

gesis[®]solar



gesis[®] SOLAR Electrical Installation Technology for Photovoltaics

Catalog



gesis[®] solar

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

Pluggable a

Connector System



gesis[®]SOLAR





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 AC side interconnect possibilities. Pre-assembled components and the IP 68 protection degree enable a fast and safe installation even under adverse conditions. The RST system comprises connectors for pre-assembly on site, cable assemblies as well as device connections, for example for inverters and main distributors. Leading manufacturers fit their products with these connectors in their factories. Furthermore preassembled main distributors and distribution boxes are part of our product range.

Inverters are often installed in groups, always 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 und sealed. This was confirmed by an extensive test performed by the technical 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). The DC solar system is developed and produced in close cooperation between Wieland Electric GmbH and PRYSMIAN Kabel und Systeme GmbH. Its IP68 protection degree, the robust design as well as the TÜV-tested compatibility with competitive products enable flexible use.

With cable cross sections from 2.5 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 scale.









DC-Solar applications – Connectors for photovoltaic systems

Application example



General

The connector is characterized by the following special features making it clearly stand out from the crowd of other products on the market.



Features:

- Easy installation with only a few components
- Cable assemblies, field-assembled connectors as well as device connectors
- Contact parts of field-assembled connectors and device connectors detachable
- Mate with standard products from competitors
- High IP protection (IP 67)
- For 2.5 / 4.0 / 6.0 /10.0 mm² cross sections
- High current-carrying capability up to 40 A 25 A at 2.5 mm²;
 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

Photovoltaic junction box for thin layer modules

PV junction box

Pre-assembled with connection cables, male and female connectors, complete with adhesive pad and contact insert.

The junction box can be mounted on glass-to-glass and glass-to-film modules.

Contact insert for
glass-to-glassContact insert for
glass-to-filmfor tin-plated CU connection strips 5 – 15 mm wide and
max. 0.1 mm thick





Required knockout on the back of the glass-to-glass modules



The new junction box for photovoltaic modules in thin layer technology is characterized by its extremely small design as well as its easy and quick installation.



Part No.

for glass-to-film modules	99.112.0000.7
for glass-to-film modules with bypass diode BY 255	99.113.0000.7
for glass-to-glass modules	99.110.0000.7
for glass-to-glass modules with bypass diode BY 255	99.111.0000.7

lax. rated current	5 A
lax. permissible current for bypass operation	2A
lax. system voltage (pole/pole)	1,000 V
est voltage (pole/pole)	6 kV
ontact resistance	< 5 mOhm
ontact material	Copper. tin-plated; stainless steel. copper-plated and tin-plated
ousing material	PPO
nsulation material	PUR
onnector material	Polyamide
nsulation material for cables	EVA
rotection class of the box	IP67
lammability class junction box	UL 94-V0
lammability class connectors	UL 94-HB
emperature range	– 40 °C + 85 °C
able	PRYSMIAN TECSUN (PV) PV1-F 2.5
able cross section	2.5 mm ²



Certificate no. 60021963 Tested in accordance with DIN V VDE 0126-5/05.08

15

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



In accordance with installation regulation IEC 60364-5-52 (DINVDE0100-522.3) 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 housing parts Outer cable diameters of 4.0 – 10.5 mm

Field-assembled connectors and device connectors Crimp technology Contacts ordered separately See the matrix on page 12 for possible combinations Assembly with customary flat wrench SW13 for housing and SW20 for gland		Knockout diameter
Approval Outer cable diameter in mm Colo	Part No. Std. Pack	Part No. Std. Pack
	Field-assembled connector Cable gland pre-assembled	Device connector
TÜV 4 - 5 black TÜV certificate according to DIN V/DE V 0126-3/12.06 5 - 7 black (EN 50521 being prepared) 7 - 8 black 8 - 10.5 black	96.111.0153.1 100 96.111.0053.1 100 96.111.0253.1 100 96.111.0353.1 (on request)	96.111.1053.1 100
ETL certificate 4 - 5 black through Intertek according to -UL 486A 496B/486D 5 - 7 black - CAN/CSA-C22.2 No. 65-03/ No. 198.2-05 Intertek 7 - 8 black UL approval being prepared 8 - 10.5 black	Y6.111.0153.1 100 Y6.111.0053.1 100 Y6.111.0253.1 100 Y6.111.0353.1 (on request) 100	Y6.111.1053.1 100
Male Connector	49,4	49,4
Field-assembled connectors and device connectors Crimp technology Contacts ordered separately See the matrix on page 12 for possible		
combinations Assembly with customary flat wrench SW13 for housing and SW20 for gland	CED TO	Knockout diameter
Approval Outer cable diameter in mm Colo	Part No. Std. Pack	Part No. Std. Pack
	Field-assembled connector Cable gland pre-assembled	Device connector
TÜV 4 - 5 black TÜV certificate according to DINVVDE V0126-3/12.06 5 - 7 black CEN50521 being prepared) 7 - 8 black 8 - 10.5 black	96.112.0153.1 100 96.112.0053.1 100 96.112.0253.1 100 96.112.0353.1 100 96.112.0353.1 100	96.112.1053.1 100
ETL certificate through Intertek according to - UL 486A.4466J/486D rCAN/CSA.C22.2 No. 65-03/ No. 198.2-05 UL approval being prepared Hertek 8 – 10.5 black	Y6.112.0153.1 100 Y6.112.0053.1 100 Y6.112.0253.1 100 Y6.112.0353.1 100	
		Y6 112 1053 1 100

Contact parts for 2.5 – 10 mm² cable cross sections

Female Connector			
Crimp technology	4	<u>30,45</u> <u>14</u> 8	Approved
Standard pack is delivered in a plastic bag. Delivery in complete standard packs only.			E c c c c c c c c c c c c c c c c c c c
Only use Wieland crimp tool!	φ5,	Ø4,4 ^c	
		and the second sec	
Marking Cable cross section in mm ²	WG Part No.	Std. Pack	
	Contact part Insul. strip length	17 + 1 mm	
2 grooves 2.5 unmarked 4.0	14 02.125.8102.8 12 02.125.8202.8	100 100	
1 groove 6.0 unmarked 10.0	10 02.125.8302.8 8 02.125.8402.8	100 100	
Female Connector			
Female Connector Crimp technology	2	6,8 5 14 8	Type
Female Connector Crimp technology Standard pack is delivered in a plastic bag. Delivery in complete		6,8 14 14 14 14 14 14 14 14 14 14	Approved
Female Connector Crimp technology Standard pack is delivered in a plastic bag. Delivery in complete standard packs only.		6,8 14 14 14 14 14 14 14 14 14 14	
Female Connector Crimp technology Standard pack is delivered in a plastic bag. Delivery in complete standard packs only. Only use Wieland crimp tool!		6, 8 14 14 14 14 14 14 14 14 14 14	Approved
Female Connector Crimp technology Standard pack is delivered in a plastic bag. Delivery in complete standard packs only. Only use Wieland crimp tool!		6, ⁴ ⁴ ⁴ ⁴ ⁴ ⁴ ⁴ ⁴ ⁴ ⁶ ⁶	Appended
Female Connector Crimp technology Standard pack is delivered in a plastic bag. Delivery in complete standard packs only. Only use Wieland crimp tool!		6,8 14 14 14 14 14 14 14 14 14 14 14 14 14	Transformation Appended Appended Fintertek
Female Connector Crimp technology Standard pack is delivered in a plastic bag. Delivery in complete standard packs only. Only use Wieland crimp tool!		6,8 5+ 14 	Type Ty
Female Connector Crimp technology Standard pack is delivered in a plastic bag. Delivery in complete standard packs only. Only use Wieland crimp tool! Marking Cable cross section in mm²	WG Part No.	6, 8 14 14 14 14 16 14 16 14 16 14 16 14 16 14 16 14 16 14 16 14 16 14 16 14 16 14 16 16 16 16 16 16 16 16 16 16	Tree Entertek
Female Connector Crimp technology Standard pack is delivered in a plastic bag. Delivery in complete standard packs only. Only use Wieland crimp tool! Marking Cable cross section in mm²	WG Part No. Contact part Insul. strip length	6, 8 14 14 14 14 14 17 17 17 17 17 17 17 17 17 17	Tree Entertek
Female Connector Crimp technology Standard pack is delivered in a plastic bag. Delivery in complete standard packs only. Only use Wieland crimp tool! Marking Cable cross section in mm²	WG Part No. Contact part Insul. strip length	6, 8 14 14 14 14 14 15 14 15 14 15 14 15 14 15 14 15 14 15 14 15 14 15 14 15 14 14 15 14 15 14 15 14 15 14 15 15 14 15 15 15 15 15 15 15 15 15 15	Tree Contraction of the tree o
Female Connector Crimp technology Standard pack is delivered in a plastic bag. Delivery in complete standard packs only. Only use Wieland crimp tool! Marking Cable cross section in mm² A 2 grooves 2.5	WG Part No. Contact part Insul. strip length	6, 8 14 14 14 16 14 16 15 17 17 100	Image: Comparative
Female Connector Crimp technology Standard pack is delivered in a plastic bag. Delivery in complete standard packs only. Only use Wieland crimp tool! Marking Cable cross section in mm² A 2 grooves 2.5 ummarked 4.0 1 groove 6.0	WG Part No. Contact part Insul. strip length 14 05.545.2102.8 10 05.545.2302.8	6, 8 14 14 14 14 16 14 17 100 100 100 100 100 100	
Female Connector Crimp technology Standard pack is delivered in a plastic bag. Delivery in complete standard packs only. Only use Wieland crimp tool! Marking Cable cross section in mm² A 2 grooves 2.5 ummarked 4.0 1 groove 6.0 unmarked 10.0	WG Part No. Contact part Insul. strip length 14 05.545.2102.8 05.545.2302.8 05.545.2402.8 10 05.545.2402.8 8 05.545.2402.8	6, 8 14 14 14 14 17 100 100 100 100 100 100 100	
Female Connector Crimp technology Standard pack is delivered in a plastic bag. Delivery in complete standard packs only. Only use Wieland crimp tool! Marking Cable cross section in mm² A 2 grooves 2.5 1 ummarked 4.0 1 1 1 groove 6.0 1 1	WG Part No. Contact part Insul. strip length 14 05.545.2102.8 05.545.2202.8 10 05.545.2302.8 05.545.2402.8	6, 8 14 14 14 14 17 100 100 100 100 100 100 100	

Overview Matrix

Components for cable variations



PST 40i1

10.0 mm ² cable	e cross section		2
8 A	()		
Female	Male		2
96.111.0153.1 Y6.111.0153.1	96.112.0153.1 Y6.112.0153.1	3 – 3.5 Nm Flat wrench SW20	
02.125.8402.8	05.545.2402.8	Flat wrench SW 13	
96.111.0053.1 Y6.111.0053.1	96.112.0053.1 Y6.112.0053.1	Flat wrench SW 13	1 40
02.125.8402.8	05.545.2402.8	Insert contact to the stop "Click"	1
96.111.0253.1 Y6.111.0253.1	96.112.0253.1 Y6.112.0253.1		1
02.125.8402.8	05.545.2402.8	a malle	/.
96.111.0353.1 Y6.111.0353.1	96.112.0353.1 Y6.112.0353.1		/
02.125.8402.8	05.545.2402.8		/
3 - 3.5 Nm		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 PST 40i1 connector system

Wire range:	min. 2.5 mm²; min. 14 AWG;	max 10.0 mm² max. 8 AWG	TÜV version ETL version
Rated current:	24 A at 2.5 mm ²	(14 AWG)	
(without derating up to 85°C)	32 A at 4.0 mm ²	(12 AWG)	
	40 A at 6.0mm ²	(10 AWG)	
	40 A at 10.0mm ²	(8 AWG)	
Rated voltage:	1000V	(IEC/CEI)	TÜV version
	600 V	(UL/ETL)	ETL version
Test voltage:	6kV	(
Overvoltage category:	CAT III (8kV)		
Contact material:	solid brass, silver-pl	ated	
Contact resistance:	< 0.15 mOhm (tvp.)		
Flammability class:	UL94-V2		TÜV version
	UL96-V0		ETL version
Weathering resistance/			7 7 7 7 7 7 7 7
UV protection:	f1		
Pollution degree:	3		
Application class:	A		
Protection class:			
Degree of protection:	IP65 / IP66 / IP67 / I	P68 (on request)	
20g.co el pretectioni	(Specifications: plugged in or with cover piece)		ver piece)
Insulation strip length:	17 + 1mm	god in or mar co	,
Ambient temperature:	-40° C up to $+85^{\circ}$ C	(+110°C upper lin	nit temperature
Insulation material:	PA		TÜV version
inioulation material.	PC		FTL version
Locking according			
to NEC 2008	Yes with locking cli	n	
Tightening torque:	3.5 Nm for cable dia	ands to ensure str	ain 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 0100sect. 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
 DIN VDE 0282 sect. 13. HD22.13. 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.03 CE 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 kV DC. Test voltage 10 kV DC
- Operating temperature: cable -40 to +120 °C
- 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:	AC0.6 / 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 VDE0298 sect. 4
Tests:	accord. to DIN VDE0282 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



Locking clip

Locking clip (compliant with NEC 2008) can be opened with customary screwdriver	Ale and a los		
	Part No.	Std. Pack	
	05.568.2756.0	100	

Accessories

	Description		0.1	Deat Ne
Large tool kit	Description		Color	Part No.
	Large tool kit		black	99.425.0000.0
	Contents: – Crimp tool (base tool) – Crimp contact positioner – Crimping die B for 1.5 mm ² . 2 – Crimping die D for 4 mm ² . 6 – Extraction tool (for contacts) – Stripping tool Use Wieland crimp tools on	2.5 mm² and 4.0 mm² contacts mm² and 10 mm² contacts Il y!		
Small tool kit	Description		Color	Part No.
	Small tool kit for	1 5/2 5/4 0 mm ²	black	99 629 0000 0
	Small tool kit for	4.0/6.0/10.0 mm ²	black	99.630.0000.0
	C			
	Contents:			
	 Crimp tool (base tool) Crimp contact positioner 			
	– Crimping die B for 1.5 mm ² , 2	2.5 mm ² and 4.0 mm ² contacts or		
	– Crimping die D for 4.0 mm ² ,	6.0 mm ² and 10.0 mm ² contacts		
	Use Wieland crimp tools on	ily!		
DCT 40:1 evetem kit	Description		Color	Part No.
PS14011 system kit	PST40i1 system kit		black	99 426 0000 0
A Contraction of the second se	Contents: - Male connectors - Cable glands with O-rings - Cover plugs - Female contacts - Male contacts - Table of contents DIN A4 Use Wieland crimp tools on	ıly!		
PST40i1 sample kit	Description		Color	Part No.
	PST40i1 sample kit		black	99.424.0000.0
A STATE OF COMPANY	Trial set Contents: – Connectors for field-assemb – Bulkhead connectors – Contacts – Cable assemblies	ly		

gesis®RAN SOLAR



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
- Sealable
- Prepared for grounding
- Climatic valves
- Project-specific variations

General

System-based solution

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

To spur the effective and ecological use of regenerative energy sources, we design, construct and market our gesis RAN SOLAR distribution units for photovoltaic power plants. Our experience, which we gathered in many years and which has grown with the requirements of the solar industry, together with state-of-the-art manufacturing technologies and our own test field with function test and simulation options guarantee highquality gesis RAN SOLAR distribution units, both on AC and on DC side. Wieland Electric GmbH, the leading manufacturer for connection technology, provides gesis RAN SOLAR distribution units that cover a spectrum from private home systems to large power plants.



Questionnaire *gesis*[®]RAN DC-SOLAR The suitable distribution unit for your project

DC distribution units (combiner boxes) provide solutions for collecting 1 to 20 strings.

Simply copy this page, fill in the details and send it to the fax number provided!

Technical data:	Simply check and fill in:
Number of strings per distribution unit	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Protection facility	Diode none Fuse
Protection facility in the + potential	yes no
Protection facility in the – potential	yes no
Rated current (Short-circuit current I _{sc} of the module)	00 01 02 03 04 05 06 07 08 09 10
■ Rated DC voltage	1000V 600V
■ DC disconnector	yes no
Overvoltage/lightning protection	Diode Combined arrester Surge arrester
Connection technique	via cable gland
■ Yield monitoring	yes no
Send as fax: +49 951 93	8 26-996
Company Name Street/Number ZIP/City TeL/Mail	
More information online, via e-mail to info@wieland-electric.com	www.wieland-electric.com
or via phone: +49 951 93 24-996	

Questionnaire *gesis*[®]RAN AC-SOLAR The suitable distribution unit for your project

AC distribution units provide

solutions for decentralized installation topology in single-phase and three-phase alternating current. Rated voltage 230/400 V Circuit breaker B/C characteristic 6 kV. Overvoltage/lightning protection with signaling contact.

Simply copy this page, fill in the details and send it to the fax number provided!

Technical data:	
IECNNICAI GATA: Simp	ly check and fill in:
■ Inverter type	se / 3 pole 1-phase / 5 pole 3-phase / 5 pole
Number of inverters	3 4 5 6 7 8 9
■ Nominal current of the circuit breaker B 25A	B B B C
Neutral conductor disable	yes no
Overvoltage/lightning protection	none Combined arrester Surge arrester
■ Grid type TN-	C / TN-S TT
Send as fax: +49 951 93 26-	996
Company	
Name	
Street/Number	
My request:	
Signature and date	
More information online, via e-mail to info@wieland-electric.com or via phone: +49 951 93 24-996	www.wieland-electric.com



gesis® RAN SOLAR References Partners fond of Wieland

References

Siemens AG Phönix Solar AG IBC Solar AG Soleg GmbH BLG Projekt GmbH S&W Regenerative Energie GmbH and many more





film





Power supply connection in open spaces, on rooftops, and in building integrated systems

Implementing large solar power plants in fields or on rooftops using string inverters requires a system with various combiner and distribution units. AC distribution units combine and conduct the power from the inverter to the load or grid. Depending on the power and the cable distance, various cross sections up to 240 mm² are required.

Wieland Electric's project team supports planning, even of megawatt systems, with design and assembly of combiner boxes. By reviewing the installation site plan and considering the inverters' AC power, we create the optimal AC distribution box for any project. Sample construction, CAD documentation and delivery logistics are included.

Further options such as lightning and surge suppression modules, custom housing design, and components including the installation of monitoring systems satisfy the majority of requirements.







Robust and flexible Solutions for the DC distribution unit

Wieland provides specific electrotechnical components which are important for the construction of a photovoltaic plant. All components are characterized by a high degree of reliability. The robust design enables undisturbed 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 be made pluggable. A whole 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, KL or Ex approval.

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

Extreme heat - bone-chilling cold On solar fields electrotechnical components face the roughest conditions. The *gesis*Ac SOLAR connectors from Wieland easily withstand these large climatic stresses.





Pluggable and Efficient Complete product range for solar systems

For solar systems Wieland offers not only the enormous advantages of pluggable connection technology, but also a comprehensive range of well-engineered and extensive clamping 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 IP65 – IP68 protection.

This advantage pays off not only for the initial installation. Individual components such as inverters, combiner boxes or distribution boxes can be disconnected during servicing with a flick of the wrist. 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 supports customized solutions. Various components can be equipped individually adding pluggable connection technology and well-engineered clamping 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 PST40i1 up to 10 mm²
- String collection
- Optional separation of individual strings
- Protection for inverters and module field
- DC isolation between inverter and module field
- 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 complicated installations are a matter of the past. This saves time and reduces the costs. Furthermore you can be sure that everything will be carried out, 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 long-standing 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 or CSA).

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

Very different industries make use of these benefits and optimize their competitiveness through cost minimization and 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





Competency in object business

Our innovative **gesis** RAN solar distribution units are the key for efficient and failsafe operation of the power plants, 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 plants. 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

Application



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 panels) produces a direct current. Connecting the PV panels in series to strings 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 distributed inverters

If the inversion is carried out with distributed smaller inverters 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 offer regarding overvoltage protection can be found in the brochure

0151.6 "Tensions running high"

and the products can be ordered directly 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 cable cross-sections. The housings can be easily mounted in generator connection boxes, as they are only the width of 3 distribution units (48 mm).

- 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

wiston GM VDV SCI 600 (EM)	Туре	Part No.
	wietan GM XPV SCI 600FM	84 995 2516 0
For use in photovoltaic generator current		01.000.2010.0
circuits	Table is all Date	
	SPD accord to EN 616/3 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-)	12.5 kA
	Max. discharge current (8/20) [(DC+/DC-)	25 kA
	→ PEJ [Imax] Protection level [1]	< 25 kV
	Protection level bei 5 k A [1]	$\leq 2.3 \text{ kV}$
	Operating time [t ₄]	< 25 ns
	Temperature range [Tu]	-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 2 TE DIN 42000 (E4 mm)
	Dimensions EM contacts / contact form	3 TE, DIN 43880 (54 mm) Change over contact
	Switching capacity AC (EM)	
	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	-
0C++- & BC-++	– Photovoltaic arrester	
······································	 Complete modular unit wired ready for use 	
	- Type 2 classification according to EN 616/3-1	1
	- Safe, arc-free replacement of protection mode	ules thanks to integrated DC fuse
	- There is no danger of fire in the event of an ov	erload thanks to a combined separator and
<u> 祭母 祭 祭母 </u>	- Can be used with all PV systems acc. to IEC 6	0364-7-712
	Ligh discharge conseity	00047712
Ť Ť		
L	- 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 PE *wietap* G MOD 275

Type *wietap* G MOD PV SCI 300 *wietap* G MOD 275 Part No. 84.995.2053.0 84.995.2010.0

Overvoltage arresters 1000V DC

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

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



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



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

wietap V M TNS 255 FM

Type

ota
p]

84.995.1405.0

Part No.

TN-S
Type 1 / Class I
Type 1 + Type 2
Type 1 + Type 2 + Type 3
230 / 400 V
50 / 60 Hz
255 V
100 kA
25 kA
25 / 100 kA
≤ 1,5 kV
50 kA _{eff}
≤ 100 ns
315 A gL/gG
200 A gL/gG
125 A gL/gG
440 V / 5 sec.
-40 °C+80 °C
-40 °C+60 °C
green / red
10 mm ² solid/fine-stranded
50 mm² stranded/35 mm² fine-stranded
25 mm² stranded/25 mm² ine-stranded
9 TE DIN 42990 (144 mm)
Change over contect
250 V/0.5 A
200 V/0.1 A, 120 V/0.2 A, 75 V/0.5 A

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

wieten VM TT 255 (FM)	Туре	Part No.
	wietan V M TT 255 FM	84 995 1315 0
For the protection of the building infeed		04.000.1010.0
100		
hard the second s	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
and the second s	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
at the second	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
100 M	Lightn. impulse current (10/350) [N-PE] [I _{imp}]	100 kA
	Nominal discharge current (8/20) [In]	25 / 100 kA
	Protection level [L-N, N-PE] [U _P]	≤ 1,5 kV
	Follow current extinction capability [L-N] AC [I _{fi}]	50 kA _{eff}
	Follow current extinction capability [N-PE] AC [I _{ff}]	100 A _{eff}
	Operating time [t _A]	≤ 100 ns
	Max. pre-fusing (L) up to $I_{K} = 50 \text{ kA}_{eff}$	315 A gL/gG
	Max. pre-tusing (L) bei $I_{K} > 50 \text{ kA}_{eff}$	200 A gL/gG
	Max. pre-fusing (L-L)	125 A gL/gG
	TOV-voltage [L-N] [U _T]	440 V / 5 sec.
المعالية العالية المعالية معالية	TOV-voltage [N-PE] [U _T]	1200 V / 200 ms
t	Temperature range (Parallel wiring) [TuP]	-40 C+60 C
	Temperature range (Through Wiring) [Tus]	
	Function/failure indication	green / red
	VVire range(L1, L1', L2, L2', L3, L3', N, N', PE +) [min]	10 mm² solid/fine-stranded
– Combined arrester Type 1	Wire range (11.1.2.1.3. N. PE) [max.]	$50 \text{ mm}^2 \text{ stranded}/35 \text{ mm}^2 \text{ fine-stranded}$
– For TT- and TN-S-systems ("3+1" circuits)	Wire range (L1', L2', L3', N, ≟) [max.]	35 mm ² stranded/25 mm ² fine-stranded
– With pluggable protection modules	Mounted on DIN rail acc. to EN 60715	35 mm
– Max, system availability due to follow current limitation	Housing material	Thermoplast, UL 94 V-0
- Switch-off selective for 20 A gl /gG fuses up to	Degree of protection	IP 20
50 kA short-circuit current	Dimensions	8 TE, DIN 43880 (144 mm)
- Discharge capacity up to 100 kA (10/350)	FM contacts / contact form	Change-over contact
- Function/failure indication according to VDE 0100-534	Switching capacity AC (FM)	250 V/0.5 A
(valid since March 2009)	Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
- Optional with remote signaling contact	Wire range Remote signaling terminals	max. 1.5 mm ² solid/fine-stranded
– Vibration and shock tested acc. to EN 60068-2	Approvals	

Replacement module for *wietap* VM devices

Туре

wietap V MOD 255

For all L-PE, L-PEN protection modules of modular combination arresters



wietap V MOD NPE 100

For all *wietap* V M TT 255(FM), N-PE protection modules of modular combination arresters

wietap V MOD 255 *wietap* V MOD NPE 100

Part No. 84.995.1001.0

84.995.1001.0

3-phase lightning arrester, AC, type 1

wietap B3 255H	Туре	Part No.
For the protection of the building infeed	wietap B3 255H	84.995.0120.0
A de trate -	Technical Data	
A state of the sta	SPD accord. to EN 61643-11	Type 1
	SPD accord. to IEC 61643-1	Class I
A 2 2 0 0	Nominal voltage AC [U _N]	230/400 V
p u	Maximum continuous voltage AC [Uc]	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) [In]	50 / 100 kA
a	Protection level [U _P]	$\leq 4 \text{ kV}$
	Follow current extinction capability AC [I _{fi}]	50 kA _{eff}
	Limitation of follow current / selectivity	Non-tripping of a 35 A gL/gG fuse
	Elimitation of follow current? selectivity	up to 50 kAeff (prosp.)
6 Ur (2 02 (3 UF	Operating time [t _A]	≤ 100 ns
	Max. pre-fusing up to $I_{K} = 50 \text{ kA}_{eff}$ (ta $\leq 0,2 \text{ s}$)	500 A gL/gG
	Max. pre-fusing up to $I_{K} = 50 \text{ kA}_{eff}$ (ta $\leq 5 \text{ s}$)	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) $[T_{\text{UP}}]$	-40 °C+80 °C
	Temperature range (Through wiring) $[T_{\text{US}}]$	-40 °C+60 °C
 Lightning arrester, type 1 For all systems (in connection with 	Wire range (L1, L1', L2, L2', L3, L3', N/PEN, N'/ PEN)	10 mm² solid/fine-stranded
wietap GPM 255 if required)	Wire range (L1, L2, L3, N/PEN)	50 mm ² stranded/35 mm ² fine-stranded
link foriant of follow and	Wire range (L1', L2', L3', N'/PEN)	35 mm ² stranded/25 mm ² fine-stranded
- High limitation of follow current	Mounted on DIN rail acc. to EN 60715	35 mm
 – 50 kA discharge capacity per pole 	Housing material	Thermoplast, UL 94 V-0
- High insulation resistance: can therefore also be placed	Degree of protection	IP 20
in front of the counter	Dimensions	6 TE, DIN 43880 (108 mm)
– Double terminals for V connection	Approvals	-

N-PE lightning arrester, AC, type 1



L-PE AC lightning arrester, type 1

wietan B1 255H	Туре	Part No.
For the protection of the building infeed	wietap B1 255H	84.995.0222.0
Tor the protection of the building infeed	Technical Data	
	SPD accord, FN to 61643-11	Type 1
A - A - A	SPD accord. to IEC 61643-1	Class I
	Nominal voltage ac $[U_N]$	230 V
	Maximum continuous voltage ac [Uc]	255 V
	Lightn. impulse current (10/350) [I _{imp}]	50 kA
L L	Nominal discharge current (8/20) [In]	50 kA
	Protection level [U _P]	$\leq 4 \text{ kV}$
E State	Follow current extinction capability ac [I _{fi}]	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
4	Max. pre-fusing up to $I_{K} = 50 \text{ kA}_{eff}$ (ta $\leq 0,2 \text{ s}$)	500 A gL/gG
10.10	Max. pre-fusing up to $I_{K} = 50 \text{ kA}_{eff}$ (ta $\leq 5 \text{ s}$)	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
	IOV-voltage [U _⊺]	335 V / 5 sec.
	Temperature range (Parallel wiring) $[T_{UP}]$	-40 °C+80 °C
	Temperature range (Through wiring) $[T_{\text{us}}]$	-40 °C+60 °C
 – L-PE AC lightning arrester, type 1 	Wire range (L, L', N/PEN, N'/PEN) [min.]	10 mm ² solid/fine-stranded
- For all systems (in connection with	Mire renge (L. NI/DENI) [mov.]	E0 mm ² atranded/25 mm ² fine atranded
wietap GPM 255 if required))	Wire range (L, N/FEN) [max.]	25 mm ² stranded/25 mm ² fine_stranded
 High limitation of follow current 	Mounted on DIN rail acc. to EN 60715	35 mm
- 50 kA discharge capacity per pole	Housing material	Thermoplast, UI 94 V-0
Llich inculation resistances can therefore clea be placed	Degree of protection	IP 20
in front of the counter	Dimensions	2 TE, DIN 43880 (36 mm)
- Double terminals for V connection	Approvals	-

3-phase AC overvoltage arrester, type 2

wietan G M TNC 275 (FM)	Туре	Part No.
For the protection of sub-systems or	wietap G M TNC 275 FM	84.995.2305.0
For the protection of sub-systems or		
the control cabinet infeed		
	Power network	TN-C
10 A	SPD accord. to EN 61643-11	Type 2
4-4-	SPD accord. to IEC 61643-1	Class II
	Nominal voltage AC [U _N]	230/400 V
	Power networkTN-CSPD accord. to EN 61643-11Type 2SPD accord. to IEC 61643-11Class IINominal voltage AC [U _n]230/400 VNominal frequency [f _n]50 / 60 HzMaximum continuous voltage AC [U _c]275 VNominal discharge current (8/20) [I _n]20 kAMax. discharge current (8/20) [I _n]40 kAProtection level [U _n] ≤ 1.25 kVProtection level bis 5 kA [U _n] ≤ 1.25 kVProtection level bis 5 kA [U _n] ≤ 25 nsMaximaler netzseitiger Überstromschutz125 A gL/gGKurzschlussfestigkeit bei max. netzseitigem50 kA _{eff} Überstromschutz10 °C+80 °CToV-voltage [U ₁]-40 °C+80 °CFunction/failure indicationgreen / redWire range (min.)1.5 mm² solid/fine-strandedWire range (max.)35 mm² stranded/25 mm² fine-strandedMounted on DIN rail acc. to EN 6071535 mm	50 / 60 Hz
1 and 1	Nominal discharge current (8/20) [In]	20 kA
and the second second	Max. discharge current (8/20) [I _{max}]	40 kA
A STATE AND A STATE A	Protection level [U _P]	≤ 1.25 kV
	Protection level bei 5 kA [U _P]	≤ 1 kV
SET TET THE	Operating time [t _A]	≤ 25 ns
1 TE 10 TE 10	Maximaler netzseitiger Überstromschutz	125 A gL/gG
	Kurzschlussfestigkeit bei max. netzseitigem	50 kA _{eff}
	Überstromschutz	
	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
ليهيا ليهيا ليهيا	Dimensions	3 TE, DIN 43880 (54 mm)
T¥	FM contacts / contact form	Change-over contact
	Switching capacity AC (FM)	250 V/0.5 A
 Surge arrester, type 2 	Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
 For TN-C-systems 	Wire range Remote signaling terminals	max. 1.5 mm ² solid/fine-stranded
 With pluggable protection modules 	Approvals	
 Function/failure indication according to VDE 0100-53 (valid since March 2009) 	4	

- Optional with remote signaling contact
- Vibration and shock tested acc. to EN 60068-2

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



- Optional with remote signaling contact

- Vibration and shock tested acc. to EN 60068-2

wietap G M TNS 275 FM	84.995.2405.0
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 [Uc]	275 V
Nominal discharge current (8/20) [In]	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
Maximaler netzseitiger Überstromschutz	125 A gL/gG
Kurzschlussfestigkeit bei max. netzseitigem	50 kA _{eff}
Uberstromschutz	
TOV-voltage [U _T]	335 V / 5 sec.
Temperature range [Tu]	-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	
3-phase AC overvoltage arrester, type 2

wietan G M TT 275 (FM)	Туре	Part No.
	wietap G M TT 275 FM	84.995.2315.0
For the protection of sub-systems or the	·····	
control cabinet infeed		
	Power network	TT und TN-S (Variante "3+1")
and the state	SPD accord. to EN 61643-11	Type 2
A'A T	SPD accord. to IEC 61643-1	Class II
	Nominal voltage AC [U _N]	230/400 V
	Nominal frequency [t _N]	50760 Hz
	Maximum continuous voltage AC [L-N] [Uc]	275 V
000	Maximum continuous voltage AC [N-PE] [Uc]	255 V
and the second second	Nominal discharge current (8/20) [In]	20 kA
	Max. discharge current (8/20) [I _{max}]	40 kA
THE REAL PROPERTY OF	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] [In]	100 A _{eff}
	Operating time [L-N] [t _A]	≤ 25 ns
	Operating time [N-PE] [t _A]	≤ 100 ns
LI LZ LJ N	Maximaler netzseitiger Uberstromschutz	125 A gL/gG
	Kurzschlussfestigkeit bei max. netzseitigem	50 kA _{eff}
	Uberstromschutz	0051///5
	TOV-voltage [L-N] U _T]	335 V / 5 Sec.
	TOV-voltage [N-PE] [U _T]	1200 V / 200 ms
	Temperature range [Tu]	-40 °C+80 °C
B B B O	Function/failure indication	green / rea
	VVIre range (min.)	1.5 mm² solid/fine-stranded
Construction of Construction o	Wire range (max.)	35 mm² stranded/25 mm² fine-stranded
	Nounted on DIN rall acc. to EN 60715	35 mm
	Housing material	I nermoplast, UL 94 V-U
 Surge arrester, type 2 	Dimensions	IF 20 4 TE DINI 43880 (72 mm)
- For TT- and TN-S-systems ("3+1" circuits)	EM contacts / contact form	Change over contact
	Switching consoity AC (EM)	
 With pluggable protection modules 	Switching capacity DC (EM)	250 V/0.5 A 250 V/0.1 A · 125 V/0.2 A · 75 V/0 5 A
 – Function/failure indication according to VDF 0100-534 	Wire range Remote signaling terminals	200 V/0.1 A, 120 V/0.2 A, 75 V/0.5 A
(valid since March 2009)		
	Approvais	
 Optional with remote signaling contact 		

- Vibration and shock tested acc. to EN 60068-2

Replacement module for *wietap* G M devices



String monitoring and communication



Transfer module cable – RJ45

Transfer module	Туре	Part No.
	gesis RJ 45-SC IC	80.000.3000.0
	Connection supply cable / forwarding cable	Spring clamp connectors
	Connector cross-section	0.5-1.5mm ² (AWG2814) solid/fine-stranded
	Number of poles	8 plus shield
	Rated voltage	24 V Supply voltage 2 A
	Rated current	data and alarming 0.5 A
	i'checker connection	2 x RJ 45
	Connection type	8-pole modular panel jack (CAT 6)
	Rated voltage	24 ∨
	Rated current	Supply for every 2 poles (1.5 each) A
CH RECEIPTER	Connection resistance	120 Ohm (switchable via switch)
The second se	Operating temperature	-20 °C to +85 °C
	Storage temperature	-20 °C to +85 °C
TELES	Relative humidity	5% to 95%, non-condensing
Station and	Service plug	Data and supply voltage
· CEEF	Plug	Appropriate counterpart: vvieland type 8513 B
1 Simo		
 Connection of incoming communication cables 		
- Connection of i'checkers		
- Terminating resistor RS485		
- Overvoltage protection		
– Local data access		





DIN rail terminal blocks with screw connection

Application example



Accessories

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

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 planning and marking your DIN rail terminal block applications.

Technical Data

Rated cross section: Rated current: Rated voltage: 2.5 mm² – 240 mm² up to 415 A up to 1000 V

Selected material:

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
- 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** WKN 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 applicationspecific terminal blocks such as terminal blocks for electrical isolation.



Wieland DIN rail terminal blocks with screw connection means:

Classic connections

- Worldwide known, proven and selfexplanatory connection 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
- Easy extension or potential distribution due to multi-wire connection
- Connection of fine-stranded wires with ferrules up to the rated cross section
- 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 functional extension
- Global and national approvals for worldwide use

DIN rail terminal blocks with screw connection



Description	Co	lor Type	Part No. S	td. Pack	Gross price
Feed-through bloc	k gr	ay WK 4/U	57.504.0055.0) 100	
Feed-through bloc	k Ex i bl	ue WK 4/U BLAU	57.504.0055.6	5 100	
Feed-through bloc	k r	ed WK 4/U ROT	57.504.0055.5	5 100	
Ground block	yello [.] gre	w/ WK 4 SL/U en	57.504.9055.0) 100	
		fine-stranded	solid	V	A
EN 60 947-7-1:2002		0.5 – 4 mm ²	0.5 – 6 mm ²	800 V/8 kV/3	32
UL ratings	field/factory wiring	No. 22-10 AWG ⁴⁾		600 V	30/35
CSA ratings		No. 20-10 AWG		600 V	40
Width	Wire strip length	6 mm			9 mm

VVidth	Wire strip length	6 mm	
Approvals		🗓 🖾 🔬 🕅 ATEX 👼 I	R 91 91 AEx @@Ex



Description	Color	Type	Part NO.	Sta.	Pack	Gross price
Feed-through block	gray	WK 6/U	57.506.0055	5.0	100	
Feed-through block Ex i	blue	WK 6/U BLAU	57.506.0055	5.6	100	
Feed-through block	red	WK 6/U ROT	57.506.0055	5.5	100	
Ground block	yellow/ green	WK 6 SL/U	57.506.9055	5.0	100	

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		fine-stranded	solid	V	A
EN 60 947-7-1:2002		0.5 – 6 mm ²	0.5 – 10 mm ²	1000 V/8 kV/37)	41
UL ratings	field/factory wiring	No. 22-8 AWG ⁵⁾		600 V	50/50
CSA ratings		No. 20-8 AWG		600 V	45
Width	Wire strip length	8 mm			11 mm
Approvals		🖲 🖾 🔬 🕪 ATEX 🛱	LR 91 91 Aex 🛈 🛈 1	İx	

WKN 10/L	J	
L	53,8	1
	51	<u>M5</u> 🛇
		55 59,5 62,5

Description	Color Type	Part No.	Std. Pack	Gross price
Feed-through block	gray WKN 10/U	57.510.0155	.0 50	
Feed-through block Ex i	blue WKN 10/U BLAU	J 57.510.0155	.6 50	
Feed-through block	red WKN 10/U ROT	57.510.0055	.5 50	
Ground block	yellow/ green WKN 10 SL/U	57.510.9055	.0 100	

		fine-stranded	solid/ stranded	V	A
EN 60 947-7-1:2002		2.5 – 10 mm ²	1.5 – 16 mm ²	1000 V/8 kV/37)	57
UL ratings	field/factory wiring	No. 16-6 AWG ⁶⁾		600 V	65/65
CSA ratings		No. 16-6 AWG		600 V	70
Width	Wire strip length	10 mm			13 mm
Approvals		(IL) (NV) ATEX LR	RI RI AEx () () ex		



Description	Color T		Port N	lo (Std. Pack	G	oss prico
Description	00101 1	ype	Turti	NO. (Jtu. Fack	G	033 price
Feed-through block	gray V	WKN 16/U	57.5	16.0155.	0 100		
Feed-through block Ex i	blue V	NKN 16/U BLA	U 57.5	16.0155.	6 100		
Feed-through block	red V	NKN 16/U ROT	57.5	16.0055.	5 100		
Ground block	yellow/ green	WKN 16 SL/U	57.5	16.9055.	0 100		
	C			. /		X.(
	fine	e-stranded	solic	1/		V	A
			strai	nded			
EN 60 947-7-1:2002	4 –	16 mm ²	1.5 -	- 25 mm ²	² 1000 \	//8 kV/3 ⁷⁾	76
UL ratings field/fact	ory wiring No.	. 12-4 AWG			6	00 V	85/90
CSA ratings	No.	. 12-4 AWG			6	00 V	95
Width Wire st	rip length 12 i	mm					15 mm
Approvals	<u>(i)</u>	<u>sev</u> nv atex	lr 71 71	AEx 🕄 🕄 Ex			

*) For maintaining the proper isolation distances, the open side of a feed-through terminal block as well as both sides of a jumper are to be covered by partitions. UL wire ranges: ⁴¹ or 2x No. 14 Sol/Str AWG or 2x No. 16 Sol/Str AWG or 2x No. 18 Sol/Str AWG or 3x No. 20 Sol/Str AWG or 3x No. 22 Sol/Str AWG ⁵⁾ or 2x No. 12 Sol/Str AWG or 2x No. 16 Sol/Str AWG or 3x No. 18 Sol/Str AWG or 3x No. 22 Sol/Str AWG
 ⁶⁾ or 2x No. 12 Sol/Str AWG or 2x No. 14 Sol/Str AWG or 3x No. 16 Sol/Str AWG

⁷⁾ Rated voltage 1000 V while maintaining the specified wire strip length, the creepage distances and clearances for a rated voltage according to VDE 0110/01.00

DIN rail terminal blocks with screw connection



*) For maintaining the proper isolation distances, the open side of a feed-through terminal block as well as both sides of a jumper are to be covered by partitions. UL wire ranges: ⁴⁾ or 2x No. 14 Sol/Str AWG or 2x No. 16 Sol/Str AWG or 2x No. 18 Sol/Str AWG or 3x No. 20 Sol/Str AWG or 3x No. 22 Sol/Str AWG ⁵⁾ or 2x No. 12 Sol/Str AWG or 2x No. 16 Sol/Str AWG or 3x No. 18 Sol/Str AWG or 3x No. 22 Sol/Str AWG
 ⁶⁾ or 2x No. 12 Sol/Str AWG or 2x No. 14 Sol/Str AWG or 3x No. 16 Sol/Str AWG ⁷⁾ Rated voltage 1000 V while maintaining the specified wire strip length, the creepage distances and clearances for a rated voltage according to VDE 0110/01.00

Disconnect blocks with screw connection

	Description Co	olor Type	Part No. St	td. Pack G	ross price
	Neutral disconnect block b	lue WKN 4 ETK/U	57.504.8155.0	100	
1.875	Neutral disconnect block	red WKN4EIK/URO	l on request		
₩3_					
e te de la companya de la					
5	Current corruine conchility	fine-stranded	solid	V	A
	EN 60 947-7-1/DIN VDE 0611 sect. 1	0.5 – 4 mm ²	$0.5 - 6 \text{ mm}^2$	1000 V/6 kV/2*	20/30
	CSA ratings	6			0
	Approvals being prepared	omm ∡≩∿€			9 mm
	Description Co	olor Type	Part No. St	td. Pack G	ross price
57	Neutral disconnect block b	lue WKN 10 ETK/U	57.510.8155.0	50	
M5 5425 M4	Neutral disconnect block	red WKN 10 ETK/U ROT	f on request		
5,59		fine-stranded	solid	V	A
	Current carrying capability	10 mm ²	16 mm ²	1000 100 1100*	45/50
	EN 60 947-7-1/DIN VDE 0611 sect. 1 CSA ratings	4 – 16 mm²	4 – 25 mm²	1000 V/6 kV/2*	
	Width Wire strip length	12 mm			15 mm
	Approvals being prepared	SEV C			
	Description	olor Type	Part No. St	td. Pack Gi	ross price
				50	
59,3	Neutral disconnect block b Neutral disconnect block	lue WKN 16ETK/U red WKN 16ETK/UROT	57.516.8155.0 on request	50	
59,3 M6 57,5 M5	Neutral disconnect block b Neutral disconnect block	lue WKN 16 ETK/U red WKN 16 ETK/U ROT	57.516.8155.0 f on request	50	
59,3 M6 57,5 M5	Neutral disconnect block b Neutral disconnect block	lue WKN 16 ETK/U red WKN 16 ETK/U ROT	57.516.8155.0 on request	50	
59,3 M6 57,5 M5	Neutral disconnect block b Neutral disconnect block	lue WKN 16 ETK/U red WKN 16 ETK/U ROT	57.516.8155.0 f on request	50	
59,3 M6 57,5 M5	Neutral disconnect block b Neutral disconnect block	lue WKN 16 ETK/U red WKN 16 ETK/U ROT	57.516.8155.0 f on request	50	
M6 59,3 57,5 M5 57,5 57,5 5 57,5 5 5 5 5 5 5 5 5 5 5 5	Neutral disconnect block b Neutral disconnect block	lue WKN 16 ETK/U ed WKN 16 ETK/U ROT	57.516.8155.0 on request	50 V	A
59,3 M6 57,5 M5 57,5 57,5 57,5 57,5 57,5 57,5 5	Neutral disconnect block b Neutral disconnect block	fine-stranded	57.516.8155.0 on request solid 25 mm ²	50 V	A 62/67
59,3 M6 57,5 M5 57,5 57,5 57,5 57,5 57,5 57,5 5	Neutral disconnect block b Neutral disconnect block c Current carrying capability EN 60 947-7-1/DIN VDE 0611 sect. 1 CSA ratings	lue WKN 16 ETK/U red WKN 16 ETK/U ROT fine-stranded 16 mm ² 1 – 10 mm ²	57.516.8155.0 on request solid 25 mm ² 1 – 16 mm ²	50 V 1000 V/6 kV/2*	A 62/67
59,3 M6 57,5 M5 57,5 S0 S0 S0 S0 S0 S0	Neutral disconnect block b Neutral disconnect block b Current carrying capability b EN 60 947-7-1/DIN VDE 0611 sect. 1 cSA ratings Width Wire strip length American being a second block b	fine-stranded 16 mm ² 1 – 10 mm ²	57.516.8155.0 on request solid 25 mm ² 1 – 16 mm ²	V 1000 V/6 kV/2*	A 62/67 13 mm
59,3 M6 57,5 M5 57,5 S 6 9 5 5 5 5 9 5 9 5 9 5 9 5 9 5 9	Neutral disconnect block b Neutral disconnect block c Current carrying capability EN 60 947-7-1/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared	lue WKN 16 ETK/U ed WKN 16 ETK/U RO fine-stranded 16 mm ² 1 – 10 mm ² 10 mm ▲€	57.516.8155.0 on request solid 25 mm ² 1 – 16 mm ²	V 1000 V/6 kV/2*	A 62/67 13 mm
59,3 M6 57,5 M5 57,5 57,5 57,5 57,5 57,5 57,5 5	Neutral disconnect block b Neutral disconnect block c Current carrying capability EN 60 947-7-1/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared	Iue WKN 16 ETK/U red WKN 16 ETK/U RO [™] fine-stranded 16 mm ² 1 – 10 mm ² 10 mm ▲ €	57.516.8155.0 on request 25 mm ² 1 – 16 mm ²	V 1000 V/6 kV/2*	A 62/67 13 mm
59,3 57,5 57,5 57,5 57,5 57,5 57,5 57,5 57	Neutral disconnect block b Neutral disconnect block a Current carrying capability b EN 60 947-7-1/DIN VDE 0611 sect. 1 c CSA ratings Width Width Wire strip length Approvals being prepared c	Iue WKN 16 ETK/U red WKN 16 ETK/U ROT fine-stranded 16 mm ² 1 – 10 mm ² 10 mm ▲ €	57.516.8155.0 on request 25 mm ² 1 – 16 mm ² Part No. St	V 1000 V/6 kV/2* td. Pack G	A 62/67 13 mm
59,3 57,5 57,5 57,5 57,5 5 5 5 5 5 5 5 5 5 5	Neutral disconnect block b Neutral disconnect block b Current carrying capability b EN 60 947-7-1/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared b Description Cc Connector clamp for b bushar b	Iue WKN 16 ETK/U red WKN 16 ETK/U ROT fine-stranded 16 mm ² 1 – 10 mm ² 10 mm ☆ € blor Type Iue WAK 16/2 BLAU Iue WAK 35/2 BLAU	57.516.8155.0 on request 25 mm ² 1 – 16 mm ² Part No. St 30.494.3021.6 30 494.4021 6	V 1000 V/6 kV/2* td. Pack Gi 100	A 62/67 13 mm ross price
59,3 M6 57,5 M5 57,5 C 6 5 5 5 5 5 5 5 5 5 5 5 5 5	Neutral disconnect block b Neutral disconnect block a Current carrying capability a EN 60 947-71/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared a Description Carconnector clamp for busbar b unplate b	Iue WKN 16 ETK/U red WKN 16 ETK/U ROT ted WKN 16 ETK/U ROT 16 mm ² 1 – 10 mm ² 10 mm Control Control C	57.516.8155.0 on request 25 mm ² 1 – 16 mm ² Part No. St 30.494.3021.6 30.494.4021.6 30.494.4121.0	V 1000 V/6 kV/2* td. Pack G 100 50	A 62/67 13 mm ross price
WAK 16/2 WAK 35/2	Neutral disconnect block b Neutral disconnect block a Current carrying capability a EN 60 947-7.1/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared a Description Cc Connector clamp for b unplat b	Iue WKN 16 ETK/U red WKN 16 ETK/U ROT ted WKN 16 ETK/U ROT 16 mm ² 1 − 10 mm ² 10 mm Control Control	57.516.8155.0 on request 25 mm ² 1 – 16 mm ² 30.494.3021.6 30.494.4021.6 30.494.4121.0	V 1000 V/6 kV/2* td. Pack G 100 50	A 62/67 13 mm ross price
WAK 16/2 WAK 35/2 WAK 16/2 BLAU	Neutral disconnect block b Neutral disconnect block disconnect block Current carrying capability EN 60 947-7.1/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared Description Cc Connector clamp for b busbar b WXK 16/2 EN 60 000 0.1 1 000 / CU	Iue WKN 16 ETK/U red WKN 16 ETK/U ROT fine-stranded 16 mm ² 1 – 10 mm ² 10 mm ▲ for Type Iue WAK 16/2 BLAU Iue WAK 35/2 BLAU Iue WAK 35/2	57.516.8155.0 on request 25 mm ² 1 – 16 mm ² 30.494.3021.6 30.494.4021.6 30.494.4121.0	V 1000 V/6 kV/2* 1000 V/6 kV/2* td. Pack Gr 100 50	A 62/67 13 mm ross price
WAK 16/2 WAK 35/2 WAK 16/2 BLAU	Neutral disconnect block b Neutral disconnect block n Current carrying capability n EN 60 947-7-1/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared b Description Connector clamp for b Wbaar b unplat WAK 16/2 EN 60 998-2-1 CCA/CH EN 60 947-7-1/DIN VDE 0611 sect. 1	Iue WKN 16 ETK/U red WKN 16 ETK/U ROT WKN 16 ETK/U ROT 16 mm ² 1 - 10 mm ² 10 mm ▲ € Nor Type Iue WAK 16/2 BLAU Iue WAK 35/2 BLAU Iue WAK 35/2 Fine-stranded	57.516.8155.0 on request 25 mm ² 1 – 16 mm ² 30.494.3021.6 30.494.4021.6 30.494.4121.0 solid	V 1000 V/6 kV/2* 100 Fack G 100 50 V	A 62/67 13 mm ross price
VAK 16/2 VAK 35/2 WAK 35/2	Neutral disconnect block b Neutral disconnect block n Current carrying capability n EN 60 947-7-1/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared n Description Cc Connector clamp for b busbar b WAK 16/2 EN 60 998-2-1 CCA/CH EN 60 947-7-1/DIN VDE 0611 sect. 1 UL ratings UL ratings field/factory wiring Width Wire strip unplay	Iue WKN 16 ETK/U red WKN 16 ETK/U ROT WKN 16 ETK/U ROT 16 mm ² 1 – 10 mm ² 10 mm ▲ Olor Type Iue WAK 16/2 BLAU Iue WAK 35/2 BLAU Iue WAK 35/2 fine-stranded 1.5 – 16 mm ² 8.4 mm ²	57.516.8155.0 on request 25 mm ² 1 – 16 mm ² 30.494.3021.6 30.494.4021.6 30.494.4121.0 solid 10 – 16 mm ²	v 1000 V/6 kV/2* td. Pack G 100 50 V	A 62/67 13 mm ross price A 76
VAK 16/2 WAK 35/2 WAK 16/2 BLAU	Neutral disconnect block b Neutral disconnect block a Current carrying capability b EN 60 947-7-1/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared b Description Cartering Connector clamp for b busbar b WAK 16/2 EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 947-7-1/DIN VDE 0611 sect. 1 UL ratings field/factory wiring Width Wire strip length Approvals being prepared b	Iue WKN 16 ETK/U red WKN 16 ETK/U ROT ted WKN 16 ETK/U ROT 16 mm ² 1 – 10 mm ² 10 mm ▲ 10 mm M 10 mm M 10 mm 10 mm 10 mm 10 mm ² 10 mm 10 mm 10 mm 10 mm ² 10 mm ²	57.516.8155.0 on request 25 mm ² 1 – 16 mm ² 30.494.3021.6 30.494.4021.6 30.494.4121.0 solid 10 – 16 mm ²	v 1000 V/6 kV/2* 1000 V/6 kV/2*	A 62/67 13 mm ross price A 76 16 mm
WAK 16/2 WAK 35/2 WAK 16/2 BLAU	Neutral disconnect block b Neutral disconnect block a Neutral disconnect block a Current carrying capability a EN 60 947-7-1/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared b Description Cc Connector clamp for b busbar b Unplat WAK 16/2 EN 60 998-2-1 CCA/CH EN 60 947-7-1/DIN VDE 0611 sect. 1 UL ratings field/factory wiring Width Wire strip length Approvals being prepared WAK 16/2	Iue WKN 16 ETK/U red WKN 16 ETK/U ROT d WKN 16 ETK/U ROT 16 mm ² 1 – 10 mm ² 10 mm ▲ € Nor Type Iue WAK 16/2 BLAU Iue WAK 16/2 BLAU Iue WAK 35/2 BLAU Iue WAK 35/2 fine-stranded 1.5 – 16 mm ² 8,4 mm €	57.516.8155.0 on request 25 mm ² 1 – 16 mm ² 30.494.3021.6 30.494.4021.6 30.494.4121.0 solid 10 – 16 mm ²	V 1000 V/6 kV/2* 1000 V/6 kV/2* td. Pack G 100 50 V	A 62/67 13 mm ross price A 76 16 mm
WAK 16/2 WAK 35/2 WAK 16/2 BLAU	Neutral disconnect block b Neutral disconnect block m Current carrying capability m EN 60 947-7-1/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared m Description Cc Connector clamp for b busbar b UL ratings field/factory wiring Width Wire strip length Approvals being prepared WAK 16/2 EN 60 998-2-1 CCA/CH EN 60 947-7-1/DIN VDE 0611 sect. 1 UL ratings field/factory wiring Width Wire strip length Approvals being prepared WAK 35/2 EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH	Iue WKN 16 ETK/U red WKN 16 ETK/U ROT d WKN 16 ETK/U ROT 16 mm ² 1 – 10 mm ² 10 mm ▲ € Iue WAK 16/2 BLAU Iue WAK 16/2 BLAU Iue WAK 35/2 BLAU Iue WAK 35/2 BLAU Iue WAK 35/2 fine-stranded 1.5 – 16 mm ² 8,4 mm € fine-stranded	57.516.8155.0 on request 25 mm ² 1 – 16 mm ² 30.494.3021.6 30.494.4021.6 30.494.4121.0 solid 10 – 16 mm ²	 50 V 1000 V/6 kV/2* id. Pack G i00 50 V 	A 62/67 13 mm ross price A 76 16 mm
WAK 16/2 WAK 35/2 WAK 16/2 BLAU	Neutral disconnect block b Neutral disconnect block n Current carrying capability n EN 60 947-7-1/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared b Description Cc Connector clamp for b busbar b UL ratings field/factory wiring Width Wire strip length Approvals being prepared WAK 16/2 EN 60 998-2-1 CCA/CH EN 60 947-7-1/DIN VDE 0611 sect. 1 UL ratings field/factory wiring Width Wire strip length Approvals being prepared WAK 35/2 EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 947-7-1/DIN VDE 0611 sect. 1	Iue WKN 16 ETK/U red WKN 16 ETK/U ROT d WKN 16 ETK/U ROT 1 - 10 mm ² 10 mm ▲ € Iue WAK 16/2 BLAU Iue WAK 16/2 BLAU Iue WAK 35/2 BLAU Iue WAK 35/2 BLAU fine-stranded 1.5 - 16 mm ² 8,4 mm € fine-stranded	57.516.8155.0 on request 25 mm ² 1 – 16 mm ² 30.494.3021.6 30.494.4021.6 30.494.4121.0 solid 10 – 16 mm ² solid 10 – 16 mm ²	v 1000 V/6 kV/2* 1000 V/6 kV/2* d. Pack Gi 100 50 V	A 62/67 13 mm ross price A 76 16 mm A
VAK 16/2 VAK 35/2 Wak 16/2 blau	Neutral disconnect block b Neutral disconnect block m Current carrying capability m EN 60 947-7-1/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared munplat Description Cc Connector clamp for b busbar b UL ratings field/factory wiring Width Wire strip length Approvals being prepared WAK 16/2 EN 60 998-2-1 CCA/CH EN 60 947-7-1/DIN VDE 0611 sect. 1 UL ratings field/factory wiring Width Wire strip length Approvals being prepared WAK 35/2 EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH Width Wire strip length Approvals being prepared Wire strip length Wire strip length Mire strip length Mire strip length Mire strip length Wire strip length Mire strip length	lue WKN 16 ETK/U red WKN 16 ETK/U ROT d WKN 16 ETK/U ROT 1 - 10 mm ² 10 mm ▲ € lue WAK 16/2 BLAU lue WAK 16/2 BLAU lue WAK 35/2 BLAU lue WAK 35/2 BLAU ted WAK 35/2 fine-stranded 1.5 - 16 mm ² 8,4 mm € fine-stranded 16 - 35 mm ² 17 mm	57.516.8155.0 on request 25 mm ² 1 – 16 mm ² 30.494.3021.6 30.494.4021.6 30.494.4021.6 30.494.4121.0 solid 10 – 16 mm ² solid 10 – 16 mm ² 10 – 16 mm ²	 50 V 1000 V/6 kV/2* 1000 100 50 V V 	A 62/67 13 mm ross price A 76 16 mm A 125 14 mm
VAK 16/2 WAK 35/2 WAK 35/2 WAK 35/2 BLAU	Neutral disconnect block b Neutral disconnect block a Current carrying capability b EN 60 947-7-1/DIN VDE 0611 sect. 1 CSA ratings Width Wire strip length Approvals being prepared b Description Carter clamp for Connector clamp for b busbar b Unplat Wire strip length Width Wire strip length Approvals being prepared b WAK 16/2 EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 998-2-1 CCA/CH EN 60 947-7-1/DIN VDE 0611 sect. 1 UL ratings field/factory wiring Width Wire strip length Approvals being prepared Wire strip length Approvals being prepared Wire strip length	lue WKN 16 ETK/U red WKN 16 ETK/U ROT $1 - 10 \text{ mm}^2$ $1 - 10 \text{ mm}^2$ $1 - 10 \text{ mm}^2$ 10 mm^2	57.516.8155.0 on request 25 mm ² 1 – 16 mm ² Part No. St 30.494.4021.6 30.494.4021.6 30.494.4021.6 30.494.4121.0 solid 10 – 16 mm ² 10 – 16 mm ²	v 1000 V/6 kV/2* 1000 V/6 kV/2* td. Pack G 100 50 V V	A 62/67 13 mm ross price A 76 16 mm A 125 14 mm

* When using the terminal blocks inside housings with a protection degree of at least IP 54 according to IEC 60520. (Pollution degree 2 means that transient conductivity due to moisture condensation must be taken into account only occasionally) Otherwise 600 V/6 kV/3 applies

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Technical information for all neutral disconnect blocks

Use the busbar support WKIF SH/E/35 Part No. Z1.108.8453.0 as end clamp. If feed-through blocks are mounted between the disconnect blocks, end plates must be added to both the feed-through blocks and the disconnects blocks.

Disconnect blocks with screw connection

Description



Current transformer disconnect bloc	K WKN 6 TK	56.106.0055.0	50	
Feed-through block	WKN 6 TK D	56.106.0155.0	50	
	fine stranded	oolid	1/	٨
		SUIIU		A
EN 60 947-7-1/DIN VDE 0611 sect. 1	0.5 – 6 mm²	$0.5 - 10 \text{ mm}^2$	1000 V/6 KV/2*	57
CSA ratings				
Width Wire strip length	8 mm			12 mm
Approvals being prepared	91 ®			

Part No.

Std. Pack

Gross price

Color Type

WK 4 TKM



Description	Color Type	Part No. S	itd. Pack	Gross price
Knife edge disconnect block	gray WK 4/TKM/U blue WK 4/TKM/U BLAI	57.504.2055. U 57.504.2055.	0 100 6 100	
with 2 test bolts	gray WK 4/TKM/P3/U	57.504.2355.	0 100	
	fine-stranded	solid	V	A
EN 60 947-7-1/DIN VDE 0611 sect. 1	0.5 – 4 mm ²	0.5 – 6 mm ²	800 V/8 kV/3	20
UL ratings field/factory wirin	g No. 22-10 AWG		600 V	20
CSA ratings	No. 22-10 AWG		600 V ¹⁾	20
Width Wire strip length	n 6 mm			9 mm
Approvals	SEV 910			

The disconnecting knife in these WK versions swings in and out on a pivot point. The distinctive color of the disconnecting lever signals the open state. The terminals can be connected with the lever open or closed. Designs with a different number and arrangement of test sockets permit safe measurements using the test plug.

High-current terminal blocks with screw connection

Description



Configuration F	gray	y RFK 1/95 F S35	56.395.0055.0	10	
Configuration K	grav	y RFK 1/95 K S35	56.395.0155.0	10	
Configuration FK	grav	y RFK 1/95 FK S35	56.395.0255.0	10	
Configuration FM	grav	y RFK 1/95 FM S35	56.395.1055.0	10	
Configuration FMI	K gray	y RFK 1/95 FMK S35	56.395.1255.0	10	
		fine-stranded		V	А
DIN VDE 0611 sect.	1/EN 60 947-7-1	16 – 95 mm ²		1000 V	250
UL ratings	field/factory wiring	No. 6-3/0 AWG		600 V	200
CSA ratings		No. 6-3/0 AWG		600 V	200
Width	Wire strip length	32 mm			27 mm
Approvals		(L) sev (N) LR FL (L			

Part No.

Std. Pack

Gross price

@______ LR 91.6

Color Type

RFK 1/150... S35 ۲ _ 1.5 1.1 85,5 62,5 55 35 42,5 1.1 1. .1

Description	Color Type	Part No.	Std. Pack	Gross price
Configuration F	gray RFK 1/150 F S35	56.397.0055	5.0 10	
Configuration K	gray RFK 1/150 K S35	56.397.0155	5.0 10	
Configuration FK	gray RFK 1/150 FK S35	56.397.0255	5.0 10	
Configuration FMK	gray RFK 1/150 FMK S35	56.397.1255	5.0 10	

		fine-stranded		V	A
DIN VDE 0611 sect.	1/EN 60 947-7-1	70 – 150 mm ²		1000 V	335
UL ratings	field/factory wiring	No. 0 AWG - 300	MCM	600 V	275
CSA ratings		No. 0 AWG – 300	MCM	600 V	300
Width	Wire strip length	42 mm			27 mm
Approvals		<u></u> NV LR FL ()			

RFK 1/185... S35



Description Color Type Part No. Std. Pack Gross price **Configuration F** gray RFK 1/185 F S35 56.398.0055.0 10 gray RFK 1/185 FM S35 56.398.1055.0 10 Configuration FM V Α DIN VDE 0611 sect. 1/EN 60 947-7-1 1000 V/8 kV/3 353 field/factory wiring No. 0 AWG – 400 kcmil No. 0 AWG – 400 kcmil 600 V UL ratings CSA ratings 375 600 V 375 Width Wire strip length 42 mm 27 mm Approvals

RFK 1/240... S35 1 F E M12 d x p -96,5т 42,5 M12 15,15 ビーキージ

Description	Color	Туре	Part No.	Std. Pack	Gross price
Configuration F	gray	RFK 1/240 F S35*)	56.399.0055	.0 10	
Configuration K	gray	RFK 1/240 K S35	56.399.0155	.0 10	
Configuration FK	gray	RFK 1/240 FK S35*)	56.399.0255	.0 10	
Configuration FM	gray	RFK 1/240 FM S35*)	56.399.1055	.0 10	
Configuration FMK	gray	RFK 1/240 FMK S35*)	56.399.1255	.0 10	
		fine-stranded	stranded	V	A
DIN VDE 0611 sect.	1/EN 60 947-7-1	70 – 240 mm ²	70 – 240 mn	n ² 1000 V/8 kV/	3 415
UL ratings	field/factory wiring	No. 0 AWG - 50	0 kcmil	600 V	375
CSA ratings		No. 3/0 AWG - 50	0 kcmil	600 V	425
Width	Wire strip length	42 mm			27 mm
Approvals		<u></u> NV LR FL@			

High-current terminal blocks with screw connection

mm ²	Туре	a x b	ΜI	MII	Н	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
	К	8 x 26	_	M 12	100.5	200	112	56









DIN rail terminal blocks with tension spring connection

Application example



Accessories

We offer a comprehensive assortment of various accessories for our spring clamp connection terminal block range **fasis** to customize our DIN rail terminal blocks to the requirements of your application. Among others it includes the proven Wieland marking system, which is used for our other product lines, too, as well as a complete range of pluggable cross connectors. In addition to various test accessories Wieland standard products also include end plates, partitions or special supplementary covers with warning symbols.

Technical Data

Rated cross section: Rated current: Rated voltage: 1.5 mm² – 35 mm² up to 125 A up to 1000 V

Selected material:

Special alloys enable a low feed-through resistance and provide a gas-tight contact area:

- Current-carrying bar: copper, tin-plated
- Clamping spring: CrNi stainless steel
- 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 **fasis** WKF Wieland Electric offers a complete range of DIN rail terminal blocks with spring clamp 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 applicationspecific terminal blocks such as terminal blocks for electrical isolation. With our software systems **wieplan** and wiemarc we support you in planning and marking your DIN rail terminal block applications.



Durable electrical connection

- The tension spring system provides a dynamic clamping connection. Load-controlled and thermal cold flow properties of the connected wires are balanced.
- Maintenance-free and gas-tight electrical connection as specified by the approvals.
- Separation of electrical and mechanical functions.

Easy collection and distribution of power

- Combine the string currents of various circuits using the PV combiner terminal WKF 16 PV and standard connectors
- High-current distribution up to 125 A using a sophisticated system of reducing jumpers in combination with 35, 16 and 10 mm² blocks
- All terminal blocks provide two jumper channels for parallel supply in order to increase power performance



DIN rail terminal blocks with tension spring connection

W/KE //35	Description	Cole	or Type	Part No. St	d. Pack G	ross price
VIII 4/00	Feed-through block	ar	WKF 4/35	57 704 0053 0	100	
	Feed-through block	blu	wKF 4/35 BLAU	57 704 0053 6	100	
	Feed-through block	re	d WKF 4/35 BOT	57 704 0053 5	100	
		yellov	N/ WIKE A SLUDE	E7 704 00E2 0	100	
	Ground Diock	gree	wr 4 SL/35 en	57.704.9053.0	100	
-4 m			fine-stranded	solid	V	А
	EN 60 947-7-1.2002		$0.13 - 4 \text{ mm}^2$	$0.13 - 6 \text{ mm}^2$	1000 V/8 kV/2*	32
THIN IF	UL ratings fi	eld/factory wiring	No. 22-10 AWG		600 V	20/30
······································	CSA ratings		No. 22-10 AWG		600 V	35
	Width	Wire strip length	6 mm			11 mm
	Approvals			RINA LR BV SL SL	AEX	
WKF 6/35	Description	Cole	or Type	Part No. St	d. Pack G	ross price
	Feed-through block	gra	ay WKF 6/35	57.706.0053.0	100	
61	Feed-through block	blu	ue WKF6/35 BLAU	57.706.0053.6	100	
	Feed-through block	re	ed WKF 6/35 ROT	57.706.0053.5	100	
	Ground block	yellov	WKE 6 SL /35	57 706 9053 0	100	
		gree	en in en			
¢ †2			fine-stranded	solid	V	А
52	FN 60 947-7-1:2002		$0.5 - 6 \text{ mm}^2$	$0.5 - 6 \text{ mm}^2$	1000 V/8 kV/2*	41
2	UL ratings fi	eld/factory wiring	No 20-10 AWG	0.0 0.000	600 V	40
	CSA ratings	old/ldotoly willing	No. 20-10 AWG		600 V	47
	Width	Wire strip length	8 mm		000 1	12 mm
	Approvals	the strip longth			D	
			0240			
	Description	Cole	or Type	Part No. St	d. Pack G	ross price
WKF 10/35	Booonprion					
WKF 10/35	Feed-through block	gra	ay WKF 10/35	57.710.0053.0	50	
WKF 10/35	Feed-through block	gra	ay WKF 10/35 ue WKF 10/35 BLAU	57.710.0053.0 57.710.0053.6	50 50	
WKF 10/35	Feed-through block Feed-through block Feed-through block	gra blu re	ay WKF 10/35 ue WKF 10/35 BLAU ad WKF 10/35 ROT	57.710.0053.0 57.710.0053.6 57.710.0053.5	50 50 50	
WKF 10/35	Feed-through block Feed-through block Feed-through block Ground block	gra blu rec yellov gree	ay WKF 10/35 ue WKF 10/35 BLAU ad WKF 10/35 ROT v/ WKF 10 SL/35 an	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0	50 50 50 50	
WKF 10/35	Feed-through block Feed-through block Feed-through block Ground block	gra bit re yellov gree	ay WKF 10/35 ue WKF 10/35 BLAU ad WKF 10/35 ROT v/ WKF 10 SL/35 n	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0	50 50 50 50	<u> </u>
WKF 10/35	Feed-through block Feed-through block Feed-through block Ground block	gra blu re yellov gree	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT W/ WKF 10 SL/35 an	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/	50 50 50 50	A
WKF 10/35	Feed-through block Feed-through block Feed-through block Ground block	grad bit re yellov gree	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT ^{W/} WKF 10 SL/35 fine-stranded 2.5 – 10 mm ²	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 stranded 2.5 - 10 mm ²	50 50 50 50 V 1000 V/8 kV/?*	Α
WKF 10/35	Feed-through block Feed-through block Ground block	gra blu yellov gree	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT ^{V/} WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No 14-8 AWG	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ²	50 50 50 50 V 1000 V/8 kV/2* 600 V	57
WKF 10/35	Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings	gra re yellov gree eld/factory wiring	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT W/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG No. 14-8 AWG	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ²	50 50 50 50 1000 V/8 kV/2* 600 V	Α 57 55 65
WKF 10/35	Feed-through block Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings fi CSA ratings Width	gra blu re yellov gree eld/factory wiring Wire strip length	ay WKF 10/35 je WKF 10/35 BLAU ad WKF 10/35 ROT w/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG No. 14-8 AWG 10 mm	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ²	50 50 50 50 1000 V/8 kV/2* 600 V 600 V	4 57 55 68 13 mm
WKF 10/35	Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings Width Approvals	grad bit re yellov gree eld/factory wiring Wire strip length	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT w/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG No. 14-8 AWG 10 mm @ OT ATEX RINA U	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ²	50 50 50 50 V 1000 V/8 kV/2* 600 V 600 V	Α 57 55 65 13 mm
WKF 10/35	Feed-through block Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings fit CSA ratings Width Approvals	gra bil re yellov gree eld/factory wiring Wire strip length	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT W/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG No. 14-8 AWG 10 mm @ M ATEX RINA U	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ²	50 50 50 50 1000 V/8 kV/2* 600 V 600 V	A 57 55 65 13 mm
WKF 10/35	Feed-through block Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings fi CSA ratings Width Approvals	gra blu re yellov gree eld/factory wiring Wire strip length Cole	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT W/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG No. 14-8 AWG 10 mm (a) ATEX RINA LI are an are	57.710.0053.0 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ²	50 50 50 1000 V/8 kV/2* 600 V 600 V 600 V 600 V	4 57 55 65 13 mm
WKF 16/35	Feed-through block Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings UL ratings Width Approvals	gra blu re yellov gree eld/factory wiring Wire strip length Colo gra	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT w/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG No. 14-8 AWG 10 mm @ @ ATEX RINA U por Type ay WKF 16/35	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ² BV %1 %Last @C Part No. St 57.716.0053.0	50 50 50 50 V 1000 V/8 kV/2* 600 V 600 V 600 V 600 V 600 V €	A 57 55 65 13 mm
WKF 10/35	Feed-through block Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings UL ratings Kidth Approvals Description Feed-through block Feed-through block	gra blu rec yellov gree Wire strip length Wire strip length Colo gra blu	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT W/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG No. 14-8 AWG 10 mm @ AWG 10 mm @ ATEX RINA U or Type ay WKF 16/35 BLAU	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ² BV %1 %Las: @G Part No. St 57.716.0053.0 57.716.0053.6	50 50 50 50 1000 V/8 kV/2* 600 V 600	A 57 55 65 13 mm
WKF 10/35 WKF 16/35	Eventplan Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings Width Approvals Description Feed-through block Feed-through block Feed-through block	gra blu re yellov gree eld/factory wiring Wire strip length Colo blu re	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT W/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG No. 14-8 AWG 10 mm () ATEX RINA U or Type ay WKF 16/35 BLAU ad WKF 16/35 RLAU ad WKF 16/35 RLAU	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ² 8 BV NJ NJ AFF @ Part No. St 57.716.0053.6 57.716.0053.6	50 50 50 50 1000 V/8 kV/2* 600 V 600 V 600 V 600 V 600 V 600 V 600 V 600 V	A 57 55 65 13 mm
WKF 10/35	Feed-through block Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings Vidth Approvals Description Feed-through block Feed-through block Feed-through block Feed-through block Feed-through block Feed-through block Ground block	gra gra vellov gree eld/factory wiring Wire strip length Colo gra blu re yellov gree	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT W/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG No. 14-8 AWG 10 mm (C) ATEX RINA U Or Type ay WKF 16/35 Je WKF 16/35 ROT W/ WKF 16 SL/35 an	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ² 3 BV % % % Fart No. St 57.716.0053.6 57.716.0053.6 57.716.0053.0	50 50 50 50 V 1000 V/8 kV/2* 600 V 600 V 6	A 57 58 68 13 mm
WKF 10/35	Feed-through block Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings Width Approvals Description Feed-through block Feed-through block Feed-through block Feed-through block Feed-through block Feed-through block Ground block	gra gra vellov gree eld/factory wiring Wire strip length Col gra blu re yellov gree	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT W/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG 10 mm Control Control Control Control Control Monte Control Control Control Control No. 14-8 AWG 10 mm Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control Control No. 14-8 AWG 10 mm Control Control Cont	57.710.0053.0 57.710.0053.5 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ² a BV %1 %Las @ Part No. St 57.716.0053.0 57.716.0053.5 57.716.9053.0	50 50 50 50 1000 V/8 kV/2* 600 V 600 V € d. Pack C 50 50 50 50 50	A 57 55 65 13 mm
WKF 10/35	Peed-through block Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings Width Approvals Description Feed-through block Feed-through block	gra bit yellov gree eld/factory wiring Wire strip length Col gra bit re yellov gree	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT W/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG No. 14-8 AWG 10 mm (a) ATEX RINA U ATEX RINA	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ² A BV 71 71. 51 57.716.0053.0 57.716.0053.0 57.716.0053.0 57.716.9053.0 stranded 4 – 16 mm ²	50 50 50 50 1000 V/8 kV/2* 600 V 600	A 57 55 65 13 mm ross price
WKF 10/35 WKF 16/35 82	Feed-through block Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings fi CSA ratings Width Approvals Description Feed-through block Feed-through block Feed-through block Ground block	eld/factory wiring Wire strip length Column Column gree blu re yellov gree	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT W/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG No. 14-8 AWG 10 mm (C) C M C M C M C	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ² 8 BV %1 %1.e (C) 57.716.0053.0 57.716.0053.0 57.716.9053.0 stranded 4 – 16 mm ²	50 50 50 50 1000 V/8 kV/2* 600 V 600 V € * C 50 50 50 50 50 50 50 50 50 50	A 57 55 13 mm ross price
WKF 10/35	Feed-through block Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings Width Approvals Description Feed-through block Feed-through block Feed-through block Ground block	eld/factory wiring Wire strip length Cold Cold Cold Cold Cold Cold Cold Cold	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT W/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG No. 14-8 AWG 10 mm (a) (a) (a) (a) (a) (a) (a) (a) (a) (a)	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ² 3 BV %1 %Lat. @ Part No. St 57.716.0053.6 57.716.0053.5 57.716.0053.0 stranded 4 – 16 mm ²	50 50 50 50 1000 V/8 kV/2* 600 V 600 V 600 V 600 V 600 V 600 V 0 50 50 50 50 50 50 50 50 50	A 57 55 65 13 mm ross price
WKF 10/35 Image: state st	Feed-through block Feed-through block Feed-through block Ground block EN 60 947-7-1:2002 UL ratings Width Approvals Description Feed-through block Feed-through block Ground block	eld/factory wiring Wire strip length	ay WKF 10/35 Je WKF 10/35 BLAU ad WKF 10/35 ROT W/ WKF 10 SL/35 fine-stranded 2.5 – 10 mm ² No. 14-8 AWG No. 14-8 AWG 10 mm W/ MKF 16/35 Je WKF 16/35 BLAU ad WKF 16/35 BLAU ad WKF 16/35 BLAU ad WKF 16/35 ROT W/ WKF 16 SL/35 fine-stranded 4 – 16 mm ² No. 24-4 AWG No. 14-4 AWG 12 mm	57.710.0053.0 57.710.0053.6 57.710.0053.5 57.710.9053.0 solid/ stranded 2.5 – 10 mm ² 3 BV % % % Part No. St 57.716.0053.0 57.716.0053.5 57.716.0053.0 stranded 4 – 16 mm ²	50 50 50 50 1000 V/8 kV/2* 600 V 600 V 600 V 600 V 600 V 1000 V/8 kV/2* 600 V 1000 V/8 kV/2*	A 57 55 65 13 mm ross price ross price 75 78 78 75 78

the mounting rail

DIN rail terminal blocks with tension spring connection

WKIF 16/1 /35	Description	Colo	or Type	Part No. St	d. Pack Gi	ross price
	Feed-through bloc	k ara	v WKIF 16/1/35	56.716.1155.0	50	
. 94	Feed-through bloc	k blu	e WKIF 16/1/35 BLAU	56,716,1155,6	50	
	Feed-through bloc	k re	d WKIF 16/1/35 ROT	on request		
			fine-stranded	stranded	V	A
	EN 60 947-7-1:2002		4 – 16 mm ²	4 – 16 mm ²	1000 V/8 kV/2*	76
	Width	Wire strip length	12 mm			16 mm
	Approvals					
WKE 16/35 PV/WKE	Description	Со	lor Type	Part No. St	d. Pack Gi	ross price
	Supply block	ara	V WKE 16/35 PV//WKE	56 716 0153 0	20	
	Supply block	blu	e WKF 16/35 PV BLAL	156 716 0153 e	20	
	Supply block	rei	d WKF 16/35 PV BOT	56 716 0153 5	20	
	5 app. 7 2.000				20	
0			fine-stranded	solid/ stranded	V	A
	EN 60 947-7-1:2002		4 – 16 mm ²	4 – 16 mm ²	1000 V/8 kV/2*	76
	UL ratings	field/factory wiring	No. 12-6 AWG		600 V	20
	A CONTRACT OF					
	CSA ratings		No. 12-6 AWG		600 V	20

ⓐ∠sev_№ ATEX RINA BV 乳 ③

Approvals

Disconnect blocks with spring clamp connection

Neutral disconnect block Neutral disconnect block	blue WKF4NT/35 red WKF4NT/35R0	57.704.8153.0 on request	100	
Neutral disconnect block	red WKF4NT/35R0	on request		
EN 60 947-7-1; 1991/DIN VDE 0611 T1/08.92	fine-stranded	solid	V	A
	0.13 – 4 mm ²	0.13 – 6 mm ²	1000 V/6 kV/2*	25
Width Wire strip le	ength 6 mm			11 mm
Approvals being prepared	SE .			
	EN 60 947-7-1; 1991/DIN VDE 0611 T1/08.92 Width Wire strip le Approvals being prepared	EN 60 947-7-1; fine-stranded 1991/DIN VDE 0611 T1/08.92 0.13 – 4 mm ² Width Wire strip length Approvals being prepared @	EN 60 947-7-1;fine-strandedsolid1991/DIN VDE 0611 T1/08.920.13 - 4 mm²0.13 - 6 mm²WidthWire strip length6 mmApprovals being prepared👀	EN 60 947-7-1; fine-stranded solid V 1991/DIN VDE 0611 T1/08.92 0.13 - 4 mm² 0.13 - 6 mm² 1000 V/6 kV/2* Width Wire strip length 6 mm 6 mm 6 mm Approvals being prepared 9 9 9 9

Description

Deer

Neutral disconnect block

Neutral disconnect block

WKF 10 NT/35

EN 60 947-7-1		fine-stranded	solid	V	А
1991/DIN VDE	0611 T1/08.92				
		0.25 – 10 mm ²	2.5 – 10 mm ²	1000 V/6 kV/2*	57
Width	Wire strip length	10 mm			13 mm
Approvals bein	g prepared				

Part No. Std. Pack

57.710.8153.0 50

D . N

Ctal Data

Gross price

Color Type

blue WKF 10 NT/35

red WKF 10 NT/35 ROT on request

WKIF 16/1 NT/35

Description	COIOI	Type	Part NO.	Stu. Pack	G	ross price
Neutral disconnect block	blue	WKIF 16 NT/35	57.716.8153	.0 50		
Neutral disconnect block	red	WKIF 16 NT/35 ROT	on request			
EN 60 947-7-1; 1991/DIN VDE 0611 T1/08.92	fir	ne-stranded	solid		V	A
	4	– 16 mm²	4 – 16 mm ²	1000	V/6 kV/2*	76
Width Wire strip lengt	h 12	2 mm				15 mm
Approvals being prepared						



	Description	Co	lor Type	Part No. S	Std. Pack	Gr	oss price
	Connector clamp f	or bl		30 /9/ 3021	6 100		
	connector clamp r	oi Di		20.404.4021	0 100		
	busbar	Id	UE WAK 35/2 BLAU	30.494.4021.	0 100		
		unplate	ed WAK 35/2	30.494.4121.	0 50		
	WAK 16/2						
	EN 60 998-2-1 CCA/	СН	fine-stranded	solid	V		А
	EN 60 947-7-1/DIN V	DE 0611 T1					
	UL ratings	field/factory wiring	1.5 – 16 mm ²	10 – 16 mm ²			76
	Width	Wire strip length	8.4 mm				16 mm
	Approvals being pre	pared	(Ser 6				
'	WAK 35/2						
	EN 60 998-2-1 CCA/	СН	fine-stranded	solid	V		А
	EN 60 947-7-1/DIN V	'DE 0611 T1					
	UL ratings	field/factory wiring	16 – 35 mm ²	16 - 35 mm ²			125
	Width	Wire strip length	17 mm				14 mm
	Approvals being pre	pared					

* When using the terminal blocks inside housings with a protection degree of at least IP 54 according to IEC 60520. (Pollution degree 2 means that transient conductivity due

to IEC 60520. (Pollution degree 2 means that transient conductivity due to moisture condensation must be taken into account only occasionally) Otherwise 600 V/6 kV/3 applies

Technical information for all neutral disconnect blocks

Use the busbar support WKIF SH/E/35 Part No. Z1.108.8453.0 as end clamp. If feed-through blocks are mounted between the disconnect blocks, end plates must be added to both the feed-through blocks and the disconnects blocks.

fasis/selos

Accessories

Cross connectors for DIN rail	Description	Width	Screw	Туре	Part No.	Std. Pack	Gross price
terminal blocks with serow		6	M2		77 201 1227	10	
	VVIX 4/0	0 11111	1015	IVB WK 4-2	77 281 1327 () 10	
connection				IVB WK 4-3	77 281 1/27 (10	
				IVB WK 4-12	77 281 2227 () 10	
				100 0010 4 12	27.201.2227.0	, 10	
	WK 6/U	8 mm	M3.5	IVB WK 6-2	77.282.2227.0) 10	
				IVB WK 6-3	Z7.282.2327.0) 10	
				IVB WK 6-12	Z7.282.3227.0) 10	
	WKN 10/U	10 mm	M3.5	IVB WKN 10-2	Z7.283.2227.0) 10	
				IVB WKN 10-3	Z7.283.2327.0) 10	
				IVB WKN 10-12	Z7.283.3227.0) 10	
	WKN 16/U	12 mm	M4	IVB WKN 16-2	Z7.284.2227.0) 10	
				IVB WKN 16-3	Z7.284.2327.0) 10	
				IVB WKN 16-12	Z7.284.3227.0) 10	
				IAR MAKIN 10 MI-30	27.284.2027.0) 10	
	W/KN 25/11	16 mm	ME	IV/R W/KN 25 2	77 225 2227 (10	
- Vanto		10 1111	NI J	IVB WKN 35-2	77 285 2327 () 10	
				IVB WKN 35-12	77 285 3227 () 10	
				IVB WKN 35 M-20	77.285.2027.0) 10	4
				110 1111100 111 20	2712001202710		
	WKN 70/U	24 mm	M6	VB WKN 70-2	Z7.286.3227.0) 10	
				VB WKN 70-3	Z7.286.3327.0) 10	
				VB WKN 70-4	Z7.286.3427.0) 10	
				VB WKN 70-5	Z7.286.3527.0) 10	
				VB WKN 70-6	Z7.286.3627.0) 10	
	WKN 150/U	28 mm	M8	VB WKN 150-2	Z7.287.1227.0) 5	
				VB WKIN 150-3	27.287.1327.0	5	
		-					
Cross connectors for DIN rail terminal	WKF 4/35	6 mm		IVB WKF 4-2	Z7.261.1227.0) 10	
blocks with tension spring				IVB WKF 4-3	Z7.261.1327.0) 10	
connection					Z7.261.1427.0	10	
				IVD WKF 4-3	Z7.201.1527.0) 10	
					27.201.1027.0) 10	
					77 261 1827 (10	
				IVB WKF 4-9	77 261 1927 () 10	
				IVB WKF 4-10	Z7.261.2027.0) 10	
	WKF 6/35	8 mm		IVB WKF 6-2	Z7.282.4227.0) 10	
	WKF 10/35	10 mm		IVB WKF 10-2	Z7.283.8227.0) 10	
at 150	W/VE 16/25	12			77 201 1227	10	
	VVNF 10/30	12 mm		IVD VVNF 10-2	27.204.4227.0	J 10	
U -							
	Description	Width	Screw	Туре	Part No.	Std. Pack	Gross price
Cover strip with warning symbol							
OVEL 4 DIOCKS	WK 4/U	6 mm		AD 6/4 GELB	04.343.4856.8	3 10	
	WK 6/U	8 mm		AD 8/4 GELB	04.343.4956.8	3 10	
	M/// NI 10/II	10		ADNI 10/4 CELD	04 040 5050 0	1 10	



Description	Width	Screw	Туре	Part No.	Std. Pack	Gross price
WK 4/U	6 mm		AD 6/4 GELB	04.343.4856.	8 10	
WK 6/U	8 mm		AD 8/4 GELB	04.343.4956.	8 10	
WKN 10/U	10 mm		ADN 10/4 GELB	04.343.5056.	B 10	
WKN 16/U	12 mm		ADN 12/4 GELB	04.343.5156.	8 10	
WKN 35/U	16 mm		AD 16/4 GELB	04.343.5256.	8 10	
WKN 70/U	24 mm		AD 24/4 GELB	04.343.5356.	8 10	
WKN 150/U	28 mm		ADN 28/4 GELB	04.343.5456.	8 10	
WKF 4/35	6 mm		ADF 4/4 GELB	04.343.6153.	8 10	
WKF 6/35	8 mm		ADF 6/4 GELB	04.343.6253.	8 10	
WKF 10/35	10 mm		ADF 10/4 GELB	04.343.6453.	8 10	
WKF 16/35	12 mm		ADF 16/4 GELB	04.343.6653.	B 10	





PCB terminal blocks **PCB** connectors

Application example



General

High-guality modules combined with robust power electronics require reliable PCB terminal blocks and connectors to function properly. This applies to the innovative photovoltaic products, too.

Whether controllers in building automation or control systems used in automotive production - each individual data point is important for the entire system's effectiveness. wiecon PCB terminal blocks and connectors from Wieland Electric have proven themselves for many decades and users worldwide trust in them.

Technology

Detachable connection technology for electronic modules that is user-friendly, clearly and durably marked. Optimized for manufacturing, convenient operation for the user.

Spring clamp or screw connection technology, both proven for the requirements of PCB connections. The spring clamp technology plays to its strength when rigid wires are used or in mobile environments. The screw, known worldwide and convenient for stranded flexible connections, makes its conductivity a feature in very warm environments. It thus protects the printed circuit board against excessive load due to the contact force transferred by the torque. Maintenance-free contacts for reliable power generation has a name wiecon.

Entire *wiecon* range for download as well as layout with approval data available

via eCatalog at

www.wieland-electric.com Hotline +49 951 9324 993

Variety of types

The following products represent a selection chosen for solar power. The entire range from Wieland Electric GmbH provides many more standalone solutions for complex tasks and applications.

- 2 to 24 pole
- 0.1 16 mm² and 57 A
- Voltage up to 690 / 1000 V
- Direct and indirect pluggable connection
- Wires and operating components in all directions
- Modular and multi-tier
- Inch and metric spacings
- Marking directly on the product; no adhesive tags
- THR versions in packages suitable for automated machines

Material and quality:

- UL 94 V-0 material
- DQS certified with DIN ISO 9001
- ROHS-compliant
- UL/CSA approvals
- ÖQS Certificate, Austria

Subject to changes without prior notice.



0145.0 "PCB terminal blocks"



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Solar applications up to 25 A for single-phase supply with three-phase main power supply monitoring (5 pole) and for single-phase supply (ENS, 3 pole)



General

The system is specially adapted to the requirements of solar technology. The connectors can be loaded with 25 A on two contacts (L, N). They are used for single-phase supply with three-phase monitoring. Special distribution boxes are to bundle the electrical power of up to 6 inverters and are thus completing the system. These connectors have their own mechanical coding. This means that only associated pairs of male and female can be connected

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:

- Quick installation with user-friendly design
- UV-resistant
- Cross sections up to 4 mm2
- Degree of protection: IP65...IP68 (on request)

Connectors



Male SW 27 \$#32 Application Coding Cable diameter in mm Color Part No. Part No. Screw technology for cable Ø 10 -14 mm Screw technology for cable Ø 13 -18 mm Wire mm² Wire mm² solid solid up to 4.0 up to 4.0 fine-stranded fine-stranded Single-phase supply with 25 A (ENS) 96.032.4154.3 96.032.4554.3 concrete L, N, ground gray/black

M 25 device connector

Female with sealing option	
Application Coding Color	Part No.
Single-phase supply with 25 A (ENS)	Screw technology Wire mm² solid up to 6.0 fine-stranded up to 6.0
Male with sealing option	
Application Coding Color	Part No.
Single-phase supply with L, N, ground 25 A (ENS)	Screw technology Wire mm² solid up to 6.0 fine-stranded up to 6.0

Connectors



	Screw technology for cable Ø 10 –14 mm			Screw technology for cable Ø 13 –18 mm			
	Wire	mm ²		Wire	mm ²		
	solid			solid	up to 4.0		
	fine-stranded	up to 4.0		fine-stranded	up to 4.0		
Single-phase Concrete	96.052.4154.3			96.052.4554.3			
supply with gray/black							
25A and							
three-phase							
monitoring							

M 25 device connectors

Female with sealing option			the second	M25x1,5 16,1 SW22	SW24
Application	Coding	Color	Part No.		
Single-phase supply with 25 A and three-phase monitoring		concrete gray/black	96.051.5054.3	Screw technolog Wire solid fine-stranded	mm ² up to 4.0
Male with sealing option			and the second	-5102 - 1935	19, 35 30, 45 7221 727
Application	Coding	Color	Part No.		
Single-phase supply with 25A and three-phase monitoring		concrete gray/black	96.052.5054.3	Screw technolog Wire solid fine-stranded	mm ² up to 4.0

Cable assemblies, 4.0 mm²



RST 25i3

Cable assemblies, 4.0 mm²



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

RST 25i5

Cable assemblies, 4.0 mm²



RST 25i5

Cable assemblies, 4.0 mm²



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

Technical data RST25i3 and RST25i5

Rated voltage	250 V	250 / 400 V			
Rated current	25 A	25 A (L, N) 1 ~ Contacts (1, 2) 10 A			
Number of poles	3 pole	5 pole			
Operating temperature under full load	55 °C	55 °C			
Continuous temperature: -44 Ins	–40 °C to +100 °C Insulating parts 100° C, cable H05VV 70° C, H07RN-F 60° C				
Material: Co Ho Sea	Contact parts: surface-plated brass Housing parts: thermoplastic material PA 66, halogen-free, V2 Sealing material: NBR				
Regulations: DIM IEC	DIN VDE 0606 T200; DIN EN 61984 (VDE 0627), VDE 0110 IEC 60999: UL 2238; CSA: C22.2 No.182.2-M1987; LR Type Approval System				
Approvals: VD	VDE; UL*; CSA*; LR; GL; DNV				
Degree of protection: IP	IP 65, IP 66, IP 67 and IP 68 (3 m; 2 hours))				
Glow-wire test 960 °C: For	For connectors, distribution units, cable assemblies and device connections				
Coding: Me	Mechanical coding, symbolized by color code.				
Note: Pro Pro con cirr On Co DII Da is r Ins hor	 Protection against shock generally guaranteed even when disconnected. Protective conductor leading. Connection to the live cable must be with a female connector according to the regulations. It is therefore not possible to have a ring circuit arrangement. Only pluggable in the correct pole confi guration; 1 pole cannot be connected. Contacts protected against strain on the cable. All components can be interlocked. DIN VDE 0606-200 requires the use of a locking device. Dangerous mismating with installation connector systems of other manufacturers is not automatically excluded by compliance with DIN VDE0606 T200! Installation connectors do not replace national connector/outlet systems for household applications. 				
* SF	* Spring clamp connections and cable assemblies in shrinkage tube technology excluded. NEC code to be followed!				
	sis ° AC-SOLAR in use. Sis ° AC-SOLAR is extremely	flexible in its applications			



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

Technical data in general Degrees of protection and material resistance

Please contact us for applications under different of	ond	itions.	
UV light (use black-colored connectors!)	+	Motor oil (SAE 20W/55)	+
Oil and grease resistance	+	Nickel chloride	+
Aliphatic carbon hydride	+	Paraffin and paraffin derivates	+
Aromatic hydrocarbons	+	Phosphoric ester	+
Alcohols	+	Phthalic ester	+
Ammonia, water-free	+	Polyamide resin	+
Ammonium chloride (salmiac)	+	Polyester polyoles	+
Ammonium sulfate	+	Polyether polyoles	+
Barium chloride	+	Polyglycols	+
Beer	+	Polymeric softeners	+
Butter	+	Polyurethane resins	+
Butyl alcohol	+	Mercury	+
Calcium chloride, aqueous solution, 10%	+	Castor oil	+
Citric acid, hydrous solution, 10%	+	Salmiac	+
Ferric sulfide	+	Oxygen, RT	+
Ethyl ether	+	Lubricating oil (O-149), (not bunker fuel, oil anker)	+
Paint, varnish, not much sulfuric acid	+	Sulfur, wet	+
Fruit juice, fruit acid	+	Sulfuric acid (dilluted, RT)	+
Tannic acid	+	Sulfur hexafluoride	+
Glycerin	+	Sweat	+
Glysantine, hydrous solution, 40%	+	Sebacic acid ester	+
Potassium chloride	+	Spirits	+
Caustic potash solution, hydrous solution, 10%	+	Nitric acid (10%)	+
Sodium, hydrous solution, 10%	+	Hydrochloric acid (10%)	+
Linseed oil	+	Water, RT, free from chlorine up to 80°	+
Milk	+	Water: sea water resistance, artificial, 20°C	+
Lactic acid, 20°C	+	Stannic chloride, 20°C, saturated	+



RST long-term studies:

In addition to the tests required by the standard, a continuous test was performed over 14 months. During this time the connectors were exposed to direct sunlight, frost and occasional flooding. For this purpose the RST components were installed in an eaves gutter and monitored by a 30mA circuit breaker with the mains voltage applied. The following tests were performed in addition to the continuous test: – Temperature change test (-40° C to + 60° C)

- Installation of the connector at - 40°C

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

Installation of the field-assembled connectors



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.

gesis® RST

Housing installation

Installation of a standard system, for M20 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.

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

Dimensions in mm





Bending radius (for conductors)

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

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



The new RST Power series up to 50A



General

The new RST Power series is particulary designed for device engineering. With a current-carrying capability of 50A combined with an extremely compact design the connector fits almost everywhere.

Features:

- High load capabilities up to 50 A
- Quick and easy installation
- Cross sections up to 16 mm²
- For M32 knock-outs
- Lockable with screwdriver
- Compact and robust design

Connectors with strain relief

Female connector	65 K	CW12 CW12 G G G G G G G G G G G G G G G G G G G
Application Coding Cable gland Wire diameter Color	Part No.	Part No.
Main power supply max. 50A M32 15 – 25 black M40 20 – 32 black	with screw connectionWiresmm²solidfrom 4.0 to 6.0strandedfrom 4.0 to 16.0ApprovalsVDE, UL, CSA being preparedPole markingsground, 1, 2, 3, N97.051.4053.197.051.4253.1	with crimp connectionWiresmm²flexible wiresfrom 4.0 to 10.0ApprovalsVDE, UL, CSA being preparedPole markingsground, 1, 2, 3, NCrimp contactsorder separately as accessories97.151.0053.197.151.0253.1
Male connector	Part No	Freimachung Freimachung Freimachung Freimachung Freimachung
Application Coding Cable gland Wire diameter Color	Part INO.	Part NO.
	with screw connectionWiresmm²solidfrom 4.0 to 6.0strandedfrom 4.0 to 16.0ApprovalsVDE, UL, CSA being preparedPole markingsground, 1, 2, 3, N	with crimp connectionWiresmm²flexible wiresfrom 4.0 to 10.0ApprovalsVDE, UL, CSA being preparedPole markingsground, 1, 2, 3, NCrimp contactsorder separately as accessories
Main power supply max. 50 A M 32 15 – 25 black M 40 20 – 32 black	97.052.4053.1 97.052.4253.1	97.152.0053.1 97.152.0253.1
M32 device connectors

Female connector		SH55 565 Kodiersteg
Application Coding Fixation with bolts Color	Part No.	Part No.
#5,5±0,1 () () () () () () () () () () () () ()	with screw connection Wires mm² solid from 4.0 to 16.0 stranded from 4.0 to 16.0 Approvals VDE, UL, CSA being prepared Pole markings ground, 1, 2, 3, N	with crimp connectionWiresmm²flexible wiresfrom 4.0 to 10.0ApprovalsVDE, UL, CSA being preparedPole markingsground, 1, 2, 3, NCrimp contactsorder separately as accessories
Main power supply max. 50 A	97.051.5553.1 97.051.5053.1	97.151.1553.1 97.151.1053.1
Male connector	ef s	Freimachung
Application Coding Fixation with bolts Color	Part No. with screw connection Wires mm ² solid from 4.0 to 16.0 flexible wires from 4.0 to 16.0	Part No. with crimp connection Wires mm ² flexible wires from 4.0 to 10.0 Approvals VDE, UL, CSA being prepared Pole markings ground, 1, 2, 3, N
Main power supply max. 50 A	ApprovalsVDE, UL, CSA being preparedPole markingsground, 1, 2, 3, N97.052.5553.197.052.5053.1	Crimp contacts order separately as accessories 97.152.1553.1 97.152.1053.1

Technical Data

Rated voltage:	250/400∨
Rated current:	50 A rigid wires from 4.0 mm ² to 6.0 mm ² for connectors (up to 16 mm ² for device connectors)
Rated cross section:	fine-stranded wires from 4.0 mm ² to 1.0 mm ²
Number of poles:	5
Pole marking:	1, 2, 3, N, ground
Material:	Contact parts: brass, surface-treated Housing parts: thermoplastic PA 66, halogen-free, V2
	Sealing material NBR, TPE
Degrees 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 glands M32: 12 Nm; M40: 14 Nm



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RST 50i5

Installation and pre-assembly



Insert the cable into the strain relief housing



M40 adapter ring

Snap the housing into the M32 knock-out



Tighten the counter nuts positioned inside



Connect the wire using screw technology



Latch the contact carrier



Assemble the

contact carrier

Fasten or loosen the contact carrier



Fasten or loosen the contact carrier



Bayonet lock with integrated protection against accidental disconnect



Accessories

Cover niece	Name	Color Part No.
	Cover piece	black Z5.567.5653.0
	For safe covering of unused male or female components	
Sample kit RST 50 i 5	Name	Color Part No.
	Sample kit RST50i5	black 99.628.0000.0
	Trial set Complete kit including: – Connectors – Device connection – Cover piece – Knock-out (metal sheet)	
Crimera to al	Name	Color Part No.
with system kit	System kit	

Accessories

Crimp contacts	Name	ID (groo	ove) mm²	Part No.
female	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	Name	ID (groove) mm ²	Part No. 05.545.2821.8 05.545.2921.8 05.545.3021.8	
Chimp contacts				
male	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		



Connection examples

Selection of the suitable interconnection







Connector (female part) for



4

5

assembly on site

Device connection (male part) for installation in the inverter housing¹⁾ ¹⁾ Numerous well-known manufacturers offer their devices with pre-installed RST connections.

Main collector RST SOLAR

Cable assemblies for the connection from the inverter to the main collector (in all lengths as required)





- 3 Main distribution unit RST RAN SOLAR with integrated circuit breakers
- 5 Cable assemblies for the connection from the inverter to the main collector (in all lengths as required)



gesis[®] SOLAR

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 3 mm the incendiary speed must not exceed 3 inch/min; for wall thicknesses over 3 mm it must not exceed 1.5 inch/min.

Materials which exceed these incendiary speed limit values will not be registered by UL.

Flammability class V2

In the vertical test for flammability self-extinction must occur after 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 self-extinction must also occur after 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 after 30 seconds.

Flammability class V0

In the vertical test for flammability self-extinction must occur after 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 after 30 seconds..





Description of the 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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