



# Photovoltaic connectors

Product overview 2024

# Photovoltaic connectors for DC and AC cabling

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

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





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### Find out more with the web code

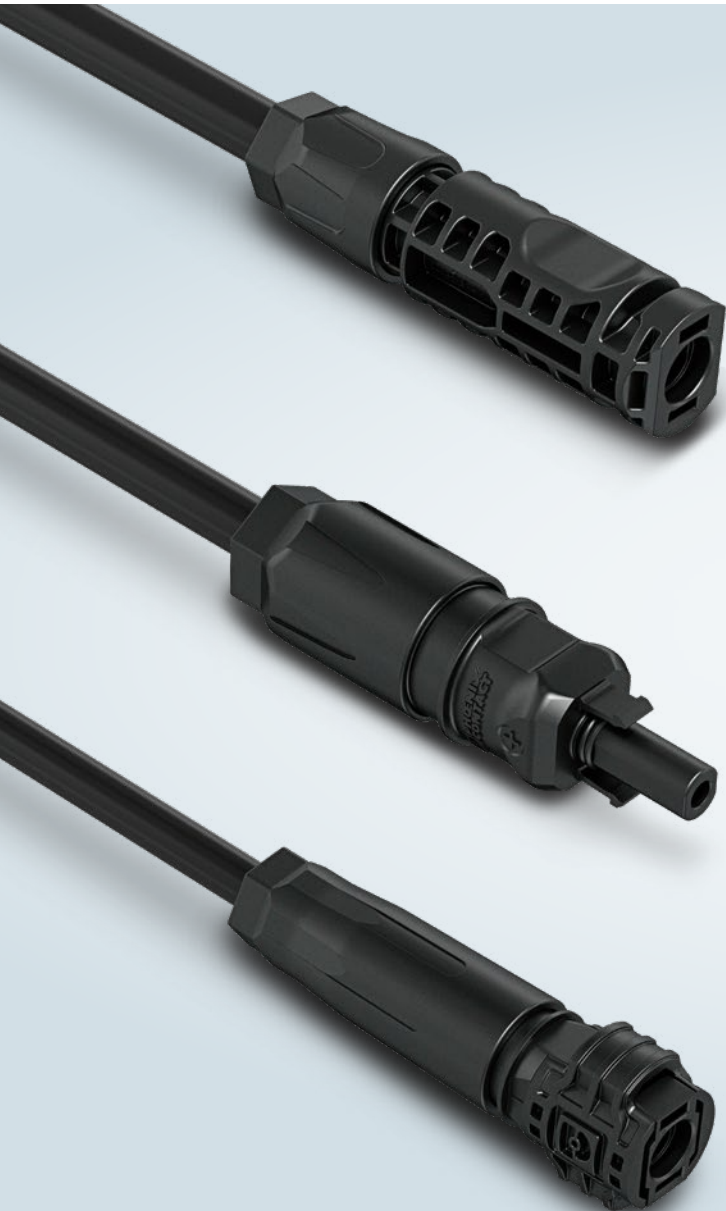
For detailed information, use the web codes provided in this brochure. Simply enter # and the four-digit number in the search field on our website.

**i** Web code: #1234 (example)

Or use the direct link:  
[phoenixcontact.net/webcode/#1234](https://phoenixcontact.net/webcode/#1234)

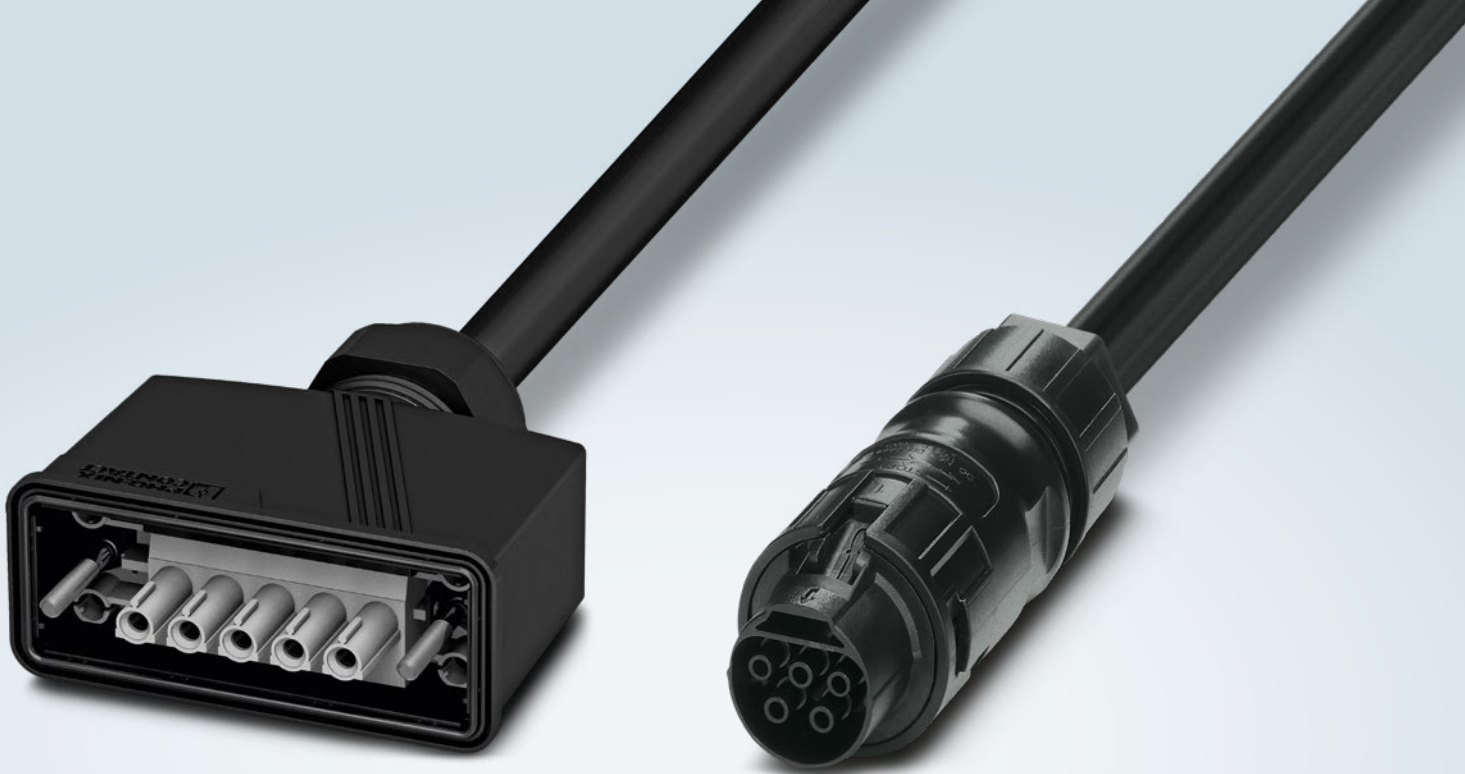
# The right connection for every application

The efficiency, reliability, and safety of components are crucial for the profitability of an investment. Connectors and accessories from Phoenix Contact for the cabling of 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.



## DC connectors in the SUNCLIX series

- Voltages up to 1,500 V
- Currents up to 60 A
- Conductor cross-sections from 2.5 to 16 mm<sup>2</sup>
- SUNCLIX spring connection
- Crimp connection
- Degree of protection IP66/IP68 (24 h/2 m)



Web code:  
#0542

## AC connectors in the VARIOCON and PRC series

- Connection technology for string and micro inverters
- Voltages up to 1,000 V
- Currents up to 70 A
- Conductor cross-sections from 1.5 to 16 mm<sup>2</sup>
- Screw and crimp connection
- VARIOCON: Degree of protection IP65/IP68 (24 h/2 m)
- PRC: Degree of protection 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 preassembled connectors and connectors with fast-connection technology.



### Rooftop systems

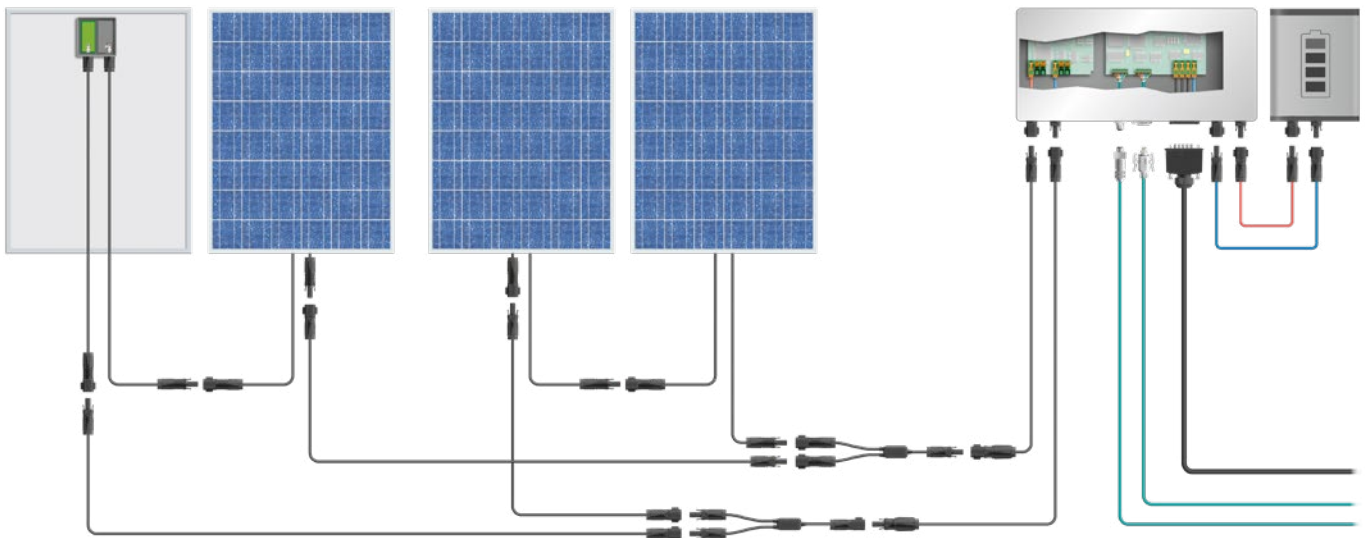
Compact DC connectors are ideal for cramped installation conditions. Thanks to the SUNCLIX spring connection, wiring is easy and reliable – without special tools.

# Product range overview of photovoltaic connectors

## Consistent connection technology from the photovoltaic panel 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 at market-oriented terms – the Phoenix Contact connection technology portfolio for the international solar market

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

#### Quality in the details ensures reliability in the system

Today, photovoltaics is a mainstay of the power supply in a growing number of global economies. This means that the electricity must be generated at the lowest possible cost, while ensuring that power 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 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 panel feed-throughs

For device connection, preassembled or designed for assembly.



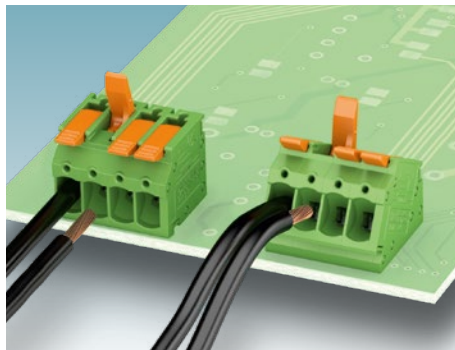
### AC connectors

For grid-side connection.



### Data and signal connectors

Copper and fiber-optic-based data connectors and signal connectors, M5 to M23, 3- to 19-pos.



### PCB terminal blocks and PCB connectors

For transmitting signals, data, or power.

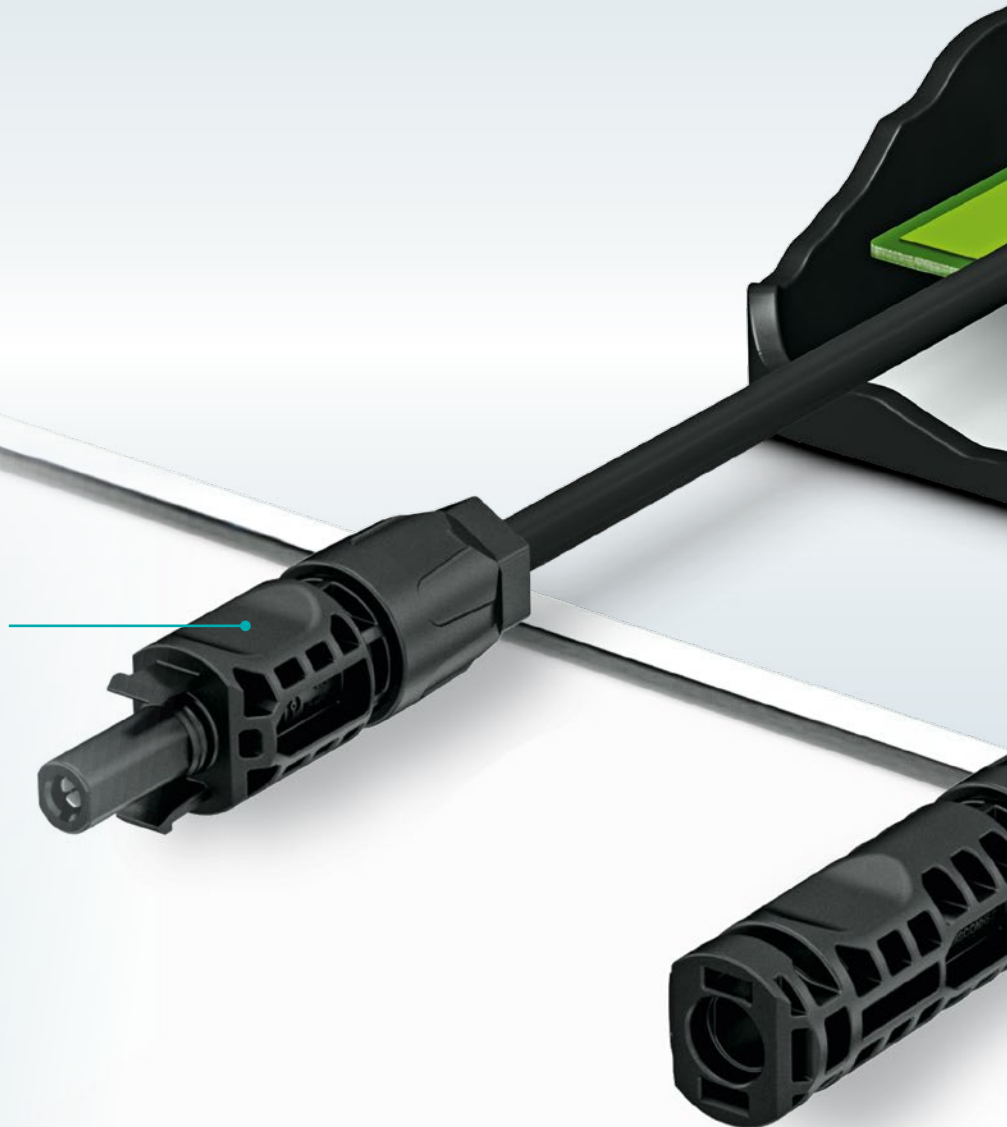
# DC connection technology for PV panels

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



## SUNCLIX DC connectors with crimp connection

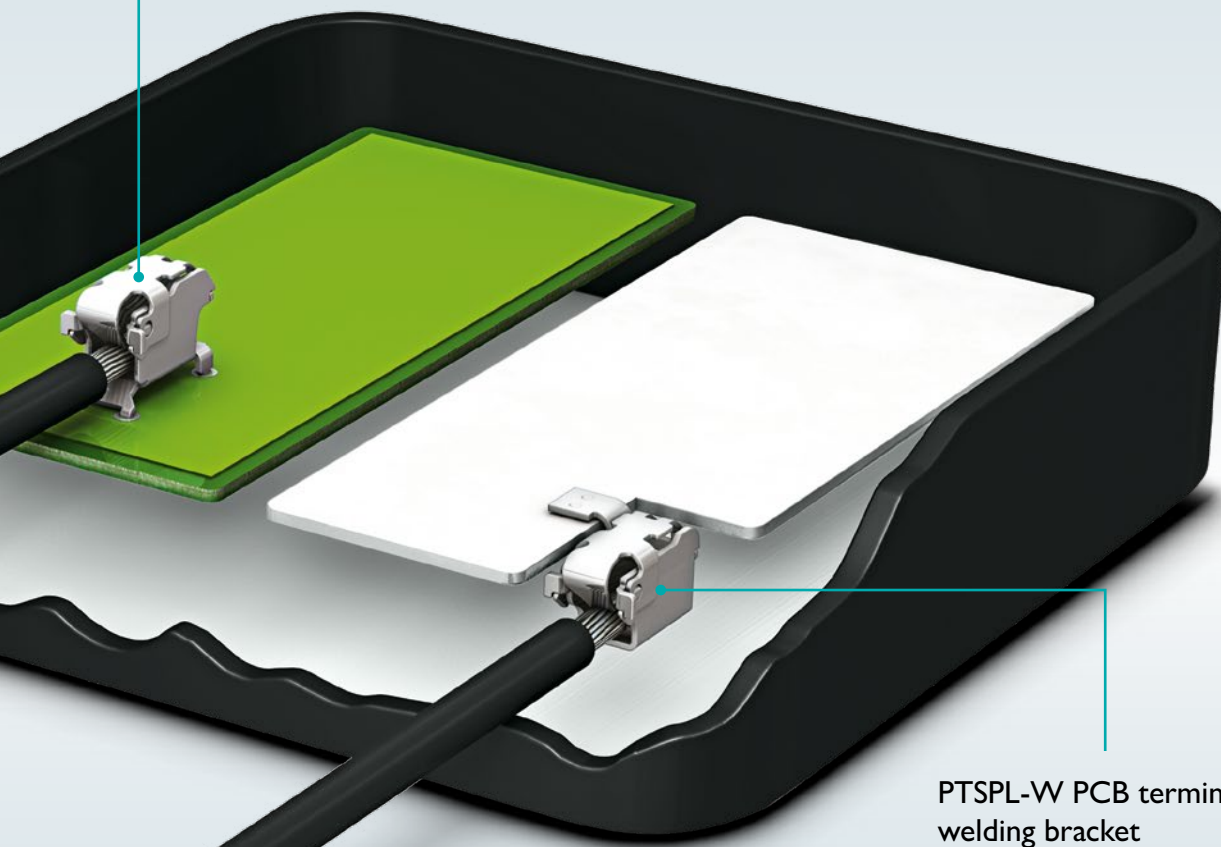
- Just one connector for all crimp contacts
- Suitable for automated processing
- Voltages up to 1,500 V
- Currents up to 40 A (IEC), 50 A (UL)
- Conductor cross-sections from 2.5 to 4 mm<sup>2</sup> (AWG 14 to 12) and 6 mm<sup>2</sup> (AWG 10)
- Degree of protection IP65/IP66/IP67/IP68 (24 h/2 m)
- 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 2.1 and 2.9 mm solder pin lengths
- 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 mm<sup>2</sup>



## PTSPL-W PCB terminal block with welding bracket

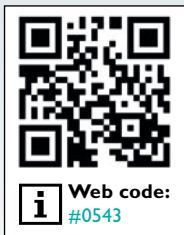
- Available with the welding bracket on the right or left for spot welding processes
- Supplied with closed spring as bulk goods or in a tray for automated processes
- Currents up to 41 A
- SUNCLIX spring connection for conductor cross-sections from 2.5 to 6 mm<sup>2</sup>

# DC connection technology for field cabling

Wire your photovoltaic system efficiently, safely, and reliably from the module through to the inverter – with the SUNCLIX connection system from Phoenix Contact.

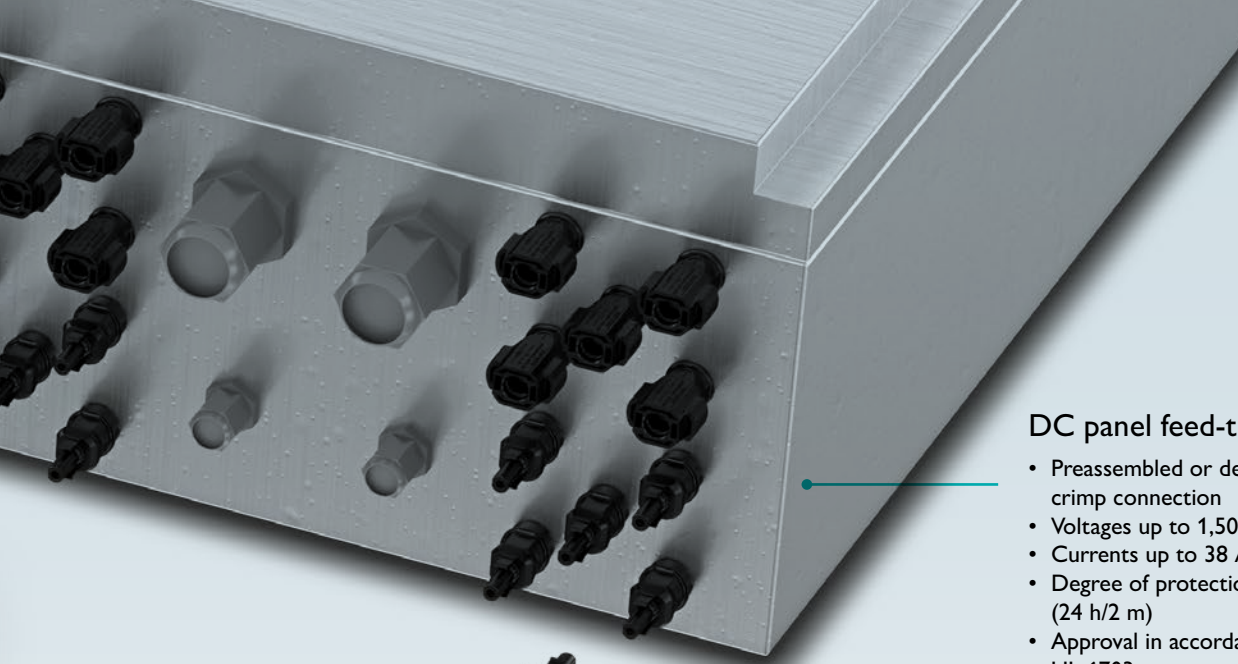
The one-piece DC connectors can be connected quickly and easily without using special tools. The unique spring technology ensures permanently reliable and stable conductor contacting.

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 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 mm<sup>2</sup>
- Degree of protection IP65/IP66/IP67/IP68 (24 h/2 m)
- Approval in accordance with IEC 62852 and UL 6703



### DC panel feed-throughs

- Preassembled or designed for assembly with crimp connection
- Voltages up to 1,500 V
- Currents up to 38 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 distributors

- For the parallel connection of modules and strings
- Customer-specific preassembly 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

### DC connectors for field assembly

- Patented SUNCLIX spring connection
- Voltages up to 1,500 V
- Currents up to 60 A
- Just two versions cover conductor cross-sections from 2.5 to 16 mm<sup>2</sup>
- Degree of protection IP65/IP66/IP67/IP68 (24 h/2 m)
- Approval in accordance with IEC 62852 and UL 6703

### 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

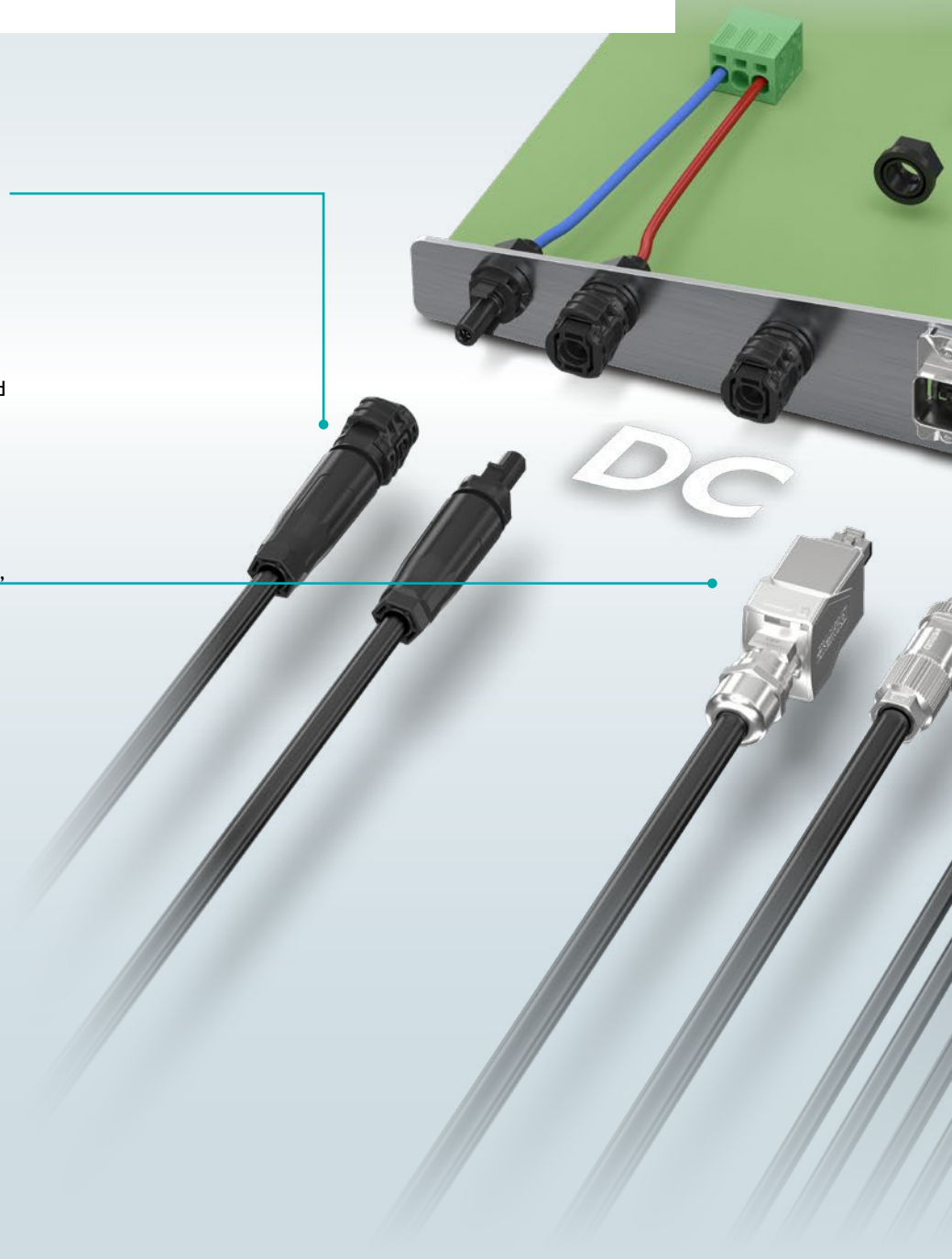
Phoenix Contact provides a comprehensive range for connection to devices in all performance classes. Whether AC or DC, circular or rectangular, for signals, data, or power – the connectors cover a wide range of requirements. Device connectors, PCB connection technology, and accessories complete the comprehensive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

## SUNCLIX DC connectors with spring connection

- Patented SUNCLIX spring connection
- Voltages up to 1,500 V
- Currents up to 60 A
- Just two versions cover conductor cross-sections from 2.5 to 16 mm<sup>2</sup>
- 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
- Preassembled connector systems and connector systems designed for assembly
- Solutions for IP20, IP65/IP67, and IP69K

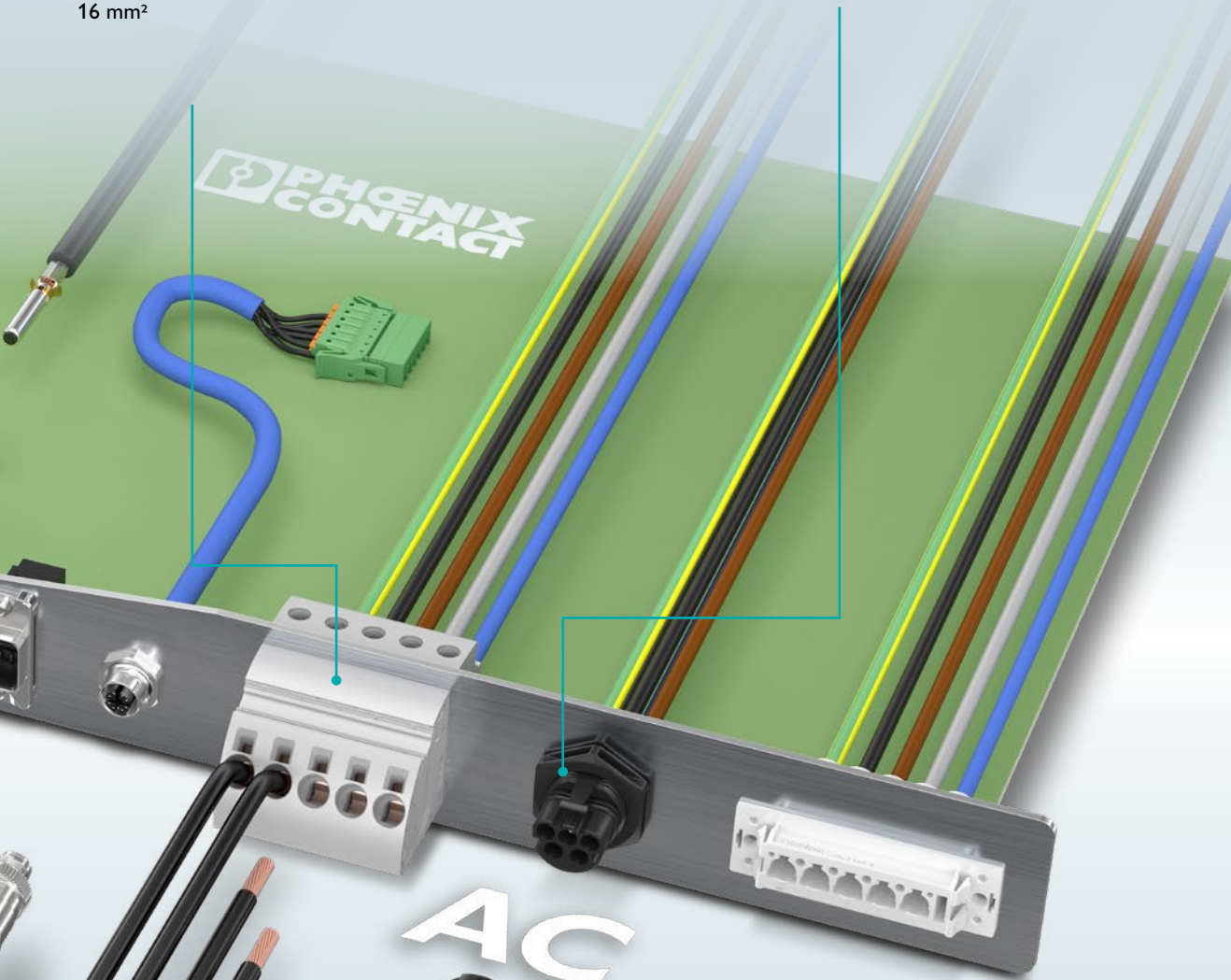


## Panel feed-through terminal block PWO 16-UW/S with Push-in connection

- Easy connection and removal of conductors with a tool-free, time-saving Push-in connection on the outside
- The screw connection with tension sleeve on the inside
- Voltages up to 1,000 V
- Currents up to 76 A
- Conductor cross-section from 1.5 to 16 mm<sup>2</sup>

## 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 mm<sup>2</sup>
- Degree of protection IP66/IP68 (24 h/2 m) / IP69



AC

## 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 mm<sup>2</sup>
- Degree of protection: IP65/IP68 (24 h/2 m)

# Installation system for photovoltaic system technology

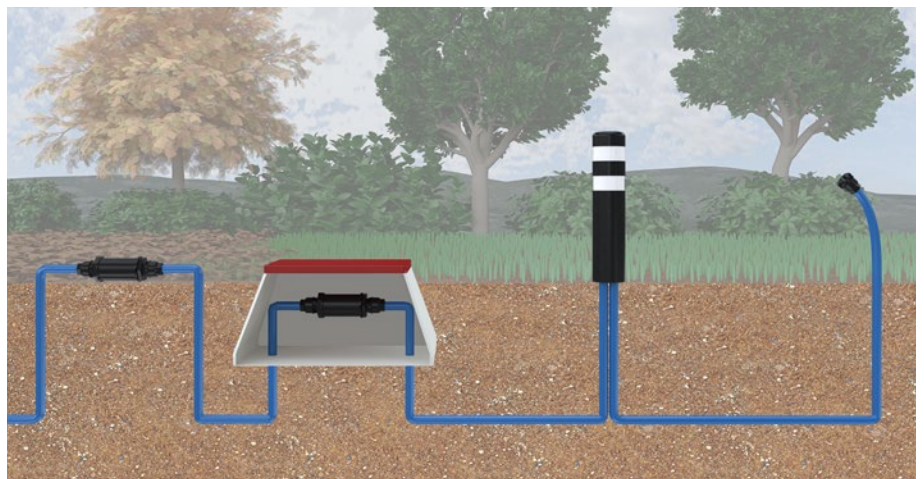
Circular connectors from the PRC series are ideal for compact and safe power transmission in outdoor applications. The device, coupler, and field connectors are manufactured from special plastics. They allow countless connection solutions for micro and string inverters, as well as for tracking systems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



## The best connection

Cable too short, damaged, or cut through? The PRC conductor connectors can be used anywhere, even where you would like to implement a secure power connection over the long term. Made of robust plastic, PRC conductor connectors are UV and salt water resistant, impact resistant, and waterproof. In addition, the PRC cable end cap offers the possibility of protecting free cable ends against penetrating moisture and subsequent conductor corrosion in the short and long term.

 Web code: #2885



## Your advantages

- ✓ 3-pos. and 5-pos. 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 preassembled device connectors and device connectors designed for assembly

## AC device connectors

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



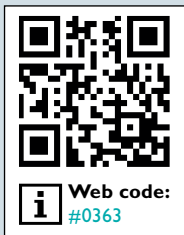
## AC connectors with screw connection

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

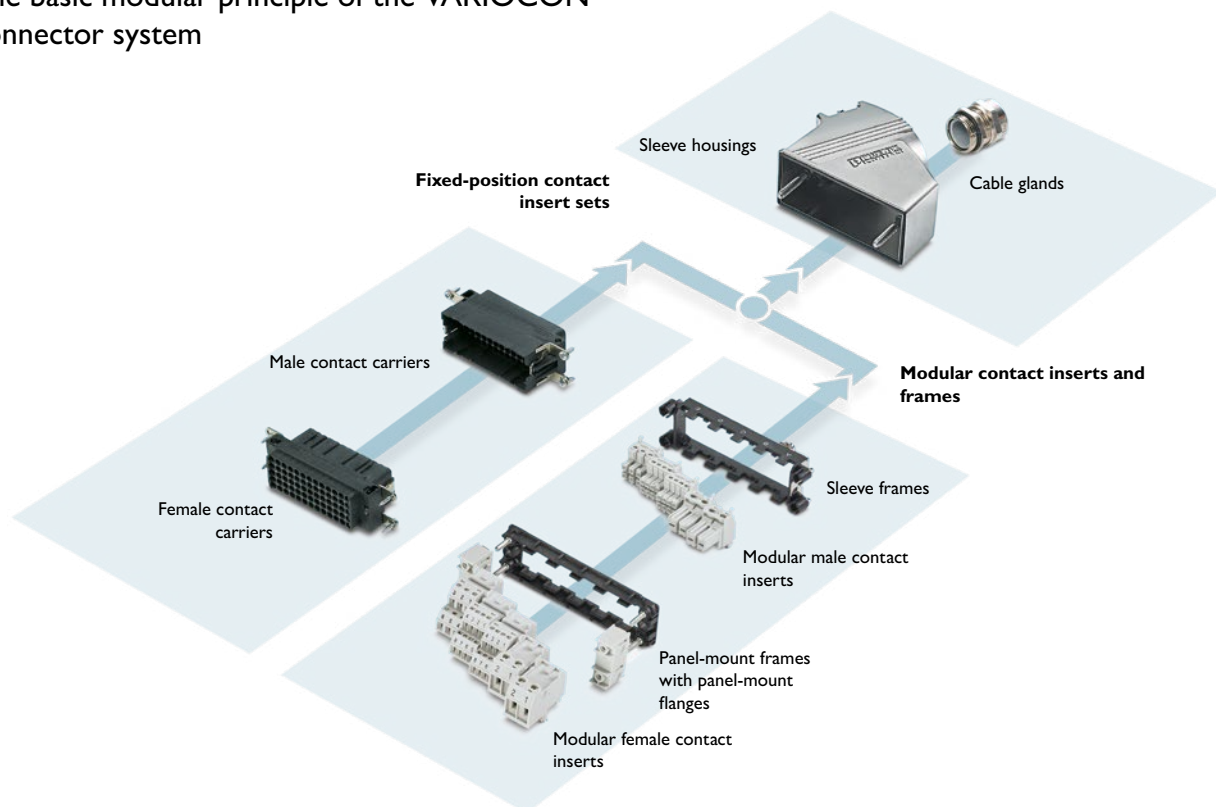


# Modular rectangular connectors for signals, data, and power

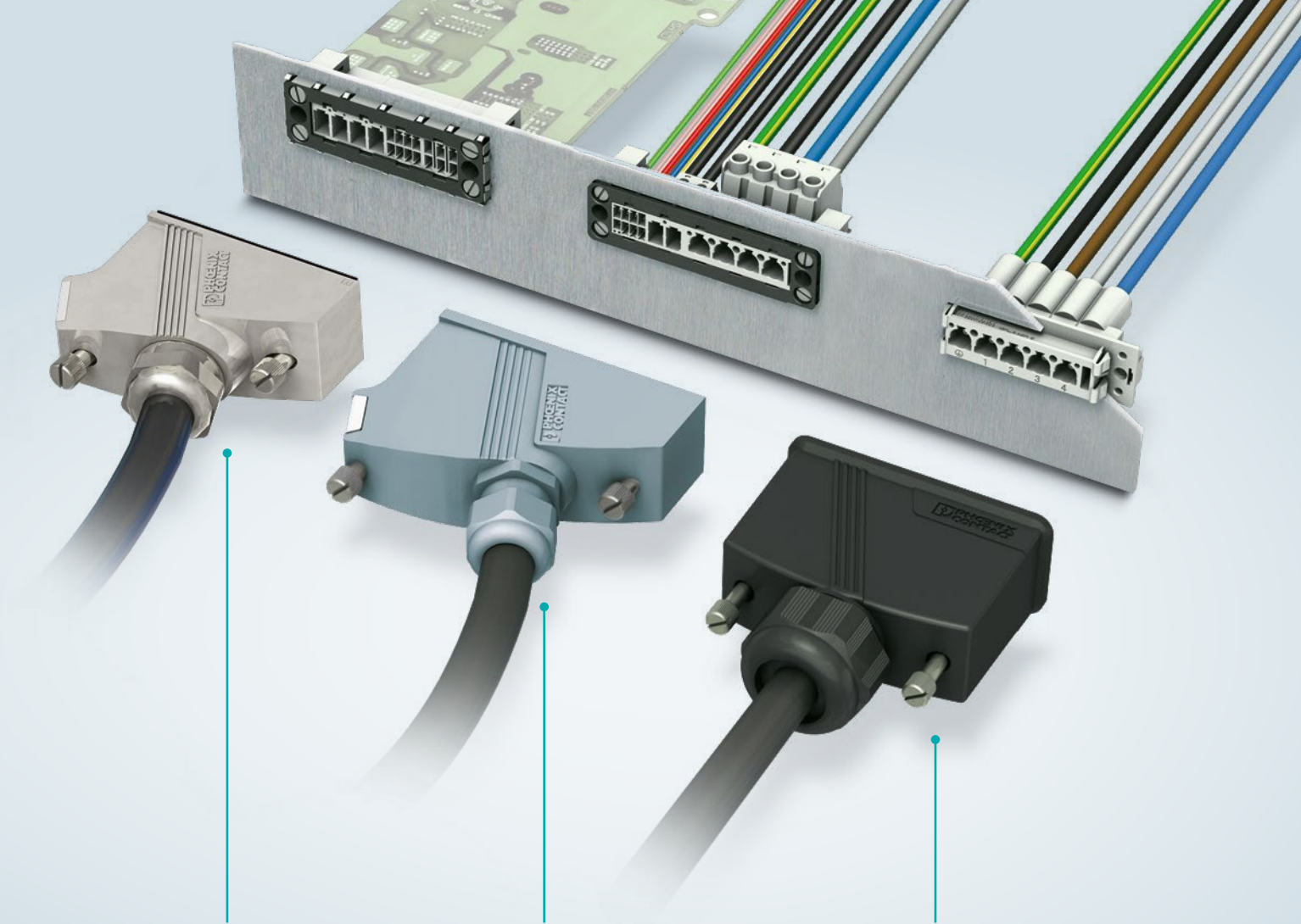
The VARIOCON connector system offers compact connection solutions for transmitting currents up to 70 A and voltages up to 1,000 V in devices and junction boxes. The product range is based on modular contact inserts with screw and PCB connection, and fixed contact inserts with crimp connection for turned and punched contacts. 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

# DC connection technology for PV panels




PCB terminal blocks without insulating bodies						i Web code: #0361	
PCB connection for photovoltaic applications							
<b>Description</b>	<b>Push-Lock PCB terminal blocks with spring connection for tin-plated circular conductors or conductors with ferrules</b>				<b>Push-Lock terminal blocks with spring connection and welding bracket</b>		
	Solder pin length	Item no.	Solder pin length	Item no.	Version	Item 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 <sup>2</sup>						

Housings and contacts						i Web code: #0674					
SUNCLIX DC connectors designed for assembly, with crimp connection											
<b>Description</b>	<b>Housing for crimp connector, male (-)</b>	<b>Housing for crimp connector, female (+)</b>	<b>Male (-) crimp connector with unlocking function</b>	<b>Contacts for crimp connection</b>		<b>Contacts for crimp connection (bulk goods in poly bag)</b>					
Type	Male (-)	Female (+)	Male (-)	Male	Female	Male	Female				
Item no.	1050770	1050771	1196766	1457398 1050768 1457400 1050766	1478435 1050769 1478436 1050767	1196770 1196772 1196768 1196771	1196767 1196774 1196769 1196775				
Cross-section	–	–	–	2.5/4 mm <sup>2</sup> / 6 mm <sup>2</sup> (14 AWG / 12 AWG / 10 AWG)	2.5/4 mm <sup>2</sup> / 6 mm <sup>2</sup> (14 AWG / 12 AWG / 10 AWG)	2.5/4 mm <sup>2</sup> / 6 mm <sup>2</sup> (14 AWG / 12 AWG / 10 AWG)	2.5/4 mm <sup>2</sup> / 6 mm <sup>2</sup> (14 AWG / 12 AWG / 10 AWG)				
Cable outer diameter	5 mm ... 8 mm	5 mm ... 8 mm	5 mm ... 8 mm	–	–						
Rated voltage	1500 V (1,500 V UL)	1500 V (1500 V UL)	1500 V (1500 V UL)	–							
Rated current	–	–	–	Max. 35 A Max. 40 A		Max. 38 A (IEC) Max. 50 A (UL)	Max. 26 ... 32 A (IEC) Max. 30 ... 35 A (UL)				
Degree of protection	IP68 (24 h / 2 m)	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			Approval in accordance with UL 6703 and IEC 62852 Pcs./Pkt.: 1000 / 3000 pcs. per roll		Approval in accordance with IEC 62852 and UL 6703 Pcs./Pkt.: 50 / 250 pcs. in a poly bag					




# DC connection technology for field cabling

## Connectors




 Web code: #0358




<p>SUNCLIX DC connectors designed for assembly, with SUNCLIX spring connection</p>						
<p><b>Description</b></p>	<p align="center"><b>Field connectors with spring-cage connection</b></p>					
<p>Type</p>	<p>Male (-)</p>	<p>Female (+)</p>	<p>Male (-)</p>	<p>Female (+)</p>	<p>Male (-)</p>	<p>Female (+)</p>
<p>Item no.</p>	<p><a href="#">1386384</a></p>	<p><a href="#">1386381</a></p>	<p><a href="#">1020775</a></p>	<p><a href="#">1020776</a></p>	<p><a href="#">1284632</a></p>	<p><a href="#">1284634</a></p>
<p>Cross-section</p>	<p>2.5 mm<sup>2</sup> ... 6 mm<sup>2</sup></p>		<p>2.5 mm<sup>2</sup> ... 6 mm<sup>2</sup></p>		<p>6 mm<sup>2</sup> ... 16 mm<sup>2</sup></p>	
<p>Rated voltage</p>	<p>1100 V</p>		<p>1500 V</p>		<p>1500 V</p>	
<p>Rated current</p>	<p>Max. 35 A</p>		<p>Max. 35 A (IEC) / 50 A (UL)</p>		<p>Max. 60 A (IEC)</p>	
<p>Degree of protection</p>	<p>IP66 / IP68 (24 h / 2 m)</p>		<p>IP66 / IP68 (24 h / 2 m)</p>		<p>IP66 / IP68 (2 h / 2 m)</p>	
<p>Product information</p>	<p>Temperature range: -40°C ... +85°C, protection class II, approval in accordance with IEC 62852</p>		<p>Temperature range: -40°C ... +85°C, protection class II, approval in accordance with UL 6703 and IEC 62852</p>		<p>Temperature range: -40°C ... +85°C, protection class II, approval in accordance with IEC 62852</p>	




## DC connection technology for field cabling

Connection systems		 Web code: #0358
SUNCLIX		
<b>Description</b>	<b>DC distributor, cable-based</b>	<b>Adapter set SUNCLIX / MC4</b>
Product information	Connection set with branch line (6 mm <sup>2</sup> ) 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.
Item no.	<a href="#">1030649</a>	<a href="#">1030650</a>
Design	Set of 1x string SUNCLIX male to MC4 female and 1x string from SUNCLIX female to MC4 male (as per product image)	<a href="#">1079531</a>
Trunk line cross-section	6 mm <sup>2</sup>	
Rated voltage	1500 V	1500 V
Rated current	38 A in accordance with IEC 62852	Up to 38 A in accordance with IEC 62852 / UL 6703
Degree of protection	IP68 (1 h / 1 m)	IP68 (1 h / 1 m)
Ambient temperature (operation)	-40°C ... +85°C	-40°C ... +85°C




# DC connection technology for device connection





Preassembled DC device connectors							<b>i</b> 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	
Item no.	1158446	1158445	1158449	1158447	1158451	1158448	
Cross-section	2.5 mm <sup>2</sup>		4 mm <sup>2</sup>		6 mm <sup>2</sup>		
Rated voltage	1500 V		1500 V		1500 V		
Rated current	Max. 26 A		Max. 32 A		Max. 38 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							<b>i</b> Web code: #0359
							
Description	Housing		Wall mount	Contacts		Contacts (bulk goods in poly bag)	
Type	Female	Male		Female	Male	Male	Female
Item no.	1133364	1133365	1146092	1478435 1050769 1478436 1050767	1457398 1050768 1457400 1050766	1196770 1196772 1196768 1196771	1196767 1196774 1196769 1196775
Cross-section				2.5 mm <sup>2</sup> / 4 mm <sup>2</sup> / 6 mm <sup>2</sup> (14 AWG / 12 AWG / 10 AWG)			
Rated voltage	1500 V						
Rated current				2.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> : max. 32 A (ICE) / 35 A (UL) 6.0 mm <sup>2</sup> : max. 38 A (ICE) / 50 A (UL)			
Degree of protection	IP66 / IP68 (24 h / 2 m)						
Product information	Temperature range: -40°C ... +85°C, approval in accordance with IEC 62852 and UL 6703, required accessories: 1146092		Wall mount for securing the device plugs in the housing	Approval in accordance with IEC 62852 and UL 6703 Pcs./Pkt.: 1000 / 3000 pcs. per roll		Approval in accordance with IEC 62852 and UL 6703 Pcs./Pkt.: 50 / 250 pcs. in a poly bag	

Accessories			<b>i</b> Web code: #0362
			
Description	Filler plug	Filler plug	Protective cap
Item no.	1775631	1623478	1785430
Product information	Filler plug for SUNCLIX connectors, IP67 in the cable gland, 1000 V	Filler plug for SUNCLIX connectors, IP67 in the cable gland, 1500 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.

## PRC series AC connection technology

Panel feed-throughs							Web code: #1628		
									
Description	Device plugs with crimp connection			Contact carriers		Contacts			
				With nut	Without nut				
Item no. 3-pos.	1409219	1409220	1409221	1409218	1627608	1409207	1409208	1409209	
Item no. 5-pos.	1409211	1409212	1409213	1409206	1627609				
Conductor cross-section	2.5 mm <sup>2</sup>	4.0 mm <sup>2</sup>	6.0 mm <sup>2</sup>	–	–	2.5 mm <sup>2</sup>	4.0 mm <sup>2</sup>	6.0 mm <sup>2</sup>	
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			–	–	–	–	–	



Installation connectors				
				
Description	Coupling, 3-pos.	Coupling, 5-pos.	Connector, 3-pos.	Connector, 5-pos.
Item no. 8.0 mm ... 21.0 mm	1410661	1410656	1014498	1014530
Conductor cross-section	1.5 mm <sup>2</sup> ... 6.0 mm <sup>2</sup>			
Rated voltage	690 V			
Rated current	35 A			
Connection method	Screw connection			
Insertion cycles	Approx. 100		Approx. 2000	
Product information	Approvals in accordance with IEC 61984, IEC 61535, 2 PFG 1915, UL 2238, UL 2237, DNV GL 7-2.			

PRC special versions		
		
Description	Conductor connector	Cable protective cap
Rated voltage	600 V	
Rated current	25 A	
Cable diameter	9.5 mm ... 12.5 mm	
Item no.	1274812	1274810

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

# Tools

## Tools for PRC series AC device connectors

			
<b>Description</b>	<b>Screw pliers</b>	<b>Crimping pliers</b>	
Conductor cross-section	–	2.5 mm <sup>2</sup> ... 4.0 mm <sup>2</sup>	4.0 mm <sup>2</sup> ... 6.0 mm <sup>2</sup>
Type	UNIFOX-WRENCH	CRIMPFOX-1,6/2,5-ED-4,0	CRIMPFOX-4,0-ED-6,00
Item no.	1212835	1687419	1205859

## Tools for SUNCLIX series DC connectors

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

## Tool for SUNCLIX DC connectors with crimp connection














Mounting and release tool for SUNCLIX crimp module connectors	
<b>Description</b>	<b>PV-A-C-DC-TOOL</b>
Item 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
						Item 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+EMC	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
						Item 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...	-	-







# Modular contact inserts

Modular contact inserts – device side								 Web code: #0537	
	Type	Number of positions	Module slots	PCB connection			Screw connection	Item no.	
					180°	90°			90° with PE
100 insertion cycles	1.5 mm <sup>2</sup>	6	1		1884872	1853531	–		1854019 1583555 <sup>1)</sup>
	1.5 mm <sup>2</sup>	8	1		1884885	1852833	–		1854022 1583568 <sup>1)</sup>
	4 mm <sup>2</sup>	2	1		1884979	1852859	–		1853528 1583542 <sup>1)</sup>
50 insertion cycles	16 mm <sup>2</sup>	4	3		–	1607509	1607516		1607745
	16 mm <sup>2</sup>	5	4		–	1607523	1607530		1607748
	16 mm <sup>2</sup>	7	5		–	1607537	1607544		1607751


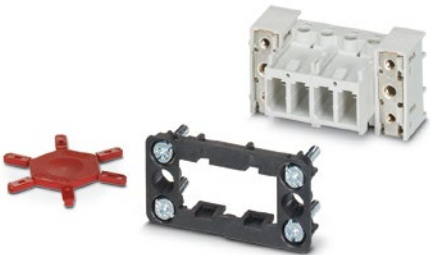
Modular contact inserts – connector side								 Web code: #0536	
	Type	Number of positions	Module slots	Rated current	Rated voltage	Screw connection	Item no.		
100 insertion cycles	1.5 mm <sup>2</sup>	6	1	10 A	250 V		1853476 1583526 <sup>1)</sup>		
	1.5 mm <sup>2</sup>	8	1	10 A	160 V		1852820 1583536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

<sup>1)</sup> Contact insert with PE marking. <sup>2)</sup> Items do not require separate panel-mount 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	Item no.	Type	Item no.	Type	Item no.
VC 1	2	VC-AR 1/2 M	<a href="#">1852972</a>	VC-AR 1/2 M-PEA	1607761 <sup>1)</sup>	VC-AR1-EMV	<a href="#">1853214</a>
VC 2	3	VC-AR 2/3 M	<a href="#">1852985</a>	VC-AR 2/3 M-PEA	1607774 <sup>1)</sup>	VC-AR2-EMV	<a href="#">1853227</a>
VC 3	4	VC-AR 3/4 M	<a href="#">1852998</a>	VC-AR 3/4 M-PEA	1607787 <sup>1)</sup>	VC-AR3-EMV	<a href="#">1853232</a>
VC 4	5	VC-AR 4/5 M	<a href="#">1853007</a>	VC-AR 4/5 M-PEA	1607790 <sup>1)</sup>	VC-AR4-EMV	<a href="#">1853243</a>

<sup>1)</sup> Contact insert with PE marking.

Male contact inserts incl. panel-mount frame and flange						 Web code: #0528	
							
Size	Number of positions / conductor cross-section	Rated voltage	Rated current	Type	Item no.		
VC 1	16 x 1.5 mm <sup>2</sup>	160 V	10 A	VC-AR1/2M-S88-SET	<a href="#">1607394</a>		
	12 x 1.5 mm <sup>2</sup>	250 V	10 A	VC-AR1/2M-S66-SET	<a href="#">1607346</a>		
	4 x 4 mm <sup>2</sup>	400 V	20 A	VC-AR1/2M-S22-SET	<a href="#">1607298</a>		
VC 2	24 x 1.5 mm <sup>2</sup>	160 V	10 A	VC-AR2/3M-S888-SET	<a href="#">1607407</a>		
	18 x 1.5 mm <sup>2</sup>	250 V	10 A	VC-AR2/3M-S666-SET	<a href="#">1607359</a>		
	6 x 4 mm <sup>2</sup>	400 V	20 A	VC-AR2/3M-S222-SET	<a href="#">1607311</a>		
VC 3	32 x 1.5 mm <sup>2</sup>	160 V	10 A	VC-AR3/4M-S8888-SET	<a href="#">1607418</a>		
	24 x 1.5 mm <sup>2</sup>	250 V	10 A	VC-AR3/4M-S6666-SET	<a href="#">1607370</a>		
	8 x 4 mm <sup>2</sup>	400 V	20 A	VC-AR3/4M-S2222-SET	<a href="#">1607322</a>		
VC 4	40 x 1.5 mm <sup>2</sup>	160 V	10 A	VC-AR4/5M-S88888-SET	<a href="#">1607431</a>		
	30 x 1.5 mm <sup>2</sup>	250 V	10 A	VC-AR4/5M-S66666-SET	<a href="#">1607383</a>		
	10 x 4 mm <sup>2</sup>	400 V	20 A	VC-AR4/5M-S22222-SET	<a href="#">1607335</a>		

## Sleeve frames for connectors

### Sleeve frames – connector side

 Web code: #0538



Size	Module slots	Sleeve frame without PE		Sleeve frame with PE	
		Type	Item no.	Type	Item no.
VC 1	2	VC-TR 1/2 M	<a href="#">1852891</a>	VC-TR 1/2 M-PEA	<a href="#">1607059</a>
VC 2	3	VC-TR 2/3 M	<a href="#">1852901</a>	VC-TR 2/3 M-PEA	<a href="#">1607062</a>
VC 3	4	VC-TR 3/4 M	<a href="#">1852914</a>	VC-TR 3/4 M-PEA	<a href="#">1607075</a>
VC 4	5	VC-TR 4/5 M	<a href="#">1852927</a>	VC-TR 4/5 M-PEA	<a href="#">1607088</a>

### Female contact inserts incl. sleeve frames

 Web code: #0529



Size	Number of positions / conductor cross-section	Rated voltage	Rated current	Type	Item no.
VC 1	16 x 1.5 mm <sup>2</sup>	160 V	10 A	VC-TR1/2M-PEA-S88-SET	<a href="#">1607239</a>
	12 x 1.5 mm <sup>2</sup>	250 V	10 A	VC-TR1/2M-PEA-S66-SET	<a href="#">1607191</a>
	4 x 4 mm <sup>2</sup>	400 V	20 A	VC-TR1/2M-PEA-S22-SET	<a href="#">1607143</a>
VC 2	24 x 1.5 mm <sup>2</sup>	160 V	10 A	VC-TR2/3M-PEA-S888-SET	<a href="#">1607250</a>
	18 x 1.5 mm <sup>2</sup>	250 V	10 A	VC-TR2/3M-PEA-S666-SET	<a href="#">1607202</a>
	6 x 4 mm <sup>2</sup>	400 V	20 A	VC-TR2/3M-PEA-S222-SET	<a href="#">1607154</a>
VC 3	32 x 1.5 mm <sup>2</sup>	160 V	10 A	VC-TR3/4M-PEA-S8888-SET	<a href="#">1607263</a>
	24 x 1.5 mm <sup>2</sup>	250 V	10 A	VC-TR3/4M-PEA-S6666-SET	<a href="#">1607215</a>
	8 x 4 mm <sup>2</sup>	400 V	20 A	VC-TR3/4M-PEA-S2222-SET	<a href="#">1607167</a>
VC 4	40 x 1.5 mm <sup>2</sup>	160 V	10 A	VC-TR4/5M-PEA-S88888-SET	<a href="#">1607274</a>
	30 x 1.5 mm <sup>2</sup>	250 V	10 A	VC-TR4/5M-PEA-S66666-SET	<a href="#">1607226</a>
	10 x 4 mm <sup>2</sup>	400 V	20 A	VC-TR4/5M-PEA-S22222-SET	<a href="#">1607178</a>






# Device connectors

Device connections for signals		 Web code: #0515			
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.	<a href="#">1440119</a>	<a href="#">1520068</a>	<a href="#">1424242</a>	<a href="#">1441765</a>
Female	5-pos.	<a href="#">1440106</a>	<a href="#">1520042</a>	<a href="#">1424241</a>	<a href="#">1441778</a>
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









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, two-piece, rear mounting	M12 housing screw connections for reflow process, two-piece, rear mounting, standard
Male	5-pos.		<a href="#">1411943</a>	<a href="#">1414000/1107993</a> (push-pull)	<a href="#">1432350</a>	<a href="#">1027661</a> (push-pull)
Female	5-pos.	<a href="#">1412222/</a> <a href="#">housing 1412506</a>	<a href="#">1411937</a>	<a href="#">1414021/</a> <a href="#">1454492</a> (push-pull)	<a href="#">1432363</a>	<a href="#">1249212</a> (push-pull)
Number of positions		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		PA 6T / 66	
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	THR solder connection

You will find further housings, such as our push-pull connections, in our brochure “M5 to M12 circular connectors” (order no.: 52003132) in the Section “Solder connection, PCB mounting, for reflow and wave soldering processes”.






# Device connectors

Device connections for data				 Web code: #0515
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	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 connection

PCB terminal blocks, signals, and power				 Web code: #0391
				
<b>Description</b>	<b>Push-in spring connection, horizontal to the PCB for SMD applications</b>	<b>Push-in spring connection, angled (45°) to the PCB</b>	<b>Push-in spring connection, horizontal to the PCB</b>	<b>Push-in spring connection, horizontal to the PCB for THR applications</b>
Product family	PTSM 0,5/...-H-SMD	SPTAF 1/...-LL	PTS 1,5	SPT-THR 1,5/...H
Product example Item no.	<a href="#">1771059</a>	<a href="#">1864312</a>	<a href="#">1792892</a>	<a href="#">1822781</a>
Number of positions	2 ... 8	2 ... 16	2 ... 12	2 ... 12
Nominal cross-section	0.5 mm <sup>2</sup>	1.0 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>
Pitch	2.5 mm	3.5 mm	5 mm	3.5 / 3.81 mm
Rated voltage IEC / UL	160 V / 150 V	160 V / 300 V	400 V / 300 V	160 V / 300 V
Nominal current IEC / UL	6 A / 5 A	13.5 A / 7 A	16 A / 10 A	17.5 A / 10 A
				
<b>Description</b>	<b>Lever Push-in connection, angled (45°) to the PCB</b>	<b>Push-in spring connection, horizontal to the PCB</b>	<b>Push-in spring connection, angled (60°) to the PCB</b>	
Product family	SPTA-THR 2,5	SPT-THR 2,5/...-V	SPTA-THR 2,5	
Product example Item no.	<a href="#">1071205</a>	<a href="#">1017524</a>	<a href="#">1366007</a>	
Number of positions	2 ... 12	2 ... 12	1 ... 12	
Nominal cross-section	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	6 mm <sup>2</sup>	
Pitch	5.08 mm	5.0 mm	5.0 mm	
Rated voltage IEC / UL	400 V / 300 V	24 V / 20 V	24 V / 20 V	
Nominal current IEC / UL	320 A / 200 A	400 A / 300 A	400 A / 300 A	
Product information	THR soldering	THR soldering	THR soldering	

# PCB connection

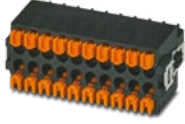

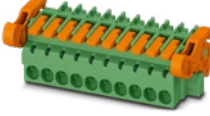





PCB terminal blocks, power				 Web code: #0391
				
Description	Push-in spring connection, horizontal to the PCB	Lever Push-in connection, horizontal to the PCB	Push-in spring connection, vertical to the PCB	Screw connection, horizontal to the PCB
Product family	SPT 16/...-H	LPT 16/	SPT 35/...-V	MKDSP 50
Product example Item no.	<a href="#">1735817</a>	<a href="#">1119814</a>	<a href="#">1845373</a>	<a href="#">1856155</a>
Number of positions	1 ... 9	1 ... 8	1 ... 5	1 ... 5
Nominal cross-section	16 mm <sup>2</sup>	16 mm <sup>2</sup>	25 mm <sup>2</sup>	70 mm <sup>2</sup>
Pitch	10 mm	10 mm	15 mm	17.5 mm
Rated voltage IEC / UL	1000 V / 600 V	1000 V / 600 V	1000 V / 600 V	1000 V / 600 V
Nominal current IEC / UL	76 A / 66 A	76 A / 66 A	125 A / 101 A	192 A / 160 A
Product information		Also available with 15 mm pitch with 1000 V UL approval		Suitable for connecting aluminum conductors

# Panel feed-throughs

High-current feed-through terminal blocks, power				 Web code: #0456
				
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	PWO 16-UW / PWO 16-POT	TW 50	TW 95
Product example    Item no.	<a href="#">3073377</a>	<a href="#">1844390</a>	<a href="#">1708749</a>	<a href="#">1708756</a>
Number of positions	1-pos. alignable	1-pos. alignable	1 ... 6	1 ... 6
Nominal cross-section	25 mm <sup>2</sup>	16 mm <sup>2</sup>	50 mm <sup>2</sup>	95 mm <sup>2</sup>
Panel thickness	1 mm ... 6 mm	1 mm ... 6 mm	1 mm ... 5 mm	1 mm ... 5 mm
Rated voltage IEC / UL	630 V / 600 V	1000 V / 600 V	1000 V / 600 V	1000 V / 600 V
Nominal current IEC / UL	101 A / 112.5 A	76 A / 76 A	150 A / 150 A	232 A / 200 A
Product information	Suitable for connecting aluminum conductors	POT versions suitable for molding Tool-free, time-saving Push-in connection	Suitable for connecting aluminum conductors	Suitable for connecting aluminum conductors



# PCB connection

PCB connectors, signals, and power				i Web code: #0425	
					
Description	Push-in spring connection with latching flange	Push-in spring connection with latching flange	Lever Push-in connection with lock-and-release locking	Lever Push-in connection	
Product family	DFMC 0,5/...-ST-RF	FMC 1,5/...-ST-RF	LPC 1,5/...-ST-LR	LPC 2,5/...-ST	
Product example Item no.	<a href="#">1715737</a>	<a href="#">1952050</a>	<a href="#">1849191</a>	<a href="#">1110584</a>	
Number of positions	2 ... 16	2 ... 16	2 ... 16	2 ... 20	
Nominal cross-section	0.5 mm <sup>2</sup> (20 AWG)	1.5 mm <sup>2</sup> (16 AWG)	1.5 mm <sup>2</sup> (16 AWG)	2.5 mm <sup>2</sup> (12 AWG)	
Pitch	2.54	3.5 mm	3.81 mm	5.08 mm	
Rated voltage IEC / UL	160 V / 150 V	160 V / 150 V	160 V / 150 V	320 V / 300 V	
Nominal current IEC / UL	6 A / 6 A	8 A / 8 A	8 A / 8 A	16 A / 16 A	
					
Description	Lever Push-in connection with middle flange	Energy bus system with insulation displacement connection technology	Lever Push-in connection	Screw connection with screw flange	
Product family	LPC 6/...-STL	PC 6/...-ST-BUS	LPC 16 HC/...-ST	PC 35 HC/...-STF	
Product example Item no.	<a href="#">1716942</a>	<a href="#">1044738</a>	<a href="#">1716818</a>	<a href="#">1762628</a>	
Number of positions	2 ... 6	2 ... 3	1 ... 6	2 ... 6	
Nominal cross-section	6 mm <sup>2</sup> (8 AWG)	16 mm <sup>2</sup> (6 AWG)	16 mm <sup>2</sup> (4 AWG)	35 mm <sup>2</sup> (2 AWG)	
Pitch	7.62 mm	7.62 mm	10.16 mm	15.0 mm	
Rated voltage IEC / UL	1000 V / 600 V	1000 V / 600 V	1000 V / 600 V	1000 V / 600 V	
Nominal current IEC / UL	41 A / 35 A	32 A / 30 A	76 A / 66 A	125 A / 115 A	

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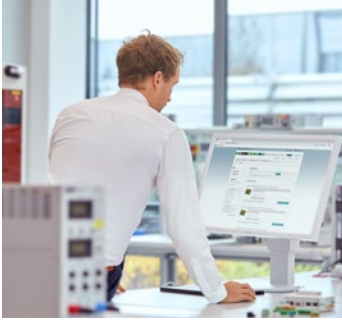
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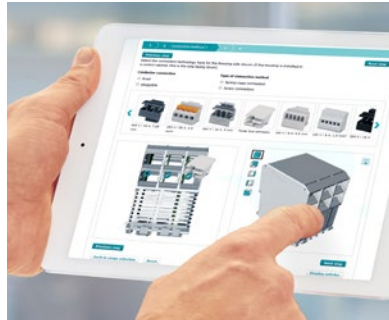
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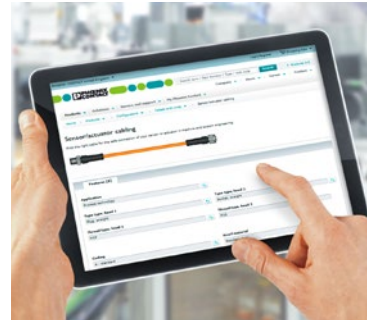
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Housing parts and connection technology are easy to configure



Cable and assembly systems can be matched easily



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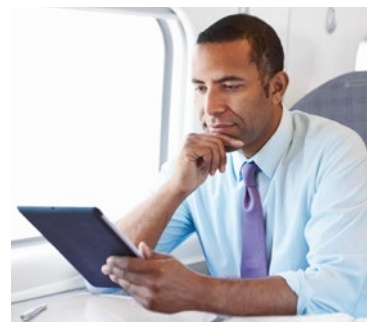
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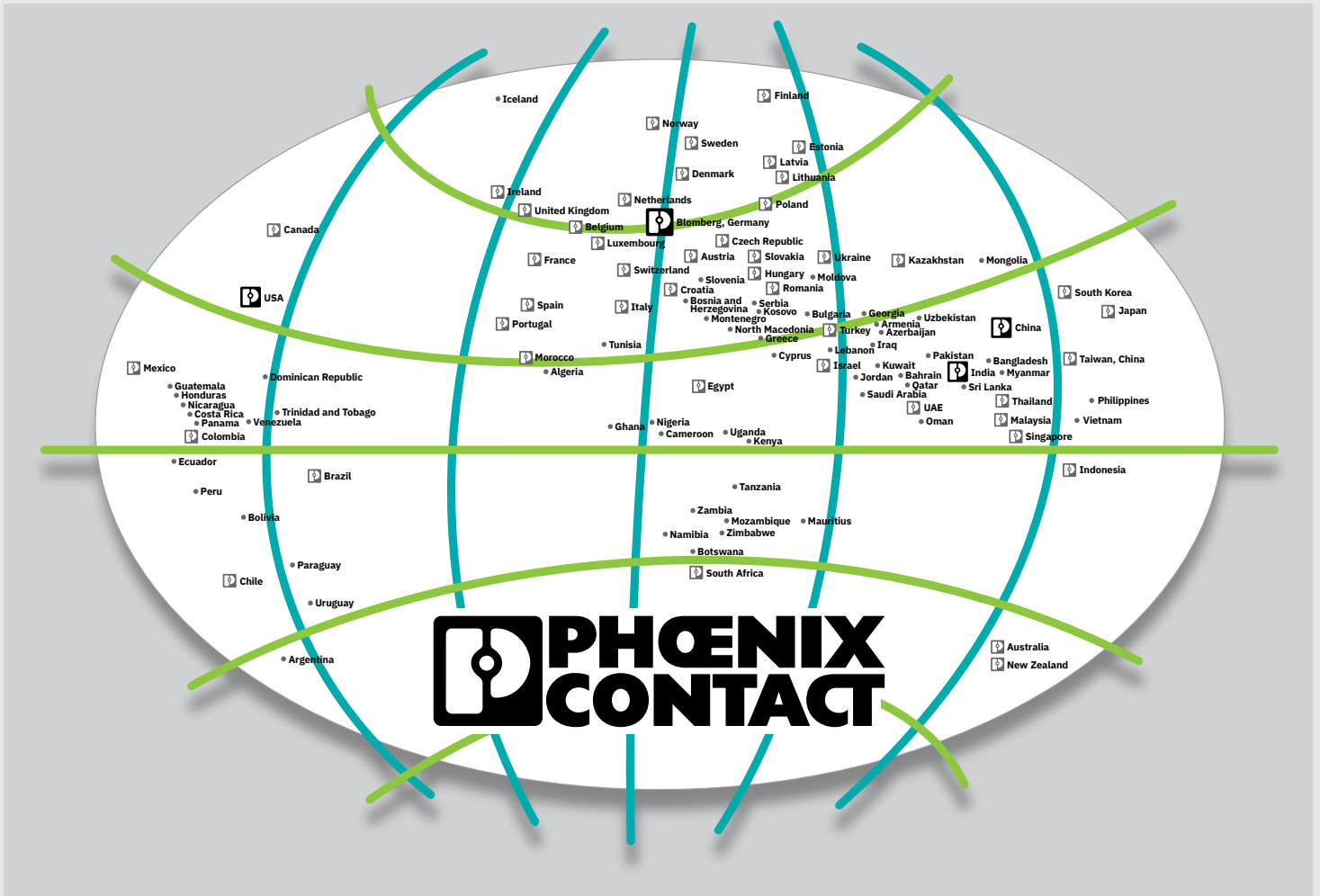
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## Open communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. We are known for producing future-oriented products and solutions for the electrification, networking, and automation of all sectors of the economy and infrastructure. With a global network reaching across more than 100 countries with over 21,000 employees, we maintain close relationships with our customers, something we believe is essential for our common success.

Our wide range of innovative products makes it easy for our customers to implement the latest technology in a variety of applications and industries. This especially applies to the target markets of energy, infrastructure, industry, and mobility.

You can find your local partner at  
[phoenixcontact.com](https://www.phoenixcontact.com)

