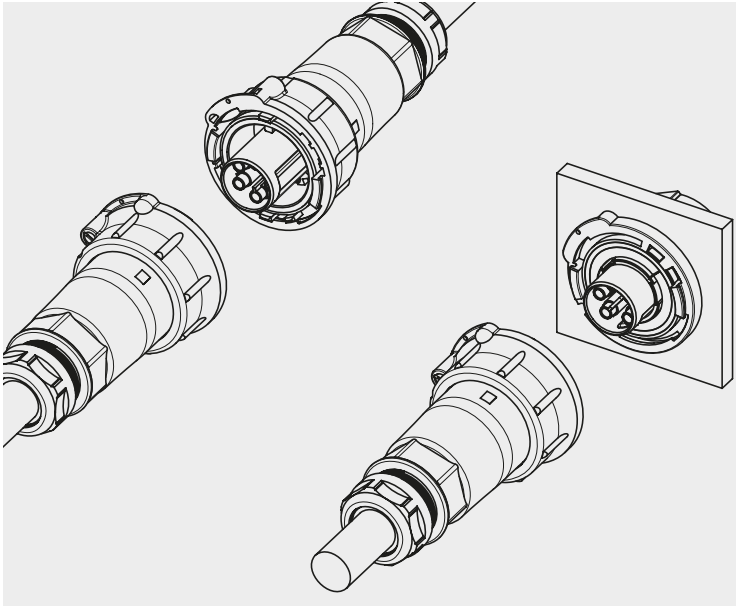




The new **RST**[®] POWER series up to 50 A


Application example



General

The new **RST**[®] POWER series is particularly designed for device engineering. With a current-carrying capability of 50A combined with an extremely compact design, the connector fits almost everywhere.

Coding

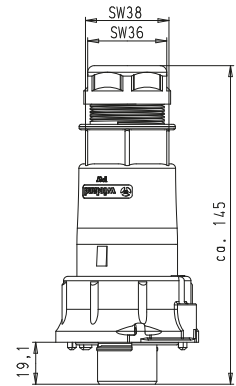
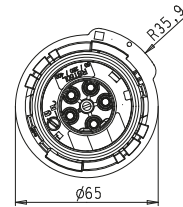
For daily updates visit the website at http://eshop.wieland-electric.com . Assembly instructions and other technical information can be found in the Technical Data or in eShop.				Application	Power max. 50A
				Mechanical coding	250/400V 1, 2, 3, N, ⊕ 
Name	Description	Connection style	Strain relief housing	Connection points per pole	black
Connectors	1 x wire entry	Screw Crimp	yes	1	✓
Device connectors	M32 connector, standard	Screw Crimp	yes	1	✓

Connectors, straight for cables Ø 4 – 6 mm and 4 – 10 mm

Female connector



Illustration
M 32 cable gland



with screw connection

Wire	mm ²
solid	from 4.0 to 6.0*
stranded	
flexible wires	from 4.0 to 16.0
Approvals	VDE, c CSA us

with crimp connection

Wire	mm ²
flexible wires	from 4.0 to 10.0
Approvals	VDE, c CSA us

Application Coding Cable gland Cable Ø in mm Color

Power max. 50A		M 32	15 – 25	black
		M 40	20 – 32	black

Part No.

97.051.4053.1
97.051.4253.1

Part No.

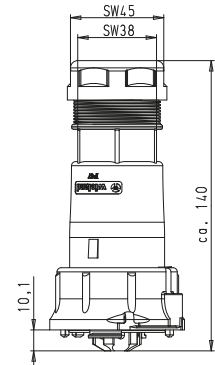
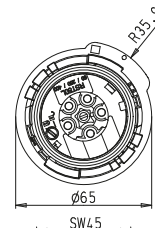
97.151.0053.1
97.151.0253.1

Contacts separately under Accessories, see following pages.

Male connector



Illustration
M 40 cable gland



with screw connection

Wire	mm ²
solid	from 4.0 to 6.0*
stranded	
flexible wires	from 4.0 to 16.0
Approvals	VDE, c CSA us

with crimp connection

Wire	mm ²
flexible wires	from 4.0 to 10.0
Approvals	VDE, c CSA us

Application Coding Cable gland Cable Ø in mm Color

Power max. 50A		M 32	15 – 25	black
		M 40	20 – 32	black

Part No.

97.052.4053.1
97.052.4253.1

Part No.

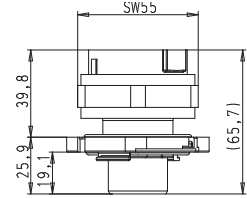
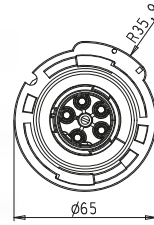
97.152.0053.1
97.152.0253.1

Contacts separately under Accessories, see following pages.

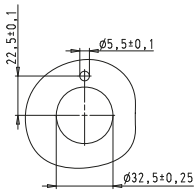
* Solid and stranded wires > 6.0 mm² cannot be connected in the available space due to their rigidity.

M32 device connector straight, standard

Female connector



Drilling template for device connectors fixed in position



with screw connection

Wire	mm ²
solid	from 4.0 to 16.0
stranded	
flexible wires	from 4.0 to 16.0
Approvals	VDE, c CSA us

with crimp connection

Wire	mm ²
flexible wires	from 4.0 to 10.0
Approvals	VDE, c CSA us

Application Coding Fixation with bolts Color

Power max. 50A		fixed in position	black
		not fixed in position	black

Part No.

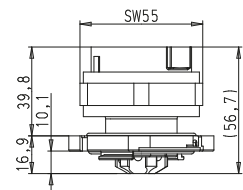
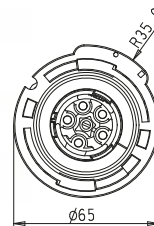
97.051.5553.1
97.051.5053.1

Part No.

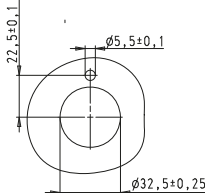
97.151.1553.1
97.151.1053.1

Contacts separately under Accessories, see following pages.

Male connector



Drilling template for device connectors fixed in position



with screw connection

Wire	mm ²
solid	from 4.0 to 16.0
stranded	
flexible wires	from 4.0 to 16.0
Approvals	VDE, c CSA us

with crimp connection

Wire	mm ²
flexible wires	from 4.0 to 10.0
Approvals	VDE, c CSA us

Application Coding Fixation with bolts Color

Power max. 50A		fixed in position	black
		not fixed in position	black

Part No.

97.052.5553.1
97.052.5053.1

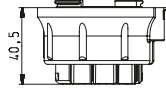
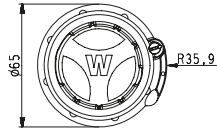
Part No.

97.152.1553.1
97.152.1053.1

Contacts separately under Accessories, see following pages.

Cover

For safe covering of unused male or female components



Name	Color	Part No.
Cover	black	Z5.567.5653.0

Sample kit RST 50i5

Complete kit

Contents:

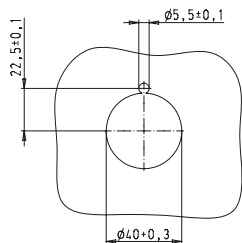
- Connectors
- Device connection
- Cover
- Knock-out (metal sheet)



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



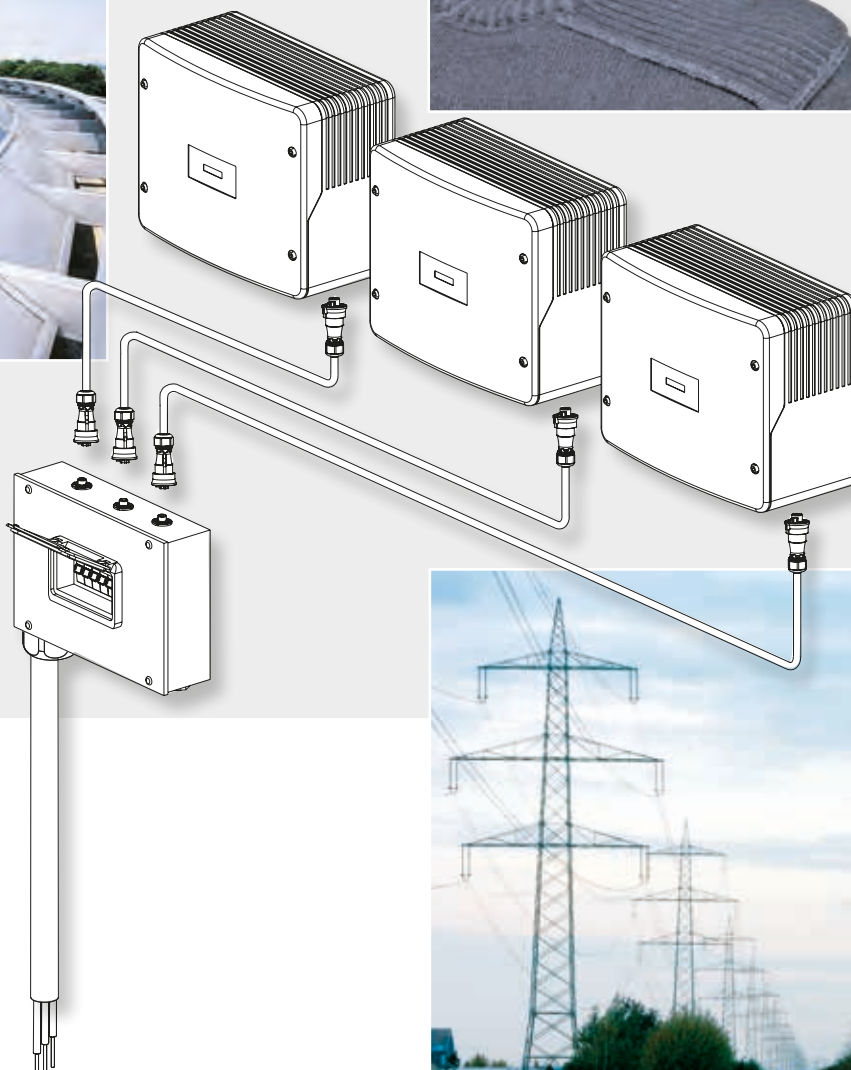
Name	Marking	(groove) mm ²	Part No.
Female contact	None	4.0	02.126.0621.8
Female contact	1	6.0	02.126.0721.8
Female contact	None	10.0	02.126.0821.8
Male contact	None	4.0	05.545.2821.8
Male contact	1	6.0	05.545.2921.8
Male contact	None	10.0	05.545.3021.8

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

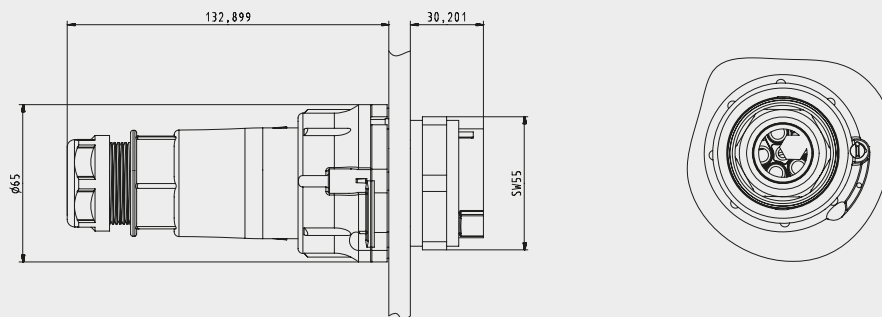


Example:
Solar collective
distribution box

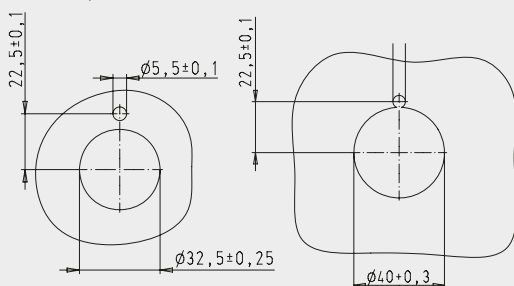


RST® POWER

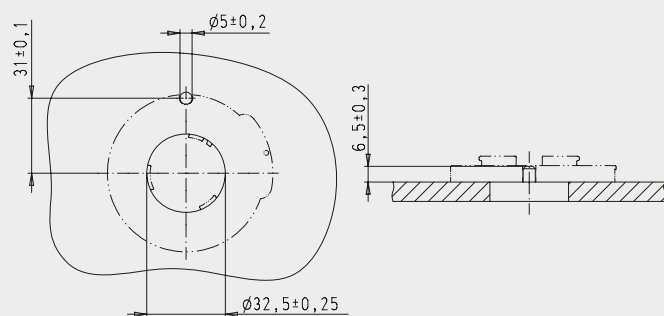
Rated voltage:	250/400V	
Rated current:	50A	
Rated cross-section:	rigid cables with 4.0 mm ² to 6.0 mm ² for plug connectors (up to 16 mm ² with device connectors) fine-stranded cables with 4.0 mm ² to 16.0 mm ²	
Number of poles:	4-pole	5-pole
Pole designation:	1, 2, 3, ⊕	1, 2, 3, N, ⊕
Material:	Contact parts: brass, surface-plated Housing parts: thermoplastic material PA 66, halogen-free, V2 Sealing material NBR, TPE	
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.	
Sheath strip length:	L/N = 70 mm, SL = 80 mm	
Insulation strip length:	Screw 10 mm (crimp 11 mm)	
Torques:	Cable gland SW 36: 8 Nm; SW 38: 14 Nm	



Hole pattern for M32 device connectors,
alternative M40 with adapter ring
(fixed in position)

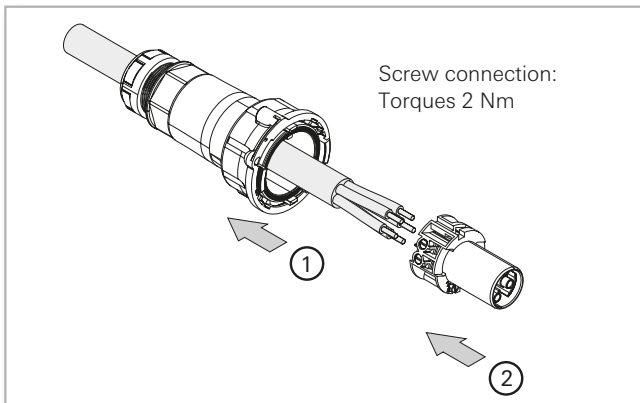


Alternative fixed in position (cams on the housing)

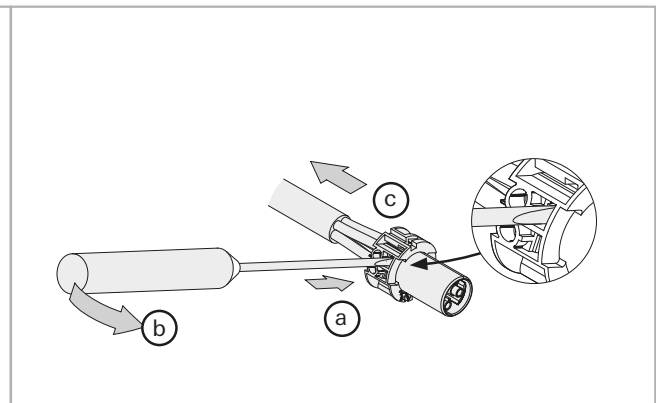


Connectors 4- and 5-pole

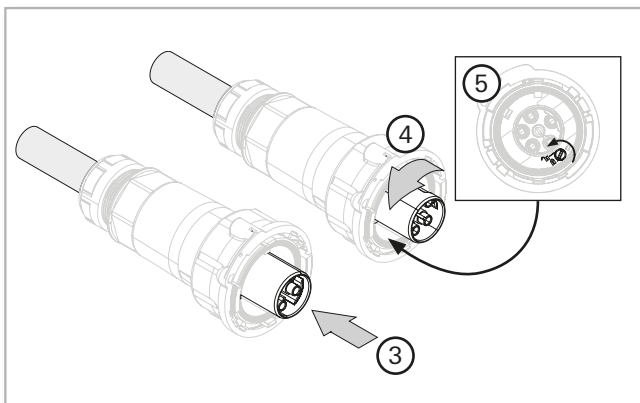
Connect the wires ...



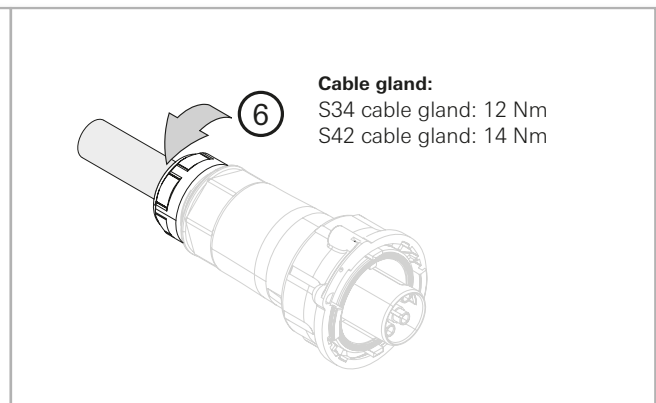
... Disconnect the crimp contacts



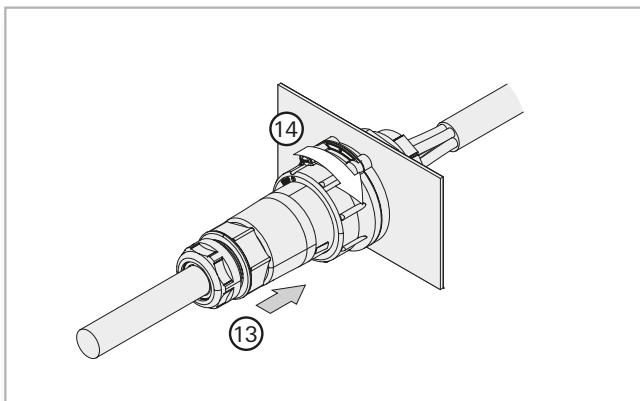
Secure the contact inserts ...



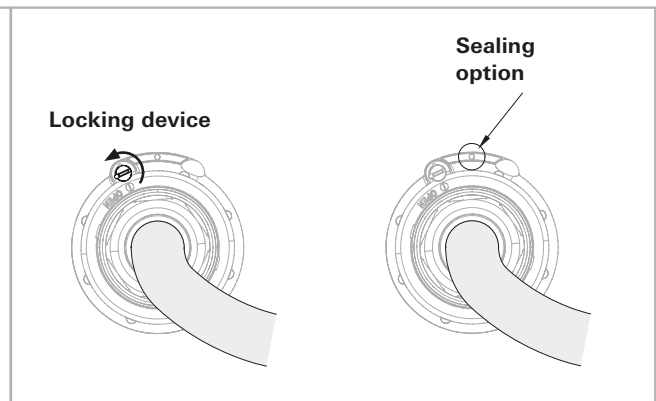
... Tighten the cable gland



Bayonet lock ...

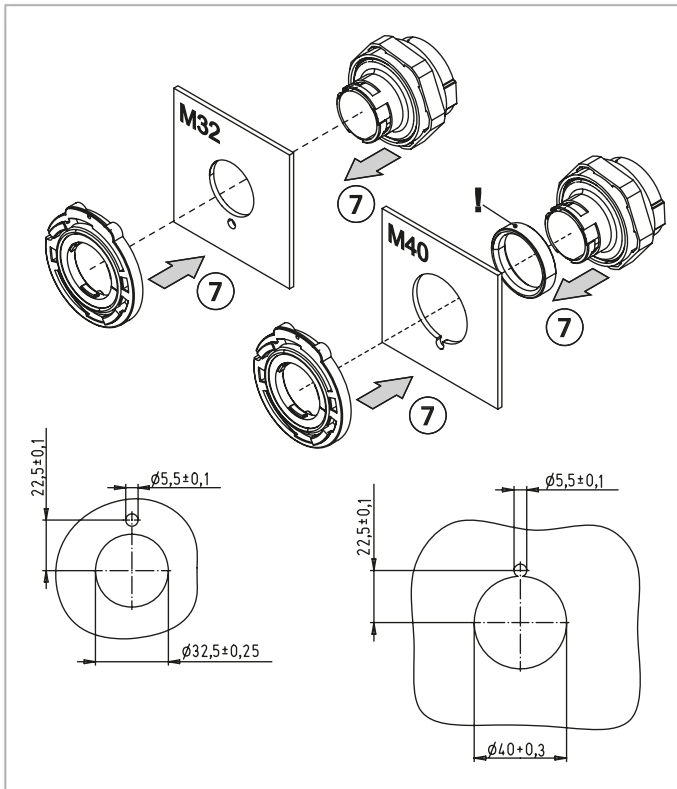


... and protection against unintentional disconnection

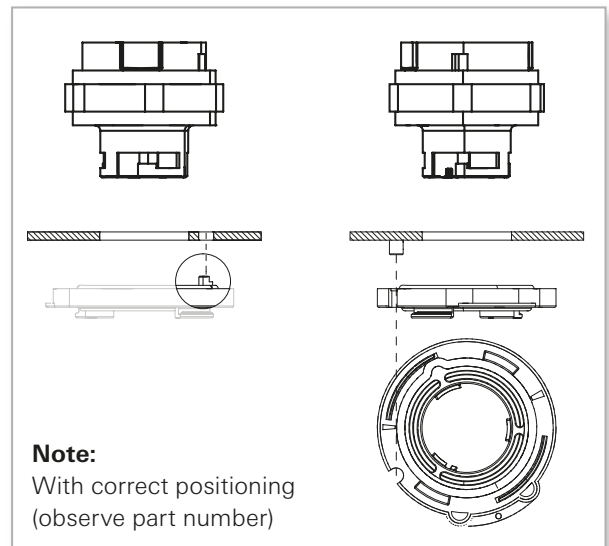


Device connections 4- and 5-pole

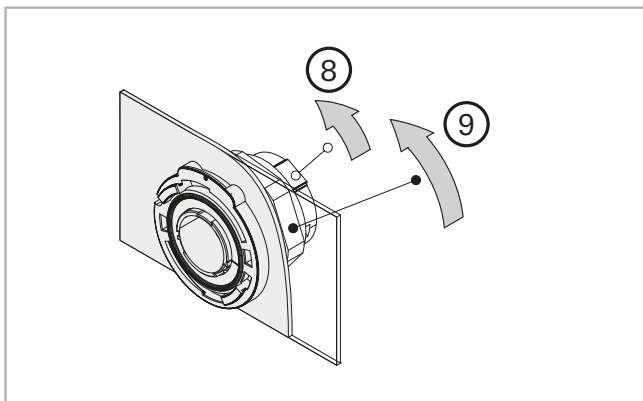
Mounting housing flange,
dimensions in mm



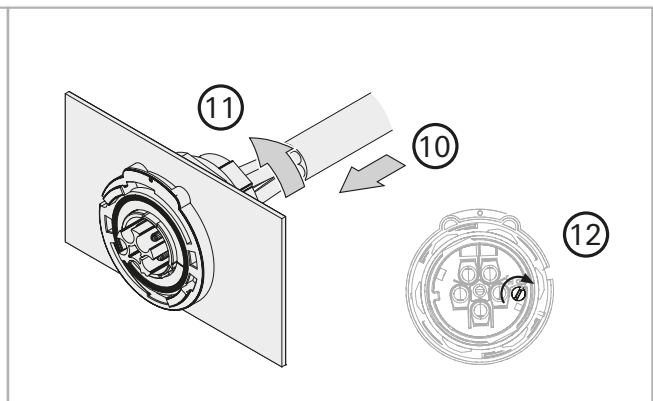
Positioning option



Latching the housing flange ...



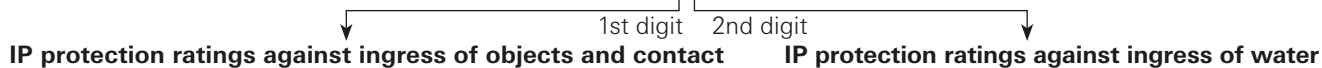
... securing the contact insert




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		

	
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 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, 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	+
Fruit juice, fruit acid	+	Sulfuric acid (diluted, RT)	+
Tannic acid	+	Sulfur hexafluoride	+
Glycerin	+	Sweat	+
Glycantine, aqueous solution, 40%	+	Sebacic acid ester	+
Potassium chloride	+	Spirits	+
Caustic potash solution, aqueous solution, 10%	+	Nitric acid (10%)	+
Sodium, aqueous solution, 10%	+	Hydrochloric acid (10%)	+
Linseed oil	+	Water, RT, free from chlorine up to 80 °C	+
Milk	+	Water: sea water resistance, artificial, 20 °C	+
Lactic acid, 20 °C	+	Stannic chloride, 20 °C, saturated	+

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.

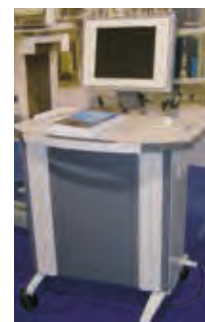
Temporary outdoor installations without special demands can be implemented using H07RN-F rubbersheathed cables. However, it is essential to check whether or not any additional action, such as laying inside installation pipes, is required.

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

