

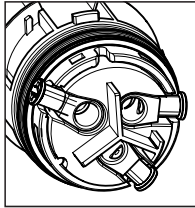
## Wire preparation

### RST 2/3 pole

#### Insulation strip lengths and ferrules

all lengths indicated in mm

#### Screw connection:



Screwdriver

PZ1

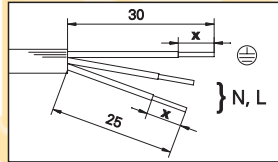
Rated torque:  
0.8 – 1.0 nm

#### Spring

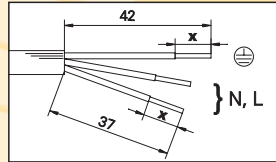
#### clamp connection:



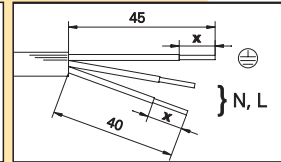
Connector  
6 – 10 mm  
10 – 14 mm



Connector  
13 – 18 mm



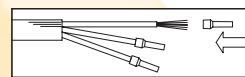
Splitter connector  
max. 2 x 2.5 mm<sup>2</sup>!



#### Insulation strip length X =

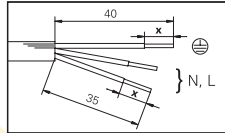
Wire range	0.75 mm <sup>2</sup>	1.0 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	4 mm <sup>2</sup>	AWG 12-18
solid	8	8	8	8	8	-
fine-stranded	8	8	8	8	8	-
stranded	8	8	8	8	8	8
ultrasonically compressed	8	8	8	8	8	-

Fine-stranded and stranded wires

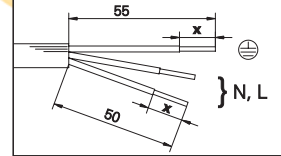


Ferrules required!

Connectors



Splitter connectors



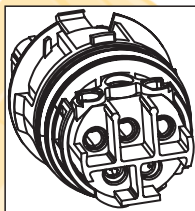
#### Insulation strip length X =

Wire range	0.5 mm <sup>2</sup>	0.75 mm <sup>2</sup>	1 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>
solid	14.5 + 1	14.5 + 1	14.5 + 1	14.5 + 1	14.5 + 1
fine-stranded	12.0 + 1	13.0 + 1	13.0 + 1	13.0 + 1	
Ferrules according to DIN	46228-E0.5-10	46228-E0.75-12	46228-E1.0-12	46228-E1.5-12	
stranded		13.0 + 1	13.0 + 1	13.0 + 1	
Ferrules according to DIN		46228-E0.75-12	46228-E1.0-12	46228-E1.5-12	
ultrasonically compressed				14.5 + 1	14.5 + 1

### RST 4/5 pole

all lengths indicated in mm

#### Screw connection:

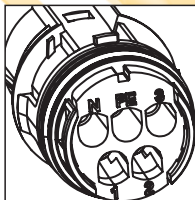


Screwdriver

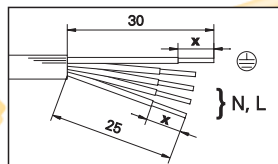
PZ1

Rated torque:  
0.5 – 0.7 nm

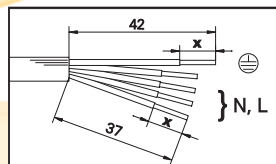
#### Crimp connection:



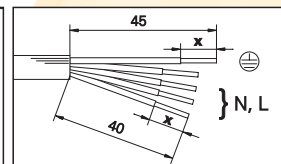
Connector  
6 – 10 mm  
10 – 14 mm



Connector  
13 – 18 mm



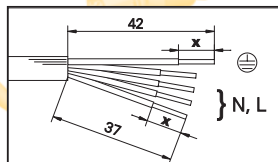
Splitter connector  
max. 2 x 1.5 mm<sup>2</sup>!



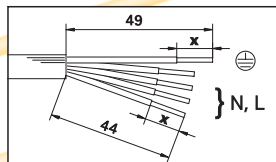
#### Insulation strip length X =

Wire range	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 mm <sup>2</sup>	AWG 12-18
solid	8	8	8	8	8	-
fine-stranded	8	8	8	8	8	-
stranded	8	8	8	8	8	8
ultrasonically compressed	8	8	8	8	8	-

Connector  
6 – 10 mm  
10 – 14 mm



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 mm <sup>2</sup>
fine-stranded	7.0 + 1	7.0 + 1	7.0 + 1	7.0 + 1	7.0 + 1

## IP protection degrees:

### Documentation:

### Example: IP 65

IP protection degree:  
foreign bodies and accidental contact

	Protection against accidental contact	Protection against foreign bodies
0	No protection	No protection
1	Large parts of the body (e.g. the back of the hand)	Large foreign bodies (diameter > 50 mm)
2	Fingers	Medium-size foreign bodies (diameter > 12 mm)
3	Tools and wires (> 2.5 mm in diameter)	Small foreign bodies (diameter > 2.5 mm)
4	Tools and wires (> 1 mm in diameter)	Grain-like particles (diameter > 1 mm)
5	Complete protection against accidental contact	Dust on the surface
6	Complete protection against accidental contact	Dust ingress

IP protection degree: water

0	No protection
1	Protection from vertically falling water drops
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
5	Protection from jet spray water
6	Protection from powerful jets of water
7	Protection from temporary immersion
8	Protection from longer lasting immersion

**gesis** IP+

Wieland offers an innovative installation system with a complete concept for economic installation in outdoor and industrial applications

### Degree of protection achieved:

- IP 65** Jet water
- IP 66** Powerful jet water
- IP 67** Temporary submersion
- IP 68** Lasting immersion (2 hours in 3 m deep water)

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

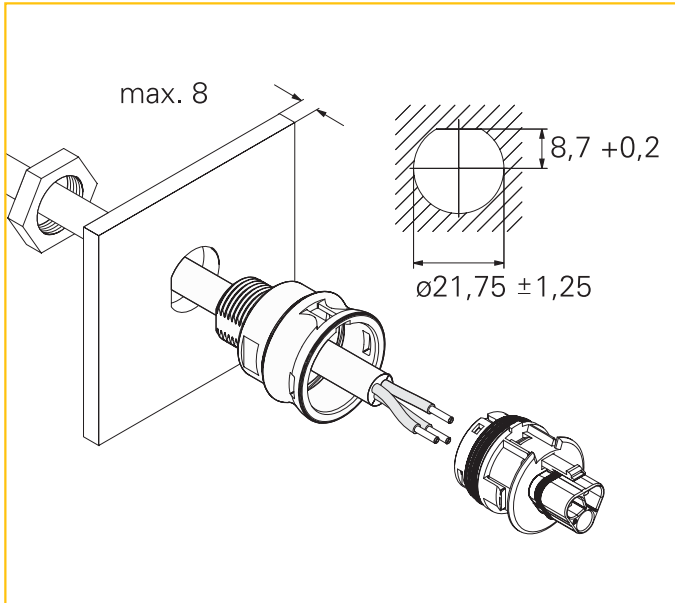
**The system is not designed for permanent operation under water.**

# Installation instructions for RST 2/3 pole

## Installation in a housing

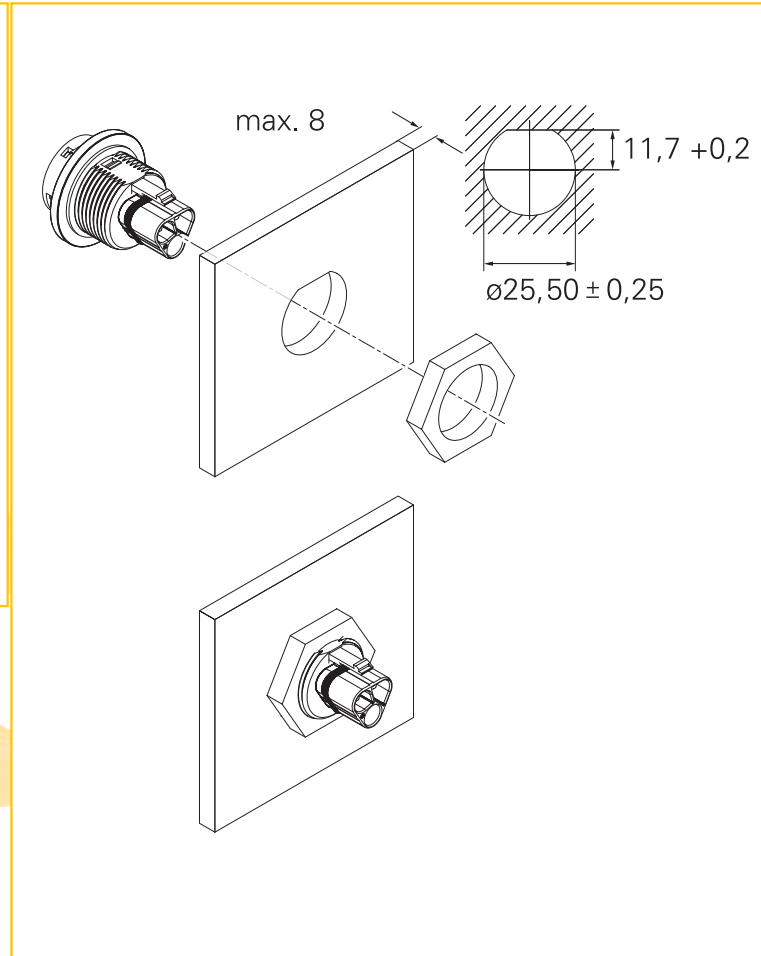
Installation of a standard system,  
for M 20 feed-through

Dimensions in mm



Installation of a standard system,  
for M 25 feed-through

Dimensions in mm



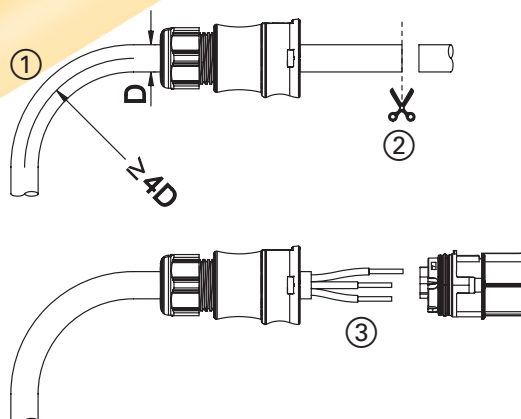
### Note:

Effectiveness of the protection against twisting can only be guaranteed when the lower tolerance limit is ensured for the diameter of the hole.

### Bending radius (for conductors)

Note the minimum bending radius for conductors  $> 2.5 \text{ mm}^2$ . Pull forces on the contact points can be avoided by proceeding as follows:

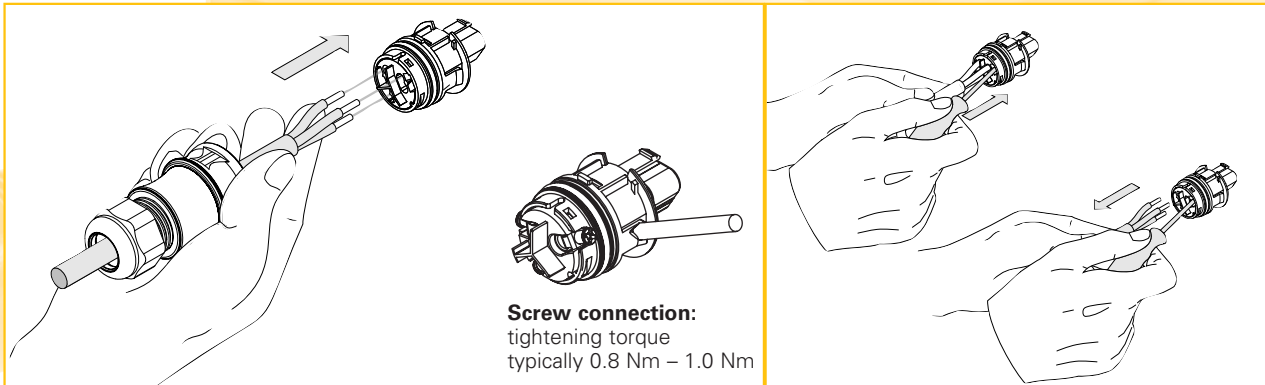
- ① Bend the wire as required
- ② Cut the wire to length
- ③ Strip the cable and wires



## Installation of the connectors

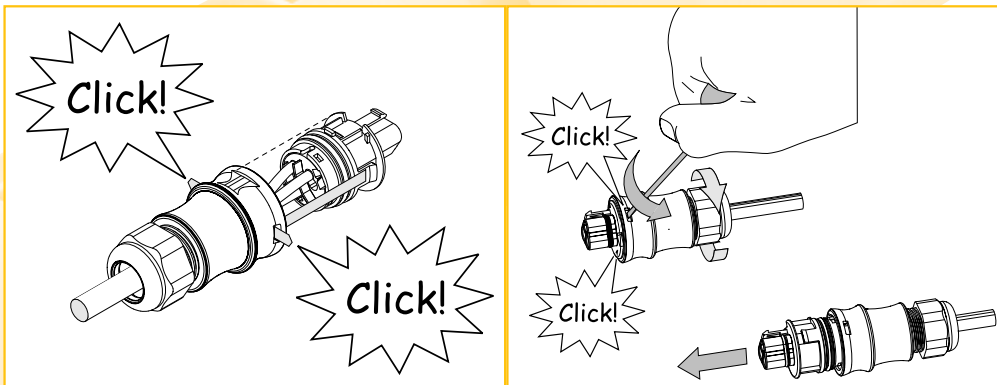
Connect the wires

...and disconnect them



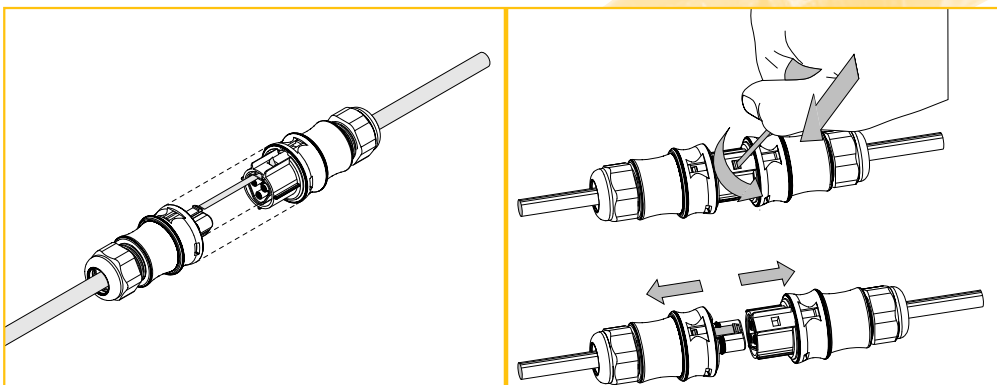
Close the connector...

...and open it



Lock the housing

...and unlock it

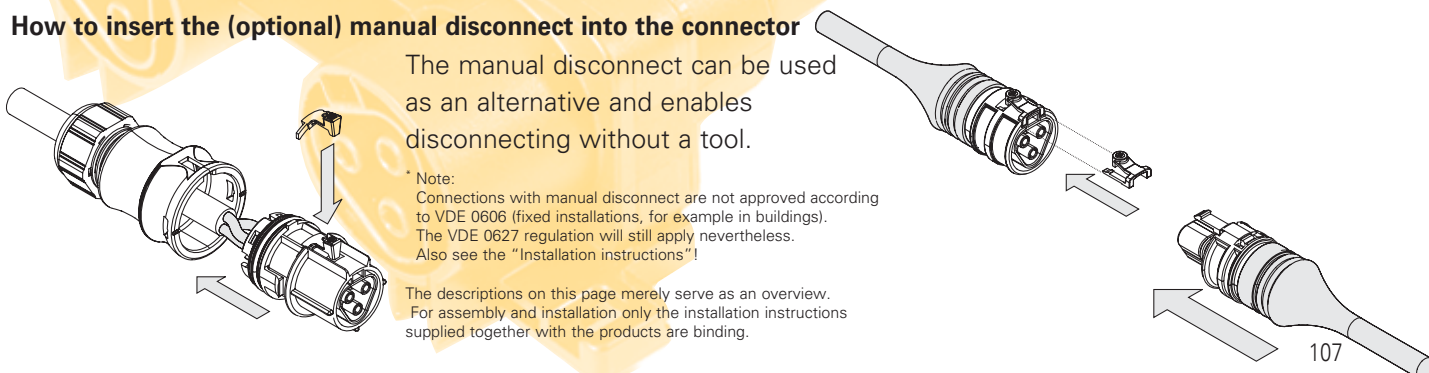


### How to insert the (optional) manual disconnect into the connector

The manual disconnect can be used as an alternative and enables disconnecting without a tool.

\* Note:  
Connections with manual disconnect are not approved according to VDE 0606 (fixed installations, for example in buildings). The VDE 0627 regulation will still apply nevertheless. Also see the "Installation instructions"!

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.



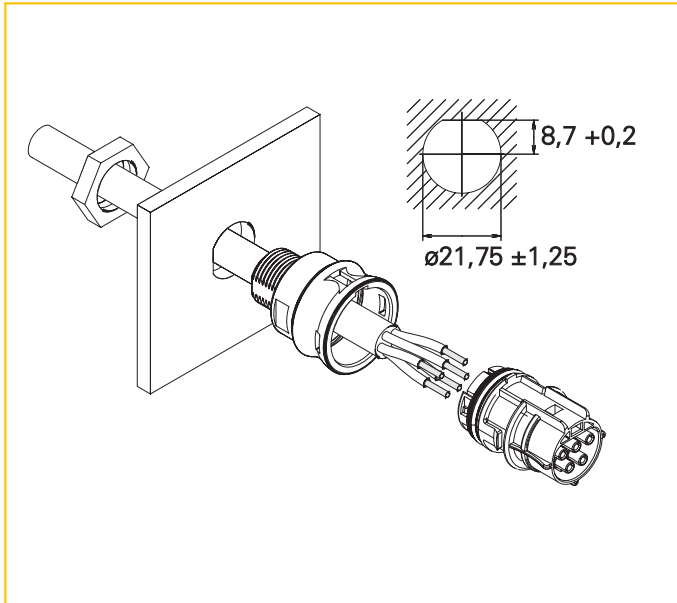


# Installation instructions for RST 4/5 pole

## Installation in a housing

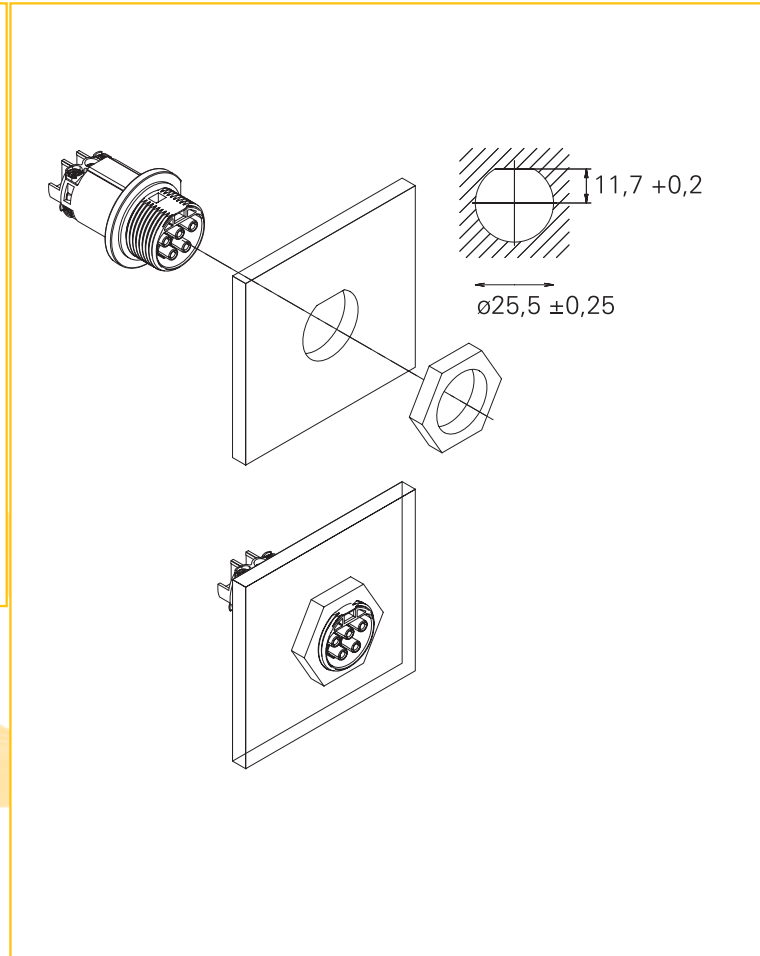
Installation of a standard system,  
for M 20 feed-through

Dimensions in mm



Installation of a standard system,  
for M 25 feed-through

Dimensions in mm



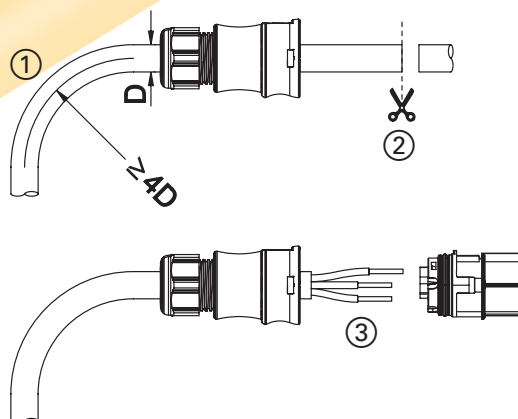
### Note:

Effectiveness of the protection against twisting can only be guaranteed when the lower tolerance limit is ensured for the diameter of the hole.

### Bending radius (for conductors)

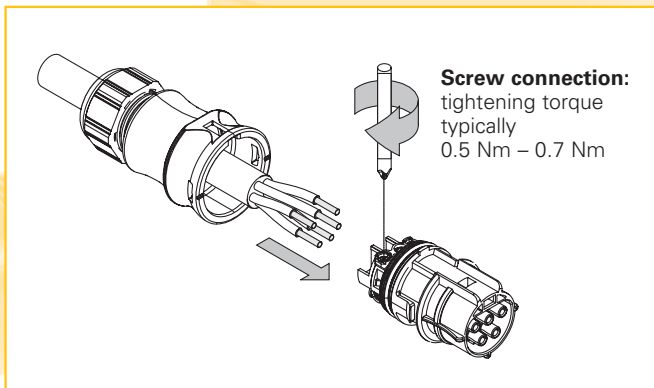
Note the minimum bending radius for conductors  $> 2.5 \text{ mm}^2$ . Pull forces on the contact points can be avoided by proceeding as follows:

- ① Bend the wire as required
- ② Cut the wire to length
- ③ Strip the cable and wires

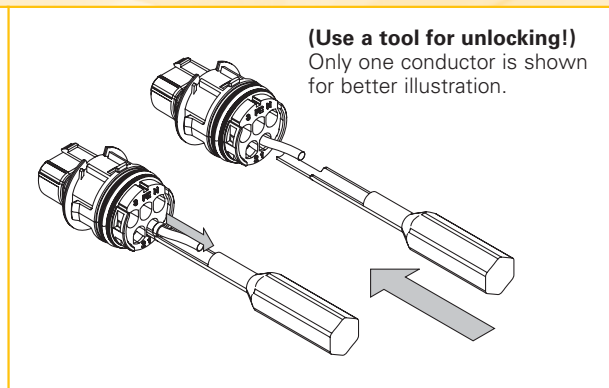


## Installation of the connectors

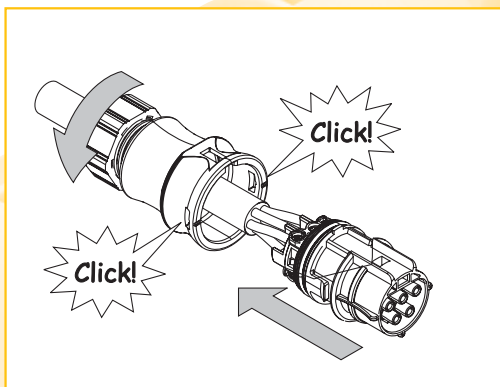
Screw connection



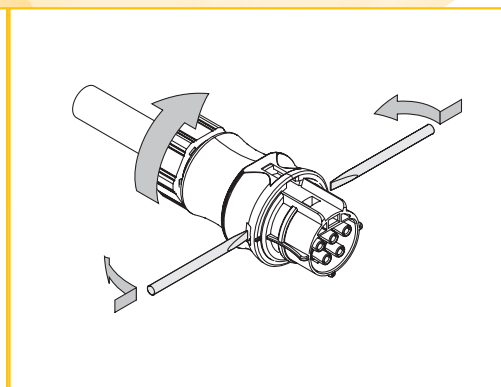
Crimp connection



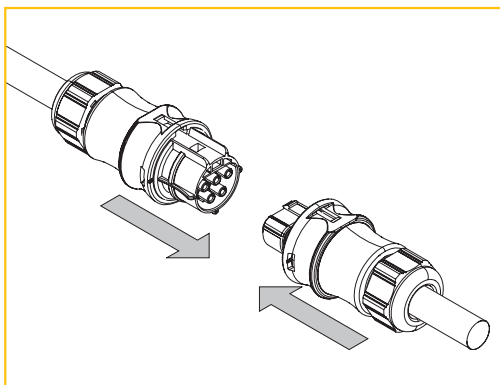
Close the connector...



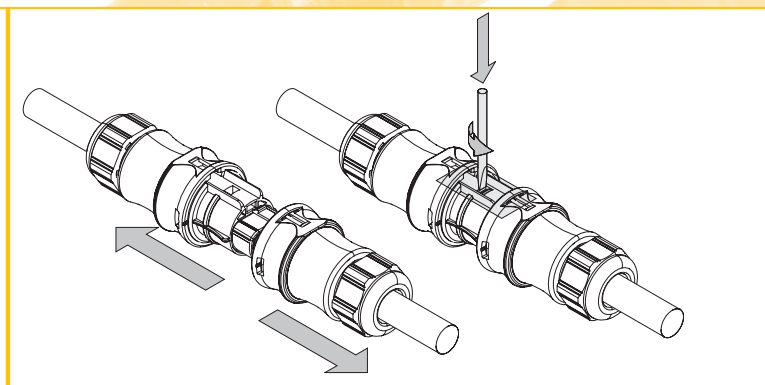
...and open it



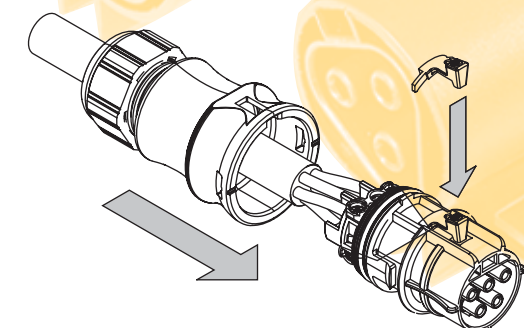
Lock the housing



...and unlock it



### How to insert the (optional) manual disconnect into the connector



The manual disconnect can be used as an alternative and enables disconnecting without a tool.

\* Note:  
Connections with manual disconnect are not approved according to VDE 0606 (fixed installations, for example in buildings). The VDE 0627 regulation will still apply nevertheless. Also see the "Installation instructions"!

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.

# Material resistance

for PA 66 (housing) and NBR (sealing)

Please contact us for applications under different conditions.			
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, hydrous solution, 10%	+	Salmiac	+
Ferric sulfide	+	Oxygen, RT	+
Ethyl ether	+	Lubricating oil (O-149), (not bunker fuel, oil tanker)	+
Paint, varnish, not much sulfuric acid	+	Sulfur, wet	+
Fruit juice, fruit acid	+	Sulfuric acid (dilluted, RT)	+
Tannic acid	+	Sulfur hexafluoride	+
Glycerin	+	Sweat	+
Glysantine, hydrous solution, 10%	+	Sebacic acid ester	+
Potassium chloride	+	Spirits	+
Caustic potash solution, hydrous solution, 10%	+	Nitric acid (10%)	+
Sodium, hydrous solution, 10%	+	Hydrochloric acid (10%)	+
Linseed oil	+	Water, RT, free from chlorine up to 80°	+
Milk	+	Water: sea water resistance, artificial, 20°C	+
Lactic acid, 20°C	+	Stannic chloride, 20°C, saturated	+

### 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)
- Installation of the connector at - 40° C

The complete test report can be ordered from our hotline using the phone number +49 9 51/93 24-9 96.



## Technical data

	<b>RST 20i2/i3</b>	<b>RST 25i3</b>	<b>RST 20i4/i5</b>	<b>RST 25i5</b>
<b>Rated voltage</b>	250 V	250 V	250 / 400 V	250 / 400 V
<b>Rated current</b>	20 A	25 A	20 A	25 A (L, N) 1 ~ Contacts (1, 2) 10 A
<b>Number of poles</b>	2 or 3 pole	3 pole	4 or 5 pole	5 pole
<b>Ambient operating temperature under full load</b>	Connectors 55° C Distributor 40° C	55° C	55° C	55° C

<b>Temperature range:</b>	-40° C to +100° C
<b>Material:</b>	Contact parts: brass, surface-plated Housing parts: thermoplastic material PA 66, halogen-free, V2 Sealing material: NBR
<b>Regulations:</b>	DIN VDE 0606 T200, DIN EN 61984 (VDE 0627), VDE 0110 IEC 60999: UL 2238; CSA: C22.2 No.182.2-M1987; LR Type Approval System
<b>Approvals:</b>	pending VDE; UL; CSA; LR; GL; DNV
<b>Degree of protection:</b>	IP 65, IP 66, IP 67 and IP 68 (3 m; 2 hours)
<b>Glow-wire test 850° C, 30 s:</b>	For connectors, distribution units, cable assemblies and appliance couplers
<b>Coding:</b>	Mechanical coding symbolized by color code. Gray and black with the same mechanical coding. Other codings are optional.
<b>Note:</b>	Protection against shock generally guaranteed even when disconnected. Protective 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. DIN VDE 0606-200 requires the use of a locking device. Dangerous mismatching with installation connector systems of other suppliers is not automatically excluded by compliance with DIN VDE 0606 T200. Installation connectors do not replace national connector/outlet systems for home applications.

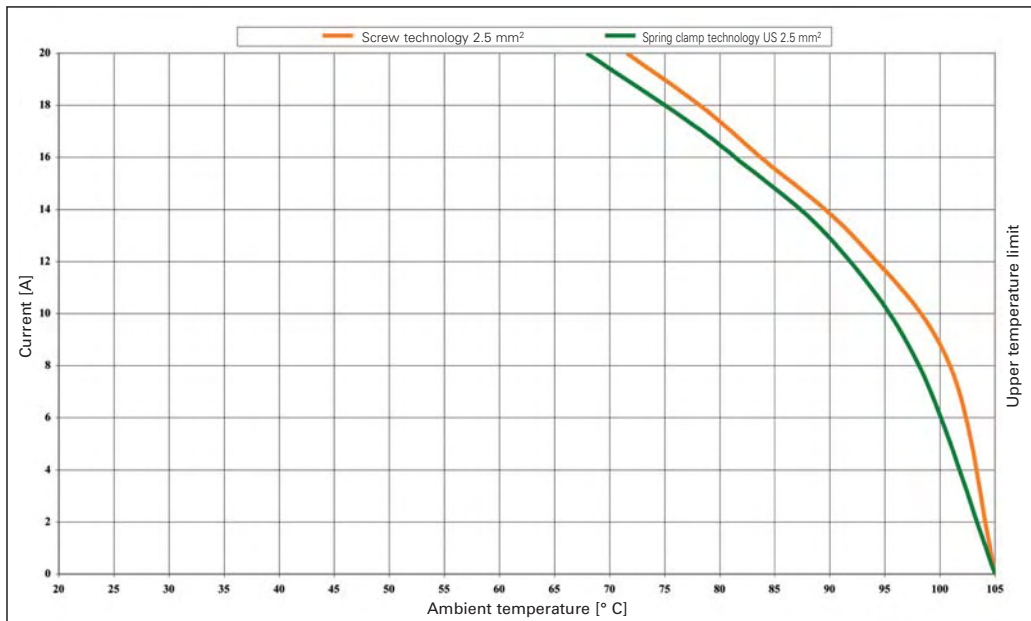


# Derating curves

Derating curve according to IEC 60512 sect. 3  
RST 20i3

Current through 2 poles (L, N)

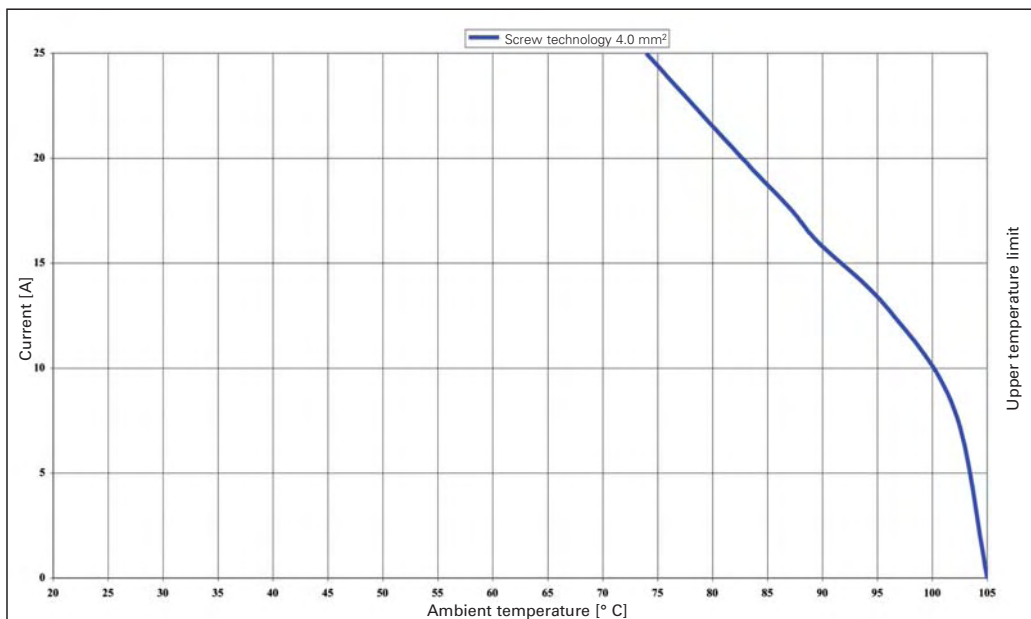
Connectors with screw technology: cross section 2.5 mm<sup>2</sup> with  
spring clamp connection: cross section 2.5 mm<sup>2</sup>



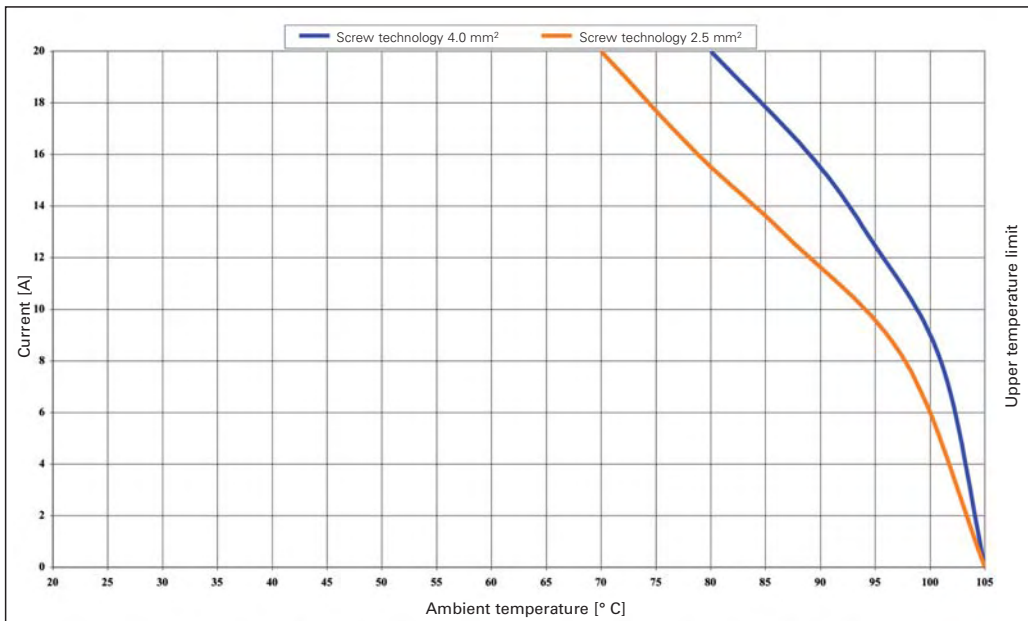
Derating curve according to IEC 60512 sect. 3  
RST 25i3

Current through 2 poles (L, N)

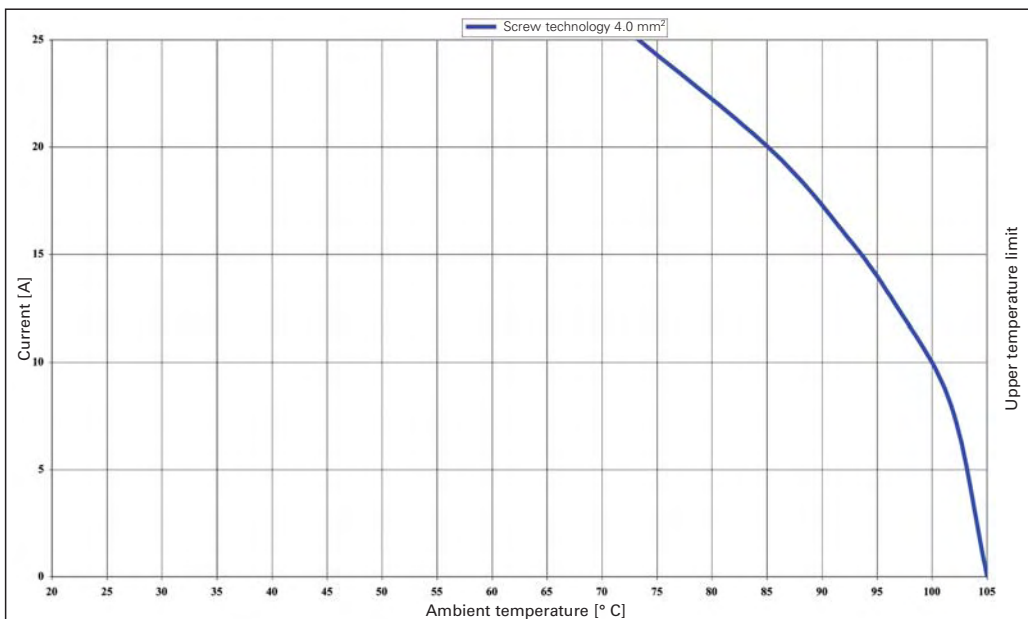
Connectors with screw technology: cross section 4.0 mm<sup>2</sup>



**Derating curve according to IEC 60512 sect. 3**  
**RST 20i5**  
**Current through 4 poles (L1, L2, L3, N)**  
**Connectors with screw technology**  
**cross section 4.0 mm<sup>2</sup> and 2.5 mm<sup>2</sup>**



**Derating curve according to IEC 60512 sect. 3**  
**RST 25i5**  
**Current through 2 poles (L, N)**  
**Connectors with screw technology: cross section 4.0 mm<sup>2</sup>**



### Product finder

On the web pages users easily find the application of **gesis** in its complete diversity, broken down into logical sections.

There the suitable **gesis** components can be found and ordered in no time while being assured that they are compatible with the **gesis** system. Mismatching is excluded due to clear coding.

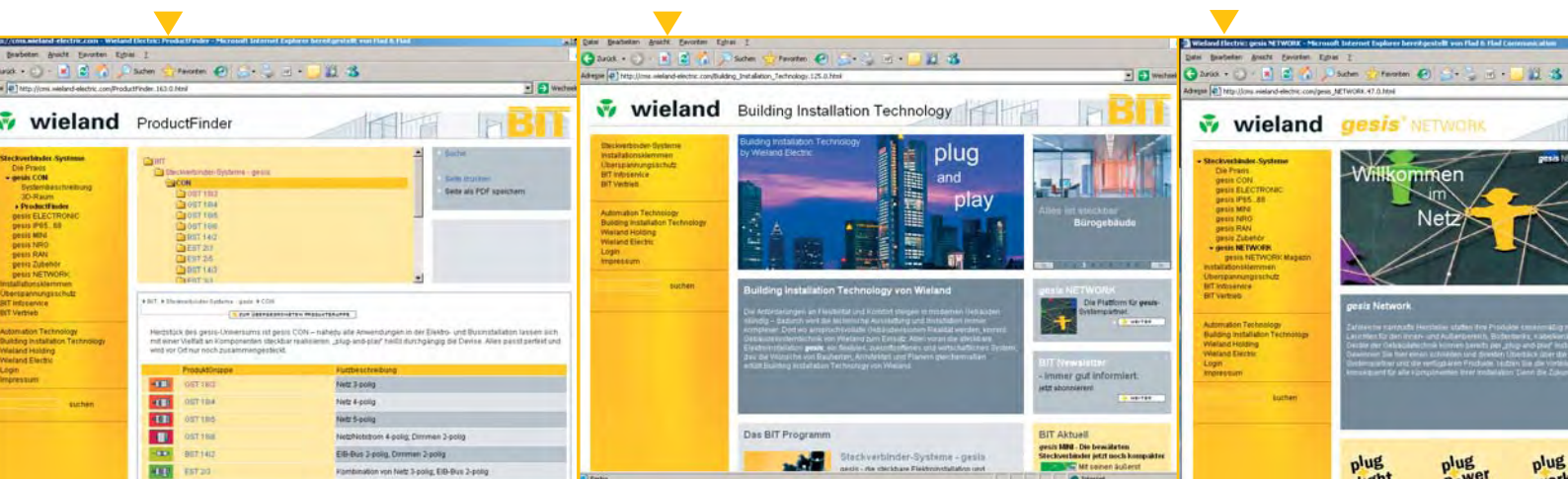
### Electronics – modular and flat

In the ELECTRONICS section we have combined all EIB-controlled modules as well as the device series that can be controlled via radio and Ethernet.

All electronic connections of the **gesis** Electronics series provide a pluggable design. These modules combine all the benefits of the various control units with the benefits of a pluggable electrical installation system.

### gesis NETWORK

**gesis** NETWORK is a group of system partners whose products are equipped with the pluggable electrical installation system **gesis**. Whether manufacturers of lamps, floor boxes or furniture – in numerous industries, the pluggable electrical installation system has already become a typical component and, for many products, **gesis** is already the standard today. For a quick and direct overview of the products equipped with **gesis**, a group of partners



Plan your outside and inside applications with **gesis**.

On our web pages you can find complete solutions for the different functions and control units of your planned system.

was founded whose common information platform is available on the Internet.

Easily accessible under:  
**www.gesis-network.com.**

www.gesis-network.com combines the appropriate information about **gesis**. Here you can find a 3-D diagram of a lamp installation, among other things. It shows detailed views of possible **gesis** components during installation, presents sample applications and leads directly to the

relevant "**gesis** NETWORK member". By means of a search function within the partner list, the correct partner for each task can be determined. Different parameters such as "Application" or "Country" make the search more precise.

**gesis** NETWORK offers high transparency for the market of all products equipped with **gesis**. With a mouse click, planners, architects or electrical installers can find all the products and data required for the installation concept. In addition, **gesis**

NETWORK is a presentation forum that provides excellent publicity value for the products of various system partners, as it shows their own logo and has a link to their own website. The manufacturers of **gesis** compatible solutions present themselves to completely new opportunities.

**gesis** NETWORK starts with the goal of providing a market overview of all products equipped with **gesis**. In order to facilitate the navigation, the categories plug+light, plug+power and plug+work were developed.

# 25 YEARS gesis

**Willkommen im Netz.**

- Ackermann
- Andromeda
- Ansong-Belux
- Arctite
- Beghelli-Epfast
- Cohausz
- DEXTRA
- DL-SYSTEM
- ELDO
- ELKOVO
- erea
- ETAP
- Fagerhults
- FITZGERALD LIGHTING
- GERA-LEUCHTEN
- Genov Lichttechnologie
- Hoffmeister Leuchten
- Holophane
- light
- PLA Imperial
- INGE OPAVA
- Istar
- König+Neurath
- Lampaper
- LightDesign
- LightPartner
- LITE-LICHT
- LITEC
- A. & H. MEYER
- MODUS
- MEDAX
- OMS
- Philips Lighting
- Polans-Rem
- Popp
- Profile Lighting
- RIDI Leuchten
- RUCO LICHT
- Alfred Rudolph
- RZB
- SCHWEIBER ELECTRIC
- Schuch
- SETSQUARE
- Siteco
- SPITTLER
- STAND-LUX
- Tiebau
- Trevo
- Tuma Jiri
- WILA Leuchten

- Reihenketten
- PCB-Klemmen
- Elektronik-Komponenten
- Feldbustechnologie
- Steckbare Elektroinstallation
- Industrie-Steckverbinder

**Nutzen Sie das gesis® NETWORK – jetzt auch im Internet.**

Stellen Sie sich vor, Sie hätten steckbare Schalter, Steckdosen oder Leuchten. Alle vorgefertigt mit einem Anschluss für **gesis®** – der steckbaren Elektroinstallation von Wieland Electric. Kein Verdrahten, nur noch stecken.  
Eine Wunschvorstellung?  
Nein, bereits Realität! Im **gesis®** NETWORK finden Sie zahlreiche Produkte namhafter Leuchten- und Komponentenhersteller aus ganz Europa. Alle mit passendem Anschluss – fertig für Ihr ganz eigenes **gesis®**-Netzwerk. Schauen Sie doch gleich mal rein.

**www.gesis-NETWORK.com**

**www.wieland-electric.com**

**wieland**  
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