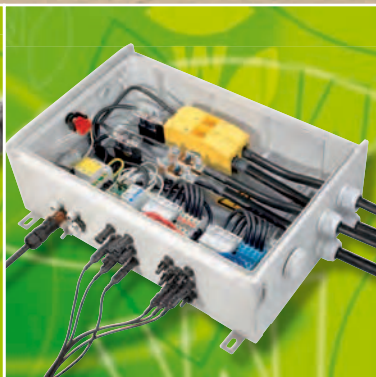




gesis[®] SOLAR
**Electrical Installation Technology
for Photovoltaics**
Catalog 2013





**Our Service
Hotline SOLAR:**

The **gesis**[®] RAN solar distribution units are configured for your project and delivered on time and ready for installation. Ask our experts!

Phone: +49-9 51 93 24-972

ACDC
Pluggable
SOLAR
Connector System





Intro

AC/DC-SOLAR

A solution for everything

Page

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PST 40i1

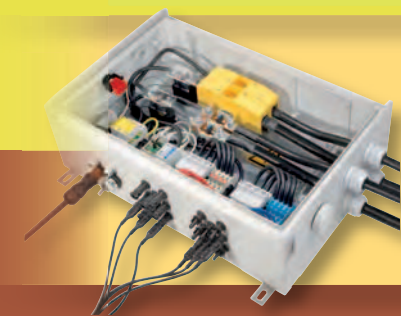
DC-SOLAR Products

PST40i1

Cable assemblies
Connectors
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Distribution Units DC-SOLAR AC-SOLAR

Solar AC and DC distribution units for your project

Planning **gesis** RAN SOLAR
Solutions for the combiner box
Overvoltage protection **wietap**
VPN industrial router **wienet**
DIN rail terminal blocks **selos**

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RST 25i3 RST 25i5

AC-SOLAR Products

RST 25i3 / RST 25i5

Connectors, cable assemblies **RST 25i3**
Connectors, cable assemblies **RST 25i5**
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RST 50i5

AC-SOLAR Products

RST 50i5

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A solution for everything

Efficiency in all fields of photovoltaics

The Wieland Group with almost 2,000 staff members is one of the leading companies worldwide in the field of electrical connection technology. Environmental protection and preservation of natural resources are major company goals for Wieland.

Environmental protection and electrical contacts are a perfect match in the field of photovoltaics (PV): the sun is an inexhaustible energy source – Wieland's photovoltaic connectors harness this energy sustainably and efficiently.

The AC solar system

With its 3 and 5 pole connector system RST25i3/i5 Wieland offers the optimal solution for connectivity on the AC side. Pre-assembled components and the IP 65/67 protection degree enable a fast and safe installation even under adverse conditions. The RST system includes field assembly connectors, pre-assembled connectors and cordsets, and also device connectors, to be used for example on inverters and distribution panels. Leading manufacturers equip their products with these connectors in their factories. Furthermore pre-assembled distribution panels and combiner boxes are part of our product range. Inverters are often installed in groups, often with the same distance between them. On the AC side, installation is performed in a similar way which has long been the case in module-to-module connections (DC). Using the gesis products installation times and logistics are reduced to a minimum.

The DC solar system

The PST40i1 photovoltaic connectors from Wieland Electric for the connection of PV modules and inverters are safe, easy to install environmentally sealed, and require a tool for disconnect. This was confirmed by an extensive test performed at an independent laboratory for the photovoltaic magazine "Photon". The laboratory test not only certified that the PV connectors have a top position among the tested connectors, but that the connectors also were one of the winners among the single-pole, latchable solar connectors (also see: "Photon" 09/2009).

Its IP68 protection degree, the robust design as well as the TÜV-tested compatibility with competitive products enable flexible use.

With conductor cross sections from 4 mm² to 10.0 mm² even long distances to the inverter can be implemented pluggably and efficiently.

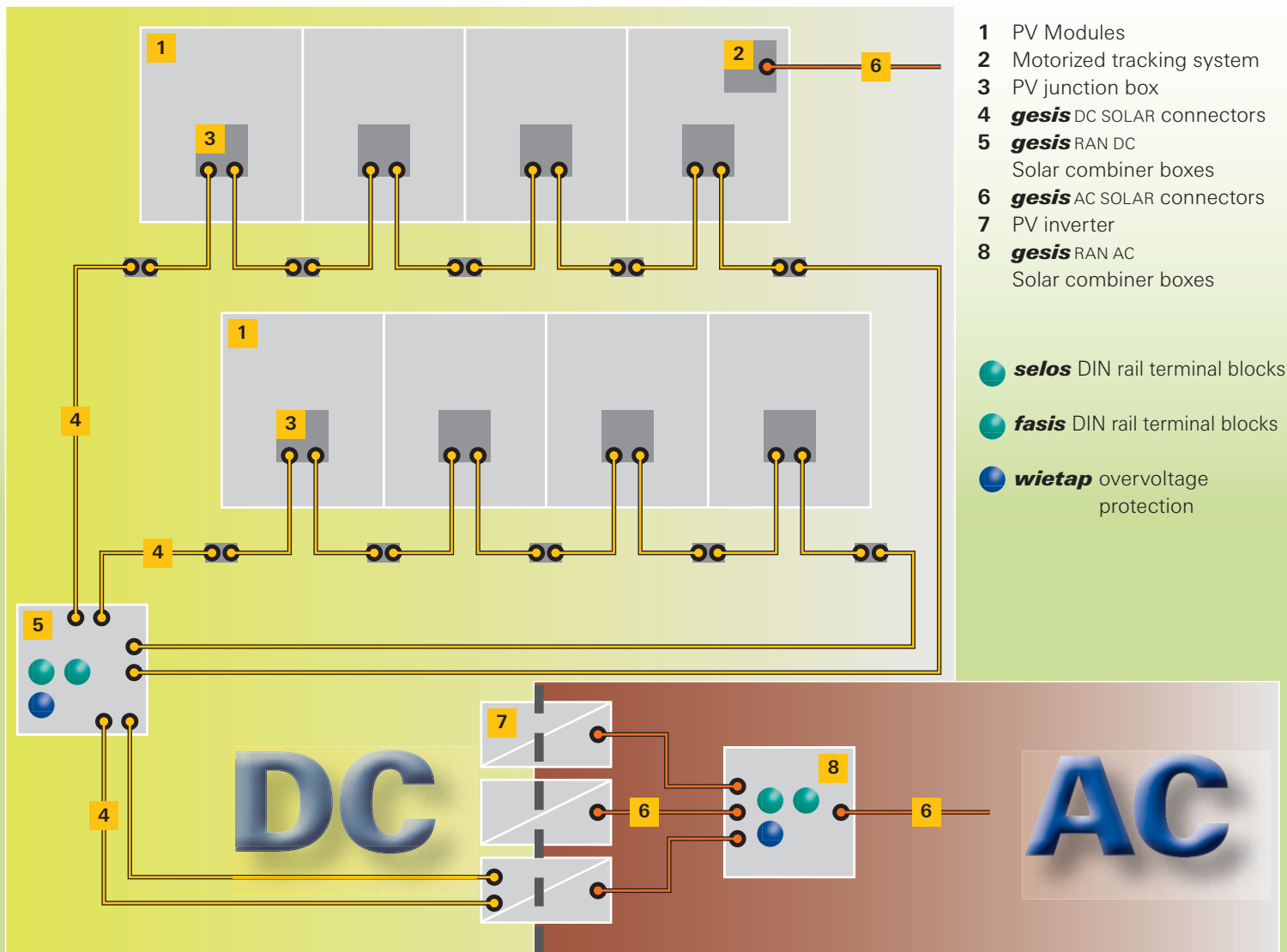
Wieland photovoltaics – pluggable from the module to the power connection

With Wieland, the enormous benefits of a pluggable electrical installation are no longer restricted to the DC side of photovoltaic systems.

Whether for main power supply connections (AC) or connectors for the drives of tracking systems, durable electrical connectors are the backbone of a profitable installation.



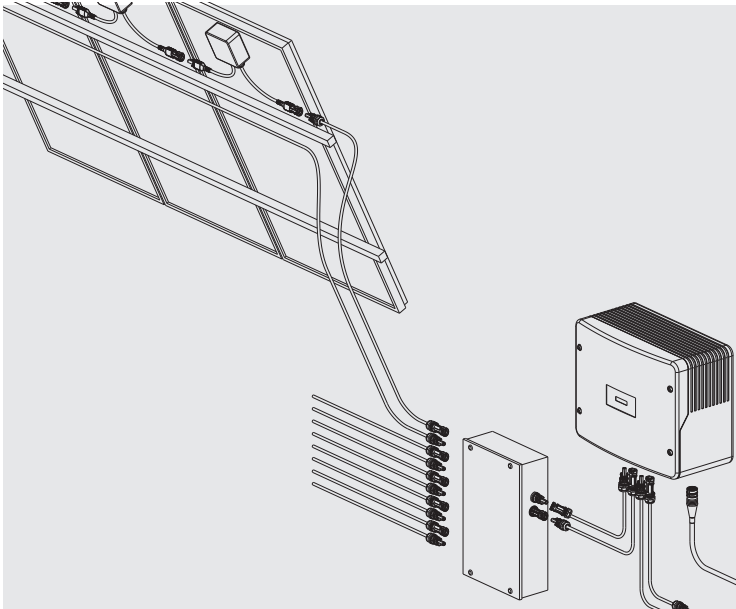
The solar product range from Wieland offers an efficient connectivity solution for all electrical termination points, in solar systems of every size.



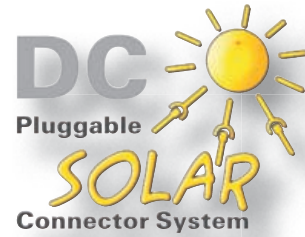


DC-Solar applications – Connectors for photovoltaic systems

Application example




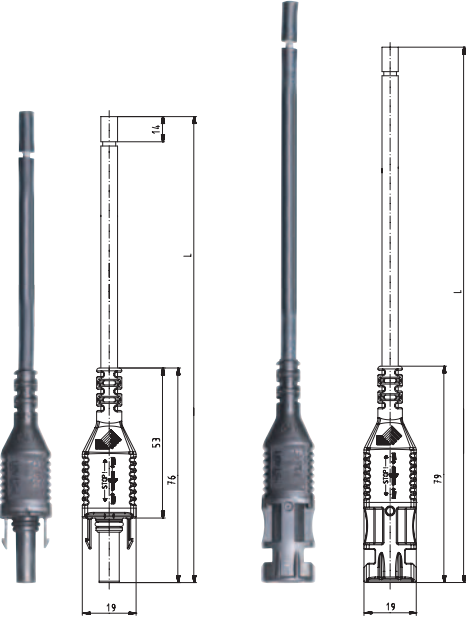

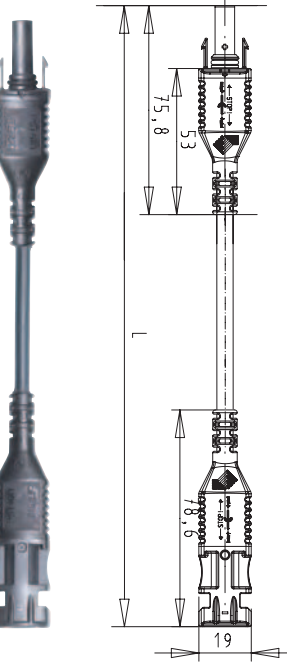
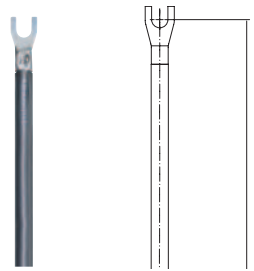
General



Features:

- Easy installation with only a few components
- Overmolded cable assemblies, crimp contact field-assembled connectors, and also bulkhead mount device connectors
- Field assembly crimp contacts are removable from the housings
- Mate-compatible with competitive standard products
- High IP protection IP68 (3 m, 2 h)
- For 4.0 / 6.0 / 10.0 mm² cross sections
- High current-carrying capability up to 40 A
32 A at 4.0 mm²;
40 A at 6.0 mm² and 10.0 mm²
-> unaffected by derating curve up to 85 °C
- Very low contact resistance of
< 0.15 mOhm (typ.) with solid, turned brass contacts
with silver plating
- Turned contacts mean that positioning is not required

Cable assemblies 2.5 – 10.0 mm² for installers and manufacturers of solar modules

<p>TECSUN PV1-F</p>  <p>Pre-assembled Photon www.photon-international.com Total grade 1.7 Best in class (09/2010)</p>	 <p>Female – Free end / Male – Free end (cable pair)</p> <p>Connection cable</p> <p>Wire ends insulation partly stripped</p> <p>Insul. strip length 14 mm</p>	<p>TECSUN PV1-F</p>  <p>Pre-assembled Photon www.photon-international.com Total grade 1.7 Best in class (09/2010)</p>	 <p>Female – Male</p> <p>Extension cable</p> <p>Locking device yes</p>																																										
<p>Color Length m¹⁾</p> <p>black 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4</p> <p>¹⁾ Total length of Male – Free End and Female – Free End each</p>	<p>Part No.</p> <p>For cable cross section:</p> <table border="1"> <thead> <tr> <th>2.5 mm²</th> <th>4.0 mm²</th> <th>6.0 mm²</th> </tr> </thead> <tbody> <tr><td>96.311.1209.1</td><td>96.312.1209.1</td><td>96.313.1209.1</td></tr> <tr><td>96.311.1309.1</td><td>96.312.1309.1</td><td>96.313.1309.1</td></tr> <tr><td>96.311.1409.1</td><td>96.312.1409.1</td><td>96.313.1409.1</td></tr> <tr><td>96.311.1509.1</td><td>96.312.1509.1</td><td>96.313.1509.1</td></tr> <tr><td>96.311.1609.1</td><td>96.312.1609.1</td><td>96.313.1609.1</td></tr> <tr><td>96.311.1709.1</td><td>96.312.1709.1</td><td>96.313.1709.1</td></tr> <tr><td>96.311.1809.1</td><td>96.312.1809.1</td><td>96.313.1809.1</td></tr> <tr><td>96.311.1909.1</td><td>96.312.1909.1</td><td>96.313.1909.1</td></tr> <tr><td>96.311.2009.1</td><td>96.312.2009.1</td><td>96.313.2009.1</td></tr> <tr><td>96.311.2109.1</td><td>96.312.2109.1</td><td>96.313.2109.1</td></tr> <tr><td>96.311.2209.1</td><td>96.312.2209.1</td><td>96.313.2209.1</td></tr> <tr><td>96.311.2309.1</td><td>96.312.2309.1</td><td>96.313.2309.1</td></tr> <tr><td>96.311.2409.1</td><td>96.312.2409.1</td><td>96.313.2409.1</td></tr> </tbody> </table>	2.5 mm ²	4.0 mm ²	6.0 mm ²	96.311.1209.1	96.312.1209.1	96.313.1209.1	96.311.1309.1	96.312.1309.1	96.313.1309.1	96.311.1409.1	96.312.1409.1	96.313.1409.1	96.311.1509.1	96.312.1509.1	96.313.1509.1	96.311.1609.1	96.312.1609.1	96.313.1609.1	96.311.1709.1	96.312.1709.1	96.313.1709.1	96.311.1809.1	96.312.1809.1	96.313.1809.1	96.311.1909.1	96.312.1909.1	96.313.1909.1	96.311.2009.1	96.312.2009.1	96.313.2009.1	96.311.2109.1	96.312.2109.1	96.313.2109.1	96.311.2209.1	96.312.2209.1	96.313.2209.1	96.311.2309.1	96.312.2309.1	96.313.2309.1	96.311.2409.1	96.312.2409.1	96.313.2409.1	<p>Color Length m¹⁾</p> <p>black 1.0 2.0 3.0 4.0 5.0 6.0</p>	<p>Part No.</p> <p>For cable cross section:</p> <p>4.0 mm²</p> <p>96.312.1000.1 96.312.2000.1 96.312.3000.1 96.312.4000.1 96.312.5000.1 96.312.6000.1</p> <p>For cable cross section:</p> <p>6.0 mm²</p> <p>96.313.1000.1 96.313.2000.1 96.313.3000.1 96.313.4000.1 96.313.5000.1 96.313.6000.1</p>
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<p>The hole dimensions or diameters of the cable lugs are suitable for M5 screws.</p> <p>Std. Pack on request</p>	 <p>Spade lug</p> <p>Connection cable</p> <p>Wire ends Spade lug</p>	<p>black 1.0 2.0 3.0 4.0 5.0 6.0</p>	<p>For cable cross section:</p> <p>10.0 mm²</p> <p>96.314.1000.1 96.314.2000.1 96.314.3000.1 96.314.4000.1 96.314.5000.1 96.314.6000.1</p>																																										
<p>Color Length m</p> <p>black</p>	<p>Part No.</p> <p>on request</p>																																												

In accordance with installation regulation IEC 60364-5-52 (DIN VDE 0100-522.3) cable systems must be designed such that ingress of water will not cause damage. To ensure that water drains off as quickly as possible, the cable lengths differ by 10cm. This ensures that the connection is not the lowest point.

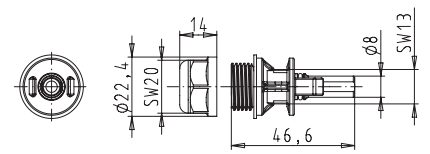
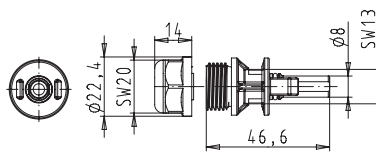
Connector housings Outer cable diameters of 4.0 – 8.0 mm




Female Contact

Field-assembled connectors and device connectors

Crimp technology
Contacts ordered separately

Assembly with customary flat wrench
SW13 for housing and
SW20 for gland



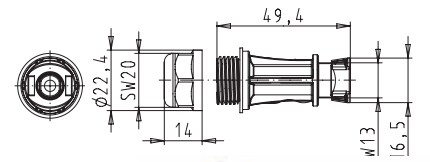
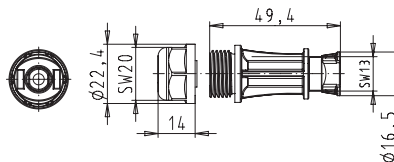
Approval	Outer cable diameter in mm	Color	Part No.	Std. Pack	Part No.	Std. Pack		
 TÜV certificate according to - UL VVDE V 0126-3/12.06 (EN 50521 being prepared)  ETL certificate through Intertek according to - UL 486A-486B/486D - CAN/CSA-C22.2 No. 65-03/ No. 198.2-05 UL approval being prepared 	4 – 5	black	Field-assembled connector		Device connector			
			Cable gland		pre-assembled			
		5 – 7	black	96.111.0153.1	100			
		7 – 8	black	96.111.0053.1	100			
				96.111.0253.1	100			
		with touring protection						
		4 – 5	black	Y6.111.0153.1	100			
		5 – 7	black	Y6.111.0053.1	100			
		7 – 8	black	Y6.111.0253.1	100			
		with touring protection						
						96.111.1053.1	100	
					96.111.1253.1	100		
					Y6.111.1053.1	100		
					Y6.111.1253.1	100		




Male Connector

Field-assembled connectors and device connectors

Crimp technology
Contacts ordered separately

Assembly with customary flat wrench
SW13 for housing and
SW20 for gland



Approval	Outer cable diameter in mm	Color	Part No.	Std. Pack	Part No.	Std. Pack		
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				96.112.0253.1	100			
		with touring protection						
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		5 – 7	black	Y6.112.0053.1	100			
		7 – 8	black	Y6.112.0253.1	100			
		with touring protection						
						96.112.1053.1	100	
					96.111.1253.1	100		
					Y6.112.1053.1	100		
					Y6.112.1253.1	100		

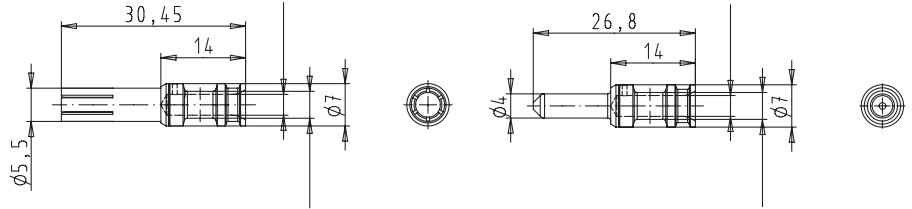
Crimp contacts for 4.0 – 10 mm² conductor cross sections

Female Connector

Crimp technology

Standard pack is delivered in a plastic bag. Delivery in complete standard packs only.

Use Wieland crimp tool only!



Marking	Cable cross section in mm ²	AWG	Part No.	Std. Pack	Part No.	Std. Pack
			Contact part – Female contact		Contact part – Male contact	
			Insul. strip length	17 + 1 mm	Insul. strip length	17 + 1 mm
unmarked	4.0	12	02.125.8202.8	100	05.545.2202.8	100
1 groove	6.0	10	02.125.8302.8	100	05.545.2302.8	100
unmarked	10.0	8	02.125.8402.8	100	05.545.2402.8	100

PST40i1 housing with turning protection

Complete intermateability with the existings PST40i1 system.
Can be used in round and mould openings.
High mechanical strength due to the 18mm thread.

PST40i1 Mounting

Use Wieland crimp tools only!
To be connected by specialists only!
Tightening of the cable gland using flat wrench SW 13 for housings and SW 20 for nuts.
Tightening torque for cable glands 3 – 3.5 Nm with TECSUN PV1-F cables.



Technical data for PST40i1 connector system

Wire range:	min. 4.0 mm ² ; min. 12 AWG;	max 10.0 mm ² max. 8 AWG	TÜV version ETL version
Rated current: (without derating up to 85°C)	32 A at 4.0 mm ² 40 A at 6.0 mm ² 40 A at 10.0 mm ²	(12 AWG) (10 AWG) (8 AWG)	
Rated voltage:	1000 V 600 V	(IEC/CEI) (UL/ETL)	TÜV version ETL version
Test voltage:	6 kV		
Overvoltage category:	CAT III (8 kV)		
Contact material:	solid brass, silver-plated		
Contact resistance:	< 0.15 mOhm (typ.)		
Flammability class:	UL94-V2 UL94-V0		TÜV version ETL version
Weathering resistance/ UV protection:	f1		
Pollution degree:	3		
Application class:	A		
Protection class:	II		
Degree of protection:	IP65 / IP66 / IP67 / IP68 (on request) (Specifications: plugged in or with cover piece)		
Insulation strip length:	17 + 1 mm		
Ambient temperature:	-40°C up to +85°C (+110°C upper limit temperature)		
Insulation material:	PA PC		TÜV version ETL version
Locking according to NEC 2008:	Yes, with locking clip		
Tightening torque:	3.5 Nm for cable glands to ensure strain relief and tightness		

Installation instruction for field assembly:

The tightening torque must be adapted to the cable! Typical tightening torques range between 3 – 4 Nm. The solar cables from various manufacturers differ with regard to material, hardness and outer diameter. Therefore tightness of the cable glands must be checked in pre-assembly and the tightening torque must be increased for safety purposes, if required. When the TECSUN cable from Prysmian is used, tightness and strain relief are guaranteed with a torque of 3.5 Nm.

Basically the installer is responsible for proper cable layout and connector assembly.

Notice: **DC solar connectors must not be disconnected under load!**

Technical data for PV cable

TECSUN PV1-F

Suitable for:

- Use in PV power supply systems
- Use outdoors and indoors with free and fixed layout
- Installation inside wireways, walls, or surface mount, electrical installation ducts and devices
- Suitable for protection class 2; short-circuit and ground-fault proof
- Basically the regulations in IEC 61215 und 61646. IEC 64/123/CD will apply. DIN VDE 0100 sect. 520



Features / installation criteria:

Manufacturer:	Prysmian Kabel und Systeme GmbH. www.prysmian.com / www.special-cables-neustadt-coburg.de
Brand name:	TECSUN
Design ID:	PV1-F
Standards	
Approvals:	DIN VDE 0282 sect. 13. HD 22.13. VDE reg. no. 7985. TÜV certificate no. R 60010750-000 New requirements (2008) according to TÜV and VDE are fulfilled. Approval being prepared) UL 4703

Special features:


- VDE and TÜV tested. EC declaration of conformity no. 03CE 004. UL 4703
- Expected lifecycle: 30 years when used as specified and with consideration of temperature, humidity, influence from ozone, UV and mechanical movement. Long-term behavior tests in line with IEC 6026 using Arrhenius.
- System voltage up to 2 kVDC. Test voltage 10 kVDC
- Operating temperature: cable –40 to +90 °C (+120 °C max. operating temperature)
- Very good fire resistance behavior in fire propagation and smoke emission as well as in corrodibility and very low toxicity of the smoke gas
- Halogen-free, meshed materials for insulation and sheath
- Ecological safety regarding recycling, waste disposal and manufacturing
- UV and ozone resistant

Rated voltage:	AC 0.6 / 1.0 kV
max. PV system voltage:	DC up to 2.0 kV possible
Operating voltage max.:	AC 0.7/1.2 kV / DC 0.9/1.8 kV
Test voltage:	AC / DC 6.0 / 10 kV (15 min)
Current-carrying capacity:	according to DIN VDE 0298 sect. 4
Tests:	accord. to DIN VDE 0282 sect. 2. HD 22.2 – cable resistance, voltage test AC and DC; dielectric strength, surface resistance (spark test), insulation resistance at 20 °C and 90 °C in water and at 120 °C in open air. EN 50305 sect. 6 – direct voltage resistance (10 days, 85 °C. in sea water, 1.5 kV DC)



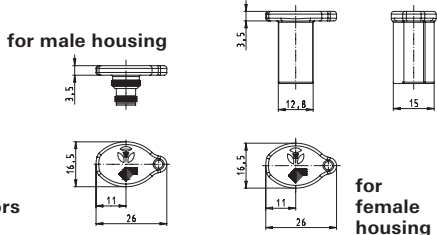
Accessories

Cover plug



Description	Std. Pack	Part No.
Male		
without lanyard	50	05.566.6480.0
with lanyard	50	Z5.566.6480.0
Female		
without lanyard	50	05.566.6380.0
with lanyard	50	Z5.566.6380.0


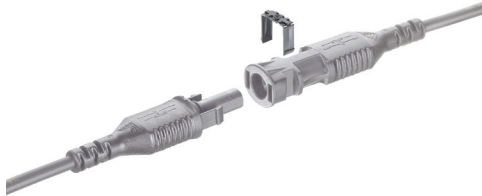
for protection of unplugged male or female connectors



for male housing

for female housing


Locking clip

Description	Std. Pack	Part No.
Locking clip	100	05.568.2756.0

Locking clip (compliant with NEC 2008)
can be opened with ordinary screwdriver

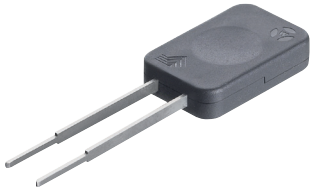

Grounding grommet



Description	Std. Pack	Part No.
Grounding grommet	50	99.570.0000.7

For safe ground connection
with customary tools.

Extraction tool





Description	Std. Pack	Part No.
Extraction tool		05.502.1600.0

This tool can be used to extract the contact from the PST40i1 housing.


Accessories

Multitool	Description		Color	Part No.
	Multitool	for 4 mm ²	12 AWG	95.101.1500.0
	Multitool	for 6 mm ²	10 AWG	95.101.1600.0



The Multitool can be used for cutting, stripping and crimping PV cables, replacing three tools with one Multitool!

Tool kit	Description		Color	Part No.
	Crimp tool kit (small) for	4.0/6.0/10.0 mm ²		99.630.0000.0




Contents:

- Crimping tool
- Crimp die
- Crimping jaws D for 4.0 mm², 6.0 mm² and 10.0 mm² contacts
- Extraction tool (for contacts)
- Strip tool

The crimp tool kit (small) is not shown here.

Use Wieland crimp tools only!

PST40i1 system kit	Description		Color	Part No.
	PST40i1 system kit		black	99.426.0000.0




Contents:

- Male and female connector housings
- Cable glands with O-rings
- Cover plugs
- Female contacts
- Male contacts
- Table of contents DIN A4

Use Wieland crimp tools only!

PST40i1 sample kit	Description		Color	Part No.
	PST40i1 sample kit		black	99.424.0000.0

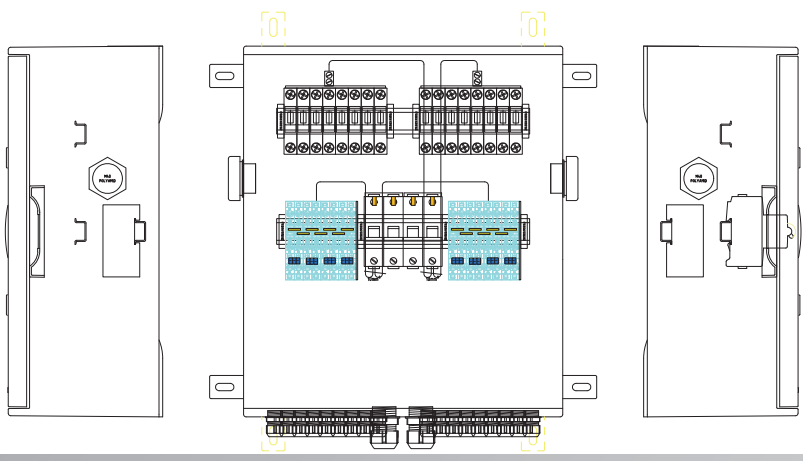
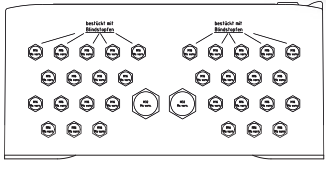


Trial set

Contents:

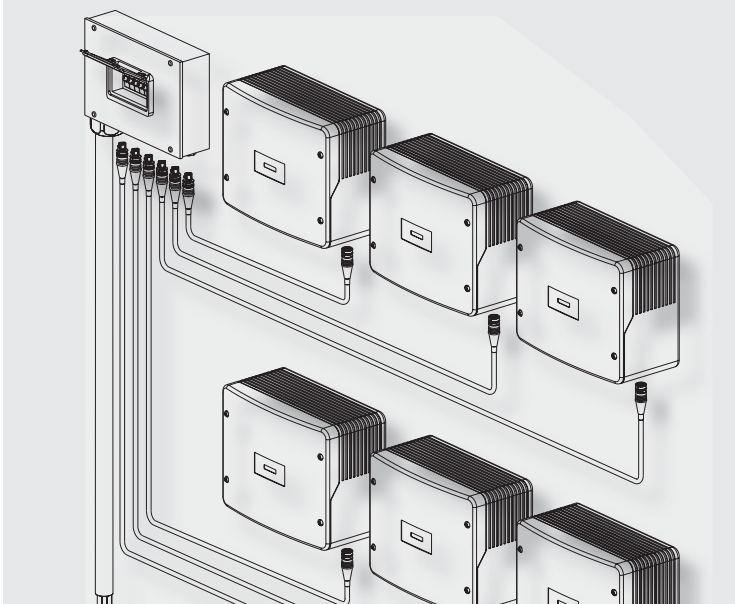
- Connectors for field-assembly
- Bulkhead connectors
- Contacts
- Cable assemblies
- Cover plugs
- Extraction tool (for contacts)





Solar AC and DC Distribution Units For Your Projects

Application example



Features:

- Distribution boxes for photovoltaic applications
- Protection class II
- UV-resistant polycarbonate housing, electric gray
- IP 65
- Ready for connection
- Optional lockout
- Prepared for grounding
- Passive ventilation (for climatic valves)
- Project-specific variations

General

System-based solution

Renewable energy sources are the future of energy generation – a future, the potential of which is still to be fully tapped.

To promote the effective and ecological use of renewable energy sources, we design, construct and market our **gesis** RAN SOLAR distribution units for photovoltaic promote installations. Our long term experience is continuously growing along with the requirements of the solar industry. When combined with the latest manufacturing technologies and our own solar testing facilities, featuring functionality and simulation programs, we guarantee high-quality **gesis** RAN SOLAR distribution panels for both the AC and DC side.

Wieland Electric GmbH, the leading manufacturer for connection technology, provides **gesis** RAN SOLAR distribution units that cover a spectrum from private residential systems to utility scale installations.



Robust and flexible Solutions for the DC distribution unit

Wieland provides specialized electrotechnical components which are ideally suited for the construction of photovoltaic installations. All components are characterized by a high degree of reliability. The robust design enables uninterrupted operation even under rough conditions.



DC distribution units – pluggable and customizable

The combiner box plays a major role in large photovoltaic plants. It bundles strings, enables isolation and overvoltage protection and can even be made pluggable. A complete range of specific components from DIN rail terminal blocks to overvoltage protection makes customization possible. Wieland Electric offers connection technology for use worldwide, whether with screw or spring clamp connection, 1.5 mm² or 240 mm² with VDE, UL or CSA approval.

The combiner box is the interface between the array and the inverter. This component is very important for the smooth operation of a solar installation. With Wieland components this is guaranteed.

Solar installations expose electrotechnical components to the roughest conditions. The *gesis*^{AC} SOLAR connectors from Wieland easily withstand these large climatic stresses.



Pluggable and Efficient

Complete product range for solar installations

For solar installations Wieland offers not only the enormous advantages of pluggable connection technology, but also a comprehensive range of well-engineered and extensive interconnect technology suitable for combiner boxes, distribution boxes and control cabinets.

Maximum efficiency

The **gesis** RAN SOLAR system always guarantees a high degree of efficiency. Due to this fact the installation can be implemented quickly and without errors – even under adverse weather conditions. This is possible using pre-assembled connectors and components providing IP 65 – IP 68 protection.

This advantage pays off not only for the initial installation. Individual components such as inverters, can be safely and quickly disconnected during maintenance via lockable connectors. Consistent protection against accidental contact as well as fast commissioning reduce the downtimes to a minimum.

Maximum customization

Wieland not only supplies components, but also offers customized solutions. A broad standardized range can be customized with pluggable connectors and advanced interconnect technology. This is made possible by the large scope of the Wieland system, the compatibility of its components as well as our know-how.



Benefits of a combiner box fitted with Wieland components:

- Pluggable connector PST 40i1 up to 10 mm²
- String collection
- Optional separation of individual strings
- Protection for inverters and array
- DC isolation between inverter and array
- Aluminum or copper conductors up to 1000V
- IEC, UL and CSA approvals



gesis[®]RAN Planning Support Economical, cost-efficient and safe

When planning your projects you want to focus on your competencies. Make use of our competency in planning solar distribution units!

Minimize costs with top quality

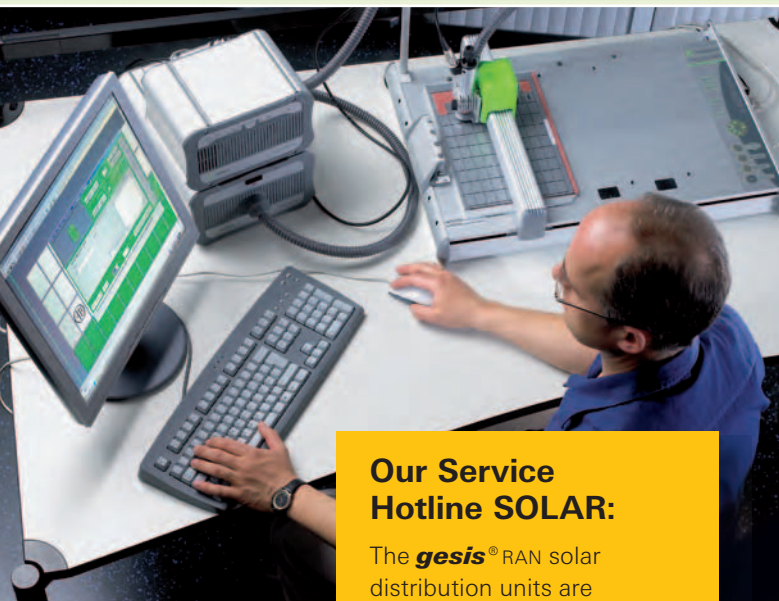
With **gesis** RAN solar distribution units, once complicated installations become a thing of the past. This saves time and reduces the costs. Furthermore you can be sure that everything will be assembled, tested and configured in accordance with currently valid regulations.

Our customers place value not only on top quality and on-time delivery, but also on efficient solutions. With our own, modern production plant and a highly motivated and experienced workforce we fulfill these criteria.

Wieland Electric stands for flexibility, know-how as well as for reliability, and works in accordance with national and international standards for manufacturing and testing (e.g. IEC, UL and CSA).

gesis RAN solar distribution units are manufactured according to VDE 0100 and IEC and meet protection class II.

A wide variety of clients take advantage of these benefits, and increase their competitive edge through cost reduction, and by focusing on their own core competencies.



Our Service Hotline SOLAR:

The **gesis**[®]RAN solar distribution units are configured for your project and delivered on time and ready for installation. Ask our experts!
Phone: +49-9 51 93 24-972



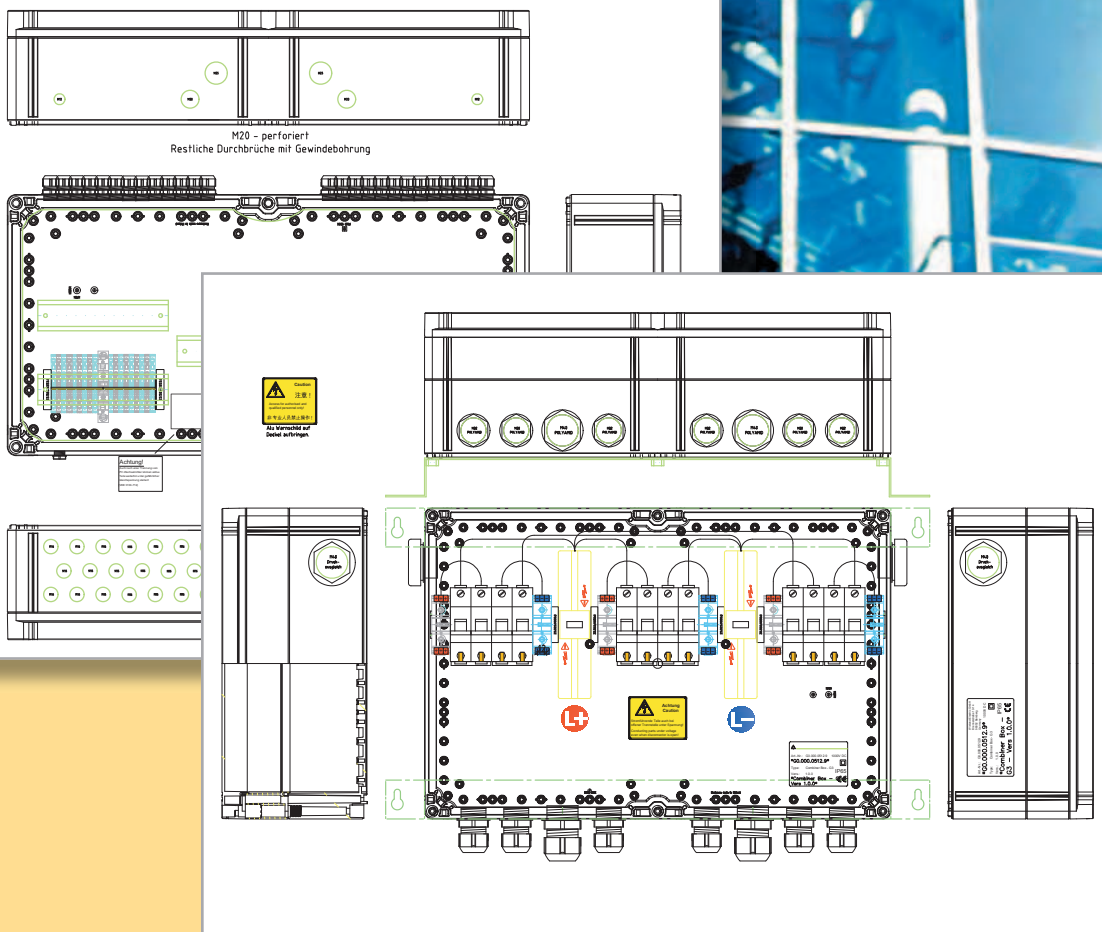
Excellence in project fulfillment

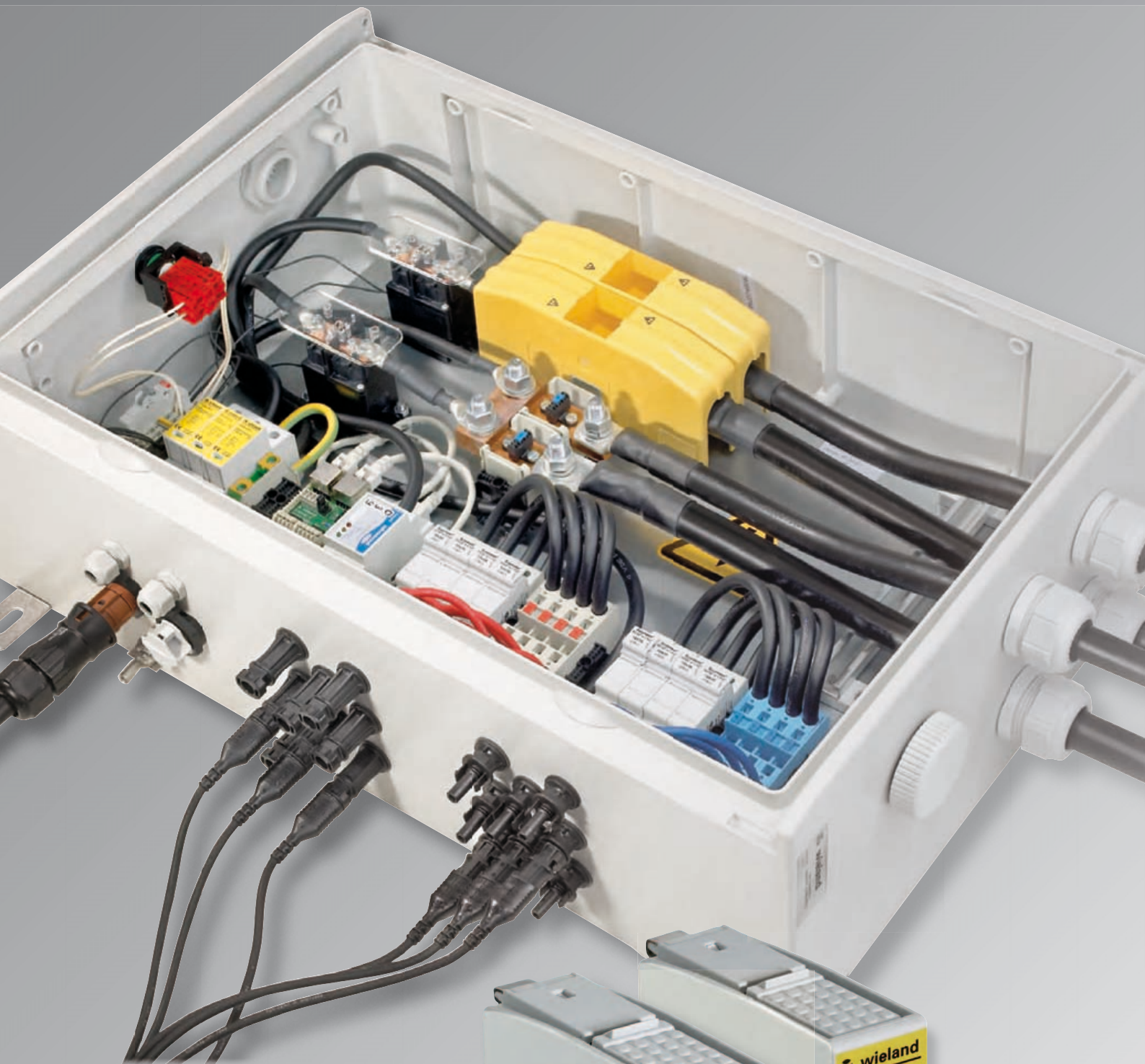
Our innovative **gesis** RAN solar distribution units are the key for efficient and failsafe operation of the installation, and perform as the "gateway to the grid".

Our capabilities as a specialist for energy distribution as well as our staff's extensive project experience make us an ideal partner for the implementation of solar installations. A special staff team supports planning of photovoltaic projects and develops customized **gesis** RAN solar distribution units including CAD documentation.

Special value is placed on a robust and user-friendly design of the **gesis** RAN solar distribution units. The **gesis** RAN solar distribution units are configured for your project and delivered on time and ready for installation.

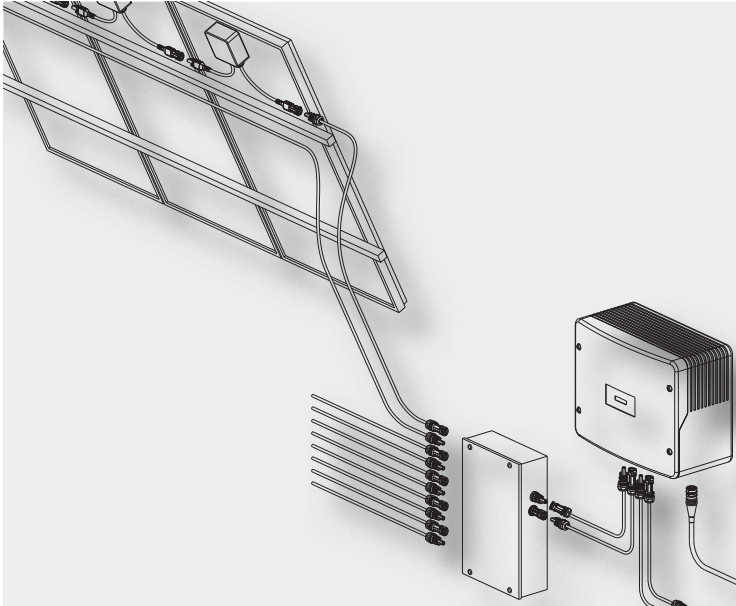
Ask our experts!





Overvoltage protection and string monitoring for photovoltaic systems

Application example



General

Photovoltaic systems, abbreviated as PV systems, are a considerable investment that must be protected from failure and damage. As these systems are installed outdoors, they are exposed to the danger of overvoltage from lightning strikes.

Overvoltage protection in the DC circuit with central inverters

The generator circuit (the PV modules) produces a direct current. Connecting the PV modules and arrays in series allows voltages of 1000 V to be reached. This combination with the fact that the generator circuit can continue to supply energy after overvoltage requires sophisticated technology for the overvoltage arrester.

Overvoltage protection in the AC circuit with string inverters

If smaller decentralized or string inverters are used, the energy produced must be collected on the AC side. As this collection is also in danger of overvoltage, the appropriate protection measures must be taken.

Further information on the complete overvoltage protection product range can be found in the catalog

0800.1 "interface – solutions for the control cabinet"

and the products can also be found online via our e-catalog, which also provides more information, drawings, etc.



DC overvoltage protection:

The PV/DC overvoltage arresters are specially designed for use in PV systems. Both the housing technology and the connections are designed for the requirements of a PV system's high voltages and conductor cross-sections. With a width of only 48mm, the units are easily installed inside distribution panels, requiring the minimum of space.

- For applications in all PV systems in accordance with IEC 60364-7-712
- High discharge capacity due to powerful zinc-oxide varistor
- No fire hazard caused by permanent electric arc due to combined disconnect and short-circuit facility. Overload indicated in display window
- Signaling contacts for remote monitoring in all remote signaling types

AC overvoltage protection:

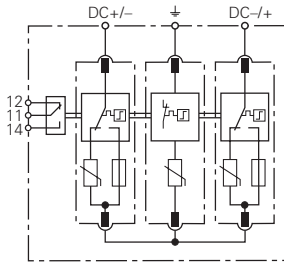
On the AC side of the inverters overvoltage protection must also be installed. The arresters listed here are the most commonly used versions.

- Prewired combined spark-gap based surge arrester consisting of a base component and pluggable protection modules
- Maintenance-friendly thanks to pluggable protection modules
- Discharge capacity up to 100 kA (10/350)
- Function and fault display
- Signaling contacts for remote monitoring in all remote signaling types



Overvoltage arresters 600V DC

wietap GM YPV SCI 600 (FM) For use in PV system current circuits



Type	Part No.
wietap GM YPV SCI 600FM	84.995.2516.0
Replacement module	
"+" or "-" against internal neutral point	84.995.2053.0
Internal neutral point against \perp	84.995.2010.0

Technical Data	
SPD-accord. to EN 61643-11	Type 2
SPD-accord. to IEC 61643-1	Class II
Maximum PV voltage [UPV _{max}]	≤ 600 V
Total discharge current (8/20) [I _{total}]	40 kA
Nominal discharge current (8/20) [(DC+/DC-) → PE] [I _n]	12.5 kA
Max. discharge current (8/20) [(DC+/DC-) → PE] [I _{max}]	25 kA
Protection level [U _p]	≤ 2.5 kV
Protection level bei 5 kA [U _p]	≤ 2 kV
Operating time [t _a]	≤ 25 ns
Temperature range [T _U]	-40 °C...+80 °C
Current breaking capacity of the internal fuse	30 kA / 1000 V DC
Function/failure indication	green / red
Wire range (min.)	1.5 mm ² solid/fine-stranded
Wire range (max.)	35 mm ² stranded/25 mm ² fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	3 TE, DIN 43880 (54 mm)
FM contacts / contact form	Change-over contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Connector cross-section for FM terminals	max. 1.5 mm ² solid/fine-stranded
Approvals	CE

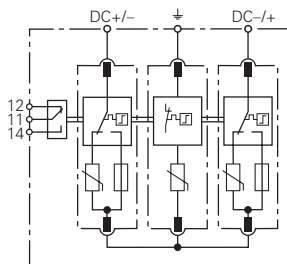
- Photovoltaic arrester
- Complete modular unit wired ready for use
- Type 2 classification according to EN 61643-11
- Safe, arc-free replacement of protection modules thanks to integrated DC fuse
- There is no danger of fire in the event of an overload thanks to a combined separator and short-circuiting device with safe electrical separation in the protection module.
- Can be used with all PV systems acc. to IEC 60364-7-712
- High discharge capacity
- Function/failure indication
- Optional with remote signaling contact

Replacement module for wietap GM YPV SCI 600 (FM)

"+" or "-" against internal neutral point wietap G MOD PV SCI 300 Internal neutral point against \perp wietap G MOD 275	Type	Part No.
	wietap G MOD PV SCI 300	84.995.2053.0
	wietap G MOD 275	84.995.2010.0

Overvoltage arresters 1000V DC

wietap GM YPV SCI 1000 (FM) For use in PV system current circuits



Type	Part No.
wietap GM YPV SCI 1000FM	84.995.2515.0
Replacement module	
"+" or "-" against internal neutral point	84.995.2051.0
Internal neutral point against \pm	84.995.2015.0

Technical Data	
SPD-accord. to EN 61643-11	Type 2
SPD-accord. to IEC 61643-1	Class II
Maximum PV voltage [UPV _{max}]	≤ 1000 V
Total discharge current (8/20) [I _{total}]	40 kA
Nominal discharge current (8/20) [(DC+/DC-) → PE] [I _n]	12,5 kA
Max. discharge current (8/20) [(DC+/DC-) → PE] [I _{max}]	25 kA
Protection level [U _p]	≤ 4 kV
Protection level bei 5 kA [U _p]	≤ 3.5 kV
Operating time [t _a]	≤ 25 ns
Temperature range [T _U]	-40 °C...+80 °C
Current breaking capacity of the internal fuse	30 kA / 1000 V DC
Function/failure indication	green / red
Wire range (min.)	1,5 mm ² solid/fine-stranded
Wire range (max.)	35 mm ² stranded/25 mm ² fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	3 TE, DIN 43880 (54 mm)
FM contacts / contact form	Changeover contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Connector cross-section for FM terminals	max. 1.5 mm ² solid/fine-stranded
Approvals	CE, VDE, TÜV

- Photovoltaic arrester
- Complete modular unit wired ready for use
- Type 2 classification according to EN 61643-11
- Safe, arc-free replacement of protection modules thanks to integrated DC fuse
- There is no danger of fire in the event of an overload thanks to a combined separator and short-circuiting device with safe electrical separation in the protection module.
- Can be used with all PV systems acc. to IEC 60364-7-712
- High discharge capacity
- Function/failure indication
- Optional with remote signaling contact

Replacement module for wietap GM YPV SCI 1000 (FM)

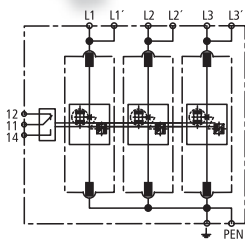
"+" or "-" against internal neutral point
wietap G MOD PV SCI 500

Internal neutral point against PE
wietap G MOD 440

Type	Part No.
wietap G MOD PV SCI 500	84.995.2051.0
wietap G MOD 440	84.995.2015.0

3-phase AC combination arrester, type 1 (2, 3)

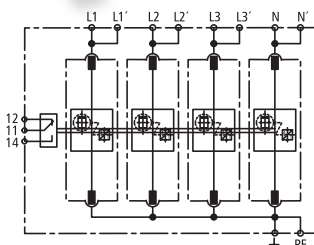
wietap V M TNC 255 (FM) For protection of the main building supply



- Combined arrester, type 1
- For TN-C-systems
- With pluggable protection modules
- Max. system availability due to follow current limitation
- Switch-off selective for 20 A gL/gG fuses up to 50 kA_{eff} short-circuit current
- Discharge capacity up to 75 kA (10/350)
- Function/failure indication according to VDE 0100-534 (valid since March 2009)
- Optional with remote signaling contact
- Vibration and shock tested acc. to EN 60068-2

Type	Part No.
wietap V M TNC 255 FM	84.995.1305.0
Replacement module	
L1, L2, L3 against \varnothing	84.995.1001.0
Power network	TN-C
SPD accord. to 61643-11 / IEC 61643-1	Type 1 / Class I
Energy-coordinated protective function to the end device	Type 1 + Type 2
Energy-coordinated protective function to the end device $\leq 5m$	Type 1 + Type 2 + Type 3
Nominal voltage AC [U _N]	230 / 400 V
Nominal frequency [f _N]	50 / 60 Hz
Maximum continuous voltage AC [U _c]	255 V
Lightn. impulse current (10/350) [L1+L2+L3-PEN] [I _{total}]	75 kA
Lightn. impulse current (10/350) [L-PEN] [I _{imp}]	25 kA
Nominal discharge current (8/20) [I _n]	25 / 75 kA
Protection level [U _p]	≤ 1.5 kV
Follow current extinction capability AC [I _e]	50 kA _{eff}
Operating time [t _a]	≤ 100 ns
Max. pre-fusing (L) up to I _k = 50 kA _{eff}	315 A gL/gG
Max. pre-fusing (L) bei I _k > 50 kA _{eff}	200 A gL/gG
Max. pre-fusing (L-L')	125 A gL/gG
TOV-voltage [U _T]	440 V / 5 sec.
Temperature range (Parallel wiring) [T _{up}]	-40°C...+80 °C
Temperature range (Through wiring) [T _{us}]	-40°C...+60 °C
Function/failure indication	green / red
Wire range (L1, L1', L2, L2', L3, L3', PEN, \varnothing) [min.]	10 mm ² solid/fine-stranded
Wire range (L1, L2, L3, PEN) [max.]	50 mm ² stranded/35 mm ² fine-stranded
Wire range (L1', L2', L3', \varnothing) [max.]	35 mm ² stranded/25 mm ² fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	6 TE, DIN 43880 (108 mm)
FM contacts / contact form	Change-over contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range FM terminals	max. 1.5 mm ² solid/fine-stranded
Approvals	CE

wietap V M TNS 255 (FM) For protection of the main building supply

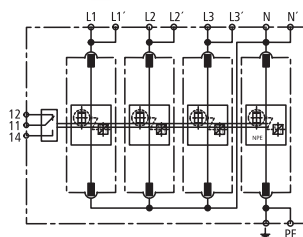


- Combined arrester Type 1
- For TN-S-Systeme
- With pluggable protection modules
- Max. system availability due to follow current limitation
- Switch-off selective for 20 A gL/gG fuses up to 50 kA_{eff} short-circuit current
- Discharge capacity up to 100 kA (10/350)
- Function/failure indication according to VDE 0100-534 (valid since March 2009)
- Optional with remote signaling contact
- Vibration and shock tested acc. to EN 60068-2

Typ	Bestell-Nr.
wietap V M TNS 255 FM	84.995.1405.0
Replacement module	
L1, L2, L3, N against \varnothing	84.995.1001.0
Power network	TN-S
SPD accord. to EN 61643-11 / IEC 61643-1	Type 1 / Class I
Energy-coordinated protective function to the end device	Type 1 + Type 2
Energy-coordinated protective function to the end device $\leq 5m$	Type 1 + Type 2 + Type 3
Nominal voltage AC [U _N]	230 / 400 V
Nominal frequency [f _N]	50 / 60 Hz
Maximum continuous voltage AC [U _c]	255 V
Lightn. impulse current (10/350) [L1+L2+L3+N-PE] [I _{total}]	100 kA
Lightn. impulse current (10/350) [L, N-PE] [I _{imp}]	25 kA
Nominal discharge current (8/20) [I _n]	25 / 100 kA
Protection level [L, N-PE] [U _p]	≤ 1.5 kV
Follow current extinction capability AC [I _e]	50 kA _{eff}
Operating time [t _a]	≤ 100 ns
Max. pre-fusing (L) up to I _k = 50 kA _{eff}	315 A gL/gG
Max. pre-fusing (L) bei I _k > 50 kA _{eff}	200 A gL/gG
Max. pre-fusing (L-L')	125 A gL/gG
TOV-voltage [L-N] [U _T]	440 V / 5 sec.
Temperature range (Parallel wiring) [T _{up}]	-40 °C...+80 °C
Temperature range (Through wiring) [T _{us}]	-40 °C...+60 °C
Function/failure indication	green / red
Wire range (L1, L1', L2, L2', L3, L3', N, N', PE, \varnothing) [min.]	10 mm ² solid/fine-stranded
Wire range (L1, L2, L3, PE, N) [max.]	50 mm ² stranded/35 mm ² fine-stranded
Wire range (L1', L2', L3', N', \varnothing) [max.]	35 mm ² stranded/25 mm ² fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	8 TE, DIN 43880 (144 mm)
FM contacts / contact form	Change-over contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range FM terminals	max. 1.5 mm ² solid/fine-stranded
Approvals	CE

3-phase AC combination arrester, type 1 (2, 3)

wietap V M TT 255 (FM) For protection of the main building supply



- Combined arrester Type 1
- For TT- and TN-S-systems ("3+1" circuits)
- With pluggable protection modules
- Max. system availability due to follow current limitation
- Switch-off selective for 20 A gL/gG fuses up to 50 kA_{eff} short-circuit current
- Discharge capacity up to 100 kA (10/350)
- Function/failure indication according to VDE 0100-534 (valid since March 2009)
- Optional with remote signaling contact
- Vibration and shock tested acc. to EN 60068-2

Type	Part No.
wietap V M TT 255 FM	84.995.1315.0
Replacement module	
L1, L2, L3 against N	84.995.1001.0
N against $\underline{\text{PE}}$	84.995.1100.0
Power network	TT und TN-S
SPD accord. to 61643-11 / 61643-1	Type 1 / Class I
Energy-coordinated protective function to the end device	Type 1 + Type 2
Energy-coordinated protective function to the end device \leq 5m	Type 1 + Type 2 + Type 3
Nominal voltage AC [U _n]	230 / 400 V
Nominal frequency [f _n]	50 / 60 Hz
Maximum continuous voltage AC [U _c]	255 V
Lightn. impulse current (10/350) [L1+L2+L3 +N-PE] [I _{total}]	100 kA
Lightn. impulse current (10/350) [L-N] [I _{imp}]	25 kA
Lightn. impulse current (10/350) [N-PE] [I _{imp}]	100 kA
Nominal discharge current (8/20) [I _n]	25 / 100 kA
Protection level [L-N, N-PE] [U _p]	\leq 1,5 kV
Follow current extinction capability [L-N] AC [I _n]	50 kA _{eff}
Follow current extinction capability [N-PE] AC [I _n]	100 A _{eff}
Operating time [t _a]	\leq 100 ns
Max. pre-fusing (L) up to I _k = 50 kA _{eff}	315 A gL/gG
Max. pre-fusing (L) bei I _k > 50 kA _{eff}	200 A gL/gG
Max. pre-fusing (L-L')	125 A gL/gG
TOV-voltage [L-N] [U _v]	440 V / 5 sec.
TOV-voltage [N-PE] [U _v]	1200 V / 200 ms
Temperature range (Parallel wiring) [T _{up}]	-40 °C...+80 °C
Temperature range (Through wiring) [T _{us}]	-40 °C...+60 °C
Function/failure indication	green / red
Wire range(L1, L1', L2, L2', L3, L3', N, N', PE, $\underline{\text{PE}}$) [min.]	10 mm ² solid/fine-stranded
Wire range (L1, L2, L3, N, PE) [max.]	50 mm ² stranded/35 mm ² fine-stranded
Wire range (L1', L2', L3', N, $\underline{\text{PE}}$) [max.]	35 mm ² stranded/25 mm ² fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	8 TE, DIN 43880 (144 mm)
FM contacts / contact form	Change-over contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range Remote signaling terminals	max. 1.5 mm ² solid/fine-stranded
Approvals	CE

Replacement module for wietap V M devices

wietap V MOD 255

Network spark gap protection module for all L - $\underline{\text{PE}}$; L - N and wietap V M TNS 255 (FM) N - $\underline{\text{PE}}$



wietap V MOD NPE 100

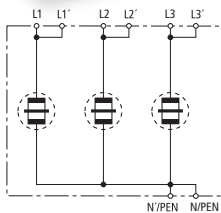
Network spark gap protection module for wietap V M TT 255 (FM) N - $\underline{\text{PE}}$



Type	Part No.
wietap V MOD 255	84.995.1001.0
wietap V MOD NPE 100	84.995.1100.0

3-phase lightning arrester, AC, type 1

wietap B3 255H
For protection of the main building supply



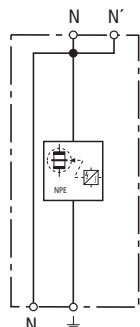
- Lightning arrester, type 1
- For all systems (in connection with **wietap** GPM 255 if required)
- High limitation of follow current
- 50 kA discharge capacity per pole
- High insulation resistance; can therefore also be placed in front of the meter
- Double terminals for V connection

Type	Part No.
wietap B3 255H	84.995.0120.0
Technical Data	
SPD accord. to EN 61643-11	Type 1
SPD accord. to IEC 61643-1	Class I
Nominal voltage AC [U _N]	230/400 V
Maximum continuous voltage AC [U _c]	255 V
Lightn. impulse current (10/350) [L-N/PEN] [I _{imp}]	50 kA
Lightn. impulse current (10/350) [L1+L2+L3-N/PEN] [I _{total}]	100 kA
Nominal discharge current (8/20) [I _n]	50 / 100 kA
Protection level [U _p]	≤ 4 kV
Follow current extinction capability AC [I _a]	50 kA _{eff}
Limitation of follow current / selectivity	Non-tripping of a 35 A gL/gG fuse up to 50 kA _{eff} (prosp.)
Operating time [t _a]	≤ 100 ns
Max. pre-fusing up to I _k = 50 kA _{eff} (ta ≤ 0,2 s)	500 A gL/gG
Max. pre-fusing up to I _k = 50 kA _{eff} (ta ≤ 5 s)	315 A gL/gG
Max. pre-fusing bei I _k > 50 kA _{eff}	200 A gL/gG
Max. pre-fusing (L-L')	125 A gL/gG
TOV-voltage [U _T]	335 V / 5 sec.
Temperature range (Parallel wiring) [T _{UP}]	-40 °C...+80 °C
Temperature range (Through wiring) [T _{US}]	-40 °C...+60 °C
Wire range (L1, L1', L2, L2', L3, L3', N/PEN, N'/PEN)	10 mm ² solid/fine-stranded
Wire range (L1, L2, L3, N/PEN)	50 mm ² stranded/35 mm ² fine-stranded
Wire range (L1', L2', L3', N'/PEN)	35 mm ² stranded/25 mm ² fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	6 TE, DIN 43880 (108 mm)
Approvals	CE

N-PE lightning arrester, AC, type 1

wietap GMP 255

For protection of the main building supply



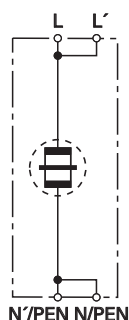
- N-PE AC lightning arrester, type 1
- in combination with **wietap** B1 255H or **wietap** B3 255H
- 100 kA discharge capacity

Type	Part No.
wietap GPM 255	84.995.0055.0
Technical Data	
SPD accord. to EN 61643-11	Type 1
SPD accord. to IEC 61643-1	Class I
Maximum continuous voltage AC [U _c]	255 V
Lightn. impulse current (10/350) [I _{imp}]	100 kA
Nominal discharge current (8/20) [I _n]	100 kA
Protection level [U _p]	≤ 1,5 kV
Follow current extinction capability AC [I _n]	100 A _{eff}
Operating time [t _a]	≤ 100 ns
TOV-voltage	1200 V / 200 ms
Temperature range (Parallel wiring) [T _{UP}]	-40 °C...+80 °C
Temperature range (Through wiring) [T _{US}]	-40 °C...+60 °C
Function/failure indication	green / red
Wire range (min.)	10 mm ² solid/fine-stranded
Wire range (max.)	50 mm ² stranded/35 mm ² fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	2 TE, DIN 43880 (36 mm)
Approvals	CE

L-PE AC lightning arrester, type 1

wietap B1 255H

For protection of the main building supply



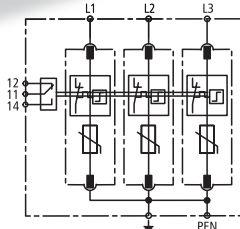
- L-PE AC lightning arrester, type 1
- For all systems (in connection with **wietap** GPM 255 if required)
- High limitation of follow current
- 50 kA discharge capacity per pole
- High insulation resistance; can therefore also be placed in front of the meter
- Double terminals for V connection

Type	Part No.
wietap B1 255H	84.995.0222.0
Technical Data	
SPD accord. EN 61643-11	Type 1
SPD accord. to IEC 61643-1	Class I
Nominal voltage ac [U _N]	230 V
Maximum continuous voltage ac [U _c]	255 V
Lightn. impulse current (10/350) [I _{imp}]	50 kA
Nominal discharge current (8/20) [I _n]	50 kA
Protection level [U _p]	≤ 4 kV
Follow current extinction capability ac [I _n]	50 kA _{eff}
Limitation of follow current / selectivity	Non-tripping of a 35 A gL/gG fuse up to 50 kA _{eff} (prosp.)
Operating time [t _a]	≤ 100 ns
Max. pre-fusing up to I _k = 50 kA _{eff} (t _a ≤ 0,2 s)	500 A gL/gG
Max. pre-fusing up to I _k = 50 kA _{eff} (t _a ≤ 5 s)	315 A gL/gG
Max. pre-fusing bei I _k > 50 kA _{eff}	200 A gL/gG
Max. pre-fusing (L-L')	125 A gL/gG
TOV-voltage [U _T]	335 V / 5 sec.
Temperature range (Parallel wiring) [T _{UP}]	-40 °C...+80 °C
Temperature range (Through wiring) [T _{US}]	-40 °C...+60 °C
Wire range (L, L', N/PEN, N'/PEN) [min.]	10 mm ² solid/fine-stranded
Wire range (L, N/PEN) [max.]	50 mm ² stranded/35 mm ² fine-stranded
Wire range (L', N'/PEN) [max.]	35 mm ² stranded/25 mm ² fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	2 TE, DIN 43880 (36 mm)
Approvals	CE

3-phase AC overvoltage arrester, type 2

wietap G M TNC 275 (FM)

For the protection of sub-systems or the control cabinet supply

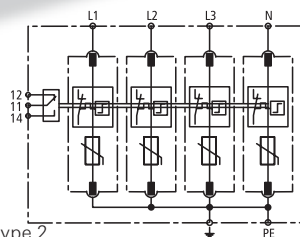


- Surge arrester, type 2
- For TN-C-systems
- With pluggable protection modules
- Function/failure indication according to VDE 0100-534 (valid since March 2009)
- Optional with remote signaling contact
- Vibration and shock tested acc. to EN 60068-2

Type	Part No.
wietap G M TNC 275 FM	84.995.2305.0
Replacement module	
L1, L2, L3 against \oplus	84.995.2010.0
Power network	TN-C
SPD accord. to EN 61643-11	Type 2
SPD accord. to IEC 61643-1	Class II
Nominal voltage AC [U _N]	230/400 V
Nominal frequency [f _N]	50 / 60 Hz
Maximum continuous voltage AC [U _C]	275 V
Nominal discharge current (8/20) [I _n]	20 kA
Max. discharge current (8/20) [I _{max}]	40 kA
Protection level [U _p]	≤ 1.25 kV
Protection level bei 5 kA [U _p]	≤ 1 kV
Operating time [t _a]	≤ 25 ns
Maximum network overcurrent protection	125 A gL/gG
Short-circuit proof for max network overcurrent protection	up to 50 kA _{eff}
TOV-voltage [U _T]	335 V / 5 sec.
Temperature range [T _U]	-40 °C...+80 °C
Function/failure indication	green / red
Wire range (min.)	1.5 mm ² solid/fine-stranded
Wire range (max.)	35 mm ² stranded/25 mm ² fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	3 TE, DIN 43880 (54 mm)
FM contacts / contact form	Change-over contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range remote signaling terminals	max. 1.5 mm ² solid/fine-stranded
Approvals	CE

wietap G M TT 275 (FM)

For the protection of sub-systems or the control cabinet supply

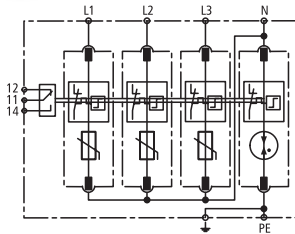


- Surge arrester, type 2
- For TN-S-systems
- With pluggable protection modules
- Function/failure indication according to VDE 0100-534 (valid since March 2009)
- Optional with remote signaling contact
- Vibration and shock tested acc. to EN 60068-2

Type	Part No.
wietap G M TNS 275 FM	84.995.2405.0
Replacement module	
L1, L2, L3, N against \oplus	84.995.2010.0
Power network	TN-S
SPD accord. to EN 61643-11	Type 2
SPD accord. to IEC 61643-1	Class II
Nominal voltage AC [U _N]	230/400 V
Nominal frequency [f _N]	50 / 60 Hz
Maximum continuous voltage AC [U _C]	275 V
Nominal discharge current (8/20) [I _n]	20 kA
Max. discharge current (8/20) [I _{max}]	40 kA
Protection level [U _p]	≤ 1.25 kV
Protection level bei 5 kA [U _p]	≤ 1 kV
Operating time [t _a]	≤ 25 ns
Maximum network overcurrent protection	125 A gL/gG
Short-circuit proof for maximum network current protection	up to 50 kA _{eff}
TOV-voltage [U _T]	335 V / 5 sec.
Temperature range [T _U]	-40 °C...+80 °C
Function/failure indication	green / red
Wire range (min.)	1.5 mm ² solid/fine-stranded
Wire range (max.)	35 mm ² stranded/25 mm ² fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	4 TE, DIN 43880 (72 mm)
FM contacts / contact form	Change-over contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range remote signaling terminals	max. 1.5 mm ² solid/fine-stranded
Approvals	CE

3-phase AC overvoltage arrester, type 2

wietap G M TNS 275 (FM) For the protection of sub-systems or the control cabinet supply



- Surge arrester, type 2
- For TT- and TN-S-systems ("3+1" circuits)
- With pluggable protection modules
- Function/failure indication according to VDE 0100-534 (valid since March 2009)
- Optional with remote signaling contact
- Vibration and shock tested acc. to EN 60068-2

Type	Part No.
wietap G M TT 275 FM	84.995.2315.0
Replacement module	
L1, L2, L3 against N	84.995.2010.0
N against \varnothing	84.995.2050.0
Power network	TT and TN-S (Variante "3+1")
SPD accord. to EN 61643-11	Type 2
SPD accord. to IEC 61643-1	Class II
Nominal voltage AC [U _N]	230/400 V
Nominal frequency [f _N]	50 / 60 Hz
Maximum continuous voltage AC [L-N] [U _c]	275 V
Maximum continuous voltage AC [N-PE] [U _c]	255 V
Nominal discharge current (8/20) [I _n]	20 kA
Max. discharge current (8/20) [I _{max}]	40 kA
Lightn. impulse current (10/350) [N-PE] [I _{imp}]	12 kA
Protection level [L-N] [U _p]	≤ 1.25 kV
Protection level [L-N] bei 5 kA [U _p]	≤ 1 kV
Protection level [N-PE] [U _p]	≤ 1.5 kV
Follow current extinction capability [N-PE] [I _{eff}]	100 A _{eff}
Operating time [L-N] [t _Δ]	≤ 25 ns
Operating time [N-PE] [t _Δ]	≤ 100 ns
Maximum network overcurrent protection	125 A gL/gG
Short-circuit proof for maximum network current protection	up to 50 kA _{eff}
TOV-voltage [L-N] [U _T]	335 V / 5 sec.
TOV-voltage [N-PE] [U _T]	1200 V / 200 ms
Temperature range [T _U]	-40 °C...+80 °C
Function/failure indication	green / red
Wire range (min.)	1.5 mm ² solid/fine-stranded
Wire range (max.)	35 mm ² stranded/25 mm ² fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	4 TE, DIN 43880 (72 mm)
FM contacts / contact form	Change-over contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range remote signaling terminals	max. 1.5 mm ² solid/fine-stranded
Approvals	CE

Replacement module for wietap G M devices

wietap G MOD 275

Varistor protection module
for all L - \varnothing ; L - N
and
wietap G M TNS 275 (FM)
N - \varnothing



wietap G MOD NPE

Spark gap protection module
for all N - \varnothing
and
wietap G M TT 275 (FM)
N - \varnothing



Type	Part No.
wietap G MOD 275	84.995.2010.0
wietap G MOD NPE	84.995.2050.0





wienet VPN Industrial Router – unlimited M2M communication

Functionality which convinces

Whether it is about the control of machines, monitoring of production lines or the co-ordination of all production areas a permanent communication between devices is needed to complete such a complex task. Access to stored data using wireless networks is not always possible or safe. Now Wieland offers with its modern router technology the possibility of completing such complex tasks. For example control commands, level indicators or video signals can now be transmitted. At download speeds of up to 100 Mbit/s and upload speeds of up to 50 Mbit/s (depending on the network operator) the **wienet** VPN industrial router is sure to cover the available connectivity options of GPRS up to LTE. With automatic login **wienet** VPN industrial router will always access the fastest available connection.

Each router has its own IP address and can be configured through the integrated web interface.

It supports services such as DHCP, NAT and DynDNS. The routers communicate directly or via the control panel to open a secure VPN connection. The establishment of an IPSec encrypted tunnel is alternatively possible. **wienet** VPN routers are ideal components for industrial use in conjunction with VPN-service portals, such as Wie-Service24.

With the arrangement of the ports on the front-panel and a standard USB port, the **wienet** VPN industrial router are extremely user friendly. A clear statistic of mobile connections is used for better control. Optionally, the devices are available with a second SIM card slot, additional I/O, RS-232, RS-422/RS-485, M-Bus, second Ethernet interface, Wi-Fi module or integrated 3 port switch.

Applications

- Energy systems
 - Wind turbines
 - Solar farms
 - Biogas cogeneration systems
 - Heat pumps, ...
- Water and waste water Management
- System monitoring in machine building
 - Washing machines
 - Packaging machines
 - Compressors, ...
- External surveillance camera
- Vending
 - Telemetry online sales or ticket machines
- Smart metering
- Mobile Fleet Management



Further information on the complete product range can be found in the catalog

0800.1 "interface – solutions for the control cabinet"

and the products can also be found online via our e-catalog, which also provides more information, drawings, etc.



VPN-Server „Wie-Service24“

Additional VPN channels to VPN-server Wie-Service24

- Rent of additional VPN-tunnels to VPN-Server of Wieland Electric
- High availability of VPN connections
- Immediately usable
- Client access on the server



Type		Part No.
wienet WIE-SERVICE24-EINZEL-R	VPN-Router-Client	ZD.000.0011.0
wienet WIE-SERVICE24-EINZEL-PC	VPN-PC-Client	ZD.000.0011.1

Properties	
Security by VPN	
Automatic generation of router configurations	
Only outgoing connections to the VPN server Wie-Service24	
No changes in the local network needed	
Connection complete networks without additional route settings	

Contract data	
Calculation	12 months in advance
Termination	any time at the end of a month
Administration	Wieland Electric
Server hardware	Internet high-performance computing center

Customer installation of the VPN server Wie-Service24

- Customer installation of the VPN server
- Administration on customer side
- High availability of VPN connections
- Customized layout possible

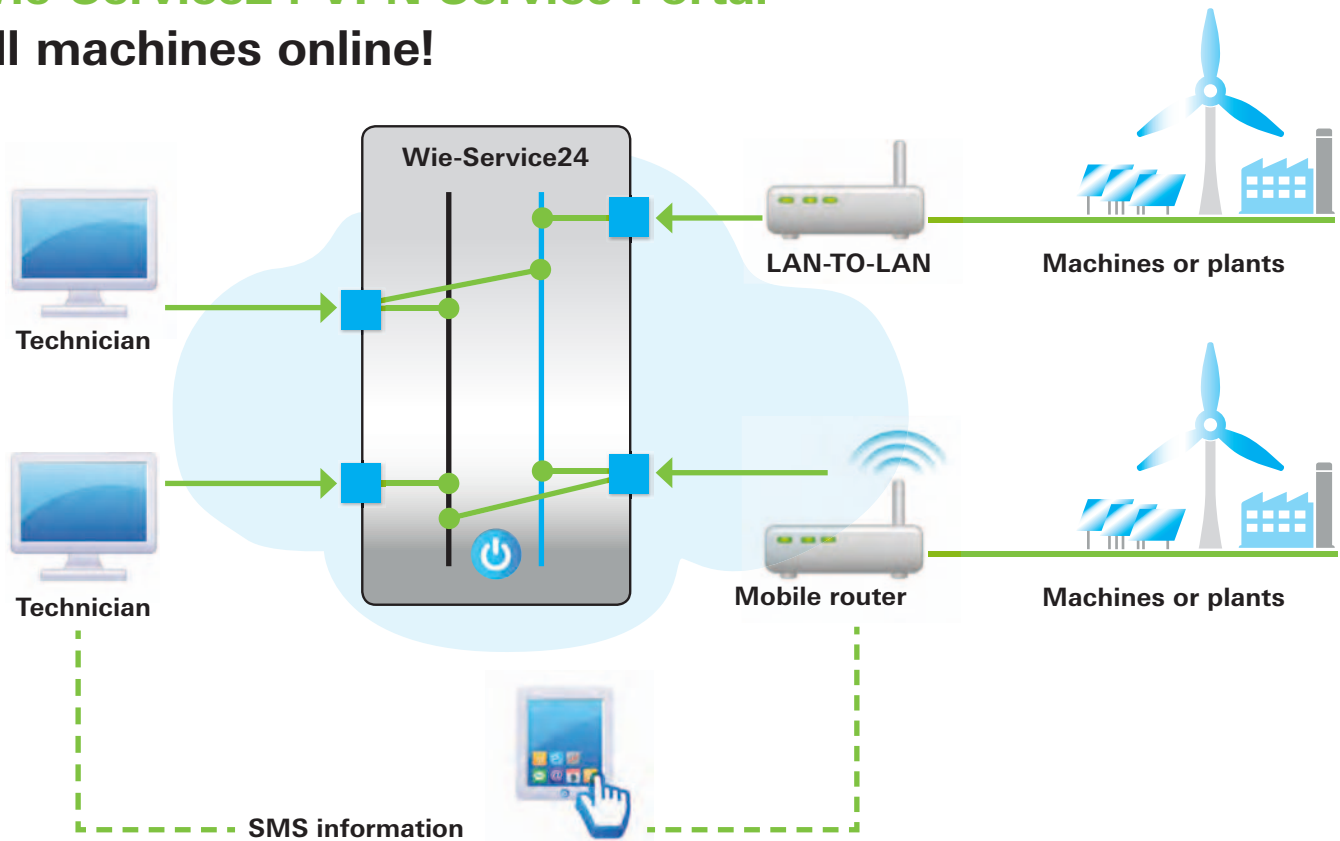


Type	Installation	Part No.
wienet WIESERVICE24-VM	Virtual machine "Oracle Virtual Box"	ZD.000.0012.0
wienet WIESERVICE24-IPC SAVE	On energy-saving PC hardware	ZD.000.0013.0
wienet WIESERVICE24-IPC HIGH	On High Performance 19 "PC	ZD.000.0014.0
wienet WIESERVICE24-DC CUSTOM	In customer data center	ZD.000.0015.0
wienet WIESERVICE24-DC INTERN.	In internet data center ("in the cloud")	ZD.000.0016.0

Properties	
Security by VPN	
Automatic generation of router configurations	
Only outgoing connections to the VPN server Wie-Service24	
No changes in the local network needed	
Connection complete networks without additional route settings	

Contract data	
Calculation	Fixed rate
Number of VPN connections	> 1000
Administration	customer
Server hardware	selectable

Wie-Service24 VPN Service Portal All machines online!



The Wie-Service24 VPN service portal is available in different configurations:

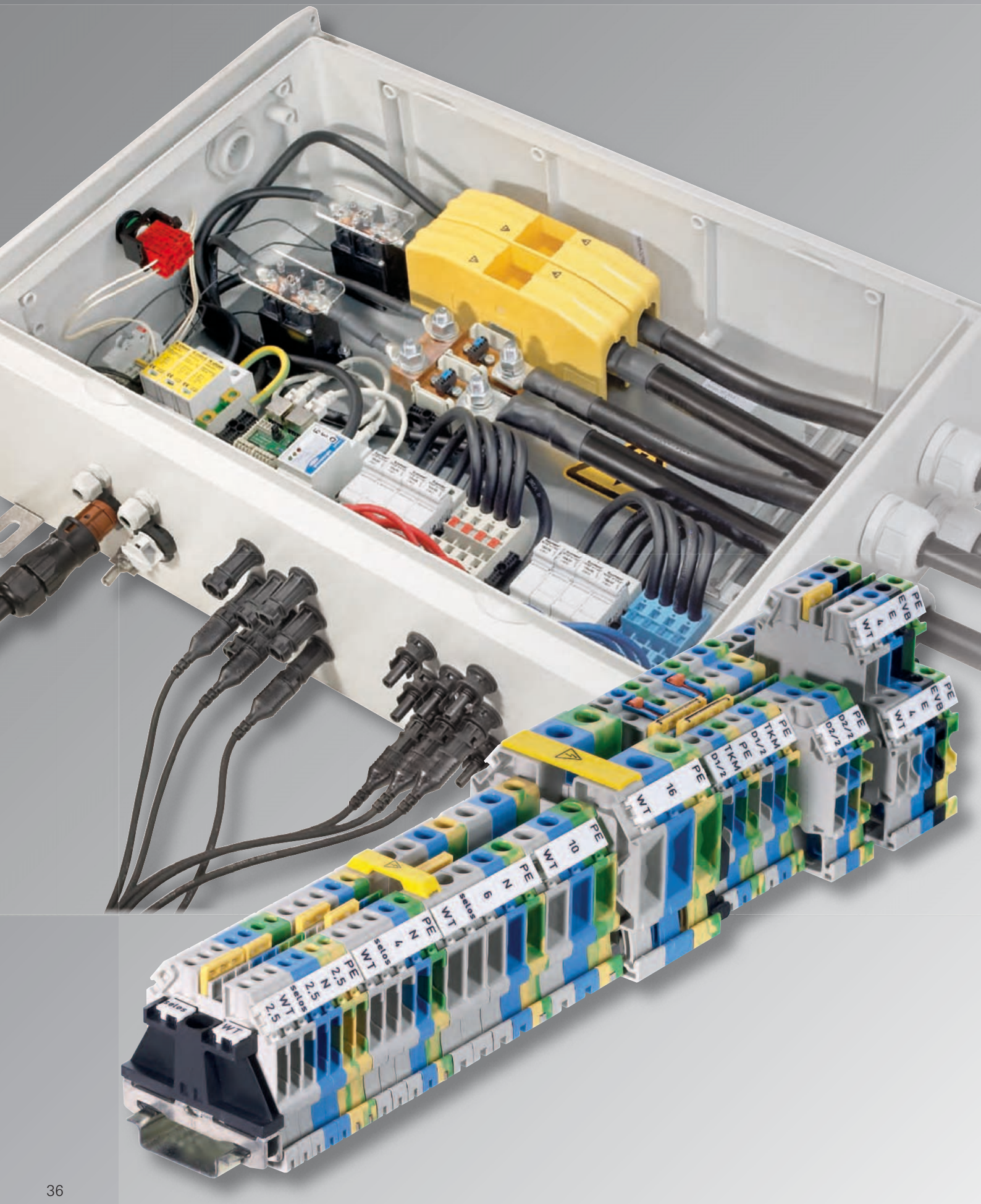
You can try the working with the VPN-server Wie-Service24 with up to 30 routers and one PC client for free. If you need further VPN clients you can rent more router and PC clients. We propose the installation of your own customer VPN server portal. Installation of the portal on a virtual machine, on an industrial PC, data center at customer site or a data center on an internet server.

	Single access	Virtual machine	Industrial PC	Data center Server at Customer	Data center Internet server
Part-No.	ZD.000.0011.0 (Router) ZD.000.0011.1 (PC-Client)	ZD.000.0012.0	ZD.000.0013.0 (Energy Saving) ZD.000.0014.0 (High Performance)	ZD.000.0015.0	ZD.000.0016.0
User access	•	•	•	•	•
Administrator access	–	•	•	•	•
Server hardware from	Wieland	Customer	Wieland	Customer	Provider
Internet connection by	Wieland	Customer	Customer	Customer	Provider
Installation by	Wieland	Customer or Wieland	Wieland	Wieland	Wieland



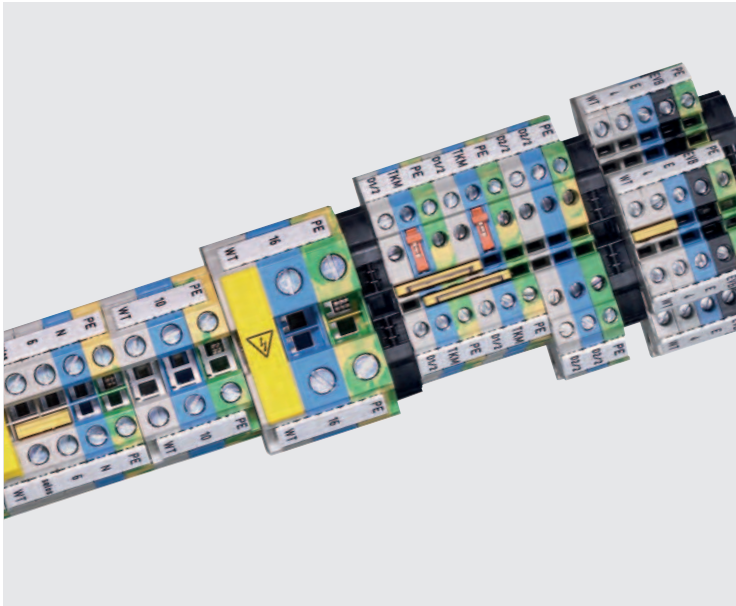
More information is available from our technical support:

Telefon +49 951 9324-995
 Telefax +49 951 9326-991
 wie-service24@wieland-electric.com



DIN rail terminal blocks with screw connection

Application example



Accessories

We offer a comprehensive assortment of various accessories for our screw connection **selos** screw connection terminal block range to customize our DIN rail terminal blocks to the requirements of your application. Among others it includes the proven Wieland marking system, which is also used for our other product lines, as well as our robust pluggable cross connectors.

In addition to various test accessories Wieland standard products also include end plates, partitions or special supplementary covers with warning symbols.

With our software systems **wieplan** and **wiemarc** we support you in designing and marking your DIN rail terminal block applications.

Technical Data

Rated cross section:	2.5 mm ² – 240 mm ²
Rated current:	up to 415 A
Rated voltage:	up to 1000 V

Selected material:

- **Metal** – Special alloys enable a low feed-through resistance and provide a gas-tight contact area:
 - Current carrying bar: copper or brass
 - Clamping body and clamping screws: steel, zinc-plated and chromate-treated
- **Plastic** – Polyamide has excellent electrical, chemical and mechanical characteristics:
 - Temperature resistance: up to 120 °C
 - Tracking resistance: CTI 600
 - Flammability class: UL94-V0, self-extinguishing

General

With **selos** Wieland Electric offers a complete range of DIN rail terminal blocks with screw connection technology. Generously dimensioned wire entries, low feed-through resistance and a high dielectric strength make DIN rail terminal blocks from Wieland an optimal solution for connections in photovoltaic applications. The portfolio comprises feed-through and ground blocks with 2, 3 or 4 wire termination points, two-tier and three-tier terminal blocks, knife-edge disconnect blocks and fuse blocks. Furthermore we offer function blocks with various diode circuits as well as several application-specific terminal blocks such as terminal blocks for electrical isolation.



Wieland DIN rail terminal blocks with screw connection highlights:

Classic connections

- Known and proven worldwide, the simplest form of termination technology
- Space-saving, compact design with lateral wire entry
- Safe and maintenance-free electrical connection with maximum contact force

Universal connections

- Flexible connection of various wire sizes due to the termination points' large wire ranges
- Multiple conductor termination in single clamping body facilitates potential distribution
- Connection of fine-stranded wires with and without ferrules
- Low feed-through resistance owing to large contact areas and high contact forces

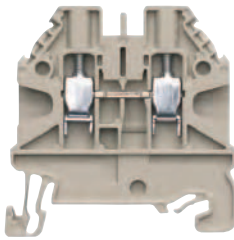
Versatile applications

- DIN rail terminal block solutions for all common switching tasks and functions
- Special-purpose blocks for industry-specific applications
- Comprehensive range of accessories for maximum functionality
- Global and national approvals for worldwide use

Feed-through blocks with screw connection

WT 2,5

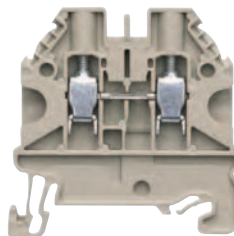
- Feed-through block with screw connection for mounting on TS 35
- Nominal cross section 2.5 mm²
- Max. electrical data: 32 A/4 mm²
- Connection capacity: 2 wires, equal size 0.14 – 1.5 mm²



Description	Type	Part No.	Std. Pack
Feed-through block, gray	WT 2,5	58.503.0055.0	100
Feed-through block, blue	WT 2,5 BL	58.503.0055.6	100
General data			
Width / length / height, incl. TS 7.5	5 mm / 48 mm / 48 mm		
Wire strip length	9 mm		
Approvals			
Technical data	IEC	UL	CSA
	EN 60 947-7-1		
Cross section fine-stranded	0.14–4 mm ²		pending
Cross section solid/stranded	0.14–4 mm ²		
Cross section, AWG		26–12	26–12
Rated current	24 A	20 A	20 A
Rated voltage	1000 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
End plate	AP WT 2,5-10	07.313.2555.0	10
Cross connector	2 pole IVB WKF 2,5-2	Z7.280.6227.0	10
	3 pole IVB WKF 2,5-3	Z7.280.6327.0	10
	4 pole IVB WKF 2,5-4	Z7.280.6427.0	10
	5 pole IVB WKF 2,5-5	Z7.280.6527.0	10
	10 pole IVB WKF 2,5-10	Z7.280.7027.0	20
	20 pole IVB WKF 2,5-20	Z7.280.8027.0	20

WT 4

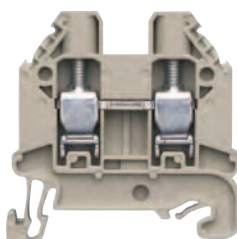
- Feed-through block with screw connection for mounting on TS 35
- Nominal cross section 4 mm²
- Max. electrical data: 41 A/6 mm²
- Connection capacity: 2 wires, equal size 0.14 – 2.5 mm²



Description	Type	Part No.	Std. Pack
Feed-through block, gray	WT 4	58.504.0055.0	100
Feed-through block, blue	WT 4 BL	58.504.0055.6	100
General data			
Width / length / height, incl. TS 7.5	6 mm / 48 mm / 48 mm		
Wire strip length	9 mm		
Approvals			
Technical data	IEC	UL	CSA
	EN 60 947-7-1		
Cross section fine-stranded	0.14–6 mm ²		pending
Cross section solid/stranded	0.14–6 mm ²		
Cross section, AWG		26–10	26–10
Rated current	32 A	30 A	30 A
Rated voltage	1000 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
End plate	AP WT 2,5-10	07.313.2555.0	10
Cross connector	2 pole IVB WKF 4-2	Z7.261.1227.0	10
	3 pole IVB WKF 4-3	Z7.261.1327.0	10
	4 pole IVB WKF 4-4	Z7.261.1427.0	10
	5 pole IVB WKF 4-5	Z7.261.1527.0	10
	10 pole IVB WKF 4-10	Z7.261.2027.0	20

WT 6

- Feed-through block with screw connection for mounting on TS 35
- Nominal cross section 6 mm²
- Max. electrical data: 57 A/10 mm²
- Connection capacity: 2 wires, equal size 0.2 – 4 mm²

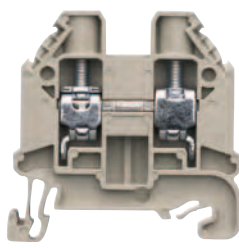


Description	Type	Part No.	Std. Pack
Feed-through block, gray	WT 6	58.506.0055.0	100
Feed-through block, blue	WT 6 BL	58.506.0055.6	100
General data			
Width / length / height, incl. TS 7.5	8 mm / 48 mm / 48 mm		
Wire strip length	11 mm		
Approvals			
Technical data	IEC	UL	CSA
	EN 60 947-7-1		
Cross section fine-stranded	0.2–10 mm ²		pending
Cross section solid/stranded	0.2–10 mm ²		
Cross section, AWG		24–8	24–8
Rated current	41 A	50 A	50 A
Rated voltage	1000 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
End plate	AP WT 2,5-10	07.313.2555.0	10
Cross connector	2 pole IVB WKF 6-2	Z7.282.5227.0	10
	3 pole IVB WKF 6-3	Z7.282.5327.0	10
	4 pole IVB WKF 6-4	Z7.282.5427.0	10
	5 pole IVB WKF 6-5	Z7.282.5527.0	10
	10 pole IVB WKF 6-10	Z7.282.6027.0	10


Feed-through blocks with screw connection

WT 10

- Feed-through block with screw connection for mounting on TS 35
- Nominal cross section 10 mm²
- Max. electrical data: 76 A/16 mm²
- Connection capacity: 2 wires, equal size 0.5 – 6 mm²



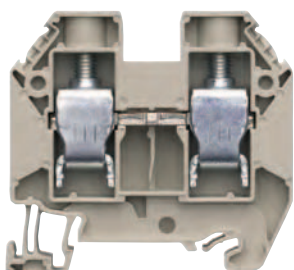
Description	Type	Part No.	Std. Pack
Feed-through block, gray	WT 10	58.510.0055.0	50
Feed-through block, blue	WT 10 BL	58.510.0055.6	50

General data				
Width / length / height, incl. TS 7.5	10 mm / 48 mm / 48 mm			
Wire strip length	13 mm			
Approvals				
Technical data				
	IEC	UL	CSA	CE
	EN 60 947-7-1			
Cross section fine-stranded	0.5 – 16 mm ²			
Cross section solid/stranded	0.5 – 16 mm ²			
Cross section, AWG	20 – 6			
Rated current	57 A	65 A	65 A	
Rated voltage	1000 V	600 V	600 V	
Rated impulse voltage	8 kV			
Pollution degree	3			


Accessories		Type	Part No.	Std. Pack
End plate		AP WT 2,5-10	07.313.2555.0	10
Cross connector	2 pole	IVB WKF 10-2	Z7.283.8227.0	10

WT 16

- Feed-through block with screw connection for mounting on TS 35
- Nominal cross section 16 mm²
- Max. electrical data: 101 A/25 mm²
- Connection capacity: 2 wires, equal size 2.5 – 10 mm²




Description	Type	Part No.	Std. Pack
Feed-through block, gray	WT 16	58.516.0055.0	50
Feed-through block, blue	WT 16 BLAU	58.516.0055.6	50

General data				
Width / length / height, incl. TS 7.5	12 mm / 58 mm / 54mm			
Wire strip length	15 mm			
Approvals				
Technical data				
	IEC	UL	CSA	CE
	EN 60 947-7-1			
Cross section fine-stranded	4 – 25 mm ²			
Cross section solid/stranded	1.5 – 25 mm ²			
Cross section, AWG	16 – 4			
Rated current	76 A	85 A	85 A	
Rated voltage	1000 V	600 V	600 V	
Rated impulse voltage	8 kV			
Pollution degree	3			

Accessories		Type	Part No.	Std. Pack
End plate		AP WT 16	07.313.2755.0	10
Cross connector	2 pole	IVB WKF 16-2	Z7.284.4227.0	10

Accessories for *selos* WT 2,5 – WT 16



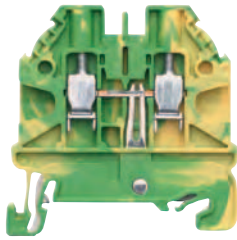
Accessories		Type	Part No.	Std. Pack
Cover with warning symbol	for WT 2,5	AD WT 2,5	04.344.1455.8	10
	for WT 4	AD WT 4	04.344.1655.8	10
	for WT 6	AD WT 6/10	04.344.1855.8	10
	for WT 10	AD WT 6/10	04.344.1855.8	10
	for WT 16	AD WT 16	04.344.2255.8	10
Partition for WT 2,5 – WT 10		TW WT 2,5-10	07.313.2655.0	10
Partition for WT 16		TW WT 4E	07.313.2855.0	10
Test adapter modular for WT 2,5 and 4		PS WKC/F	Z1.299.9753.0	10
End plate for test adapter *		ZP/AP PS	07.312.6053.0	10

* for WT4 an end cover plate must be snapped in after each test connector

Ground blocks with screw connection

WT 2,5 PE

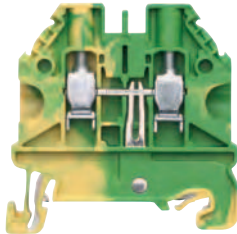
- Ground block with screw connection for mounting on TS 35
- Nominal cross section 2.5 mm²
- Connection capacity: 2 wires, equal size 0.14 – 1.5 mm²



Description	Type	Part No.	Std. Pack
Ground block, green/yellow	WT 2,5 PE	58.503.9055.0	100
General data			
Width / length / height, incl. TS 7.5	5 mm / 48 mm / 48 mm		
Wire strip length	9 mm		
Approvals			
Technical data	IEC	UL	CSA
	EN 60 94-7-2		
Cross section fine-stranded	0.14–4 mm ²		pending
Cross section solid/stranded	0.14–4 mm ²		
Cross section, AWG		26–12	26–12
Rated current			
Rated voltage	1000 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
	Type	Part No.	Std. Pack
End plate	AP WT 2,5 - 10	07.313.2555.0	10

WT 4 PE

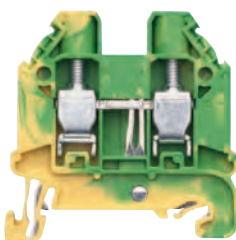
- Ground block with screw connection for mounting on TS 35
- Nominal cross section 4 mm²
- Connection capacity: 2 wires, equal size 0.14 – 2.5 mm²



Description	Type	Part No.	Std. Pack
Ground block, green/yellow	WT 4 PE	58.504.9055.0	100
General data			
Width / length / height, incl. TS 7.5	6 mm / 48 mm / 48 mm		
Wire strip length	9 mm		
Approvals			
Technical data	IEC	UL	CSA
	EN 60 94-7-2		
Cross section fine-stranded	0.14–6 mm ²		pending
Cross section solid/stranded	0.14–6 mm ²		
Cross section, AWG		26–10	26–10
Rated current			
Rated voltage	1000 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
	Type	Part No.	Std. Pack
End plate	AP WT 2,5 - 10	07.313.2555.0	10

WT 6 PE

- Ground block with screw connection for mounting on TS 35
- Nominal cross section 6 mm²
- Connection capacity: 2 wires, equal size 0.2 – 4 mm²

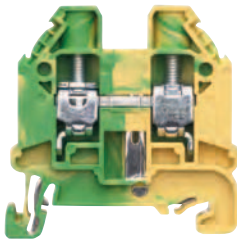


Description	Type	Part No.	Std. Pack
Ground block, green/yellow	WT 6 PE	58.506.9055.0	100
General data			
Width / length / height, incl. TS 7.5	8 mm / 48 mm / 48 mm		
Wire strip length	11 mm		
Approvals			
Technical data	IEC	UL	CSA
	EN 60 94-7-2		
Cross section fine-stranded	0.2–10 mm ²		pending
Cross section solid/stranded	0.2–10 mm ²		
Cross section, AWG		24–8	24–8
Rated current			
Rated voltage	1000 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
	Type	Part No.	Std. Pack
End plate	AP WT 2,5 - 10	07.313.2555.0	10

Ground blocks with screw connection

WT 10 PE

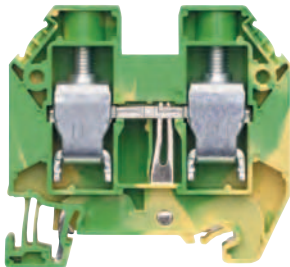
- Ground block with screw connection for mounting on TS 35
- Nominal cross section 10 mm²
- Connection capacity: 2 wires, equal size 0.5 – 6 mm²



Description	Type	Part No.	Std. Pack
Ground block, green/yellow	WT 10 PE	58.510.9055.0	50
General data			
Width / length / height, incl. TS 7.5	10 mm / 48 mm / 48 mm		
Wire strip length	13 mm		
Approvals			
Technical data	IEC	UL	CSA
	EN 60 94-7-2		
Cross section fine-stranded	0.5 – 16 mm ²		
Cross section solid/stranded	0.5 – 16 mm ²		
Cross section, AWG		20 – 6	20 – 6
Rated current			pending
Rated voltage	1000 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
	Type	Part No.	Std. Pack
End plate	AP WT 2,5 - 10	07.313.2555.0	10

WT 16 PE

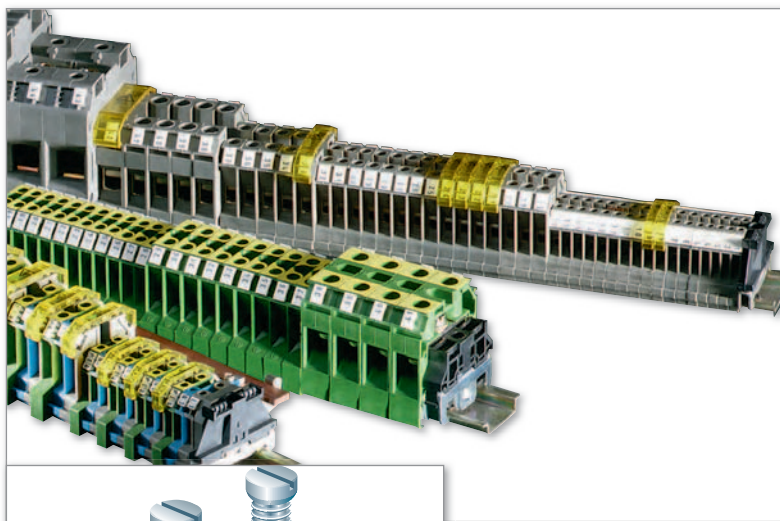
- Ground block with screw connection for mounting on TS 35
- Nominal cross section 16 mm²
- Connection capacity: 2 wires, equal size 2.5 – 10 mm²



Description	Type	Part No.	Std. Pack
Ground block, green/yellow	WT 16 PE	58.516.9055.0	100
General data			
Width / length / height, incl. TS 7.5	12 mm / 58 mm / 54 mm		
Wire strip length	15 mm		
Approvals			
Technical data	IEC	UL	CSA
	EN 60 94-7-2		
Cross section fine-stranded	4 – 25 mm ²		
Cross section solid/stranded	1.5 – 25 mm ²		
Cross section, AWG		16 – 4	16 – 4
Rated current			pending
Rated voltage	1000 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
	Type	Part No.	Std. Pack
End plate	AP WT 16	07.313.2755.0	10



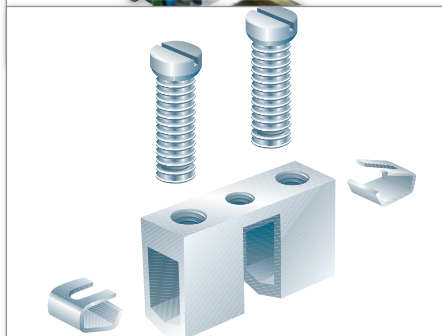
DIN rail terminal blocks with screw connection, type 9700 A.. S35



DIN rail terminal blocks with screw connection – **selos** CLASSIC

The **selos** CLASSIC series offers the highest-quality connecting technology. Thanks to its unique clamping body design, aluminum or copper wire connections are long lasting and maintenance-free.

The product line includes feed-through and ground blocks for wires up to 50 mm².



High-quality screw connection technology

- Steel free clamping body
 - Increased corrosion resistance
 - Extruded clamping body, nickel-plated brass
- Low contact resistance
 - Clamping body has similar physical and chemical characteristics as the conductor
 - One piece clamping body/current bar



Connection of aluminum wires possible

The following always applies when connecting aluminium wires in the **selos** CLASSIC LINE:

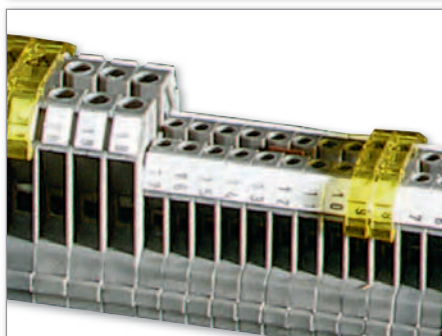
- After being stripped, the ends of the wires must be cleaned with a brush and then coated with acid-free grease to prevent further oxidation.
- The terminal should be tightened to approx. 20% higher torque than what is stated for the clamping screw.

With this type of terminal, it is not necessary to retighten the clamping screws.



Wide connection range

- Connection range 0.5 – 50 mm²
Solid, fine-stranded and stranded wires can be connected to the terminal blocks of **selos** CLASSIC LINE without ferrules, as all block sizes have wire protection.



Compact design

- **Save space on the rail**
 - **selos** CLASSIC LINE offers higher density due to the wire size and terminal block pitch:

Connection range	Pitch
2,5 mm ²	5 mm
4 mm ²	6 mm
10 mm ²	8 mm
16 mm ²	10 mm
25 mm ²	12 mm
35 mm ²	16 mm

Feed-through blocks with screw connection, type 9700 A.. S35

9700 A/5 S35

- Feed-through block for mounting on TS 35
- Nominal cross section 2.5 mm²



Description	Type	Part No.	Std. Pack
Feed-through block, gray	9700 A/5 S35	54.003.7553.0	100
Feed-through block, (Ex)i, blue	9700 A/5 S35 BLAU	54.003.7553.6	100
General data			
Width / length / height, incl. TS 7.5	5 mm / 47 mm / 38 mm		
Wire strip length	9 mm		
Approvals			
Technical data			
	IEC	UL	CSA
Ratings for use of insulating sleeves	EN 60 947-7-1		
Cross section fine-stranded	0.5 – 2.5 mm ²		
Cross section solid/stranded	0.5 – 4 mm ²		
Cross section, AWG		18 – 12	22 – 12
Rated current	24 A	20/30 A	25 A
Rated voltage	800 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
	Type	Part No.	Std. Pack
End plate, gray	9701/6	07.310.3153.0	10
Partition, gray	9702/6	07.310.3453.0	10
Cross connector with screws, 2 pole	9703/5-2	Z7.215.0227.0	50
E-Cu, uninsulated	3 pole	9703/5-3	Z7.215.0327.0
	4 pole	9703/5-4	Z7.215.0427.0
	5 pole	9703/5-5	Z7.215.0527.0
	6 pole	9703/5-6	Z7.215.0627.0
Cut-to-order strip 0,6 m long	9703/5-M	Z7.215.0027.0	10
2-pole switchable jumper		Z7.269.3523.0	50
Adapter for test plug	9011 D	05.508.8921.0	10
Cover with warn. symbol for 1 block	yellow	04.325.1656.0	10

9700 A/6 S35

- Feed-through block for mounting on TS 35
- Nominal cross section 4 mm²



Description	Type	Part No.	Std. Pack
Feed-through block, gray	9700 A/6 S35	54.004.7553.0	100
Feed-through block, (Ex)i, blue	9700 A/6 S35 BLAU	54.004.7553.6	100
General data			
Width / length / height, incl. TS 7.5	6 mm / 47 mm / 38 mm		
Wire strip length	9 mm		
Approvals			
Technical data			
	IEC	UL	CSA
Ratings for use of insulating sleeves	EN 60 947-7-1		
Cross section fine-stranded	0.5 – 4 mm ²		
Cross section solid/stranded	0.5 – 6 mm ²		
Cross section, AWG		18 – 10	22 – 10
Rated current	32 A	30/30 A	35 A
Rated voltage	800 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
	Type	Part No.	Std. Pack
End plate, gray	9701/6	07.310.3153.0	10
Partition, gray	9702/6	07.310.3453.0	10
Cross connector with screws, 2 pole	9703/6-2	Z7.211.0227.0	50
E-Cu, uninsulated	3 pole	9703/6-3	Z7.211.0327.0
	4 pole	9703/6-4	Z7.211.0427.0
	5 pole	9703/6-5	Z7.211.0527.0
	6 pole	9703/6-6	Z7.211.0627.0
Cut-to-order strip 0,6 m long	9703/6-M	Z7.211.0027.0	10
2-pole switchable jumper		Z7.269.2923.0	50
Adapter for test plug	9011 C	05.508.8821.0	10
Cover with warn. symbol for 1 block	yellow	04.325.1056.0	10

Feed-through blocks with screw connection, type 9700 A.. S35

9700 A/8 S35

- Feed-through block for mounting on TS 35
- Nominal cross section 16 mm²



Description	Type	Part No.	Std. Pack
Feed-through block, gray	9700 A/8 S 35	54.010.7553.0	100
Feed-through block, (Ex)i, blue	9700 A/8 S 35 BLAU	54.010.7553.6	100
General data			
Width / length / height, incl. TS 7.5	8 mm / 47 mm / 48 mm		
Wire strip length	12 mm		
Approvals			
Technical data	IEC	UL	CSA
	EN 60 947-7-1		
Cross section fine-stranded	1 – 10 mm ²		
Cross section solid/stranded	1 – 10 mm ²		
Cross section, AWG		18–8	18–8
Rated current	57 A	50/50 A	55 A
Rated voltage	800 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
End plate	gray 9701/8	07.310.3253.0	10
Partition	gray 9702/8	07.310.3553.0	10
Cross connector with screws, E-Cu, uninsulated	2 pole 9703/8-2	Z7.212.0227.0	50
	3 pole 9703/8-3	Z7.212.0327.0	50
	4 pole 9703/8-4	Z7.212.0427.0	50
	5 pole 9703/8-5	Z7.212.0527.0	50
	6 pole 9703/8-6	Z7.212.0627.0	50
2-pole switchable jumper		Z7.269.3023.0	50
Adapter for test plug	9011 B	05.508.3221.0	10
Cover with warn. symbol for 1 block	yellow	04.325.1156.0	10
Rapid mounting tool		05.593.5953.0	10

9700 A/10 S35

- Feed-through block for mounting on TS 35
- Nominal cross section 16 mm²

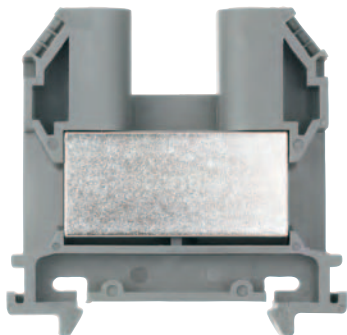


Description	Type	Part No.	Std. Pack
Feed-through block, gray	9700 A/10 S 35	54.016.7553.0	100
Feed-through block, (Ex)i, blue	9700 A/10 S 35 BLAU	54.016.7553.6	100
General data			
Width / length / height, incl. TS 7.5	10 mm / 49 mm / 51 mm		
Wire strip length	15 mm		
Approvals			
Technical data	IEC	UL	CSA
	EN 60 947-7-1		
Cross section fine-stranded	1.5 – 16 mm ²		
Cross section solid/stranded	1.5 – 16 mm ²		
Cross section, AWG		18–6	18–6
Rated current	76 A	65/70 A	70 A
Rated voltage	800 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
End plate	gray 9701/10	07.310.3953.0	10
Partition	gray 9702/10	07.310.4053.0	10
Cross connector with screws, E-Cu, uninsulated	2 pole 9703/10-2	Z7.214.0227.0	50
	3 pole 9703/10-3	Z7.214.0327.0	50
	4 pole 9703/10-4	Z7.214.0427.0	50
	5 pole 9703/10-5	Z7.214.0527.0	50
	6 pole 9703/10-6	Z7.214.0627.0	50
2-pole switchable jumper		Z7.269.3123.0	50
Adapter for test plug	9011 A	05.508.3121.0	10
Cover with warn. symbol for 1 block	yellow	04.325.1256.0	10

Feed-through blocks with screw connection, type 9700 A.. S35

9700 A/12 S35

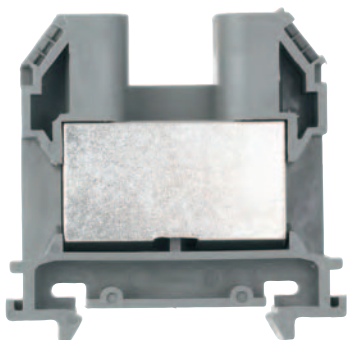
- Feed-through block for mounting on TS 35
- Nominal cross section 25 mm²



Description	Type	Part No.	Std. Pack
Feed-through block, gray	9700 A/12 S 35	54.025.7553.0	50
Feed-through block, (Ex)i, blue	9700 A/12 S 35 BLAU	54.025.7553.6	50
General data			
Width / length / height, incl. TS 7.5	12 mm / 59 mm / 58 mm		
Wire strip length	20 mm		
Approvals			
Technical data	IEC	UL	CSA
	EN 60 947-7-1		
Cross section fine-stranded	2.5 – 25 mm ²		
Cross section solid/stranded	2.5 – 35 mm ²		
Cross section, AWG		14–4	14–4
Rated current	101 A	85/100 A	100 A
Rated voltage	800 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
End plate	gray 9701/12	07.310.3353.0	10
Partition	gray 9702/12	07.310.3653.0	10
Cross connector with screws, E-Cu, uninsulated	2 pole 9703/12-2	Z7.213.0227.0	50
	3 pole 9703/12-3	Z7.213.0327.0	50
	4 pole 9703/12-4	Z7.213.0427.0	50
	5 pole 9703/12-5	Z7.213.0527.0	50
	6 pole 9703/12-6	Z7.213.0627.0	50
2-pole switchable jumper		Z7.269.3223.0	50
Adapter for test plug		05.508.6521.0	10
Cover with warn. symbol for 1 block	yellow	04.325.1356.0	10

9700 A/16 S35

- Feed-through block for mounting on TS 35
- Nominal cross section 35 mm²



Description	Type	Part No.	Std. Pack
Feed-through block, gray	9700 A/16 S 35	54.035.7553.0	50
Feed-through block, (Ex)i, blue	9700 A/16 S 35 BLAU	54.035.7553.6	50
General data			
Width / length / height, incl. TS 7.5	16 mm / 59 mm / 58 mm		
Wire strip length	20 mm		
Approvals			
Technical data	IEC	UL	CSA
	EN 60 947-7-1		
Cross section fine-stranded	2,5 – 35 mm ²		
Cross section solid/stranded	2,5 – 50 mm ²		
Cross section, AWG		6–2	12–2
Rated current	125 A	115/130 A	125 A
Rated voltage	1000 V	600 V	600 V
Rated impulse voltage	8 kV		
Pollution degree	3		
Accessories			
End plate	gray 9701/12	07.310.3353.0	10
Partition	gray 9702/12	07.310.3653.0	10
Cross connector with screws, E-Cu, uninsulated	2 pole 9703/16-2	Z7.216.0227.0	50
	3 pole 9703/16-3	Z7.216.0327.0	50
	4 pole 9703/16-4	Z7.216.0427.0	50
	5 pole 9703/16-5	Z7.216.0527.0	50
	6 pole 9703/16-6	Z7.216.0627.0	50
2-pole switchable jumper		Z7.269.3423.0	50
Adapter for test plug		05.508.6521.0	10
Cover with warn. symbol for 1 block	yellow	04.325.1456.0	10

High-current terminal blocks with screw connection

<p>RFK 1/95... S35</p>	<table border="1"> <thead> <tr> <th>Description</th> <th>Color</th> <th>Type</th> <th>Part No.</th> <th>Std. Pack</th> </tr> </thead> <tbody> <tr> <td>Configuration F</td> <td>gray</td> <td>RFK 1/95 F S35</td> <td>56.395.0055.0</td> <td>10</td> </tr> <tr> <td>Configuration K</td> <td>gray</td> <td>RFK 1/95 K S35</td> <td>56.395.0155.0</td> <td>10</td> </tr> <tr> <td>Configuration FK</td> <td>gray</td> <td>RFK 1/95 FK S35</td> <td>56.395.0255.0</td> <td>10</td> </tr> <tr> <td>Configuration FM</td> <td>gray</td> <td>RFK 1/95 FM S35</td> <td>56.395.1055.0</td> <td>10</td> </tr> <tr> <td>Configuration FMK</td> <td>gray</td> <td>RFK 1/95 FMK S35</td> <td>56.395.1255.0</td> <td>10</td> </tr> </tbody> </table> <table border="1"> <tbody> <tr> <td>DIN VDE 0611 sect. 1/EN 60 947-7-1</td> <td>fine-stranded</td> <td></td> <td>V</td> <td>A</td> </tr> <tr> <td>UL ratings</td> <td>field/factory wiring</td> <td>16 – 95 mm²</td> <td>1000 V</td> <td>250</td> </tr> <tr> <td>CSA ratings</td> <td></td> <td>No. 6-3/0 AWG</td> <td>600 V</td> <td>200</td> </tr> <tr> <td>Width</td> <td>wire strip length</td> <td>32 mm</td> <td></td> <td>27 mm</td> </tr> <tr> <td>Approvals</td> <td colspan="4"> </td> </tr> </tbody> </table>	Description	Color	Type	Part No.	Std. Pack	Configuration F	gray	RFK 1/95 F S35	56.395.0055.0	10	Configuration K	gray	RFK 1/95 K S35	56.395.0155.0	10	Configuration FK	gray	RFK 1/95 FK S35	56.395.0255.0	10	Configuration FM	gray	RFK 1/95 FM S35	56.395.1055.0	10	Configuration FMK	gray	RFK 1/95 FMK S35	56.395.1255.0	10	DIN VDE 0611 sect. 1/EN 60 947-7-1	fine-stranded		V	A	UL ratings	field/factory wiring	16 – 95 mm ²	1000 V	250	CSA ratings		No. 6-3/0 AWG	600 V	200	Width	wire strip length	32 mm		27 mm	Approvals				
Description	Color	Type	Part No.	Std. Pack																																																				
Configuration F	gray	RFK 1/95 F S35	56.395.0055.0	10																																																				
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Configuration FK	gray	RFK 1/95 FK S35	56.395.0255.0	10																																																				
Configuration FM	gray	RFK 1/95 FM S35	56.395.1055.0	10																																																				
Configuration FMK	gray	RFK 1/95 FMK S35	56.395.1255.0	10																																																				
DIN VDE 0611 sect. 1/EN 60 947-7-1	fine-stranded		V	A																																																				
UL ratings	field/factory wiring	16 – 95 mm ²	1000 V	250																																																				
CSA ratings		No. 6-3/0 AWG	600 V	200																																																				
Width	wire strip length	32 mm		27 mm																																																				
Approvals																																																								
<p>RFK 1/150... S35</p>	<table border="1"> <thead> <tr> <th>Description</th> <th>Color</th> <th>Type</th> <th>Part No.</th> <th>Std. Pack</th> </tr> </thead> <tbody> <tr> <td>Configuration F</td> <td>gray</td> <td>RFK 1/150 F S35</td> <td>56.397.0055.0</td> <td>10</td> </tr> <tr> <td>Configuration K</td> <td>gray</td> <td>RFK 1/150 K S35</td> <td>56.397.0155.0</td> <td>10</td> </tr> <tr> <td>Configuration FK</td> <td>gray</td> <td>RFK 1/150 FK S35</td> <td>56.397.0255.0</td> <td>10</td> </tr> <tr> <td>Configuration FMK</td> <td>gray</td> <td>RFK 1/150 FMK S35</td> <td>56.397.1255.0</td> <td>10</td> </tr> </tbody> </table> <table border="1"> <tbody> <tr> <td>DIN VDE 0611 sect. 1/EN 60 947-7-1</td> <td>fine-stranded</td> <td></td> <td>V</td> <td>A</td> </tr> <tr> <td>UL ratings</td> <td>field/factory wiring</td> <td>70 – 150 mm²</td> <td>1000 V</td> <td>335</td> </tr> <tr> <td>CSA ratings</td> <td></td> <td>No. 0 AWG – 300 MCM</td> <td>600 V</td> <td>275</td> </tr> <tr> <td>Width</td> <td>wire strip length</td> <td>42 mm</td> <td></td> <td>27 mm</td> </tr> <tr> <td>Approvals</td> <td colspan="4"> </td> </tr> </tbody> </table>	Description	Color	Type	Part No.	Std. Pack	Configuration F	gray	RFK 1/150 F S35	56.397.0055.0	10	Configuration K	gray	RFK 1/150 K S35	56.397.0155.0	10	Configuration FK	gray	RFK 1/150 FK S35	56.397.0255.0	10	Configuration FMK	gray	RFK 1/150 FMK S35	56.397.1255.0	10	DIN VDE 0611 sect. 1/EN 60 947-7-1	fine-stranded		V	A	UL ratings	field/factory wiring	70 – 150 mm ²	1000 V	335	CSA ratings		No. 0 AWG – 300 MCM	600 V	275	Width	wire strip length	42 mm		27 mm	Approvals									
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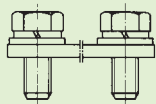
*) Only use cable protectors according to DIN 46234.

High-current terminal blocks with screw connection

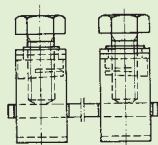
mm ²	Type	a x b	M I	M II	H	L	F	E
185	F, FM	6 x 26	M 12	–	–	200	92	46
	F, FM	8 x 26	M 12	–	–	200	92	46
240	FK, FMK	8 x 26	M 12	M 12	100.5	200	102	46
	K	8 x 26	–	M 12	100.5	200	112	56

Configurations

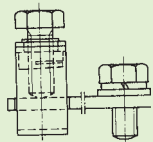
F



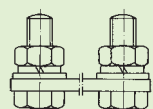
K



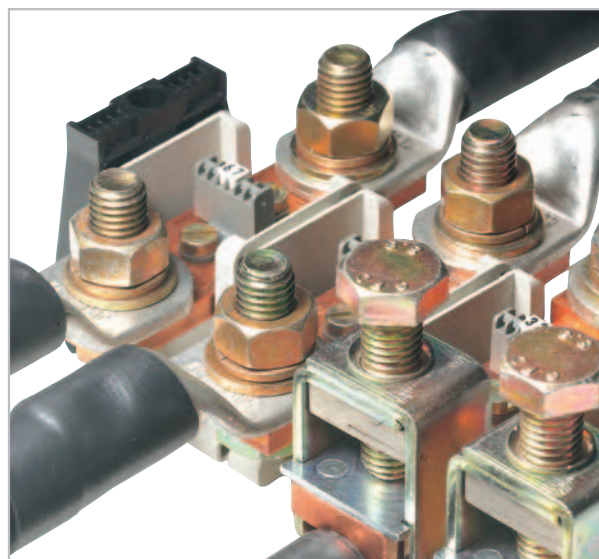
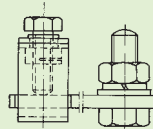
FK



FM



FMK

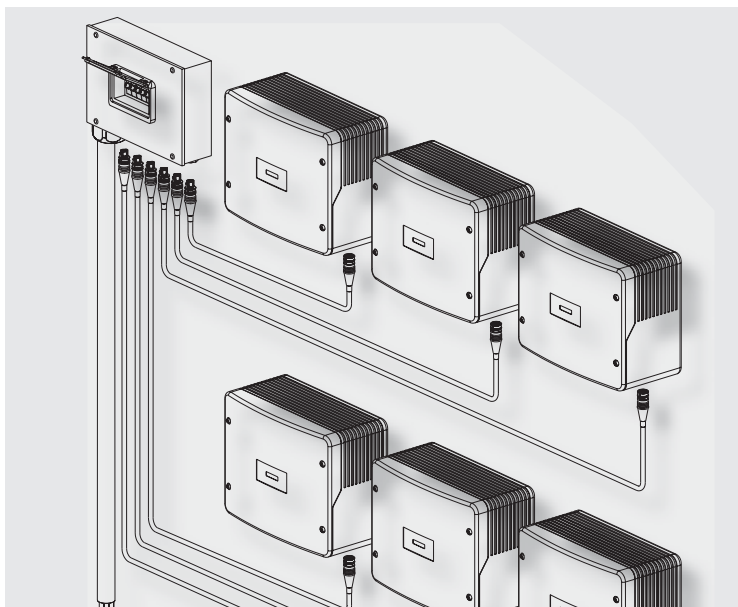


RST 25i3



Solar applications for systems up to 32A 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.

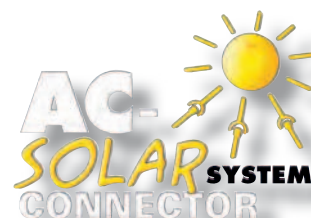
Special distribution boxes are used to bundle the electrical power of up to 6 inverters and thus complete the system.

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 32 A (with 6.0 mm²)
- Cross-sections up to 6 mm²
- Degree of protection IP65, IP66, IP67, IP68 (3 m, 2 h)

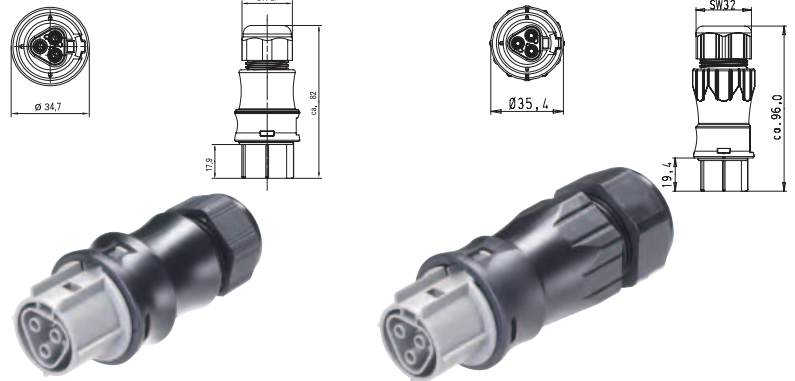


Coding

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 e-KAT.				Application	Single-phase power
				Mechanical coding, for example	250 V, 32 A L, N, ⊕
Name	Description	Connection style	Strain relief housing	Connection points per pole	concrete gray
Connectors	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	pre-assembled	pre-assembled	pre-assembled	✓
	Connection cable Female – Free end	pre-assembled	pre-assembled	pre-assembled	✓
	Extension cable Male – Female	pre-assembled	pre-assembled	pre-assembled	✓

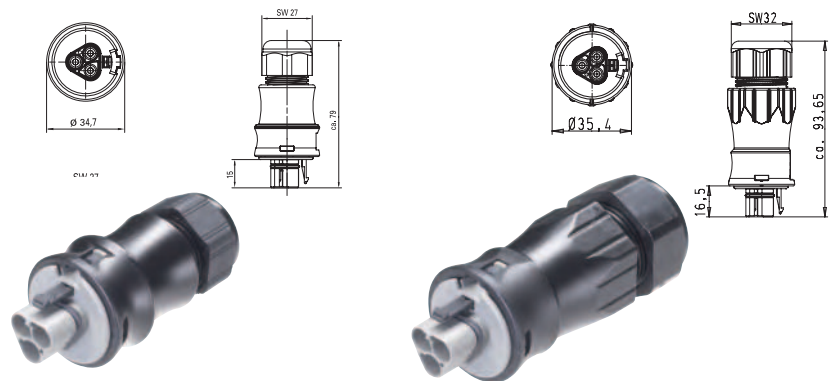
Connectors, 25 A (32 A with 6.0 mm²)

Female connector



Application	Coding	Color	Part No.	Part No.																		
			Screw technology for cable Ø 10 –14 mm <table border="1"> <tr> <td>Wire</td> <td>mm²</td> <td></td> </tr> <tr> <td>solid</td> <td></td> <td></td> </tr> <tr> <td>fine-stranded</td> <td>up to 6.0²⁾</td> <td>without ferrules</td> </tr> </table>	Wire	mm ²		solid			fine-stranded	up to 6.0 ²⁾	without ferrules	Screw technology for cable Ø 13 –18 mm <table border="1"> <tr> <td>Wire</td> <td>mm²</td> <td></td> </tr> <tr> <td>solid</td> <td></td> <td></td> </tr> <tr> <td>fine-stranded</td> <td>up to 6.0²⁾</td> <td>without ferrules</td> </tr> </table>	Wire	mm ²		solid			fine-stranded	up to 6.0 ²⁾	without ferrules
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Single-phase power 250V	L, N, PE	concrete gray/black	96.031.4154.3	96.031.4554.3																		

Male connector



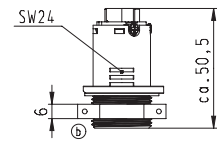
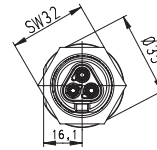
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Locking device	yes																											
Single-phase power 250V	L, N, PE	concrete gray/black	96.032.4154.3	96.032.4554.3																								

¹⁾ Larger cross-sections available on request
²⁾ With 6.0 mm² wires, the pull and bending forces at the connector must be taken into consideration and compensated by suitable measures if required

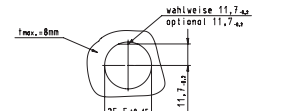
M 25 device connector, 25 A (32 A with 6.0 mm²)

Female connector With sealing option

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



Application Coding Color

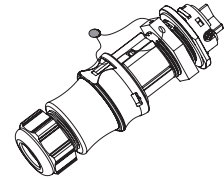


Single-phase power 250 V L, N, concrete gray/black

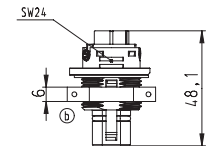
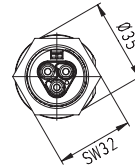
Part No.

Screw technology		
Wire	mm ²	
solid	up to 6.0	without ferrules
fine-stranded		
Locking device	yes	

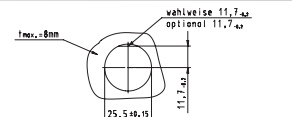
96.031.5054.3



Male connector With sealing option



Application Coding Color

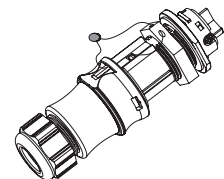


Single-phase power 250 V L, N, concrete gray/black

Part No.

Screw technology		
Wire	mm ²	
solid	up to 6.0	without ferrules
fine-stranded		
Locking device	yes	

96.032.5054.3



Distribution units

RST-Distribution box RST RAN Solar



Name	Material	Part No.
RST RAN Solar	Sheet metal/ powder-coated	99.512.0000.7

Detailed information about the distribution units available in section "Distribution units".

Inputs	6 x RST25i3 / concrete gray coding
Cable gland	1 x M40, 2 x M20
Connector clamps	3 x 35 mm ²
Circuit breakers	6 x B25
Dimensions in mm (L x W x H)	350 x 300 x 100 mm

Distribution box RST Solar



Distribution box RST Solar	Plastic	99.502.0000.7
----------------------------	---------	---------------

Detailed information about the distribution units available in section "Distribution units".

Inputs	3 x RST25i3 / concrete gray coding
Cable gland	1 x M32, 2 x M20
Connector clamps	5 x 10 mm ²
Dimensions in mm (L x W x H)	180 x 180 x 90 mm

Cable assemblies, 4.0 mm², 25 A

H05VV-F 3G4.0¹⁾

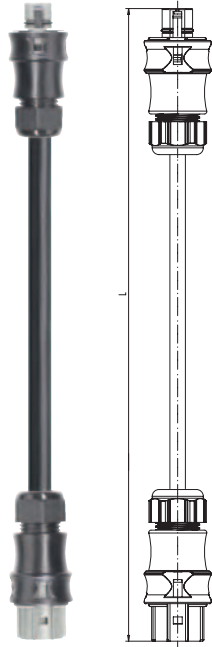


N = BU
L = BN
⊕ = GN/YE

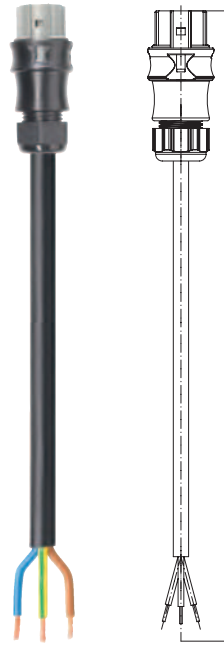
Observe the installation instructions in the Technical Data that follow the product pages.

The cable colors have been adapted to the new European standard HD 208 S2. The assignment corresponds to international recommendations.

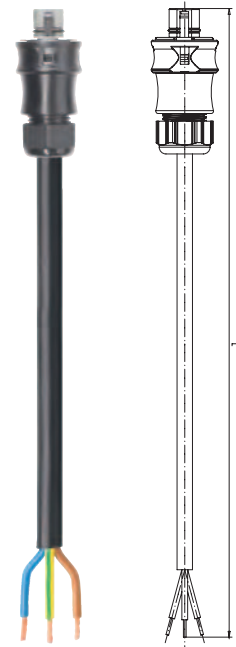
Cable: black
Coding: concrete gray/black



Female – Male	
Extension cable	
Locking device	yes

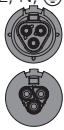


Female – Free end	
Connection cable	
Wire ends	ultrason. welded
Sheath strip length	35 mm
Insul. strip length	9 mm
Cable diameter	10.5 – 13.1 mm
H05VV-F ²⁾	



Male – Free end	
Connection cable	
Wire ends	ultrason. welded
Sheath strip length	35 mm
Insul. strip length	9 mm
Locking device	yes
Cable diameter	10.5 – 13.1 mm
H05VV-F ³⁾	

Application	Length ²⁾ m	Part No.	Part No.	Part No.
Single-phase power 250V	1.0	96.834.1000.3	96.834.1003.3	96.834.1004.3
	1.5	96.834.1500.3	96.834.1503.3	96.834.1504.3
	2.0	96.834.2000.3	96.834.2003.3	96.834.2004.3
	2.5	96.834.2500.3	96.834.2503.3	96.834.2504.3
	3.0	96.834.3000.3	96.834.3003.3	96.834.3004.3
L, N, ⊕	3.5	96.834.3500.3	96.834.3503.3	96.834.3504.3
	4.0	96.834.4000.3	96.834.4003.3	96.834.4004.3



Cable assemblies, 4.0 mm², 25 A

H07RN-F 3G4.0¹⁾

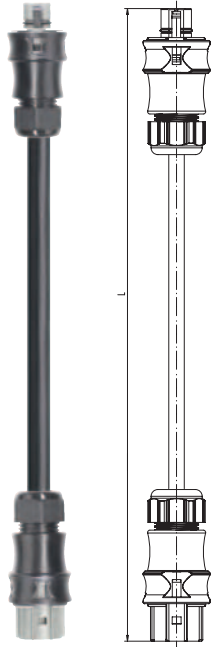


N = BU
L = BN
⊕ = GN/YE

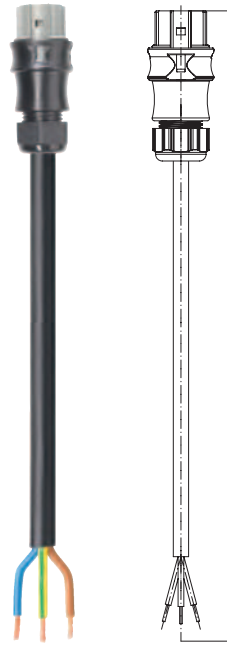
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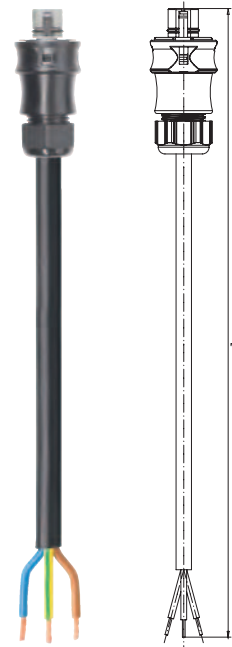
Cable: black
Coding: concrete gray/black



Female - Male	
Extension cable	
Locking device	yes



Female - Free end	
Connection cable	
Wire ends	ultrason. welded
Sheath strip length	35 mm
Insul. strip length	9 mm
Cable diameter	10.5 - 13.1 mm
H07RN-F ²⁾	

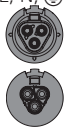


Male - Free end	
Connection cable	
Wire ends	ultrason. welded
Sheath strip length	35 mm
Insul. strip length	9 mm
Locking device	yes
Cable diameter	10.5 - 13.1 mm
H07RN-F ³⁾	

Application	Length ²⁾ m	Part No.
Single-phase power 250 V	1.0	96.834.1030.3
	1.5	96.834.1530.3
	2.0	96.834.2030.3
	2.5	96.834.2530.3
	3.0	96.834.3030.3
L, N, ⊕	3.5	96.834.3530.3
	4.0	96.834.4030.3

Part No.
96.834.1033.3
96.834.1533.3
96.834.2033.3
96.834.2533.3
96.834.3033.3
96.834.3533.3
96.834.4033.3

Part No.
96.834.1034.3
96.834.1534.3
96.834.2034.3
96.834.2534.3
96.834.3034.3
96.834.3534.3
96.834.4034.3



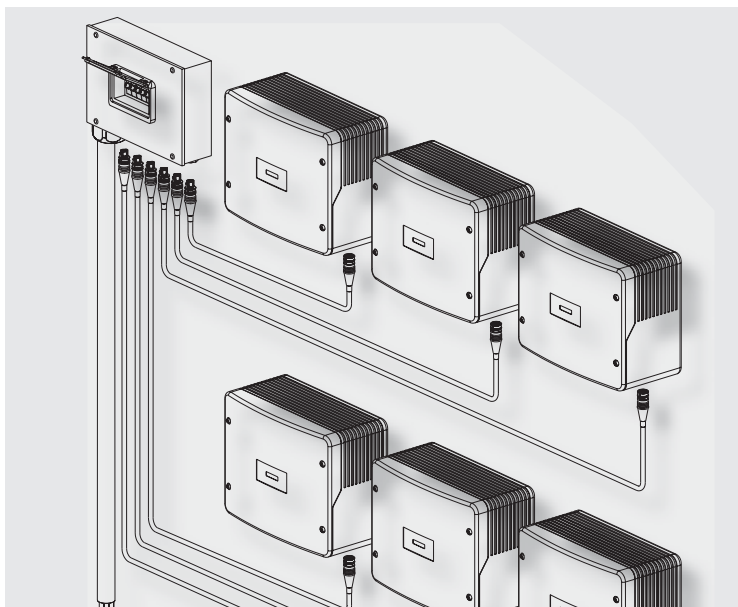
¹⁾ Other cables available on request
²⁾ Other lengths available on request
³⁾ According to VDE 0281/T5 and VDE 0288/T4

RST 25i5



Solar applications up to 25 A for single-phase supply with three-phase power monitoring or three-phase supply

Application example



General

The system has been specially adapted to the requirements of solar technology. The connectors can be loaded with 25A and are used for single-phase supply with power monitoring or three-phase supply.

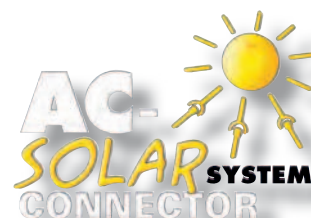
Special distribution boxes are used to bundle the electrical power of up to 6 inverters and thus complete the system.

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.

Features:

- Fast mounting through easy handling
- UV-resistant
- Rated current up to 25 A
- Cross-sections up to 6 mm²
- Degree of protection IP65 ... IP68 (on request)

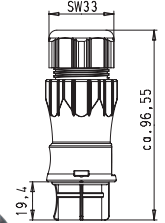
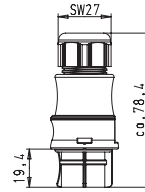


Coding

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 e-KAT.				Application	3-phase power
				Mechanical coding, for example	250/400V, 25 A L, N, ⊕, 1, 2 
Name	Description	Connection style	Strain relief housing	Connection points per pole	concrete gray
Connectors	1 x cable entry	Screw technology	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	pre-assembled	pre-assembled	pre-assembled	✓
	Connection cable Female – Free end	pre-assembled	pre-assembled	pre-assembled	✓
	Extension cable Male – Female	pre-assembled	pre-assembled	pre-assembled	✓

Connectors, 25 A

Female connector



Application Coding Color

Part No.

Part No.

Screw technology for cable Ø 10 –14 mm

Wire	mm ²	
solid		
fine-stranded	up to 4.0	without ferrules

Screw technology for cable Ø 13 –18 mm

Wire	mm ²	
solid	up to 4.0	
fine-stranded	up to 6.0	without ferrules

3-phase power
250/400 V,
25 A



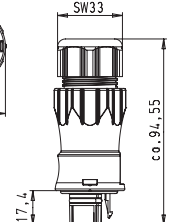
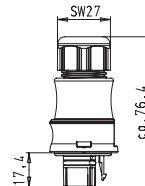
concrete
gray/
black

96.051.4154.3 4.0 mm²

96.051.4554.3 4.0 mm²

99.575.0000.7 6.0 mm²

Male connector



Application Coding Color

Part No.

Part No.

Screw technology for cable Ø 10 –14 mm

Wire	mm ²	
solid		
fine-stranded	up to 4.0	without ferrules

Screw technology for cable Ø 13 –18 mm

Wire	mm ²	
solid	up to 4.0	
fine-stranded	up to 6.0	without ferrules

3-phase power
250/400 V,
25 A



concrete
gray/
black

96.052.4154.3 4.0 mm²

96.052.4554.3 4.0 mm²

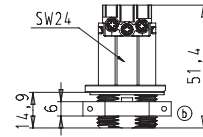
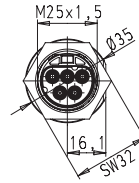
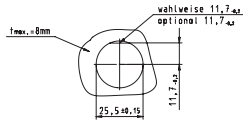
99.576.0000.7 6.0 mm²

M 25 device connector, 25 A

Female connector

With sealing option

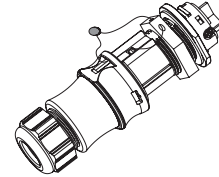
For spacer rings for unlocking the device connector, see Accessories.



Application Coding Color Part No.

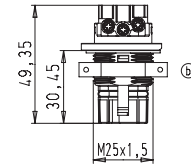
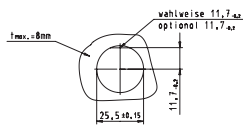
3-phase power 250/400 V, 25 A	 L, N, ⊕, 1, 2	concrete gray/ black
-------------------------------------	-------------------	----------------------------

Screw technology		
Wire	mm ²	
solid	up to 4.0	without ferrules
fine-stranded	up to 6.0	without ferrules
96.051.5054.3	4.0 mm ²	
99.577.0000.7	6.0 mm ²	



Male connector

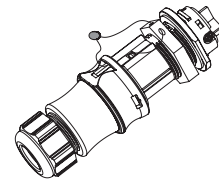
With sealing option



Application Coding Color Part No.

3-phase power 250/400 V, 25 A	 L, N, ⊕, 1, 2	concrete gray/ black
-------------------------------------	-------------------	----------------------------

Screw technology		
Wire	mm ²	
solid	up to 4.0	without ferrules
fine-stranded	up to 6.0	without ferrules
96.052.5054.3	4.0 mm ²	
99.578.0000.7	6.0 mm ²	



Distribution units

RST Distribution box RST RAN Solar



Name	Material	Part No.
RST RAN Solar	Sheet metal/ powder-coated	99.527.0000.7

Detailed information about the distribution units available in section "Distribution units".

Inputs	6 x RST25i5 / Concrete gray coding
Cable gland	1 x M40, 2 x M20
Connector clamps	5 x 35 mm ²
Circuit breakers	6 x B25
Dimensions in mm (L x W x H)	350 x 300 x 100 mm

Distribution box RST Solar



Name	Material	Part No.
Distribution box RST Solar	Plastic	99.528.0000.7

Detailed information about the distribution units available in section "Distribution units".

Inputs	3 RST25i5 / Concrete gray coding
Cable gland	1 x M32, 2 x M20
Connector clamps	5 x 10 mm ²
Dimensions in mm (L x W x H)	180 x 180 x 90 mm

Cable assemblies, 4.0 mm², 25 A

**H05VV-F
5G4.0¹⁾**



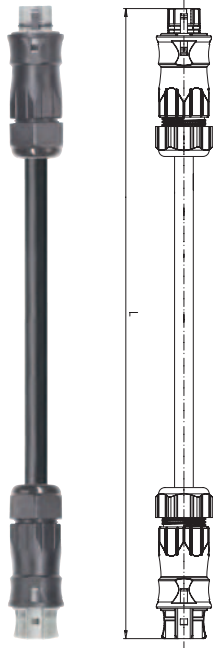
N = BU
L = GY
⊕ = GN/YE
1 = BN
2 = BK

Observe the installation instructions in the Technical Data that follow the product pages.

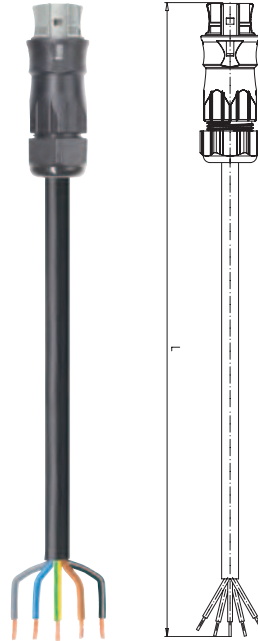
The cable colors have been adapted to the new European standard HD 208 S2.

The assignment corresponds to international recommendations.

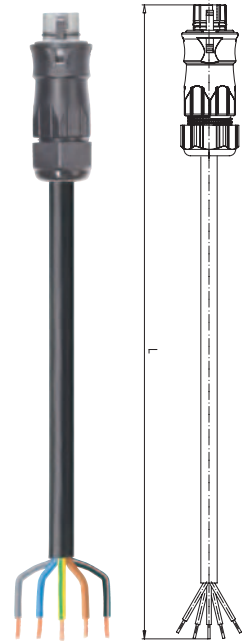
Cable: black
Coding: concrete gray/black



Female - Male	
Extension cable	
Locking device	yes

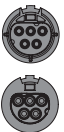


Female - Free end	
Connection cable	
Wire ends	ultrason. welded
Sheath strip length	35 mm
Insul. strip length	9 mm
Cable diameter	13.0 – 16.1 mm
H05VV-F ²⁾	



Male - Free end	
Connection cable	
Wire ends	ultrason. welded
Sheath strip length	35 mm
Insul. strip length	9 mm
Locking device	yes
Cable diameter	13.0 – 16.1 mm
H05VV-F ²⁾	

Application	Length ²⁾ m	Part No.	Part No.	Part No.
3-phase power	1.0	96.854.1000.3	96.854.1003.3	96.854.1004.3
	1.5	96.854.1500.3	96.854.1503.3	96.854.1504.3
250/400 V, 25 A	2.0	96.854.2000.3	96.854.2003.3	96.854.2004.3
	2.5	96.854.2500.3	96.854.2503.3	96.854.2504.3
	3.0	96.854.3000.3	96.854.3003.3	96.854.3004.3
L, N, ⊕, 1, 2	3.5	96.854.3500.3	96.854.3503.3	96.854.3504.3
	4.0	96.854.4000.3	96.854.4003.3	96.854.4004.3



¹⁾ Other cables available on request
²⁾ Other lengths available on request
³⁾ According to VDE 0281/T5 and VDE 0288/T4

Cable assemblies, 4.0 mm², 25 A

H07RN-F 5G4.0¹⁾

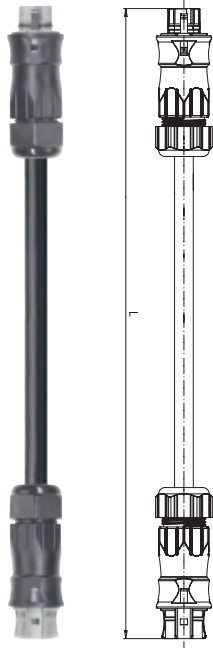


N = BU
L = GY
⊕ = GN/YE
1 = BN
2 = BK

Observe the installation instructions in the Technical Data that follow the product pages.

The cable colors have been adapted to the new European standard HD 208 S2. The assignment corresponds to international recommendations.

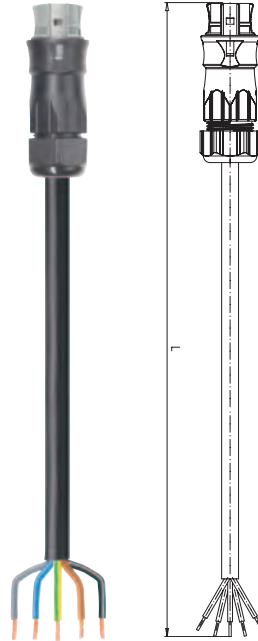
Cable: black
Coding: concrete gray/black



Female - Male

Extension cable

Locking device yes



Female - Free end

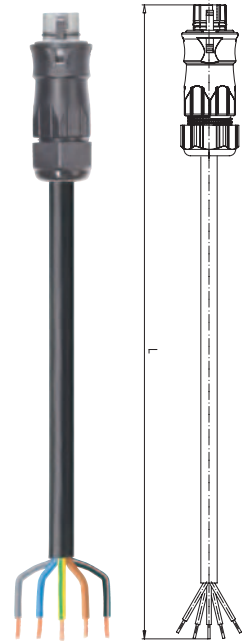
Connection cable

Wire ends ultrason. welded

Sheath strip length 35 mm

Insul. strip length 9 mm

Cable diameter H07RN-F²⁾ 15.6 – 19.9 mm



Male - Free end

Connection cable

Wire ends ultrason. welded

Sheath strip length 35 mm

Insul. strip length 9 mm

Locking device yes

Cable diameter H07RN-F³⁾ 15.6 – 19.9 mm

Application	Length ²⁾ m	Part No.
3-phase power	1.0	96.854.1030.3
	1.5	96.854.1530.3
250/400 V, 25 A	2.0	96.854.2030.3
	2.5	96.854.2530.3
	3.0	96.854.3030.3
L, N, ⊕, 1, 2	3.5	96.854.3530.3
	4.0	96.854.4030.3



Application	Length ²⁾ m	Part No.
3-phase power	1.0	96.854.1033.3
	1.5	96.854.1533.3
250/400 V, 25 A	2.0	96.854.2033.3
	2.5	96.854.2533.3
	3.0	96.854.3033.3
L, N, ⊕, 1, 2	3.5	96.854.3533.3
	4.0	96.854.4033.3

Application	Length ²⁾ m	Part No.
3-phase power	1.0	96.854.1034.3
	1.5	96.854.1534.3
250/400 V, 25 A	2.0	96.854.2034.3
	2.5	96.854.2534.3
	3.0	96.854.3034.3
L, N, ⊕, 1, 2	3.5	96.854.3534.3
	4.0	96.854.4034.3

¹⁾ Other cables available on request

²⁾ Other lengths available on request

³⁾ According to VDE 0281/T5 and VDE 0288/T4

Technical data

RST 25i3 and RST 25i5

	RST 25i3	RST 25i5
Rated voltage	250 V	250 / 400 V
Rated current	32 A (with 6mm ²)	25 A
Number of poles	3 pole	5 pole
Operating ambient temperature at peak load	55 °C	55 °C

Continuous operating temperature::

-40° C to +100° C
Cable H05VV max 70 °C, H07RN-F max. 60 °C

Material:

Contact parts: brass, surface-plated
Housing parts: thermoplastic material PA 66, halogen-free, V2
Sealing material: NBR

Regulations:

IEC 61535 (VDE 0606); DIN EN 61984 (VDE 0627); VDE 0110
IEC 60999; UL 2238; CSA: C22.2 No.182.2-M1987;
LR Type Approval System

Pollution degree:

3 (when plugged in)

Mating cycles:

according to IEC 61535
100 times without load and 50 times at rated load (cos φ = 0.6)

Approvals:

VDE; LR; GL; DNV; ATEX; CSA**; UL* (observe the conditions of acceptability)
* without pre-assembled cables with shrinkage tube technology and connectors with spring clamp technology
** without pre-assembled cables with shrinkage tube technology

Degree of protection:

IP 65, IP 66, IP 67 and IP 68 (3 m; 2 hours)
Please observe the Installation Instructions (see Installation Instructions)

IK code:

IK7 (2 Joule)

**Glow-wire test
850° C, 30 s:**

For connectors, distribution units, cable assemblies and device connectors

Coding:

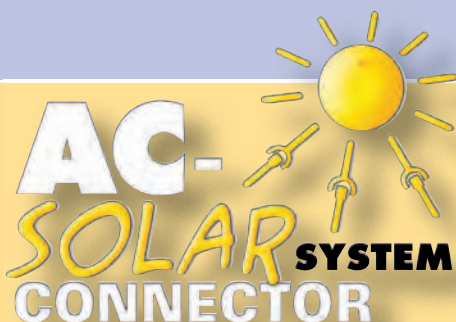
Mechanical coding symbolized by color code. Gray and black with the same mechanical coding. Other codings are optional.

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 IEC 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. IEC 60364-5-52 must be observed – see note under „Electrical installations with increased degree of protection“.



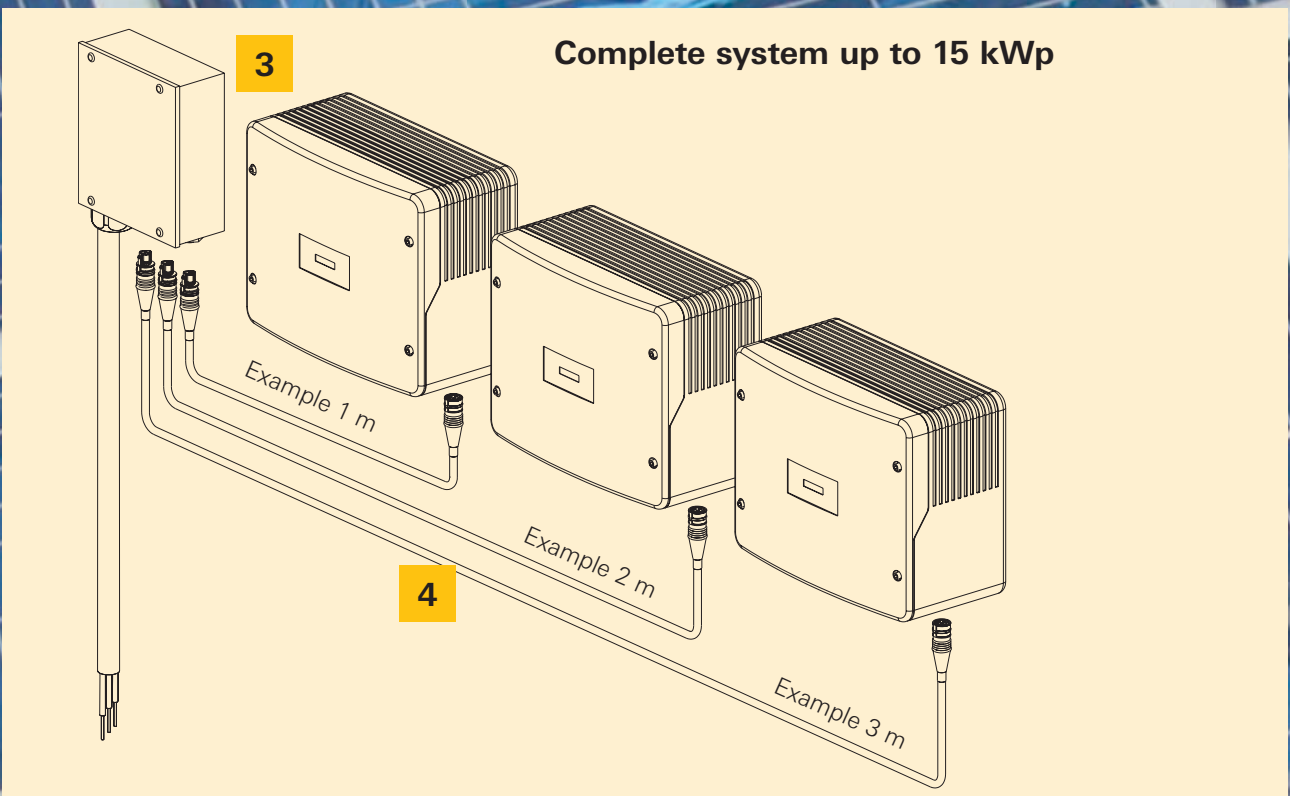
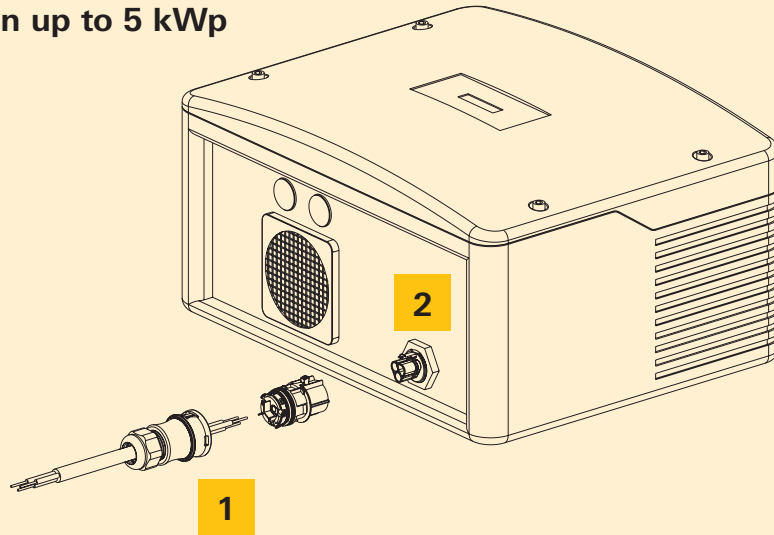
gesis[®] AC-SOLAR in use.

gesis[®] AC-SOLAR is extremely flexible in its applications. In addition to its use in photovoltaic systems **gesis**[®] AC-SOLAR SOLAR is also suitable for the following areas: Emergency power supply through batteries in buildings or systems; inversion of on-board voltage (cars, trucks, railroad, recreational vehicles, boats); metal working; power generation (fuel cell, wind power plants).

Inverter connection examples

Selecting the right connector

Individual application up to 5 kWp



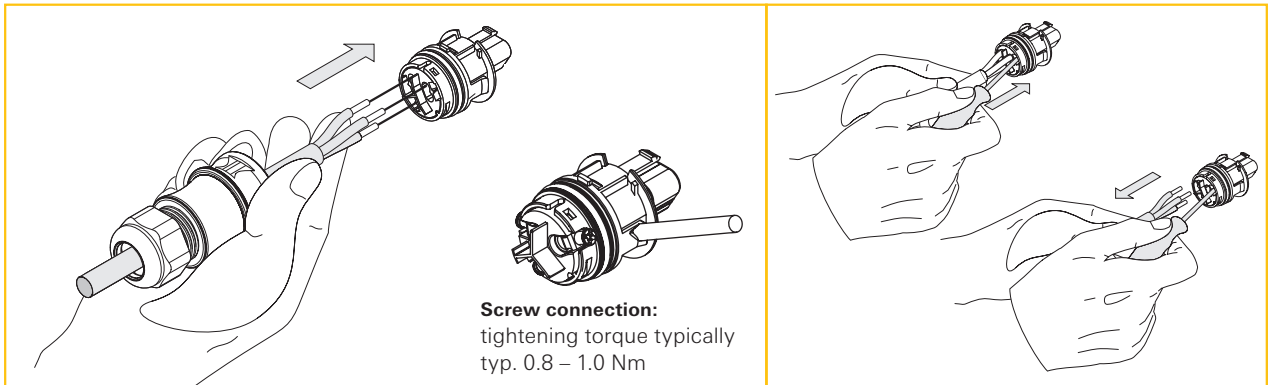
- 1** Connector (female) for field assembly
- 2** Device connection (male) for installation in the inverter housing¹⁾
¹⁾ Numerous well-known manufacturers offer their devices with pre-installed RST connections.
- 3** Combiner box
RST SOLAR
- 4** Cable assemblies for the connection from the inverter to the combiner box (in all lengths as required)



Installation of the field-assembled connectors

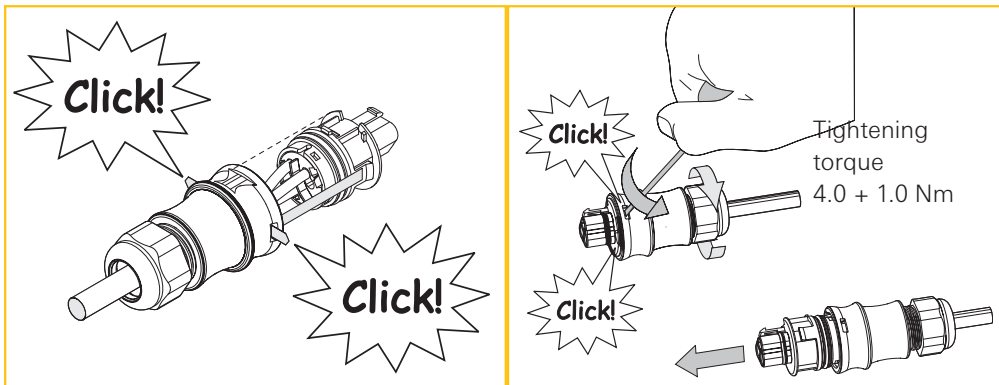
Connect the wires

... and disconnect them



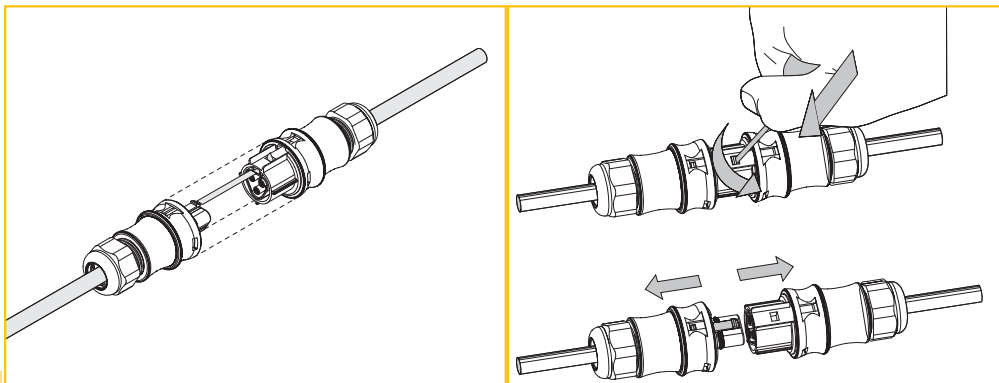
Close the connector ...

... and open it

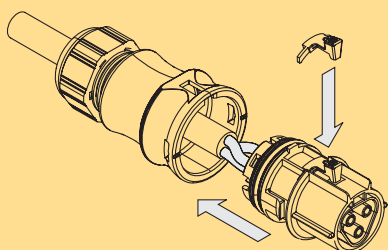


Lock the housing ...

... and unlock it

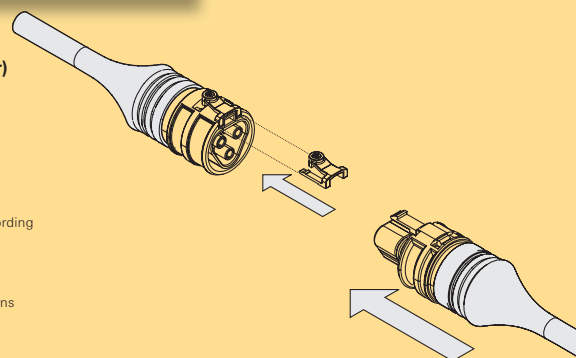


How to insert the (optional) manual disconnect into the connector
(only possible for the female connector)



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

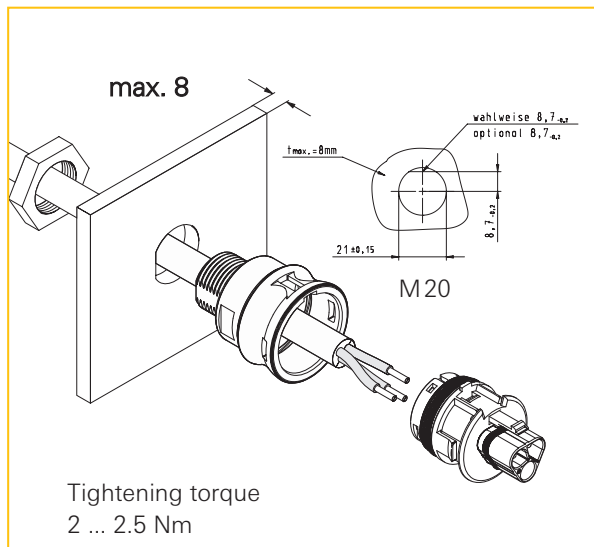
* Note:
Connections with manual disconnect are not approved according to VDE 0606 (fixed installations, for example in buildings). The VDE 0627 regulation will still apply nevertheless. Also see the "Installation instructions"! The descriptions on this page merely serve as an overview. For assembly and installation, only the installation instructions supplied together with the products are binding



Housing installation

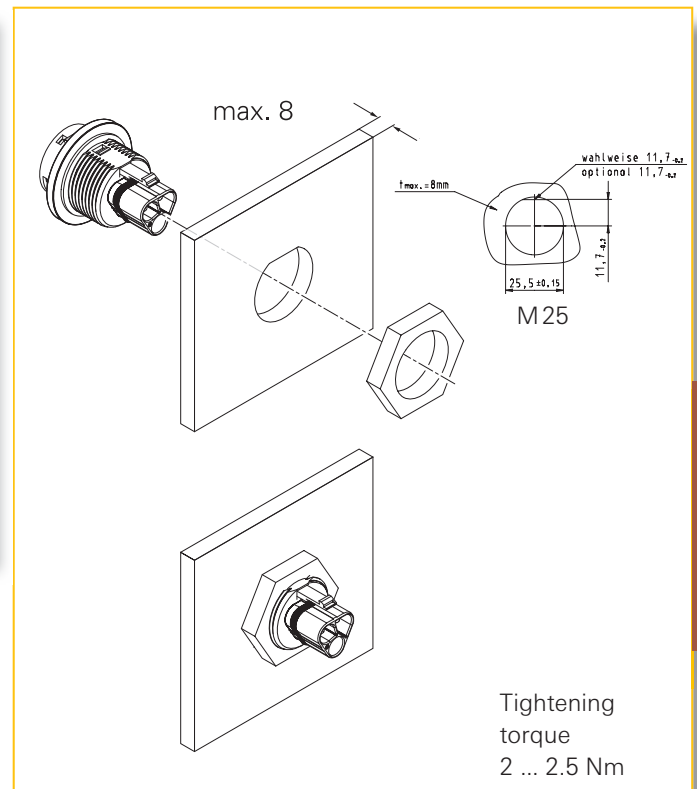
Installation of a standard system, for M 20 feed-through

Dimensions in mm



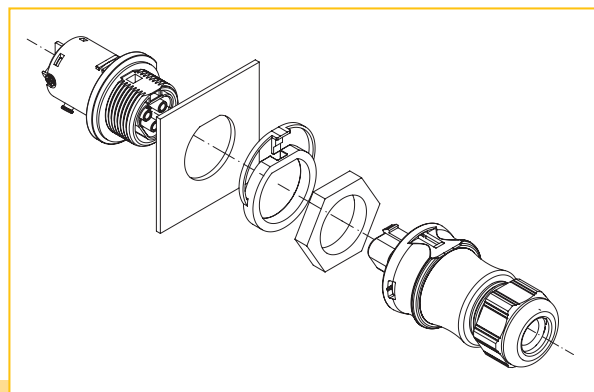
Installation of a standard system, for M 25 feed-through

Dimensions in mm



Note:

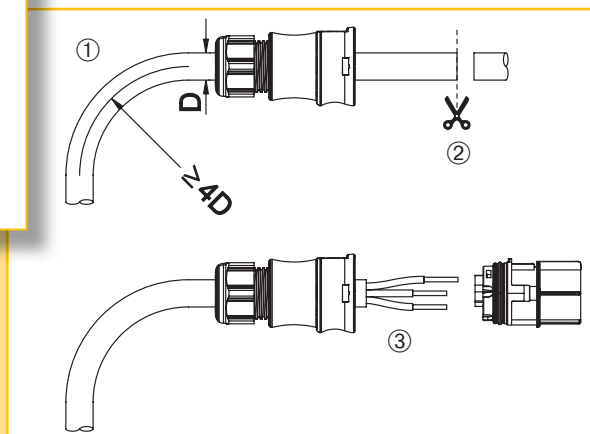
Effectiveness of the protection against twisting can only be guaranteed when the lower tolerance limit is ensured for the diameter of the hole.



Bending radius (for conductors)

Note the minimum bending radius for conductors > 2.5 mm². 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

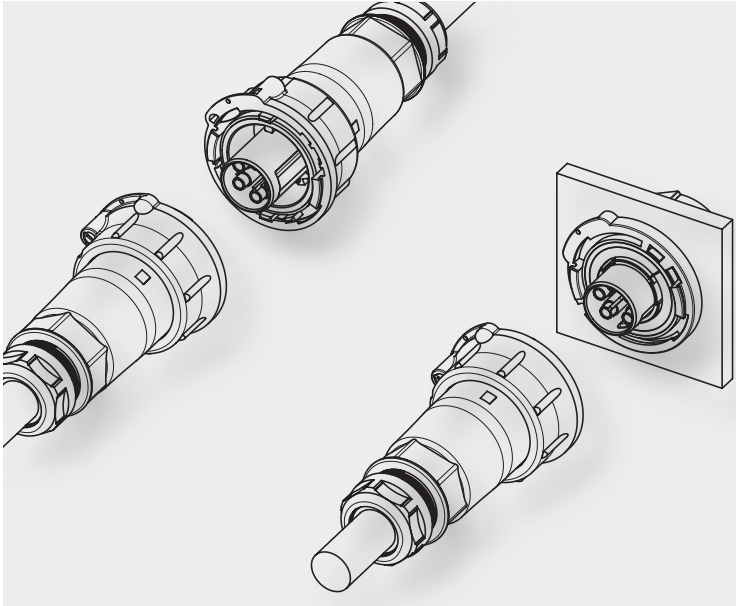


RST 50i5



The new RST Power series up to 50A

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 e-KAT.				Application	Power max. 50 A
				Mechanical coding for example	250 / 400 V 1, 2, 3, N, ⊕
Name	Description	Connection style	Strain relief housing	Connection points per pole	Color
Connectors	1 x wire entry	Screw Spring clamp	yes	1	✓
Device connectors	M32 connector, standard	Screw Spring clamp	yes	1	✓

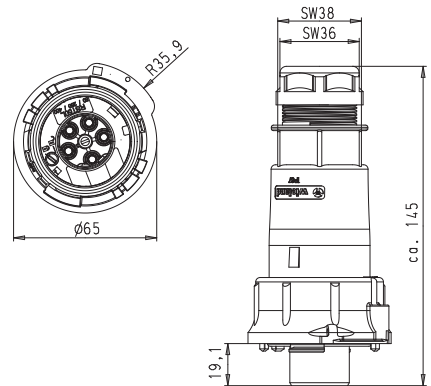


Connector with strain relief

Female connector

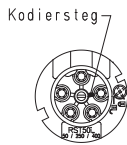


Illustration
M32 cable gland



Application	Coding	Cable gland	Wire diameter	Color	Part No.	Part No.
Power max. 50		M32	15 – 25	black	97.051.4053.1	97.151.0053.1
		M40	20 – 32	black	97.051.4253.1	97.151.0253.1

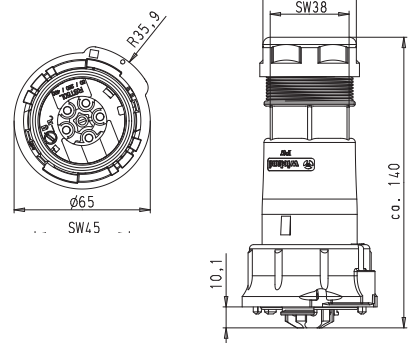
with screw connection		with crimp connection	
Wires	mm ²	Wires	mm ²
solid	from 4.0 to 6.0*)	flexible wires	from 4.0 to 10.0
stranded		Approvals	VDE
flexible wires	from 4.0 to 16.0	Pole markings	⊕, 1, 2, 3, N
Approvals	VDE	Crimp contacts	order separately; see last page of section RST50i
Pole markings	⊕, 1, 2, 3, N		



Male connector

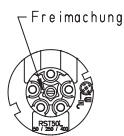


Illustration
M40 cable gland



Application	Coding	Cable gland	Wire diameter	Color	Part No.	Part No.
Power max. 50		M32	15 – 25	black	97.052.4053.1	97.152.0053.1
		M40	20 – 32	black	97.052.4253.1	97.152.0253.1

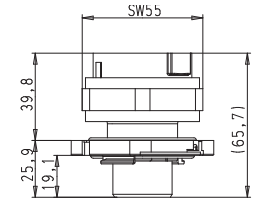
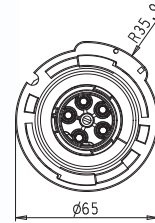
with screw connection		with crimp connection	
Wires	mm ²	Wires	mm ²
solid	from 4.0 to 6.0*)	flexible wires	from 4.0 to 10.0
stranded		Approvals	VDE
flexible wires	from 4.0 to 16.0	Pole markings	⊕, 1, 2, 3, N
Approvals	VDE	Crimp contacts	order separately; see last page of section RST50i
Pole markings	⊕, 1, 2, 3, N		



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

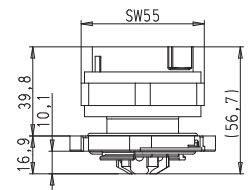
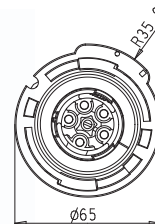
M32 device connector

Female connector



Application	Coding	Fixation with bolts	Color	Part No.	Part No.																				
Drilling template for device connectors fixed in position		fixed in position	black	with screw connection	with crimp connection																				
		not fixed in position	black	<table border="1"> <tr><td>Wires</td><td>mm²</td></tr> <tr><td>solid</td><td>from 4.0 to 16.0</td></tr> <tr><td>stranded</td><td>from 4.0 to 16.0</td></tr> <tr><td>flexible wires</td><td>from 4.0 to 16.0</td></tr> <tr><td>Approvals</td><td>VDE</td></tr> <tr><td>Pole markings</td><td>⊕, 1, 2, 3, N</td></tr> </table>	Wires	mm ²	solid	from 4.0 to 16.0	stranded	from 4.0 to 16.0	flexible wires	from 4.0 to 16.0	Approvals	VDE	Pole markings	⊕, 1, 2, 3, N	<table border="1"> <tr><td>Wires</td><td>mm²</td></tr> <tr><td>flexible wires</td><td>from 4.0 to 10.0</td></tr> <tr><td>Approvals</td><td>VDE</td></tr> <tr><td>Pole markings</td><td>⊕, 1, 2, 3, N</td></tr> <tr><td>Crimp contacts</td><td>order separately; see last page of section RST50i</td></tr> </table>	Wires	mm ²	flexible wires	from 4.0 to 10.0	Approvals	VDE	Pole markings	⊕, 1, 2, 3, N
Wires	mm ²																								
solid	from 4.0 to 16.0																								
stranded	from 4.0 to 16.0																								
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Approvals	VDE																								
Pole markings	⊕, 1, 2, 3, N																								
Crimp contacts	order separately; see last page of section RST50i																								
Power max. 50				97.051.5553.1 97.051.5053.1	97.151.1553.1 97.151.1053.1																				

Male connector



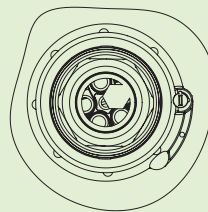
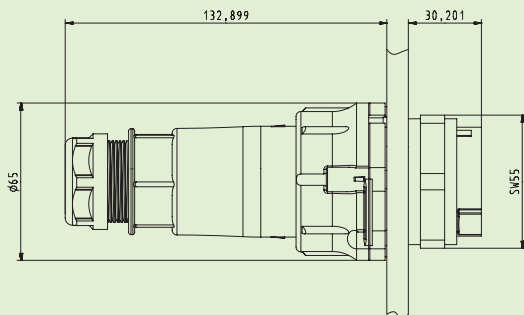
Application	Coding	Fixation with bolts	Color	Part No.	Part No.																				
Drilling template for device connectors fixed in position		fixed in position	black	with screw connection	with crimp connection																				
		not fixed in position	black	<table border="1"> <tr><td>Wires</td><td>mm²</td></tr> <tr><td>solid</td><td>from 4.0 to 16.0</td></tr> <tr><td>stranded</td><td>from 4.0 to 16.0</td></tr> <tr><td>flexible wires</td><td>from 4.0 to 16.0</td></tr> <tr><td>Approvals</td><td>VDE</td></tr> <tr><td>Pole markings</td><td>⊕, 1, 2, 3, N</td></tr> </table>	Wires	mm ²	solid	from 4.0 to 16.0	stranded	from 4.0 to 16.0	flexible wires	from 4.0 to 16.0	Approvals	VDE	Pole markings	⊕, 1, 2, 3, N	<table border="1"> <tr><td>Wires</td><td>mm²</td></tr> <tr><td>flexible wires</td><td>from 4.0 to 10.0</td></tr> <tr><td>Approvals</td><td>VDE</td></tr> <tr><td>Pole markings</td><td>⊕, 1, 2, 3, N</td></tr> <tr><td>Crimp contacts</td><td>order separately; see last page of section RST50i</td></tr> </table>	Wires	mm ²	flexible wires	from 4.0 to 10.0	Approvals	VDE	Pole markings	⊕, 1, 2, 3, N
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Power max. 50				97.052.5553.1 97.052.5053.1 W	97.152.1553.1 97.152.1053.1																				



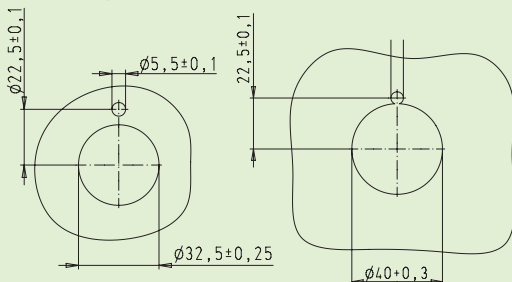
Convincing technology

RST50i 4 pole/5 pole

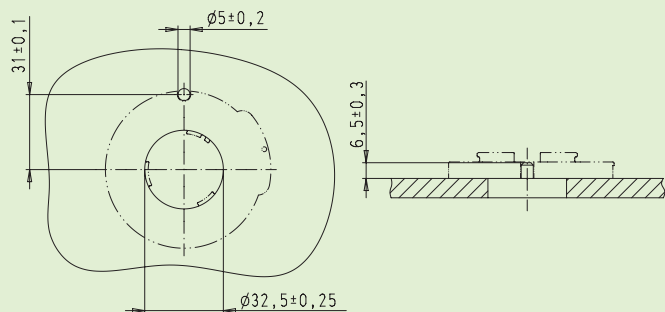
Rated voltage:	250/400V	
Rated current:	50A	
Rated cross-section:	starre Wires von 4,0 mm ² bis 6,0 mm ² bei Steckverbindern (bis 16 mm ² bei Geräteanschlüssen) fsolide Wires von 4,0 mm ² bis 16,0 mm ²	
Number of poles:	4 pole	5 pole
Pole designation:	1, 2, 3, ⊕	1, 2, 3, N, ⊕
Material:	Contact parts: brass, surface-plated Housing parts: thermoplastic material PA 66, halogen-free, V2 Sealing material NBR, TPE	
Degree of protection:	IP65, IP66, IP67	
Approvals:	VDE, UL, CSA being prepared	
Sheath strip length:	70 mm	
Insulation strip length:	Screw 10 mm (crimp 11 mm)	
Torques:	Cable gland S34: 12 Nm; S42: 14 Nm	



Hole pattern for M 32 device connectors, alternative M40 with adapter ring (fixed in position)



Alternative fixed in position (cams on the housing)



Installation and pre-assembly



Insert the cable into the strain relief housing



Connect the wire terminate the wires via screw termination



Connect the contact insert into the housing



Fasten or loosen the contact insert



Snap the housing into the M 32 knock-out



M 40 adapter ring



Tighten the counter nuts inside



Install the contact insert


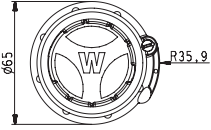
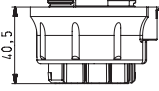



Fasten or loosen the contact insert


Bayonet lock with integrated protection against accidental disconnect



Accessories


Cover	Name	Color	Part No.
		Cover	black
			
			
	For safe covering of unused male or female components		

Sample kit RST50i5	Name	Color	Part No.
		Sample kit RST50i5	black
	Complete kit including:		
	– Connectors		
	– Device connection		
	– Cover piece		
	– Knock-out (metal sheet)		


Crimping tool with system kit	Name	Color	Part No.
		Crimping tool (supplied in case)	
	Crimping die D		05.502.2300.0

Accessories


Crimp contacts Female contacts	Name	ID (groove) mm ²		Part No.
	Crimp contact	unmarked	4.0	02.126.0621.8
	Crimp contact	1	6.0	02.126.0721.8
	Crimp contact	unmarked	10.0	02.126.0821.8



Crimp contacts Male contacts	Name	ID (groove) mm ²		Part No.
	Crimp contact	unmarked	4.0	05.545.2821.8
	Crimp contact	1	6.0	05.545.2921.8
	Crimp contact	unmarked	10.0	05.545.3021.8



Adapter ring 40 mm	Name	Color	Part No.
	Adapter ring	black	05.568.1853.0



For fixing the device connector inside
40 mm knock-outs

Technical drawing of the adapter ring showing dimensions: outer diameter 22.5±0.1, inner diameter 5.5±0.1, and hole diameter 4.0±0.3.

Description of the flammability classes in accordance with UL 94

Flammability class HB

In the horizontal test for flammability the material is slowly flammable. For wall thicknesses under 3mm the incendiary speed must not exceed 3 inch/min; for wall thicknesses over 3mm it must not exceed 1.5inch/min. Materials which exceed these incendiary speed limit values will not be registered by UL.

Flammability class V2

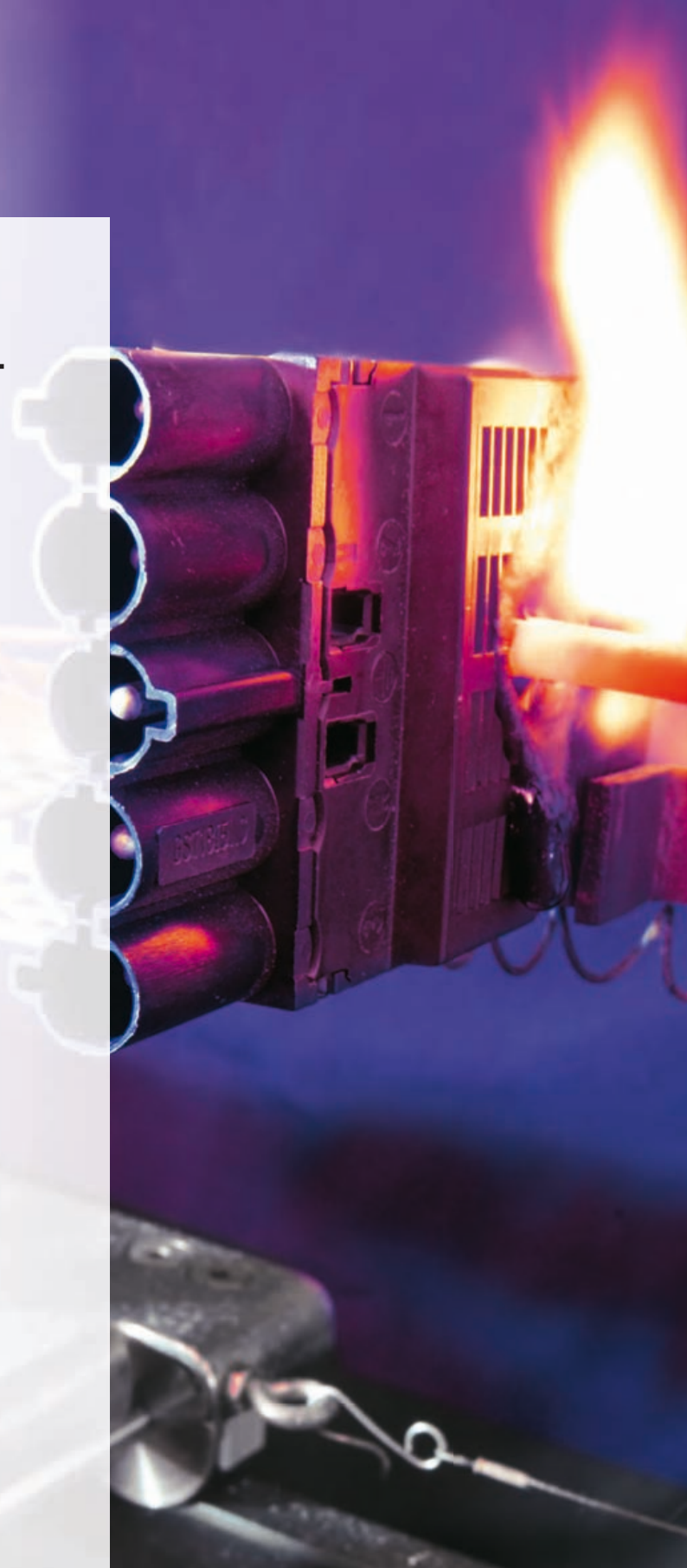
In the vertical test for flammability materials must self-extinguish within 25 seconds on average (individual values not more than 30 seconds). Material drippings can ignite cotton padding placed under the material. But afterglow must not exceed 60 seconds.

Flammability class V1

In the vertical test for flammability materials must self-extinguish within 25 seconds on average (individual values not more than 30 seconds). But any drippings that may possibly occur must not ignite the cotton padding. Afterglow must be terminated within 30 seconds.

Flammability class V0

In the vertical test for flammability materials must self-extinguish within less than 5 seconds on average (individual values not more than 10 seconds). Any drippings that may occur must not ignite the cotton padding and afterglow must be terminated within 30 seconds..



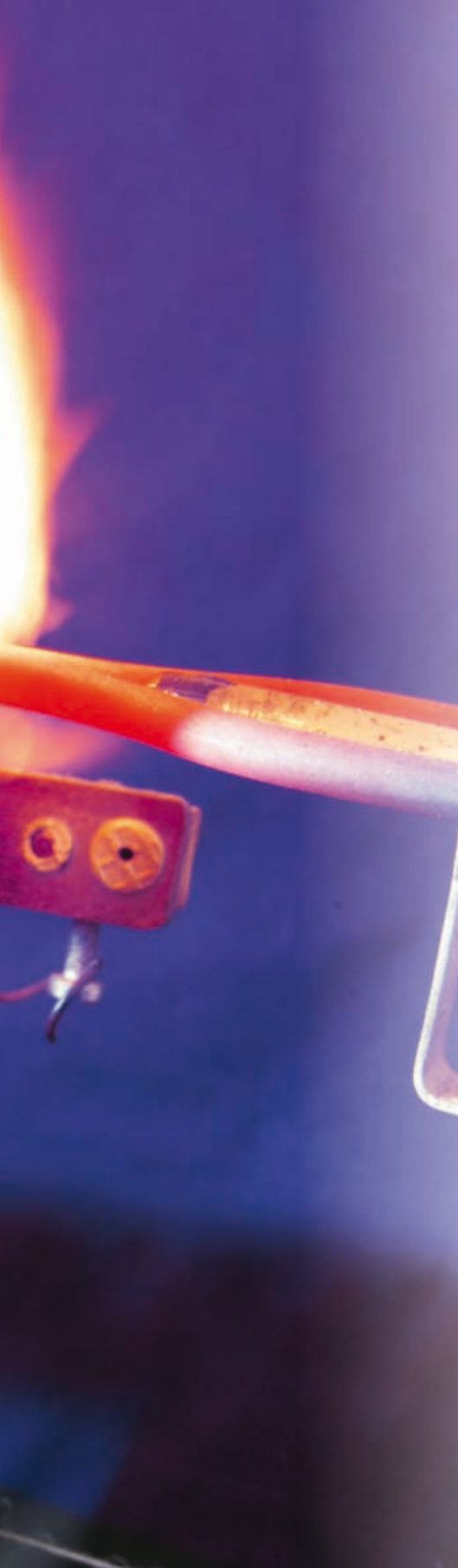
Description of weathering resistance in accordance with UL 746 C

Weathering resistance f1

Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746 C.

Weathering resistance f2

Subjected to one or more of the following tests: Ultraviolet Light, Water Exposure or Immersion in accordance with UL746 C, where the acceptability for outdoor use is to be determined by UL.



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















































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






























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