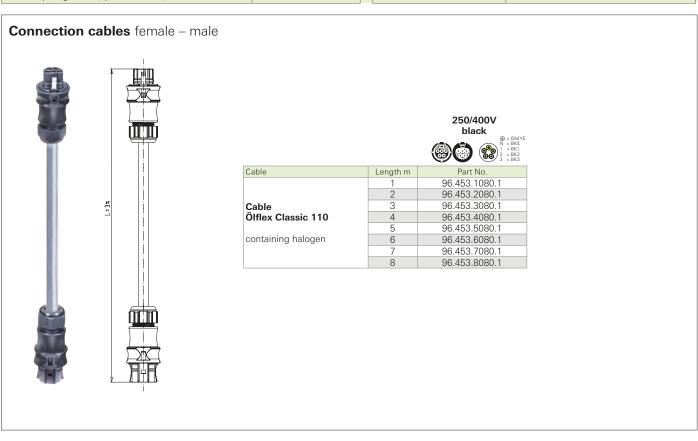
tion cables male – free end			250/400V black	250V turquoise
			(♣) = GN/YE N = BU 1 = BN 2 = BK 3 = GY	⊕ = GN/YE N = BU L = BN D1 = GY D2 = BK
	Cable	Length m	Part No.	Part No.
Train 4		1	96.453.1004.1	96.453.1004.6
		2	96.453.2004.1	96.453.2004.6
	PVC cable	3	96.453.3004.1	96.453.3004.6
<del></del>	H05VV-F	4	96.453.4004.1	96.453.4004.6
		5	96.453.5004.1	96.453.5004.6
	containing halogen	6	96.453.6004.1	96.453.6004.6
		7	96.453.7004.1	96.453.7004.6
		8	96.453.8004.1	96.453.8004.6
	Cable	Length m	Part No.	Part No.
li li l		1	96.453.1034.1	96.453.1034.6
		2	96.453.2034.1	96.453.2034.6
	Rubber-sheathed cable	3	96.453.3034.1	96.453.3034.6
	H07RN-F	4	96.453.4034.1	96.453.4034.6
		5	96.453.5034.1	96.453.5034.6
<u>υ</u> ω ω ω ω ω ω ω ω ω ω ω ω ω ω ω ω ω ω ω	containing halogen	6	96.453.6034.1	96.453.6034.6
		7	96.453.7034.1	96.453.7034.6
		8	96.453.8034.1	96.453.8034.6
	0.11		D	
	Cable	Length m	Part No.	
		1	96.453.1054.1	
	Rubber-sheathed cable	2	96.453.2054.1	
	H07RN-F	3	96.453.3054.1	
	enhanced version	4	96.453.4054.1	
		5	96.453.5054.1	
	halogen-free	6	96.453.6054.1	
4 11 11 11		7	96.453.7054.1	
		8	96.453.8054.1	

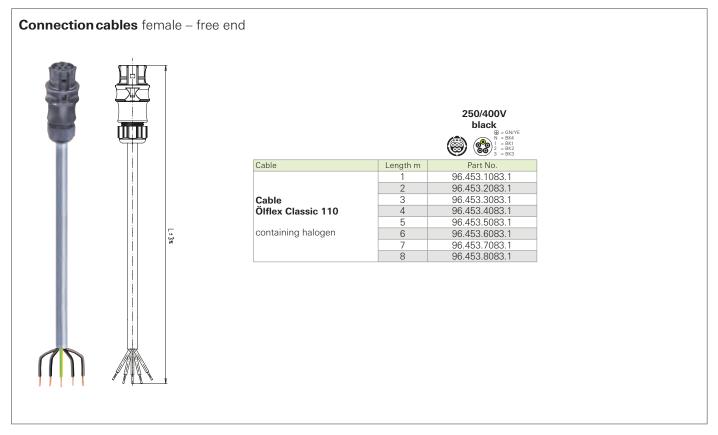
# Cable assemblies

### Cable 5 x 2.5 mm<sup>2</sup>; 20 A (Power 5-pole)

Rated values	Rated values			
Wire ends (open cable end)		ultrason. welded		
Sheath strip length	(open cable end)	35 mm		
Wire strip length	(open cable end)	9 mm		

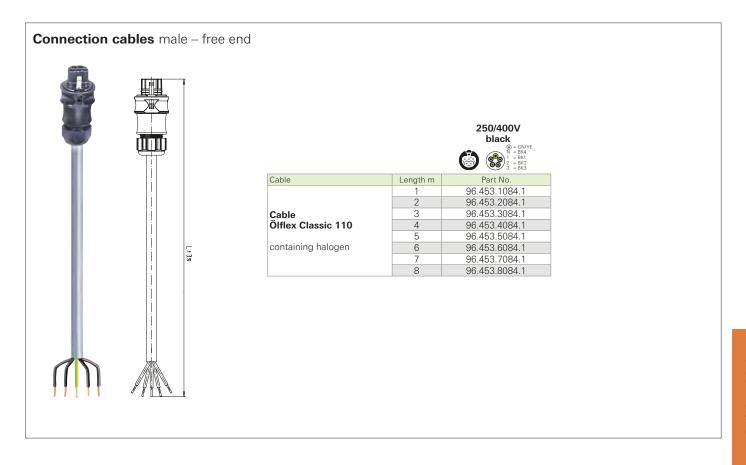
Pull relief	with gland nut
Interlock	integrated
Color cable	gray
Color handle shell	black





# Cable assemblies

Cable 5 x 2.5 mm<sup>2</sup>; 20 A (Power 5-pole)

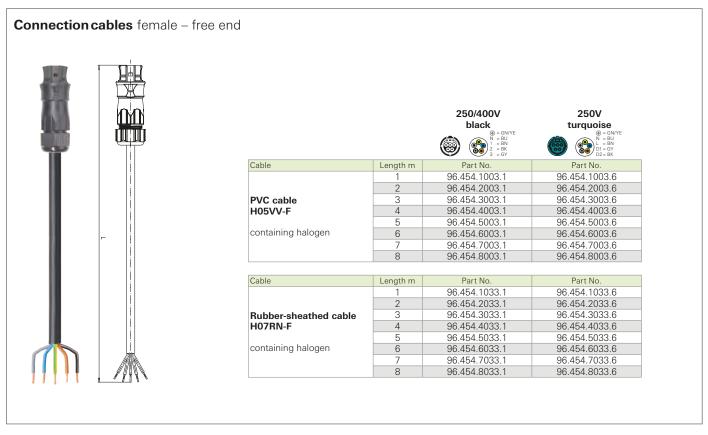


### Cable assemblies Cable 5 x 4.0 mm<sup>2</sup>; 20 A

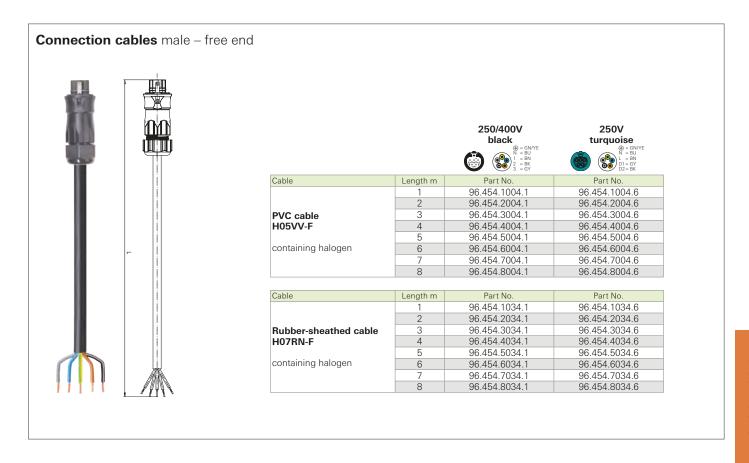
	Rated values			
Wire ends (open cable end)		(open cable end)	ultrason. welded	
	Sheath strip length	(open cable end)	35 mm	
	Wire strip length	(open cable end)	9 mm	

Pull relief	with gland nut
Interlock	integrated
Color cable	black
Color handle shell	black

#### Connection cables female - male 250/400V 250V black turquoise Part No. Cable Part No. Length m 96.454.1000.1 96.454.1000.6 96.454.2000.1 96.454.2000.6 **PVC** cable 96.454.3000.1 96.454.3000.6 H05VV-F 4 96.454.4000.1 96.454.4000.6 96.454.5000.1 96.454.5000.6 containing halogen 6 96.454.6000.1 96.454.6000.6 96.454.7000.1 96.454.7000.6 8 96.454.8000.1 96.454.8000.6 Cable Part No. Length m Part No 96.454.1030.1 96.454.1030.6 96.454.2030.6 96.454.2030.1 96.454.3030.1 96.454.3030.6 Rubber-sheathed cable 96.454.4030.1 96.454.4030.6 H07RN-F 96.454.5030.1 96,454,5030,6 5 containing halogen 96.454.6030.1 96.454.6030.6 6 96 454 7030 1 96 454 7030 6 96.454.8030.1 96.454.8030.6



### Cable assemblies Cable 5 x 4.0 mm<sup>2</sup>; 20 A



# **Distribution units**

#### **RST** compact distribution unit

Dimensions  $104 \times 162 \times 57.2 \text{ mm}$ 

Pre-wired with 2.5 mm<sup>2</sup>

3 outputs routing 230/400V, 20A

Mounting option

RST 20i5 Coding Color black

Yes





Dimensions  $104 \times 162 \times 96 \text{ mm}$ 

Pre-wired with 2.5 mm<sup>2</sup>

Fitted as required with

Fuse

M25 device connector 2- up to 5-pole

Outputs

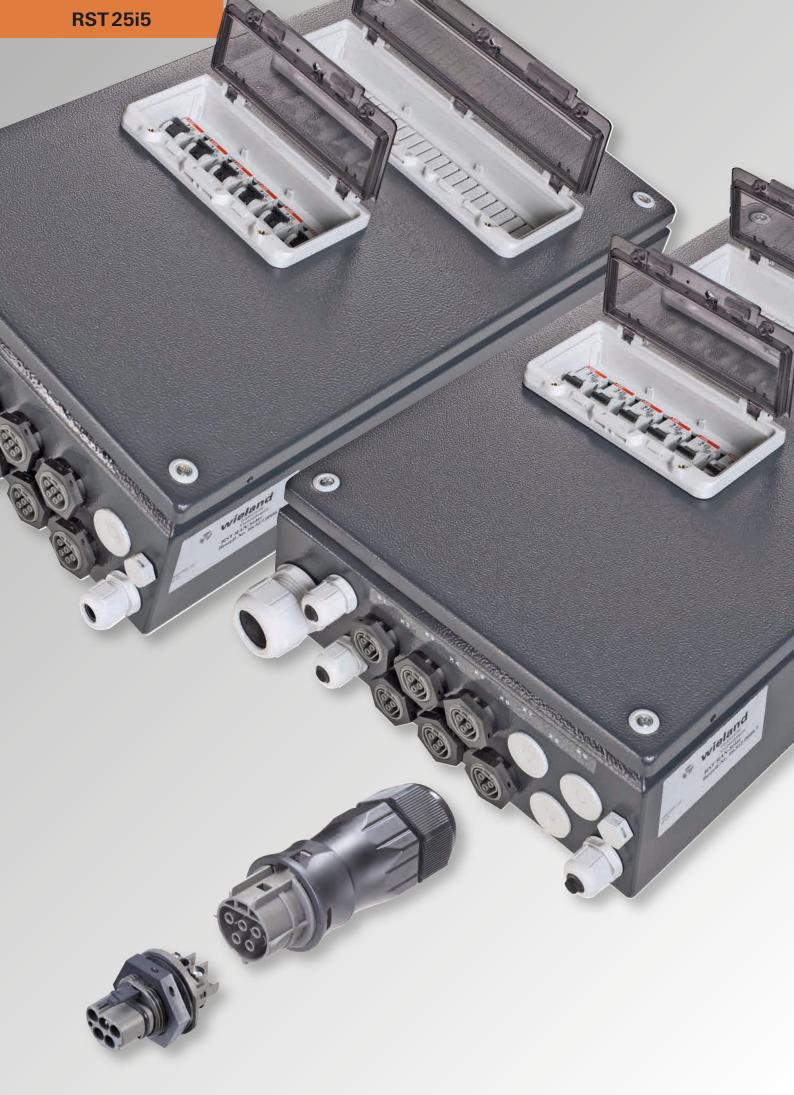
Part No.

upon request 96.050.0153.1

6.3 or 10A can be integrated

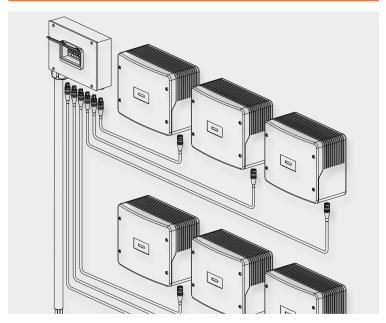


Color	Input	Outputs	Part No.
■ black	1	7	upon request
■ black	1	5	96.050.2153.1



# Solar applications up to 32 A for single-phase supply with three-phase power monitoring or three-phase supply

### **Application example**



### **Features:**

- Fast mounting through easy handling
- UV-resistant
- Rated current up to 32 A (at 6.0 mm²)
- Cross-sections up to 6 mm²
- Degree of protection IP66/68 (3m; 2h) /69

#### **General**

The system has been specially adapted to the requirements of solar technology.

The connectors can be loaded with max. 32 A and are used for single-phase supply with power monitoring or three-phase supply.

Special distribution boxes are used to bundle the electrical power of up to 6 inverters and thus complete the system.

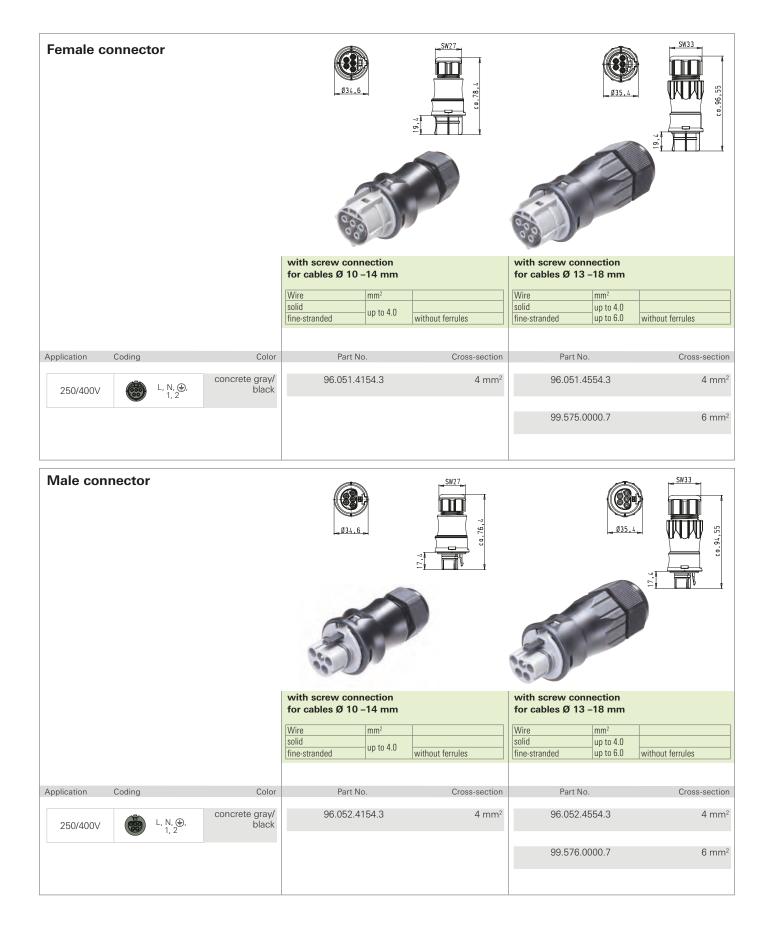
These connectors have their own mechanical coding. This means that only associated pairs of male and female can be connected with the correct polarity. This ensures a clear separation from the connectors of the other product series.



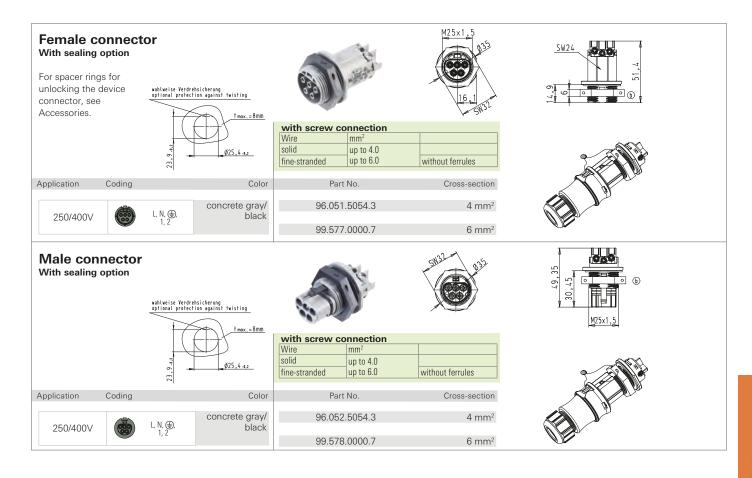
#### Codina

	or daily updates visit the website at http://eshop.wieland-electric.com. Assembly instructions and other technical information can be found have the Technical Data or in eShop.			Application	250/400V
Assembly instruct				Mechanical coding	L, N, 🖨, 1, 2
Name	Description	Connection style	Strain relief housing	Connection points per pole	concrete gray
Connector	1 x cable entry	Screw	yes	1	
Distribution units	Distribution box RST RAN Solar Distribution box RST Solar				
Device connectors	M25 device connector, Standard				
Cable assemblies	Connection cable Male – Free end Connection cable Female – Free end Extension cable Male – Female	pre- assembled pre- assembled pre- assembled	pre- assembled pre- assembled pre- assembled	pre- assembled pre- assembled pre- assembled	

# Connectors, straight for cables Ø 10 – 14 mm and 13 – 18 mm



# M25 device connector straight, standard

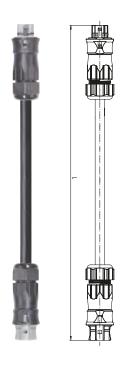


# Cable assemblies Cable 5 x 4.0 mm<sup>2</sup>; 25 A

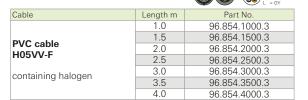
Rated values		
Wire ends	(open cable end)	ultrason. welded
Sheath strip length	(open cable end)	35 mm
Wire strip length	(open cable end)	9 mm

Pull relief	with gland nut
Interlock	integrated
Color cable	black
Color handle shell	black

#### **Connection cables** female – male



#### 250/400V concrete gray/black

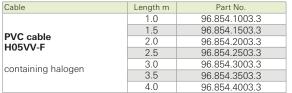


Cable	Length m	Part No.
	1.0	96.854.1030.3
B	1.5	96.854.1530.3
Rubber-sheathed cable H07RN-F	2.0	96.854.2030.3
HU/KN-F	2.5	96.854.2530.3
containing halogen	3.0	96.854.3030.3
Containing nalogen	3.5	96.854.3530.3
	4.0	96 854 4030 3

#### Connection cables female - free end



#### 250/400V concrete gray/black (a) = GN/YE

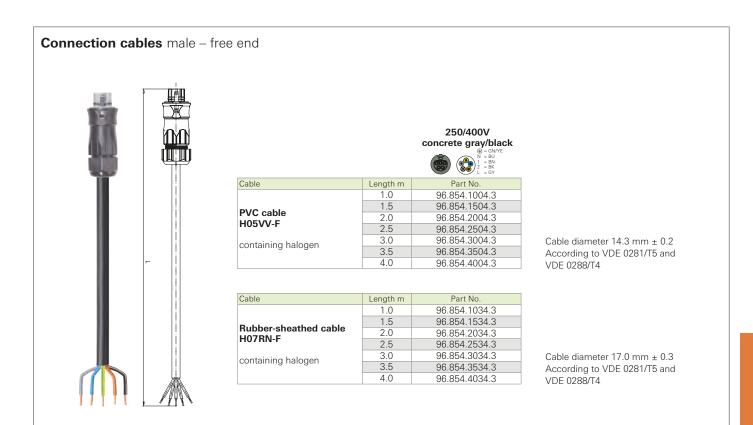


Cable	Length m	Part No.
	1.0	96.854.1033.3
Darlahan aharakha darah la	1.5	96.854.1533.3
Rubber-sheathed cable H07RN-F	2.0	96.854.2033.3
HU/KN-F	2.5	96.854.2533.3
containing halogen	3.0	96.854.3033.3
containing halogen	3.5	96.854.3533.3
	4.0	96.854.4033.3

Cable diameter 14.3 mm  $\pm$  0.2 According to VDE 0281/T5 and VDE 0288/T4

Cable diameter 17.0 mm  $\pm$  0.3 According to VDE 0281/T5 and VDE 0288/T4

### Cable assemblies Cable 5 x 4.0 mm<sup>2</sup>; 25 A





# The new RST20i6 and i7 More poles for greater demands

Following the current trend, Wieland Electric continues to expand its **RST**® product range, presenting a 6- and 7-pole variant for the first time.

A total of three codings ensure both mechanical and color differentiation of the various circuits. To increase safety, a distinction is also drawn between applications with and without protective earth. The compact connectors with key data 250/400V; 600V UL/CSA, 20A, IP 66/68 (3m; 2h)/69 offer high modularity and adaptability to the requirements of the application. Connectors are available in straight or angled versions, as well as for all common cable diameters. The range even includes connectors with 2 cable inputs for throughwiring. Both screw and crimp fittings are offered as the connection system.

As an interface to electrical devices, the system offers straight and angled adapters for all standard housing bores (for M16, M20, M25). All devices can therefore easily to converted to RST without changing tools.

# Combination of one-phase systems (network) with signals and emergency light

### **Application example**



#### General

Multi-functionality requires a higher number of poles.

The system components, rated for up to 20 A, can accommodate cables of up to a maximum 2.5 mm<sup>2</sup> and are available with screw or crimp fittings. The 6-pole variant is designed specifically for dimming emergency lights.

Different codings within the RST series allow a mechanical and visual separation from other circuits.

### **Coding**

For daily updates vis				Application	250/400V
http://eshop.wieland- Assembly instruction in the Technical Data	s and other technical information c	Mechanical coding	L, N, ( ), 1, 2, Ls		
Name	Description	Connection system	Strain-relief housing	Connection points per pole	turquoise
Connector	1x cable guide	Screw Crimp	yes	1	$\checkmark$
Connector	2x cable guide	Screw Crimp fitting	yes	1	$\checkmark$
Distributors	RST compact splitter/ multi-splitter				on request
Distributors	Individual distribution box				on request
	Device connector M16, modular, straight			1	$\checkmark$
	Device connector M16, modular, 7° angled			1	$\checkmark$
	Device connector M25, standard			1	
Device connectors	Device connector M25, modular, straight			1	<b>√</b>
	Device connector M20, modular, straight			1	$\checkmark$
	Device connector M20, modular, angled			1	$\checkmark$
	Device connector M25, modular, angled			1	$\checkmark$
	Device connector cable Male — free end	pre-assembled	pre-assembled	pre-assembled	on request
Cable assemblies	Connection cable Female – free end	pre-assembled	pre-assembled	pre-assembled	on request
	Extension cable Male – female	pre-assembled	pre-assembled	pre-assembled	on request

# Connector, straight For cables Ø 6 - 10 mm and 10 - 14 mm

#### Female connector SW27 Unmounted with screwed cable gland. With or without contact seal. Crimp contacts separate, Accessories. For stripping lengths, refer to Technical Specifications. With screw connection With crimp connection Cables Cables mm<sup>2</sup> Rigid 0.75-2.5 Fine stranded Fine stranded 0.2 - 2.5 Stranded Cables with 2.5 mm<sup>2</sup> only without ferrules Part No. Application Coding Ø cable mm Part No. Part No. Part No. Without contact seal With contact seal 1) Without contact seal With contact seal 1) 9L.061.4053.6 96.061.4053.6 96.161.0053.6 9L.161.0053.6 250/400V turquoise 10 - 14 96.061.4153.6 9L.061.4153.6 96.161.0153.6 9L.161.0153.6

#### Male connector

Unmounted with screwed cable gland and lock.

With or without contact seal.

Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.







				With screw connection		With crimp connection	
				Cables	mm <sup>2</sup>	Cables	mm <sup>2</sup>
				Rigid		Fine stranded	0.75-2.5
				Fine stranded	0.2 - 2.5		
				Stranded			
				Cables with 2.5 mm² only without	ut ferrules		
Application	Coding	Ø cable mm	Color	Part No.	Part No.	Part No.	Part No.
				Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
250/400V	L, N, (	6 - 10	turquoino	96.062.4053.6	on request	96.162.0053.6	on request
250/4000	L, N, @ 1, 2, L:	10 - 14	turquoise	96.062.4153.6	on request	96.162.0153.6	on request

<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

# Connector, angled 90° For cables Ø 6 - 10 mm and 10 - 14 mm

#### Female connector

Unmounted with screwed cable gland, 90° angle.

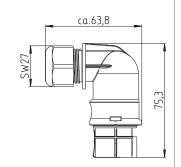
With or without contact seal.

Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.







				With screw connection		With crimp connection	
				Cables	mm <sup>2</sup>	Cables	mm <sup>2</sup>
				Rigid		Fine stranded	0.75-2.5
				Fine stranded	0.2 - 2.5		
				Stranded			
				Cables with 2.5 mm <sup>2</sup> only without	ferrules		
Application Coding		Ø cable mm	Color	Part No.	Part No.	Part No.	Part No.
				Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
250/400V	L, N, ⊕, 1, 2, Ls	6 - 10	turquoise	96.063.4053.6	9L.063.4053.6	96.161.0053.6	9L.163.0053.6
250/4007	1, 2, Ls	10 - 14	turquoise	96.063.4153.6	9L.063.4153.6	96.163.0153.6	9L.163.0153.6

#### Male connector

Unmounted with screwed cable gland and lock.

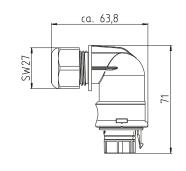
With or without contact seal.

Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.







	With screw connection		With crimp connection	
	Cables Rigid Fine stranded Stranded Cables with 2.5 mm² only witho	mm² 0.2 - 2.5 ut ferrules	Cables Fine stranded	mm²   0.75-2.5
Application Coding Ø cable mm Color	Part No.	Part No.	Part No.	Part No.
	Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
250/400V L, N, ⊕, 6 - 10 turquoise	96.064.4053.6	on request	96.164.0053.6	on request
250/400V L, N, ⊕, 1, 2, Ls 10 - 14 turquoise	96.064.4153.6	on request	96.164.0153.6	on request

<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

# Connector, straight For cables Ø 13 - 18 mm

#### Female connector SW33 Unmounted with screwed cable gland. With or without contact seal. $\emptyset$ 35,4 Crimp contacts separate, Accessories. For stripping lengths, refer to Technical Specifications. With screw connection With crimp connection Cables Cables mm<sup>2</sup> Rigid 0.75-2.5 Fine stranded Fine stranded 0.2 - 2.5 Stranded Cables with 2.5 mm<sup>2</sup> only without ferrules Part No. Application Coding Ø cable mm Part No. Part No. Part No. Without contact seal With contact seal 1) Without contact seal With contact seal 1) 250/400V 13 - 18 turquoise 96.061.4553.6 9L.061.4553.6 96.161.0553.6 9L.161.0553.6

#### Male connector

Unmounted with screwed cable gland and lock.

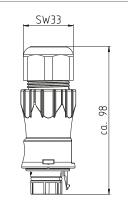
With or without contact seal.

Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.







					With screw connection		With crimp connection	
					Cables	mm <sup>2</sup>	Cables	mm <sup>2</sup>
					Rigid		Fine stranded	0.75-2.5
					Fine stranded	0.2 - 2.5		
					Stranded			
					Cables with 2.5 mm <sup>2</sup> only withou	t ferrules		
Applica	ation Coding	g	Ø cable mm	Color	Part No.	Part No.	Part No.	Part No.
					Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
250/4	400V	L, N, ⊕, 1, 2, Ls	13 - 18	turquoise	96.062.4553.6	on request	96.162.0553.6	on request

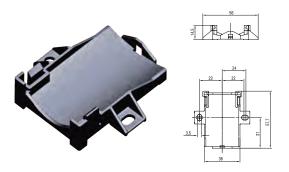
<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

# Connector with double connection, straight

#### For cables Ø 6 - 10 mm and 10 - 14 mm



#### Mounting plate for splitter connectors



Color	Part No.
■ light gray	01.006.1553.0
■ black	01.006.1553.1

<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

### **Device connector M25**

### straight, modular

### Female connector

Position fixing guaranteed by flattening the thread. Screwed from inside.

With or without contact seal.

Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.





With screw connectio	n			
Cables	mm <sup>2</sup>			
Rigid				
Fine stranded 0.2 - 2.5				
Stranded				
Cables with 2.5 mm² only without ferrules				

With crimp connection	
Cables	mm <sup>2</sup>
Fine stranded	0.75-2.5

Application	Coding		Color	Part No.	Part No.	Part No.	Part No.
				Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
250/400V		L, N, ⊕, 1, 2, Ls	turquoise	96.061.6253.6	9L.061.6253.6	96.161.2253.6	9L.161.2253.6

#### Male connector

Position fixing guaranteed by flattening the thread. Screwed from inside.

With or without contact seal.

Crimp contacts separate, Accessories.

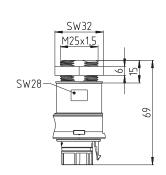
For stripping lengths, refer to Technical Specifications.





With screw connection





With crimp connection

	6	-	ΨZ5,4.	-0,2	Cables	mm <sup>2</sup>	Cables	mm <sup>2</sup>	
	23,				Rigid		Fine stranded	0.75-2.5	
	24				Fine stranded	0.2 - 2.5			
					Stranded				ı
					Cables with 2.5 mm <sup>2</sup> only without	ut ferrules			
									١
А	pplication	Coding		Color	Part No.	Part No.	Part No.	Part No.	
					Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)	
	250/400V		L, N, ⊕, 1, 2, Ls	turquoise	96.062.6253.6	9L.062.6253.6	96.162.2253.6	9L.162.2253.6	

<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

### **Device connector M20**

### straight, modular

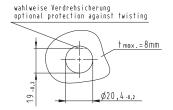


Position fixing guaranteed by flattening the thread. Screwed from inside.

With or without contact seal.

Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.





Color

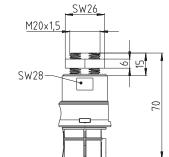
turquoise

Part No.

Without contact seal

96.061.6053.6





0.75-2.5

With screw connection	With crimp connection	
Cables	mm <sup>2</sup>	Cables
Rigid		Fine stranded
Fine stranded	0.2 - 2.5	
Sstranded		
Cables with 2.5 mm <sup>2</sup> only withou		

Part No.

With contact seal 1)

9L.061.6053.6

Part No.	Part No.
Without contact seal	With contact seal 1)
96 161 2053 6	91 161 2053 6

# Male connector

Application

Application

250/400V

250/400V

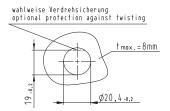
Position fixing guaranteed by flattening the thread. Screwed from inside.

With or without contact seal.

Crimp contacts separate, Accessories.

Coding

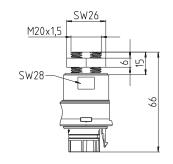
For stripping lengths, refer to Technical Specifications.



L, N, ⊕, 1, 2, Ls







	With screw connection		With crimp connection			
	Cables	mm²	Cables	mm <sup>2</sup>		
	Rigid		Fine stranded	0.75-2.5		
	Fine stranded	0.2 - 2.5				
	Stranded					
	Cables with 2.5 mm² only without ferrules					
r	Part No.	Part No.	Part No.	Part No.		
	Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)		
	96 062 6053 6	91, 062, 6053, 6	96 162 2053 6	91 162 2053 6		

Color

turquoise

<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

### **Device connector M16**

### straight, modular

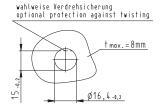
#### Female connector

Position fixing guaranteed by flattening the thread. Screwed from inside.

With or without contact seal.

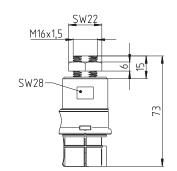
Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.









With screw connection	
Cables	mm <sup>2</sup>
Rigid	
Fine stranded	0.2 - 2.5
Stranded	
Cables with 2.5 mm <sup>2</sup> only withou	it ferrules

With crimp connection	
Cables	mm <sup>2</sup>
Fine stranded	0.75-2.5

ı	Application	Coding		Color	
	250/400V		L, N, ⊕, 1, 2, Ls	turquoise	

Part No.	Part No.
Without contact seal	With contact seal 1)
96.061.6153.6	9L.061.6153.6

Part No.	Part No.
Without contact seal	With contact seal 1)
96.161.2153.6	9L.161.2153.6

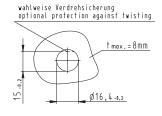
#### Male connector

Position fixing guaranteed by flattening the thread. Screwed from inside.

With or without contact seal.

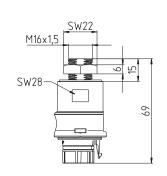
Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.









mm<sup>2</sup> 0.75-2.5

With crimp connection

Cables

Fine stranded

With screw connection			
Cables	mm <sup>2</sup>		
Rigid			
Fine stranded	0.2 - 2.5		
Stranded			
Rigid 0.2 - 2.5			

Application	Coding		Color	Part No.	Part No.	Part No.	Part No.
				Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
250/400V		L, N, ⊕, 1, 2, Ls	turquoise	96.062.6153.6	9L.062.6153.6	96.162.2153.6	9L.162.2253.6

<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

# Device connector M16 angled 7°, modular

#### Female connector

Position fixing guaranteed by flattening the thread. Screwed from inside.

With or without contact seal.

Crimp contacts separate, Accessories.

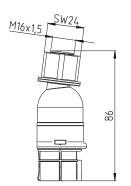
For stripping lengths, refer to Technical Specifications.





With screw connection





	Lables	mm²	Ш	Cables	mm²
	Rigid			Fine stranded	0.75-2.5
	Fine stranded	0.2 - 2.5			
	Stranded				
	Cables with 2.5 mm <sup>2</sup> only withou	t ferrules			
l			ı		
١	Part No.	Part No.		Part No.	Part No.
	Without contact seal	With contact seal 1)		Without contact seal	With contact sea

	Application	Coding		Color	
	250/400V		L, N, ⊕, 1, 2, Ls	turquoise	
- 1					



Part No.	Part No.
Without contact seal	With contact seal 1)
96.165.2153.6	Upon request

With crimp connection

With crimp connection

#### Male connector

Position fixing guaranteed by flattening the thread. Screwed from inside.

With or without contact seal.

Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.





With screw connection





0	ø20,4.	9,2	Cables Rigid Fine stranded Stranded Cables with 2.5 mm² only witho	mm² 0.2 - 2.5 ut ferrules	Cables Fine stranded	mm² 0.75-2.5
Application	Coding	Color	Part No.	Part No.	Part No.	Part No.
			Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
250/400V	L, N, ⊕, 1, 2, Ls	turquoise	96.066.6153.6	Upon request	96.166.2153.6	Upon request

<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

# Device connector M20 angled 90°, modular

#### Female connector 54.3 Position fixing guaranteed by flattening the thread. Screwed from inside. With or without contact seal. Crimp contacts separate, Accessories. For stripping lengths, refer to Technical Specifications. wahlweise Verdrehsicherung optional protection against twisting t max. = 8 mm With screw connection With crimp connection Cables Cables mm<sup>2</sup> Ø20,4-0,2 Rigid 0.75-2.5 Fine stranded Fine stranded 0.2 - 2.5 Stranded Cables with 2.5 mm<sup>2</sup> only without ferrules Application Coding Color Part No. Part No. Part No. Part No. Without contact seal With contact seal 1) Without contact seal With contact seal 1) 250/400V turquoise 96.063.6053.6 on request 96.163.2053.6 on request

#### Male connector

Position fixing guaranteed by flattening the thread. Screwed from inside.

With or without contact seal.

Crimp contacts separate, Accessories.

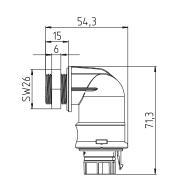
For stripping lengths, refer to Technical Specifications.





With screw connection



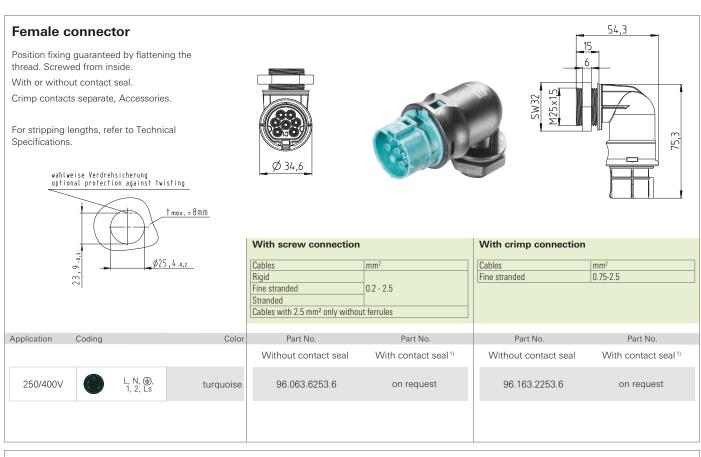


With crimp connection

Ø20,4-a.2		Cables Rigid Fine stranded Stranded Cables with 2.5 mm² only without	mm² 0.2 - 2.5 ut ferrules	Cables Fine stranded	mm <sup>2</sup> 0.75-2.5	
Application	Coding	Color	Part No.	Part No.	Part No.	Part No.
			Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
250/400V	L, N, ⊕, 1, 2, Ls	turquoise	96.064.6053.6	on request	96.164.2053.6	on request

<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

## Device connector M25 angled 90°, modular



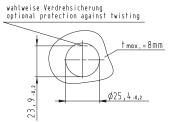


Position fixing guaranteed by flattening the thread. Screwed from inside.

With or without contact seal.

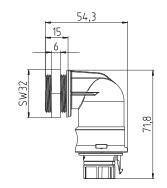
Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.









2.		With screw connection		With crimp connection			
	9-6	ø25	, 4 -0,2	Cables	mm <sup>2</sup>	Cables	mm <sup>2</sup>
	23,			Rigid		Fine stranded	0.75-2.5
	(4)		Fine stranded 0.2 - 2.5				
				Stranded			
			Cables with 2.5 mm² only without ferrules				
Application	Coding		Color	Part No.	Part No.	Part No.	Part No.
				Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
250/400V		L, N, ⊕, 1, 2, Ls	turquoise	96.064.6253.6	on request	96.164.2253.6	on request

<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector



## Combination of multi-phase systems (network) with signals, protection class II

#### **Application example**



#### General

Multi-functionality requires a higher number of poles.

The system components, rated for up to 20 A, can accommodate cables of up to a maximum 2.5 mm<sup>2</sup> and are available with screw or crimp fittings. The 7-pole variants are available with a total of 3 codings.

Different codings within the RST series allow a mechanical and visual separation from other circuits.

#### **Coding**

Coding								
For daily updates v				Application	250/-	400V	250/400V	250/400V
	ons and other technical informa	Mechanical coding	1, 2, 3, 4/1	N, 5, 6, ⊕	1, 2, 3, 4/N, 5, 6, 7	L, N, ⊕, 1, 2, 3, 4		
Name	Description	Connection system	Strain-relief housing	Connection points per pole	light gray	black	light blue	turquoise
Commenter	1x cable guide	Screw Crimp	yes	1	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Connector	2x cable guide	Screw Crimp	yes	1	$\overline{}$	$\checkmark$	$\overline{}$	$\overline{}$
Distributors	RST compact splitter/ multi-splitter							
Distributors	Individual distribution box				on request	on request	on request	on request
	Device connector M16, modular, straight				$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
	Device connector M16, modular, 7° angled				$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
	Device connector M25, standard							
Device connectors	Device connector M25, modular, straight				$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
	Device connector M20, modular, straight				$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
	Device connector M20, modular, angled				$\sim$	$\sim$	$\overline{}$	$\overline{}$
	Device connector M25, modular, angled				$\checkmark$	$\checkmark$	$\overline{}$	$\checkmark$
	Device connector cable Male – free end	pre-assembled	pre-assembled	pre-assembled	on request	on request	on request	on request
Cable assemblies	Connection cable Female – free end	pre-assembled	pre-assembled	pre-assembled	on request	on request	on request	on request
	Extension cable Male — female	pre-assembled	pre-assembled	pre-assembled	on request	on request	on request	on request

## Connector, straight For cables Ø 6 - 10 mm and 10 - 14 mm

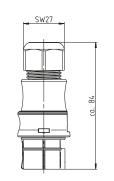
#### **Female connector**

Unmounted with screwed cable gland. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.







With screw connection	With crimp connection	
Cables	mm <sup>2</sup>	Cables
Rigid		Fine stranded
Fine stranded	0.2 - 2.5	
Stranded		
Cables with 2.5 mm <sup>2</sup> only withou		

Cables	mm <sup>2</sup>
Fine stranded	0.75-2.5

250/400V	1, 2, 3, 5, 6,	4/N,	6 – 10	light gray black
	5, 6,	<b>\(\begin{array}{c}\end{array}\)</b>	10 – 14	light gray black
	1, 2, 3, 5, 6,	4/N, 7	6 – 10 10-14	light blue
	L, N, ( 1, 2, 3	⊕, , 4	6 – 10 10-14	turquoise

Ø cable mm

Part No.	Part No.
Without contact seal	With contact seal 1)
96.071.4053.0	9L.071.4053.0
96.071.4053.1	9L.071.4053.1
96.071.4153.0	9L.071.4153.0
96.071.4153.1	9L.071.4153.1
96.071.4053.9	9L.071.4053.9
96.071.4153.9	9L.071.4153.9
96.071.4053.6	9L.071.4053.6
96.071.4153.6	9L.071.4153.6

Part No.	Part No.		
Without contact seal	With contact seal 1)		
96.171.0053.0 96.171.0053.1	9L.171.0053.0 9L.171.0053.1		
96.171.0153.0 96.171.0153.1	9L.171.0153.0 9L.171.0153.1		
96.171.0053.9 96.171.0153.9	9L.171.0053.9 9L.171.0153.9		
96.171.0053.6 96.171.0153.6	9L.171.0053.6 9L.171.0153.6		

#### Male connector

Application Coding

Unmounted with screwed cable gland and lock. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.







							•
				With screw connection	ı	With crimp connection	
				Cables	mm <sup>2</sup>	Cables	mm <sup>2</sup>
				Rigid		Fine stranded	0.75-2.5
				Fine stranded	0.2 - 2.5		
				Multi-stranded Cables with 2.5 mm² only without	ut forrulas		
				Cables with 2.5 min only without	ut ieirules		
Application	Codina	Ø cable mm	Color	Part No.	Part No.	Part No.	Part No.
	o .			Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
		6 – 10	light gray	96.072.4053.0	on request	96.172.0053.0	on request
	1, 2, 3, 4/N, 5, 6, ⊕	0 - 10	black	96.072.4053.1	on request	96.172.0053.1	on request
	5, 6, 🖶	10 – 14	light gray	96.072.4153.0	on request	96.172.0153.0	on request
250/400V			black	96.072.4153.1	on request	96.172.0153.1	on request
2007.007	1, 2, 3, 4/N, 5, 6, 7	6 – 10	light blue	96.072.4053.9	on request	96.172.0053.9	on request
	5, 6, 7	10-14	g bluo	96.072.4153.9	on request	96.172.0153.9	on request
	L, N, ⊕, 1, 2, 3, 4	6 – 10	turquoise	96.072.4053.6	on request	96.172.0053.6	on request
	1, 2, 3, 4	10-14	turquoise	96.072.4153.6	on request	96.172.0153.6	on request

<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

## Connector, straight For cables Ø 6 - 10 mm and 10 - 14 mm

#### **Female connector**

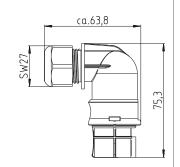
Unmounted with screwed cable gland. 90° angle With or without contact seal.

Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.







With screw conne	cuon
Cables	mm <sup>2</sup>
Rigid	
Fine stranded	0.2 - 2.5
Multi-stranded	
Cables with 2.5 mm <sup>2</sup> only	y without ferrules

mm <sup>2</sup>
0.75-2.5

1, 2, 3, 4/N, 5, 6, 🖨	6 – 10	light gray black
	10 – 14	light gray black
1, 2, 3, 4/N, 5, 6, 7	6 – 10 10-14	light blue
L, N, ⊕, 1, 2, 3, 4	6 – 10 10-14	turquoise
	1, 2, 3, 4/N, 5, 6, 7	1, 2, 3, 4/N, 5, 6, ⊕  10 − 14  1, 2, 3, 4/N, 5, 6, 7  10-14

Ø cable mm

Part No.	Part No.
Without contact seal	With contact seal 1)
96.073.4053.0	9L.073.4053.0
96.073.4053.1	9L.073.4053.1
96.073.4153.0	9L.073.4153.0
96.073.4153.1	9L.073.4153.1
96.073.4053.9	9L.073.4053.9
96.073.4153.9	9L.073.4153.9
96.073.4053.6	9L.073.4053.6
96.073.4153.6	9L.073.4153.6

Part No.	Part No.
Without contact seal	With contact seal 1)
96.173.0053.0 96.173.0053.1	9L.173.0053.0 9L.173.0053.1
96.173.0153.0 96.173.0153.1	9L.173.0153.0 9L.173.0153.1
96.173.0053.9 96.173.0153.9	9L.173.0053.9 9L.173.0153.9
96.173.0053.6 96.173.0153.6	9L.173.0053.6 9L.173.0153.6

#### Male connector

Application Coding

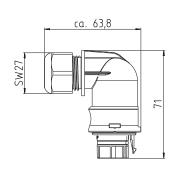
Unmounted with screwed cable gland and lock. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.





on request



					With screw connection		With crimp connection	
					Cables	mm <sup>2</sup>	Cables	mm <sup>2</sup>
					Rigid		Fine stranded	0.75-2.5
					Fine stranded	0.2 - 2.5		
					Multi-stranded			
					Cables with 2.5 mm <sup>2</sup> only without ferrules			
Application Coding Ø cable mm Co		Color	Part No.	Part No.	Part No.	Part No.		
					Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
			6 – 10	light gray	96.074.4053.0	on request	96.174.0053.0	on request
		1, 2, 3, 4/N, 5, 6, ⊕	6 – 10	black	96.074.4053.1	on request	96.174.0053.1	on request
		5, 6, 🖶	10 – 14	light gray	96.074.4153.0	on request	96.174.0153.0	on request
250/400\	,		10 - 14	black	96.074.4153.1	on request	96.174.0153.1	on request
250/400		1, 2, 3, 4/N,	6 – 10	light blue	96.074.4053.9	on request	96.174.0053.9	on request
		5, 6, 7	10-14	ligitt blue	96.074.4153.9	on request	96.174.0153.9	on request
		L, N, ⊕,	6 – 10	turquoise	96.074.4053.6	on request	96.174.0053.6	on request

96.074.4153.6

turquoise

10-14

on request

96.174.0153.6

<sup>&</sup>lt;sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

#### Connector, straight For cables Ø 13 - 18 mm

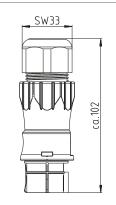
#### **Female connector**

Unmounted with screwed cable gland. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.







With screw conne	ection
Cables	mm <sup>2</sup>
Rigid	
Fine stranded	0.2 - 2.5
Stranded	
Cables with 2.5 mm <sup>2</sup> only	v without ferrules

ı		
	Cables	mm <sup>2</sup>
	Fine stranded	0.75-2.5
ı		

With crimp connection

	Application Coding		Ø cable mm	Color	
		1	, 2, 3, 4/N, 5, 6, 😩	13 – 18	light gray black
	250/400V	1	, 2, 3, 4/N, 5, 6, 7	13 – 18	light blue
			L, N, ⊕, 1, 2, 3, 4	13 – 18	turquoise
ш					

Part No.	Part No.
Without contact seal	With contact seal 1)
96.071.4553.0 96.071.4553.1	9L.071.4553.0 9L.071.4553.0
96.071.4553.9	9L.071.4553.9
96.071.4553.6	9L.071.4553.6
96.071.4553.9	9L.071.4553.9

Part No.	Part No.
Without contact seal	With contact seal 1)
96.171.0553.0 96.171.0553.1	9L.171.0553.0 9L.171.0553.1
96.171.0553.9	9L.171.0553.9
96.171.0553.6	9L.171.0553.6

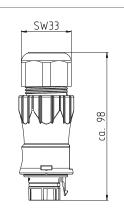
#### Male connector

Unmounted with screwed cable gland and lock. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.







				With screw connection		With crimp connection	
Cables Rigid Fine stranded Stranded Cables with 2.5		Rigid Fine stranded	mm² 0.2 - 2.5 ut ferrules	Cables Fine stranded	mm²   0.75-2.5		
Application	Coding	Ø cable mm	Color	Part No.	Part No.	Part No.	Part No.
				Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
	1, 2, 3, 4/N, 5, 6, ⊕	13 – 18	light gray black	96.072.4553.0 96.072.4553.1	on request on request	96.172.0553.0 96.172.0553.1	on request on request
250/400V	1, 2, 3, 4/N, 5, 6, 7	13 – 18	light blue	96.072.4553.9	on request	96.172.0553.9	on request
	L, N, 🖶, 1, 2, 3, 4	13 – 18	turquoise	96.072.4553.6	on request	96.172.0553.6	on request

<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

## Connector with double connection, straight For cables Ø 6 - 10 mm and 10 - 14 mm



#### Mounting plate for splitter connectors



Color	Part No.
light gray	01.006.1553.0
■ black	01.006.1553.1

<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

## Device connector M25 straight, modular

#### Female connector

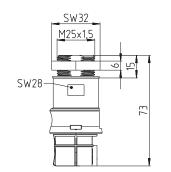
Position fixing guaranteed by flattening the thread. Screwed from inside. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.









	With screw connection						
	Cables	mm <sup>2</sup>					
	Rigid	0.2 - 2.5					
	Fine stranded						
	Stranded						
	Cables with 2.5 mm <sup>2</sup> only withou	t ferrules					

	With crimp connection	
1	Cables	mm <sup>2</sup>
	Fine stranded	0.75-2.5

Application	Coding		Color
		1, 2, 3, 4/N, 5, 6, ⊕	light gray black
250/400V		1, 2, 3, 4/N, 5, 6, 7	light blue
		L, N, ⊕, 1, 2, 3, 4	turquoise

Part No.	Part No.
Without contact seal	With contact seal 1)
96.071.6253.0 96.071.6253.1	9L.071.6253.0 9L.071.6253.1
96.071.6253.9	9L.071.6253.9
96.071.6253.6	9L.071.6253.6

Part No.	Part No.
Without contact seal	With contact seal 1)
96.171.2253.0 96.171.2253.1	9L.171.2253.0 9L.171.2253.1
96.171.2253.9	9L.171.2253.9
96.171.2253.6	9L.171.2253.6

#### Male connector

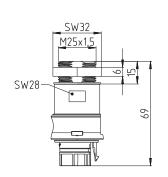
Position fixing guaranteed by flattening the thread. Screwed from inside. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.









mm<sup>2</sup> 0.75-2.5

Part No.
With contact seal <sup>1)</sup>
9L.172.2253.0
9L.172.2253.1
9L.172.2253.9
9L.172.2253.6

With crimp connection

Cables

Fine stranded

With screw connection	
Cables	mm <sup>2</sup>
Rigid	
Fine stranded	0.2 - 2.5
Stranded	
Cables with 2.5 mm <sup>2</sup> only withou	t ferrules

Application	Coding		Color	Part No.	Part No.	Part No.
				Without contact seal	With contact seal 1)	Without contact seal
		1, 2, 3, 4/N, 5, 6, ⊕	light gray black	96.072.6253.0 96.072.6253.1	9L.072.6253.0 9L.072.6253.1	96.172.2253.0 96.172.2253.1
250/400V		1, 2, 3, 4/N, 5, 6, 7	light blue	96.072.6253.9	9L.072.6253.9	96.172.2253.9
		L, N, ⊕, 1, 2, 3, 4	turquoise	96.072.6253.6	9L.072.6253.6	96.172.2253.6

<sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

#### **Device connector M20** straight, modular

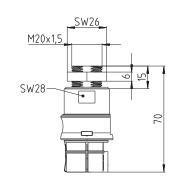
#### Female connector

Position fixing guaranteed by flattening the thread. Screwed from inside. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.









With screw connection	
Cables	mm <sup>2</sup>
Rigid	
Fine stranded	0.2 - 2.5
Stranded	
Cables with 2.5 mm <sup>2</sup> only withou	ut ferrules

	With crimp conn	ection	
1	Cables	mm <sup>2</sup>	
	Fine stranded	0.75-2.5	

Application	Coding		Color
		1, 2, 3, 4/N, 5, 6, ⊕	light gray black
250/400V		1, 2, 3, 4/N, 5, 6, 7	light blue
		L, N, ⊕, 1, 2, 3, 4	turquoise

Part No.	Part No.
Without contact seal	With contact seal 1)
96.071.6053.0 96.071.6053.1	9L.071.6053.0 9L.071.6053.1
96.071.6053.9	9L.071.6053.9
96.071.6053.6	9L.071.6053.6

Part No.	Part No.
Without contact seal	With contact seal 1)
96.171.2053.0 96.171.2053.1	9L.171.2053.0 9L.171.2053.1
96.171.2053.9	9L.171.2053.9
96.171.2053.6	9L.171.2053.6

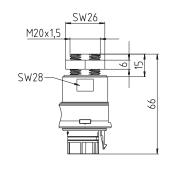
#### Male connector

Position fixing guaranteed by flattening the thread. Screwed from inside. With or without contact seal. Crimp contacts separate, Accessories.

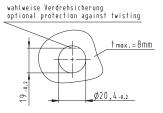
For stripping lengths, refer to Technical Specifications.







mm<sup>2</sup> 0.75-2.5



with screw connection	
Cables	mm <sup>2</sup>
Rigid	
Fine stranded	0.2 - 2.5
Stranded	
Cables with 2.5 mm <sup>2</sup> only withou	t ferrules

Part No.	Part No.
Without contact seal	With contact seal 1)
96.172.2053.0 96.172.2053.1	9L.172.2053.0 9L.172.2053.1
96.172.2053.9	9L.172.2053.9

With crimp connection

Coding		Color
	1, 2, 3, 4/N, 5, 6, 🖨	light gray black
	1, 2, 3, 4/N, 5, 6, 7	light blue
	L, N, ⊕, 1, 2, 3, 4	turquoise
	Coding	1, 2, 3, 4/N, 5, 6, ⊕ 1, 2, 3, 4/N, 5, 6, 7

Part No.	Part No.	Part No.	Part No.
Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
96.072.6053.0 96.072.6053.1	9L.072.6053.0 9L.072.6053.1	96.172.2053.0 96.172.2053.1	9L.172.2053.0 9L.172.2053.1
96.072.6053.9	9L.072.6053.9	96.172.2053.9	9L.172.2053.9
96.072.6053.6	9L.072.6053.6	96.172.2053.6	9L.172.2053.6

Cables

Fine stranded

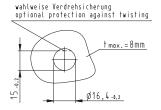
<sup>&</sup>lt;sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

#### **Device connector M16** straight, modular

#### Female connector

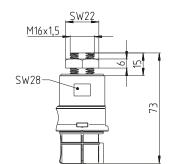
Position fixing guaranteed by flattening the thread. Screwed from inside. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.









With screw connection			
Cables	mm <sup>2</sup>		
Rigid			
Fine stranded	0.2 - 2.5		
Stranded			
Cables with 2.5 mm <sup>2</sup> only with	thout ferrules		

With crimp connect	ion	
Cables	mm <sup>2</sup>	
Fine stranded	0.75-2.5	

Application	Coding		Color
		1, 2, 3, 4/N, 5, 6, ⊕	light gray black
250/400V		1, 2, 3, 4/N, 5, 6, 7	light blue
		L, N, ⊕, 1, 2, 3, 4	turquoise

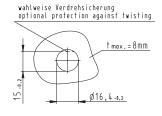
Part No.	Part No.
Without contact seal	With contact seal 1)
96.071.6153.0 96.071.6153.1	9L.071.6153.0 9L.071.6153.1
96.071.6153.9	9L.071.6153.9
96.071.6153.6	9L.071.6153.6

Part No.	Part No.
Without contact seal	With contact seal 1)
96.171.2153.0 96.171.2153.1	9L.171.2153.0 9L.171.2153.1
96.171.2153.9	9L.171.2153.9
96.171.2153.6	9L.171.2153.6

#### Male connector

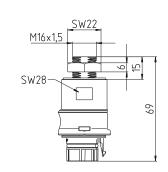
Position fixing guaranteed by flattening the thread. Screwed from inside. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.









With screw connection	With crimp connection	
Cables	mm <sup>2</sup>	Cables
Rigid		Fine stranded
Fine stranded	0.2 - 2.5	
Stranded		
Cables with 2.5 mm <sup>2</sup> only without ferrules		

Part No.	Part No.
Without contact seal	With contact se
96.072.6153.0 96.072.6153.1	9L.072.6153. 9L.072.6153.
96.072.6153.9	9L.072.6153.
96.072.6153.6	9L.072.6153.

Cables Fine stranded	mm <sup>2</sup> 0.75-2.5
i iii daalaaa	]
Part No.	Part No

Application	Coding		Color	Part No.	Part No.	Part No.	Part No.
				Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
	1, 2	2, 3, 4/N, 5, 6, ⊕	light gray black	96.072.6153.0 96.072.6153.1	9L.072.6153.0 9L.072.6153.1	96.172.2153.0 96.172.2153.1	9L.172.2153.0 9L.172.2153.1
250/400V	1, 2	2, 3, 4/N, 5, 6, 7	light blue	96.072.6153.9	9L.072.6153.9	96.172.2153.9	9L.172.2153.9
	L,	, N, ⊕, , 2, 3, 4	turquoise	96.072.6153.6	9L.072.6153.6	96.172.2153.6	9L.172.2153.6

<sup>&</sup>lt;sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

## Device connector M16 angled 7°, modular

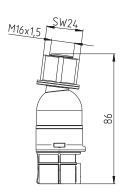
#### Female connector

Position fixing guaranteed by flattening the thread. Screwed from inside. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.







# wahlweise Verdrehsicherung optional protection against twisting t max. = 8 mm

	With screw connection				
	Cables	mm <sup>2</sup>			
	Rigid	0.2 - 2.5			
	Fine stranded				
	Stranded				
	Cables with 2.5 mm <sup>2</sup> only without	t ferrules			

With crimp connection		
Cables	mm <sup>2</sup>	
Fine stranded	0.75-2.5	

Application	Coding		Color
		1, 2, 3, 4/N, 5, 6, ⊕	light gray black
250/400V		1, 2, 3, 4/N, 5, 6, 7	light blue
		L, N, ⊕, 1, 2, 3, 4	turquoise

Part No.	Part No.
Without contact seal	With contact seal 1)
96.075.6153.0 96.075.6153.1	on request on request
96.075.6153.9	on request
96.075.6153.6	on request

Part No.	Part No.
Without contact seal	With contact seal 1)
96.175.2153.0 96.175.2153.1	on request on request
96.175.2153.9	on request
96.175.2153.6	on request

#### Male connector

Application

250/400V

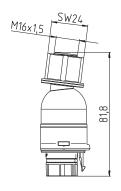
Position fixing guaranteed by flattening the thread. Screwed from inside. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.

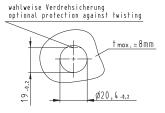
Coding







mm<sup>2</sup> 0.75-2.5



L, N, ⊕, 1, 2, 3, 4

	With screw connection			
	Cables	mm <sup>2</sup>		
I	Rigid			
	Fine stranded	0.2 - 2.5		
	Stranded			
	Cables with 2.5 mm² only without ferrules			

Color	Part No.	Part No.	Part No.	Part No.
	Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
light gray black	96.076.6153.0 96.076.6153.1	on request on request	96.176.2153.0 96.176.2153.1	on request on request
light blue	96.076.6153.9	on request	96.176.2153.9	on request
turquoise	96.076.6153.6	on request	96.176.2153.6	on request

Cables

Fine stranded

With crimp connection

<sup>&</sup>lt;sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

#### **Device connector M20** angled 90°, modular

#### Female connector

Position fixing guaranteed by flattening the thread. Screwed from inside. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.





	54,3 15 6 8 15 15 15 15 15 15 15 15 15 15 15 15 15
--	--

With crimp connection

With crimp connection

Cables

Fine stranded

Cables

Fine stranded

mm <sup>2</sup>		
Fine stranded 0.2 - 2.5		
Stranded		
Cables with 2.5 mm² only without ferrules		

Part No.	Part No.
Without contact seal	With contact seal 1)
96.173.2053.0 96.173.2053.1	on request on request
96.173.2053.9	on request
96.173.2053.6	on request

0.75-2.5

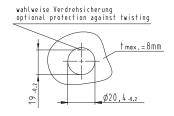
Application	Coding		Color
		1, 2, 3, 4/N, 5, 6, ⊕	light gray black
250/400V		1, 2, 3, 4/N, 5, 6, 7	light blue
		L, N, ⊕, 1, 2, 3, 4	turquoise

#### Male connector

Position fixing guaranteed by flattening the thread. Screwed from inside. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.

Coding





Part No.

Without contact seal

96.073.6053.0

96.073.6053.1

96.073.6053.9

96.073.6053.6



Part No.

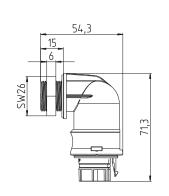
With contact seal 1)

on request

on request

on request

on request



mm<sup>2</sup> 0.75-2.5

With screw connection		
Cables	mm <sup>2</sup>	
Rigid		
Fine stranded 0.2 - 2.5		
Stranded		
Cables with 2.5 mm <sup>2</sup> only without ferrules		

	Color	Part No.	Part No.	Part No.	Part No.
		Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
1, 2, 3, 4/N, 5, 6, 🖶	light gray black	96.074.6053.0 96.074.6053.1	on request on request	96.174.2053.0 96.174.2053.1	on request on request
1, 2, 3, 4/N, 5, 6, 7	light blue	96.074.6053.9	on request	96.174.2053.9	on request
L, N, ⊕, 1, 2, 3, 4	turquoise	96.074.6053.6	on request	96.174.2053.6	on request

<sup>&</sup>lt;sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

Application

250/400V

54,3

## Device connector M25 angled 90°, modular

#### Female connector

Position fixing guaranteed by flattening the thread. Screwed from inside. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.





With screw connection	1	
Cables	mm <sup>2</sup>	
Rigid		
Fine stranded 0.2 - 2.5		
Stranded		
Cables with 2.5 mm <sup>2</sup> only without ferrules		

With crimp connection	
Cables	mm <sup>2</sup>
Fine stranded	0.75-2.5
	Cables

Application	County		COIOI
		1, 2, 3, 4/N, 5, 6, ⊕	light gray black
250/400V		1, 2, 3, 4/N, 5, 6, 7	light blue
		L, N, ⊕, 1, 2, 3, 4	turquoise

Part No.	Part No.
Without contact seal	With contact seal 1)
96.073.6253.0 96.073.6253.1	on request on request
96.073.6253.9	on request
96.073.6253.6	on request

Part No.	Part No.
Without contact seal	With contact seal 1)
96.173.2253.0 96.173.2253.1	on request on request
96.173.2253.9	on request
96.173.2253.6	on request

#### Male connector

Application

250/400V

Application Coding

Position fixing guaranteed by flattening the thread. Screwed from inside. With or without contact seal. Crimp contacts separate, Accessories.

For stripping lengths, refer to Technical Specifications.

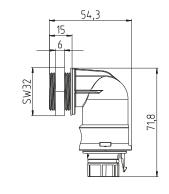
Coding





Color





mm<sup>2</sup> 0.75-2.5

With crimp connection

Cables

Fine stranded

With screw connection		
Cables	mm <sup>2</sup>	
Rigid		
Fine stranded	0.2 - 2.5	
Stranded		
Cables with 2.5 mm <sup>2</sup> only without ferrules		

Color	Part No.	Part No.	Part No.	Part No.
	Without contact seal	With contact seal 1)	Without contact seal	With contact seal 1)
light gray black	96.074.6253.0 96.074.6253.1	on request on request	96.174.2253.0 96.174.2253.1	on request on request
light blue	96.074.6253.9	on request	96.174.2253.9	on request
turquoise	96.074.6253.6	on request	96.174.2253.6	on request

<sup>&</sup>lt;sup>1)</sup> When using connectors with contact sealing, use only one connector with contact sealing – either male or female connector

#### Cover pieces for 2-/3-pole

#### For the safe closure of female and male connectors.

With mounting strap for snapping onto plug connectors and device connectors

#### for female







not captive against loss	for female	for male
Color	Part No.	Part No.
■ light gray	Z5.564.4553.0	05.564.4453.0
■ black	Z5.564.4553.1	05.564.4453.1

#### for male







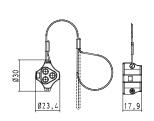
#### for female



captive against loss	for female	for male
Color	Part No.	Part No.
■ light gray	99.413.6205.2	99.415.6205.2
■ black	99.414.6205.2	99.416.6205.2

#### for male





#### Crimp contacts for 2-/3-pole

#### **Female contacts**



Name	Marking	(groove) mm <sup>2</sup>	Part No.
Female crimp contact	1	0.75 – 1.0	02.122.9000.0
Female crimp contact	unmarked	1.5	02.122.9100.0
Female crimp contact	1	2.5	02.122.9200.0
Female crimp contact	unmarked	4.0	02.122.9300.0
Male crimp contact	1	0.75 – 1.0	05.544.7800.0
Male crimp contact	unmarked	1.5	05.544.7900.0
Male crimp contact	1	2.5	05.544.8000.0
Male crimp contact	unmarked	4.0	05.545.4600.0

#### Male contacts



#### Cover pieces for 4-/5-pole

#### For the safe closure of female and male connectors.

With mounting strap for snapping onto plug connectors and device connectors

### for female



not captive against loss	for female	for male
Color	Part No.	Part No.
■ light gray	Z5.565.9853.0	05.565.9953.0
■ black	Z5.565.9853.1	05.565.9953.1

#### for male







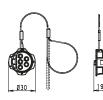
#### for female



captive against loss	for female	for male
Color	Part No.	Part No.
■ light gray	99.529.0000.7	99.531.0000.7
hlack	99 530 0000 7	99 532 0000 7

#### for male





#### Crimp contacts for 4-/5-pole

#### Female contact



#### Male contact



Name	Marking	(groove) mm <sup>2</sup>	Part No.
Female contact	None	0.75 – 1.0	02.125.5521.8
Female contact	1	1.5	02.125.5621.8
Female contact	2	2.5	02.125.5721.8
Female contact	3	4.0	02.125.5821.8
Male contact	None	0.75 – 1.0	05.545.0021.8
Male contact	1	1.5	05.545.0121.8
Male contact	2	2.5	05.545.0221.8
Male contact	3	4.0	05.545.0321.8

#### Cover pieces for 6-/7-pole

For the safe closure of female and male connectors. With mounting strap for snapping onto plug connectors and device connectors

#### for female



not captive against loss	for female	for male
Color	Part No.	Part No.
■ black	Z5.569.5253.1	Z5.569.5353.1

#### for male



#### for female



captive against loss	for female	for male
Color	Part No.	Part No.
■ black	99 589 0000 7	99 591 0000 7

#### for male



#### Crimp contacts for 6-/7-pole









Name	Marking	(groove) mm <sup>2</sup>	Part No.
Female contact	None	0.75 – 1.0	02.127.1121.8
Female contact	1	1.5	02.127.1221.8
Female contact	2	2.5	02.127.1321.8
Male contact	None	0.75 – 1.0	05.546.3921.8
Male contact	1	1.5	05.546.4021.8
Male contact	2	2.5	05.546.4121.8

#### **Crimping tool**



Name	Part No.
Crimping tool incl. system kit	95.101.0800.0
Crimping die B	05.502.2100.0
Contact positioner	05.502.3600.0

## Unlocking tool for crimp contacts

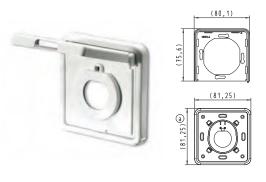


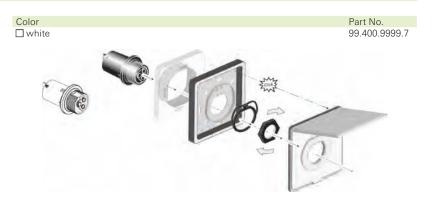
Name	Part No.
Unlocking tool	05.502.3500.0

## Socket frame for device connectors M25 straight (female)

Protection rating: RST approval: Entry: IP 44

2PfG1915, EN61535 2- up to 5-pole





#### Manual disconnect tool

Retrofitting of plug connectors (female only)

Poles 2- up to 5-pole



Color	Part No.
■ black	05.564.8653.1
■ concrete gray	05.564.8653.3
■ leaves green	05.564.8653.7

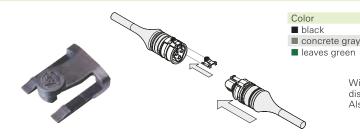
With the manual disconnect tool, only one button must be pressed to easily disconnect the connections

Also see the Mounting Instructions!

#### Manual disconnect tool

Retrofitting of pre-assembled cables

Cable RST20i2, RST20i3 Model shrinkage tube



Part No.
05.565.8653.1
e gray
05.565.8653.3
reen
05.565.8653.7

With the manual disconnect tool, only one button must be pressed to easily disconnect the connections.

Also see the Mounting Instructions!

#### Manual disconnect tool for 6-/7-pole



Name	Part No.
Manual disconnect tool	06.562.8753.0

#### Locking slide - Safety Clip

#### for replacement need, delivery quantity 100 pieces



Color	Part No.
■ black	05.583.2900.1
■ concrete gray	05.583.2900.3

**Note:** The locking devices are integrated in the according plug parts at the factory. They click audibly when plugged in, confirming the safe connection. They are by default loosened with a screw driver or with the manual disconnect facility (can be ordered separately). In case of excessive tension on the connection these will loosen, however, to prevent hazards by wires pulled out of the contacts. This safety mechanism will lead to wear or destroy the slider, which should be replaced after having been activated several times.

### Spacer ring for device connector M25, female connector 2- up to 5-pole

#### for replacement need



Screwdriver actuated



	manually actuated	with screwdriver
Color	Part No.	Part No.
■ light gray	05.568.8853.0	05.566.5253.0
■ black	05.568.8853.1	05.566.5253.1

A spacer ring makes it possible to unlock a connection at the device connector (female).

#### Ferrule crimping tool

for termination points with spring clamp technology

Cable end sleeves  $0.08 - 6.0 \text{ mm}^2$ , AWG 28 - 10

Total length 174 mm

Square compression; releasable latch; compression adjustable



Name	Part No.
Ferrule crimping tool	95.101.1300.0

#### Cable end sleeves

#### Materials

Sleeve Temperature resistance

Temperature resistance Tube Polypropylene

up to 105 °C, tracking resistant E-Cu, galvanically tin-plated

#### for RST 20i3 spring clamp connectors

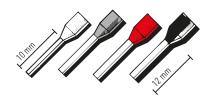
Insulating sleeve Yes for wires

 0.50 mm²
 DIN 46228-E0,5-10

 0.75 mm²
 DIN 46228-E0,75-12

 1.00 mm²
 DIN 46228-E1,0-12

 1.50 mm²
 DIN 46228-E1,5-12



Name	mm²	Color	Part No.
Cable end sleeves	0.50	white	06.600.3827.0
Cable end sleeves	0.75	gray	06.600.3727.0
Cable end sleeves	1.00	red	06.600.3627.0
Cable end sleeves	1.50	black	06.600.3927.0

## Screwdriver according to DIN 5264

#### for RST spring clamp connections

Blade 0.4 x 2.5 mm



Name	Part No.
Screwdriver	06.502.4300.0

#### **Fastening cord**

#### for cover pieces 2-/3-pole & 4-/5-polig





Color	Part No.
light gray	99.000.9950.6

Sample kit RST 20i3

getting to know

Contents:

- Connector

- Device connector

- Cover pieces

Sample set RST 20i3

Part No. 99.429.0000.0

Sample kit RST 20i5 getting to know

Contents:

- Connector

- Device connector

- Cover pieces

Name Sample kit RST 20i5

Part No. 99.430.0000.0

Sample kit RST 20i7 getting to know

Contents:

- Connector

- Device connector

– Cover pieces



Name

Sample kit RST 20i7

Part No.

99.696.0000.0

Sample kit RST 20i2...i7 getting to know

Contents:

- Connectors, including all codings

- Device connectors

- Pre-assembled cables

- Distributors

– Cover pieces



Sample set RST 20i2...i7 complete kit

Part No. 99.431.0000.0

Sample set RST 20i3 getting to know

Contents:

1x X6.030.0153.1 1x X6.031.1053.0 1x X6.031.1053.1 1x X6.032.1053.0 1x X6.032.1053.1



Name
ATEX , IECEx RST20i3

Part No. 99.663.0000.0

Sample set RST 20i5 getting to know

Contents:

1x X6.051.4153.0 1x X6.052.4153.0 1x X6.051.5053.1 1x X6.052.5053.0

Name
ATEX RST20i5 Part No. 99.664.0000.0



#### Technical data RST® CLASSIC

	RST 20i2/i3	RST25i3	RST 20i4/i5	RST 25i5	RST 20i6/i7
Rated voltage	250/400 V	250 V	250/400 V	250/400 V	250/400V
Rated current	20 A	25 A 32 A (with 6.0 mm <sup>2</sup> )	20 A	25 A 32 A (with 6.0 mm <sup>2</sup> )	20 A (3x20A; 4x5A) no defining of poles
Number of poles	2- or 3-poles	3-poles	4- or 5-poles	5-poles	6- or 7-poles

**Operating temperature:**  $-40^{\circ}$  C to  $+100^{\circ}$  C

H05VV cable max 70 °C, H07RN-F max. 60 °C, H07 RN-F enhanced 90 °C

Material: Contact parts: brass, surface-treated

Housing parts: polyamide, halogen-free, V2

Sealing material: NBR

**Regulations:** IEC 61535 (VDE 0606); DINEN 61984 (VDE 0627); VDE 0110

IEC 60999: UL 2238; CSA: C22.2 No.182.2-M1987;

LR Type Approval System

2 PfG 1915

**Pollution severity:** 3 (when connected)

**Degree of protection:** IP66/68 (3m; 2h)/69, barrier seal optional at RST20i6/7

Pre-assembled cable as a shrink hose variant IP66/68 (3m; 2h)

The installation instructions must be observed (see page with installation instructions)

IK 07 (2 Joule)

**Plugging cycles:** 100x without load and 50x under nominal load (cos  $\phi$  = 0.6) as per IEC 61535

RST20i2/3 / RST25i3 provide up to 5,000 plugging cycles and RST20i4/5 / RST25i5 up to 3,000 plugging cycles without load. After approx. 600 plugging cycles, however, the sealing should be checked and, if required, re-lubricated with a suitable lubricant

(e.g. Berulub FR 43 UV).

**Glow-wire test:** RST20i2-i5/RST25i3/i5: with 850° C, 30 s

RST20i6/i7: with 960° C, 30 s

for connectors, distribution units, cable assemblies and device connectors

**Coding:** Mechanical coding symbolized by color code. Color gray and black with the same

mechanical coding. Other codings are optional.

Approvals: VDE; TÜV Rheinland; LR; GL; DNV; RINA; BV; ATEX; IECEx; cULus; CSA\*\*; UL\*

(observe conditions of acceptability)

\* without cable assembles in shrinkage tube technology and connectors with spring clamp technology

\*\* without cable assembles in shrinkage tube technology

You can find the direct assignment of approvals and part numbers in the internet in

the eShop under http://eshop.wieland-electric.com, or consult us.

Note: Protection against shock generally guaranteed even when disconnected. Ground conductor leading. Connection to the live cable

must be with a female connector according to the regulations It is therefore not possible to have a ring circuit arrangement.

Only pluggable in the correct pole configuration; 1 pole cannot be connected. Contacts protected against strain on the cable. All components can be interlocked.

A locking device is required for IEC 6153 approval.

DIN VDE 0606 T200 conformity does not automatically exclude the danger of confusion with third-party installation plug connector systems! Installation plug connector systems are no substitute for national plug/outlet systems for domestic use.

IEC 60364-5-52 must be observed – see note under "Electrical installations with increased degree of protection".

## Wire preparation Sheath stripping and insulation removal lengths

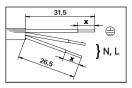
#### RST 2-/3-pole

all lengths indicated in mm **Screw connection:** 

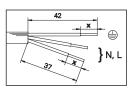


Screwdriver PZ1 Rated torque: 0.8 – 1.0 Nm

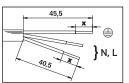
Connector 6 – 10 mm 10 – 14 mm



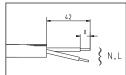
Connector 13 – 18 mm



Splitter connector, 3-pole max. 2 x 2.5 mm²



Splitter connector, 2-pole max. 2 x 2.5 mm<sup>2</sup>



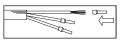
Insulat	ion st	rip lei	nath	X =	=

Conductor cross-section	0.75 mm <sup>2</sup>	1.0 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	4.0 mm <sup>2</sup>	6.0 mm <sup>2</sup>	AWG 12-18
solid	8	8	8	8	8	8	-
fine-stranded	8	8	8	8	8	8	-
stranded	8	8	8	8	8	8	8
ultrasonically compressed	8	8	8	8	8	8	-

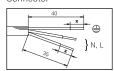
#### Spring clamp connection:



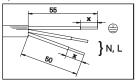




Ferrules required



Splitter connector



#### Insulation strip length X =

0.5 mm <sup>2</sup>	0.75 mm <sup>2</sup>	1.0 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>
14.5 + 1	14.5 + 1	14.5 + 1	14.5 + 1	14.5 + 1
12.0 + 1	13.0 + 1	13.0 + 1	13.0 + 1	
46228-E0.5-10	46228-E0.75-12	46228-E1.0-12	46228-E1.5-12	
	13.0 + 1	13.0 + 1	13.0 + 1	
	46228-E0.75-12	46228-E1.0-12	46228-E1.5-12	
14.5 + 1	14.5 + 1		14.5 + 1	14.5 + 1
	14.5 + 1 12.0 + 1 46228-E0.5-10	14.5 + 1 14.5 + 1 12.0 + 1 13.0 + 1 46228-E0.5-10 46228-E0.75-12 13.0 + 1 46228-E0.75-12	14.5 + 1 14.5 + 1 14.5 + 1 12.0 + 1 13.0 + 1 13.0 + 1 46228-E0.5-10 46228-E0.75-12 46228-E1.0-12 13.0 + 1 13.0 + 1 46228-E0.75-12 46228-E1.0-12	14.5 + 1     14.5 + 1     14.5 + 1     14.5 + 1       12.0 + 1     13.0 + 1     13.0 + 1     13.0 + 1       46228-E0.5-10     46228-E0.75-12     46228-E1.0-12     46228-E1.5-12       13.0 + 1     13.0 + 1     13.0 + 1       46228-E0.75-12     46228-E1.0-12     46228-E1.5-12

#### Crimp connection:



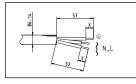
Connector 6 – 10 mm, 10 – 14 mm

Insulation strip length X =

12 X & X & X & X & X & X & X & X & X & X
--

Conductor cross-section	0,75 mm <sup>2</sup>	1,0 mm <sup>2</sup>	1,5 mm²	2,5 mm <sup>2</sup>	4,0 mm <sup>2</sup>
fine-stranded	8.0 + 1	8.0 + 1	8.0 + 1	8.0 + 1	8.0 + 1

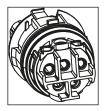
Connector 13 –18 mm



## Wire preparation Sheath stripping and insulation removal lengths

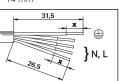
#### RST 4 /5-pole

all lengths indicated in mm **Screw connection:** 

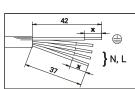


Screwdriver PZ1 Rated torque: 0.5 – 0.7 Nm

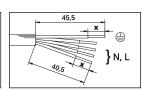




Connector 13 – 18 mm



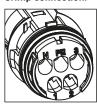
Splitter connector max. 2 x 1.5 mm<sup>2</sup>



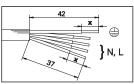
#### Insulation strip lengthh X =

Conductor cross-section	0.75 mm <sup>2</sup>	1.0 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	4.0 mm <sup>2</sup>	6.0 mm <sup>2</sup>	AWG 12-18
solid	8	8	8	8	8	8	-
fine-stranded	8	8	8	8	8	8	-
stranded	8	8	8	8	8	8	8
ultrasonically compressed	8	8	8	8	8	8	_

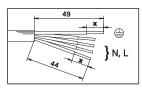
#### Crimp connection:







Connector 13 – 18 mm



#### Insulation strip length X =

Conductor cross-section	0,75 mm <sup>2</sup>	1,0 mm <sup>2</sup>	1,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	4,0 mm <sup>2</sup>
fine-stranded	7.0 + 1	7.0 + 1	7.0 + 1	7.0 + 1	7.0 + 1

## Wire preparation Sheath stripping and insulation removal lengths

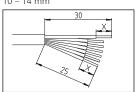
#### RST 6 /7-pole

all lengths indicated in mm **Screw connection:** 

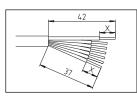


Screwdriver PZ1 Rated torque: 0.5 – 0.7 Nm

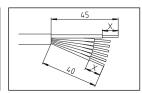
Connector 6 – 10 mm 10 – 14 mm



Connector 13 – 18 mm



Splitter connector max. 2 x 1.5 mm<sup>2</sup>



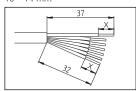
#### Insulation strip lengthh X =

Conductor cross-section	0.2 mm <sup>2</sup>	0.5 mm <sup>2</sup>	0.75 mm <sup>2</sup>	1.0 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	AWG 14-20
solid	8 *	8 *	8 *	8 *	8 *	8 **	8 *
fine-stranded	8 *	8 *	8 *	8 *	8 *	8 **	8 **

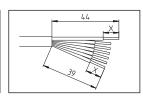
#### Crimp connection:







Connector 13 – 18 mm



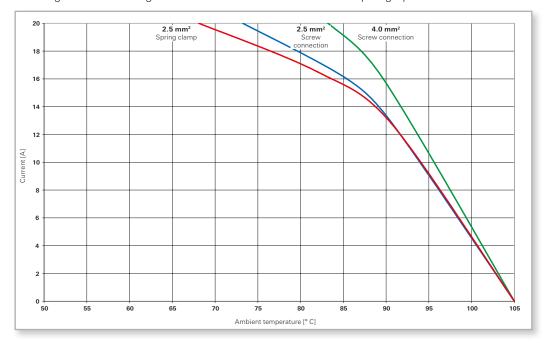
#### Insulation strip length X =

Conductor cross-section	0.75 mm <sup>2</sup>	1.0 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	AWG 14-20
fine-stranded	7.0 + 1	7.0 + 1	7.0 + 1	7.0 + 1	7.0 + 1

## **Derating curves**

**RST 20i3** 

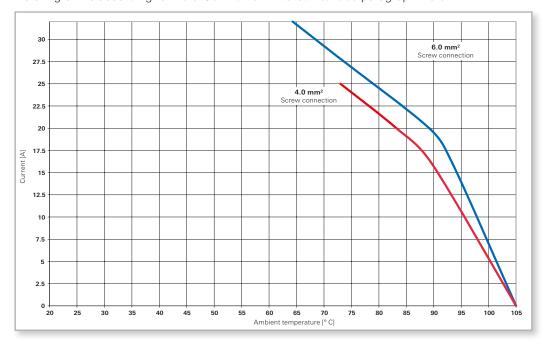
Screw connection – spring clamp connection
Derating curve according to IEC 61984 Edition 2 dated 10/2008 paragraph 7.3.8



#### **RST 25i3**

Screw connection

Derating curve according to IEC 61984 Edition 2 dated 10/2008 paragraph 7.3.8

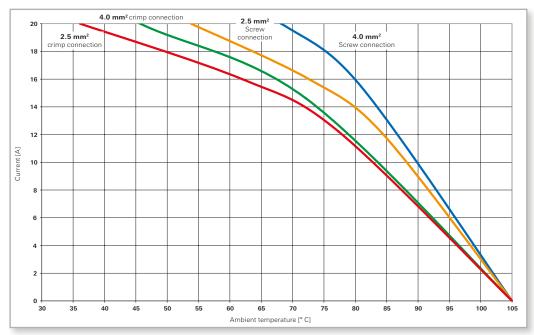


## **Derating curves**

**RST 20i5** 

Screw connection – crimp connection

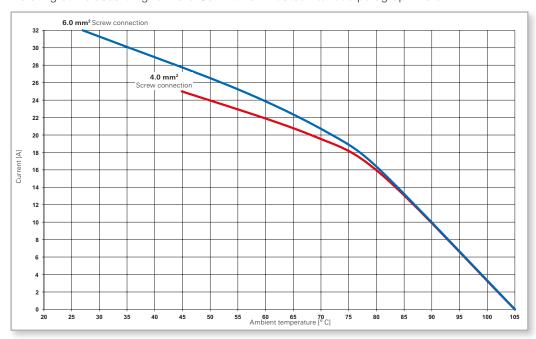
Derating curve according to IEC 61984 Edition 2 dated 10/2008 paragraph 7.3.8



#### **RST 25i5**

Screw connection

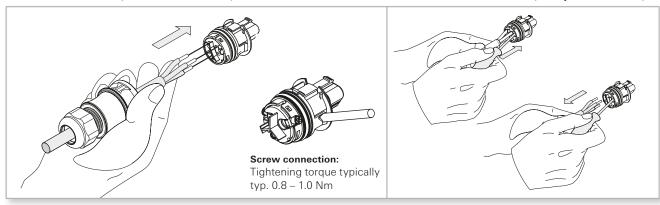
Derating curve according to IEC 61984 Edition 2 dated 10/2008 paragraph 7.3.8



### Connectors 2- and 3-pole

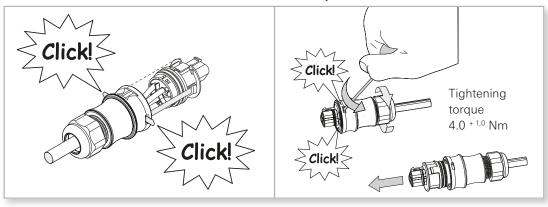
#### Connect the wires (screw connection) ...

#### ... and disconnect them (crimp connection)



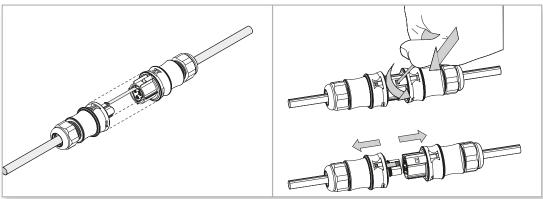
#### Close the connector ...

#### ... and open it

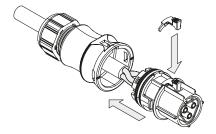


#### Lock the housing ...

#### ... and unlock it

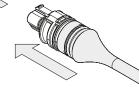


How to insert the (optional) manual disconnect tool into the connector (only possible for the female connector)



The manual disconnect tool can be used as an alternative and enables disconnecting without a tool.

The descriptions on this page merely serve as an overview. For assembly and installation, only the installation instructions supplied together with the products are binding



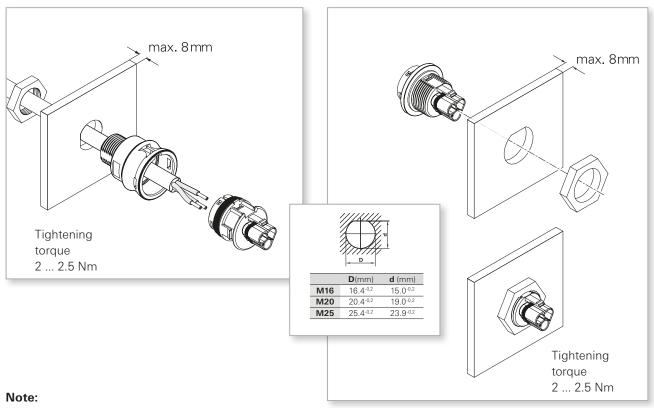
### **Device connections 2- and 3-pole**

Installation of a standard system, for M16 and M20 feed-through

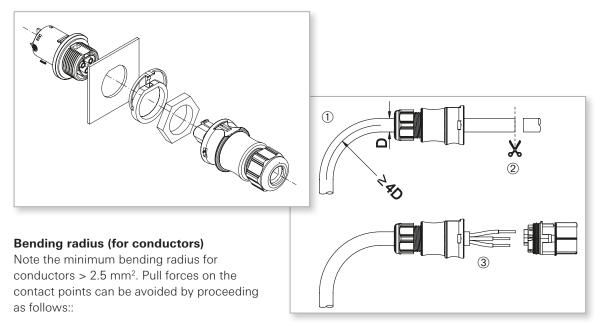
Installation of a standard system, for M25 feed-through

Dimensions in mm

Dimensions in mm



Effectiveness of the protection against twisting can only be guaranteed when the lower tolerance limit is ensured for the diameter of the hole.

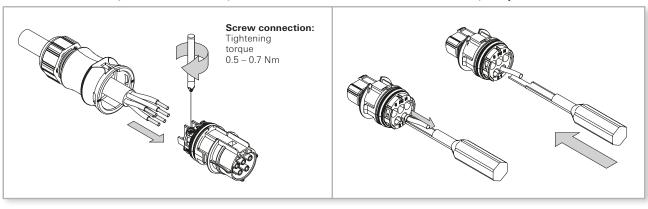


Bend the wire as required Cut the wire to length ② Strip the cable and wires ③

## **Connectors 4- and 5-pole**

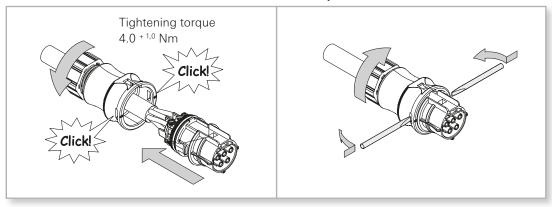
#### Connect the wires (screw connection) ...

#### ... and disconnect them (crimp connections



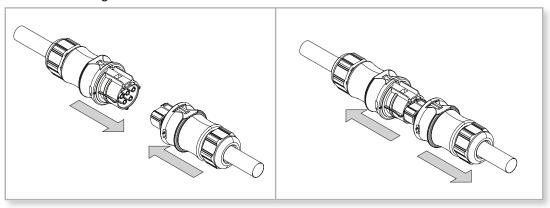
#### Close the connector ...

#### ... and open it



#### Lock the housing ...

#### ... and unlock it



## How to insert the (optional) manual disconnect tool into the connector (only possible for the female connector)

The manual disconnect tool can be used as an alternative and enables disconnecting without a tool.

The descriptions on this page merely serve as an overview. For assembly and installation, only the installation instructions supplied together with the products are binding

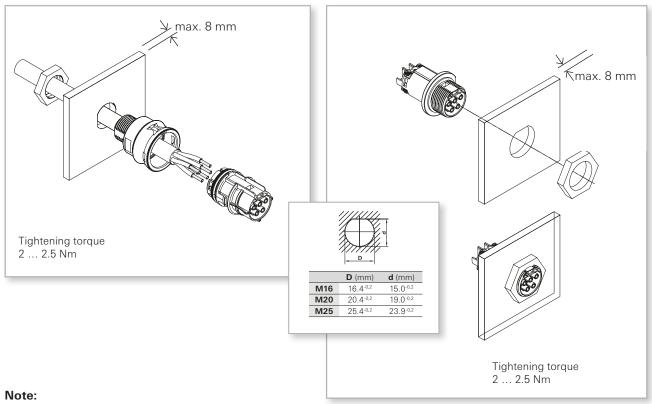
## Device connections 4- and 5-pole

Installation of a standard system, for M16 and M20 feed-through

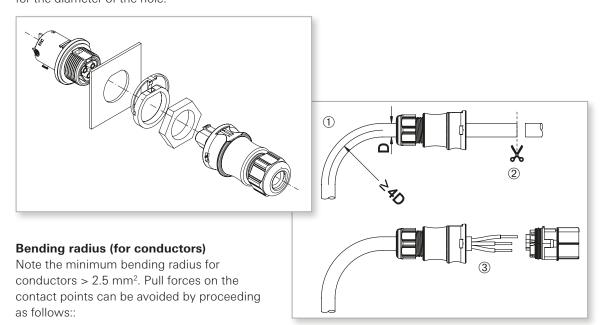
Installation of a standard system, for M25 feed-through

Dimensions in mm

Dimensions in mm



Effectiveness of the protection against twisting can only be guaranteed when the lower tolerance limit is ensured for the diameter of the hole.

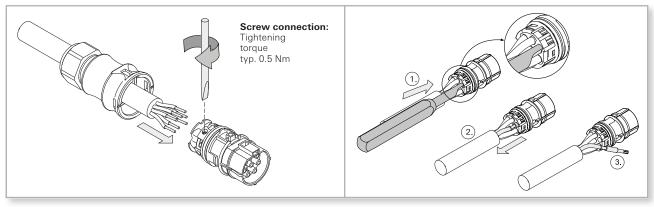


Bend the wire as required Cut the wire to length ② Strip the cable and wires ③

### Connectors 6- and 7-pole

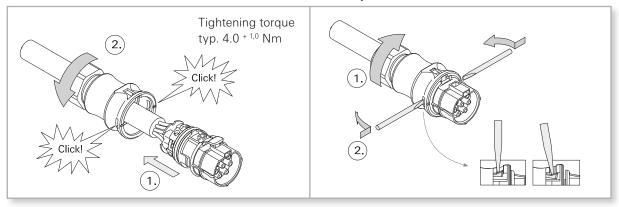
#### Connect the wires (screw connection) ...

#### ... and disconnect them (crimp connections



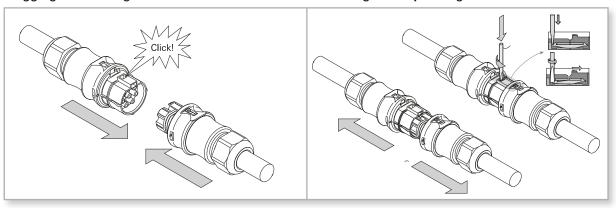
#### Close the connector ...

#### ... and open it

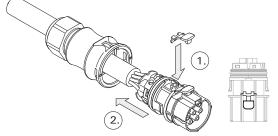


#### **Plugging and locking**

#### Unlocking and separating



How to insert the (optional) manual disconnect tool into the connector (only possible for the female connector)



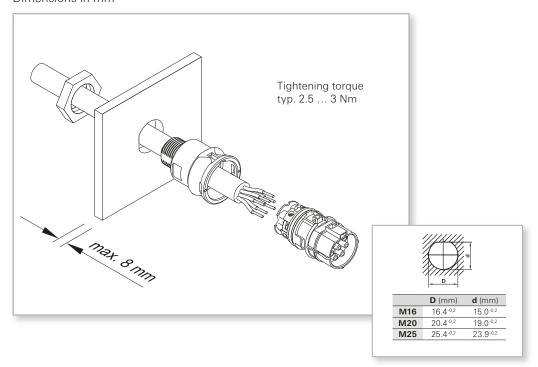
The manual disconnect tool can be used as an alternative and enables disconnecting without a tool.

The descriptions on this page merely serve as an overview. For assembly and installation, only the installation instructions supplied together with the products are binding

## **Device connections 6- and 7-pole**

Housing installation with M16, M20 and M25 feed-through

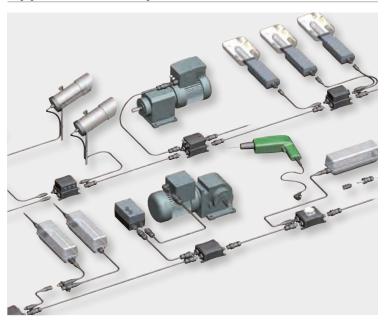
#### Dimensions in mm





## Compact and multi-distribution units for use in rough environments

#### **Application example**



#### General

The pluggable distribution units play a major role in power distribution. In their simplest function, they merely have to provide branches in the required locations. Practice shows, however, that the requirements may be much more complex.

Examples can be found in AC and DC wiring through distribution units with microfuses up to boxes with integrated safety outlets or switches.



### Compact and multi-distribution units

## Flexibility according to the modular RST® principle

#### The highest level of flexibility!

Two housing variations are the basis: a flat design with up to four slots, and a high design with a total of up to eight slots. Unused slots are closed at the factory.

The distribution units are equipped individually with suitable device connectors. These connectors are available in various pole configurations, with mechanical

coding and designs; they are wired to customer's requirements.

## Overview of the standard components:

Depending on the application, you can choose among 30 codings from the range of **RST**® CLASSIC and **RST**® MINI. Mechanically coded means that only the matching male and female connectors can

be plugged together. Thus you can be sure that your different applications are clearly distinguished – without having to rework incorrect connections. The connector colors signal the matching connections. The standard power coding is an exception. Here you can select between black and gray. These are compatible with one another.

RST16i2	RST16i3	RST16i4	RST16i5	RST20i2	RST20i3	RST20i4	RST20i5	RST25i3
250V black or light gray L, N	250V black or light gray L, N, PE	250/400V black or light gray 1, 2 ,3, N, PE	250/400V black or light gray 1, 2 ,3, N, PE	250V black or light gray L, N	250V black or light gray L, N, PE	250/400V black or light gray PE, 1, 2, 3	250/400V black or light gray PE, N, 3, 2,1	250V concrete gray L, N, PE
250/400V light blue 1, 2	250/400V leaf green 1, 2, PE		250V turquoise L, N, PE, 1, 2	250/400V pebble gray	250/400V leaf green 1, 2, PE		250V turquoise L, N, PE, D1, D2	ac.¥
250/400V turquoise D1, D2	250/400V light blue 1, 2, 3	~50/-120V signal brown 1, 2, 3, 4	250/400V light blue 1, 2, 3, 4, 5	+, -	250/400V light blue 1, 2, 3	~50/-120V signal brown 1, 2, 3,4	250/400V light blue 1, 2, 3, 4, 5	RST25i5
~50/-120V signal brown 1, 2	250/400V turquoise D1, D2, PE		~50/-120V signal brown 1, 2, 3, 4, 5	~50/-120V signal brown 1, 2	~50/-120V signal brown 1, 2, PE		250/400V yellow N, E, 1, 2, 3	250/400V concrete gray L, N, PE, 1, 2
	~50/-120V signal brown 1, 2, 3						~50/-120V signal brown 1, 2, 3, 4, 5	SOL AR SYSTEM GONNEGTOR

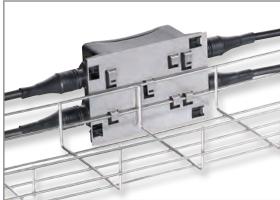


#### Mounting

Four fixing clips on the outside ensure easy installation and safe fixation.

At the bottom, there are extra fixing holes for attachment of a special mounting plate.







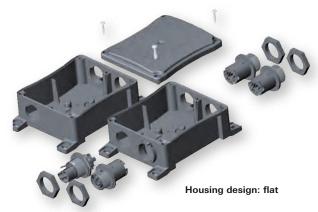
#### Unlocking

All pluggable connections are protected against accidental loosening. This is guaranteed by a locking facility integrated during production. On plug-in, the locking facility latches with an audible click.

The connection is released using a screwdriver.





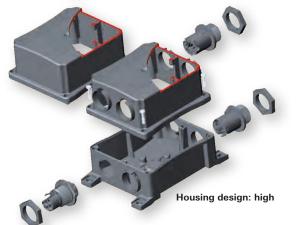




Cover pieces are required for safely covering unused outputs.

These are available either with or without protection against loss.





## Circuit diagram

A circuit diagram on the housing cover provides information about the internal wiring

The outputs are numbered from X1 to X8.



## Compact distribution units with max. 4 slots

## **RST** compact distribution unit

Dimensions (W x L x H) Number of poles

104 x 162 x 57.2 mm

5-pole

routing 3 outputs 230/400V, 20A

Pre-wired with

2.5 mm<sup>2</sup>

Color

gray

black

Mounting option

Yes

Input

RST 20i5 coding Color black

Outputs

Part No.

upon request

96.050.0153.1



Circuit diagram



#### **RST** compact distribution unit

Dimensions (W x L x H)

104 x 162 x 57.2 mm

Number of poles 5-pole routing 2 outputs 230/400V, 20A

RST 20i5 Coding Color black 2.5 mm<sup>2</sup>

Pre-wired with Mounting option

Yes





Circuit diagram



## **RST** compact distribution unit

Dimensions (W x L x H)

Number of poles

104 x 162 x 57.2 mm

5-/3-pole

routing 1 output 230/400V, 20A

1 output 230V, 20A

Pre-wired with Mounting option

Color

gray
lack

■ black
■ black

Color

gray

■ black

RST 20i5 coding Color black RST 20i3 coding Color black

Outputs

Outputs

3

2

Part No.

upon request 96.050.3153.1

96.050.4153.1

Upon request

96.050.6153.1

96.050.5153.1

2.5 mm<sup>2</sup>

Input

Yes

Pole marking

L2

L3



Circuit diagram



## **RST** compact distribution unit

Dimensions (W x L x H) Number of poles

104 x 162 x 57.2 mm

5-/3-pole

1 input 230/400V, 20A 3 outputs 230V, 20A Pre-wired with Mounting option

RST 20i5 coding Color black RST 20i3 coding Color black

2.5 mm<sup>2</sup> Yes

Pole marking Input

L1, L2, L3

Circuit diagram



## **AS-i distribution unit**

## Distribution box AS-i / 24V

Dimensions (W x L x H) Number of poles 104 x 162 x 57.2 mm

4-pole

3 outputs 230/400V, 20A

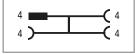
Pre-wired with Mounting option RST 20i4 coding Color brown

2.5 mm² Yes

Color	Input	Outputs	Part No.
gray	1	3	upon request
■ black	1	3	96.040.0151.4



Circuit diagram



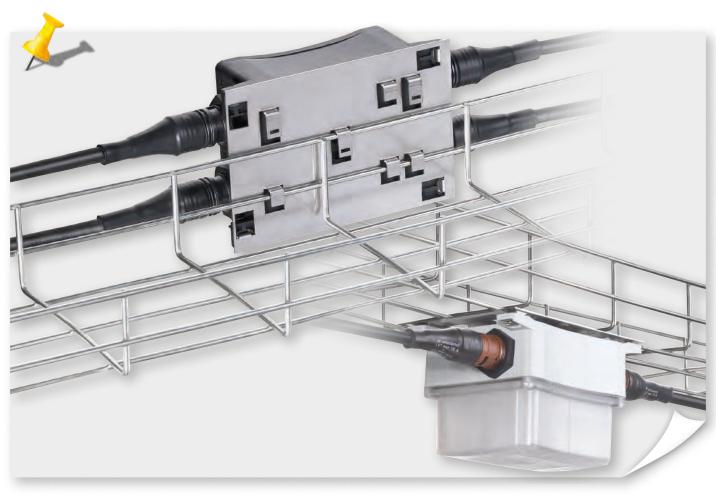
Mounting plate for example to fit on the mesh cable tray (see illustration below)

Dimensions (W  $\times$  L  $\times$  H) Mounting option 105 x 154 x 4.5 mm

Yes



Part No. G0.500.2041.5



## Multi-distribution units with max. 8 slots

Multi-distribution unit 5-/3-pole, 11/70, 2x L1, L2, L3

Dimensions (W x L x H) routing outputs 230/400V, 20A outputs 230V, 20A

Color

gray

black

Color

gray

■ black

104 x 162 x 96 mm 1, RST 20i5 coding black 6, RST 20i3 coding black

Input

Outputs

Outputs

Outputs

Outputs

3

Part No.

Part No.

Part No.

upon request 99.901.0000.7

99.903.0000.7

upon request 99.902.0000.7

upon request

96.050.7153.1



Circuit diagram

3 L3 <b>)</b>	( 3 L3
3 L2 )	3 L3 3 L2
	1
3L1 <b>)</b> ——	3 L1
5	5

Multi-distribution unit 5-/3-pole, 11/30, L1, L2, L3

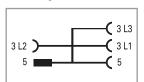
Dimensions (W x L x H) routing outputs 230/400V, 20A outputs 230V, 20A

104 x 162 x 96 mm 1, RST 20i5 coding black 3, RST 20i3 coding black

Input



Circuit diagram



#### Multi-distribution unit 5-/3-pole, 11/30, L1, L2, L3

Dimensions (W x L x H) Protection type

104 x 162 x 96 mm IP 65, 66, 67

input 230/400V, 20A

outputs 230 V, with 3 integrated microfuse holders up to 10  $\mbox{\ensuremath{\mbox{A}}}$ 

including microfuse

Color

gray

black

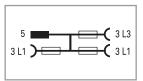
1, RST 20i5 coding black 3, RST 20i3 coding black

10A, 5 x 20 mm

Input



Circuit diagram



#### **Distribution box** Power and AS-i / 24 V

Dimensions (W x L x H)

104 x 162 x 96 mm

Input power 230/400V, 20A Outputs power 230/400V, 20A

input AS-i/24V, 20A

outputs AS-i/24V, 20A

Color

■ black

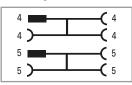
3, RST 20i5 coding black

3, RST 20i4 coding brown

Input



Circuit diagram



# Multi-distribution units, radio, halogen technology, LED technology

### Switching output unit EnOcean 4-fold

Power In-/Output 230V AC / 20A connectors RST 20i3 coding

black

Outputs 4
Connection type c

connector RST20i3, coding black

Rated voltage 230 V AC

Switching capacity

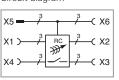
6A (max. two of the LED/LV halogen

Protection type modules given below)
Protection type IP 65, 66, 67, 68 (3m; 2h)

Dimensions (length/width/height) 104/162/96 mm Mounting option 4 elongated holes



#### Circuit diagram



Type Name Part No.

RC RST-0/4 4 relay outputs, 1 feed-through wiring 83.020.0505.0

The EnOcean 4-fold switching output unit in IP68 surface housing for outdoor use features four 230V relays. They can be programmed for 30 push button pairs. All electrical connections are pluggable.

## Constant power supply unit, 350 mA DC

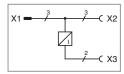
Power input (male connector)
Power output (female connector)
Output LED (female connector)

230V AC/20A RST 20i3 coding black 230V AC/20A RST 20i3 coding black 350mA DC/max. 12W RST 20i2 coding Protection type IP 65, 66, 67, 68 (3m; 2h), 69
Ambient temperature -25 °C up to +55 °C
Dimensions (length/width/height) 104/162/96 mm
Mounting option 4 elongated holes

Electrical connections pluggable with RST 20i2...20i3



#### Circuit diagram



Type Part No. **RST PSI 350/12 LED** 83.020.0902.0

Constant power supply unit 350 mA for connecting LEDs. Connections not used have to be closed.

#### Constant power supply unit, 700 mA DC

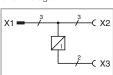
Power input (male connector)
Power output (female connector)
Output LED (female connector)

230V AC/20A, RST 20i3 coding black 230V AC/20A RST 20i3, coding black 700mA DC/max. 12W, RST 20i2 coding brown Protection type IP 65, 66, 67, 68 (3m; 2h), 69
Ambient temperature -25 °C up to +55 °C
Dimensions (length/width/height) 104/162/96 mm
Mounting option 4 elongated holes

Electrical connections pluggable with RST 20i2...20i3



## Circuit diagram



Type Part No. RST PSI 700/12 LED 83.020.0903.0

 $Constant\ power\ supply\ unit\ 700\ mA\ for\ connecting\ LEDs.\ Connections\ not\ used\ have\ to\ be\ closed.$ 

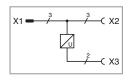
## Constant power supply unit, 12 V DC

Power input (male connector)
Power output (female connector)
Output LED (female connector)

230V AC/20A RST 20i3, coding black 230V AC/20A RST 20i3, coding black 12V DC/max. 12W RST 20i2, coding signal brown Protection type IP 65, 66, 67, 68 (3m; 2h), 69
Ambient temperature -25 °C up to +55 °C
Dimensions (length/width/height) 104/162/96 mm
Mounting option 4 elongated holes
Electrical connections pluggable with RST 20i2...20i3



#### Circuit diagram



Type Part No. RST PSU 12/12 LED 83.020.0900.0

Constant voltage supply unit 12 V for connecting LEDs. Connections not used have to be closed.

### Constant power supply unit, 24 V DC

power input (male connector) output LED (female connector)

230V AC/20A RST 20i3, coding black power output (female connector) 230V AC/20A RST 20i3, coding black 24V DC/max. 12W RST20i2, coding signal

Mounting option

Ambient temperature

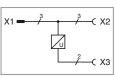
Protection type

IP 65, 66, 67, 68 (3m; 2h), 69 -25 °C up to +55 °C Dimensions (length/width/height) 104/162/96 mm 4 elongated holes

Electrical connections pluggable with RST 20i2...20i3



#### Circuit diagram



#### RST PSU 24/12 LED

83.020.0901.0

Constant voltage supply unit 24 V for connecting LEDs. Connections not used have to be closed.

## Transformer for low voltage halogen luminaires, 12 V AC Output LV halogen

Power input (male connector) Power output (female connector) Output LV halogen (female connector)

230 V AC/20 A RST 20i3, coding black 230 V AC/20 A RST 20i3, coding black 12 V AC/20 - 70 W RST 20i2, coding signal brown

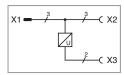
max. 2 m cable length IP 65, 66, 67, 68 (3m; 2h), 69 Protection type Ambient temperature 0 °C up to +45 °C (derating from 35 °C)

Dimensions (length/width/height) 104/162/57.2 mm Mounting option 4 elongated holes

pluggable with RST 20i2...20i3 Electrical connections



#### Circuit diagram



Type RST PSU 12/70 LVH Part No. 83.020.0904.0

Power supply unit 12 V for connecting halogen luminaires. Connections not used have to be closed.

#### **Accessories Covers**

Suitable for all RST 20i2 and RST 20i3 codings

The covers have to be used to close all unused inputs and outputs. Without these covers, only IP20 is achieved!



## for female



lype	Part No.
Cover for male connector, captive against loss	99.416.6205.2
Cover for male connector, not captive against loss	05.564.4453.1
Cover for female connector, captive against loss	99.414.6205.2
Cover for female connector, not captive against loss	Z5.564.4553.1

## Radio switch / hand-held radio transmitter

### Radio switch, 2/4 channels glossy with suitable frame

- glossy surfacebatteryless and maintenance free
- for installation on flat surfaces with screws or adhesive pads (included in delivery)
- the combination frames have to be ordered separately





Туре	Color	Marking	Part No.
Radio switch, 2 channels	pure white	1/0	F0.000.0025.0
	pure white	(△▼)	F0.000.0025.2
	pure white		F0.000.0025.4
	aluminum	1/0	F0.000.0026.8
	aluminum	(△▼)	F0.000.0027.0
	aluminum		F0.000.0027.2
Radio switch, 4 channels	pure white	1/0	F0.000.0025.1
	pure white	(△▼)	F0.000.0025.3
	pure white		F0.000.0025.5
	Piano black	1/0	F0.000.0026.0
	aluminum	1/0	F0.000.0026.9
	aluminum	(△▼)	F0.000.0027.1
	aluminum		F0.000.0027.3

- \* 2 channels represent a rocker in neutral center position. This function is defined in the receiver.
- \* 4 channels represent two rockers in neutral center position. This function is defined in the receiver.

This push button series features a glossy, smooth surface. The radio switches with 2 or 4 channels do not require batteries or maintenance. The rockers are in neutral central position and without marking with 1/0 or up/down symbols. The matching frames for these push buttons can be found below.



Frame for installation of the 2/4 channel glossy radio switches. Suitable for vertical and horizontal mounting.

Type	Color	Marking	Part No.
Combination frame 1-fold	pure white		F0.000.0025.6
Combination frame 2-fold	pure white		F0.000.0025.7
Combination frame 3-fold	pure white		F0.000.0025.8
Combination frame 1-fold	piano black		F0.000.0026.5
Combination frame 3-fold	piano black		F0.000.0026.7
Combination frame 1-fold	aluminum		F0.000.0027.4
Combination frame 2-fold	aluminum		F0.000.0027.5
Combination frame 3-fold	aluminum		F0.000.0027.6

### Handheld radio transmitter, 4 channels

Handheld radio transmitter

- Batteryless and maintenance-free
- For stick-on surface mounting or as a handheld remote control.



Batteryless and maintenance-free 4-channel handheld transmitter for direct control of the actuators.

Type	Color	Marking	Part No.
Handheld radio transmitter	pure white RAL 9010		F0.000.0009.1
Handheld radio transmitter	black RAL 9005		F0.000.0009.2
Handheld radio transmitter	silver coated		F0.000.0009.3

## Radio switch / hand-held transmitter

## Convenient hand-held transmitter

Radio channels 512 Configurable levels 32 Displays
Texts and symbols
Lock
Timers

Speed dial keys

Charging device

pre-defined or configurable with pin code

Time, date, temperature

32

Dimensions (length/width/height) 165/55/21 mm

Type	Part No.
Convenient hand-held transmitter	F0.000.0024.4





Included in delivery

Special EnOcean function:

EnOcean service function, e.g. ID display, quality of radio signals, and a radio link test (enables range test

between two hand-held terminals)

Power supply:
Supply with batteries
3 AAA-NiMH power packs (included in delivery)

USB charging device and separate USB cable (included in delivery)

The convenient hand-held transmitter allows for control of the complete building. Whether complex lighting concepts or comprehensive actions following a detailed schedule: This hand-held terminal lets you program building functions in the twinkling of an eye. Menu navigation is intuitive and is supported by easily understandable symbols.

Additionally, the device offers service functions for the installer regarding range planning and

Additionally, the device offers service functions for the installer regarding range planning and serves for function testing during commissioning.

#### Multivendor radio switch, 2/4 channels

- Batteryless and maintenance-free
- for mounting on flat surfaces with screws or adhesive pads (included in delivery)
- The radio switches fit the frames with 55mm installation size of the vendors and their designs listed:
- Berker: S1, B1, B3, B7 Glas
- Gira: Standard 55, E2, Event, Esprit
- Jung: A500, A plus
- Merten: M-Smart, M-Arc, M-Plan







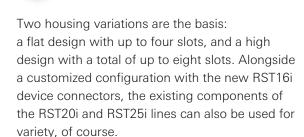
Туре	Color	Marking	Part No.
Radio switch, 2 channels	white	1/0	F0.000.0005.6
	anthracite	1/0	F0.000.0007.5
	aluminum finish	1/0	F0.000.0007.6
Radio switch, 2 channels	white	(△▼)	F0.000.0005.8
	anthracite	(△▼)	F0.000.0007.7
	aluminum finish	(△▼)	F0.000.0007.8
Radio switch, 4 channels	white	1/0	F0.000.0005.7
	anthracite	1/0	F0.000.0007.9
	aluminum finish	1/0	F0.000.0008.0
Radio switch, 4 channels	white	(△▼)	F0.000.0005.9
	anthracite	(△▼)	F0.000.0008.1
	aluminum finish	(△▼)	F0.000.0008.2

Batteryless and maintenance-free radio switches with 2/4 channels for direct control of the actuators. The rockers in neutral center position are marked with I/O or Up/Down ( $\Delta \P$ ) symbols. These 55x55 mm switches enable installation in various designs of various manufacturer

- Multivendor radio switches with 2/4 channels (light) (I / 0)
- the rockers are printed with I/O symbols
- Multivendor radio switches with 2/4 channels (sunblind) (Up / Down) (△▼)
- the rockers are printed with Up/Down (△ ▼) symbols

# Compact and multiple distribution units Flexibility according to RST® modularity

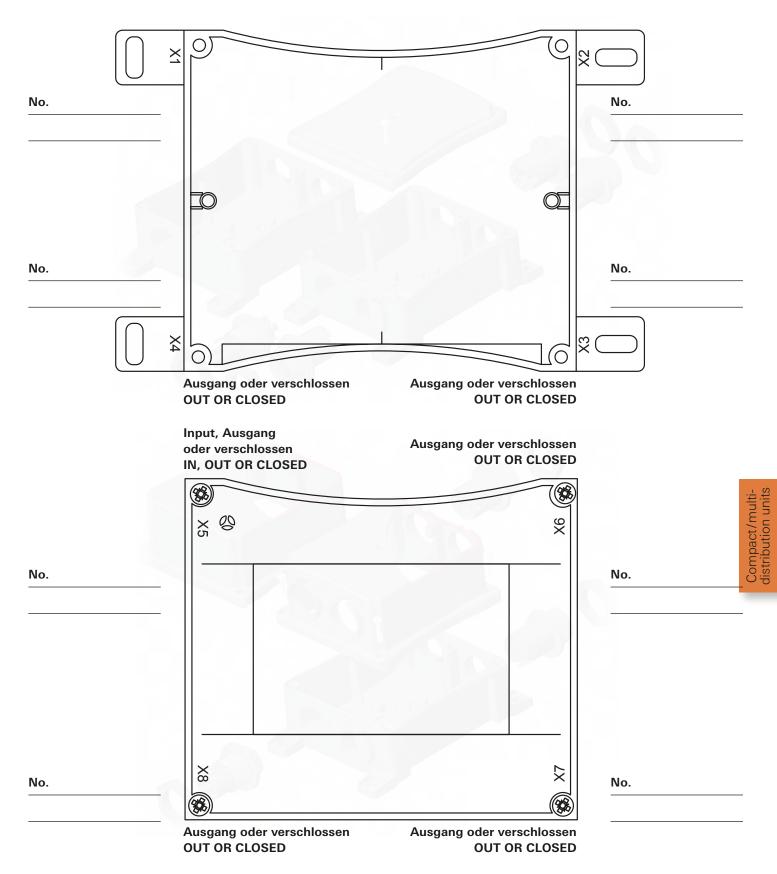
The pluggable distributors play a major role in power or signal distribution. In their simplest function, they merely have to provide branches in the required locations. Practice shows, however, that the requirements may be much more complex. Examples can be found in rotary A/C current distributors and distributors with integrated fine fuses, all the way through to boxes with integrated electronics, such as constant current sources, voltage sources, or radio actuators.



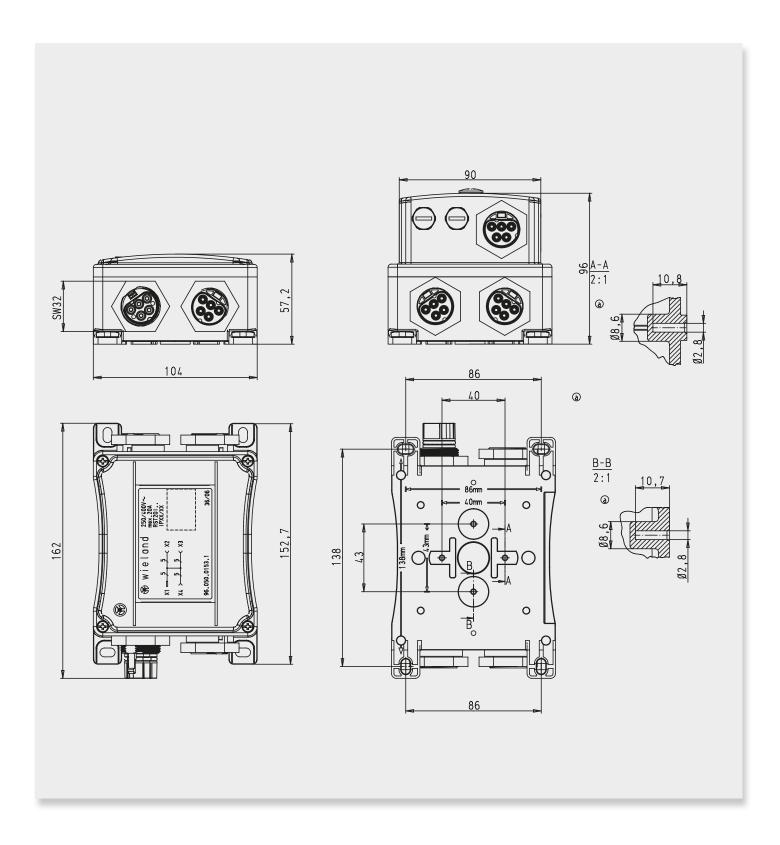
The coded connectors give you the security of a clear distinction between different circuits – no need to redo any incorrect connections. In addition to the compact and multiple distributors, standard distribution boxes can also be customequipped with device connectors.



# Special variant request – please complete and fax: +49-951-9326-996



# **RST**® compact and multi-distribution units



Compact/multi-distribution units

**Operating temperature:**  $-40^{\circ}$  C up to  $+100^{\circ}$  C

Material: Contact parts: brass, silver-plated

Housing parts: thermoplastic material PA 66, halogen-free, V2

Sealing material: NBR

Wiring: Individual wires 2.5 mm<sup>2</sup>, halogen-free

(other cross-sections on request)

**Regulations:** DIN VDE 0606 T200; DIN EN 61984 (VDE 0627); VDE 0110

IEC 60999

**Approvals:** VDE

You can find the direct assignment of approvals and part numbers in the internet

in the eShop under http://eshop.wieland-electric.com, or consult us.

**Degree of protection:** IP66/68 (3m; 2h)/69

Special variants may occur different degrees of protection.

IK code: IK 07 (2 Joule) according to DIN EN 62262

Rated voltage: 250 V / 400 V

Rated current: 20 A (25 A)

**Coding:** Mechanical coding symbolized by color code.

Gray and black with the same mechanical coding.

Other codings are optional.

**Note:** Protection against shock generally guaranteed even when disconnected.

Ground conductor leading. Connection to the live cable must be with a female connector

according to the regulations.

It is therefore not possible to have a ring circuit arrangement!

Only pluggable in the correct pole configuration; 1-pole cannot be connected. Contacts protected against strain on the cable. All components can be interlocked.

A locking device is required for DIN EN 61535 approval.

DIN VDE 0606 T200 conformity does not automatically exclude the danger of confusion

with third-party installation plug connector systems!

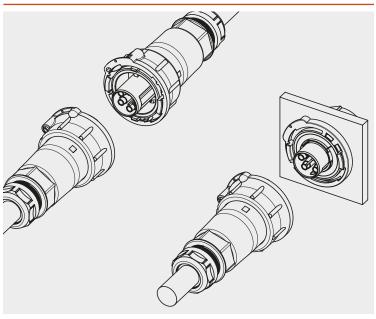
Installation plug connector systems are no substitute for national plug/outlet systems

for domestic use.



## The RST® POWER series up to 50 A

## **Application example**



## General

The new **RST**® POWER series is particularly designed for device engineering. With a current-carrying capability of 50 A combined with an extremely compact design, the connector fits almost everywhere.

The 4-pole connector is based on the 5-pole variation, with one pole left empty.

## Coding

http://eshop.w Assembly instr	tes visit the website at ieland-electric.com. ructions and other technical inforn al Data or in eShop.	Application  Mechanical coding	Power max. 50 A 250/400 V 1, 2, 3, ( )		
Name	Description	Connection style	Strain relief housing	Connection points per pole	black
Connectors	1 x wire entry	Screw Crimp	yes	1	$\checkmark$
Device connectors	M32 connector, standard	Screw Crimp	yes	1	$\overline{}$

# Connectors, straight for cables Ø 15 – 25 mm and 20 – 32 mm



<sup>&</sup>lt;sup>1)</sup> Solid and stranded wires > 6.0 mm<sup>2</sup> cannot be connected in the available space due to their rigidity.

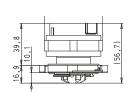
## M32 device connector straight, standard

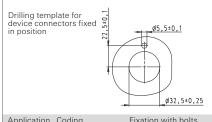












with screw co	nnection		with crimp cor	nnection
Wire	mm²		Wire	mm <sup>2</sup>
solid	f 4.0 to 10.0		flexible wires	from 4.0 to
stranded	from 4.0 to 16.0		Approvals	VDE, c CSA
flexible wires	from 4.0 to 16.0			
Approvals	VDE, c CSA us			

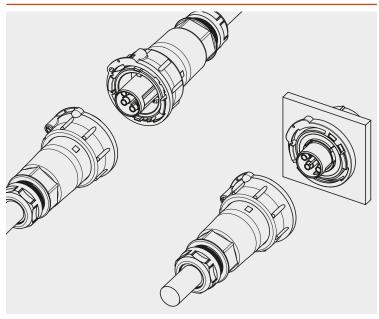
Wire	mm <sup>2</sup>	
flexible wires	from 4.0 to 10.0	
Approvals	VDE, c CSA us	

Applicati	ion Codin	g Fixation with bolts	Color	Part No.	Part No.
	_	fixed in position	black	97.042.5553.1	97.142.1553.1
		not fixed in position	black	97.042.5053.1	97.142.1053.1
Power	1 5 6 2 2 1				
max. 50A	1 0 0				
JUA	1, 2, 3,				
	•				
					Contacts separately under Accessories, see following pages.



## The new RST® POWER series up to 50 A

## **Application example**



## General

The new **RST**® POWER series is particulary designed for device engineering. With a current-carrying capability of 50A combined with an extremely compact design, the connector fits almost everywhere.

## Coding

	For daily updates visit the website at			Application	Power max. 50A
http://eshop.wieland-electric.com. Assembly instructions and other technical information can be found in the Technical Data or in eShop.  Name Description Connection Strain relief		Mechanical coding	250/400V 1, 2, 3, N, 😩		
Name	Description	Connection style	Strain relief housing	Connection points per pole	black
Connectors	1 x wire entry	Screw Crimp	yes	1	$\sim$
Device connectors	M32 connector, standard	Screw Crimp	yes	1	$\checkmark$

# Connectors, straight for cables Ø 15 – 25 mm and 20 – 32 mm



<sup>&</sup>lt;sup>1)</sup> Solid and stranded wires > 6.0 mm<sup>2</sup> cannot be connected in the available space due to their rigidity.

# M32 device connector straight, standard





## Cover

For safe covering of unused male or female components





_	_	
5,07		
1		

Name	Color	Part No.
Cover	black	Z5.567.5653.0

# Sample kit RST 50i5 Complete kit

Contents:

- Connectors
- Device connection
- Cover
- Knock-out (metal sheet)

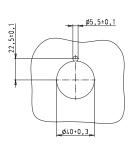


Name	Color	Part No.
Sample kit RST50i5	black	99.628.0000.0

## Adapter ring 40 mm

For fixing the device connector inside 40 mm knock-outs





Name	Color	Part No.
Adapter ring	black	05.568.1853.0

## **RST**® POWER Crimp contacts

## Female contact



## Male contact



Name	Marking	(groove) mm <sup>2</sup>	Part No.
Female contact	None	4.0	02.126.0621.8
Female contact	1	6.0	02.126.0721.8
Female contact	None	10.0	02.126.0821.8
Male contact	None	4.0	05.545.2821.8
Male contact	1	6.0	05.545.2921.8
Male contact	None	10.0	05.545.3021.8

## Crimping tool with system kit



Name	Part No.
Crimping tool (supplied in case)	95.101.0800.0
Crimping die D	05.502.2300.0

# **Convincing technology**



## Technical Data RST® POWER

	RST 50i4/i5
Rated voltage	250/400 V
Rated current	50A
Number of poles	4- or 5-poles

**Pole designation:** 4-pole: 1, 2, 3, PE

5-pole: 1, 2, 3, N, PE

Material: Contact parts: brass, surface-treated

Housing parts: polyamide, halogen-free, V2

Sealing material: NBR, TPE

Sheath strip length: L/N = 70 mm, SL = 80 mmInsulation strip length: Screw 10 mm (crimp 11 mm)

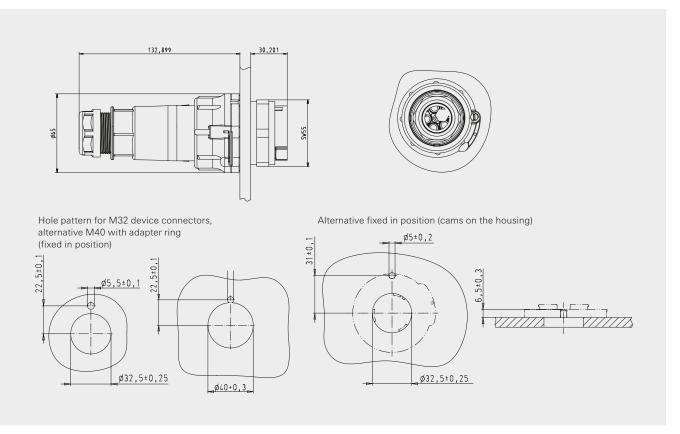
**Torques:** Cable gland M32 (SW 36): 8 Nm; M40 (SW 45): 14 Nm

**Degree of protection:** IP66/67/69 **Approvals:** VDE, cCSA us

You can find the direct assignment of approvals and part numbers

in the internet in the eShop under

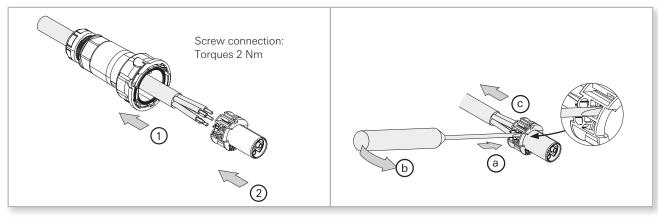
http://eshop.wieland-electric.com, or consult us.



## **Connectors 4- and 5-pole**

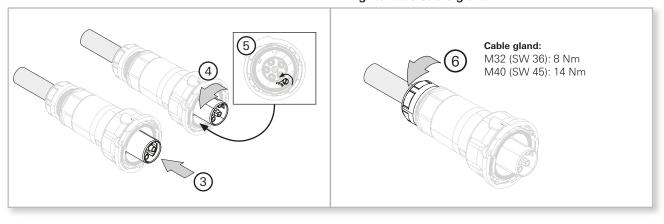
### Connect the wires ...

## ... Disconnect the crimp contacts



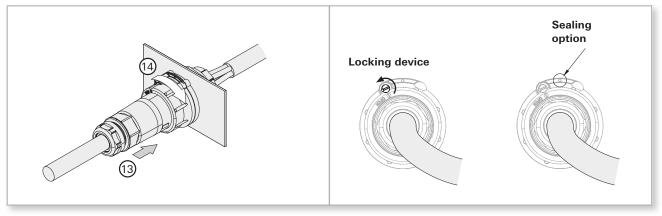
#### Secure the contact inserts ...

## ... Tighten the cable gland



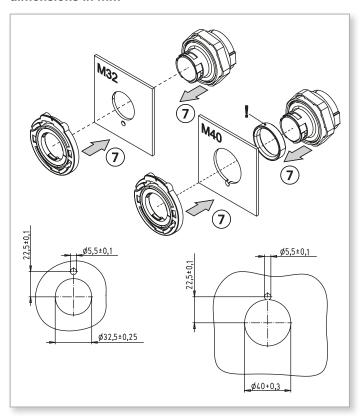
## Bayonet lock ...

## ... and protection against unintentional disconnection

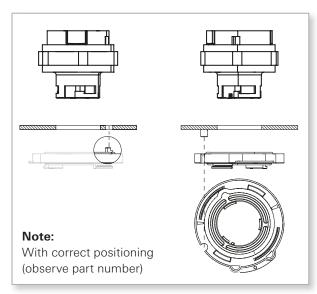


# **Device connections 4- and 5-pole**

## Mounting housing flange, dimensions in mm

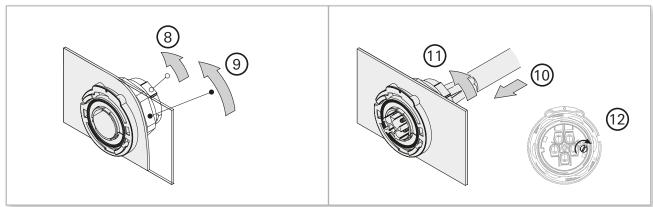


## **Positioning option**



## Latching the housing flange ...

## ... securing the contact insert



# Definition of IP protection degrees (DIN EN 60529-1)

Documentation: Example: IP65

•	Protection against contact	Protection against ingress of objects
0	no protection	no protection
1	Any large surface of the body (e.g. back of the hand)	Large foreign objects (> 50 mm in Ø)
2	Finger	Medium-sized foreign objects (> 12 mm in Ø)
3	Tools and wires (> 2.5 mm in Ø)	Small foreign objects (> 2.5 mm in Ø)
4	Tools and wires (> 1.0 mm in Ø)	Grain-shaped foreign objects (> 12 mm in Ø)
5	Complete protection against contact	Dust deposition
6	Complete protection against contact	Dust ingress
7		
8		
9		

	tection rutings against mgress or water
$\triangle$	
0	no protection
1	Protection against vertically falling water
2	Protection from diagonally (up to 15°) falling water drops
3	Protection against spraying water up to 60° to the vertical
4	Protection from splashing water from any direction
5	Protection against water jets
6	Protected against powerful water jets
7	Protection against temporary immersion in water
8	Protection against continuous immersion in water
9	Protection against high pressure, high temperature spray downs

# As an innovative installation system, Wieland offers a global concept for efficient outdoor installation and industrial application.

In many applications, electrotechnical devices and systems must reliably work for many years under tough environmental conditions. To ensure a reliable function, it is essential to prevent the penetration of humidity or particles (e.g. dust, oil, soot, etc.) in production plants, garages or in outdoor areas. Even an unplanned immersion is possible with the *RST*® system within the scope of the specified degree of protection.

The system is not designed for permanent operation under water.

It is not possible to lay the components directly in the ground.

According to VDE 0100-520, connectors must be protected using suitable additional facilities and must be accessible for visual inspection, testing, and maintenance.

Refer also to the installation instructions.

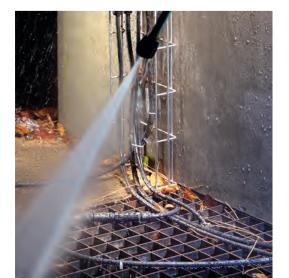
Degree	of protection achieved:
IP65	Water jets
IP66	Powerful water jets
IP67	Temporary immersion
IP68	Continuous immersion (for 2 hours at a water depth of 3 m)
IP69	High-pressure spray down

## Material resistance

Please contact us for applications under differen	t cond	itions.	
UV light (use black-colored connectors!)	+	Motor oil (SAE 20W/55)	
Oil and grease resistance	+	Nickel chloride	
Aliphatic carbon hydride	+	Paraffin and paraffin derivates	
Aromatic hydrocarbons	+	Phosphoric ester	
Alcohols	+	Phthalic ester	
Ammonia, water-free	+	Polyamide resin	
Ammonium chloride (salmiac)	+	Polyester polyoles	
Ammonium sulfate	+	Polyether polyoles	
Barium chloride	+	Polyglycols	
Beer	+	Polymeric softeners	
Butter	+	Polyurethane resins	
Butyl alcohol	+	Mercury	
Calcium chloride, aqueous solution, 10%	+	Castor oil	
Citric acid, aqueous solution, 10%	+	Salmiac	
Ferric sulfide	+	Oxygen, RT	
Ethyl ether	+	Lubricating oil (O-149), (not bunker oil, oil tankers)	
Paint, varnish, with low sulphuric acid content	+	Sulfur, wet	١.
Fruit juice, fruit acid	+	Sulfuric acid (diluted, RT)	
Tannic acid	+	Sulfur hexafluoride	
Glycerin	+	Sweat	
Glysantine, aqueous solution, 40%	+	Sebacic acid ester	
Potassium chloride	+	Spirits	
Caustic potash solution, aqueous solution, 10%	+	Nitric acid (10%)	١.
Sodium, aqueous solution, 10%	+	Hydrochloric acid (10%)	
Linseed oil	+	Water, RT, free from chlorine up to 80 °C	١.
Milk	+	Water: sea water resistance, artificial, 20 °C	
Lactic acid, 20 °C	1+	Stannic chloride, 20 °C, saturated	١.

# TÜV certificate for outdoor use





## **RST®** long-term studies:

In addition to the tests required by the standard, a continuous test was performed over 14 months. During this time, the connectors were exposed to direct sunlight, frost and occasional flooding. For this purpose, the **RST** ° components were installed in an eaves gutter and monitored by a 30 mA circuit breaker with the mains voltage applied. The following tests were performed in addition to the continuous test:

– Temperature change test (– 40 °C to + 60 °C) Please observe overleaf installation instructions.

The complete test report can be ordered from our hotline using the phone number +49 951/9324-996.

# Installation instructions for outdoor electrical installations

Outdoor electrical installations are particularly tricky. Constant temperature changes, high UV radiation, high ozone values and, not least, mechanical wear leading to material fatigue, water ingress, and, finally, system failure.

#### Installation instructions

A horizontal installation position is preferable in order to ensure that water drains off. In accordance with installation regulation IEC 60364-5-52 (DIN VDE 0100-522.3), cable systems must be designed in such a way that damage caused by the ingress of water is avoided.

Cable systems must satisfy the required degree of protection. If water can accumulate or water condensation can occur, provisions for water drainage must be made! This particularly applies to sealing points in the area of the strain relief.

If abrasion might occur (in flexible installations), wear of the pre-assembled cable must be taken into consideration and must be monitored.

Avoid any bending of the cable in the area of the strain relief.

Control mechanical bending in the area of the strain relief using suitable measures (e.g. cable clamps).

Laying of the system components directly in the ground is not possible. According to VDE 0100-520, connectors must be protected using suitable additional facilities and must be accessible for visual inspection, testing, and maintenance.

The connector system is not designed for continuous operation under water. However, unplanned immersion is possible as foreseen by the specification.

## Connectors for equipment with protection class II

Connectors from Wieland that are type-tested as per EN 61535 can be used in equipment with protection class II meeting pollution degree 2. They fulfill the requirements of protection class II of the next higher overvoltage category for clearances (6 kV).

Assembly parts have to provide contact protection for double or reinforced insulation. The relevant technical standards must be observed.

We recommend using the product families GST18®, GST15, RST20 and RST16.



Further information can be found in our White Paper "Installation instructions for outdoor electrical installations", order no. 0693.1



## ... always the right cable

What is crucial for the durability of your unit is the perfect interaction between the materials used in order to defy the environmental conditions.

While all connectors and distribution units are designed for continuous indoor and outdoor operation, the cables are clearly a different matter. Selection of the appropriate cable plays a major role for continuous operation of the installation.

By default, we offer the low-cost H05VV-F cable, but its field of applications is restricted to indoor areas. This cable is not suitable for outdoor areas and constantly humid or wet rooms! Protection from foreign bodies (IP6X) is at the fore here. Temporary wetness for cleaning purposes, however, is allowed.

Temporary outdoor installations without special demands can be implemented using H07RN-F rubbersheathed cables. However, it is essential to check whether or not any additional action, such as laying inside installation pipes, is required.

If installations will be directly exposed to environmental influences for some time, the selection of a suitable cable must be discussed with Wieland.

### **PVC** cable H05VV-F

Use inside dry rooms, not outdoors, not directly in the ground. Not UV resistant.

Minimum bending radius: 4 x outside diameter Service temperature: 70 °C







#### Rubber-sheathed cable H07RN-F

Use inside dry, and wet rooms, as well as outdoors, but not directly in the ground.
Limited UV resistant...

Minimum bending radius: 4 x outside diameter Service temperature: 60 °C







## Rubber-sheathed cable H07RN-F (enhanced version)

Use in dry, humid and wet rooms, as well as outdoors. UV and Ozon resistant. Cable halogen-free and flame retardant. Laying of the cable not directly in the ground.

Minimum bending radius: 4 x outside diameter Service temperature: von -50 °C bis +90 °C









## Part number | page

01.006.1553.0	78	06.562.5853.0	66	41.427.0537.4	42	41.427.4032.4	
01.006.1553.0	101	06.562.5853.1	58	41.427.0537.8	42	41.427.4032.8	
01.006.1553.0	127	06.562.5853.1	66	41.427.0538.4	43	41.427.4033.1	
01.006.1553.0	147	06.562.8753.0	198	41.427.0538.8	43	41.427.4033.9	
01.006.1553.0	175	06.563.5053.1	44	41.427.1030.1	42	41.427.4034.1	
01.006.1553.0	187	06.563.5153.1	44	41.427.1030.9	42	41.427.4034.9	
01.006.1553.1	78	06.563.8653.0	59	41.427.1032.4	42	41.427.4037.4	
01.006.1553.1	101	06.563.8653.1	59	41.427.1032.8	42	41.427.4037.8	
					42		
01.006.1553.1	127	06.563.8753.0	59	41.427.1033.1		41.427.4038.4	
01.006.1553.1	147	06.563.8753.1	59	41.427.1033.9	42	41.427.4038.8	
)1.006.1553.1	175	06.563.8853.0	59	41.427.1034.1	43	41.437.0530.1	
)1.006.1553.1	187	06.563.8853.1	59	41.427.1034.9	43	41.437.0532.8	
2.122.9000.0	194	06.563.8953.0	59	41.427.1037.4	42	41.437.0533.1	
2.122.9100.0	194	06.563.8953.1	59	41.427.1037.8	42	41.437.0534.1	
2.122.9200.0	194	06.563.9053.0	67	41.427.1038.4	43	41.437.0537.8	
2.122.9300.0	194	06.563.9053.1	67	41.427.1038.8	43	41.437.0538.8	
2.125.5521.8	195	06.563.9153.0	67	41.427.1530.1	42	41.437.1030.1	
2.125.5621.8	195	06.563.9153.1	67	41.427.1530.9	42	41.437.1032.8	
2.125.5721.8	195	06.563.9253.0	67	41.427.1532.4	42	41.437.1033.1	
2.125.5821.8	195	06.563.9253.1	67	41.427.1532.8	42	41.437.1034.1	
2.126.0621.8	239	06.563.9353.0	67	41.427.1533.1	42	41.437.1037.8	
2.126.0721.8	239	06.563.9353.1	67	41.427.1533.1	42	41.437.1037.8	
2.126.0721.8		06.600.3627.0					
	239		199	41.427.1534.1	43	41.437.1530.1	
2.127.1121.8	196	06.600.3727.0	199	41.427.1534.9	43	41.437.1532.8	
2.127.1221.8	196	06.600.3827.0	199	41.427.1537.4	42	41.437.1533.1	
2.127.1321.8	196	06.600.3927.0	199	41.427.1537.8	42	41.437.1534.1	
5.502.2100.0	197	41.021.3041.4	40	41.427.1538.4	43	41.437.1537.8	
5.502.2300.0	239	41.021.3041.8	40	41.427.1538.8	43	41.437.1538.8	
5.502.3500.0	197	41.021.3043.1	40	41.427.2030.1	42	41.437.2030.1	
5.502.3600.0	197	41.021.3043.9	40	41.427.2030.9	42	41.437.2032.8	
5.544.7800.0	194	41.021.4041.4	41	41.427.2032.4	42	41.437.2033.1	
5.544.7900.0	194	41.021.4041.8	41	41.427.2032.8	42	41.437.2034.1	
5.544.8000.0	194	41.021.4043.1	41	41.427.2033.1	42	41.437.2037.8	
5.545.0021.8	195	41.021.4043.9	41	41.427.2033.9	42	41.437.2038.8	
5.545.0121.8	195	41.022.3041.4	40	41.427.2034.1	43	41.437.2530.1	
	195		40		43		
5.545.0221.8		41.022.3041.8		41.427.2034.9		41.437.2532.8	
5.545.0321.8	195	41.022.3043.1	40	41.427.2037.4	42	41.437.2533.1	
5.545.2821.8	239	41.022.3043.9	40	41.427.2037.8	42	41.437.2534.1	
5.545.2921.8	239	41.022.4041.4	41	41.427.2038.4	43	41.437.2537.8	
5.545.3021.8	239	41.022.4041.8	41	41.427.2038.8	43	41.437.2538.8	
5.545.4600.0	194	41.022.4043.1	41	41.427.2530.1	42	41.437.3030.1	
5.546.3921.8	196	41.022.4043.9	41	41.427.2530.9	42	41.437.3032.8	
5.546.4021.8	196	41.031.3041.4	40	41.427.2532.4	42	41.437.3033.1	
5.546.4121.8	196	41.031.3041.8	40	41.427.2532.8	42	41.437.3034.1	
5.564.4453.0	194	41.031.3043.9	40	41.427.2533.1	42	41.437.3037.8	
5.564.4453.1	194	41.031.3053.1	40	41.427.2533.9	42	41.437.3038.8	
5.564.4453.1	223	41.031.4041.4	41	41.427.2534.1	43	41.437.4030.1	
5.564.8653.1	198	41.031.4041.8	41	41.427.2534.9	43	41.437.4032.8	
	198	41.031.4043.9	41		43		
5.564.8653.3 E EGA 00E2.7				41.427.2537.4		41.437.4033.1	
5.564.8653.7	198	41.031.4053.1	41	41.427.2537.8	42	41.437.4034.1	
5.565.8653.1	198	41.032.3041.4	40	41.427.2538.4	43	41.437.4037.8	
5.565.8653.3	198	41.032.3041.8	40	41.427.2538.8	43	41.437.4038.8	
5.565.8653.7	198	41.032.3043.9	40	41.427.3030.1	42	46.030.0150.4	
5.565.9953.0	195	41.032.3053.1	40	41.427.3030.9	42	46.030.0150.6	
5.565.9953.1	195	41.032.4041.4	41	41.427.3032.4	42	46.030.0151.4	
5.566.5253.0	198	41.032.4041.8	41	41.427.3032.8	42	46.030.0151.6	
5.566.5253.1	198	41.032.4043.9	41	41.427.3033.1	42	46.030.0153.0	
5.568.1853.0	238	41.032.4053.1	41	41.427.3033.9	42	46.030.0153.1	
5.568.8853.0	198	41.427.0530.1	42	41.427.3034.1	43	46.030.0153.9	
5.568.8853.1	198	41.427.0530.1	42	41.427.3034.1	43	46.030.0154.0	
			42		43		
5.583.2900.1	198	41.427.0532.4		41.427.3037.4		46.030.0154.1	
5.583.2900.3	198	41.427.0532.8	42	41.427.3037.8	42	46.030.0154.9	
6.502.4300.0	199	41.427.0533.1	42	41.427.3038.4	43	46.030.0155.7	
6.502.6100.0	44	41.427.0533.9	42	41.427.3038.8	43	46.030.1250.4	
06.502.6300.0	44	41.427.0534.1	43	41.427.4030.1	42	46.030.1250.6	
	58	41.427.0534.9	43	41.427.4030.9	42	46.030.1251.4	

46.030.1251.6	58	46.050.1253.0	66	46.422.2007.4	54	46.432.3033.1	54
46.030.1253.0	58	46.050.1253.1	66	46.422.2008.4	55	46.432.3034.1	55
46.030.1253.1	58	46.050.1253.6	66	46.422.2030.1	54	46.432.4000.1	54
46.030.1253.9	58	46.050.1253.9	66	46.422.2032.4	54	46.432.4003.1	54
46.030.1254.0	58	46.050.1254.0	66	46.422.2033.1	54	46.432.4004.1	55
46.030.1254.1	58	46.050.1254.1	66	46.422.2034.1	55	46.432.4030.1	54
46.030.1254.9	58	46.051.4550.4	62	46.422.2037.4	54	46.432.4033.1	54
46.030.1255.7	58	46.051.4551.4	62	46.422.2038.4	55	46.432.4034.1	55
46.031.4550.4	52	46.051.4553.0	62	46.422.3000.1	54	46.432.5000.1	54
46.031.4550.6	52	46.051.4553.1	62	46.422.3002.4	54	46.432.5003.1	54
46.031.4551.4	52	46.051.4553.6	62	46.422.3003.1	54	46.432.5004.1	55
46.031.4551.6	52	46.051.4553.9	62	46.422.3004.1	55	46.432.5030.1	54
46.031.4553.0	52	46.051.4554.0	62	46.422.3007.4	54	46.432.5033.1	54
46.031.4553.1	52	46.051.4554.1	62	46.422.3008.4	55	46.432.5034.1	55
46.031.4553.9	52	46.051.5050.4	63	46.422.3030.1	54	46.452.0500.1	64
46.031.4554.0	52	46.051.5051.4	63	46.422.3032.4	54	46.452.0500.6	64
46.031.4554.1	52	46.051.5053.0	63	46.422.3033.1	54	46.452.0503.1	64
46.031.4554.9	52	46.051.5053.1	63	46.422.3034.1	55	46.452.0503.6	64
46.031.4555.7	52	46.051.5053.6	63	46.422.3037.4	54	46.452.0504.1	65
46.031.4951.4	52	46.051.5053.9	63	46.422.3038.4	55	46.452.0504.6	65
46.031.4951.6	52	46.051.5054.0	63	46.422.4000.1	54	46.452.0530.1	64
46.031.5050.4	53	46.051.5054.1	63	46.422.4002.4	54	46.452.0530.6	64
46.031.5050.6	53	46.052.4550.4	62	46.422.4003.1	54	46.452.0533.1	64
46.031.5051.4	53	46.052.4551.4	62	46.422.4004.1	55	46.452.0533.6	64
46.031.5051.6	53	46.052.4553.0	62	46.422.4007.4	54	46.452.0534.1	65
46.031.5053.0	53	46.052.4553.1	62	46.422.4008.4	55	46.452.0534.6	65
46.031.5053.1	53	46.052.4553.6	62	46.422.4030.1	54	46.452.1000.1	64
46.031.5053.9	53	46.052.4553.9	62	46.422.4032.4	54	46.452.1000.6	64
46.031.5054.0	53	46.052.4554.0	62	46.422.4033.1	54	46.452.1003.1	64
46.031.5054.1	53	46.052.4554.1	62	46.422.4034.1	55	46.452.1003.6	64
46.031.5054.9	53	46.052.5050.4	63	46.422.4037.4	54	46.452.1004.1	65
46.031.5055.7	53	46.052.5051.4	63	46.422.4038.4	55	46.452.1004.6	65
46.032.4550.4	52	46.052.5053.0	63	46.422.5000.1	54	46.452.1030.1	64
46.032.4550.6	52	46.052.5053.1	63	46.422.5002.4	54	46.452.1030.6	64
46.032.4551.4	52	46.052.5053.6	63	46.422.5003.1	54	46.452.1033.1	64
46.032.4551.6	52	46.052.5053.9	63	46.422.5004.1	55	46.452.1033.6	64
46.032.4553.0	52	46.052.5054.0	63	46.422.5007.4	54	46.452.1034.1	65
46.032.4553.1	52	46.052.5054.1	63	46.422.5008.4	55	46.452.1034.6	65
46.032.4553.9 46.032.4554.0	52 52	46.422.0500.1 46.422.0502.4	54 54	46.422.5030.1 46.422.5032.4	54 54	46.452.2000.1 46.452.2000.6	64 64
	52	46.422.0503.1	54			46.452.2000.6	64
46.032.4554.1 46.032.4554.9	52	46.422.0503.1	55	46.422.5033.1 46.422.5034.1	54 55	46.452.2003.6	64
46.032.4555.7	52	46.422.0507.4	54	46.422.5037.4	54	46.452.2004.1	65
46.032.4951.4	52	46.422.0508.4	55	46.422.5038.4	55	46.452.2004.1	65
46.032.4951.6	52	46.422.0530.1	54	46.432.0500.1	54	46.452.2030.1	64
46.032.5050.4	53	46.422.0532.4	54	46.432.0503.1	54	46.452.2030.6	64
46.032.5050.6	53	46.422.0533.1	54	46.432.0504.1	55	46.452.2033.1	64
46.032.5051.4	53	46.422.0534.1	55	46.432.0530.1	54	46.452.2033.6	64
46.032.5051.6	53	46.422.0537.4	54	46.432.0533.1	54	46.452.2034.1	65
46.032.5053.0	53	46.422.0538.4	55	46.432.0534.1	55	46.452.2034.6	65
46.032.5053.1	53	46.422.1000.1	54	46.432.1000.1	54	46.452.3000.1	64
46.032.5053.9	53	46.422.1002.4	54	46.432.1003.1	54	46.452.3000.6	64
46.032.5054.0	53	46.422.1003.1	54	46.432.1004.1	55	46.452.3003.1	64
46.032.5054.1	53	46.422.1004.1	55	46.432.1030.1	54	46.452.3003.6	64
46.032.5054.9	53	46.422.1007.4	54	46.432.1033.1	54	46.452.3004.1	65
46.032.5055.7	53	46.422.1008.4	55	46.432.1034.1	55	46.452.3004.6	65
46.050.0150.4	66	46.422.1030.1	54	46.432.2000.1	54	46.452.3030.1	64
46.050.0151.4	66	46.422.1032.4	54	46.432.2003.1	54	46.452.3030.6	64
46.050.0153.0	66	46.422.1033.1	54	46.432.2004.1	55	46.452.3033.1	64
46.050.0153.1	66	46.422.1034.1	55	46.432.2030.1	54	46.452.3033.6	64
46.050.0153.6	66	46.422.1037.4	54	46.432.2033.1	54	46.452.3034.1	65
46.050.0153.9	66	46.422.1038.4	55	46.432.2034.1	55	46.452.3034.6	65
46.050.0154.0	66	46.422.2000.1	54	46.432.3000.1	54	46.452.4000.1	64
46.050.0154.1	66	46.422.2002.4	54	46.432.3003.1	54	46.452.4000.6	64
46.050.1250.4	66	46.422.2003.1	54	46.432.3004.1	55	46.452.4003.1	64



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46.432.3030.1

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46.452.4004.1	65	96.020.0251.4	92	96.022.0153.0	76	96.023.4153.0
46.452.4004.6	65	96.020.0253.0	92	96.022.0153.1	76	96.023.4153.1
46.452.4030.1	64	96.020.0253.1	92	96.022.0451.4	76	96.023.4451.4
46.452.4030.6	64	96.021.0050.8	76	96.022.0453.0	76	96.023.4453.0
46.452.4033.1	64	96.021.0051.4	76	96.022.0453.1	76	96.023.4453.1
46.452.4033.6	64	96.021.0053.0	76	96.022.0950.8	76	96.023.4950.8
46.452.4034.1	65	96.021.0053.1	76	96.022.0951.4	76	96.023.4951.4
46.452.4034.6	65	96.021.0153.0	76	96.022.1050.8	79	96.023.6050.8
46.452.5000.1	64	96.021.0153.1	76	96.022.1051.4	79	96.023.6051.4
			78	96.022.1051.4	79	
46.452.5000.6	64	96.021.0251.4				96.023.6053.0
46.452.5003.1	64	96.021.0253.0	78	96.022.1053.1	79	96.023.6053.1
46.452.5003.6	64	96.021.0253.1	78	96.022.2051.4	82	96.023.6250.8
46.452.5004.1	65	96.021.0351.4	78	96.022.2053.0	82	96.023.6251.4
46.452.5004.6	65	96.021.0353.0	78	96.022.2053.1	82	96.023.6253.0
46.452.5030.1	64	96.021.0353.1	78	96.022.2150.8	80	96.023.6253.1
46.452.5030.6	64	96.021.0451.4	76	96.022.2151.4	80	96.024.0050.8
16.452.5033.1	64	96.021.0453.0	76	96.022.2153.0	80	96.024.0051.4
16.452.5033.6	64	96.021.0453.1	76	96.022.2153.1	80	96.024.0053.0
6.452.5034.1	65	96.021.0950.8	76	96.022.4050.8	76	96.024.0053.1
6.452.5034.6	65	96.021.0951.4	76	96.022.4051.4	76	96.024.0153.0
L.021.3041.4	40	96.021.1050.8	79	96.022.4053.0	76	96.024.0153.1
L.021.3041.8	40	96.021.1051.4	79	96.022.4053.1	76	96.024.0451.4
L.021.3041.6	40	96.021.1053.0	79	96.022.4055.7	76	96.024.0453.0
L.021.3043.1	40	96.021.1053.0	79		76	
				96.022.4153.0		96.024.0453.1
L.021.4041.4	41	96.021.2051.4	82	96.022.4153.1	76	96.024.0950.8
L.021.4041.8	41	96.021.2053.0	82	96.022.4155.7	76	96.024.0951.4
L.021.4043.1	41	96.021.2053.1	82	96.022.4451.4	76	96.024.2050.8
L.021.4043.9	41	96.021.2150.8	80	96.022.4453.0	76	96.024.2051.4
L.022.3041.4	40	96.021.2151.4	80	96.022.4453.1	76	96.024.2053.0
L.022.3041.8	40	96.021.2153.0	80	96.022.4950.8	76	96.024.2053.1
L.022.3043.1	40	96.021.2153.1	80	96.022.4951.4	76	96.024.2250.8
L.022.3043.9	40	96.021.4050.8	76	96.022.5051.4	79	96.024.2251.4
L.022.4041.4	41	96.021.4051.4	76	96.022.5053.0	79	96.024.2253.0
L.022.4041.8	41	96.021.4053.0	76	96.022.5053.1	79	96.024.2253.1
L.022.4043.1	41	96.021.4053.1	76	96.022.5058.8	79	96.024.4050.8
L.022.4043.9	41	96.021.4055.7	76	96.022.6050.8	82	96.024.4051.4
L.031.3041.4	40	96.021.4153.0	76	96.022.6051.4	82	96.024.4053.0
L.031.3041.8	40	96.021.4153.1	76	96.022.6053.0	82	96.024.4053.1
L.031.3043.9	40				82	
		96.021.4155.7	76	96.022.6053.1		96.024.4153.0
L.031.3053.1	40	96.021.4251.4	78	96.022.6150.8	80	96.024.4153.1
L.031.4041.4	41	96.021.4253.0	78	96.022.6151.4	80	96.024.4451.4
L.031.4041.8	41	96.021.4253.1	78	96.022.6153.0	80	96.024.4453.0
L.031.4043.9	41	96.021.4351.4	78	96.022.6153.1	80	96.024.4453.1
L.031.4053.1	41	96.021.4353.0	78	96.023.0050.8	77	96.024.4950.8
L.032.3041.4	40	96.021.4353.1	78	96.023.0051.4	77	96.024.4951.4
L.032.3041.8	40	96.021.4451.4	76	96.023.0053.0	77	96.024.6050.8
L.032.3043.9	40	96.021.4453.0	76	96.023.0053.1	77	96.024.6051.4
L.032.3053.1	40	96.021.4453.1	76	96.023.0153.0	77	96.024.6053.0
L.032.4041.4	41	96.021.4950.8	76	96.023.0153.1	77	96.024.6053.1
L.032.4041.8	41	96.021.4951.4	76	96.023.0451.4	77	96.024.6250.8
L.032.4041.8	41	96.021.5050.8	79	96.023.0453.0	77	96.024.6251.4
L.032.4043.9	41	96.021.5051.4	79	96.023.0453.1	77	96.024.6253.0
33.020.0505.0	222	96.021.5053.0	79	96.023.0950.8	77	96.024.6253.1
3.020.0900.0	222	96.021.5053.1	79	96.023.0951.4	77	96.025.2151.4
3.020.0901.0	223	96.021.6050.8	82	96.023.2050.8	83	96.025.2153.0
3.020.0902.0	222	96.021.6051.4	82	96.023.2051.4	83	96.025.2153.1
3.020.0903.0	222	96.021.6053.0	82	96.023.2053.0	83	96.025.6150.8
3.020.0904.0	223	96.021.6053.1	82	96.023.2053.1	83	96.025.6151.4
5.101.0800.0	197	96.021.6150.8	80	96.023.2250.8	84	96.025.6153.0
5.101.0800.0	239	96.021.6151.4	80	96.023.2251.4	84	96.025.6153.1
5.101.1300.0	199	96.021.6153.0	80	96.023.2253.0	84	96.026.2150.8
6.020.0150.8	92	96.021.6153.1	80	96.023.2253.1	84	96.026.2151.4
96.020.0151.4	92	96.022.0050.8	76	96.023.4050.8	77	96.026.2153.0
96.020.0153.0	92	96.022.0051.4	76 76	96.023.4051.4	77	96.026.2153.1
96.020.0153.1	92	96.022.0053.0	76	96.023.4053.0	77	96.026.6150.8
96.020.0250.8	92	96.022.0053.1	76	96.023.4053.1	77	96.026.6151.4

96.026.6153.0	81	96.031.5053.1	102	96.032.6151.4	104	96.034.4053.0	99
96.026.6153.1	81	96.031.5053.9	102	96.032.6153.0	104	96.034.4053.1	99
96.030.0151.4	113	96.031.5054.3	119	96.032.6153.1	104	96.034.4053.9	99
96.030.0153.0	113	96.031.5055.7	102	96.032.6153.9	104	96.034.4055.7	99
96.030.0153.1	113	96.031.6051.4	103	96.032.6155.7	104	96.034.4151.4	99
96.030.0155.7	113	96.031.6053.0	103	96.033.0051.4	99	96.034.4153.0	99
96.030.0251.4	113	96.031.6053.1	103	96.033.0053.0	99	96.034.4153.1	99
96.030.0253.0	113	96.031.6053.9	103	96.033.0053.1	99	96.034.4153.9	99
96.030.0253.1	113	96.031.6055.7	103	96.033.0053.9	99	96.034.4155.7	99
96.030.0255.7	113	96.031.6151.4	104	96.033.0055.7	99	96.034.6051.4	100
96.031.0051.4	98	96.031.6153.0	104	96.033.0151.4	99	96.034.6053.0	100
96.031.0053.0	98	96.031.6153.1	104	96.033.0153.0	99	96.034.6053.1	100
96.031.0053.1	98	96.031.6153.9	104	96.033.0153.1	99	96.034.6053.9	100
96.031.0053.9	98	96.031.6155.7	104	96.033.0153.9	99	96.034.6055.7	10
96.031.0055.7	98	96.032.0051.4	98	96.033.0155.7	99	96.034.6251.4	10
96.031.0055.7	98	96.032.0051.4	98		106		10
				96.033.2051.4		96.034.6253.0	
96.031.0153.0	98	96.032.0053.1	98	96.033.2053.0	106	96.034.6253.1	10
96.031.0153.1	98	96.032.0053.9	98	96.033.2053.1	106	96.034.6253.9	10
96.031.0153.9	98	96.032.0055.7	98	96.033.2053.9	106	96.034.6255.7	10
96.031.0155.7	98	96.032.0151.4	98	96.033.2055.7	106	96.035.2151.4	10
96.031.0253.0	101	96.032.0153.0	98	96.033.2251.4	107	96.035.2153.0	10
96.031.0253.1	101	96.032.0153.1	98	96.033.2253.0	107	96.035.2153.1	10
96.031.0255.7	101	96.032.0153.9	98	96.033.2253.1	107	96.035.2153.9	10
96.031.0353.0	101	96.032.0155.7	98	96.033.2253.9	107	96.035.2155.7	10
96.031.0353.1	101	96.032.1051.4	102	96.033.2255.7	107	96.035.6151.4	10
96.031.0353.9	101	96.032.1053.0	102	96.033.4051.4	99	96.035.6153.0	10
96.031.0355.7	101	96.032.1053.1	102	96.033.4053.0	99	96.035.6153.1	10
96.031.1051.4	102	96.032.1053.9	102	96.033.4053.1	99	96.035.6153.9	10
6.031.1053.0	102	96.032.1055.7	102	96.033.4053.9	99	96.035.6155.7	10
6.031.1053.1	102	96.032.2051.4	103	96.033.4055.7	99	96.036.2151.4	10
6.031.1053.9	102	96.032.2053.0	103	96.033.4151.4	99	96.036.2153.0	10
96.031.1055.7	102	96.032.2053.1	103	96.033.4153.0	99	96.036.2153.1	10
96.031.2051.4	103	96.032.2053.9	103	96.033.4153.1	99	96.036.2153.9	10
96.031.2053.0	103	96.032.2055.7	103	96.033.4153.9	99	96.036.2155.7	10
96.031.2053.1	103	96.032.2151.4	104	96.033.4155.7	99	96.036.6151.4	10
96.031.2053.9	103	96.032.2153.0	104	96.033.6051.4	106	96.036.6153.0	10
96.031.2055.7	103	96.032.2153.1	104	96.033.6053.0	106	96.036.6153.1	10
96.031.2151.4	104	96.032.2153.9	104	96.033.6053.1	106	96.036.6153.9	10
96.031.2153.0	104	96.032.2155.7	104	96.033.6053.9	106	96.036.6155.7	10
96.031.2153.1	104	96.032.4051.4	98	96.033.6055.7	106	96.040.0151.4	21
06.031.2153.1	104	96.032.4053.0	98	96.033.6251.4	107	96.041.4051.4	12
						96.041.4053.0	
06.031.2155.7	104	96.032.4053.1	98	96.033.6253.0	107		12
06.031.4051.4	98	96.032.4053.9	98	96.033.6253.1	107	96.041.4053.1	12
06.031.4053.0	98	96.032.4055.7	98	96.033.6253.9	107	96.041.4153.0	12
06.031.4053.1	98	96.032.4151.4	98	96.033.6255.7	107	96.041.4153.1	12
96.031.4053.9	98	96.032.4153.0	98	96.034.0051.4	99	96.041.4253.0	12
6.031.4055.7	98	96.032.4153.1	98	96.034.0053.0	99	96.041.4253.1	12
6.031.4151.4	98	96.032.4153.9	98	96.034.0053.1	99	96.041.4353.0	12
6.031.4153.0	98	96.032.4154.3	118	96.034.0053.9	99	96.041.4353.1	12
6.031.4153.1	98	96.032.4155.7	98	96.034.0055.7	99	96.041.4553.0	12
6.031.4153.9	98	96.032.4553.0	100	96.034.0151.4	99	96.041.4553.1	12
6.031.4154.3	118	96.032.4553.1	100	96.034.0153.0	99	96.041.4951.4	12
6.031.4155.7	98	96.032.4553.9	100	96.034.0153.1	99	96.041.5051.4	12
6.031.4253.0	101	96.032.4554.3	118	96.034.0153.9	99	96.041.5053.0	1:
6.031.4253.1	101	96.032.4555.7	100	96.034.0155.7	99	96.041.5053.1	12
6.031.4255.7	101	96.032.5051.4	102	96.034.2051.4	106	96.041.6051.4	12
6.031.4353.0	101	96.032.5053.0	102	96.034.2053.0	106	96.041.6053.0	12
6.031.4353.1	101	96.032.5053.1	102	96.034.2053.1	106	96.041.6053.1	12
6.031.4355.7	101	96.032.5053.9	102	96.034.2053.9	106	96.041.6151.4	13
6.031.4553.0	100	96.032.5054.3	119	96.034.2055.7	106	96.041.6153.0	13
6.031.4553.1	100	96.032.5055.7	102	96.034.2251.4	107	96.041.6153.1	13
6.031.4553.9	100	96.032.6051.4	102	96.034.2253.0	107	96.042.4051.4	12
6.031.4554.3	118	96.032.6053.0	103	96.034.2253.0	107	96.042.4053.0	12
96.031.4555.7	100	96.032.6053.1	103	96.034.2253.9	107	96.042.4053.1	12
96.031.5051.4	102	96.032.6053.9	103	96.034.2255.7	107	96.042.4153.0	12



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96.042.4153.1

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96.034.4051.4

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980/02/4855.1 126 96/05/4253.1 147 96/05/36/51 145 96/05/66/53 6 98/05/4753 0 146 96/05/4753 0 146 96/05/4753 0 146 96/05/4753 0 147 96/05/4753 0 146 96/05/4753 0 147 96/05/4753 0 146 96/05/4753 0 147 96/05/4753 0 146 96/05/4753 0 147 96/05/4753 0 147 96/05/4753 0 146 96/05/4753 0 147 96/05/475		,						
98.042,6951.4 124 98.05.15 4258.6 147 98.05.05 4053.0 145 98.05.6253.8 9.00.042,5951.1 145 98.05.15 4253.8 98.00.15 4253.8 98.00.15 4253.8 98.00.15 4253.8 1 147 98.05.05 4053.6 145 98.00.15 4253.8 98.00.15 4253.8 1 147 98.05.05 4053.6 145 98.00.15 4253.8 1 147 98.05.05 4053.6 145 98.00.15 4253.8 1 145 98.00.15 4253.8 1 147 98.05.05 4053.8 1 145 98.00.15 4253.8 1 145 98.00.15 4253.8 1 145 98.00.15 4253.8 1 147 98.05.15 415.1 145 98.05.05 4253.8 1 145 98.00.15 4253.8 1 147 98.05.15 415.1 145 98.05.05 4253.8 1 147 98.05.15 415.1 145 98.05.05 4253.8 1 147 98.05.15 415.1 145 98.05.05 4253.8 1 147 98.05.15 415.1 145 98.05.05 4253.8 1 147 98.05.15 415.1 145 98.05.05 4153.1 145 98.05.15 4253.8 1 147 98.05.15 4153.1 145 98.05.05 4153.1 145 98.05.15 4153.1 145 98.05	96.042.4553.0	126	96.051.4253.0	147	96.052.6153.9	150	96.063.4153.6	173
98.042.9563.1 128 96.051.928.3 147 98.0563.4053.1 145 98.064.9256.6 145 98.064.9256.	96.042.4553.1	126	96.051.4253.1	147	96.053.4051.4	145	96.063.6053.6	180
98.042 5663 0 128	96.042.4951.4	124	96.051.4253.6	147	96.053.4053.0	145	96.063.6253.6	181
96.042.9563 1 128 96.061.4583 0 147 96.056.4583 1 145 96.066.6583 6 96.042.9561 1 128 96.061.4583 6 147 96.056.4183 0 146 96.066.6583 6 96.042.9563 1 128 96.061.4583 6 147 96.056.4183 0 146 96.066.6583 6 96.042.9563 1 129 96.061.4551 4 146 96.056.6583 6 96.042.9563 1 129 96.061.4551 4 146 96.056.6583 6 96.042.9563 1 120 96.056.4551 4 146 96.056.6583 6 96.042.9563 1 130 96.056.4551 4 146 96.056.6583 6 96.042.9563 1 130 96.056.4551 4 146 96.056.6583 6 96.042.9563 1 130 96.056.4553 1 146 96.056.6583 6 96.042.9563 1 130 96.056.4553 1 146 96.056.6561 4 157 96.071.4553 6 96.042.9563 1 128 96.056.4553 1 146 96.056.6561 4 157 96.071.4553 6 96.042.9563 1 128 96.056.4553 1 146 96.056.6561 4 157 96.071.4553 6 96.056.4553 1 146 96.056.6561 1 157 96.071.4553 6 96.056.4553 6 146 96.056.6563 1 157 96.071.4553 6 96.056.4553 6 146 96.056.6563 1 157 96.071.4553 6 96.056.4553 6 146 96.056.6563 1 157 96.071.4553 6 96.056.4553 6 146 96.056.6563 1 157 96.071.4553 6 96.056.4553 6 146 96.056.6563 1 157 96.071.4553 6 96.056.6563 1 157 96.071.4553 6 96.056.6563 1 157 96.071.4553 6 96.056.6563 1 157 96.071.4553 6 96.056.6563 1 146 96.056.6563 1 157 96.071.4553 6 96.056.6563 1 146 96.056.6563 1 157 96.071.4553 6 96.056.6563 1 146 96.056.6563 1 157 96.071.4553 6 96.056.6563 1 146 96.056.6563 1 157 96.071.4553 6 96.056.6563 1 146 96.056.6563 1 157 96.071.4553 6 96.056.6563 1 146 96.056.6563 1 157 96.071.4553 6 96.056.6563 1 146 96.056.6563 1 157 96.071.4553 6 96.056.6563 1 146 96.056.6563 1 157 96.071.4553 6 96.056.6563 1 146 96.056.6563 1 157 96.071.4553 6 96.056.6563 1 146 96.056.6563 1 157 96.056.6563 1 146 96.056.6563 1 157 96.056.6563 1 146 96.056.6563 1 157 96.056.6563 1 146 96.056.6563 1 157 96.056.6563 1 146 96.056.6563 1 157 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056.6563 1 146 96.056	96.042.5051.4	128	96.051.4253.9	147	96.053.4053.1	145	96.064.4053.6	173
98.042.0615.4 129 99.051.4363.1 147 86.053.4161.4 146 90.066.053.6 147 86.042.0615.2 146 90.056.053.6 147 86.042.0615.1 146 90.056.0513.6 96.042.0615.1 149 96.054.0615.1 146 96.056.0513.6 96.042.0615.1 146 96.042.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 146 96.054.0615.1 157 96.071.4053.6 96.042.0615.1 147 146 96.054.0615.1 157 96.071.4053.6 96.042.0615.1 147 146 96.054.0615.1 157 96.071.4053.6 96.042.0615.1 157 96.071.4053.6 96.042.0615.1 157 96.071.4053.9 96.0614.0653.1 126 96.0614.0653.9 146 96.054.0653.1 157 96.071.4053.9 96.0614.0653.1 126 96.0614.0653.9 146 96.054.0653.1 157 96.071.4053.9 96.0614.0653.1 126 96.0614.0653.9 146 96.054.0653.1 157 96.071.4053.9 96.071.4053.1 146 96.054.0653.1 157 96.071.4053.9 96.071.4053.9 96.071.4053.1 146 96.054.0653.1 157 96.071.4053.9 96.071.4053.9 96.071.4053.9 96.071.4053.0 146 96.054.0653.1 158 96.071.4053.9 96.071.4053.9 96.071.4053.0 146 96.054.0653.1 158 96.071.4053.9 96.071.4053.9 96.071.4053.0 146 96.054.0653.1 158 96.071.4053.9 96.071.4053.9 96.071.4053.0 146 96.054.0653.1 158 96.071.4053.9 96.071.4053.9 96.071.4053.0 146 96.054.0653.1 158 96.071.4053.9 96.071.4053.9 96.074.0653.1 146 96.054.0653.1 146 96.074.0653.0 146 96.074.0653.1 146 96.074.0653.1 146 96.074.0653.1 146 96.074.0653.1 146 96.074.0653.1 146 96.074.0653.1 146 96.074.065	96.042.5053.0	128	96.051.4351.4	147	96.053.4053.6	145	96.064.4153.6	173
98.042.0633.0 129 90.051.4853.9 147 90.053.4153.0 145 90.066.6153.6 90.042.0635.1 129 90.051.4853.9 146 90.053.4153.0 146 90.071.4053.0 90.051.4851.0 146 90.071.4053.0 146 90.071.4053.0 146 90.071.4053.0 146 90.071.4053.0 146 90.073.4153.0 146 90	96.042.5053.1	128	96.051.4353.0	147	96.053.4053.9	145	96.064.6053.6	180
96 042 0615 1 729 9 96 061 4363 9 147 8 96 053 4183 1 145 96 066 1618 6 96 071 4083 0 96 061 4615 1 4 146 96 071 4083 0 96 061 468 1 146 96 071 4083 1 96 061 4083 1 130 96 061 468 1 146 96 053 4183 9 146 96 071 4083 1 96 061 4083 1 130 96 061 468 1 146 96 053 4183 9 146 96 071 4083 1 96 062 4081 1 132 96 061 4853 1 146 96 053 6053 0 152 96 071 4053 6 96 063 4053 1 125 96 061 4853 2 146 96 053 6053 0 152 96 071 4053 6 96 063 4053 1 125 96 061 4853 2 146 96 063 6053 6053 0 152 96 071 4053 6 96 063 4053 1 125 96 061 4853 2 146 96 063 6053 6053 6 152 96 071 4153 1 146 96 063 6053 6053 6 152 96 071 4153 1 146 96 063 6053 6 152 96 071 4153 1 146 146 96 063 6053 6 152 96 071 4153 1 146 146 96 063 6053 6 152 96 071 4153 1 146 146 96 063 6053 6 152 96 071 4153 1 146 146 96 063 6053 6 152 96 071 4153 1 146 146 96 063 6053 6 152 96 071 4153 1 146 146 96 063 6053 6 152 96 071 4153 1 146 146 96 063 6053 6 152 96 071 4153 1 146 146 96 063 6053 6 152 96 071 4153 1 146 146 96 063 6053 6 152 96 071 4153 1 146 96 063 6053 6 152 96 071 4153 1 146 96 063 6053 6 153 96 071 4153 1 146 96 063 6053 6 153 96 071 4153 1 146 96 063 6053 6 153 96 071 4153 1 146 96 063 6053 6 153 96 071 4153 1 146 96 063 6053 6 153 96 071 4153 1 146 96 071 4153	96.042.6051.4	129	96.051.4353.1	147	96.053.4151.4	145	96.064.6253.6	181
98 042 6153 1 330 90 051 4861 4 148 90 053 41828 9 145 90 071 4053 0 96 061 4653 1 148 90 071 4053 1 1	96.042.6053.0	129	96.051.4353.6	147	96.053.4153.0	145	96.065.6153.6	179
96.042.6163.0 130 96.051.6563.0 146 96.053.4163.9 145 96.071.4053.1 96.043.4051.4 125 96.071.4053.5 146 96.053.6053.0 152 96.071.4053.9 96.043.4051.4 125 96.051.6563.5 146 96.053.6053.0 152 96.071.4053.9 96.043.4053.1 125 96.051.6553.5 146 96.053.6053.0 152 96.071.4153.0 125 96.051.6553.5 146 96.053.6053.5 152 96.071.4153.0 125 96.051.6553.5 166 96.053.6053.5 152 96.071.4153.1 156 96.053.6053.1 125 96.051.6563.5 166 96.053.6053.5 152 96.071.4153.1 156 96.053.6053.1 125 96.057.4153.0 125 96.051.6563.5 166 96.053.6053.1 153 96.071.4153.0 125 96.051.6563.5 146 96.053.6053.1 153 96.071.4153.9 166 96.043.4153.1 125 96.051.6053.1 148 96.053.6053.1 153 96.071.4253.0 146 96.043.6053.1 125 96.051.6053.1 148 96.053.6053.1 153 96.071.4253.0 146 96.043.6053.1 122 96.051.6053.0 148 96.053.6053.0 153 96.071.4253.0 146 96.043.6053.1 132 96.051.6053.0 148 96.053.6053.0 153 96.071.4253.0 146 96.043.6053.1 132 96.051.6053.0 148 96.053.6053.0 153 96.071.4253.0 146 96.043.6053.1 132 96.051.6053.0 148 96.053.6053.9 153 96.071.4253.6 146 96.043.6053.1 132 96.051.6063.0 149 96.054.6053.1 146 96.071.4253.0 146 96.043.6053.0 132 96.051.6063.0 149 96.054.4053.1 146 96.071.4253.0 146 96.043.6053.0 132 96.051.6063.0 149 96.054.4053.1 146 96.071.4253.0 146 96.043.6053.0 133 96.051.6053.0 149 96.054.4053.1 146 96.071.4253.1 146 96.071	96.042.6053.1	129	96.051.4353.9	147	96.053.4153.1	145	96.066.6153.6	179
96 042 6153 1 130	96.042.6151.4	130	96.051.4551.4	146	96.053.4153.6	145	96.071.4053.0	184
96 043 4053 1 125 98 051 4563 9 146 98 053 6053 0 152 98 071 4053 9 96 074 453 1 96 043 4053 1 125 98 071 4053 1 96 043 4053 1 125 98 071 4053 1 96 043 4053 1 125 98 071 4153 1 96 043 4053 1 125 98 071 4153 1 96 043 4053 1 125 98 071 4153 1 96 043 4053 1 125 98 071 4153 1 96 043 4053 1 125 98 071 4153 1 96 073 4053 1 125 98 071 4153 1 96 073 4053 1 125 98 071 4153 1 96 073 4053 1 125 98 071 4153 1 96 073 4053 1 125 98 071 4153 1 96 071 4153 1 96 071 4153 1 96 071 4153 1 96 071 4153 1 96 071 4153 1 96 071 4153 1 96 071 4253 1 96	96.042.6153.0	130	96.051.4553.0	146	96.053.4153.9	145	96.071.4053.1	184
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96.043.4083.1 125 98.051.4583.9 146 98.053.083.6 152 96.071.4183.3 6 96.043.4153.1 125 98.051.4584.3 168 98.053.083.9 152 98.071.4183.3 6 96.043.4153.1 125 98.051.4584.3 168 98.058.0851.4 153 96.071.4183.3 6 96.071.4183.3 1725 96.073.4183.3 1725 96.073.4183.3 1725 96.073.4183.3 1725 96.073.4183.3 1725 96.073.4183.3 1725 96.073.4183.3 1725 96.073.4183.3 1725 96.073.4183.3 1725 96.073.4183.3 1725 96.073.4183.3 1725 96.073.4183.3 1725 96.073.4183.3 1725 96.073.6183.3 1725 96.073.6183.3 1725 96.073.6183.3 1725 96.073.6183.3 1725 96.073.6183.3 1727 96.073.6183.3 1727 96.073.6183.3 1727 96.073.6183.3 1727 96.073.6183.3 1727 96.073.6183.3 1727 97.073.3 1727 9	96.043.4051.4	125	96.051.4553.2	146	96.053.6053.0	152	96.071.4053.9	184
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96.044.6053.0 132 96.052.4053.0 144 96.054.6053.1 152 96.071.6153.0 196.044.6053.1 132 96.052.4053.1 144 96.054.6053.6 152 96.071.6153.1 196.044.6251.4 133 96.052.4053.2 144 96.054.6053.9 152 96.071.6153.6 196.044.6253.0 133 96.052.4053.6 144 96.054.6251.4 153 96.071.6153.9 196.044.6253.1 133 96.052.4053.9 144 96.054.6253.0 153 96.071.6253.0 196.044.6253.1 133 96.052.4151.4 144 96.054.6253.1 153 96.071.6253.0 196.045.6153.0 131 96.052.4153.0 144 96.054.6253.1 153 96.071.6253.0 196.045.6153.0 131 96.052.4153.1 144 96.054.6253.1 153 96.071.6253.6 196.045.6153.0 131 96.052.4153.1 144 96.054.6253.0 153 96.071.6253.6 196.045.6153.0 131 96.052.4153.1 144 96.054.6253.0 153 96.071.6253.6 196.045.6153.0 131 96.052.4153.1 144 96.055.6153.0 153 96.071.6253.9 196.046.6151.4 131 96.052.4153.9 144 96.055.6153.0 151 96.072.4053.0 196.046.6153.1 131 96.052.4153.9 144 96.055.6153.0 151 96.072.4053.0 196.046.6153.1 131 96.052.4153.9 144 96.055.6153.0 151 96.072.4053.1 196.046.6153.1 131 96.052.4153.9 144 96.055.6153.0 151 96.072.4053.1 196.046.6153.1 131 96.052.4153.9 144 96.055.6153.0 151 96.072.4053.1 196.046.6153.1 131 96.052.4153.9 144 96.055.6153.1 151 96.072.4053.6 196.050.0153.1 162 96.052.4551.4 146 96.055.6153.1 151 96.072.4053.9 196.050.0153.1 162 96.052.4553.0 146 96.055.6153.1 151 96.072.4053.9 160.050.0153.1 162 96.052.4553.2 146 96.056.6153.1 151 96.072.4153.0 196.050.1153.1 218 96.052.4553.2 146 96.056.6153.1 151 96.072.4153.0 196.050.1153.1 218 96.052.4553.9 146 96.056.6153.1 151 96.072.4153.0 196.050.1153.1 218 96.052.4553.0 146 96.056.6153.1 151 96.072.4153.0 196.050.1153.1 218 96.052.4553.0 146 96.056.6153.1 151 96.072.4153.0 196.050.1153.1 218 96.052.4553.0 148 96.056.6153.1 151 96.072.4153.0 196.050.1153.1 218 96.052.4553.0 148 96.056.6153.1 151 96.072.4553.0 196.050.1153.1 218 96.052.4553.0 148 96.056.6153.1 151 96.072.4553.0 196.050.1153.1 218 96.052.6553.0 148 96.051.4553.6 177 96.072.6553.1 148 96.052.6053.1 148 96.051.4053.0 177 96.072.6053.0 196.051.4053.0 144 96.052.5053.1 148 96.061.4553.6 177 96.072	96.044.4951.4	125	96.051.6153.9	150	96.054.6051.4	152	96.071.6053.6	189
96.044.6053.1 132 96.052.4053.1 144 96.054.6053.6 152 96.071.6153.1 1 96.044.6251.4 133 96.052.4053.2 144 96.054.6053.9 152 96.071.6153.6 1 96.044.6253.0 133 96.052.4053.9 144 96.054.6253.0 153 96.071.6153.6 1 96.044.6253.1 133 96.052.4053.9 144 96.054.6253.0 153 96.071.6253.0 1 96.045.6151.4 131 96.052.4151.4 144 96.054.6253.1 153 96.071.6253.1 1 96.045.6153.0 131 96.052.4153.1 144 96.054.6253.1 153 96.071.6253.1 1 96.045.6153.1 131 96.052.4153.1 144 96.054.6253.6 153 96.071.6253.0 1 96.045.6153.1 131 96.052.4153.6 144 96.054.6253.9 153 96.071.6253.9 1 96.046.6153.1 131 96.052.4153.6 144 96.055.6153.0 151 96.072.4053.0 1 96.046.6153.1 131 96.052.4153.9 144 96.055.6153.1 151 96.072.4053.0 1 96.046.6153.1 131 96.052.4153.9 144 96.055.6153.1 151 96.072.4053.1 1 96.046.6153.1 131 96.052.4153.9 144 96.055.6153.1 151 96.072.4053.1 1 96.046.6153.1 131 96.052.4153.9 144 96.055.6153.0 151 96.072.4053.1 1 96.046.6153.1 131 96.052.4153.9 144 96.055.6153.0 151 96.072.4053.1 1 96.050.0153.1 162 96.052.4553.0 146 96.055.6153.0 151 96.072.4053.9 1 96.050.0153.1 218 96.052.4553.0 146 96.055.6153.9 151 96.072.4053.9 1 96.050.1153.1 218 96.052.4553.1 146 96.056.6153.0 151 96.072.4153.0 1 96.050.3153.1 218 96.052.4553.0 146 96.056.6153.1 151 96.072.4153.1 1 96.050.3153.1 218 96.052.4553.3 146 96.056.6153.1 151 96.072.4153.1 1 96.050.153.1 218 96.052.4553.3 146 96.056.6153.1 151 96.072.4153.6 1 96.050.153.1 218 96.052.4553.3 146 96.056.6153.1 151 96.072.4153.6 1 96.050.153.1 218 96.052.4553.3 146 96.056.6153.1 151 96.072.4553.9 1 96.050.153.1 218 96.052.5053.0 148 96.056.6153.6 172 96.072.4553.6 1 96.050.153.1 218 96.052.5053.0 148 96.061.4553.6 172 96.072.4553.1 1 96.050.153.1 218 96.052.5053.0 148 96.061.4553.6 175 96.072.6053.1 1 96.051.4053.1 144 96.052.5053.9 148 96.061.4553.6 175 96.072.6053.1 1 96.051.4053.2 144 96.052.5053.9 148 96.061.4553.6 175 96.072.6053.1 1 96.051.4053.0 144 96.052.6053.0 149 96.061.4553.6 176 96.072.6053.0 1 96.051.4053.0 144 96.052.6053.0 149 96.062.6053.6 177 96.072.6053.9 1 96.051.4053.9 144 96.0	96.044.6051.4	132	96.052.4051.4	144	96.054.6053.0	152	96.071.6053.9	189
96.044.6251.4 133 96.052.4053.2 144 96.054.6053.9 152 96.071.6153.6 96.044.6253.0 133 96.052.4053.6 144 96.054.6251.4 153 96.071.6153.6 96.044.6253.1 133 96.052.4053.6 144 96.054.6253.0 153 96.071.6253.0 196.044.6253.1 133 96.052.4151.4 144 96.054.6253.0 153 96.071.6253.1 196.045.6153.0 131 96.052.4153.0 144 96.054.6253.6 153 96.071.6253.6 196.045.6153.0 131 96.052.4153.0 144 96.054.6253.6 153 96.071.6253.6 196.045.6153.1 131 96.052.4153.1 144 96.054.6253.9 153 96.071.6253.9 196.046.6151.4 131 96.052.4153.6 144 96.054.6253.9 153 96.071.6253.9 196.046.6151.4 131 96.052.4153.6 144 96.055.6153.0 151 96.072.4053.0 196.046.6153.0 131 96.052.4153.1 144 96.055.6153.0 151 96.072.4053.0 196.046.6153.1 131 96.052.4153.9 144 96.055.6153.0 151 96.072.4053.1 196.056.0153.1 131 96.052.4154.3 166 96.055.6153.0 151 96.072.4053.0 196.050.0153.1 162 96.052.4553.0 146 96.055.6153.1 151 96.072.4053.9 196.050.0153.1 162 96.052.4553.0 146 96.055.6153.0 151 96.072.4053.9 196.050.0153.1 218 96.052.4553.0 146 96.055.6153.0 151 96.072.4153.0 196.050.1153.1 218 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.1 196.050.2153.1 162 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.1 196.050.2153.1 218 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.1 196.050.1153.1 218 96.052.4553.0 146 96.056.6153.0 151 96.072.4153.1 196.050.1153.1 218 96.052.4553.0 146 96.056.6153.0 151 96.072.4153.1 196.050.1153.1 218 96.052.4553.0 146 96.056.6153.0 151 96.072.4153.1 196.050.1153.1 218 96.052.4553.0 146 96.056.6153.0 151 96.072.4553.0 196.050.6153.1 218 96.052.4553.0 146 96.056.6153.0 151 96.072.4553.0 196.050.6153.1 218 96.052.4553.0 146 96.056.6153.0 151 96.072.4553.0 196.050.6153.1 218 96.052.4553.0 148 96.061.4053.6 172 96.072.4553.0 196.050.6153.1 218 96.052.5053.1 148 96.061.4053.6 172 96.072.4553.0 196.051.4053.0 144 96.052.5053.0 148 96.061.4553.6 175 96.072.6053.0 196.051.4053.0 144 96.052.5053.0 148 96.061.4553.6 175 96.072.6053.0 196.051.4053.0 144 96.052.5053.0 149 96.061.4553.6 177 96.072.6053.0 196.051.4153.0 144 96.052.6053.0 149 96.062.6053	96.044.6053.0		96.052.4053.0	144	96.054.6053.1	152	96.071.6153.0	190
96.044.6253.0 133 96.052.4053.6 144 96.054.6251.4 153 96.071.6153.9 1 96.044.6253.1 133 96.052.4053.9 144 96.054.6253.0 153 96.071.6253.0 1 96.045.6153.1 131 96.052.4153.0 144 96.054.6253.1 153 96.071.6253.1 1 96.045.6153.0 131 96.052.4153.0 144 96.054.6253.6 153 96.071.6253.6 1 96.045.6153.1 131 96.052.4153.1 144 96.054.6253.6 153 96.071.6253.9 1 96.046.6153.1 131 96.052.4153.0 144 96.054.6253.9 153 96.071.6253.9 1 96.046.6153.1 131 96.052.4153.0 144 96.056.6153.0 151 96.072.4053.0 1 96.046.6153.1 131 96.052.4153.9 144 96.055.6153.1 151 96.072.4053.1 1 96.046.6153.1 131 96.052.4153.3 144 96.055.6153.1 151 96.072.4053.1 1 96.046.6153.1 131 96.052.4153.3 146 96.055.6153.0 151 96.072.4053.1 1 96.050.0153.1 162 96.052.4553.1 146 96.056.6153.0 151 96.072.4053.9 1 96.050.0153.1 218 96.052.4553.1 146 96.056.6153.0 151 96.072.4053.9 1 96.050.153.1 218 96.052.4553.1 146 96.056.6153.0 151 96.072.4153.0 1 96.050.153.1 218 96.052.4553.1 146 96.056.6153.0 151 96.072.4153.0 1 96.050.3153.1 218 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.1 1 96.050.3153.1 218 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.1 1 96.050.153.1 218 96.052.4553.3 146 96.056.6153.0 151 96.072.4153.9 1 96.050.6153.1 218 96.052.4553.3 166 96.056.6153.0 151 96.072.4153.9 1 96.050.6153.1 218 96.052.4553.3 166 96.056.6153.0 151 96.072.4553.1 1 96.050.153.1 218 96.052.4553.3 168 96.056.6153.0 151 96.072.4553.1 1 96.050.153.1 218 96.052.5053.0 148 96.056.6153.6 172 96.072.4553.1 1 96.050.153.1 218 96.052.5053.0 148 96.061.4053.6 172 96.072.4553.1 1 96.051.4053.1 144 96.052.5053.0 148 96.061.4253.6 175 96.072.6053.1 1 96.051.4053.1 144 96.052.5053.0 148 96.061.6053.6 177 96.072.6053.1 1 96.051.4053.1 144 96.052.5053.0 148 96.061.653.6 175 96.072.6053.1 1 96.051.4053.1 144 96.052.6053.0 149 96.061.6053.6 177 96.072.6053.1 1 96.051.4053.1 144 96.052.6053.0 149 96.062.6053.6 177 96.072.6053.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.6053.6 177 96.072.6053.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.6053.6 177 96.072.6053.1 1 96.051.4153.1 144 96.05	96.044.6053.1	132	96.052.4053.1	144	96.054.6053.6	152	96.071.6153.1	190
96.044.6253.1 133 96.052.4053.9 144 96.054.6253.0 153 96.071.6253.0 190.045.6151.4 131 96.052.4151.4 144 96.054.6253.1 153 96.071.6253.1 196.045.6153.1 131 96.052.4153.1 144 96.054.6253.6 153 96.071.6253.6 196.045.6153.1 131 96.052.4153.1 144 96.054.6253.9 153 96.071.6253.9 196.046.6153.1 131 96.052.4153.6 144 96.055.6153.0 151 96.072.4053.0 196.046.6153.1 131 96.052.4153.6 144 96.055.6153.0 151 96.072.4053.0 196.046.6153.1 131 96.052.4153.3 144 96.055.6153.0 151 96.072.4053.1 196.046.6153.1 131 96.052.4154.3 166 96.055.6153.0 151 96.072.4053.1 196.050.0153.1 162 96.052.4154.3 166 96.055.6153.6 151 96.072.4053.6 196.050.0153.1 162 96.052.4553.0 146 96.055.6153.6 151 96.072.4053.9 196.050.0153.1 218 96.052.4553.0 146 96.056.6153.9 151 96.072.4153.0 196.050.2153.1 162 96.052.4553.2 146 96.056.6153.1 151 96.072.4153.1 196.052.4553.1 162 96.052.4553.2 146 96.056.6153.1 151 96.072.4153.1 196.050.2153.1 162 96.052.4553.2 146 96.056.6153.1 151 96.072.4153.1 196.050.2153.1 162 96.052.4553.2 146 96.056.6153.1 151 96.072.4153.0 196.050.3153.1 218 96.052.4553.2 146 96.056.6153.1 151 96.072.4153.6 196.050.3153.1 218 96.052.4553.9 146 96.056.6153.1 151 96.072.4153.6 196.050.3153.1 218 96.052.4553.9 146 96.056.6153.1 151 96.072.4153.6 196.050.6153.1 218 96.052.4553.0 148 96.056.6153.1 151 96.072.4553.0 196.050.6153.1 218 96.052.6553.0 148 96.056.6153.0 151 96.072.4553.0 196.050.6153.1 218 96.052.5553.0 148 96.061.453.6 172 96.072.4553.0 196.050.6153.1 218 96.052.5053.0 148 96.061.453.6 172 96.072.4553.0 196.051.4053.1 144 96.052.5053.0 148 96.061.453.6 172 96.072.4553.0 196.051.4053.1 144 96.052.5053.0 148 96.061.453.6 175 96.072.6053.1 149 96.051.4053.1 144 96.052.5053.0 148 96.061.453.6 175 96.072.6053.1 196.051.4053.1 144 96.052.5053.0 149 96.061.653.6 177 96.072.6053.1 196.051.4053.2 144 96.052.5053.0 149 96.061.653.6 174 96.072.6053.1 196.051.4053.2 144 96.052.6053.0 149 96.061.653.6 174 96.072.6053.1 196.051.4053.2 144 96.052.6053.0 149 96.061.653.6 178 96.072.6053.1 199.0605.4153.1 144 96.052.6053.1 149 96.062.6053.6	96.044.6251.4	133	96.052.4053.2	144	96.054.6053.9	152	96.071.6153.6	190
96.045.6151.4 131 96.052.4151.4 144 96.054.6253.1 153 96.071.6253.1 190.045.6153.0 131 96.052.4153.0 144 96.054.6253.6 153 96.071.6253.6 190.045.6153.1 131 96.052.4153.1 144 96.054.6253.9 153 96.071.6253.9 190.046.6151.4 131 96.052.4153.6 144 96.055.6151.4 151 96.072.4053.0 190.046.6153.0 131 96.052.4153.9 144 96.055.6151.4 151 96.072.4053.0 190.046.6153.1 131 96.052.4153.3 166 96.055.6153.0 151 96.072.4053.6 190.050.0153.1 162 96.052.4551.4 146 96.055.6153.0 151 96.072.4053.6 190.050.0153.1 162 96.052.4553.0 146 96.055.6153.0 151 96.072.4053.0 190.050.0153.1 218 96.052.4553.1 146 96.055.6153.9 151 96.072.4053.0 190.050.1153.1 218 96.052.4553.1 146 96.056.6153.0 151 96.072.4153.0 190.050.1153.1 218 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.0 190.050.3153.1 218 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.0 190.050.3153.1 218 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.0 190.050.3153.1 218 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.0 190.050.3153.1 218 96.052.4553.9 146 96.056.6153.0 151 96.072.4153.0 190.050.3153.1 218 96.052.4553.9 146 96.056.6153.0 151 96.072.4553.0 190.050.5153.1 218 96.052.4553.9 146 96.056.6153.0 151 96.072.4553.0 190.050.5153.1 218 96.052.4553.1 166 96.056.6153.0 151 96.072.4553.0 190.050.5153.1 218 96.052.5053.1 148 96.052.5053.0 148 96.051.4053.6 172 96.072.4553.0 190.050.7153.1 220 96.052.5053.1 148 96.051.4053.6 172 96.072.4553.0 190.051.4053.0 144 96.052.5053.1 148 96.061.4253.6 175 96.072.6553.1 190.051.4053.0 144 96.052.5053.1 148 96.061.4253.6 175 96.072.6053.0 190.051.4053.0 144 96.052.5053.1 148 96.061.4053.6 175 96.072.6053.0 190.051.4053.9 144 96.052.5053.0 149 96.061.6153.6 177 96.072.6053.0 190.051.4053.9 144 96.052.5053.0 149 96.061.6153.6 170 96.072.6053.0 190.051.4053.9 144 96.052.6053.1 149 96.062.4053.6 176 96.072.6153.1 190.051.4153.0 144 96.052.6053.1 149 96.062.4053.6 176 96.072.6153.1 190.051.4153.0 144 96.052.6053.1 149 96.062.4053.6 177 96.072.6253.1 190.051.4153.0 144 96.052.6053.1 149 96.062.4053.6 177 96.072.6253.1 190.051.4153.0 144 96.052.60	96.044.6253.0	133	96.052.4053.6	144	96.054.6251.4	153	96.071.6153.9	190
96.045.6153.0 131 96.052.4153.0 144 96.054.6253.6 153 96.071.6253.6 196.045.6153.1 131 96.052.4153.1 144 96.054.6253.9 153 96.071.6253.9 196.046.6151.4 131 96.052.4153.6 144 96.055.6151.4 151 96.072.4053.0 196.046.6153.0 131 96.052.4153.9 144 96.055.6153.0 151 96.072.4053.1 196.046.6153.1 131 96.052.4154.3 166 96.055.6153.1 151 96.072.4053.6 196.050.0153.1 162 96.052.4551.4 146 96.055.6153.6 151 96.072.4053.9 196.050.0153.1 218 96.052.4553.0 146 96.055.6153.0 151 96.072.4053.9 196.050.1153.1 218 96.052.4553.1 146 96.055.6153.0 151 96.072.4153.0 196.050.1153.1 218 96.052.4553.1 146 96.056.6153.0 151 96.072.4153.1 162 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.1 162 96.052.4553.2 146 96.056.6153.1 151 96.072.4153.6 196.050.2153.1 162 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.6 196.050.2153.1 218 96.052.4553.3 146 96.056.6153.0 151 96.072.4153.6 196.050.3153.1 218 96.052.4553.3 146 96.056.6153.0 151 96.072.4153.0 196.050.5153.1 218 96.052.4553.9 146 96.056.6153.0 151 96.072.4153.0 196.050.5153.1 218 96.052.4553.3 166 96.056.6153.6 151 96.072.4553.0 196.050.6153.1 218 96.052.4553.3 146 96.056.6153.6 151 96.072.4553.0 196.050.6153.1 218 96.052.5053.0 148 96.054.4553.6 172 96.072.4553.0 196.050.6153.1 218 96.052.5053.0 148 96.054.4553.6 172 96.072.4553.9 196.051.4053.1 244 96.052.5053.1 148 96.061.4053.6 172 96.072.4553.9 196.051.4053.0 144 96.052.5053.1 148 96.061.4053.6 172 96.072.6053.0 149 96.051.4053.2 144 96.052.5053.3 148 96.061.4553.6 175 96.072.6053.0 196.051.4053.2 144 96.052.5053.1 148 96.061.6253.6 175 96.072.6053.0 196.051.4053.1 144 96.052.6053.1 149 96.061.6253.6 174 96.072.6053.0 196.051.4053.0 144 96.052.6053.1 149 96.061.6253.6 174 96.072.6053.0 196.051.4053.0 144 96.052.6053.1 149 96.061.6253.6 174 96.072.6053.0 196.051.4053.0 144 96.052.6053.1 149 96.062.6053.6 177 96.072.6053.0 196.051.4153.0 144 96.052.6053.1 149 96.062.6053.6 177 96.072.6053.0 196.051.4153.0 144 96.052.6053.1 149 96.062.6053.6 177 96.072.6053.0 196.051.4153.0 144 96.052.6053.1 149 96.062.6053.6 177 96.072.6253.1 196.	96.044.6253.1	133	96.052.4053.9	144	96.054.6253.0	153	96.071.6253.0	188
96.045.6153.1 131 96.052.4153.1 144 96.052.6153.9 153 96.071.6253.9 1 96.046.6151.4 131 96.052.4153.6 144 96.055.6151.4 151 96.072.4053.0 1 96.046.6153.0 131 96.052.4153.9 144 96.055.6153.0 151 96.072.4053.1 1 96.046.6153.1 131 96.052.4153.3 166 96.055.6153.1 151 96.072.4053.6 1 96.050.0153.1 162 96.052.4551.4 146 96.055.6153.6 151 96.072.4053.9 1 96.050.0153.1 218 96.052.4553.0 146 96.055.6153.9 151 96.072.4053.0 1 96.050.1153.1 218 96.052.4553.1 146 96.056.6153.0 151 96.072.4153.0 1 96.050.2153.1 162 96.052.4553.1 146 96.056.6153.0 151 96.072.4153.0 1 96.050.2153.1 218 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.6 1 96.050.3153.1 218 96.052.4553.2 146 96.056.6153.1 151 96.072.4153.6 1 96.050.3153.1 218 96.052.4553.3 146 96.056.6153.1 151 96.072.4153.9 1 96.050.3153.1 218 96.052.4553.3 166 96.056.6153.1 151 96.072.4153.0 1 96.050.5153.1 218 96.052.4553.3 166 96.056.6153.6 151 96.072.4553.0 1 96.050.5153.1 218 96.052.4553.3 148 96.056.6153.6 151 96.072.4553.0 1 96.050.6153.1 218 96.052.5053.0 148 96.056.6153.6 151 96.072.4553.0 1 96.050.6153.1 218 96.052.5053.0 148 96.061.4053.6 172 96.072.4553.9 1 96.051.4053.1 244 96.052.5053.1 148 96.061.4253.6 175 96.072.6053.0 1 96.051.4053.0 144 96.052.5053.1 148 96.061.4253.6 175 96.072.6053.0 1 96.051.4053.0 144 96.052.5053.1 148 96.061.4253.6 175 96.072.6053.1 1 96.051.4053.1 144 96.052.5053.3 148 96.061.4553.6 174 96.072.6053.1 1 96.051.4053.0 144 96.052.5053.1 149 96.061.6553.6 174 96.072.6053.0 1 96.051.4053.0 144 96.052.6053.1 149 96.061.6553.6 174 96.072.6053.0 1 96.051.4053.0 144 96.052.6053.1 149 96.061.6553.6 172 96.072.6053.0 1 96.051.4053.1 144 96.052.6053.1 149 96.062.4053.6 172 96.072.6053.0 1 96.051.4153.0 144 96.052.6053.1 149 96.062.4553.6 174 96.072.6053.0 1 96.051.4153.0 144 96.052.6053.1 149 96.062.4553.6 174 96.072.6553.0 1 96.051.4153.1 144 96.052.6053.1 149 96.062.4553.6 174 96.072.6553.0 1 96.051.4153.0 144 96.052.6053.1 149 96.062.4553.6 174 96.072.6553.0 1 96.051.4153.0 144 96.052.6053.1 149 96.062.6053.6 177 96.072.6553.0 1 96.051.4153.1 14	96.045.6151.4	131	96.052.4151.4	144	96.054.6253.1	153	96.071.6253.1	188
96.046.6151.4 131 96.052.4153.6 144 96.055.6151.4 151 96.072.4053.0 196.046.6153.0 131 96.052.4153.9 144 96.055.6153.0 151 96.072.4053.1 196.046.6153.1 131 96.052.4154.3 166 96.055.6153.1 151 96.072.4053.6 196.050.0153.1 162 96.052.4551.4 146 96.055.6153.6 151 96.072.4053.9 196.050.0153.1 218 96.052.4553.0 146 96.055.6153.9 151 96.072.4053.9 196.050.0153.1 218 96.052.4553.0 146 96.055.6153.9 151 96.072.4153.0 196.050.1153.1 218 96.052.4553.1 146 96.056.6151.4 151 96.072.4153.0 196.050.1153.1 218 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.6 196.050.3153.1 218 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.9 196.050.3153.1 218 96.052.4553.9 146 96.056.6153.0 151 96.072.4153.9 196.050.4153.1 218 96.052.4553.9 146 96.056.6153.6 151 96.072.4553.0 196.050.5153.1 218 96.052.4554.3 166 96.056.6153.9 151 96.072.4553.1 1996.050.5153.1 218 96.052.5053.0 148 96.051.4053.6 172 96.072.4553.1 1996.050.7153.1 220 96.052.5053.0 148 96.061.4053.6 172 96.072.4553.1 196.050.7153.1 220 96.052.5053.0 148 96.061.4053.6 172 96.072.4553.9 196.051.4051.4 144 96.052.5053.6 148 96.061.4053.6 175 96.072.6053.0 196.051.4053.1 144 96.052.5053.9 148 96.061.4353.6 175 96.072.6053.1 196.051.4053.2 144 96.052.5053.9 148 96.061.4553.6 175 96.072.6053.1 196.051.4053.2 144 96.052.5053.9 148 96.061.4553.6 175 96.072.6053.1 196.051.4053.2 144 96.052.5053.9 148 96.061.4553.6 174 96.072.6053.1 196.051.4053.2 144 96.052.5053.9 148 96.061.6053.6 177 96.072.6053.1 196.051.4053.6 144 99.052.6053.1 149 96.061.6053.6 177 96.072.6053.1 196.051.4053.6 144 96.052.6053.1 149 96.061.6053.6 176 96.072.6153.0 196.051.4153.0 144 96.052.6053.1 149 96.061.6053.6 176 96.072.6153.0 196.051.4153.1 144 96.052.6053.1 149 96.062.4053.6 176 96.072.6153.0 196.051.4153.1 144 96.052.6053.1 149 96.062.6053.6 176 96.072.6553.0 196.051.4153.1 144 96.052.6053.1 149 96.062.6053.6 176 96.072.6253.0 196.051.4153.1 144 96.052.6053.9 149 96.062.6153.6 176 96.072.6253.0 196.051.4153.1 144 96.052.6053.9 149 96.062.6053.6 177 96.072.6253.0 196.051.4153.1 144 96.052.6053.9 149 96.062.	96.045.6153.0	131	96.052.4153.0	144	96.054.6253.6	153	96.071.6253.6	188
96.046.6153.0 131 96.052.4153.9 144 96.055.6153.0 151 96.072.4053.1 196.046.6153.1 131 96.052.4154.3 166 96.055.6153.1 151 96.072.4053.6 196.050.0153.1 162 96.052.4551.4 146 96.055.6153.6 151 96.072.4053.9 151 96.050.0153.1 218 96.052.4553.0 146 96.055.6153.9 151 96.072.4153.0 196.050.1153.1 218 96.052.4553.2 146 96.056.6151.4 151 96.072.4153.1 196.052.4553.1 162 96.052.4553.2 146 96.056.6151.4 151 96.072.4153.1 196.050.2153.1 218 96.052.4553.6 146 96.056.6153.0 151 96.072.4153.6 196.050.3153.1 218 96.052.4553.9 146 96.056.6153.1 151 96.072.4153.9 196.050.4153.1 218 96.052.4553.9 146 96.056.6153.6 151 96.072.4553.0 196.050.5153.1 218 96.052.4553.3 166 96.056.6153.6 151 96.072.4553.0 196.050.5153.1 218 96.052.5051.4 148 96.056.6153.9 151 96.072.4553.1 196.050.6153.1 218 96.052.5051.4 148 96.056.6153.9 151 96.072.4553.1 196.050.6153.1 218 96.052.5051.4 148 96.061.4053.6 172 96.072.4553.6 196.050.6153.1 144 96.052.5051.4 148 96.061.4053.6 172 96.072.4553.6 196.051.4053.1 144 96.052.5053.1 148 96.061.4553.6 175 96.072.6053.0 196.051.4053.1 144 96.052.5053.1 148 96.061.4553.6 175 96.072.6053.0 196.051.4053.2 144 96.052.5053.9 148 96.061.4553.6 175 96.072.6053.0 196.051.4053.2 144 96.052.5053.9 148 96.061.6053.6 177 96.072.6053.0 196.051.4053.2 144 96.052.5053.9 148 96.061.6053.6 177 96.072.6053.0 196.051.4053.2 144 96.052.5053.0 149 96.061.6053.6 177 96.072.6053.9 196.051.4053.0 144 96.052.5053.1 149 96.061.6053.6 177 96.072.6053.9 196.051.4053.0 144 96.052.6053.0 149 96.061.6053.6 177 96.072.6053.9 196.051.4053.0 144 96.052.6053.0 149 96.061.6053.6 177 96.072.6053.9 149 96.051.4153.1 144 96.052.6053.0 149 96.061.6053.6 177 96.072.6053.9 196.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.1 196.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.0 196.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.1 196.051.4153.1 144 96.052.6053.9 149 96.062.4053.6 177 96.072.6253.0 196.051.4153.1 144 96.052.6053.9 149 96.062.4053.6 174 96.072.6253.0 196.051.4153.1 144 96.052.6053.9 149 96.	96.045.6153.1	131	96.052.4153.1	144	96.054.6253.9	153	96.071.6253.9	188
96.046.6153.1 131 96.052.4154.3 166 96.055.6153.1 151 96.072.4053.6 196.050.0153.1 162 96.052.4551.4 146 96.055.6153.6 151 96.072.4053.9 196.050.0153.1 218 96.052.4553.0 146 96.055.6153.9 151 96.072.4153.0 196.050.1153.1 218 96.052.4553.1 146 96.056.6151.4 151 96.072.4153.1 162 96.052.4553.2 146 96.056.6151.4 151 96.072.4153.1 162 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.6 196.050.3153.1 218 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.9 196.050.3153.1 218 96.052.4553.6 146 96.056.6153.0 151 96.072.4153.9 196.050.4153.1 218 96.052.4553.6 146 96.056.6153.0 151 96.072.4153.9 196.050.5153.1 218 96.052.4553.9 146 96.056.6153.6 151 96.072.4553.0 196.050.5153.1 218 96.052.4553.3 166 96.056.6153.6 151 96.072.4553.0 196.050.6153.1 218 96.052.5051.4 148 96.061.4053.6 172 96.072.4553.1 196.050.6153.1 218 96.052.5053.0 148 96.061.4053.6 172 96.072.4553.6 196.050.7153.1 220 96.052.5053.0 148 96.061.4053.6 172 96.072.4553.6 196.051.4053.1 144 96.052.5053.0 148 96.061.4253.6 175 96.072.6053.0 198.051.4053.1 144 96.052.5053.6 148 96.061.4253.6 175 96.072.6053.1 196.051.4053.1 144 96.052.5053.6 148 96.061.4553.6 175 96.072.6053.1 199.051.4053.2 144 96.052.5053.4 149 96.052.5053.6 177 96.072.6053.9 149 96.051.4053.1 144 96.052.6053.0 149 96.061.6053.6 177 96.072.6053.0 199.051.4053.9 144 96.052.6053.0 149 96.061.6053.6 170 96.072.6153.0 199.051.4153.1 144 96.052.6053.0 149 96.061.6253.6 176 96.072.6153.0 199.051.4153.1 144 96.052.6053.0 149 96.061.6253.6 176 96.072.6153.0 199.051.4153.1 144 96.052.6053.0 149 96.062.4153.6 172 96.072.6153.0 199.051.4153.1 144 96.052.6053.0 149 96.062.4153.6 172 96.072.6153.0 199.051.4153.1 144 96.052.6053.0 149 96.062.4153.6 177 96.072.6153.0 199.051.4153.1 144 96.052.6053.0 149 96.062.4153.6 170 96.072.6153.0 199.051.4153.1 144 96.052.6053.0 149 96.062.4153.6 177 96.072.6153.0 199.051.4153.1 144 96.052.6053.0 149 96.062.4153.6 177 96.072.6153.0 199.051.4153.1 144 96.052.6053.0 149 96.062.6153.6 177 96.072.6253.0 199.051.4153.0 144 96.052.6053.0 149 96.062.6153.6 177 96.072.6253.0 199.	96.046.6151.4	131	96.052.4153.6	144	96.055.6151.4	151	96.072.4053.0	184
96.050.0153.1 162 96.052.4551.4 146 96.055.6153.6 151 96.072.4053.9 1 96.050.0153.1 218 96.052.4553.0 146 96.055.6153.9 151 96.072.4153.0 1 96.050.1153.1 218 96.052.4553.1 146 96.056.6151.4 151 96.072.4153.1 1 96.050.2153.1 162 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.6 1 96.050.3153.1 218 96.052.4553.6 146 96.056.6153.0 151 96.072.4153.9 1 96.050.4153.1 218 96.052.4553.9 146 96.056.6153.1 151 96.072.4553.0 1 96.050.5153.1 218 96.052.4553.9 146 96.056.6153.6 151 96.072.4553.0 1 96.050.5153.1 218 96.052.4553.9 146 96.056.6153.6 151 96.072.4553.0 1 96.050.5153.1 218 96.052.4554.3 166 96.056.6153.6 151 96.072.4553.1 1 96.050.6153.1 218 96.052.5051.4 148 96.061.4053.6 172 96.072.4553.6 1 96.050.7153.1 220 96.052.5053.0 148 96.061.4053.6 172 96.072.4553.6 1 96.051.4051.4 144 96.052.5053.1 148 96.061.4253.6 175 96.072.6053.0 1 96.051.4053.0 144 96.052.5053.1 148 96.061.4553.6 175 96.072.6053.0 1 96.051.4053.1 144 96.052.5053.1 148 96.061.4553.6 175 96.072.6053.1 1 96.051.4053.1 144 96.052.5053.0 148 96.061.4553.6 175 96.072.6053.1 1 96.051.4053.1 144 96.052.5053.0 149 96.061.6053.6 177 96.072.6053.1 1 96.051.4053.2 144 96.052.6053.0 149 96.061.6053.6 177 96.072.6053.1 1 96.051.4053.9 144 96.052.6053.0 149 96.061.6053.6 172 96.072.6153.1 1 96.051.4053.9 144 96.052.6053.0 149 96.061.6053.6 172 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.0 149 96.061.6053.6 176 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.6053.6 170 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.1 149 96.062.6053.6 170 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.1 149 96.062.6053.6 170 96.072.6253.0 1 96.051.4153.1 144 96.052.6053.0 149 96.062.6053.6 170 96.072.6253.0 1 96.051.4153.1 144 96.052.6053.1 150 96.062.6053.6 170 96.072.6253.0 1	96.046.6153.0	131	96.052.4153.9	144	96.055.6153.0	151	96.072.4053.1	184
96.050.0153.1 218 96.052.4553.0 146 96.055.6153.9 151 96.072.4153.0 196.050.1153.1 218 96.052.4553.1 146 96.056.6151.4 151 96.072.4153.1 196.050.2153.1 162 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.6 196.050.3153.1 218 96.052.4553.6 146 96.056.6153.0 151 96.072.4153.9 196.050.4153.1 218 96.052.4553.9 146 96.056.6153.1 151 96.072.4153.0 196.050.5153.1 218 96.052.4553.9 146 96.056.6153.6 151 96.072.4553.0 196.050.6153.1 218 96.052.4554.3 166 96.056.6153.9 151 96.072.4553.0 196.050.6153.1 218 96.052.5051.4 148 96.061.4053.6 172 96.072.4553.1 196.050.6153.1 218 96.052.5053.0 148 96.061.4053.6 172 96.072.4553.6 196.050.7153.1 220 96.052.5053.0 148 96.061.4053.6 172 96.072.4553.9 196.051.4051.4 144 96.052.5053.1 148 96.061.4053.6 172 96.072.4553.9 196.051.4051.4 144 96.052.5053.1 148 96.061.4253.6 175 96.072.6053.0 196.051.4053.0 144 96.052.5053.1 148 96.061.4553.6 175 96.072.6053.0 196.051.4053.1 144 96.052.5053.9 148 96.061.4553.6 175 96.072.6053.0 196.051.4053.2 144 96.052.5053.9 148 96.061.4553.6 174 96.072.6053.0 196.051.4053.2 144 96.052.5053.1 149 96.061.6053.6 177 96.072.6053.0 196.051.4053.9 144 996.052.6053.1 149 96.061.6053.6 177 96.072.6053.0 196.051.4053.9 144 996.052.6053.1 149 96.061.6053.6 172 96.072.6153.0 196.051.4153.1 144 96.052.6053.1 149 96.062.4053.6 172 96.072.6153.1 196.051.4153.1 144 96.052.6053.1 149 96.062.4053.6 172 96.072.6153.1 196.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.1 196.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.1 196.051.4153.1 144 96.052.6053.9 149 96.062.4053.6 172 96.072.6153.1 196.051.4153.6 144 96.052.6053.9 149 96.062.4053.6 172 96.072.6153.1 196.051.4153.1 144 96.052.6053.9 149 96.062.4053.6 172 96.072.6153.0 196.051.4153.1 144 96.052.6053.9 149 96.062.4053.6 172 96.072.6153.0 196.051.4153.1 144 96.052.6053.9 149 96.062.4053.6 174 96.072.6253.1 196.051.4153.1 144 96.052.6053.9 149 96.062.6053.6 174 96.072.6253.1 196.051.4153.1 144 96.052.6053.1 149 96.062.6053.6 177 96.072.6253.1 196.051.4153.1 144 96.052.6053.1 149 96.062.	96.046.6153.1	131	96.052.4154.3	166	96.055.6153.1	151	96.072.4053.6	184
96.050.1153.1 218 96.052.4553.1 146 96.056.6151.4 151 96.072.4153.1 1 96.050.2153.1 162 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.6 1 96.050.3153.1 218 96.052.4553.6 146 96.056.6153.1 151 96.072.4153.9 1 96.050.4153.1 218 96.052.4553.9 146 96.056.6153.6 151 96.072.4553.0 1 96.050.5153.1 218 96.052.4554.3 166 96.056.6153.6 151 96.072.4553.1 1 96.050.6153.1 218 96.052.5051.4 148 96.056.6153.9 151 96.072.4553.1 1 96.050.6153.1 218 96.052.5053.0 148 96.061.4053.6 172 96.072.4553.6 1 96.050.7153.1 220 96.052.5053.0 148 96.061.4153.6 172 96.072.4553.9 1 96.051.4053.1 144 96.052.5053.1 148 96.061.4253.6 175 96.072.6053.0 1 96.051.4053.0 144 96.052.5053.6 148 96.061.4253.6 175 96.072.6053.1 1 96.051.4053.1 144 96.052.5053.9 148 96.061.4553.6 174 96.072.6053.1 1 96.051.4053.2 144 96.052.5053.4 167 96.061.6053.6 177 96.072.6053.9 1 96.051.4053.9 144 96.052.5054.3 167 96.061.6053.6 177 96.072.6053.9 1 96.051.4053.9 144 96.052.5053.0 149 96.061.6153.6 178 96.072.6153.0 1 96.051.4053.9 144 96.052.6053.1 149 96.061.6253.6 176 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.1 149 96.061.6253.6 176 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.1 149 96.061.6253.6 176 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.1 149 96.062.4053.6 172 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.6053.6 176 96.072.6253.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.6053.6 174 96.072.6253.1 1 96.051.4153.1 144 96.052.6053.1 149 96.062.6053.6 174 96.072.6253.1 1 96.051.4153.1 144 96.052.6053.0 149 96.062.6053.6 174 96.072.6253.1 1 96.051.4153.1 144 96.052.6053.1 150 96.062.6053.6 176 96.072.6253.1 1	96.050.0153.1	162	96.052.4551.4	146	96.055.6153.6	151	96.072.4053.9	184
96.050.2153.1 162 96.052.4553.2 146 96.056.6153.0 151 96.072.4153.6 196.050.3153.1 218 96.052.4553.6 146 96.056.6153.1 151 96.072.4153.9 160.050.4153.1 218 96.052.4553.9 146 96.056.6153.6 151 96.072.4553.0 160.050.6153.1 218 96.052.4553.9 146 96.056.6153.6 151 96.072.4553.0 160.050.6153.1 218 96.052.4554.3 166 96.056.6153.9 151 96.072.4553.1 160.050.6153.1 218 96.052.5051.4 148 96.061.4053.6 172 96.072.4553.6 160.050.6153.1 220 96.052.5053.0 148 96.061.4053.6 172 96.072.4553.9 160.051.4051.4 144 96.052.5053.1 148 96.061.4253.6 175 96.072.6053.0 144 96.052.5053.1 148 96.061.4253.6 175 96.072.6053.0 144 96.052.5053.6 148 96.061.4253.6 175 96.072.6053.1 149 96.051.4053.1 144 96.052.5053.9 148 96.061.4553.6 174 96.072.6053.6 174 96.072.6053.6 174 96.072.6053.0 174 96.051.4053.2 144 96.052.5054.3 167 96.061.6053.6 177 96.072.6053.9 160.051.4053.9 144 96.052.6053.1 149 96.061.6053.6 178 96.072.6053.9 179 96.051.4053.9 144 96.052.6053.1 149 96.061.6153.6 178 96.072.6153.0 179 96.051.4053.9 144 96.052.6053.1 149 96.061.6253.6 176 96.072.6153.0 179 96.051.4153.0 144 96.052.6053.1 149 96.062.4053.6 172 96.072.6153.1 199.051.4153.0 144 96.052.6053.1 149 96.062.4053.6 172 96.072.6153.1 199.051.4153.0 144 96.052.6053.1 149 96.062.4053.6 172 96.072.6153.0 199.051.4153.0 144 96.052.6053.1 149 96.062.4053.6 172 96.072.6153.0 199.051.4153.0 144 96.052.6053.1 149 96.062.4053.6 172 96.072.6153.0 199.051.4153.0 144 96.052.6053.1 149 96.062.4053.6 172 96.072.6153.0 199.051.4153.0 144 96.052.6053.1 149 96.062.4053.6 172 96.072.6153.0 199.051.4153.0 144 96.052.6053.0 149 96.062.4053.6 172 96.072.6153.0 199.051.4153.6 174 96.072.6253.0 174 96.072.6253.0 174 96.072.6253.0 174 96.051.4153.0 144 96.052.6053.1 149 96.062.4053.6 174 96.072.6253.0 174 96.072.6253.0 174 96.072.6253.0 174 96.072.6253.0 174 96.072.6253.0 174 96.072.6253.0 174 96.051.4153.0 174 96.052.6053.1 174 96.052.6053.1 174 96.052.6053.1 174 96.052.6053.1 174 96.052.6053.1 174 96.052.6053.1 174 96.052.6053.1 174 96.052.6053.1 174 96.052.6053.1 174 96.052.6053.1 174 96.052	96.050.0153.1	218	96.052.4553.0	146	96.055.6153.9	151	96.072.4153.0	184
96.050,3153.1 218 96.052,4553.6 146 96.056,6153.1 151 96.072,4153.9 1 96.050,4153.1 218 96.052,4553.9 146 96.056,6153.6 151 96.072,4553.0 1 96.050,5153.1 218 96.052,4554.3 166 96.056,6153.9 151 96.072,4553.1 1 96.050,6153.1 218 96.052,5051.4 148 96.061,4053.6 172 96.072,4553.6 1 96.050,7153.1 220 96.052,5053.0 148 96.061,4053.6 172 96.072,4553.9 1 96.051,4051.4 144 96.052,5053.1 148 96.061,4253.6 175 96.072,6053.0 148 96.051,4053.0 144 96.052,5053.6 148 96.061,4253.6 175 96.072,6053.1 149 96.051,4053.1 144 96.052,5053.9 148 96.061,4253.6 174 96.072,6053.6 174 96.051,4053.2 144 96.052,5054.3 167 96.061,6053.6 177 96.072,6053.9 149 96.051,4053.9 144 96.052,6053.0 149 96.061,6153.6 178 96.072,6153.0 149 96.051,4053.9 144 96.052,6053.1 149 96.062,4053.6 172 96.072,6153.1 149 96.051,4153.0 144 96.052,6053.1 149 96.062,4053.6 172 96.072,6153.6 179 96.051,4153.1 144 96.052,6053.1 149 96.062,4053.6 172 96.072,6153.1 149 96.051,4153.0 144 96.052,6053.1 149 96.062,4053.6 172 96.072,6153.1 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 172 96.072,6153.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 172 96.072,6153.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 172 96.072,6153.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 170 96.072,6253.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 170 96.072,6253.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 170 96.072,6253.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 170 96.072,6253.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 170 96.072,6253.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,6053.6 170 96.072,6253.0 149 96.051,4153.1 144 96.052,6053.1 150 96.062,6053.6 170 96.072,6253.1 149 96.051,4153.9 144 96.052,6153.1 150 96.062,6253.6 176 96.072,6253.9 149	96.050.1153.1	218	96.052.4553.1	146	96.056.6151.4	151	96.072.4153.1	184
96.050,3153.1 218 96.052,4553.6 146 96.056,6153.1 151 96.072,4153.9 1 96.050,4153.1 218 96.052,4553.9 146 96.056,6153.6 151 96.072,4553.0 1 96.050,5153.1 218 96.052,4554.3 166 96.056,6153.9 151 96.072,4553.1 1 96.050,6153.1 218 96.052,5051.4 148 96.061,4053.6 172 96.072,4553.6 1 96.050,7153.1 220 96.052,5053.0 148 96.061,4053.6 172 96.072,4553.9 1 96.051,4051.4 144 96.052,5053.1 148 96.061,4253.6 175 96.072,6053.0 148 96.051,4053.0 144 96.052,5053.6 148 96.061,4253.6 175 96.072,6053.1 149 96.051,4053.1 144 96.052,5053.9 148 96.061,4253.6 174 96.072,6053.6 174 96.051,4053.2 144 96.052,5054.3 167 96.061,6053.6 177 96.072,6053.9 149 96.051,4053.9 144 96.052,6053.0 149 96.061,6153.6 178 96.072,6153.0 149 96.051,4053.9 144 96.052,6053.1 149 96.062,4053.6 172 96.072,6153.1 149 96.051,4153.0 144 96.052,6053.1 149 96.062,4053.6 172 96.072,6153.6 179 96.051,4153.1 144 96.052,6053.1 149 96.062,4053.6 172 96.072,6153.1 149 96.051,4153.0 144 96.052,6053.1 149 96.062,4053.6 172 96.072,6153.1 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 172 96.072,6153.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 172 96.072,6153.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 172 96.072,6153.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 170 96.072,6253.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 170 96.072,6253.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 170 96.072,6253.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 170 96.072,6253.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,4053.6 170 96.072,6253.0 149 96.051,4153.1 144 96.052,6053.9 149 96.062,6053.6 170 96.072,6253.0 149 96.051,4153.1 144 96.052,6053.1 150 96.062,6053.6 170 96.072,6253.1 149 96.051,4153.9 144 96.052,6153.1 150 96.062,6253.6 176 96.072,6253.9 149								184
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96.050.5153.1         218         96.052.4554.3         166         96.056.6153.9         151         96.072.4553.1         1           96.050.6153.1         218         96.052.5051.4         148         96.061.4053.6         172         96.072.4553.6         1           96.050.7153.1         220         96.052.5053.0         148         96.061.4153.6         172         96.072.4553.9         1           96.051.4051.4         144         96.052.5053.1         148         96.061.4253.6         175         96.072.6053.0         1           96.051.4053.0         144         96.052.5053.6         148         96.061.4353.6         175         96.072.6053.1         1           96.051.4053.1         144         96.052.5053.9         148         96.061.4553.6         174         96.072.6053.1         1           96.051.4053.2         144         96.052.5054.3         167         96.061.6053.6         177         96.072.6053.9         1           96.051.4053.6         144         96.052.6053.0         149         96.061.6253.6         178         96.072.6153.0         1           96.051.4153.0         144         96.052.6053.1         149         96.062.4053.6         172         96.072.6153.6         1 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>186</td></t<>								186
96.050.6153.1         218         96.052.5051.4         148         96.061.4053.6         172         96.072.4553.6         196.050.7153.1         220         96.052.5053.0         148         96.061.4153.6         172         96.072.4553.9         1           96.051.4051.4         144         96.052.5053.1         148         96.061.4253.6         175         96.072.6053.0         1           96.051.4053.0         144         96.052.5053.6         148         96.061.4353.6         175         96.072.6053.1         1           96.051.4053.1         144         96.052.5053.9         148         96.061.4553.6         174         96.072.6053.6         1           96.051.4053.2         144         96.052.5054.3         167         96.061.6053.6         177         96.072.6053.9         1           96.051.4053.6         144         96.052.6051.4         149         96.061.6053.6         177         96.072.6053.9         1           96.051.4053.9         144         96.052.6053.0         149         96.061.6153.6         178         96.072.6153.1         1           96.051.4153.0         144         96.052.6053.1         149         96.062.4053.6         172         96.072.6153.6         1           96.051.4153.1         144<								186
96.050.7153.1         220         96.052.5053.0         148         96.061.4153.6         172         96.072.4553.9         1           96.051.4051.4         144         96.052.5053.1         148         96.061.4253.6         175         96.072.6053.0         1           96.051.4053.0         144         96.052.5053.6         148         96.061.4353.6         175         96.072.6053.1         1           96.051.4053.1         144         96.052.5053.9         148         96.061.4553.6         174         96.072.6053.6         1           96.051.4053.2         144         96.052.5054.3         167         96.061.6053.6         177         96.072.6053.9         1           96.051.4053.6         144         96.052.6051.4         149         96.061.6053.6         177         96.072.6053.9         1           96.051.4053.9         144         96.052.6053.0         149         96.061.6153.6         178         96.072.6153.0         1           96.051.4151.4         144         96.052.6053.1         149         96.062.4053.6         172         96.072.6153.6         1           96.051.4153.0         144         96.052.6053.6         149         96.062.4553.6         172         96.072.6153.9         1 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>186</td></t<>								186
96.051.4051.4         144         96.052.5053.1         148         96.061.4253.6         175         96.072.6053.0         1           96.051.4053.0         144         96.052.5053.6         148         96.061.4353.6         175         96.072.6053.1         1           96.051.4053.1         144         96.052.5053.9         148         96.061.4553.6         174         96.072.6053.6         1           96.051.4053.2         144         96.052.5054.3         167         96.061.6053.6         177         96.072.6053.9         1           96.051.4053.6         144         96.052.6051.4         149         96.061.6153.6         178         96.072.6153.0         1           96.051.4053.9         144         96.052.6053.0         149         96.061.6253.6         176         96.072.6153.1         1           96.051.4153.4         144         96.052.6053.1         149         96.062.4053.6         172         96.072.6153.1         1           96.051.4153.0         144         96.052.6053.6         149         96.062.4053.6         172         96.072.6153.9         1           96.051.4153.1         144         96.052.6053.9         149         96.062.4553.6         174         96.072.6253.0         1 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>186</td></t<>								186
96.051.4053.0       144       96.052.5053.6       148       96.061.4353.6       175       96.072.6053.1       1         96.051.4053.1       144       96.052.5053.9       148       96.061.4553.6       174       96.072.6053.6       1         96.051.4053.2       144       96.052.5054.3       167       96.061.6053.6       177       96.072.6053.9       1         96.051.4053.6       144       96.052.6051.4       149       96.061.6153.6       178       96.072.6153.0       1         96.051.4053.9       144       96.052.6053.0       149       96.061.6253.6       176       96.072.6153.1       1         96.051.4153.1       144       96.052.6053.1       149       96.062.4053.6       172       96.072.6153.6       1         96.051.4153.0       144       96.052.6053.6       149       96.062.4153.6       172       96.072.6153.9       1         96.051.4153.1       144       96.052.6053.9       149       96.062.4553.6       174       96.072.6253.0       1         96.051.4153.6       144       96.052.6153.1       150       96.062.6053.6       177       96.072.6253.1       1         96.051.4153.9       144       96.052.6153.0       150       96.062.6153.6       178								189
96.051.4053.1         144         96.052.5053.9         148         96.061.4553.6         174         96.072.6053.6         1           96.051.4053.2         144         96.052.5054.3         167         96.061.6053.6         177         96.072.6053.9         1           96.051.4053.6         144         96.052.6051.4         149         96.061.6153.6         178         96.072.6153.0         1           96.051.4053.9         144         96.052.6053.0         149         96.061.6253.6         176         96.072.6153.1         1           96.051.4151.4         144         96.052.6053.1         149         96.062.4053.6         172         96.072.6153.6         1           96.051.4153.0         144         96.052.6053.6         149         96.062.4053.6         172         96.072.6153.9         1           96.051.4153.1         144         96.052.6053.9         149         96.062.4553.6         172         96.072.6253.0         1           96.051.4153.6         144         96.052.6153.1         150         96.062.6053.6         177         96.072.6253.1         1           96.051.4153.9         144         96.052.6153.0         150         96.062.6153.6         178         96.072.6253.6         1 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>189</td></t<>								189
96.051.4053.2       144       96.052.5054.3       167       96.061.6053.6       177       96.072.6053.9       1         96.051.4053.6       144       96.052.6051.4       149       96.061.6153.6       178       96.072.6153.0       1         96.051.4053.9       144       96.052.6053.0       149       96.061.6253.6       176       96.072.6153.1       1         96.051.4151.4       144       96.052.6053.1       149       96.062.4053.6       172       96.072.6153.6       1         96.051.4153.0       144       96.052.6053.6       149       96.062.4153.6       172       96.072.6153.9       1         96.051.4153.1       144       96.052.6053.9       149       96.062.4553.6       174       96.072.6253.0       1         96.051.4153.6       144       96.052.6153.4       150       96.062.6053.6       177       96.072.6253.1       1         96.051.4153.9       144       96.052.6153.0       150       96.062.6153.6       178       96.072.6253.6       1         96.051.4154.3       166       96.052.6153.1       150       96.062.6253.6       176       96.072.6253.9       1								189
96.051.4053.6       144       96.052.6051.4       149       96.061.6153.6       178       96.072.6153.0       1         96.051.4053.9       144       96.052.6053.0       149       96.061.6253.6       176       96.072.6153.1       1         96.051.4151.4       144       96.052.6053.1       149       96.062.4053.6       172       96.072.6153.6       1         96.051.4153.0       144       96.052.6053.6       149       96.062.4153.6       172       96.072.6153.9       1         96.051.4153.1       144       96.052.6053.9       149       96.062.4553.6       174       96.072.6253.0       1         96.051.4153.6       144       96.052.6151.4       150       96.062.6053.6       177       96.072.6253.1       1         96.051.4153.9       144       96.052.6153.0       150       96.062.6153.6       178       96.072.6253.6       1         96.051.4154.3       166       96.052.6153.1       150       96.062.6253.6       176       96.072.6253.9       1								189
96.051.4053.9       144       96.052.6053.0       149       96.061.6253.6       176       96.072.6153.1       1         96.051.4151.4       144       96.052.6053.1       149       96.062.4053.6       172       96.072.6153.6       1         96.051.4153.0       144       96.052.6053.6       149       96.062.4153.6       172       96.072.6153.9       1         96.051.4153.1       144       96.052.6053.9       149       96.062.4553.6       174       96.072.6253.0       1         96.051.4153.6       144       96.052.6151.4       150       96.062.6053.6       177       96.072.6253.1       1         96.051.4153.9       144       96.052.6153.0       150       96.062.6153.6       178       96.072.6253.6       1         96.051.4154.3       166       96.052.6153.1       150       96.062.6253.6       176       96.072.6253.9       1								
96.051.4151.4       144       96.052.6053.1       149       96.062.4053.6       172       96.072.6153.6       1         96.051.4153.0       144       96.052.6053.6       149       96.062.4153.6       172       96.072.6153.9       1         96.051.4153.1       144       96.052.6053.9       149       96.062.4553.6       174       96.072.6253.0       1         96.051.4153.6       144       96.052.6151.4       150       96.062.6053.6       177       96.072.6253.1       1         96.051.4153.9       144       96.052.6153.0       150       96.062.6153.6       178       96.072.6253.6       1         96.051.4154.3       166       96.052.6153.1       150       96.062.6253.6       176       96.072.6253.9       1								190
96.051.4153.0     144     96.052.6053.6     149     96.062.4153.6     172     96.072.6153.9     1       96.051.4153.1     144     96.052.6053.9     149     96.062.4553.6     174     96.072.6253.0     1       96.051.4153.6     144     96.052.6151.4     150     96.062.6053.6     177     96.072.6253.1     1       96.051.4153.9     144     96.052.6153.0     150     96.062.6153.6     178     96.072.6253.6     1       96.051.4154.3     166     96.052.6153.1     150     96.062.6253.6     176     96.072.6253.9     1								190
96.051.4153.1     144     96.052.6053.9     149     96.062.4553.6     174     96.072.6253.0     1       96.051.4153.6     144     96.052.6151.4     150     96.062.6053.6     177     96.072.6253.1     1       96.051.4153.9     144     96.052.6153.0     150     96.062.6153.6     178     96.072.6253.6     1       96.051.4154.3     166     96.052.6153.1     150     96.062.6253.6     176     96.072.6253.9     1								190
96.051.4153.6     144     96.052.6151.4     150     96.062.6053.6     177     96.072.6253.1     1       96.051.4153.9     144     96.052.6153.0     150     96.062.6153.6     178     96.072.6253.6     1       96.051.4154.3     166     96.052.6153.1     150     96.062.6253.6     176     96.072.6253.9     1								190
96.051.4153.9     144     96.052.6153.0     150     96.062.6153.6     178     96.072.6253.6       96.051.4154.3     166     96.052.6153.1     150     96.062.6253.6     176     96.072.6253.9								188
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00.001.7201.7 147 00.002.0100.0 100 00.000.4000.0 170 00.075.4000.0	96.051.4251.4	147	96.052.6153.6	150	96.063.4053.6	173	96.073.4053.0	185

073.4053.1	185	96.133.0053.1	99	96.151.0053.6	144	96.153.0153.1
073.4053.6	185	96.133.0153.0	99	96.151.0053.9	144	96.153.0153.6
073.4053.9	185	96.133.0153.1	99	96.151.0151.4	144	96.153.0153.9
073.4153.0	185	96.133.2053.0	106	96.151.0153.0	144	96.153.2051.4
073.4153.1	185	96.133.2053.1	106	96.151.0153.1	144	96.153.2053.0
073.4153.6	185	96.133.2253.0	107	96.151.0153.6	144	96.153.2053.1
073.4153.9	185	96.133.2253.1	107	96.151.0153.9	144	96.153.2053.6
073.6053.0	192	96.134.0053.0	99	96.151.0551.4	146	96.153.2053.9
073.6053.1	192	96.134.0053.1	99	96.151.0553.0	146	96.153.2251.4
073.6053.6	192	96.134.0153.0	99	96.151.0553.1	146	96.153.2253.0
073.6053.9	192	96.134.0153.1	99	96.151.0553.6	146	96.153.2253.1
073.6253.0	193	96.134.2053.0	106	96.151.0553.9	146	96.153.2253.6
073.6253.1	193	96.134.2053.1	106	96.151.1051.4	148	96.153.2253.9
073.6253.6	193	96.134.2253.0	107	96.151.1053.0	148	96.154.0051.4
073.6253.9	193	96.134.2253.1	107	96.151.1053.1	148	96.154.0053.0
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074.4053.0 074.4053.1	185 185	96.135.2153.0	105	96.151.1053.2	148 148	96.154.0053.1
		96.135.2153.1		96.151.1053.6		96.154.0053.6 96.154.0053.9
74.4053.6	185	96.136.2153.0	105	96.151.1053.9	148	
74.4053.9	185	96.136.2153.1	105	96.151.2051.4	149	96.154.0151.4
074.4153.0	185	96.141.0053.0	124	96.151.2053.0	149	96.154.0153.0
074.4153.1	185	96.141.0053.1	124	96.151.2053.1	149	96.154.0153.1
074.4153.6	185	96.141.0153.0	124	96.151.2053.6	149	96.154.0153.6
074.4153.9	185	96.141.0153.1	124	96.151.2053.9	149	96.154.0153.9
74.6053.0	192	96.141.0553.0	126	96.151.2151.4	150	96.154.2051.4
74.6053.1	192	96.141.0553.1	126	96.151.2153.0	150	96.154.2053.0
074.6053.6	192	96.141.1053.0	128	96.151.2153.1	150	96.154.2053.1
74.6053.9	192	96.141.1053.1	128	96.151.2153.6	150	96.154.2053.6
4.6253.0	193	96.141.2053.0	129	96.151.2153.9	150	96.154.2053.9
4.6253.1	193	96.141.2053.1	129	96.152.0051.4	144	96.154.2251.4
4.6253.6	193	96.141.2153.0	130	96.152.0053.0	144	96.154.2253.0
74.6253.9	193	96.141.2153.1	130	96.152.0053.1	144	96.154.2253.1
75.6153.0	191	96.142.0053.0	124	96.152.0053.6	144	96.154.2253.6
75.6153.1	191	96.142.0053.1	124	96.152.0053.9	144	96.154.2253.9
75.6153.6	191	96.142.0153.0	124	96.152.0151.4	144	96.155.2151.4
)75.6153.9	191	96.142.0153.1	124	96.152.0153.0	144	96.155.2153.0
76.6153.0	191	96.142.0553.0	126	96.152.0153.1	144	96.155.2153.1
76.6153.1	191	96.142.0553.1	126	96.152.0153.6	144	96.155.2153.6
76.6153.6	191	96.142.1053.0	128	96.152.0153.9	144	96.155.2153.9
6.6153.9	191	96.142.1053.1	128	96.152.0551.4	146	96.156.2151.4
1.0053.0	98	96.142.2053.0	129	96.152.0553.0	146	96.156.2153.0
31.0053.1	98	96.142.2053.1	129	96.152.0553.1	146	96.156.2153.1
31.0153.0	98	96.142.2153.0	130	96.152.0553.6	146	96.156.2153.6
31.0153.1	98	96.142.2153.1	130	96.152.0553.9	146	96.156.2153.9
31.1053.0	102	96.143.0053.0	125	96.152.1051.4	148	96.161.0053.6
31.1053.1	102	96.143.0053.1	125	96.152.1053.0	148	96.161.0053.6
31.1055.7	102	96.143.0153.0	125	96.152.1053.1	148	96.161.0153.6
31.2053.0	103	96.143.0153.1	125	96.152.1053.2	148	96.161.0553.6
31.2053.1	103	96.143.2053.0	132	96.152.1053.6	148	96.161.2053.6
31.2153.0	104	96.143.2053.1	132	96.152.1053.9	148	96.161.2153.6
31.2153.1	104	96.143.2253.0	133	96.152.2051.4	149	96.161.2253.6
31.4553.0	100	96.143.2253.1	133	96.152.2053.0	149	96.162.0053.6
31.4553.1	100	96.144.0053.0	125	96.152.2053.1	149	96.162.0153.6
32.0053.0	98	96.144.0053.1	125	96.152.2053.6	149	96.162.0553.6
2.0053.1	98	96.144.0153.0	125	96.152.2053.9	149	96.162.2053.6
2.0153.0	98	96.144.0153.1	125	96.152.2151.4	150	96.162.2153.6
2.0153.1	98	96.144.2053.0	132	96.152.2153.0	150	96.162.2253.6
2.1053.0	102	96.144.2053.1	132	96.152.2153.1	150	96.163.0153.6
32.1053.1	102	96.144.2253.0	133	96.152.2153.6	150	96.163.2053.6
32.1055.7	102	96.144.2253.1	133	96.152.2153.9	150	96.163.2253.6
2.2053.0	103	96.145.2153.0	131	96.153.0051.4	145	96.164.0053.6
32.2053.1	103	96.145.2153.1	131	96.153.0053.0	145	96.164.0153.6
32.2153.0	104	96.146.2153.0	131	96.153.0053.1	145	96.164.2053.6
32.2153.1	104	96.146.2153.1	131	96.153.0053.6	145	96.164.2253.6
132.4553.0	100	96.151.0051.4	144	96.153.0053.9	145	96.165.2153.6
32.4553.1	100	96.151.0053.0	144	96.153.0151.4	145	96.166.2153.6
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96.172.0553.9	186	96.222.1092.8	88	96.222.5032.4	86	96.223.1092.8	90
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96.172.2053.1	189	96.222.1097.8	88	96.222.5034.1	87	96.223.1097.8	90
96.172.2053.6	189	96.222.1098.4	89	96.222.5037.4	86	96.223.1098.4	91
96.172.2053.9	189	96.222.1098.8	89	96.222.5038.4	87	96.223.1098.8	91
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96.172.2153.1	190	96.222.2002.4	86	96.222.5092.8	88	96.223.2092.8	90
96.172.2153.6	190	96.222.2003.1	86	96.222.5097.4	88	96.223.2097.4	90
96.172.2153.9	190	96.222.2004.1	87	96.222.5097.8	88	96.223.2097.8	90
96.172.2253.0	188	96.222.2007.4	86	96.222.5098.4	89	96.223.2098.4	91
96.172.2253.1	188	96.222.2008.4	87	96.222.5098.8	89	96.223.2098.8	91
96.172.2253.6	188	96.222.2030.1	86	96.222.6000.1	86	96.223.3092.4	90
96.172.2253.9	188	96.222.2032.4	86	96.222.6002.4	86	96.223.3092.8	90
96.173.0053.0	185	96.222.2033.1	86	96.222.6003.1	86	96.223.3097.4	90
96.173.0053.1	185	96.222.2034.1	87	96.222.6004.1	87	96.223.3097.8	90
96.173.0053.6	185	96.222.2037.4	86	96.222.6007.4	86	96.223.3098.4	91
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96.173.0153.0	185	96.222.2092.4	88	96.222.6030.1	86	96.223.4092.4	90
96.173.0153.1	185	96.222.2092.8	88	96.222.6032.4	86	96.223.4092.8	90
96.173.0153.6	185	96.222.2097.4	88	96.222.6033.1	86	96.223.4097.4	90
96.173.0153.9	185	96.222.2097.8	88	96.222.6034.1	87	96.223.4097.8	90
96.173.2053.0	192	96.222.2098.4	89	96.222.6037.4	86	96.223.4098.4	91
96.173.2053.1	192	96.222.2098.8	89	96.222.6038.4	87	96.223.4098.8	91
96.173.2053.6	192	96.222.3000.1	86	96.222.6092.4	88	96.223.5092.4	90
96.173.2053.9	192	96.222.3002.4	86	96.222.6092.8	88	96.223.5092.8	90
96.173.2253.0	193	96.222.3003.1	86	96.222.6097.4	88	96.223.5097.4	90
96.173.2253.1	193	96.222.3004.1	87	96.222.6097.8	88	96.223.5097.8	90
96.173.2253.6	193	96.222.3007.4	86	96.222.6098.4	89	96.223.5098.4	91
96.173.2253.9	193	96.222.3008.4	87	96.222.6098.8	89	96.223.5098.8	91
96.174.0053.0	185	96.222.3030.1	86	96.222.7000.1	86	96.223.6092.4	90
96.174.0053.1	185	96.222.3032.4	86	96.222.7002.4	86	96.223.6092.8	90
96.174.0053.6	185	96.222.3033.1	86	96.222.7003.1	86	96.223.6097.4	90

223.6097.8         90         96.232.4004.1         109         96.232.8006.7         109         96.233.4           223.6098.4         91         96.232.4005.7         108         96.232.8010.9         108         96.233.4           223.6098.8         91         96.232.4010.9         108         96.232.8030.1         108         96.233.4           223.7092.4         90         96.232.4010.9         108         96.232.8031.7         108         96.233.4           223.7092.8         90         96.232.4030.1         108         96.232.8033.1         108         96.233.4           223.7097.4         90         96.232.4031.7         108         96.232.8034.1         109         96.233.5           223.7097.8         90         96.232.4033.1         108         96.232.8035.7         108         96.233.5           223.7098.4         91         96.232.4034.1         109         96.232.8036.7         109         96.233.5           223.7098.8         91         96.232.4036.7         108         96.232.8050.1         108         96.233.5           223.8092.4         90         96.232.4050.1         108         96.232.8053.1         108         96.233.5           223.8097.4         90         96.23
223.6098.8       91       96.232.4006.7       109       96.232.8030.1       108       96.233.4         223.7092.4       90       96.232.4030.1       108       96.232.8033.7       108       96.233.4         223.7092.8       90       96.232.4030.1       108       96.232.8033.1       108       96.233.4         223.7097.4       90       96.232.4031.7       108       96.232.8034.1       109       96.233.5         223.7097.8       90       96.232.4033.1       108       96.232.8035.7       108       96.233.5         223.7098.4       91       96.232.4034.1       109       96.232.8036.7       109       96.233.5         223.7098.8       91       96.232.4035.7       108       96.232.8050.1       108       96.233.5         223.8092.4       90       96.232.4036.7       109       96.232.8053.1       108       96.233.5         223.8092.8       90       96.232.4050.1       108       96.232.8054.1       109       96.233.5         223.8097.4       90       96.232.4053.1       108       96.233.1000.1       110       96.233.5         223.8097.8       90       96.232.4054.1       109       96.233.1000.1       110       96.233.5         22
223.7092.4         90         96.232.4010.9         108         96.232.8031.7         108         96.233.4           223.7092.8         90         96.232.4030.1         108         96.232.8033.1         108         96.233.4           223.7097.4         90         96.232.4031.7         108         96.232.8034.1         109         96.233.5           223.7097.8         90         96.232.4033.1         108         96.232.8035.7         108         96.233.5           223.7098.4         91         96.232.4034.1         109         96.232.8036.7         109         96.233.5           223.7098.8         91         96.232.4035.7         108         96.232.8050.1         108         96.233.5           223.8092.4         90         96.232.4036.7         109         96.232.8053.1         108         96.233.5           223.8092.8         90         96.232.4050.1         108         96.232.8054.1         109         96.233.5           223.8097.4         90         96.232.4053.1         108         96.233.1000.1         110         96.233.5           223.8097.8         90         96.232.4054.1         109         96.233.1000.1         110         96.233.5           223.8098.4         91         96.23
223.7092.4         90         96.232.4010.9         108         96.232.8031.7         108         96.233.4           223.7092.8         90         96.232.4030.1         108         96.232.8033.1         108         96.233.4           223.7097.4         90         96.232.4031.7         108         96.232.8034.1         109         96.233.5           223.7097.8         90         96.232.4033.1         108         96.232.8035.7         108         96.233.5           223.7098.4         91         96.232.4034.1         109         96.232.8036.7         109         96.233.5           223.7098.8         91         96.232.4035.7         108         96.232.8050.1         108         96.233.5           223.8092.4         90         96.232.4036.7         109         96.232.8053.1         108         96.233.5           223.8092.8         90         96.232.4050.1         108         96.232.8054.1         109         96.233.5           223.8097.4         90         96.232.4053.1         108         96.233.1000.1         110         96.233.5           223.8097.8         90         96.232.4054.1         109         96.233.1000.1         110         96.233.5           223.8098.4         91         96.23
223.7092.8         90         96.232.4030.1         108         96.232.8033.1         108         96.233.4           223.7097.4         90         96.232.4031.7         108         96.232.8034.1         109         96.233.5           223.7097.8         90         96.232.4033.1         108         96.232.8035.7         108         96.233.5           223.7098.4         91         96.232.4034.1         109         96.232.8036.7         109         96.233.5           223.7098.8         91         96.232.4035.7         108         96.232.8050.1         108         96.233.5           223.8092.4         90         96.232.4036.7         109         96.232.8053.1         108         96.233.5           223.8092.8         90         96.232.4050.1         108         96.232.8054.1         109         96.233.5           223.8097.4         90         96.232.4053.1         108         96.233.1000.1         110         96.233.5           223.8097.8         90         96.232.4054.1         109         96.233.1000.1         110         96.233.5           223.8098.4         91         96.232.5000.1         108         96.233.1003.1         110         96.233.5
223.7097.4       90       96.232.4031.7       108       96.232.8034.1       109       96.233.5         223.7097.8       90       96.232.4033.1       108       96.232.8035.7       108       96.233.5         223.7098.4       91       96.232.4034.1       109       96.232.8036.7       109       96.233.5         223.7098.8       91       96.232.4035.7       108       96.232.8050.1       108       96.233.5         223.8092.4       90       96.232.4036.7       109       96.232.8053.1       108       96.233.5         223.8092.8       90       96.232.4050.1       108       96.232.8054.1       109       96.233.5         223.8097.4       90       96.232.4053.1       108       96.233.1000.1       110       96.233.5         223.8097.8       90       96.232.4054.1       109       96.233.1001.7       110       96.233.5         223.8098.4       91       96.232.5000.1       108       96.233.1003.1       110       96.233.5
223.7097.8       90       96.232.4033.1       108       96.232.8035.7       108       96.233.5         223.7098.4       91       96.232.4034.1       109       96.232.8036.7       109       96.233.5         223.7098.8       91       96.232.4035.7       108       96.232.8050.1       108       96.233.5         223.8092.4       90       96.232.4036.7       109       96.232.8053.1       108       96.233.5         223.8092.8       90       96.232.4050.1       108       96.232.8054.1       109       96.233.5         223.8097.4       90       96.232.4053.1       108       96.233.1000.1       110       96.233.5         223.8097.8       90       96.232.4054.1       109       96.233.1001.7       110       96.233.5         223.8098.4       91       96.232.5000.1       108       96.233.1003.1       110       96.233.5
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223.7098.8     91     96.232.4035.7     108     96.232.8050.1     108     96.233.5       223.8092.4     90     96.232.4036.7     109     96.232.8053.1     108     96.233.5       223.8092.8     90     96.232.4050.1     108     96.232.8054.1     109     96.233.5       223.8097.4     90     96.232.4053.1     108     96.233.1000.1     110     96.233.5       223.8097.8     90     96.232.4054.1     109     96.233.1001.7     110     96.233.5       223.8098.4     91     96.232.5000.1     108     96.233.1003.1     110     96.233.5
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96.442.2003.1	134	96.443.1033.1	136	96.452.2030.6	154	96.452.6053.1	154
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96.442.2030.1	134	96.443.2000.1	136	96.452.2033.6	154	96.452.7000.1	154
96.442.2033.1	134	96.443.2003.1	136	96.452.2034.1	155	96.452.7000.6	154
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96.442.3034.1	135	96.443.3034.1	137	96.452.3004.6	155	96.452.7034.6	155
96.442.3080.1	138	96.443.4000.1	136	96.452.3030.1	154	96.452.7050.1	154
96.442.3083.1	138	96.443.4003.1	136	96.452.3030.6	154	96.452.7053.1	154
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96.442.4000.1	134	96.443.4030.1	136	96.452.3033.6	154	96.452.8000.1	154
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96.442.4083.1	138	96.443.5033.1	136	96.452.4000.6	154	96.452.8030.6	154
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96.442.5000.1	134	96.443.6000.1	136	96.452.4003.6	154	96.452.8033.6	154
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96.442.5034.1	135	96.443.6034.1	137	96.452.4033.1	154	96.452.8054.1	155
96.442.5080.1	138	96.443.7000.1	136	96.452.4033.6	154	96.453.1000.1	156
96.442.5083.1	138	96.443.7003.1	136	96.452.4034.1	155	96.453.1000.6	156
96.442.5084.1	139	96.443.7004.1	137	96.452.4034.6	155	96.453.1003.1	156
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96.442.6003.1	134	96.443.7033.1	136	96.452.4053.1	154	96.453.1004.1	157
96.442.6004.1	135	96.443.7034.1	137	96.452.4054.1	155	96.453.1004.6	157
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96.442.6033.1	134	96.443.8003.1	136	96.452.5000.6	154	96.453.1030.6	156
96.442.6034.1	135	96.443.8004.1	137	96.452.5003.1	154	96.453.1033.1	156
96.442.6080.1	138	96.443.8030.1	136	96.452.5003.6	154	96.453.1033.6	156
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96.442.7003.1	134	96.452.1000.6	154	96.452.5030.6	154	96.453.1053.1	156
96.442.7004.1	135	96.452.1003.1	154	96.452.5033.1	154	96.453.1054.1	157
96.442.7030.1	134	96.452.1003.6	154	96.452.5033.6	154	96.453.1080.1	158
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96.442.7080.1	138	96.452.1030.1	154	96.452.5050.1	154	96.453.2000.1	156
96.442.7083.1	138	96.452.1030.6	154	96.452.5053.1	154	96.453.2000.6	156
96.442.7084.1	139	96.452.1033.1	154	96.452.5054.1	155	96.453.2003.1	156
96.442.8000.1	134	96.452.1033.6	154	96.452.6000.1	154	96.453.2003.6	156
96.442.8003.1	134	96.452.1034.1	155	96.452.6000.6	154	96.453.2004.1	157
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96.453.2033.1	156	96.453.6003.1	156	96.454.2003.1	160	96.454.7033.1	16
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96.453.2034.1	157	96.453.6004.1	157	96.454.2004.1	161	96.454.7034.1	16
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96.453.2050.1	156	96.453.6030.1	156	96.454.2030.1	160	96.454.8000.1	16
96.453.2053.1	156	96.453.6030.6	156	96.454.2030.6	160	96.454.8000.6	16
96.453.2054.1	157	96.453.6033.1	156	96.454.2033.1	160	96.454.8003.1	16
96.453.2080.1	158	96.453.6033.6	156	96.454.2033.6	160	96.454.8003.6	16
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96.453.3000.1	156	96.453.6050.1	156	96.454.3000.1	160	96.454.8030.1	16
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96.453.3030.6	156	96.453.7000.6	156	96.454.3030.6	160	96.834.1003.3	12
96.453.3033.1	156	96.453.7003.1	156	96.454.3033.1	160	96.834.1004.3	12
96.453.3033.6	156	96.453.7003.6	156	96.454.3033.6	160	96.834.1030.3	12
96.453.3034.1	157	96.453.7004.1	157	96.454.3034.1	161	96.834.1033.3	12
96.453.3034.6	157	96.453.7004.6	157	96.454.3034.6	161	96.834.1034.3	12
96.453.3050.1	156	96.453.7030.1	156	96.454.4000.1	160	96.834.1500.3	12
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96.453.3054.1	157	96.453.7033.1	156	96.454.4003.1	160	96.834.1504.3	12
96.453.3080.1	158	96.453.7033.6	156	96.454.4003.6	160	96.834.1530.3	12
96.453.3083.1	158	96.453.7034.1	157	96.454.4004.1	161	96.834.1533.3	12
96.453.3084.1	159	96.453.7034.6	157	96.454.4004.6	161	96.834.1534.3	12
96.453.4000.1	156	96.453.7050.1	156	96.454.4030.1	160	96.834.2000.3	12
96.453.4000.6	156	96.453.7053.1	156	96.454.4030.6	160	96.834.2003.3	12
96.453.4003.1	156	96.453.7054.1	157	96.454.4033.1	160	96.834.2004.3	12
96.453.4003.6	156	96.453.7080.1	158	96.454.4033.6	160	96.834.2030.3	12
96.453.4004.1	157	96.453.7083.1	158	96.454.4034.1	161	96.834.2033.3	12
96.453.4004.6	157	96.453.7084.1	159	96.454.4034.6	161	96.834.2034.3	12
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96.453.4030.6	156	96.453.8000.6	156	96.454.5000.6	160	96.834.2503.3	12
96.453.4033.1	156	96.453.8003.1	156	96.454.5003.1	160	96.834.2504.3	12
96.453.4033.6	156	96.453.8003.6	156	96.454.5003.6	160	96.834.2530.3	12
96.453.4034.1	157	96.453.8004.1	157	96.454.5004.1	161	96.834.2533.3	12
96.453.4034.6	157	96.453.8004.6	157	96.454.5004.6	161	96.834.2534.3	12
96.453.4050.1	156	96.453.8030.1	156	96.454.5030.1	160	96.834.3000.3	12
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96.453.4083.1	158	96.453.8034.1	157	96.454.5034.1	161	96.834.3033.3	12
96.453.4084.1	159	96.453.8034.6	157	96.454.5034.6	161	96.834.3034.3	12
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96.453.5003.1	156	96.453.8054.1	157	96.454.6003.1	160	96.834.3504.3	12
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96.453.5034.6	157	96.454.1004.6	161	96.454.6034.6	161	96.834.4034.3	12
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96.453.5053.1	156	96.454.1030.6	160	96.454.7000.6	160	96.854.1003.3	16
96.453.5054.1	157	96.454.1033.1	160	96.454.7003.1	160	96.854.1004.3	16
96.453.5080.1	158	96.454.1033.6	160	96.454.7003.6	160	96.854.1030.3	16
96.453.5083.1	158	96.454.1034.1	161	96.454.7004.1	161	96.854.1033.3	16
96.453.5084.1	159	96.454.1034.6	161	96.454.7004.6	161	96.854.1034.3	16
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# **Products and systems**

# Service and attendance are granted

Ranging from *smart* installation, automation, safety technology up to terminal blocks and PC board terminals – Wieland Electric is active in most areas of automation systems and appears as a driving force for innovation within the industry.

In the business segment of building system technology, Wieland Electric with their **gesis**® system is a global market leader in pluggable electric installation – from indoor and outdoor applications up to intelligent building automation.

Wieland accomplish their product portfolio for the users providing workshops for the implementation of new guidelines and standards as well as for the implementation of risk assessments. These services are also offered on a customer-specific basis. In this context, our focus is on application-oriented solutions and competent consulting.

The flexible use of buildings does not only require an appropriate design during construction. The documentation of the installed systems must also meet these requirements.

Documenting the installed components plays a vital role. Wieland creates installation and wiring plans according to your specifications

#### Service & attendance

Information brochures, planning and calculation tools for order placement or download from our websites complement our portfolio:

- wieplan click2Buy configuration software
- **revos** PLAN configurator
- **podis**®PLAN configurator
- *gesis*®PLAN 3D visualization/calculation/application
- eShop
- **■** Building design
- **■** Workshops and support
- Wie-Service24

Online remote maintenance portal for easiest and most secure VPN remote maintenance

This offers planning safety across the entire lifecycle of an installation.











# Wieland at a glance

Our range of products and services for your industry



### **Product portfolio**

- Electronic and electrical engineering for the control cabinet
- Safety technology
- Network and fieldbus systems
- Energy bus systems for industry and buildings
- Connectors up to protection rating IP6X
- Building automation
- PCB terminals and plug connectors
- Sensor/actuator cabling



#### **Industries**

- Machine building
- Construction machines & cranes
- Buildings and lighting
- Logistics
- Power engineering
- Renewable energy sources
- Heating and air conditioning systems



#### **Business services**

- Pre-assembly and wiring
- Product labeling service
- Integrated solutions in distributors
- Customized solutions
- On-site project support
- Optimization of decentralized, pluggable installation solutions
- Certified machine safety tests



### Safety training

- Software validation
- CSE Certified Safety Engineer
- Basic principles and standards of functional safety
- Modification of old machinery and major changes
- Design of safety functions and calculation with Sistema
- Machinery Directive, liability issues, and CE Declarations of Conformity



### Software/configuration tools

- wieplan click2Buy, configuration of terminal strips with online ordering function
- **wieprint**, marking system for DIN rail terminal blocks
- revos configurator for connectors
- **gesis**®PLAN for building installation
- podis<sup>®</sup>PLAN for configuring the podis<sup>®</sup> energy bus system
- **samos**®PLAN6, programming tool for **samos**®PRO COMPACT
- **hmi** PLAN, visualization software for HMI touch panels



### Why Wieland?

- Standardized industrial solutions
- Customized solutions
- Support for your project
- Broad product portfolio
- Products usable worldwide due to international licenses
- Group-wide observance of human rights, including at suppliers
- Eco-friendly production









# **Technical consultation**

and general information

## Use the Wieland hotline - a phone call is all it takes

# Industrial automation, electromechanical

Hotline +49 951 9324-991

E-mail AT.TS@wieland-electric.com

# **Building and installation technology**

Hotline +49 951 9324-996

E-mail **BIT.TS@wieland-electric.com** 

### Industrial automation, electronics

Hotline +49 951 9324-995

E-mail AT.TS@wieland-electric.com

### Safety technology

Hotline +49 951 9324-999

E-mail safety@wieland-electric.com

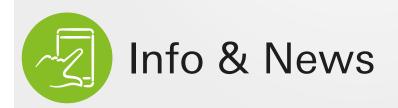




# eShop

Our products can also be found in our online shop at:

eshop.wieland-electric.com



Contact your local partner in over 70 countries:

www.wieland-electric.com





Headquarters: Wieland Electric GmbH Brennerstraße 10 – 14 96052 Bamberg, Germany

Phone +49 951 9324-0 Fax +49 951 9324-198 info@wieland-electric.com www.wieland-electric.com

### Industrial technology

### Solutions for the control cabinet

- DIN rail terminal blocks
- Screw, tension spring or push-in connection technology
- Wire cross sections up to 300 mm<sup>2</sup>
- Numerous special functions
- Software solutions interfacing to CAE systems
- Safety
  - Safe signal acquisition
  - Safety switching devices
  - Modular safety modules
  - Compact safety controllers
- Application consulting and training
- Network engineering and fieldbus systems
  - Remote maintenance via VPN industrial router and VPN service portal
  - Industrial Ethernet switches
  - PLC and I/O systems, standard and increased environmental conditions
- Interface
  - Power supply units
  - Overvoltage protection
  - Coupling relays, semiconductor switches
  - Timer relays, measuring and monitoring relays
  - Analog coupling and converter modules
  - Passive interfaces

#### Solutions for field applications

- Decentralized installation and automation technology
  - Electrical installation for wind tower
- Fieldbus interfaces and motor starters
- Connectors for industrial applications
- Rectangular and round connectors
- Aluminium or plastic housings
- Degree of protection up to IP69
- Current-carrying capacity up to 100 A
- Connectors for hazardous areas
- Modular, application-specific technology

### PC board terminals and connectors

- Screw or spring clamp connection technology
- Spacings: 2.5 mm to 10.16 mm
- Reflow or wave soldering process

### **Building and installation technology**

- Building installation systems
- Main power supply connectors IP20/IP65... IP69
- Bus connectors
- Low-voltage connectors
- Power distribution system with flat cables
- Distribution systems
- Room automation with KNX, EnOcean, SMI and DALI
- DIN rail terminal blocks for electrical installations
- Overvoltage protection

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