



Photovoltaic connectors

Product overview 2018/2019

Photovoltaic connectors for DC and AC cabling

Are you looking for innovative and reliable connection technology for your photovoltaic panels, inverters, or for the complete photovoltaic system? Then Phoenix Contact is the right partner for you.

We offer the perfect and comprehensive solution for cabling your photovoltaic system.



i Web code:
#0353

Find out more with the web code

You can find web codes in this brochure: a pound sign followed by a four-digit number combination.



Web code: #1234 (example)

This allows you to access information on our website quickly.

It could not be easier:

1. Go to the Phoenix Contact website
2. Enter # and the number combination in the search field
3. Get more information and product versions

Or use the direct link:

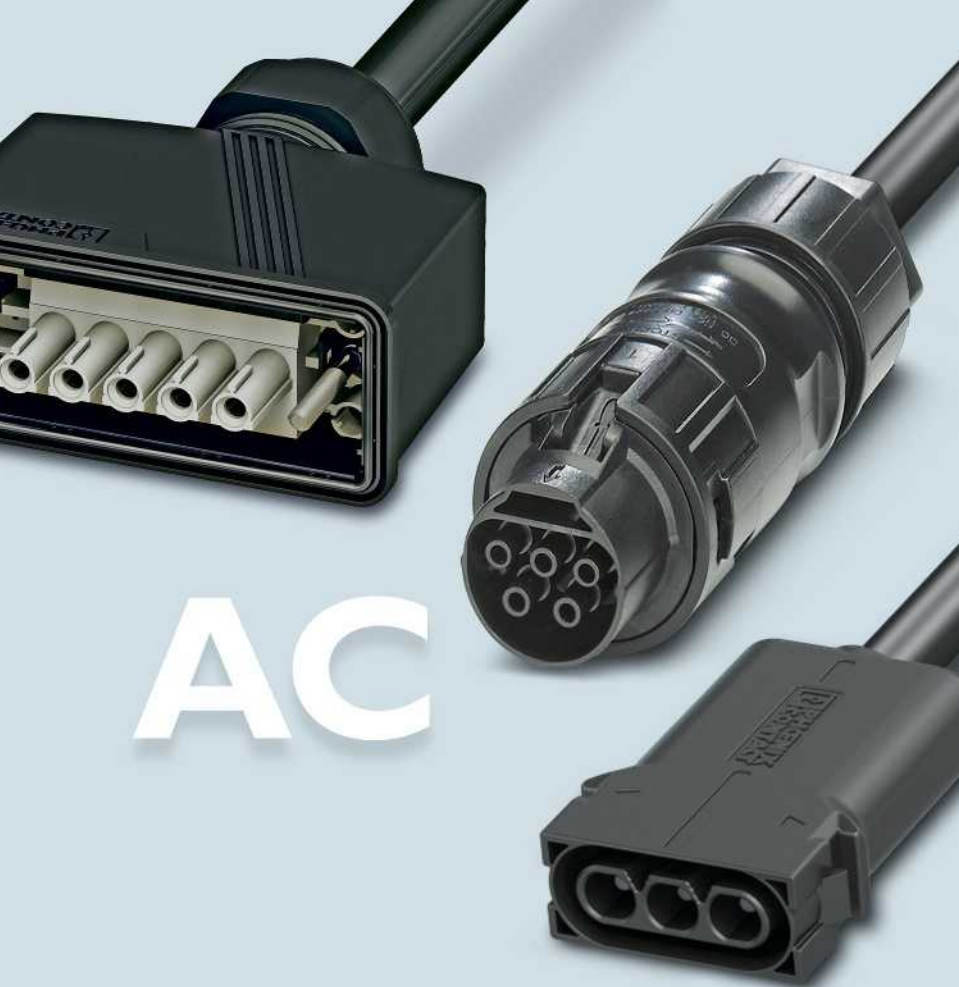
phoenixcontact.net/webcode/#1234



DC

DC connectors

- Currents up to 65 A
- Voltages up to 1500 V
- Conductor cross sections from 2.5 to 16 mm²
- Connection technology for building-integrated photovoltaics (BIPV)



AC

AC connectors

- Currents up to 70 A
- Voltages up to 690 V
- Conductor cross sections from 1.5 to 16 mm²
- Circular and rectangular connectors
- Connection technology for micro inverters

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The right connection technology for every application



Building-integrated photovoltaics (BIPV)



Rooftop systems



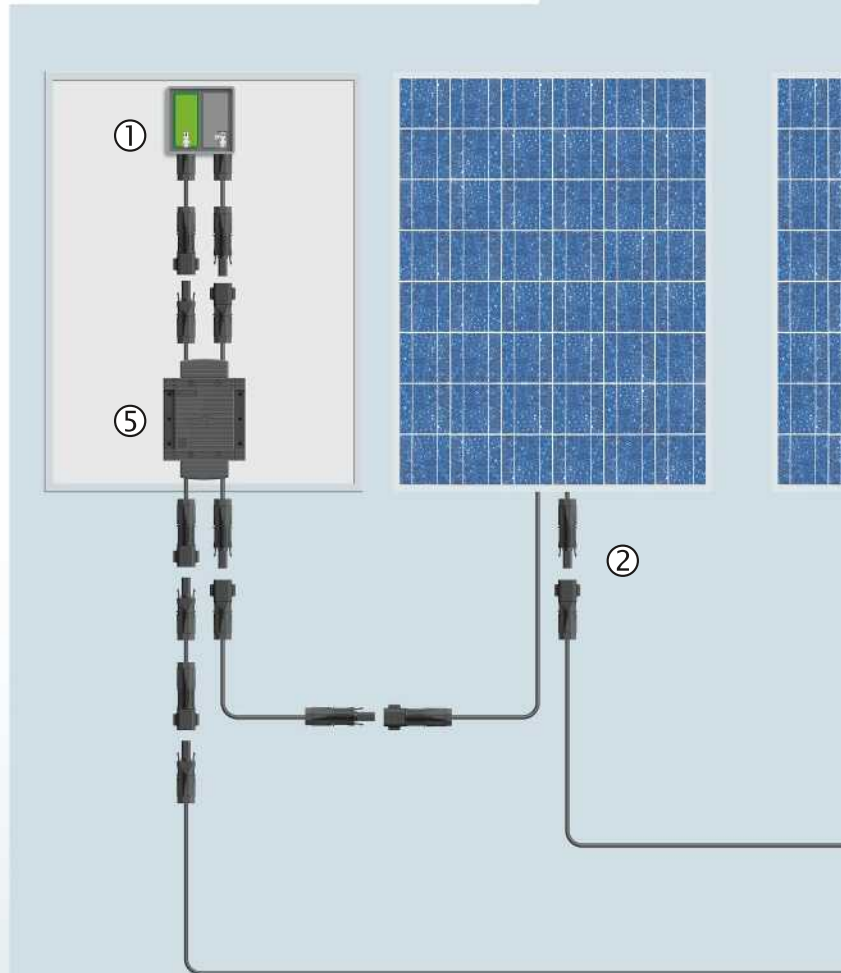
Free-standing systems

Product range overview

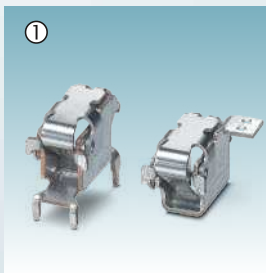
Photovoltaic connectors

We have the right connection solution for you – from connection technology for photovoltaic panels, through DC connectors for field cabling, to device connections for signals, data, and power.

The tailored, high-quality components contribute to the long-term and increased availability of your system.



Consistent connection technology from the photovoltaic panel to the supply



①
PCB terminal blocks for module junction boxes (see page 6)



②
DC connectors with crimp connection for machine processing (see page 8)



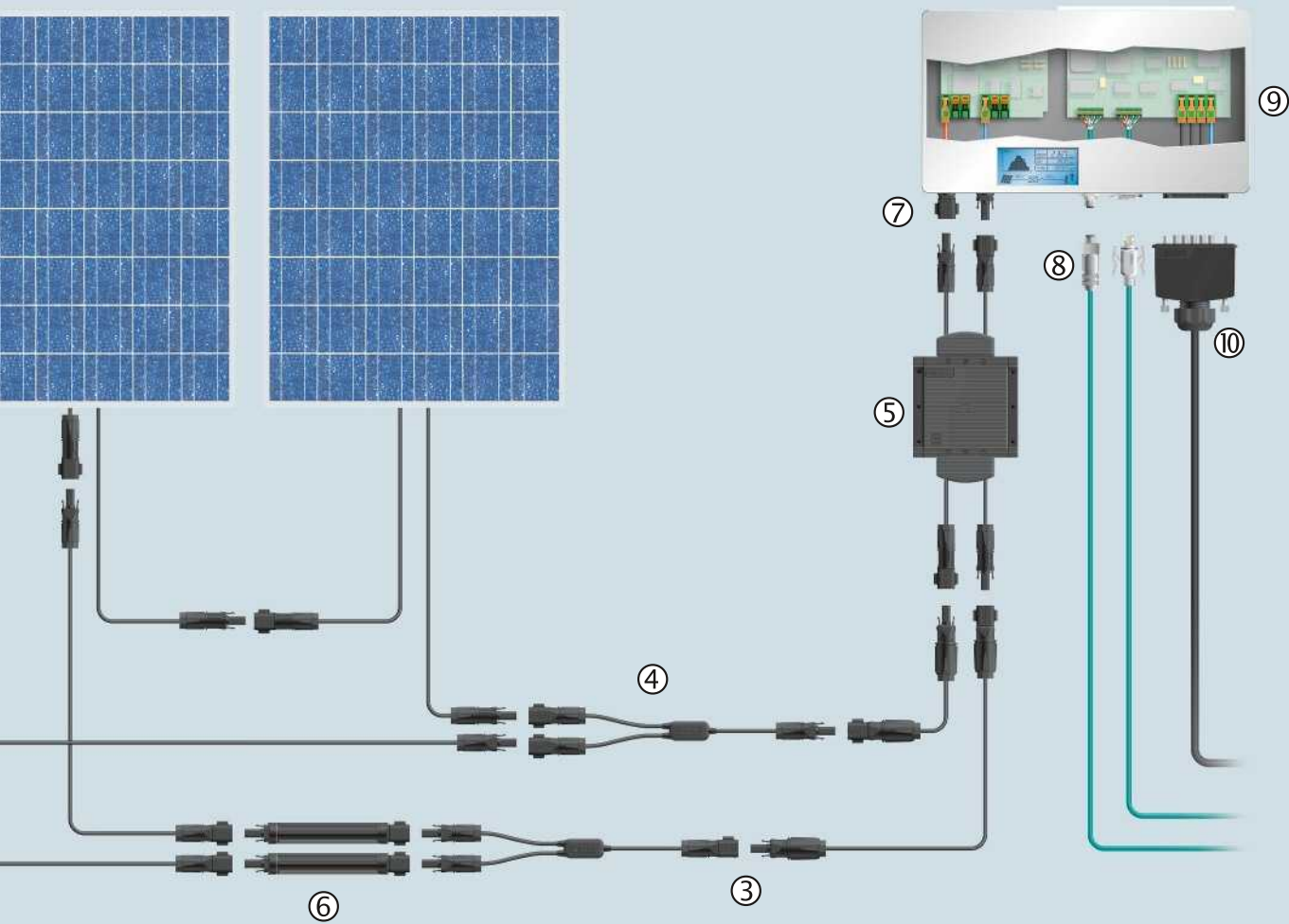
③
DC connectors with SUNCLIX spring connection for field cabling (see page 9)



④
DC distributors (see page 9)



⑤
SOLARCHECK RSD DC panel shutdown (see page 10/11)



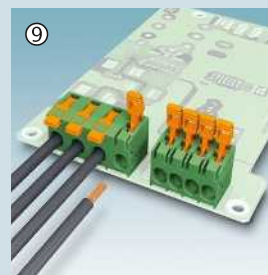
⑥
DC fuse connectors
(see page 8)



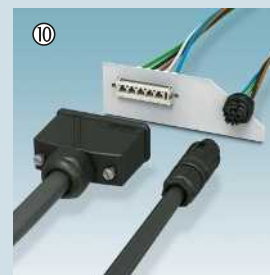
⑦
DC panel feed-throughs
(see page 9)



⑧
Data and signal
connectors (see page 12)



⑨
PCB connections
(see page 13)



⑩
AC connectors
(see page 13)

DC connection technology for photovoltaic panels

Using cost-optimized PCB terminal blocks without insulating bodies, you can connect round conductors to your module junction box quickly and safely.



SUNCLIX DC connector with crimp connection

- A single male connector for all crimp contacts
- Conductor cross sections of 2.5 to 4 mm² (AWG 14 - 12) and 6 mm² (AWG 10)
- Voltages up to 1500 V
- IP68 degree of protection (24 h/2 m)
- Approval in accordance with DIN EN 62852, UL 6703
- Suitable for automated processing

PTSPL 6 PCB terminal block with solder connection

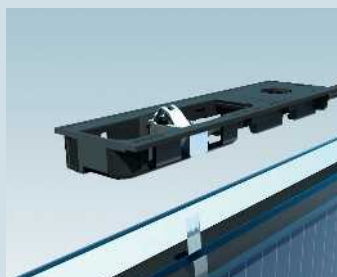
- Currents up to 41 A
- Designed for automated THR soldering processes
- Available with a solder pin length of 2.1 and 2.9 mm
- SUNCLIX spring connection for conductor cross sections from 2.5 to 6 mm²
- Closed version with Push-in connection
- Delivery with open or closed spring on a 32" coil for automated processes

PTSPL-W PCB terminal block with welded bracket

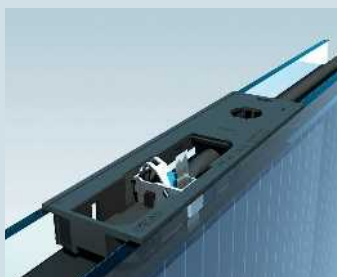
- Currents up to 41 A
- Available with welded bracket on the right or left for spot-welding procedures
- SUNCLIX spring connection for conductor cross sections from 2.5 to 6 mm²
- Delivery with closed spring in bulk or in the tray for automated processes

DC connection technology for building-integrated photovoltaics (BIPV)

Installing the module junction box



1. Position the module junction box above the ribbon



2. Remove the adhesive strip and position the module junction box on the edges of the glass



3. Insert the ribbon into the spring case, snap in the spring, and close the connection area with the cover



4. Fill the special openings of the module junction box in turn with sealant

With SUNCLIX mini, Phoenix Contact is offering a particularly compact DC connection system designed to meet the trend of producing energy via building-integrated photovoltaics. For a permanently secure and reliable connection from panel to inverter.



Single-position module junction box

One module junction box is used per ribbon (right and left module junction box). Both module junction boxes are integrated into the building-integrated panel and sealed with sealant.

- Current: 15 A
- Voltage: 1000 V DC
- Qualified ribbon:
width: 5 mm/thickness: 0.05 to 0.2 mm
- Conductor cross section: 2.5 mm²
- Spring connection

DC connection technology for field cabling

When installing photovoltaic systems, there is now a more efficient way of wiring cables of various lengths from the panel through to the inverter – with the SUNCLIX connection system from Phoenix Contact.

The one-piece DC connectors can be connected quickly and easily without using special tools, thanks to spring technology. The unique spring technology ensures that contact to the conductors is always reliable and stable.



Connectors with crimp connection

- For conductor cross sections from 2.5 to 6 mm²
- Voltages up to 1500 V
- IP68 degree of protection (24 h/2 m)
- Approval in accordance with IEC 62852 (UL 6703)

Fuse plugs

- Robust, easy-to-install fuse element for outdoor use
- High-quality Littelfuse fuse-link
- Nominal currents 3.5 to 25 A
- 1000 or 1500 V (EN)
- IP68 degree of protection (24 h/2 m)
- 2PFG 2380/02.12





Panel feed-throughs

- Pre-assembled or for assembly with crimp connection
- Voltages up to 1500 V
- Currents up to 40 A
- Approval in accordance with IEC 62852 and UL 6703

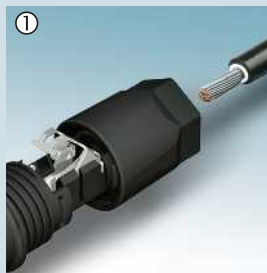
Connectors for field assembly

- Just two versions for conductor cross sections from 2.5 to 16 mm²
- Patented SUNCLIX spring connection
- Voltages up to 1500 V
- Currents up to 65 A
- IP68 degree of protection (24 h/2 m)
- Approval in accordance with IEC 62852 and UL 6703

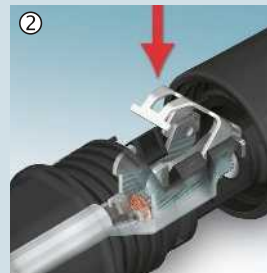
DC distributors

- For the parallel connection of panels and strings
- Optimized for voltages up to 1500 V
- Customer-specific pre-assembly possible
- Approval in accordance with 2PfG 1913/04.2011

SUNCLIX spring connection



① Insert the stripped photovoltaic conductor



② Press down the spring and snap it into place



③ Tighten the screw connection – and you're done!



DC panel shutdown – Intelligent and autonomous

Photovoltaic rooftop systems generate DC voltages of up to 1000 V and cannot be disconnected easily on the DC side. This presents a problem if the system is damaged. SOLARCHECK RSD automatically shuts down your system safely. You are protected from the risk of life-threatening electric shocks during installation and maintenance or in dangerous situations.

Photovoltaic panel shutdown with Auto Rapid Shutdown

SOLARCHECK RSD analyzes the current and voltage conditions on the DC side in the system. Deviations from the normal state or shutdown of the inverter result in automatic shutdown of the photovoltaic panels. The system is restarted automatically once the environment is technically safe.



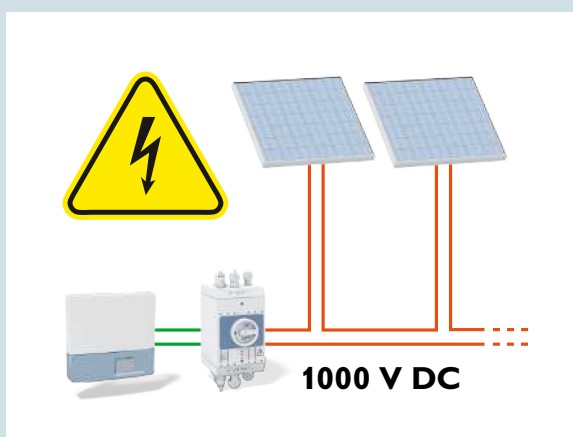
Auto Rapid Shutdown



Your advantages

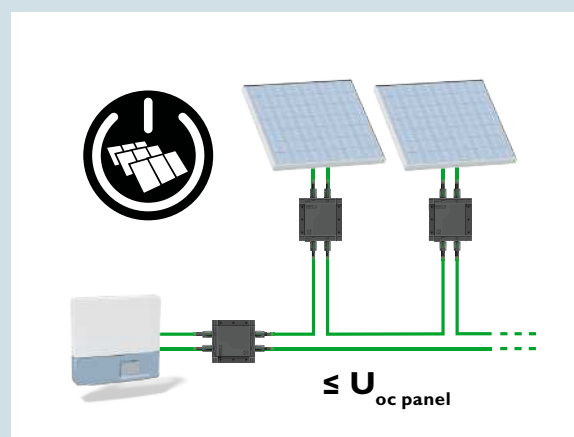
- Safe connections which are stable over the long term, thanks to proven SUNCLIX components
- Controlled restart via safe autostart
- No additional communication necessary via cables or wirelessly
- Easy to install in new and existing systems using existing DC cables
- Simple startup: no programming or manual setup

Intelligent photovoltaic panel shutdown with SOLARCHECK RSD



Danger to life without panel shutdown

The series connection of photovoltaic panels to strings generates voltages of up to 1000 V. Disconnection at the inverter is not safe, as the DC cables continue to carry high voltages.

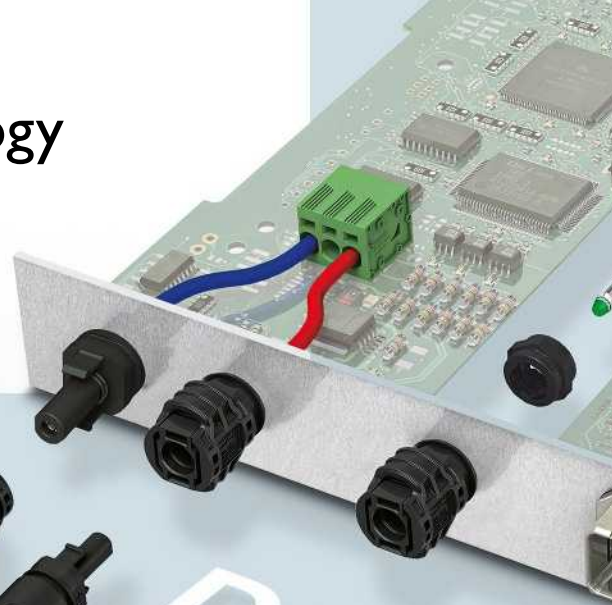


Electrical safety with panel shutdown

Each shutdown unit disconnects the corresponding photovoltaic panel from the string group. There is then no risk of electric shock in the system.

AC and DC connection technology for the device connection

Phoenix Contact provides a comprehensive range for connection to devices of all performance classes. Whether AC or DC, circular or rectangular, for signals, data or power – the connectors cover a wide range of requirements. Device connectors, PCB connection technology, and accessories complete the comprehensive portfolio.

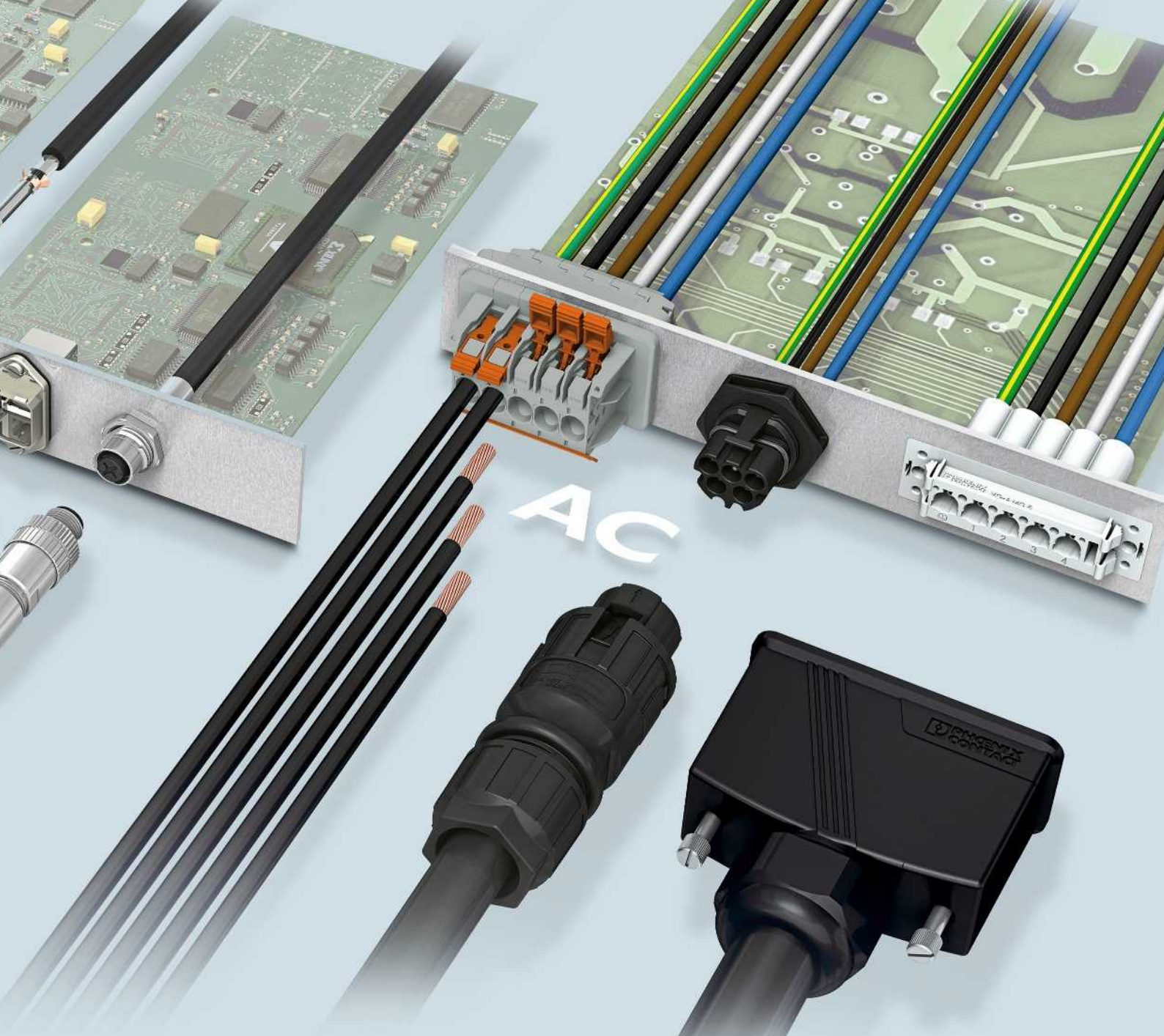


SUNCLIX DC connector with spring connection

- Currents up to 65 A
- Voltages up to 1500 V
- Conductor cross section of 2.5 to 16 mm²
- IP66/IP68 degree of protection (24 h/2 m)

Signal and data connector

- Copper and fiber optic-based data connectors
- M5 to M23 signal connectors, 3-pos. to 19-pos.
- Shielded with a round conductor within the device, 6 kV electric strength, easy routing
- Connector systems for assembly and pre-assembled connector systems
- Solutions for IP20, IP65/IP67, and IP69K



PLW 16 panel feed-through terminal block with push-lock spring connection

- For 1-phase and 3-phase devices
- Easy connection and removal of conductors using a Push-in spring connection on the outside
- Fast Push-in spring connection on the inside
- Currents up to 41 A
- Voltages up to 1000 V
- Conductor cross section of 2.5 to 16 mm²
- Can be sealed

PRC AC connector with screw connection

- For 1-phase and 3-phase devices
- Currents up to 35 A
- Voltages up to 690 V
- Conductor cross section of 1.5 to 6 mm²
- IP68 degree of protection (24 h/2 m) and IP69K
- Can be sealed

VARIOCON AC connector with screw connection

- For 1-phase and 3-phase devices
- Currents up to 70 A
- Voltages up to 690 V
- Conductor cross section of 1.5 to 16 mm²
- IP65/IP68 degree of protection (24 h/2 m)
- Hybrid-capable, thanks to modular design

AC connection technology for micro inverters

Are you looking for an innovative, universal, and easy-to-install connection technology for your micro inverters?

SUNCLIX micon, the new connection system from Phoenix Contact, was developed to meet your requirements. The connection system is user-friendly and can be pre-assembled according to your requirements to enable Plug and Play at the installation site.



Unlocking tool

The locking mechanism on the connectors is extremely robust and prevents unintentional release. The lock is opened quickly and easily using the unlocking tool. Thanks to an additional latch, the tool does not fall out of the connector housing once it has been released.

AC-Y connector

The AC-Y connector consists of two 3-position connections, which are connected to each other via the trunk line without the risk of polarity reversal. In addition to accommodating the trunk line, the coupling side also accommodates the drop line, which serves as a connection to the inverter.

Protective caps

Dust protective caps, made from biodegradable plastic, protect the pin connector pattern from contamination during transport. When it comes to installation, the caps can be easily removed from the connector without any special tools. During installation, the IP protective caps are inserted as end caps on the last connector in order to protect the connector from atmospheric influences.

Main features

- Three-position, coded pin connector pattern (protection against polarity reversal)
- Maximum reliability, thanks to SUNCLIX contacts
- Trunk line:
 - Nominal currents up to 20 A
 - Voltages up to 600 V
- Drop line:
 - Nominal currents up to 5 A (use of micro inverters with 500 W output power possible)
- IP67 degree of protection
- Connection system for the AC and DC side of your micro inverters, from a single source
- Approval in accordance with UL 6703

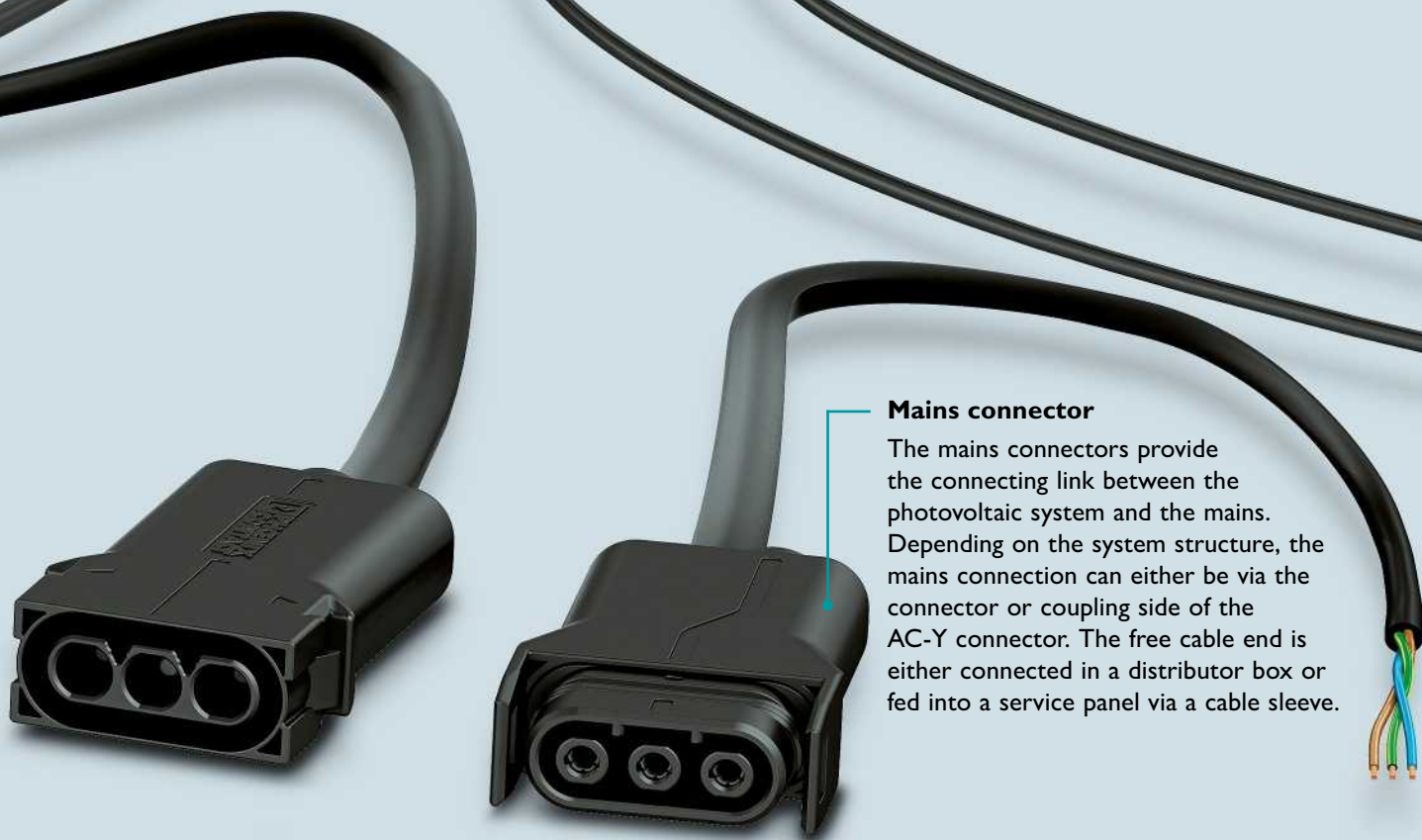


DC connector with spring connection

With the SUNCLIX DC connectors as a device plug or for field assembly, you can also impress with high performance and quality on the panel side.

Mains connector

The mains connectors provide the connecting link between the photovoltaic system and the mains. Depending on the system structure, the mains connection can either be via the connector or coupling side of the AC-Y connector. The free cable end is either connected in a distributor box or fed into a service panel via a cable sleeve.



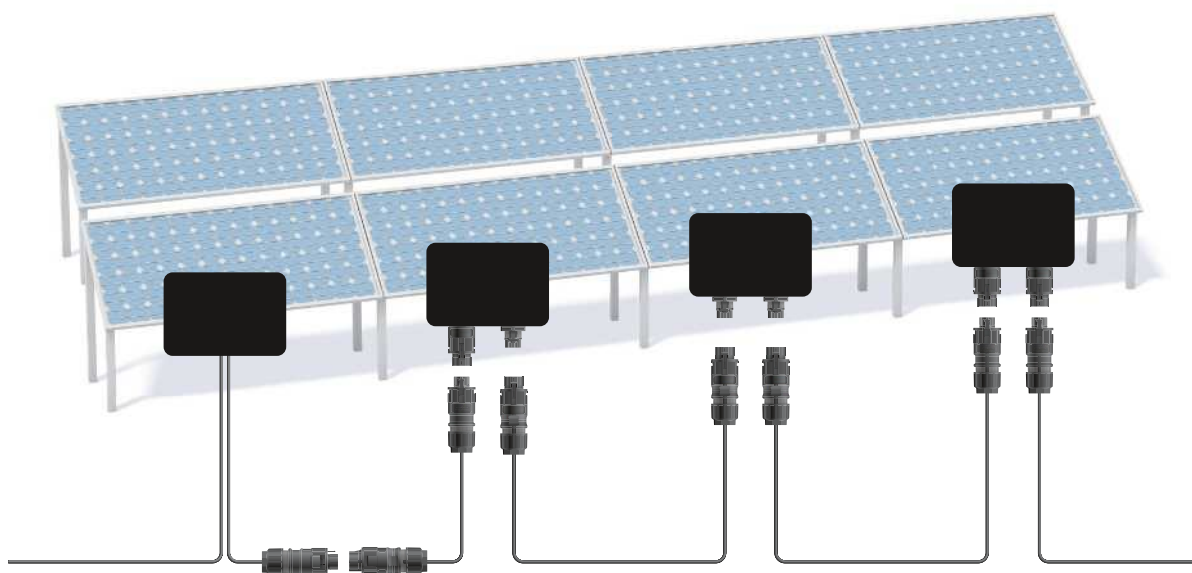
AC connection technology for inverters and tracking systems

PRC series circular connectors are ideally suited for compact and safe power transmission in outdoor applications. The device, coupling, and field connectors are manufactured from special plastics. They enable countless connection solutions for micro and string inverters, as well as for tracking systems. The comprehensive accessories and customized versions provide additional flexibility.

Your advantages

- 3-position and 5-position versions, enabling a high power density in a compact design
- Developed and certified for indoor and outdoor applications with degrees of protection up to IP69K
- Unplugged device connectors also feature a longitudinal water tightness of IPX5 degree of protection
- High flexibility in the design-in process, thanks to pre-assembled device connectors and device connectors for assembly

PRC series circular connectors feature various connection options for micro inverters and tracking systems





i Web code:
#0200

Device connector

3-pos. and 5-pos. versions with potted litz wires or for user assembly

Field connector

As coupling, 3-pos. and 5-pos. versions, with screw connection for cables with an outside diameter of 8 to 21 mm

Modular rectangular connectors for signals, data, and power

The VARIOCON connector system features compact connections for transmitting currents up to 70 A and voltages up to 1000 V in devices and terminal boxes. The basis of the program consists of modular contact inserts with screw and PCB connection, as well as fixed contact inserts with crimp connection for turned and punched contacts. Thanks to degree of protection IP68/IP69K, the connector system provides maximum reliability, even under extreme conditions.



Sleeve housings and cable glands

Cable glands

Sleeve housings

Fixed-position contact insert sets

Pin contact carriers

Socket contact carriers

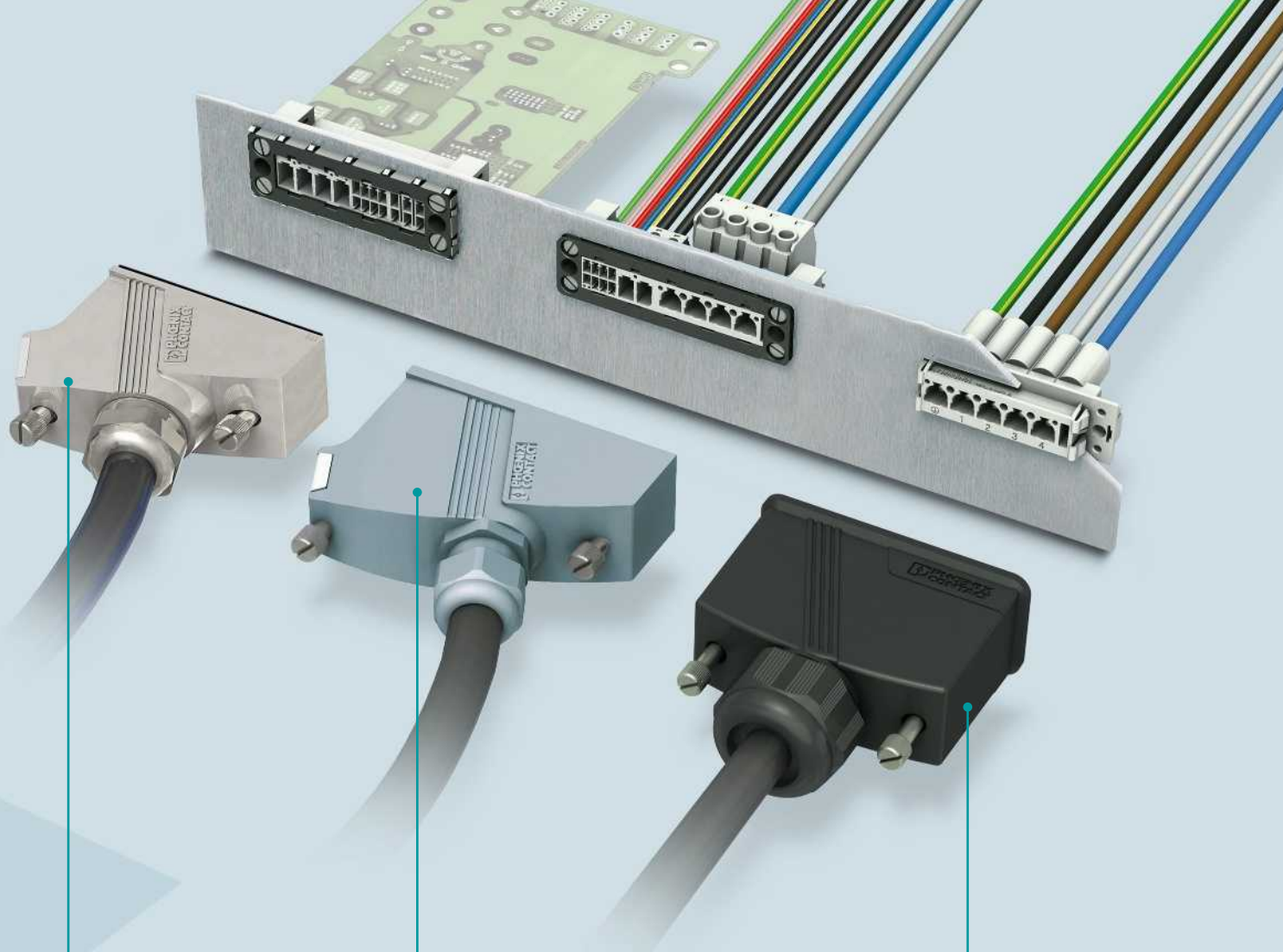
Modular contact inserts and frames

Sleeve frames

Modular pin contact inserts

Panel mounting frame with panel mounting flanges

Modular socket contact inserts



The right material for every application

- Plastic
- Powder-coated zinc die-cast
- Nickel-plated zinc die-cast

Use in the widest range of applications, thanks to four sizes

- Two to five free module slots
- Various power and signal contacts available
- Angled cable outlet

UV-resistant plastic sleeves optimized for outdoor use, thanks to degree of protection IP65/IP66/IP67

- Can be sealed
- Straight cable outlet

Your advantages

- Modular contact insert structure
- Combination of power, signal, and fiber optics in one connector
- Housing designs made of plastic and metal
- Nickel-plated housing available for EMC applications
- Easy configuration via online configurator:

i Web code: #1711

Technical data and ordering information

The following tables contain selected components, with their key technical properties. Thanks to integrated web codes, you can find more information about the products listed in our web portal.

DC connection technology for photovoltaic panels

i Web code: #0361

PCB connection for photovoltaic applications						
Description	Push-lock PCB terminal block with spring connection for tin-plated circular conductors or conductors with ferrules				Push-lock terminal block with spring connection and welded bracket	
	Solder pin length	Order No.	Solder pin length	Order No.	Version	Order No.
	2.1 mm	1704836	2.1 mm	1705081	Welded bracket right	1705624
	2.9 mm	1704837	2.9 mm	1705085	Welded bracket left	1705625
Version	Closed		Open		Closed	
Cross section	Max. 6 mm ²					
Number of positions	1					
Nominal current	Max. 41 A					

i Web code: #0674

SUNCLIX DC connectors For assembly with crimp connection						
Description	Housings for male (-) crimp connectors	Housings for female (+) crimp connectors	Contacts for crimp connection		Contacts for crimp connection	
Type	Pin (-)	Socket (+)	Pin contact		Socket contact	
Order No.	1622662	1622661	1704927	1704928	1704930	1704931
Cross section	-	-	2.5 / 4 mm ² AWG 14/AWG 12	6 mm ² AWG 10	2.5 / 4 mm ² AWG 14/AWG 12	6 mm ² AWG 10
External cable diameter	5 mm ... 8 mm	5 mm ... 8 mm	-	-	-	-
Rated voltage	1500 V (1000 V UL)	1500 V (1000 V UL)	-	-	-	-
Nominal current	-	-	Max. 35 A		Max. 40 A	
Degree of protection	IP68 (24 h/2 m)	IP68 (24 h/2 m)	-		-	
Product information	Temperature range: -40°C ... +90°C, protection class II, approval in accordance with UL 6703 and IEC 62582.		Temperature range: -40°C ... +85°C, approval in accordance with DIN EN 62582. Pcs./Pkt.: 1000 pcs./roll.			

DC connection technology for field cabling

i Web code: #0358

SUNCLIX DC connectors

For assembly with SUNCLIX spring connection



Type	Pin (-)	Socket (+)	Pin (-)	Socket (+)	Pin (-)	Socket (+)
Order No.	1774687	1774674	1020775	1020776	1790797	1790784
Cross section	2.5 mm² ... 6 mm²		2.5 mm² ... 6 mm²		6 mm² ... 16 mm²	
Rated voltage	1100 V		1500 V		1500 V	
Nominal current	Max. 40 A		Max. 35 A (IEC)/50 A (UL)		Max. 65 A	
Degree of protection	IP65/IP68 (24 h/2 m)		IP66/IP68 (24 h/2 m)		IP66/IP68 (24 h/2 m)	
Product information	Temperature range: -40°C ... +85°C, protection class II, approval in accordance with IEC 62582.		Temperature range: -40°C ... +85°C, protection class II, approval in accordance with UL 6703 and IEC 62582.		Temperature range: -40°C ... +85°C, protection class II, approval in accordance with IEC 62582.	

SUNCLIX



Description	Fuse connectors				DC distributors (cable-based)		
Product information	Fuse connectors for securing panels and devices in photovoltaic systems.				Connection set with branch line (4 mm²) for fast parallel interconnection of photovoltaic modules. Length of each individual cable 120 mm, other lengths available upon request.		
	Nominal voltage				Trunk line cross section	Version	Order No.
Order No.	1000 V	I _{nom}	1500 V	I _{nom}	6 mm²	Pin to 2x socket (-/++)	1030649
Order No.	1622153	8	1045546	7	6 mm²	Socket to 2x pin (+/-)	1030650
Order No.	1622154	10	1045545	9			
Order No.	1622155	12	1045544	11			
Order No.	1045552	14	1045543	13			
Order No.	1045551	19	1045542	17			
Order No.	1045550	23	1045541	21			
Order No.	1045549	25	1045540	23			
Degree of protection					IP68 (10 days / 1 m)		
Ambient temperature (operation)					-40°C ... +85°C		
Accessories	A spacer for improved heat dissipation is available as an option (see Accessories on page 22).						

SOLARCHECK RSD DC panel shutdown

i Web code: #0609

SOLARCHECK RSD



	Shutdown unit	Startup unit, autonomous	Startup unit, externally supplied
Type	SCK-RSD-100	SCK-RSD-400	SCK-RSD-600
Order No.	2905029	2905030	2906273
Input voltage range	20 V DC ... 50 V DC	40 V DC ... 800 V DC	40 V DC ... 800 V DC
System voltage	≤ 1000 V DC	≤ 1000 V DC	≤ 1000 V DC
Maximum input current	10 A	10 A	10 A

DC connection technology for device connection

i Web code: #0359

SUNCLIX DC device connectors

Litz wire length 130 mm, other lengths available upon request



Type	Pin	Socket	Pin	Socket	Pin	Socket
Order No.	1805148	1805135	1805164	1805151	1805180	1805177
Cross section	2.5 mm ²		4 mm ²		6 mm ²	
Rated voltage	1500 V		1500 V		1500 V	
Nominal current	Max. 27 A		Max. 35 A		Max. 40 A	
Degree of protection	IP65/IP66/IP68 (24 h/2 m)		IP65/IP66/IP68 (24 h/2 m)		IP65/IP66/IP68 (24 h/2 m)	
Properties	Temperature range: -40°C ... +85°C, approval in accordance with IEC 62582, accessories required: 1775880 .					

SUNCLIX DC device connectors

For user assembly



Description	Plastic housings		Contacts for crimp connection		Contacts for crimp connection	
Type	Pin	Socket	Pin	Socket	Pin	Socket
Order No.	1704925	1704926	1628352	1628353	1704927	1704930
Cross section					2.5 mm²/4 mm² (AWG 14/AWG 12)	
Rated voltage	1500 V		1500 V		6 mm² (AWG 10)	
Nominal current					Max. 35 A	
Degree of protection	IP66/IP68 (24 h/2 m)		IP66/IP68 (24 h/2 m)		Max. 40 A	
Properties	Temperature range: -40°C ... +85°C, approval in accordance with IEC 62582, accessories required: 1775880 .		Temperature range: -40°C ... +85°C, approval in accordance with IEC 62582 and UL 6703, accessories required: 1775880 .		Temperature range: -40°C ... +85°C, approval in accordance with IEC 62582. Pcs./Pkt.: 1000 pcs./roll.	

Accessories and tools

i Web code: #0362



Description	Fastening nut	Protective cap	Filler plug	Filler plug	Spacer
Order No.	1775880	1785430	1775631	1623478	1623253
Properties	Nut for securing the SUNCLIX device plugs to the housing.	IP67 protective cap for SUNCLIX connectors, transport protection for the pin connector pattern, for sealing and protecting unused device inputs and for transport protection.	Filler plug for SUNCLIX connectors, IP67 in the cable gland, 1000 V.	Filler plug for SUNCLIX connectors, IP67 in the cable gland, 1500 V.	Spacer for fuse connectors ensure better heat dissipation if multiple fuses are bundled in one application.



Description	Crimping pliers	Mounting pliers	Test pin	SZF 1 screwdriver	Wirefox stripping tool
Order No.	1212755	1200137	1705589	1204517	1212511
Properties	For PV-CF(M) contacts 2.5, 4, and 6 mm² (AWG 14/12/10).	For snapping the crimp contacts into the plastic housing. Suitable for conductor diameters of 4.2 ... 6.0 mm.	For SUNCLIX device plugs, for checking the correct positioning of contacts during user assembly.	Actuation tool, for unlocking the SUNCLIX connectors, as well as for opening the SUNCLIX spring connection, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component handle, with non-slip grip.	For standard 2.5, 4, and 6 mm² solar cables, with 15 mm longitudinal stop, for SUNCLIX field connectors.

AC connection technology

i Web code: #0200

PRC device connectors



Description		Device plugs			Contact carriers		Contacts		
Order No.	3-pos.	1409219	1409220	1409221	1409218 (with nut)	1627608 (without nut)	1409207	1409208	1409209
Order No.	5-pos.	1409211	1409212	1409213	1409206 (with nut)	1627609 (without nut)			
Conductor cross section		2.5 mm ²	4.0 mm ²	6.0 mm ²			2.5 mm ²	4 mm ²	6 mm ²
Cable length		150 mm							
Screw connection		M25							
Connection method		Crimp connection							

PRC field connectors



Description		Field connectors				Test connectors
Order No.	Coupling, 3-pos.	1410658	1409217	1410659	1410661	1621326
Order No.	Coupling, 5-pos.	1410629	1409205	1410655	1410656	1621325
Order No.	Male connector, 3-pos.	1014502	1014529	1014531	1014498	
Order No.	Connector, 5-pos.	1014522	1014506	1014505	1014530	
External cable diameter		8.0 mm ... 12.0 mm	12.0 mm ... 16.0 mm	16.0 mm ... 21.0 mm	8.0 mm ... 21.0 mm	8.0 mm ... 21.0 mm
Conductor cross section		1.5 mm ² ... 6.0 mm ²				1.5 mm ² ... 6.0 mm ²
Connection method		Screw connection				Screw connection
Insertion cycles		Approx. 100				Approx. 2000

PRC accessories



Description	Protective caps		Nut	Crimping tool	
Order No.	1409237 For connector side	1409236 For coupling side	1457937	1867419 For conductor cross sections from 2.5 mm ² ... 4.0 mm ²	1205859 For conductor cross sections from 4.0 mm ² ... 6.0 mm ²

DC connection technology for building-integrated photovoltaics (BIPV)

i Web code: #0357

SUNCLIX mini



Description	Single-position module junction box		Contact without housing
Type	Left	Right	
Order No.	1705132	1705131	1017978
Cross section	2.5 mm ²		2.5 mm ²
Rated voltage	1000 V		
Nominal current	15 A		15 A
Product information	The width of the module junction box can be adapted by the customer (width 18.3 mm ... 34.3 mm). Ribbon width: <5 mm, 0.05 ... 0.2 mm thick, temperature range: -40°C ... +85°C.		Ribbon width: <5 mm, 0.05 ... 0.2 mm thick, temperature range: -40°C ... +85°C.

SUNCLIX micon



Description	AC-Y connectors for PV micro inverters		Mains connectors for the coupling side of the AC Y distributor		Mains connectors for the connector side of the AC-Y distributor	
Order No.	1706518		1706517		1706609	
Cross section	Trunk	AWG 12	AWG 12		AWG 12	
	Drop	AWG 18				
Cable length	Trunk	1150 mm	Trunk	1000 mm	Trunk	1000 mm
	Drop	500 mm				
Rated voltage			600 V			
Nominal current	Trunk	20 A	20 A		20 A	
	Drop	5 A				
Degree of protection	IP67		IP67		IP67	
Product information	Version for the North American market. Approval in accordance with UL 6703.					

Accessories



Description	Dust protective caps for protecting the pin connector patterns during transport		IP protective caps for safe operation of the connection system		Unlocking tool for releasing the plug-in connections
Order No.	For male connector	1706608	For male connector	1706610	1706514
	For coupling	1706599	For coupling	1706515	
Degree of protection	IP20		IP67		After releasing the connector, the tool does not fall off, instead it remains on the connector housing.
Properties	Biodegradable plastic, can be removed without an unlocking tool.		Can only be removed with an unlocking tool.		

Housing for connectors Sleeve housings



Description	Modular rectangular connectors in zinc die-cast		Modular rectangular connectors in plastic		
	Metric	Metric + EMC	Metric	Integrated Pg screw connection	Ribbon cable outlet
	VC-MP-T...	VC-MEMV-T...	VC-K-T...	VC-K-T...	VC-K-T...
Size VC 1					
Thread type	M20	M20	M20		
Cylinder head screw	1886676	1886553	1852935		1607703
Knurled screw	1886634	1886553	1855097		
Module slots	2		2		
Degree of protection	IP65/IP66/IP67		IP65/IP66/IP67		
Size VC 2					
Thread type	M25	M25	M25	PG29	
Cylinder head screw	1886689	1886566	1852948	1583880	1607680
Knurled screw	1886647	1886605	1855107		
Module slots	3		3		
Degree of protection	IP65/IP66/IP67		IP65/IP66/IP67		
Size VC 3					
Thread type	M25	M25	M25	PG29	
Cylinder head screw	1886692	1886579	1852961	1424368	1607677
Knurled screw	1886650	1886618	1855120		
Module slots	4		4		
Degree of protection	IP65/IP66/IP67		IP65/IP66/IP67		
Size VC 4					
Thread type	M25	M25	M25		
Cylinder head screw	1886702	1886582	1852974		1607693
Knurled screw	1886663	1886621	1855133		
Module slots	5		5		
Degree of protection	IP65/IP66/IP67		IP65/IP66/IP67		

Modular contact inserts – device side

	Type	Number of positions	Module slots	PCB connection				Screw connection		Crimp connection	
					180°	90°	90° with PE				
	FO	2	1		-	-	-		1885240	-	-
Insertion cycles 100	1.5 mm ²	6	1		1884872	1853531	-		1854019 1583555*	-	-
	1.5 mm ²	8	1		1884885	1852833	-		1854022 1583568*	-	-
	4 mm ²	2	1		1884979	1852859	-		1853528 1583542*	-	-
Insertion cycles 50	16 mm ²	4	3		-	1607509	1607516		1607745		1583877**
	16 mm ²	5	4		-	1607523	1607530		1607748		1583878**
	16 mm ²	7	5		-	1607537	1607544		1607751	-	-

Crimp connection

							
Description	4 mm ²		10 mm ²		16 mm ²	Crimping tools	
	Single contacts	Taped products	Single contacts	Taped products	Taped products		
Rated current	-	32 A	-	50 A	60 A		
Type	IPCC 16-4-MT	IPCC 16-4-MT BAND	IPCC 16-10-MT	IPCC 16-10-MT BAND	IPCC 16-16-MT BAND	CRIMPFOX PCC 16 CS 4QMM	CRIMPFOX PCC 16 CS 10QMM
Order No.	1733385	1761467	1733372	1761470	1761483	1743427	1743430

Modular contact inserts – connector side

Rated current	Rated voltage	Module slots		Order No.
-	-	1		1855814
10 A	250 V	1		1853476 1583526*
10 A	160 V	1		1852820 1583536*
20 A	400 V	1		1852846 1583513*
70 A	690 V	3 4 (of which 1 is free) 5 (of which 2 are free)		1607467** 1607488** 1607495**
70 A	690 V	4 5 (of which 1 is free)		1607474** 1607502**
70 A	690 V	5		1607481**

*) Contact insert with PE marking

**) Products do not require separate panel mounting or sleeve frame

Panel mounting frames – device side

i Web code: [#0539](#)



Size	Module slots	Standard		Additional EMC shielding frames	
		Type	Order No.	Type	Order No.
VC 1	2	VC-AR1/2M	1852972*	VC-AR1-EMV	1853214
VC 2	3	VC-AR2/3M	1852985*	VC-AR2-EMV	1853227
VC 3	4	VC-AR3/4M	1852998*	VC-AR3-EMV	1853230
VC 4	5	VC-AR4/5M	1853007*	VC-AR4-EMV	1853243

Pin contact inserts incl. panel mounting frame and flange

i Web code: [#0528](#)



Size	Number of positions/ conductor cross section	Rated voltage	Rated current	Type	Order No.
VC 1	16 x 1.5 mm ²	160 V	10 A	VC-AR1/2M-S88-SET	1607394
	12 x 1.5 mm ²	250 V	10 A	VC-AR1/2M-S66-SET	1607346
	4 x 4 mm ²	400 V	20 A	VC-AR1/2M-S22-SET	1607298
VC 2	24 x 1.5 mm ²	160 V	10 A	VC-AR2/3M-S888-SET	1607407
	18 x 1.5 mm ²	250 V	10 A	VC-AR2/3M-S666-SET	1607359
	6 x 4 mm ²	400 V	20 A	VC-AR2/3M-S222-SET	1607311
	4x 16 mm ²	690 V	70 A	VC-AMS 4	1607745
VC 3	32 x 1.5 mm ²	160 V	10 A	VC-AR3/4M-S8888-SET	1607418
	24 x 1.5 mm ²	250 V	10 A	VC-AR3/4M-S6666-SET	1607370
	8 x 4 mm ²	400 V	20 A	VC-AR3/4M-S2222-SET	1607322
	5 x 16 mm ²	690 V	70 A	VC-AMS 5	1607748
VC 4	40 x 1.5 mm ²	160 V	10 A	VC-AR4/5M-S88888-SET	1607431
	30 x 1.5 mm ²	250 V	10 A	VC-AR4/5M-S66666-SET	1607383
	10 x 4 mm ²	400 V	20 A	VC-AR4/5M-S 22222-SET	1607335
	7 x 16 mm ²	690 V	70 A	VC-AMS 7	1607751

Sleeve frames – connector side

i Web code: [#0538](#)



Size	Module slots	Type	Order No.
VC 1	2	VC-TR1/2M-PEA	1607059
VC 2	3	VC-TR2/3M-PEA	1607062
VC 3	4	VC-TR3/4M-PEA	1607075
VC 4	5	VC-TR4/5M-PEA	1607088

Socket contact inserts incl. sleeve frames

i Web code: [#0529](#)



Size	Number of positions/ conductor cross section	Rated voltage	Rated current	Type	Order No.
VC 1	16 x 1.5 mm ²	160 V	10 A	VC-TR1/2M-PEA-S88-SET	1607239
	12 x 1.5 mm ²	250 V	10 A	VC-TR1/2M-PEA-S66-SET	1607191
	4 x 4 mm ²	400 V	20 A	VC-TR1/2M-PEA-S22-SET	1607143
VC 2	24 x 1.5 mm ²	160 V	10 A	VC-TR2/3M-PEA-S888-SET	1607250
	18 x 1.5 mm ²	250 V	10 A	VC-TR2/3M-PEA-S666-SET	1607202
	6 x 4 mm ²	400 V	20 A	VC-TR2/3M-PEA-S222-SET	1607154
	4 x 16 mm ²	690 V	70 A	VC-TFS 4-PEA	1607467
VC 3	32 x 1.5 mm ²	160 V	10 A	VC-TR3/4M-PEA-S8888-SET	1607263
	24 x 1.5 mm ²	250 V	10 A	VC-TR3/4M-PEA-S6666-SET	1607215
	8 x 4 mm ²	400 V	20 A	VC-TR3/4M-PEA-S2222-SET	1607167
	5 x 16 mm ²	690 V	70 A	VC-TFS 5-PEA	1607474
VC 4	40 x 1.5 mm ²	160 V	10 A	VC-TR4/5M-PEA-S88888-SET	1607274
	30 x 1.5 mm ²	250 V	10 A	VC-TR4/5M-PEA-S66666-SET	1607226
	10 x 4 mm ²	400 V	20 A	VC-TR4/5M-PEA-S22222-SET	1607178
	7 x 16 mm ²	690 V	70 A	VC-TFS 7-PEA	1607481

COMBICON power

PCB terminal blocks and PCB connectors for power electronics up to 232 A



Description	Push-in PCB terminal block up to 6 mm²	Push-in PCB terminal block up to 16 mm²	Push-in PCB terminal block up to 35 mm²	PCB terminal block with screw connection up to 95 mm²
5-pos. Order No.	1719341	1735817	1845373	1841898
Cross section	6 mm²	16 mm²	35 mm²	95 mm²
Pitch	7.5 mm	10 mm	15 mm	20 mm
Number of positions	1 ... 12	1 ... 9	1 ... 5	1 ... 5
IEC/UL rated voltage	1000 V/600 V	1000 V/600 V	1000 V/600 V	1000 V/600 V
IEC/UL nominal current	41 A/35 A	76 A/66 A	125 A/101 A	232 A/200 A
Comment				Suitable for the connection of aluminum sector cables.

COMBICON control

PCB connectors for data and power transmission in MCR technology



Description	Flat connector with Push-in spring connection up to 1.5 mm²	TWIN bus connector with Push-in spring connection up to 1.5 mm²	Flat connector with Push-in spring connection up to 2.5 mm²	Connector with screw connection up to 2.5 mm²
5-pos. Order No.	1952050	1713868	1732771	1812788
Cross section	1.5 mm²	1.5 mm²	2.5 mm²	2.5 mm²
Pitch	3.5 mm	5 mm	5 mm/5.08 mm	7.62 mm
Number of positions	2 ... 20	2 ... 20	2 ... 18	2 ... 12
IEC/UL rated voltage	160 V/150 V	320 V/250 V	320 V/250 V	1000 V/600 V
IEC/UL nominal current	8 A/8 A	10 A/8 A	12 A/10 A	16 A/18.5 A

COMBICON control/compact

PCB terminal blocks and PCB connectors for signal transmission in MCR technology



Description	PCB terminal block with Push-in spring connection with 45° angle up to 1.0 mm²	PCB terminal block with Push-in spring connection up to 2.5 mm²	PCB terminal block with double Push-in spring connection up to 2.5 mm²	PCB terminal block with Push-in spring connection for SMD application up to 0.5 mm²
5-pos. Order No.	1864312	1792892	1725341	1771059
Cross section	1.0 mm²	1.5 mm²	2.5 mm²	0.5 mm²
Pitch	3.5 mm	5 mm	5 mm	2.5 mm
Number of positions	2 ... 16	2 ... 12	2 ... 16	2 ... 8
IEC/UL rated voltage	160 V	400 V/300 V	400 V/300 V	160 V/150 V
IEC/UL nominal current	16 A	12 A/10 A	13.5 A/13.5 A	6 A/5 A

For more connectors, please visit phoenixcontact.com

PLUSCON circular

Circular connectors
for sensor/actuator applications



Description		M8 flush-type connector with halogen-free litz wires, front mounting	M12 flush-type connector with halogen-free litz wires, front mounting	M8 flush-type connector for wave soldering processes, one-piece, rear mounting	M12 flush-type connector for wave soldering processes, one-piece, rear mounting
Type	Order No.				
Pin	5-pos.	1440119	1520068	1424241	1551833
Socket	5-pos.	1440106	1520042	1424242	1441765
Number of positions		4/5	4/5	4/5	4/5
Rated voltage		30 V	60 V	30 V	60 V
Nominal current		2 A	4 A	2 A	4 A
Contact carrier material		PA 66	PA 66	PA 66	PA 66
Contact/contact surface material		Cu alloy/Au	Cu alloy/Au	Cu alloy/Au	Cu alloy/Au
Connection method		Individual litz wires	Individual litz wires	Solder pins	Solder pins

PLUSCON circular

Circular connectors
for sensor/actuator applications



Description		M8 flush-type connector for reflow process, two-piece, rear mounting	M12 flush-type connector for reflow process, two-piece, rear mounting	M12 housing screw connection for reflow process, two-piece, rear mounting, standard	M12 flush-type connector for reflow process, two-piece, rear mounting
Type	Order No.				
Pin	5-pos.	1412506 (housing)	1411943	1414000/1414002 (SPEEDCON)	1551752
Socket	5-pos.	1412222	1411937	1414021/1414023 (SPEEDCON)	1542622
Number of positions		4/5	4/5		4/5
Rated voltage		30 V	60 V		60 V
Nominal current		2 A	4 A		4 A
Contact carrier material		PA 66	PA 66		PPA
Contact/contact surface material		Cu alloy/Au	Cu alloy/Au		Cu alloy/Au
Connection method		SMD solder connection	SMD solder connection	SMD solder connection	THR solder connection

PLUSCON data

Connectors with standard interfaces
such as RJ45, USB, and M12
for data transmission



Description		RJ45 socket inserts and panel mounting frames, for Freenet system	RJ45 socket inserts and panel mounting frames, for PCB connection	USB socket inserts and panel mounting frames, for flat-ribbon cable connection	M12 flush-type connector for wave soldering processes, one-piece
Socket insert	CAT5	1652936	1688586	1653854	
Socket insert	CAT6	1652949	1653090	1653867	
Panel mounting frame		1653744	1689446	1653744	
Flush-type connector	4-pos., socket				1551503
Flush-type connector	8-pos., socket				1553860
Rated voltage		50 V	150 V	30 V	250 V
Nominal current		1 A	1.5 A	1 A	4 A
Number of positions		8	8	4	4-pos./8-pos.
Contact material		Cu alloy	Cu alloy	Cu alloy	Cu alloy
Connection method		IDC	Solder connection	Flat-ribbon cable connection	Solder pins

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