



Photovoltaic connectors

Product overview 2021

Photovoltaic connectors for DC and AC cabling

Are you looking for reliable and innovative 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.





Contents

Product range overview	6
DC connection technology for PV panels	8
DC connection technology for field cabling	10
AC and DC connection technology for device connection	12
Installation system for photovoltaic system technology	14
Modular rectangular connectors for signals, data, and power	16
Technical data and ordering information	18
Excellent services	34

Find out more with the web code

For detailed information, use the web codes provided in this brochure. Simply enter the # and the four-digit number in the search field on our website.

i Web code: #1234 (example)

Or use the direct link:
phoenixcontact.net/webcode/#1234

The right connection for every application

Efficiency, reliability, and the safety of components are crucial to the profitability of an investment. Connectors and accessories from Phoenix Contact for cabling photovoltaic systems are tailored to your application. Whether DC, AC, or hybrid applications: Secure the return on your investment with SUNCLIX, PRC, and VARIOCON connectors.



SUNCLIX series DC connectors

- Voltages up to 1,500 V
- Currents up to 65 A
- Conductor cross-sections from 2.5 to 16 mm²
- SUNCLIX spring connection
- Crimp connection
- IP66/IP68 degree of protection (24 h/2 m)



VARIOCON and PRC series AC connectors

- Connection technology for micro inverters
- Voltages up to 690 V
- Currents up to 70 A
- Conductor cross-sections from 1.5 to 16 mm²
- Screw connection
- VARIOCON: IP65/IP68 degree of protection (24 h/2 m)
- PRC: IP66/IP68 (24 h/2 m)/IP69K



Ground-mounted systems

Installing the maximum possible number of PV panels in the shortest possible time: This requires pre-assembled connectors with fast connection technology.



Rooftop systems

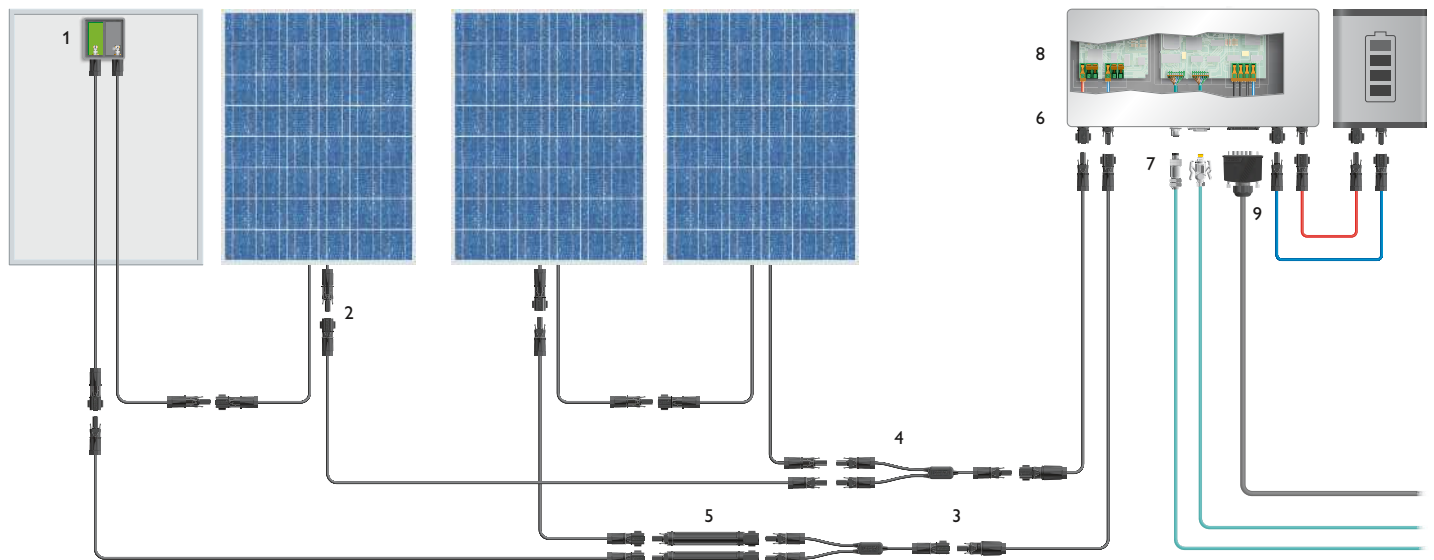
Compact DC connectors are ideally suited for cramped installation conditions. Thanks to the SUNCLIX spring connection, wiring is easy and reliable, without special tools.

Product range overview of photovoltaic connectors

Uniform connection technology from the photovoltaic panel through to feed-in

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

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



Safety and reliability on market-oriented terms – the Phoenix Contact connection technology portfolio for the international solar market

Harnessing electrical energy from photovoltaic systems is vital for the energy supply of today and tomorrow. This development began with market incentive programs in various regions, but was primarily driven by the Electricity Feed-In Act in Germany. The potential rates of return from photovoltaic systems were the main motivation for investors entering this market.

Quality in the details ensures reliability in the system

Today, photovoltaics is a mainstay of energy supply in a growing number of global economies. This means that the electricity must be generated at the lowest possible cost, while ensuring that energy is supplied reliably and continuously. Using components with a balanced cost-benefit ratio was and continues to be crucial for the basic return on investment of a photovoltaic

system. The lowest initial investment is worthless if the calculated capital return does not materialize over the service life of the project due to loss of efficiency or failure. However, as soon as photovoltaics becomes relevant to the system – where the economy and the public depend on its reliable function – the failsafe performance of components, and therefore their quality, plays an increasingly important role. Phoenix Contact has a clear policy of never compromising on quality. Confidence in our company and our products is the foundation for all of our business. This is also reflected in our connection technology portfolio for the solar market. Innovative products, sophisticated designs, high-quality materials with long-term stability, and excellent service ensure safety and customer satisfaction. Market-oriented and competitive terms complement this approach.

Product overview



PCB terminal blocks without insulating bodies

for the fast and secure connection of module junction boxes



DC connectors with crimp connection

for the field-side connection of your PV panels



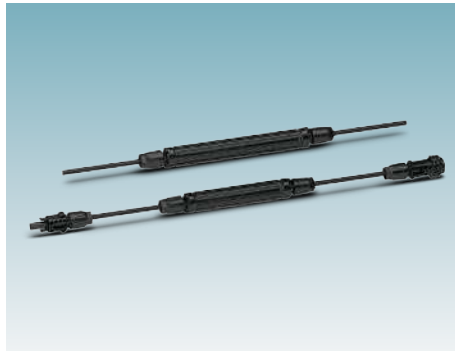
DC connectors with SUNCLIX spring connection

for field-side connection to the device



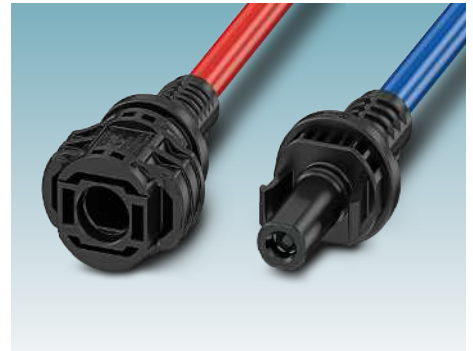
Cable-based DC distributors

for fast parallel interconnection of photovoltaic panels



DC fuse plugs

for safeguarding modules and devices in photovoltaic systems



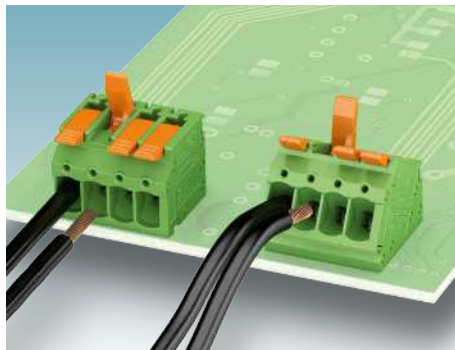
DC panel feed-throughs

for device connection, pre-assembled or designed for assembly



Data and signal connectors

copper and fiber-optic-based data connectors and signal connectors, M5 to M23, 3- to 19-positions



PCB terminal blocks and PCB connectors

for transmitting signals, data, or power



AC connectors

for grid-side connection

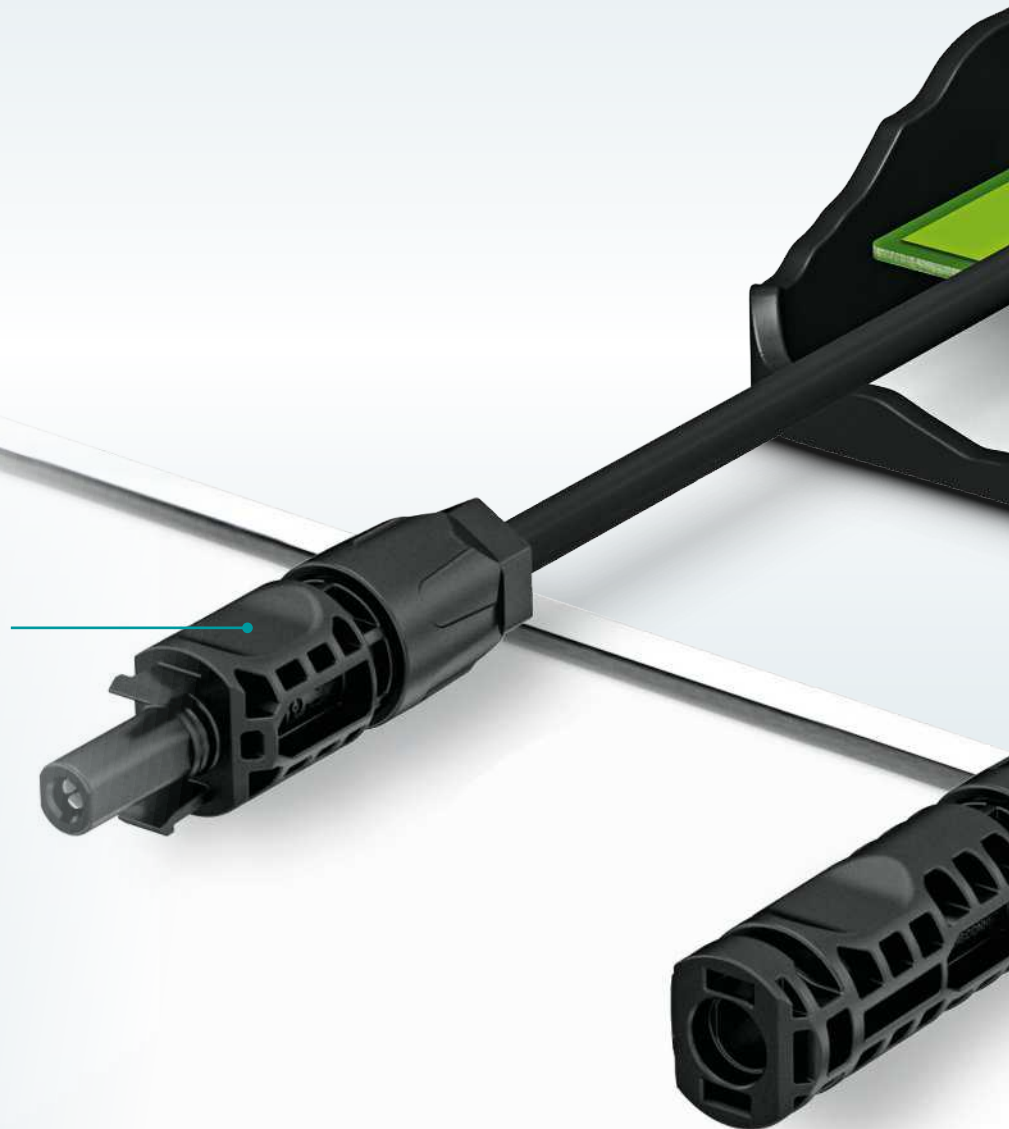
DC connection technology for PV panels

Using cost-optimized PCB terminal blocks without insulating bodies, you can connect flexible cables to your module junction box quickly and safely. The SUNCLIX connectors with crimp connection are ideal for connecting solar panels on the field side and for cable assemblies. They are designed for automated processing and meet established international standards.



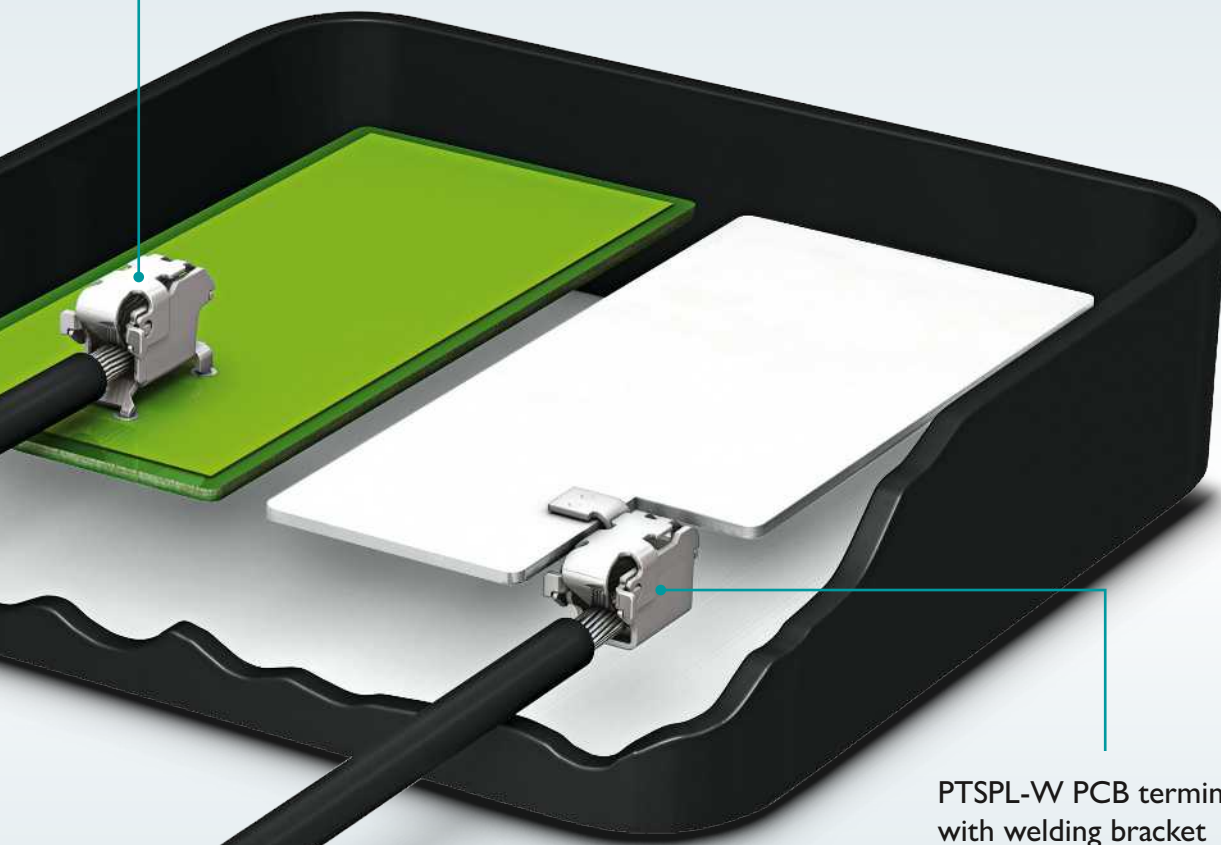
SUNCLIX DC connectors with crimp connection

- Just one connector for all crimp contacts
- Suitable for automated processing
- Voltages up to 1,500 V
- Currents up to 40 A (IEC), 50 A (UL)
- Conductor cross-sections from 2.5 to 4 mm² (AWG 14...AWG 12) and 6 mm² (AWG 10)
- Degree of protection IP65 / IP66 / IP67 / IP68 (24 h / 2 m)
- Approval in accordance with DIN EN 62852, UL 6703



PTSPL 6 PCB terminal block with solder connection

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



PTSPL-W PCB terminal block with welding bracket

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

DC connection technology for field cabling

Wire your photovoltaic system efficiently, safely, and reliably 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. The unique spring technology ensures permanently reliable and stable conductor contacting.

A comprehensive range of accessories allows the demands placed on quick and safe system installation to be met in accordance with current normative requirements.

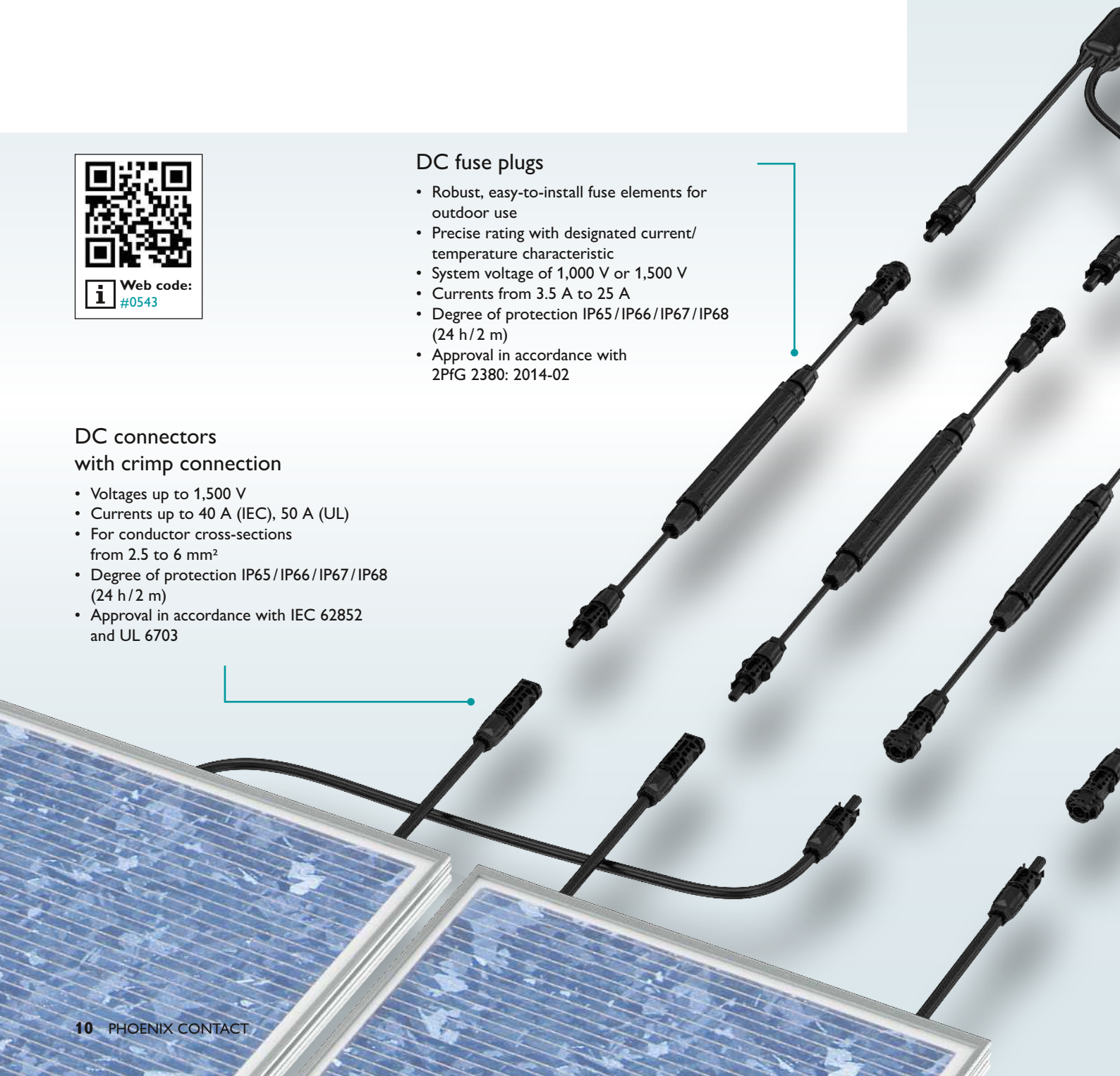


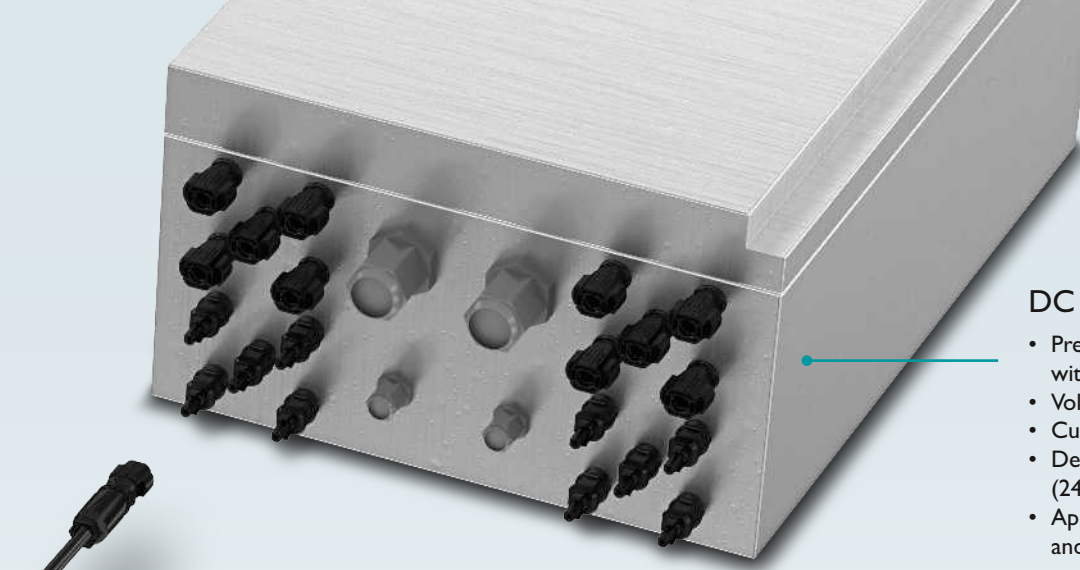
DC fuse plugs

- Robust, easy-to-install fuse elements for outdoor use
- Precise rating with designated current/temperature characteristic
- System voltage of 1,000 V or 1,500 V
- Currents from 3.5 A to 25 A
- Degree of protection IP65/IP66/IP67/IP68 (24 h/2 m)
- Approval in accordance with 2PfG 2380: 2014-02

DC connectors with crimp connection

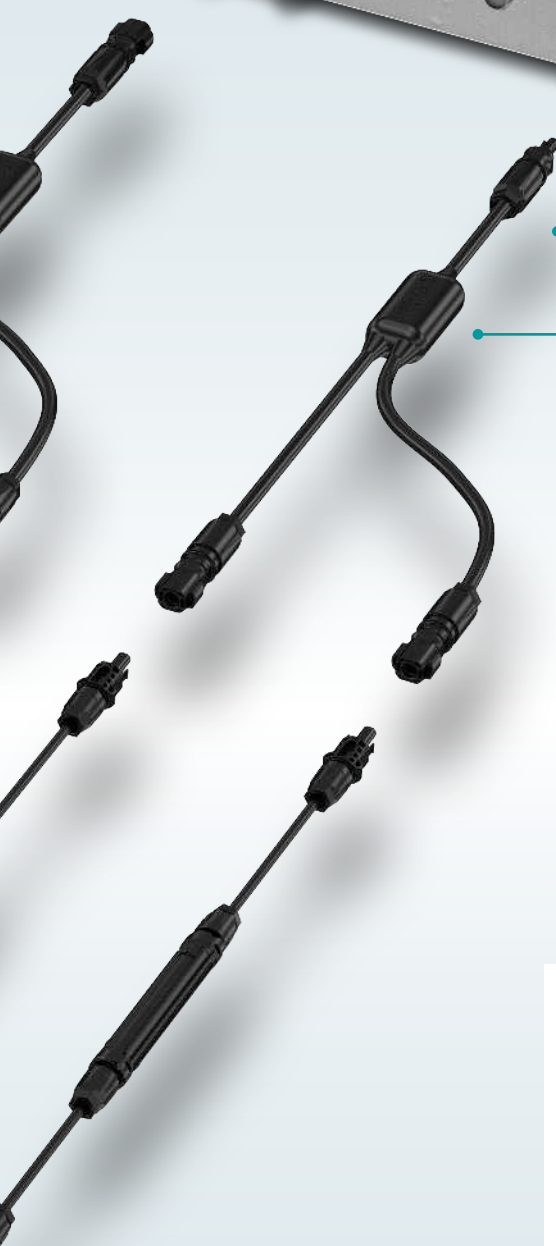
- Voltages up to 1,500 V
- Currents up to 40 A (IEC), 50 A (UL)
- For conductor cross-sections from 2.5 to 6 mm²
- Degree of protection IP65/IP66/IP67/IP68 (24 h/2 m)
- Approval in accordance with IEC 62852 and UL 6703





DC panel feed-throughs

- Pre-assembled or designed for assembly with crimp connection
- Voltages up to 1,500 V
- Currents up to 40 A (IEC), 50 A (UL)
- Degree of protection IP65/IP66/IP67/IP68 (24 h/2 m)
- Approval in accordance with IEC 62852 and UL 6703



DC connectors for field assembly

- Patented SUNCLIX spring connection
- Voltages up to 1,500 V
- Currents up to 65 A
- Just two versions cover conductor cross-sections from 2.5 to 16 mm²
- Degree of protection IP65/IP66/IP67/IP68 (24 h/2 m)
- Approval in accordance with IEC 62852 and UL 6703

DC distributors

- For the parallel connection of modules and strings
- Customer-specific pre-assembly possible
- Optimized for voltages up to 1,500 V
- Currents up to 35 A
- Approval in accordance with 2PFG 1913/04.2011 and IEC 62852

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!



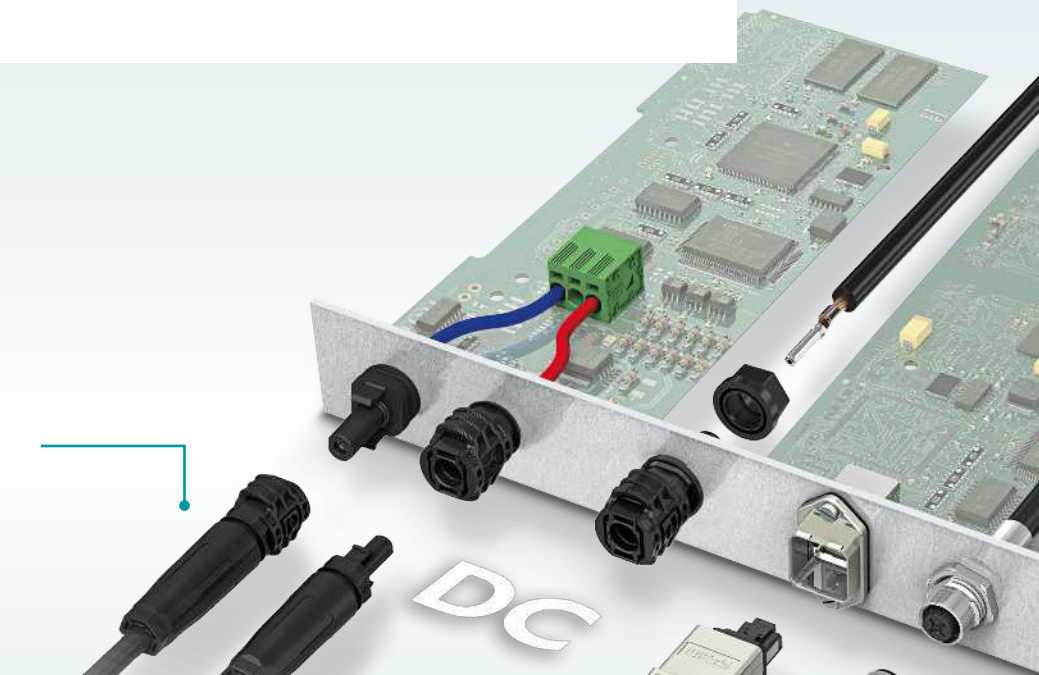
AC and DC connection technology for device connection

Phoenix Contact provides a comprehensive range for connection to devices in 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 connectors with spring connection

- Patented SUNCLIX spring connection
- Voltages up to 1,500 V
- Currents up to 65 A
- Just two versions cover conductor cross-sections from 2.5 to 16 mm²
- Degree of protection IP65/IP66/IP67/IP68 (24 h/2 m)
- Approval in accordance with IEC 62852 and UL 6703



Signal and data connectors

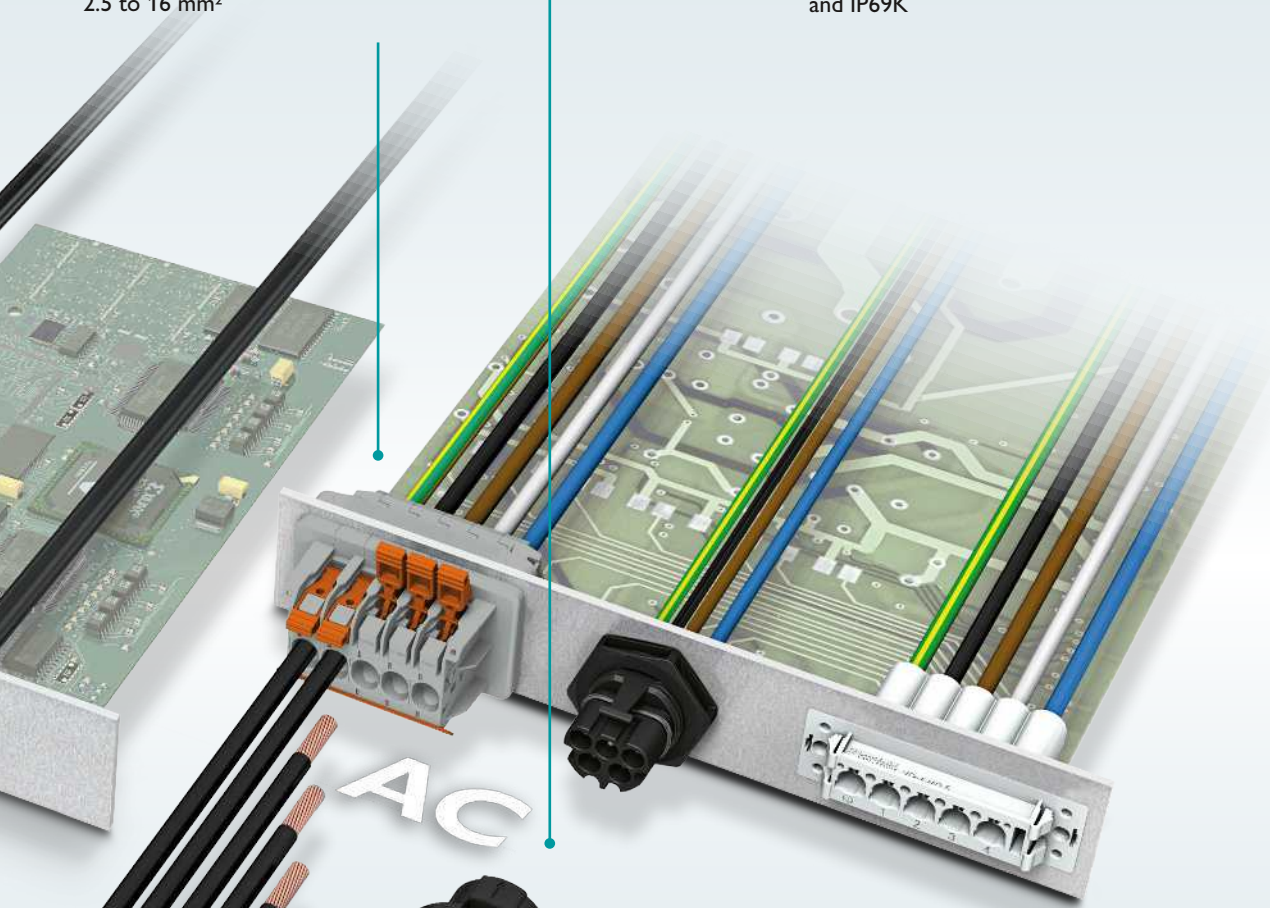
- Copper and FO-based data connectors
- M5 to M23 signal connectors, 3- to 19-pos.
- Shielded with round cable inside the device, 6 kV electric strength, easy installation
- Pre-assembled connector systems and connector systems designed for assembly
- Solutions for IP20, IP65/IP67 and IP69K

PLW 16 panel feed-through terminal blocks with Push-Lock spring connection

- For 1-phase and 3-phase devices
- Easy conductor connection and release with Push-Lock spring connection on the outside
- Fast Push-in spring connection on the inside
- Can be sealed
- Voltages up to 1,000 V
- Currents up to 41 A
- Conductor cross-section from 2.5 to 16 mm²

PRC AC connectors with screw connection

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



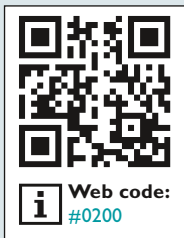
VARIOCON AC connectors with screw connection

- For 1-phase and 3-phase devices
- Hybrid-capable with the modular design
- Voltages up to 1,000 V
- Currents up to 70 A
- Conductor cross-section from 1.5 to 16 mm²
- Degree of protection: IP65/IP68 (24 h/2 m)

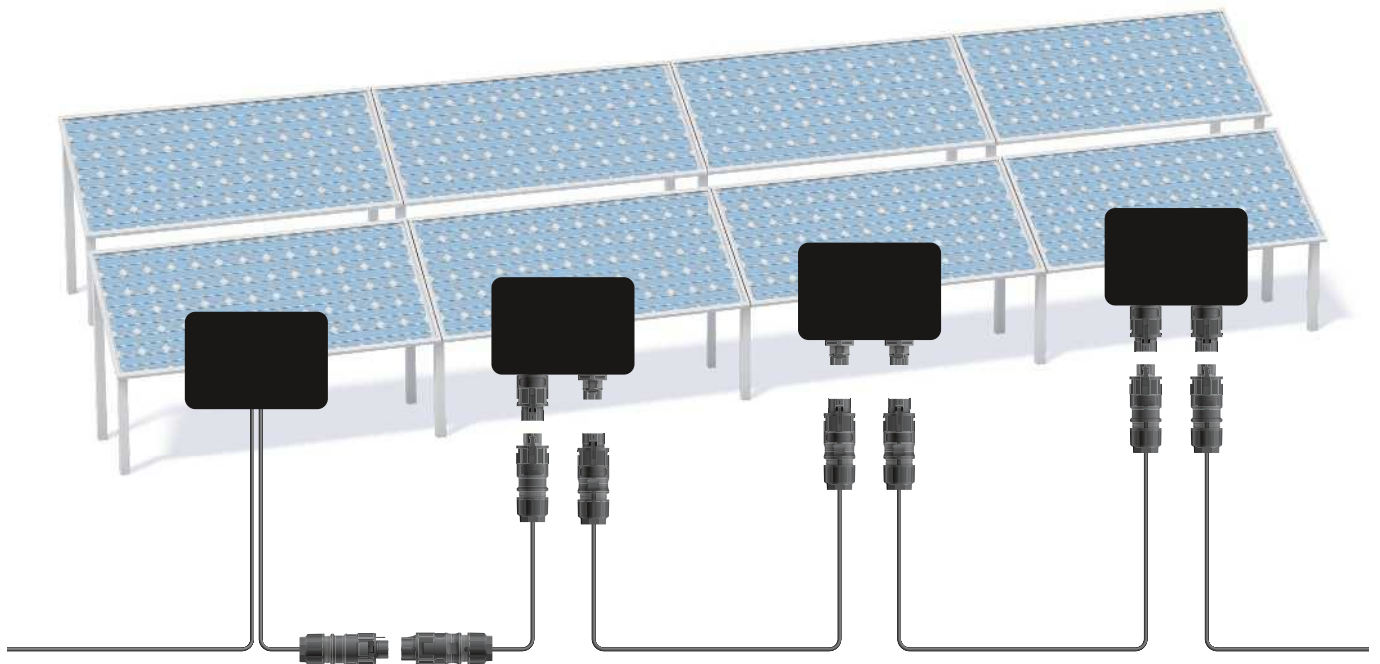


Installation system for photovoltaic system technology

Circular connectors from the PRC series are ideal for compact and safe power transmission in outdoor applications. The device, coupler, and field connectors are manufactured from special plastics. They allow countless connection solutions for micro and string inverters, as well as for tracking systems and battery storage. The comprehensive range of accessories and customer-specific versions provides additional flexibility.



The basic modular principle of the PRC installation system



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 with pre-assembled device connectors and device connectors designed for assembly

AC device connectors

3-position and 5-position versions with attached litz wires or for self-assembly



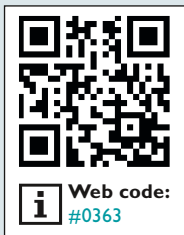
AC connectors with screw connection

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

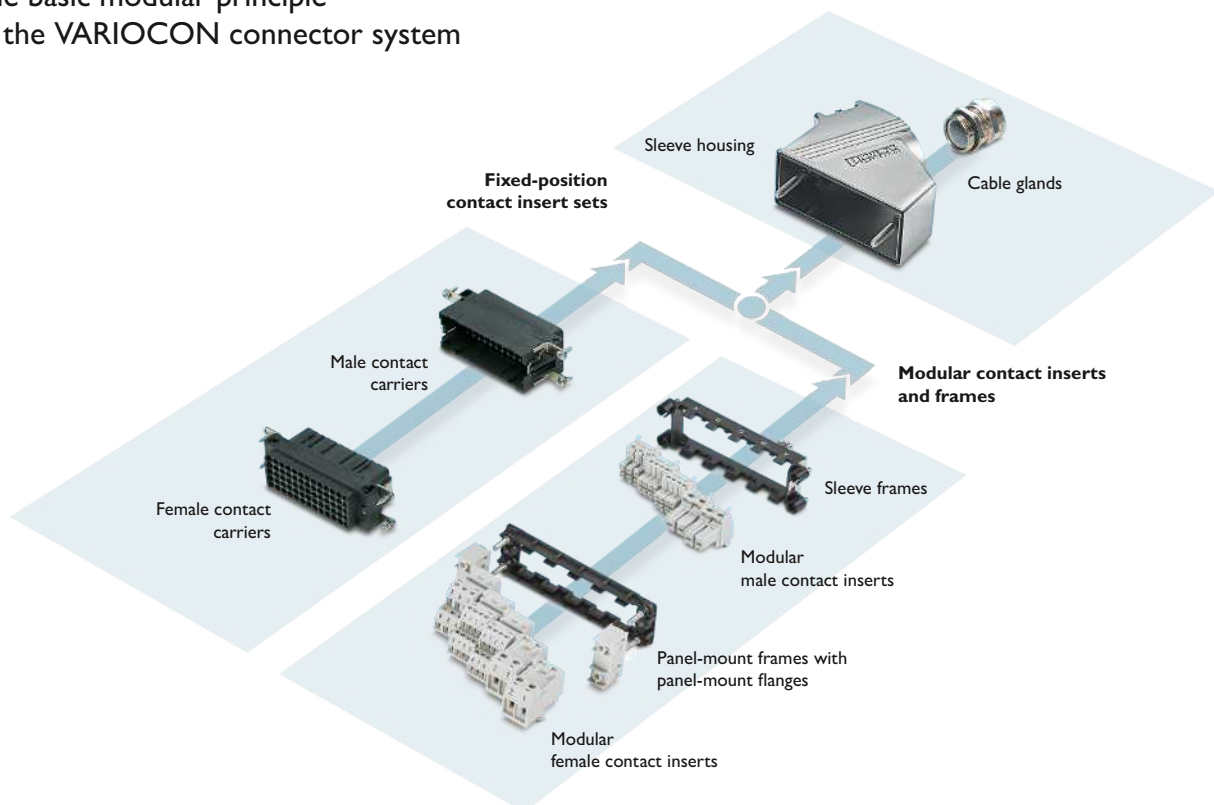


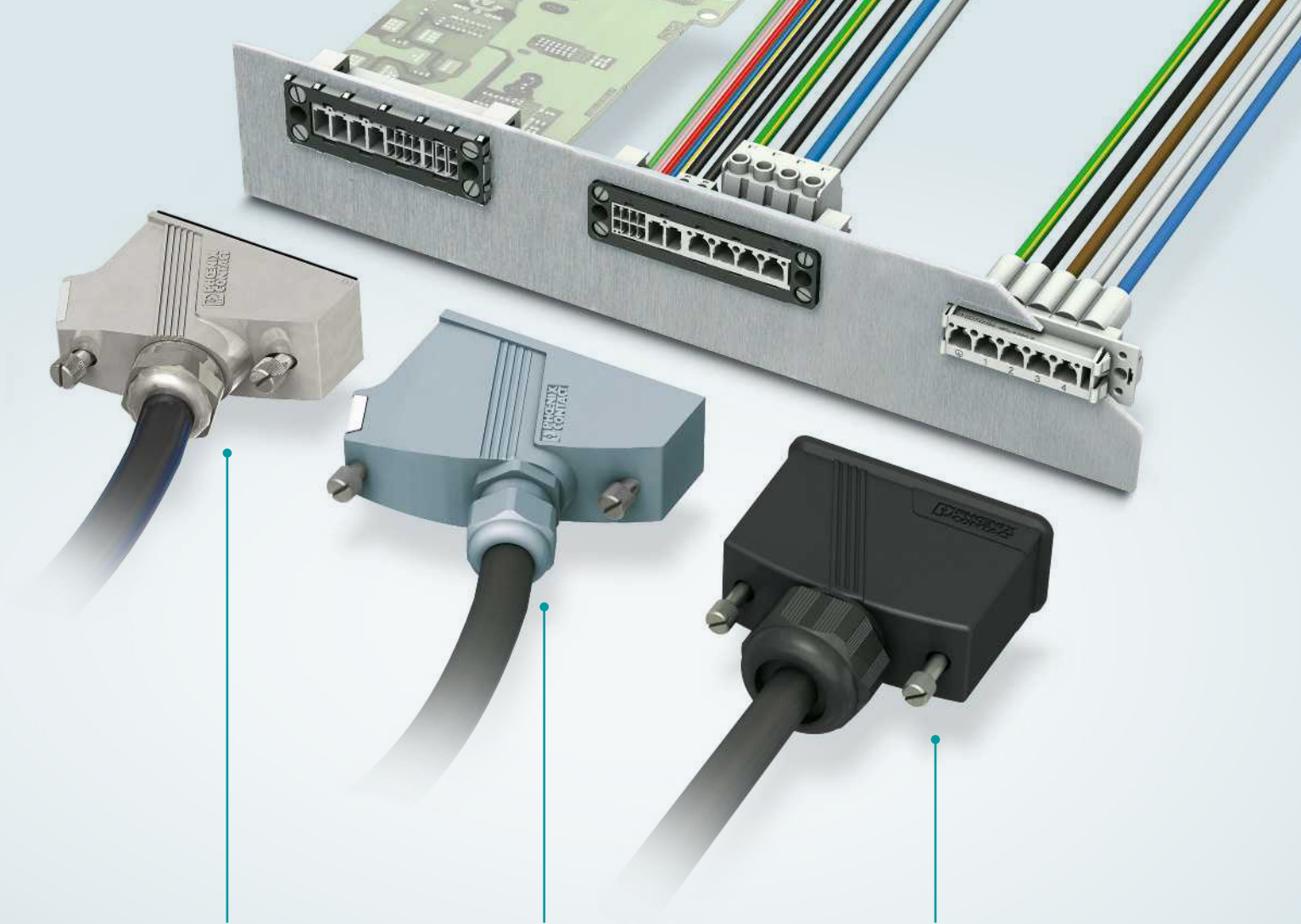
Modular rectangular connectors for signals, data, and power

The VARIOCON connector system offers compact connection solutions for transmitting currents up to 70 A and voltages up to 1,000 V in devices and junction boxes. Modular contact inserts with screw and PCB connection, as well as fixed contact inserts with crimp connection for turned and punched contacts, are the basis of the product range. With IP68/IP69K degree of protection, the connector system offers a high degree of reliability, even under extreme conditions.



The basic modular principle
of the VARIOCON connector system





The right material for every application

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

Four sizes

- For use in various applications
- Two to five free module slots
- Various power and signal inserts available
- Angled cable outlet

Optimized for outdoor use





- UV-resistant plastic sleeve
- Degree of protection IP65/IP66/IP67
- Can be sealed
- Straight cable outlet

Your advantages

- ✓ Modular contact insert design
- ✓ Combination of power and signal in one connector
- ✓ Housing designs made of plastic and metal
- ✓ Nickel-plated housings available for EMC applications
- ✓ Easy configuration via online configurator:

i Web code: #1711

DC connection technology for PV panels

PCB terminal blocks without insulating bodies					 Web code: #0361	
PCB connection for photovoltaic applications						
Description	Push-Lock PCB terminal blocks with spring connection for tin-plated circular conductors or conductors with ferrules				Push-Lock terminal blocks with spring connection and welding bracket	
	Solder pin length	Order No.	Solder pin length	Order No.	Version	Order No.
	2.1 mm	1704836	2.1 mm	1705081	Welding bracket on right	1705624
	2.9 mm	1704837	2.9 mm	1705085	Welding bracket on left	1705625
Design	Closed		Open		Closed	
Number of positions	1					
Cross-section	Max. 6 mm ²					

Housings and contacts					 Web code: #0674	
SUNCLIX DC connectors designed for assembly with crimp connection						
Description	Housing for crimp connector, male (-)	Housing for crimp connector, female (+)	Contacts for crimp connection		Contacts for crimp connection	
Type	Male (-)	Female (+)	Male	Female	Male	Female
Order No.	1050770	1050771	1050768	1050769	1050766	1050767
Cross-section	–	–	2.5/4 mm ² AWG 14/ AWG 12	2.5/4 mm ² AWG 14/ AWG 12	6 mm ² AWG 10	6 mm ² AWG 10
Outside cable diameter	5 mm...8 mm	5 mm...8 mm	–	–	–	–
Rated voltage	1,500 V (1,500 V UL)	1,500 V (1,500 V UL)	–		–	
Rated 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...+85°C, protection class II, approval in accordance with UL 6703 and IEC 62852		Temperature range: -40°C...+85°C, approval in accordance with UL 6703 and IEC 62852 Pcs./Pkt.: 1,000 pcs. per roll			

DC connection technology for field cabling

Connectors

 Web code: #0358

SUNCLIX
DC connectors
designed for
assembly with
SUNCLIX spring
connection







Description




Field connectors with spring-cage connection

Type	Male (-)	Female (+)	Male (-)	Female (+)	Male (-)	Female (+)
Order No.	1774687	1774674	1020775	1020776	1790797	1790784
Cross-section	2.5 mm ² ... 6 mm ²		2.5 mm ² ... 6 mm ²		6 mm ² ... 16 mm ²	
Rated voltage	1,100 V		1,500 V		1,500 V	
Rated 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 62852		Temperature range: -40°C ... +85°C, protection class II, approval in accordance with UL 6703 and IEC 62852		Temperature range: -40°C ... +85°C, protection class II, approval in accordance with IEC 62852	

DC connection technology for field cabling

Connection systems					 Web code: #0358	
SUNCLIX						
Description	Fuse plugs		DC distributors (cable-based)		Adapter set SUNCLIX/MC4	
Product information	Fuse plugs for protecting panels and devices in photovoltaic systems.		Connection set with branch line (6 mm ²) for fast parallel connection of photovoltaic panels. Length of each individual cable 120 mm; other lengths available on request.		Connection of SUNCLIX connectors to type MC4 connectors from Stäubli without voiding the product warranty or guarantee for the MC4 connectors. Rated voltage: 1,500 V rated current: up to 35 A in accordance with IEC 62852/UL 6703 6 mm ² Multinorm cable	
	Nominal voltage		Cross-section Trunk line	Design	Order No.	
	OE		6 mm ²	Male to 2 x female (-/++)	1030649	
	1,000 V	I_{nom}	1,500 V	I_{nom}		
	1220829	3.5	1220822	3.7	6 mm ²	Female to 2 x male (+/--)
	1220828	6	1220821	5		1030650
	1220827	8	1220820	7		
	1220826	10	1220819	9		
	1220825	11	1220818	11		Order No. 1079531
	1214613	14	1214616	13		
	1214610	19	1214620	17		
	1220824	23				
	1220823	25				
	M/F					
	1,000 V	I_{nom}	1,500 V	I_{nom}		
	1220881	3.5	1220814	3.7		
	1220879	6	1220813	5		
	1220878	8	1220812	7		
	1220876	10	1220811	9		
	1220874	11	1220810	11		
	1220873	14	1220808	13		
	1220866	19	1220809	17		
	1220863	23				
	1220861	25				
Degree of protection	IP65 / IP66 / IP67 / IP68 (24 h / 2 m)		IP68 (1 h / 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 21)					

DC connection technology for device connection


Pre-assembled DC device connectors							i Web code: #0359
SUNCLIX DC device connectors, 130 mm litz wire length, other lengths available on request							
Description	Device plugs						
Type	Male	Female	Male	Female	Male	Female	
Order No.	1158446	1158445	1158449	1158447	1158451	1158448	
Cross-section	2.5 mm ²		4 mm ²		6 mm ²		
Rated voltage	1,500 V		1,500 V		1,500 V		
Rated current	Max. 20 A		Max. 30 A		Max. 35 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)		
Product information	Temperature range: -40°C... +85°C, approval in accordance with IEC 62852, required accessories: 1146092						

DC device connectors designed for assembly						i Web code: #0359
						
Description	Housing		Wall mount	Contacts		
Type	Female	Male		Female	Male	
Order No.	1133364	1133365	1146092	1050769 1050767	1050768 1050766	
Product information	Temperature range: -40°C... +85°C, approval in accordance with IEC 62852 and UL 6703, required accessories: 1146092		Wall mount for securing SUNCLIX "C4" device plugs in the housing			

Accessories					i Web code: #0362
					
Description	Filler plugs	Filler plugs	Protective caps	Spacers	
Order No.	1775631	1623478	1785430	1623253	
Product information	Filler plug for SUNCLIX connectors, IP67 in the cable gland, 1,000 V.	Filler plug for SUNCLIX connectors, IP67 in the cable gland, 1,500 V.	IP67 protective cap for SUNCLIX connectors, transport protection for the pin connector pattern, for sealing and protecting unused device inputs and for transport protection.	Spacers for fuse plugs ensure better heat dissipation if multiple fuses are bundled together in an application.	

PRC series AC connection technology



AC device connectors							Web code: #0200		
									
Description	Device plugs with crimp connection			Contact carriers		Contacts			
				With nut	Without nut				
Order No. 3-pos.	1409219	1409220	1409221	1409218	1627608	1409207	1409208	1409209	
Order No. 5-pos.	1409211	1409212	1409213	1409206	1627609				
Conductor cross-section	2.5 mm ²	4.0 mm ²	6.0 mm ²	–	–	2.5 mm ²	4.0 mm ²	6.0 mm ²	
Cable length	150 mm			–	–	–	–	–	
Rated voltage	690 V			690 V		–	–	–	
Rated current	24 A	32 A	35 A	–	–	24 A	32 A	35 A	
Screw connection	M25			–	–	–	–	–	

AC connectors for field assembly				
				
Description	Coupling, 3-pos.	Coupling, 5-pos.	Connector, 3-pos.	Connector, 5-pos.
Order No. 8.0 mm... 12.0 mm	1410658	1410629	1014502	1014522
Order No. 12.0 mm... 16.0 mm	1409217	1409205	1014529	1014506
Order No. 16.0 mm... 21.0 mm	1410659	1410655	1014531	1014505
Order No. 8.0 mm... 21.0 mm	1410661	1410656	1014498	1014530
Conductor cross-section	1.5 mm ² ... 6.0 mm ²			
Rated voltage	690 V			
Rated current	35 A			
Connection method	Screw connection			
Insertion cycles	Approx. 100		Approx. 2,000	
Product information	Approvals in accordance with IEC 61984, IEC 61535, 2 PFG 1915, UL 2238, UL 2237, DNV GL 7-2.			

Accessories				
				
Description	Protective cap for connector	Protective cap for coupling	Coding ring for connector	Nut for device plug
Order No.	1409237	1409236	1014496	1457937

Tools

Tools for PRC series AC device connectors

			
Description	Screw pliers	Crimping tool	
Conductor cross-section	–	2.5 mm ² ... 4.0 mm ²	4.0 mm ² ... 6.0 mm ²
Type	UNIFOX-WRENCH	CRIMPFOX-1,6/2,5-ED-4,0	CRIMPFOX-4,0-ED-6,00
Order No.	1212835	1687419	1205859

Tools for SUNCLIX series DC connectors

			
Description	Crimping tool	Mounting pliers	WIREFOX stripping tool
Order No.	1212755	1200137	1212511
Product information	For PV-CF(M) contacts, 2.5, 4, and 6 mm ² (AWG 14/12/10).	For snapping the crimp contacts into the plastic housing. Suitable for conductor diameters of 4.2 mm ... 6.0 mm.	For standard 2.5, 4, and 6 mm ² solar cables, with 15 mm longitudinal stop, for SUNCLIX field connectors.














Tool for SUNCLIX DC connectors with crimp connection








Mounting and removal tool for SUNCLIX crimp module connectors	
Description	PV-A-C-DC-TOOL
Order No.	1069522

VARIOCON series modular rectangular connectors

Sleeve housings in accordance with IP65/IP66/IP67, die-cast zinc – connector side							 Web code: #0363	
	Description	Size	Module slots	Thread type	Type	Cylinder head screw	Knurled screw	
						Order No.		
	Metric	VC 1	2	M20	VC-MP-T1...	1886676	1886634	
		VC 2	3	M25	VC-MP-T2...	1886689	1886647	
		VC 3	4		VC-MP-T3...	1886692	1886650	
		VC 4	5		VC-MP-T4...	1886702	1886663	
	Pg	VC 1	2	Pg16	VC-MP-T1...	1884898	1855539	
		VC 2	3	Pg21	VC-MP-T2...	1884908	1855542	
		VC 3	4		VC-MP-T3...	1884911	1855555	
		VC 4	5		VC-MP-T4...	1884924	1855568	
	Metric + EMC	VC 1	2	M20	VC-MEMV-T1...	1886553	1886595	
		VC 2	3	M25	VC-MEMV-T2...	1886566	1886605	
		VC 3	4		VC-MEMV-T3...	1886579	1886618	
		VC 4	5		VC-MEMV-T4...	1886582	1886621	
	Pg+EMV	VC 1	2	Pg16	VC-MEMV-T1...	1853324	1855131	
		VC 2	3	Pg21	VC-MEMV-T2...	1853337	1855144	
		VC 3	4		VC-MEMV-T3...	1853340	1855157	
		VC 4	5		VC-MEMV-T4...	1853353	1855160	
Sleeve housings in accordance with IP67, plastic								
	Description	Size	Module slots	Thread type	Type	Cylinder head screw	Knurled screw	
						Order No.		
	Metric	VC 1	2	M20	VC-K-T1...	1852935	1855097	
		VC 2	3	M25	VC-K-T2...	1852948	1855107	
		VC 3	4		VC-K-T3...	1852961	1855120	
		VC 4	5		VC-K-T4...	1852974	1855133	
	Pg	VC 1	2	Pg16	VC-K-T1...	1852930	1855092	
		VC 2	3	Pg21	VC-K-T2...	1852943	1855102	
		VC 3	4		VC-K-T3...	1852956	1855115	
		VC 4	5		VC-K-T4...	1852969	1855128	
	Integrated Pg screw connection	VC 1	2	-	VC-K-T1...	-	-	
		VC 2	3	Pg29	VC-K-T2...	1583880	-	
		VC 3	4		VC-K-T3...	1424368	-	
		VC 4	5	-	VC-K-T4...	-	-	
	Ribbon cable outlet	VC 2	3	Cable size (mm) 6 x 20.5 6 x 24 7.5 x 29.5 9 x 35	VC-K-T2...	1607703	-	
						1607677	-	
						1607680	-	
						1607693	-	





Modular contact inserts



Modular contact inserts – device side								 Web code: #0537	
	Type	Number of positions	Module slots	PCB connections			Screw connection	Order No.	
					180°	90°			90° with PE
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
	16 mm ²	5	4		–	1607523	1607530		1607748
	16 mm ²	7	5		–	1607537	1607544		1607751

Modular contact inserts – connector side								 Web code: #0536	
	Type	N° of positions	Module slots	Rated current	Rated voltage	Screw connection	Order No.		
Insertion cycles 100	1.5 mm ²	6	1	10 A	250 V		1853476 1583526*		
	1.5 mm ²	8	1	10 A	160 V		1852820 1583536*		
	4 mm ²	2	1	20 A	400 V		1852846 1583513*		
Insertion cycles 50	16 mm ²	4	3 4 (1 of which is free) 5 (2 of which are free)	70 A	690 V		1607467** 1607488** 1607495**		
	16 mm ²	5	4 5 (1 of which is free)	70 A	690 V		1607474** 1607502**		
	16 mm ²	7	5	70 A	690 V		1607481**		

*) Contact insert with PE marking. **) Items do not require separate panel-mount frame or sleeve frame.

Panel-mount frames for device connection

Panel-mount frames – device side							 Web code: #0539	
								
Size	Module slots	Panel-mount frame without PE		Panel-mount frame with PE		Additional EMC shielding frame		
		Type	Order No.	Type	Order No.	Type	Order No.	
VC 1	2	VC-AR 1/2 M	1852972*	VC-AR 1/2 M-PEA	1607761*	VC-AR1-EMV	1853214	
VC 2	3	VC-AR 2/3 M	1852985*	VC-AR 2/3 M-PEA	1607774*	VC-AR2-EMV	1853227	
VC 3	4	VC-AR 3/4 M	1852998*	VC-AR 3/4 M-PEA	1607787*	VC-AR3-EMV	1853232	
VC 4	5	VC-AR 4/5 M	1853007*	VC-AR 4/5 M-PEA	1607790*	VC-AR4-EMV	1853243	

Male contact inserts incl. panel-mount frame and flange						 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		
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		
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-S22222-SET	1607335		

Sleeve frames for connectors

Sleeve frames – connector side

 Web code: #0538



Size	Module slots	Sleeve frame without PE		Sleeve frame with PE	
		Type	Order No.	Type	Order No.
VC 1	2	VC-TR 1/2 M	1852891	VC-TR 1/2 M-PEA	1607059
VC 2	3	VC-TR 2/3 M	1852901	VC-TR 2/3 M-PEA	1607062
VC 3	4	VC-TR 3/4 M	1852914	VC-TR 3/4 M-PEA	1607075
VC 4	5	VC-TR 4/5 M	1852927	VC-TR 4/5 M-PEA	1607088

Female contact inserts incl. sleeve frames

 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
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
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










Device connectors

Device connections for signals		 Web code: #0515			
PLUSCON circular connectors for sensor/ actuator applications					
Description		M8 device connectors with halogen-free litz wires, front mounting	M12 device connectors with halogen-free litz wires, front mounting	M8 device connectors for wave soldering processes, one-piece, rear mounting	M12 device connectors for wave soldering processes, one-piece, rear mounting
Male	5-pos.	1440119	1520068	1424242	1441765
Female	5-pos.	1440106	1520042	1424241	1441778
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 connectors for sensor/ actuator applications					
Description		M8 device connectors for reflow process, two-piece, rear mounting	M12 device connectors for reflow process, two-piece, rear mounting	M12 housing screw connections for reflow process, two-piece, rear mounting, standard	M12 device connectors for reflow process, rear mounting
Male	5-pos.		1411943	1414000/1414002 (SPEEDCON)	1551752
Female	5-pos.	1412222/housing 1412506	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		THR solder connection

Device connectors

Device connections for data					 Web code: #0515				
PLUSCON data connectors with standard interfaces such as RJ45, USB, and M12 for data transmission									
Description		RJ45 female inserts and panel-mount frames, for Freenet system		RJ45 female inserts and panel-mount frames, for PCB connection		USB female inserts and panel-mount frames, for flat-ribbon cable connection		M12 device connectors for wave soldering processes, one-piece	
Female insert	CAT5	1652936				1653854			
Female insert	CAT6	1418984		1653090		1653867			
Panel-mount frame		1653744		1689446		1653744			
Flush-type connector	4-pos., female							1551503	
Flush-type connector	8-pos., female							1553860	
Number of positions		8		8		4		4-pos./8-pos.	
Rated voltage		50 V		150 V		30 V		250 V	
Nominal current		1 A		1.5 A		1 A		4 A	
Contact material		Cu alloy		Cu alloy		Cu alloy		Cu alloy	
Connection method		IDC		Solder connection		Flat-ribbon cable connection		Solder pins	

PCB connections





PCB terminal blocks, signals, and power				 Web code: #0391
PCB terminal blocks, conductor cross-sections from 0.14 to 95 mm ² , pitch 2.5 mm to 20 mm				
Description	Push-in spring connection, horizontal to the PCB for SMD applications	Push-in spring connection, angled (45°) to the PCB	Push-in spring connection, horizontal to the PCB	Double Push-in spring connection, angled (45°) to the PCB
Product family	PTSM 0,5/...-H-SMD	SPTAF 1/...-LL	PTS 1,5	PTDA 2,5
Product example Order No.	1771059	1864312	1792892	1725341
Number of positions	2...8	2...16	2...12	2...16
Nominal cross-section	0.5 mm ²	1.0 mm ²	1.5 mm ²	2.5 mm ²
Pitch	2.5 mm	3.5 mm	5 mm	5 mm
Rated voltage IEC/UL	160 V/150 V	160 V/300 V	400 V/300 V	400 V/300 V
Nominal current IEC/UL	6 A/5 A	16 A/8 A	12 A/10 A	13.5 A/13.5 A
PCB terminal blocks, conductor cross-sections from 0.14 to 95 mm ² , pitch 2.5 mm to 20 mm				
Description	Lever connection, angled (45°) to the PCB	Push-in spring connection, horizontal to the PCB	Push-in spring connection, angled (60°) to the PCB	Lever connection, horizontal to the PCB
Product family	LPTA 2,5/	TDPT 4/...-SP	SPTA 5	LPT 6/
Product example Order No.	1190366	1017524	1819118	1098170
Number of positions	1...12	2...6	1...12	1...8
Nominal cross-section	2.5 mm ²	4 mm ²	6 mm ²	6 mm ²
Pitch	5 mm	6.35 mm	7.5 mm	7.5 mm
Rated voltage IEC/UL	400 V/300 V	1,000 V/600 V	1,000 V/600 V	1,000 V/600 V*
Nominal current IEC/UL	24 A/20 A*	41 A/30 A	41 A/33 A	41 A/35 A*
Product information			Can be bridged, for connecting individual positions	

* The specified value is expected upon approval

PCB connections






PCB terminal blocks, power

 Web code: #0391




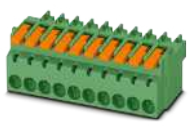





<p>PCB terminal blocks, conductor cross-sections from 0.14 to 95 mm², pitch 2.5 mm to 20 mm</p>				
<p>Description</p>	<p>Push-in spring connection, horizontal to the PCB</p>	<p>Lever connection, horizontal to the PCB</p>	<p>Push-in spring connection, vertical to the PCB</p>	<p>Screw connection, horizontal to the PCB</p>
<p>Product family</p>	<p>SPT 16/...-H</p>	<p>LPT 16/</p>	<p>SPT 35/...-V</p>	<p>MKDSP 50</p>
<p>Product example Order No.</p>	<p>1735817</p>	<p>1119814</p>	<p>1845373</p>	<p>1856155</p>
<p>Number of positions</p>	<p>1...9</p>	<p>1...8</p>	<p>1...5</p>	<p>1...5</p>
<p>Nominal cross-section</p>	<p>16 mm²</p>	<p>16 mm²</p>	<p>25 mm²</p>	<p>70 mm²</p>
<p>Pitch</p>	<p>10 mm</p>	<p>10 mm</p>	<p>15 mm</p>	<p>17.5 mm</p>
<p>Rated voltage IEC/UL</p>	<p>1,000 V / 600 V</p>	<p>1,000 V / 600 V*</p>	<p>1,000 V / 600 V</p>	<p>1,000 V / 600 V</p>
<p>Nominal current IEC/UL</p>	<p>76 A / 66 A</p>	<p>76 A / 66 A*</p>	<p>125 A / 101 A</p>	<p>192 A / 160 A</p>
<p>Product information</p>		<p>Also available with 15 mm pitch with 1,000 V UL* approval</p>		<p>Suitable for connecting aluminum conductors</p>

^{*)} The specified value is expected upon approval

Panel feed-throughs

High-current feed-through terminal blocks, power				 Web code: #0456
High-current feed-through terminal blocks, conductor cross-sections from 4 to 95 mm ² , for panel thickness from 1 to 6 mm				
Description (outside/inside)	Screw connection / screw and bolt connection	Push-Lock spring connection / Push-in spring connection	T-LOX knee-lever connection / bolt connection	T-LOX knee-lever connection / bolt connection
Product family	UW 25	PLW 16-6	TW 50	TW 95
Product example Order No.	3073377	1821083	1708749	1708756
Number of positions	1-pos. alignable	3...5	1...6	1...6
Nominal cross-section	25 mm ²	16 mm ²	50 mm ²	95 mm ²
Panel thickness	1 mm...6 mm	Free choice of screw fastening	1 mm...5 mm	1 mm...5 mm
Rated voltage IEC/UL	1,000 V / 600 V	1,000 V / 600 V	1,000 V / 600 V	1,000 V / 600 V
Nominal current IEC/UL	101 A / 112.5 A	41 A / 40 A	150 A / 150 A	232 A / 230 A
Product information	Suitable for connecting aluminum conductors	Optional sealing prevents unintentional release	Suitable for connecting aluminum conductors	Suitable for connecting aluminum conductors

PCB connections

PCB connectors, signals, and power				 Web code: #0425
PCB connectors, conductor cross-sections from 0.14 to 35 mm ² , pitch 2.5 to 15 mm				
Description	Push-in spring connection with latching flange	Push-in spring connection with latching flange	Push-in spring connection with lever actuation and Lock and Release locking	Push-in spring connection, SKEDD direct connection technology
Product family	DFMC 0,5/...-ST-RF	FMC 1,5/...-ST-RF	LPC 1,5/...-ST-LR	SDDC 1,5/...-PV
Product example Order No.	1715737	1952050	1849191	1713868
Number of positions	2...16	2...16	2...16	2...16
Nominal cross-section	0.5 mm ² (AWG 20)	1.5 mm ² (AWG 16)	1.5 mm ² (AWG 16)	1.5 mm ² (AWG 16)
Pitch	2.54	3.5 mm/3.81 mm	3.81 mm	3.5 mm
Rated voltage IEC/UL	160 V/150 V	160 V/300 V	160 V/150 V	160 V/300 V
Nominal current IEC/UL	6 A/6 A	8 A/8 A	8 A/8 A	8 A/8 A
PCB connectors, conductor cross-sections from 0.14 to 35 mm ² , pitch 2.5 to 15 mm				
Description	Push-in spring connection, SKEDD direct connection technology	Flat Push-in spring connection	Push-in spring connection with lever actuation and middle flange	Energy bus system with insulation displacement connection technology
Product family	CDDC 2,5/...-PV-5,0	FKCN 2,5/...-ST	LPC 6/...-STL	PC 6/...-ST-BUS
Product example Order No.	1016289	1754597	1716942	1044738
Number of positions	2...16	2...18	2...6	2...3
Nominal cross-section	2.5 mm ² (AWG 12)	2.5 mm ² (AWG 14)	6 mm ² (AWG 8)	16 mm ² (AWG 6)
Pitch	5.0 mm	5.0 mm/5.08 mm	7.62 mm	7.62 mm
Rated voltage IEC/UL	320 V/300 V	320 V/300 V	1,000 V/600 V	1,000 V/600 V
Nominal current IEC/UL	12 A/12 A	12 A/10 A	41 A/35 A	32 A/30 A

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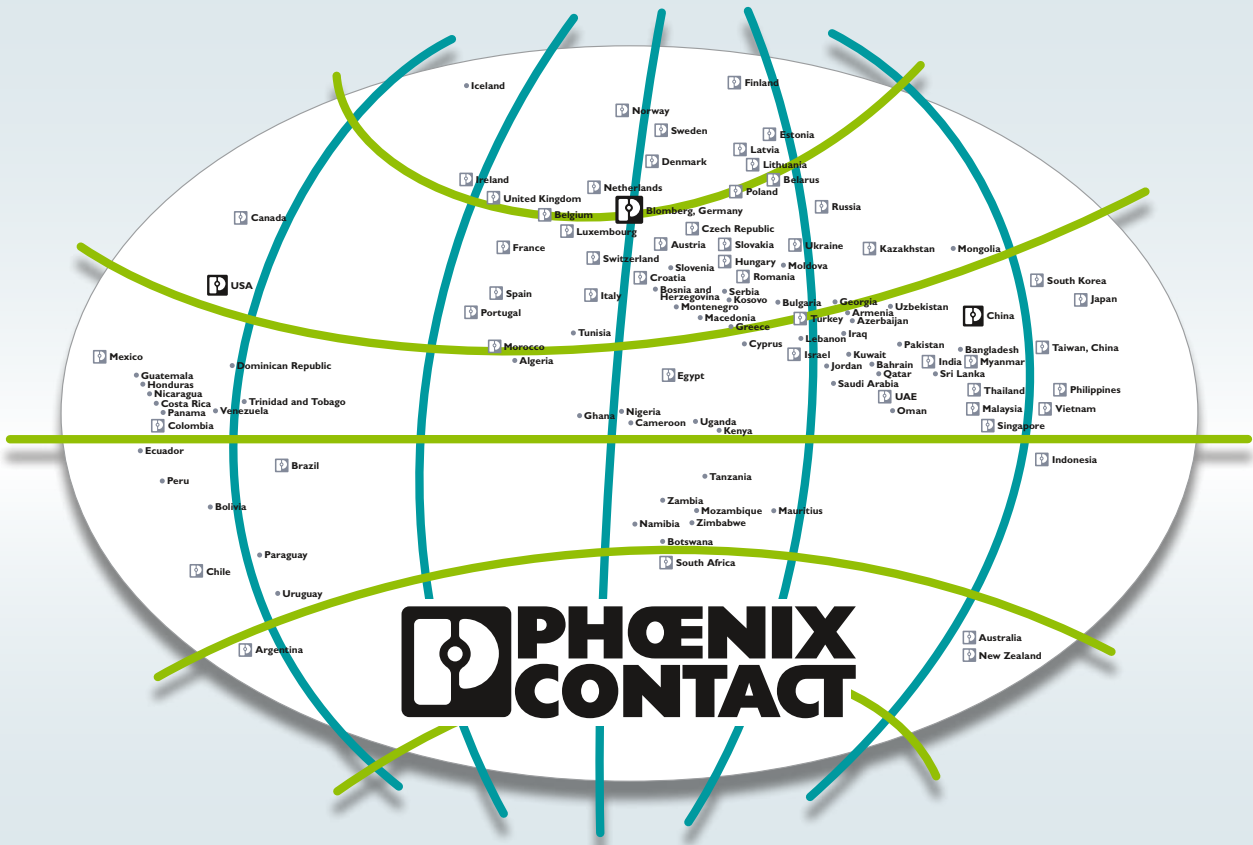
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