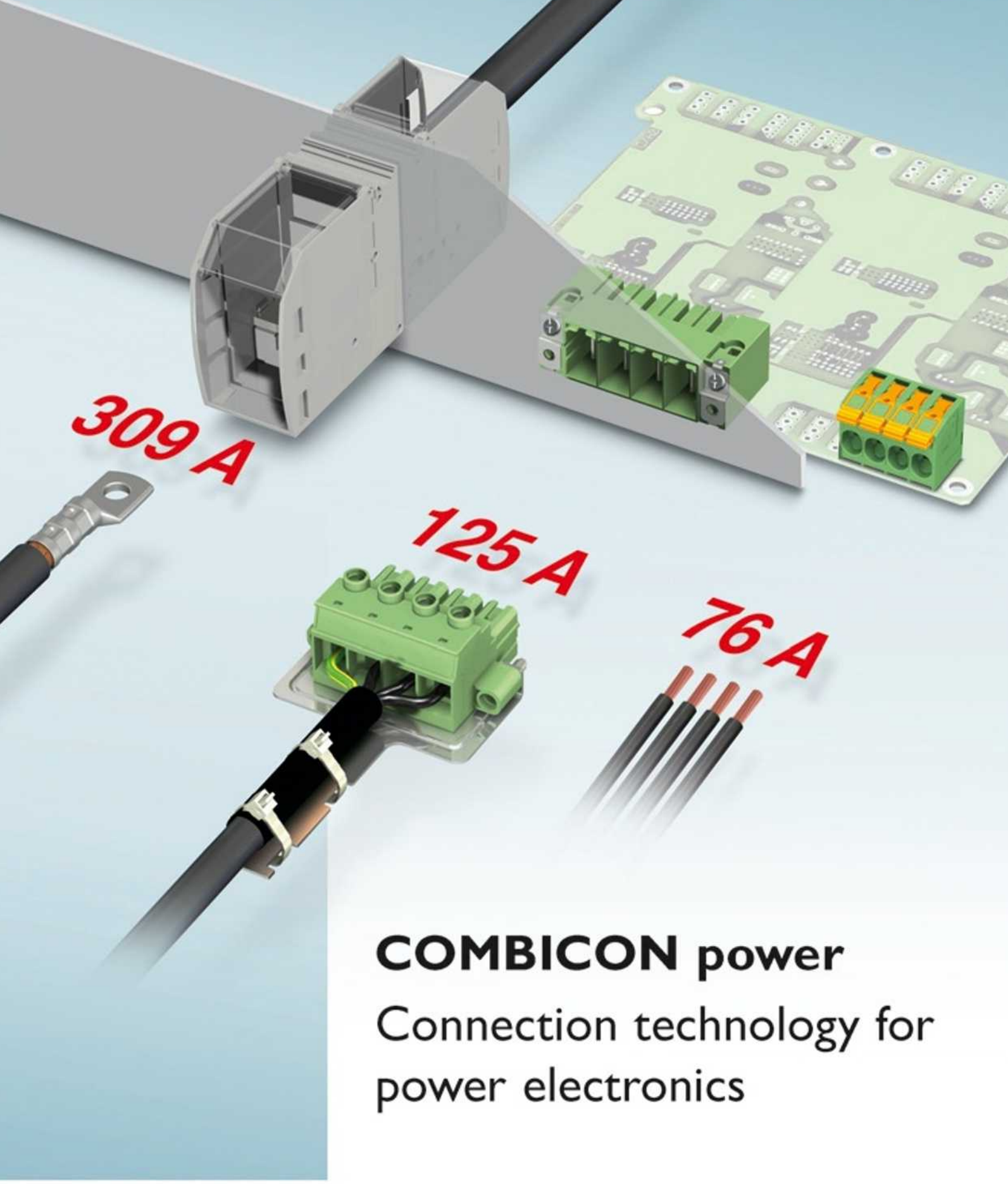
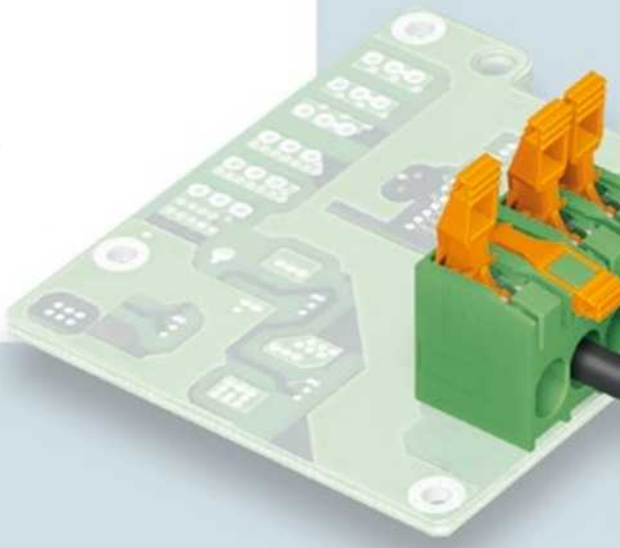


COMBICON power

Connection technology for power electronics

PHOENIX CONTACT
INSPIRING INNOVATIONS

Plug-in connectors, PCB, and feed-through terminal blocks for power electronics



COMBICON power is the power electronics range for plug-in connectors, PCB terminal blocks, and feed-through terminal blocks.

More and more functions and components are being accommodated on printed circuit boards. This is why COMBICON power PCB connections offer from 16 A to 125 A. The range of feed-through terminal blocks has been developed especially for devices in the upper power spectrum, and offers panel feed-throughs up to 309 A.

With its extensive range, Phoenix Contact offers you the perfect connection for power electronics.

COMBICON
feed-through terminal blocks
- Currents up to 309 A
- Voltage up to 600 V UL
- Conductor cross section up to 150 mm²

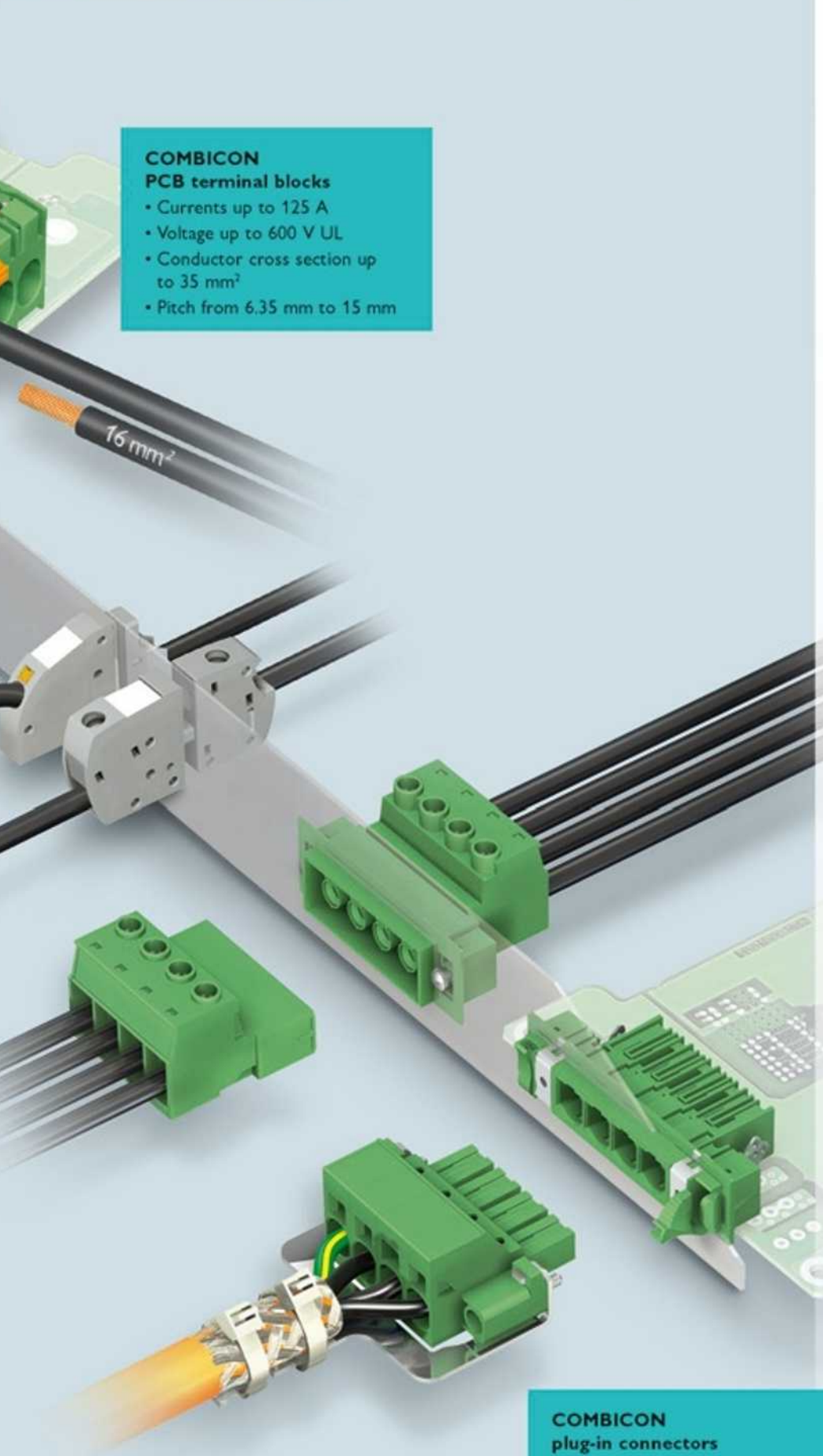
The right connection technology for every application

Variable frequency drives

Frequency inverters

Power supply units

Solar inverters



COMBICON
PCB terminal blocks
- Currents up to 125 A
- Voltage up to 600 V UL
- Conductor cross section up to 35 mm²
- Pitch from 6.35 mm to 15 mm

COMBICON
plug-in connectors
- Currents up to 125 A
- Voltage up to 600 V UL
- Conductor cross section up to 35 mm²
- Pitch from 5 mm to 15 mm

Contents

Plug-in connectors for power electronics

COMBICON power plug-in connectors provide professional solutions for user-friendly connections in power electronics up to 125 A.

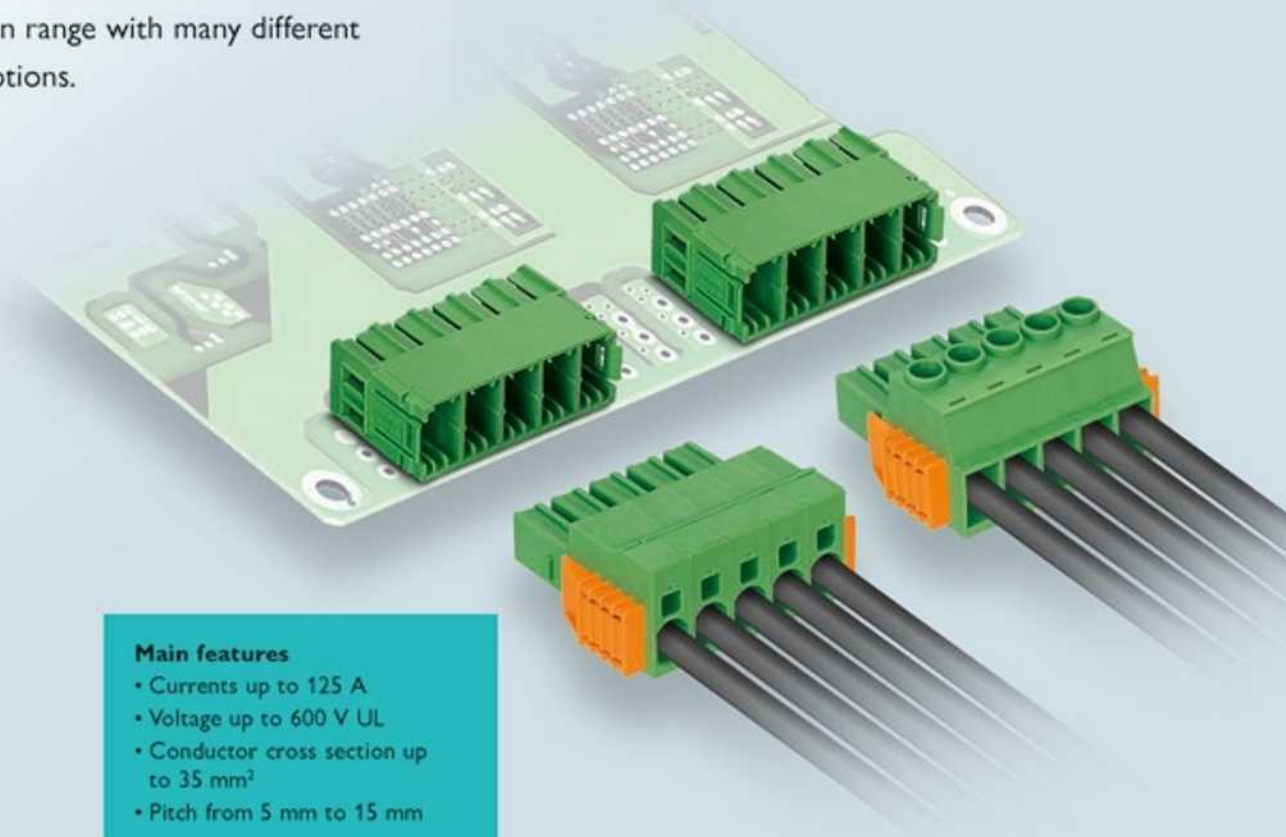
In addition to the proven screw connection with tension sleeve principle, the push-in spring technology offers fast and tool-free conductor connection. A fixed connection is essential for applications which experience high vibrations. This can be achieved with a screw flange or the new automatic click and lock system.

COMBICON power plug-in connectors therefore offer a consistent and easy-to-maintain range with many different combination options.

Connection technologies for plug-in connectors

Screw connection with tension sleeve

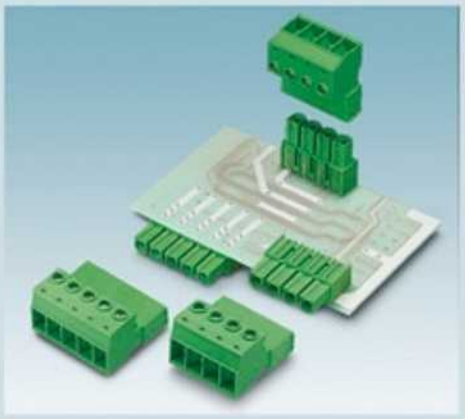
Push-in spring connection



Main features

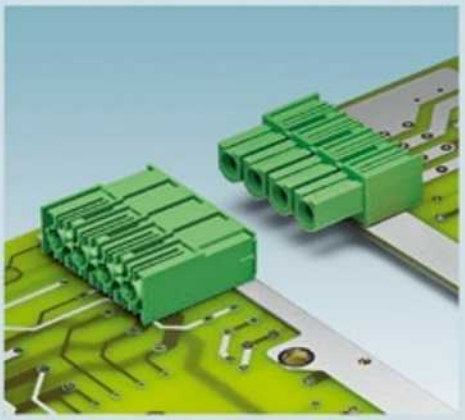
- Currents up to 125 A
- Voltage up to 600 V UL
- Conductor cross section up to 35 mm²
- Pitch from 5 mm to 15 mm

Advantages at a glance



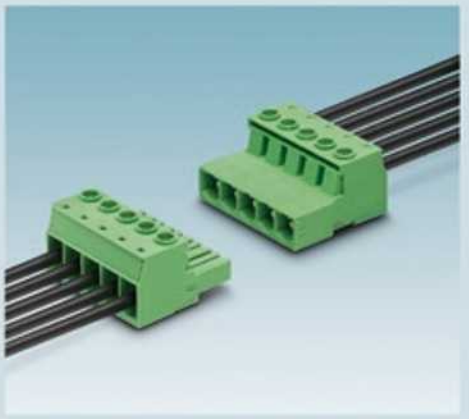
Inverted contact systems

Optimum protection against contact with the current carrying contacts



PCB/PCB connection

By using the inverted versions, PCB/PCB connections are possible



Free-hanging cable-to-cable connection

Two plugs as free-hanging connection

Compact designs

Unrestricted 600 V UL approvals for pitches of 7.62 mm

Shield function

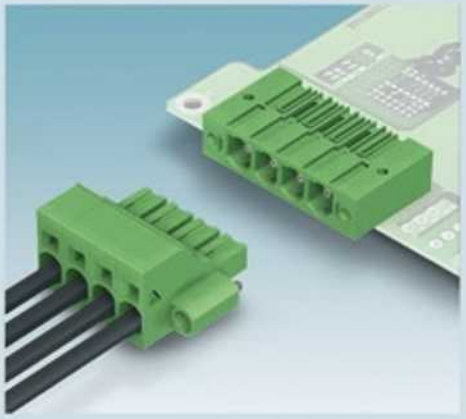
Connects the braided shield connector to fulfill EMC requirements and for additional strain relief

Integrated double steel spring

This covering spring provides additional safety in the event of power and temperature fluctuations

Click and lock

Automatically locks the plug-in connection during the plug-in process, with a space-saving design



Screw flange

Vibration-resistant connection with threaded flange

TWIN plug

Connects two conductors on one electrical potential

PCB terminal blocks for power electronics

COMBICON power PCB terminal blocks stand out thanks to a varied range of high-performance connections up to 125 A.

The PCB terminal blocks offer numerous connection options. The conductor connection is established via a reliable screw connection, a convenient spring-cage connection and push-in spring connection or the latest push-lock spring connection. Conductors can be connected to conductor cross sections of up to 35 mm².

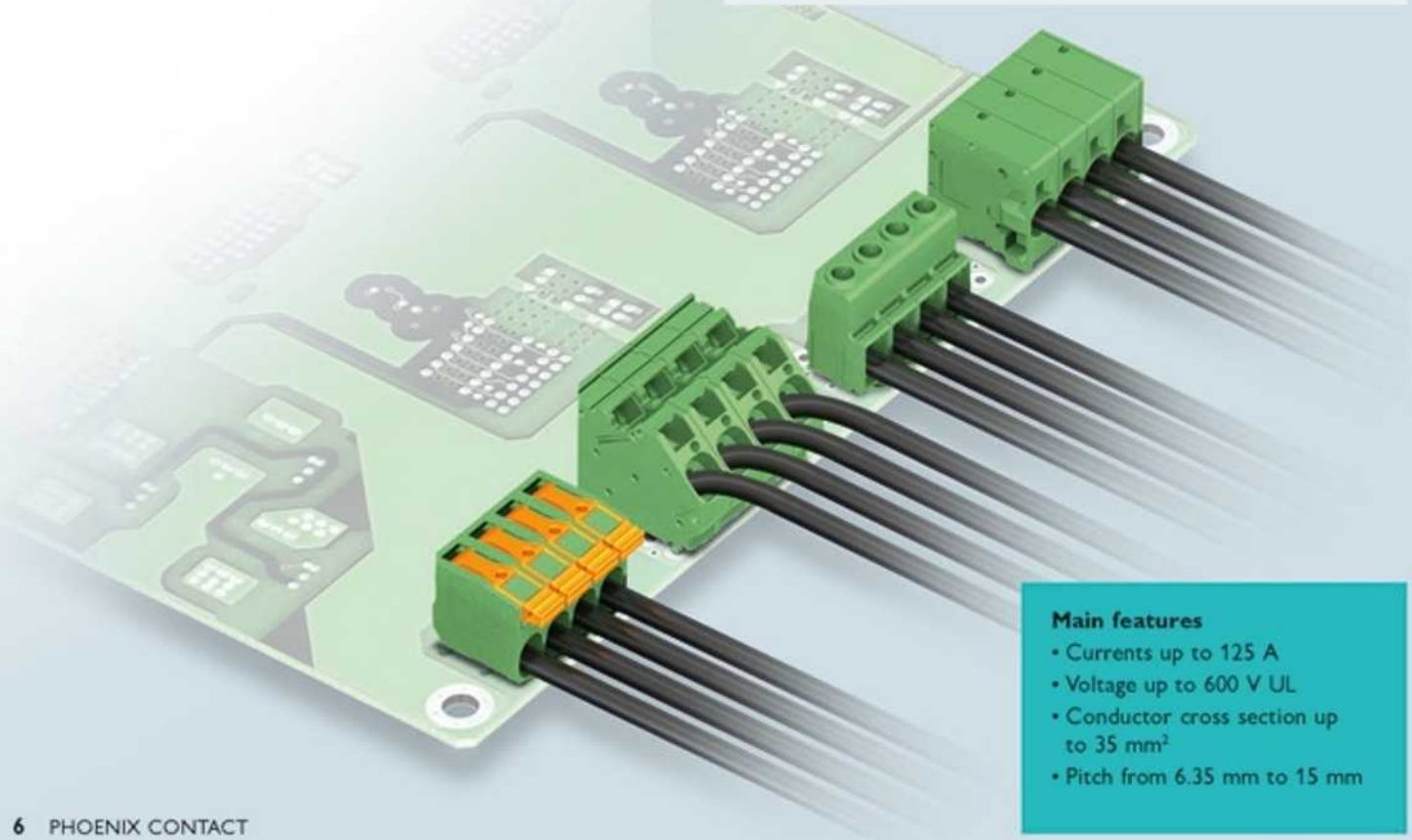
Connection technologies for PCB terminal blocks

Push-in spring connection

Screw connection with tension sleeve

Spring-cage connection

Push-lock spring connection



Main features

- Currents up to 125 A
- Voltage up to 600 V UL
- Conductor cross section up to 35 mm²
- Pitch from 6.35 mm to 15 mm

Advantages at a glance

Easy keying

Color coding of positions, thanks to modular design

Compact design

Unrestricted 600 V UL approvals for compact pitches of 6.35 mm

Easy marking

Individual labeling with SK strips, zack marker strip or direct imprinting

Integrated test connection

Continuously monitors operating states

Safe mounting flange

Relieves the strain on solder pins thanks to additional screw connection to the mounting flanges

Plug-in jumpers

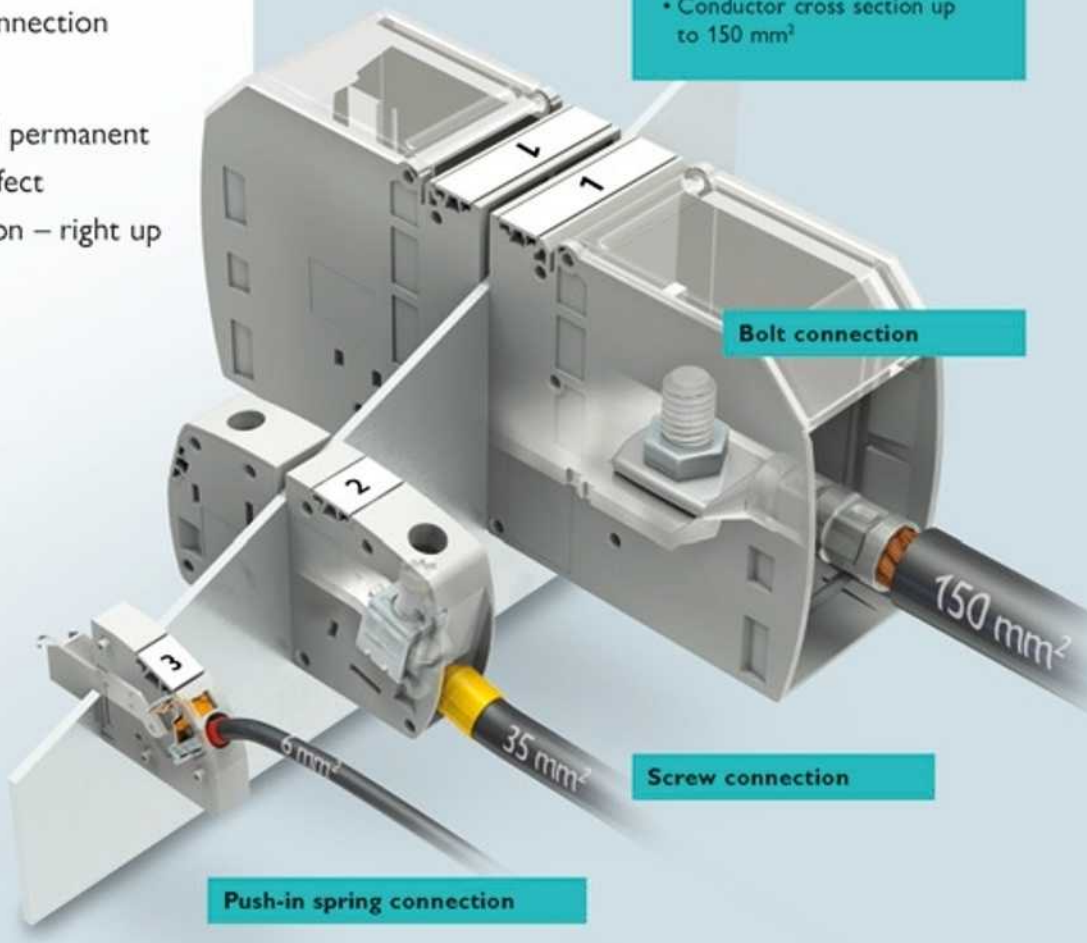
Easy potential distribution, e.g., via star-delta circuits

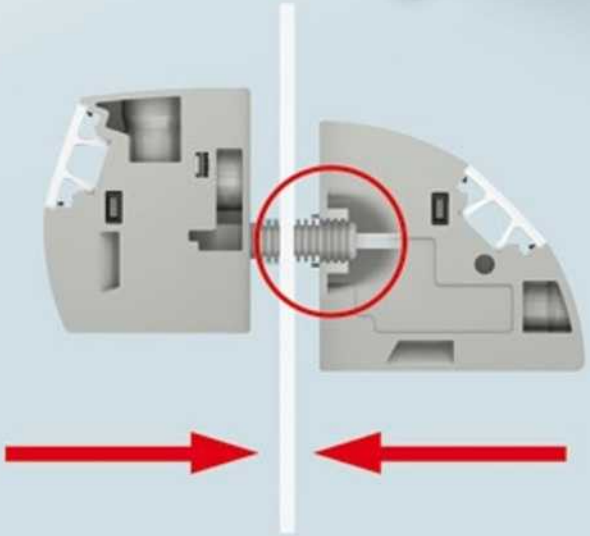
Feed-through terminal blocks for power electronics

With Phoenix Contact's COMBICON power feed-through terminal blocks, you are free to choose the connection technology.

The range includes plug-in and permanent connections. We have the perfect connection for every application – right up to 309 A.

Main features
- Currents up to 309 A
- Voltage up to 600 V UL
- Conductor cross section up to 150 mm²





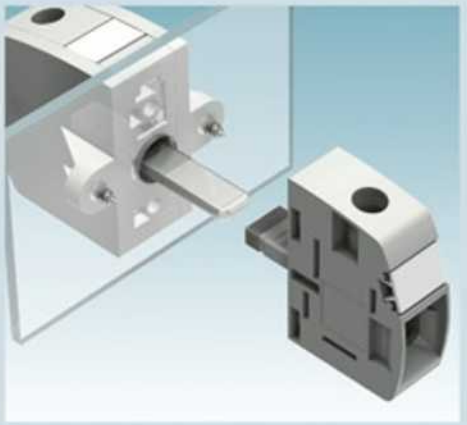
Easy mounting – secure snapping

The terminal blocks consist of an internal and external element. These pass through the housing panel and snap together easily without the need for tools. The engagement mechanism ensures a tight fit, however thick the panel.

Alternative mounting for higher loads

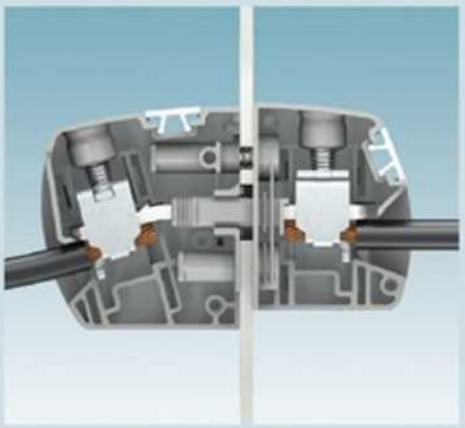
Screws

Rivets

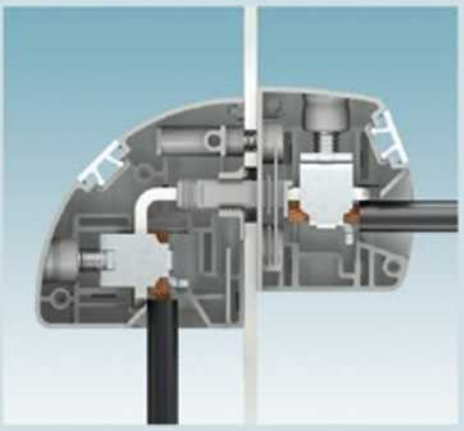


Flanges

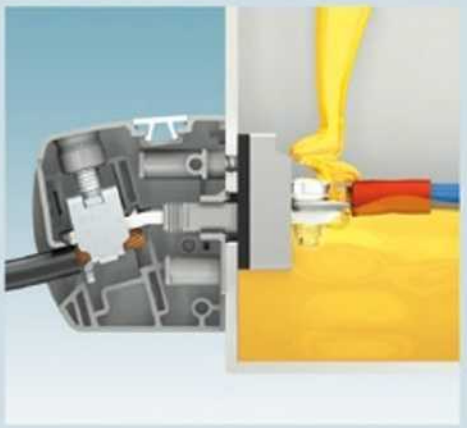
The right connection for every installation type



Horizontal

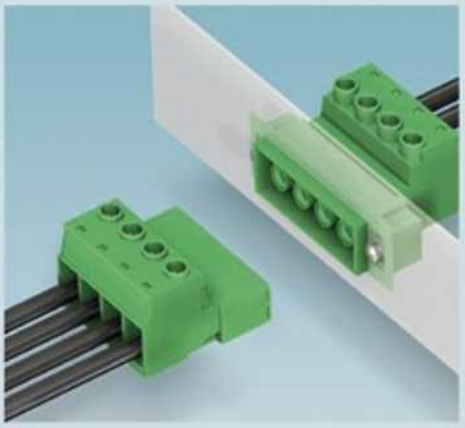


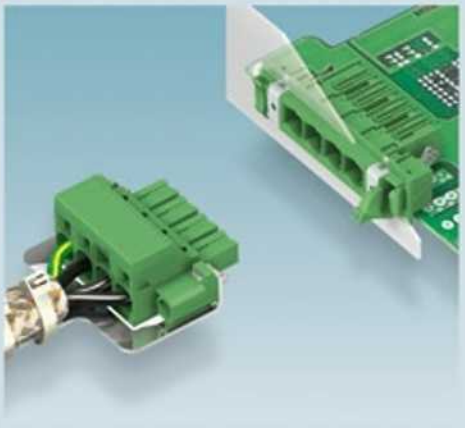
Vertical

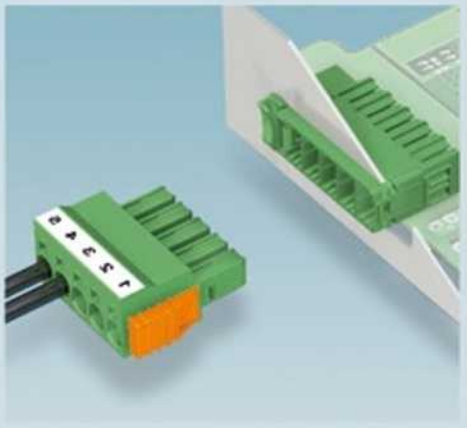


Sealed internally

Plug-in feed-through terminal blocks







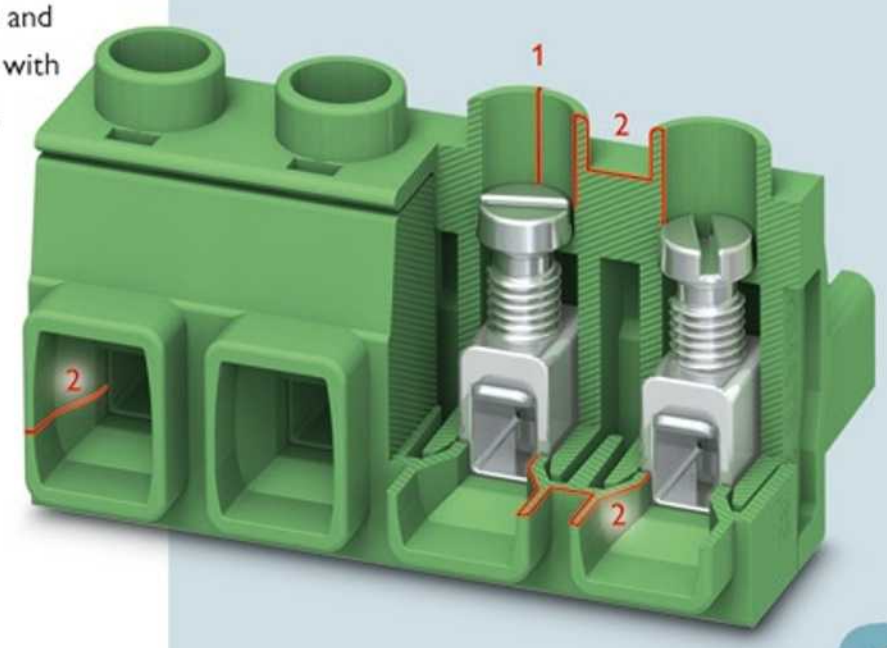
The plug-in feed-through terminal blocks consist of the plug and the DFK header of the PC 4 to PC 35 series. The terminal blocks are inserted into the opening of the housing and mounted using the classic screw fixing or tool-free snap-lock mechanism into a section of the housing.

UL certification – technical information about the PCB connection

Approvals such as UL/CUL continue to raise questions for the device developer. As a responsible manufacturer of device connection technology, we develop and test our products in such as way that our customers do not encounter any problems with international approval for their devices.

UL recognizes terminal boxes and plug-in connectors as individual components (UL 1059). In the end application, components undergo final evaluation and are approved for operation together with the device (UL 508 (C) and UL 840).

When plugged in, COMBICON power plug-in connectors fulfill all requirements of the increased contact protection for electrical power drives according to IEC 61800-5-1.



Air and creepage distances

For safety reasons, the stipulated air and creepage distances must be adhered to for all UL approvals.

The clearance (1) is the shortest straight-line distance between two leading objects, while the creepage distance (2) is the shortest distance between two leading objects along the surface of an insulation material.

Product standards

UL 1059 "Terminal Blocks"

In order for Phoenix Contact products to be able to be used in industrial applications without restrictions, they are generally tested and recognized in accordance with UL 1059.

The following table lists the air and creepage distances required for the components.

The use group refers to the later area of application of the termination device.

Use group	Definition	Maximum voltage (V)	Required distances (mm)	
			Clearance	Creepage distance
A 	Operating elements, consoles, and similar	150 300 600	12.7 19.1 25.4	19.1 31.8 50.8
B 	Conventional devices, including office and electronic data processing equipment and similar	150 300 600	1.6 2.4 9.5	1.6 2.4 12.7
C 	Industrial applications, without restrictions	150 300 600	3.2 6.4 9.5	6.4 9.5 12.7
D 	Industrial applications, operating equipment with limited rating	300 600	1.6 4.8	3.2 9.5

Device standards

UL 508 "Industrial control equipment"

Terminal blocks, which are recognized according to UL 1059, meet the requirements of UL 508 for field wiring terminal blocks and can thus be used in accordance with this standard without restriction. UL 508 also permits alternative rating in accordance with UL 840.

UL 508 C "Power conversion equipment"

This UL standard applies specifically to power electronics (motor controllers, frequency inverters, etc.). The requirements for field wiring terminal blocks are similar to the specifications of UL 508. Alternative rating in accordance with UL 840 is also possible here.

UL 840 "Insulation coordination including clearances and creepage distances for electrical equipment"

This standard describes an alternative procedure for designing the insulation of end products for defined ambient conditions (surge voltage category, pollution degree, material index), provided that this is permitted by the device standard.

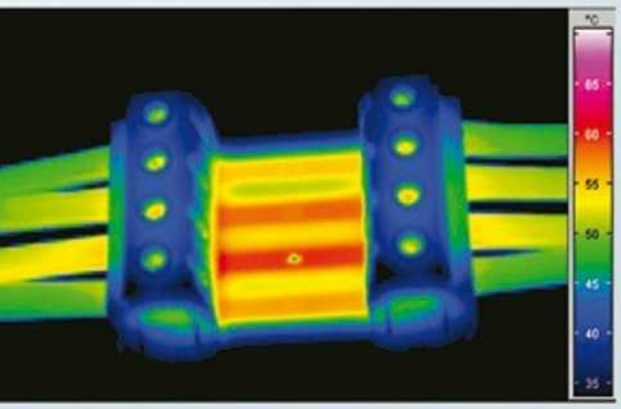
In accordance with UL 840 (3rd edition 2005), the following procedures are carried out to determine air and creepage distances:

1. Equivalent clearances
   Not meeting the clearance required in the device standard is permitted if the termination device has passed one of the surge voltage tests described in UL 840 (Table 7.1*) without sparkover. The amount of surge voltage depends on the clearance required in the product standard.
2. Clearances for limited surge voltages
   If it is ensured that surge voltages occurring during operation do not exceed a specified maximum value, the required clearances for the known pollution degree can also be determined in accordance with Table 8.1*.
3. Creeping distances
   The minimum requirements described in Table 9.1* for general creeping distances and those especially for PCBs must be met, taking into consideration the operating voltage, pollution degree, and creep resistance of the material.

* Tables in accordance with Standard UL 840

High-performance on the PCB
PCB layout for 125 A

In cooperation with high-current PCBs, the plug-in connectors from the COMBICON power range enable a current carrying capacity of up to 125 A. New options for the device design arise from various PCB production technologies. The necessary functions and boards can thus be grouped together on a single PCB, which reduces the number of devices required.
Further assembly procedures and expensive additional device wiring can also be avoided.



Thermal imaging of a test application with 125 A

Three different technologies are used in PCB production:

1. Multi-layer technology
- Up to maximum 210 µm on the outer layers
- Up to maximum 400 µm on the inner layers
- Advantages:
  Better heat distribution
  Higher currents transported
  Replacement for stamping and bending constructions

2. Thick copper technology
- Solid copper core internal layers
- Internal layers 0.6 – 2 mm
- Various asymmetrical layer structures also possible
- Advantages:
  Fewer interfaces
  No through-contacting necessary
  Patented high-current technology

3. Wire-writing technology
- Enameled wires inside the PCB
- Connects the contact points using modern microwelding technology
- Advantages:
  High current densities through additional wires
  Control and power sections possible on one PCB

3 steps to having your device approved according to UL 508 (C) and UL 840

1. Product standards

Approval	Use group	Pollution degree	Rated insulation voltage		Rated current
UL 1059	B		600 V	-	50 A
	C		600 V	-	50 A
	D		-	-	-
IEC 60664		2	1000 V	-	41 A
		3	1000 V	-	41 A

Approval for the individual product according to UL 1059 can be found next to or under the product photos in use groups B, C, and D or according to IEC 60664 in pollution degrees 2 and 3.

2. Possible combinations

UL 508 (C)
250 V - 16 A
–
300 V - 10 A
UL 840
320 V - 16 A
250 V - 16 A

In the middle of the array, you will find the approvals of all suitable combinations of male and female contacts.

3. Device standards

UL 508 (C)
250 V - 16 A
–
300 V - 10 A

… according to UL 508 (C)

The values in the turquoise-colored field show the approval values of the device standard in use groups for UL 508 (C) (see page 11).

UL 840
320 V - 16 A
250 V - 16 A

… according to UL 840

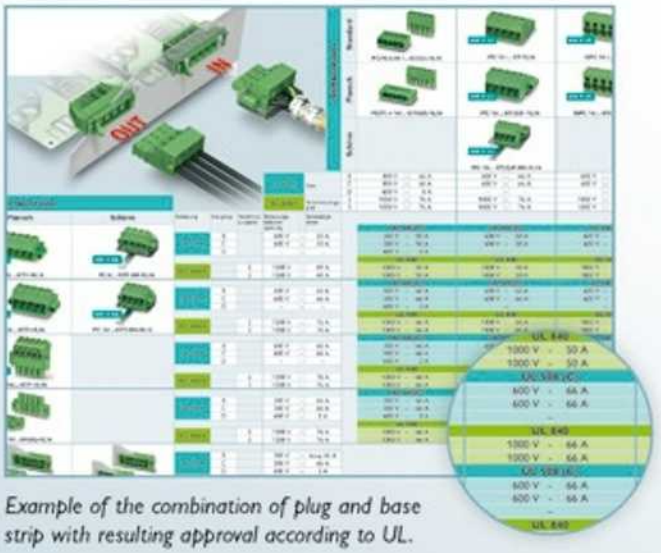
The values in the bright green field result from alternative calculations according to UL 840 in pollution degrees 2 and 3. The requirement for the specified values is fulfilling the points specified on page 11 under UL 840.

600 V UL

This button displays all products in the COMBICON power range which fulfill the air and creepage distances, including in the case of field wiring applications for unrestricted 600 V UL approval.

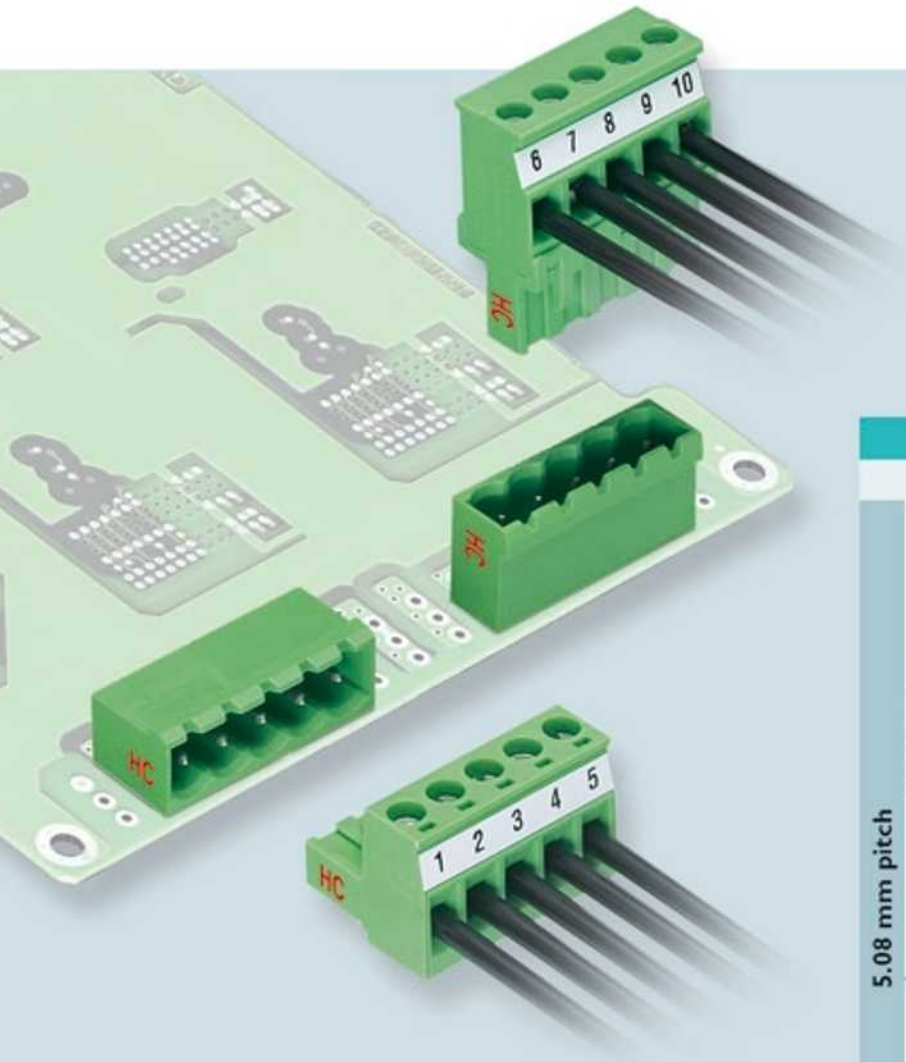
The arrays on the following pages should help you obtain approval for your device quickly and reliably.

You can find approvals in the product standard according to UL 1059 and IEC 60664 in the left-hand column and the top row. Furthermore, each array provides information about which resulting device standards apply according to UL 508 and UL 840 for a plug and appropriate base strip combination.



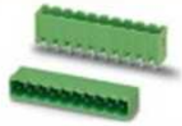
Example of the combination of plug and base strip with resulting approval according to UL.

Plug-in connectors for conductor cross sections up to 2.5 mm²



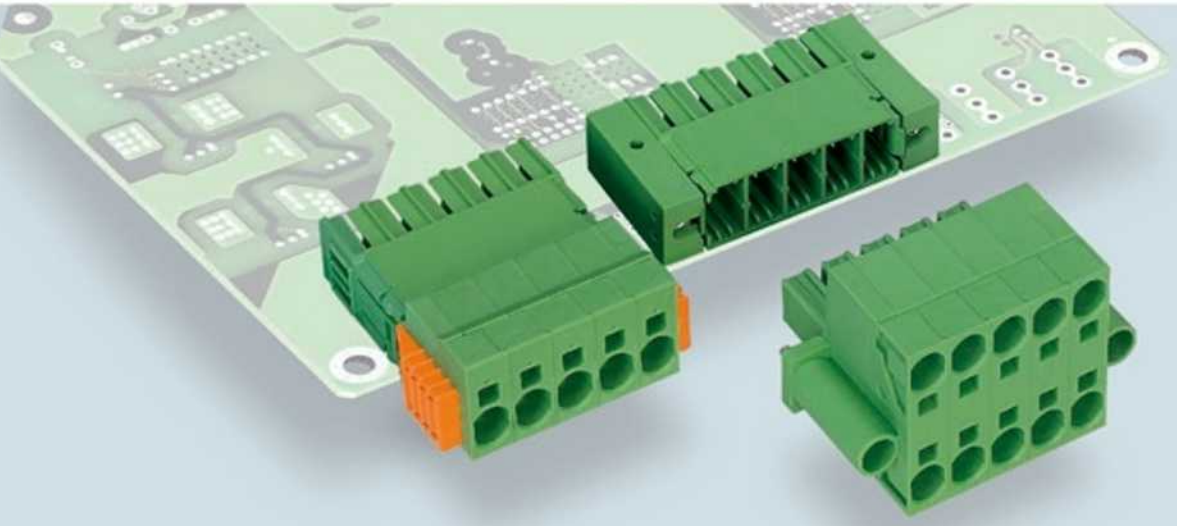
		Female contacts		
		Standard	Flange	Approval
5.08 mm pitch	AWG 30 – 12	MSTB 2,5 HC/...-ST-5,08	MSTB 2,5 HC/...-STF-5,08	UL 1059, IEC 60664
		MSTBT 2,5 HC/...-ST		UL 1059, IEC 60664
		MVSTB(R/W) 2,5 HC/...-ST-5,08	MVSTB(R/W) 2,5 HC/...-STF-5,08	UL 1059, IEC 60664
	AWG 26 – 12	FKC 2,5 HC/...-ST-5,08	FKC 2,5 HC/...-STF-5,08	UL 1059, IEC 60664
		IC(V) 2,5 HC/...-G-5,08	IC(V) 2,5 HC /...-GF-5,08	UL 1059, IEC 60664
7.62 mm pitch	AWG 24 – 12	600 V UL GMSTB 2,5 HCV/...-ST-7,62		UL 1059, IEC 60664
		GIC 2,5 HC/...-G-7,62		UL 1059, IEC 60664

2.5 mm²

Male contacts		5.08 mm pitch		7.62 mm pitch	
		AWG 30 – 12	AWG 26 – 12	AWG 24 – 12	
		2.5 mm²			
Standard		 MSTB(V)A 2,5 HC/...-G-5,08	 FKIC 2,5 HC/...ST-5,08	 GMSTBA 2,5 HC/...-G-7,62	 600 V UL GIC 2,5 HCV/...-ST-7,62
Flange		 MSTB(V)2,5 HC/...-GF-5,08	 FKIC 2,5 HC/...-STF-5,08		
UL 1059 – Use group	B	250 V - 16 A	250 V - 16 A	250 V - 18.5 A	600 V - 16 A
	C	– - –	– - –	– - –	600 V - 16 A
	D	300 V - 10 A	300 V - 10 A	300 V - 10 A	– - –
IEC 60664 – Pollution degree	2	320 V - 16 A	320 V - 16 A	630 V - 16 A	1000 V - 16 A
	3	250 V - 16 A	320 V - 16 A	400 V - 16 A	1000 V - 16 A

Use group	Pollution degree	Rated insulation voltage	Rated current	MSTB(V)A 2,5 HC/...-G-5,08	FKIC 2,5 HC/...ST-5,08	GMSTBA 2,5 HC/...-G-7,62	GIC 2,5 HCV/...-ST-7,62
				UL 508 (C)	UL 508 (C)		
B		250 V	16 A	250 V - 16 A	250 V - 16 A		
C		–	–	–	–		
D		300 V	10 A	300 V - 10 A	300 V - 10 A		
				UL 840	UL 840		
	2	320 V	16 A	320 V - 16 A	320 V - 16 A		
	3	250 V	16 A	250 V - 16 A	250 V - 16 A		
				UL 508 (C)	UL 508 (C)		
B		250 V	16 A	250 V - 16 A	250 V - 16 A		
C		–	–	–	–		
D		300 V	10 A	300 V - 10 A	300 V - 10 A		
				UL 840	UL 840		
	2	320 V	16 A	320 V - 16 A	320 V - 16 A		
	3	250 V	16 A	250 V - 16 A	250 V - 16 A		
				UL 508 (C)	UL 508 (C)		
B		250 V	16 A	250 V - 16 A	250 V - 16 A		
C		–	–	–	–		
D		300 V	10 A	300 V - 10 A	300 V - 10 A		
				UL 840	UL 840		
	2	320 V	16 A	320 V - 16 A	320 V - 16 A		
	3	250 V	16 A	250 V - 16 A	250 V - 16 A		
				UL 508 (C)	UL 508 (C)		
B		250 V	16 A	250 V - 16 A	250 V - 16 A		
C		–	–	–	–		
D		300 V	10 A	300 V - 10 A	300 V - 10 A		
				UL 840	UL 840		
	2	320 V	16 A	320 V - 16 A	320 V - 16 A		
	3	250 V	16 A	250 V - 16 A	250 V - 16 A		
				UL 508 (C)	UL 508 (C)		
B		250 V	16 A	250 V - 16 A	250 V - 16 A		
C		–	–	–	–		
D		300 V	10 A	300 V - 10 A	300 V - 10 A		
				UL 840	UL 840		
	2	320 V	16 A	320 V - 16 A	320 V - 16 A		
	3	320 V	16 A	250 V - 16 A	320 V - 16 A		
						UL 508 (C)	UL 508 (C)
B		600 V	18.5 A			250 V - 18.5 A	600 V - 16 A
C		600 V	18.5 A			–	600 V - 16 A
D		–	–			300 V - 10 A	–
						UL 840	UL 840
	2	1000 V	16 A			630 V - 16 A	1000 V - 16 A
	3	1000 V	16 A			400 V - 16 A	1000 V - 16 A
						UL 508 (C)	UL 508 (C)
B		250 V	16 A			250 V 16 A	250 V - 16 A
C		–	–			–	–
D		300 V	10 A			300 V 10 A	300 V - 10 A
						UL 840	UL 840
	2	630 V	16 A			630 V - 16 A	630 V - 16 A
	3	630 V	16 A			400 V - 16 A	630 V - 16 A

Plug-in connectors for conductor cross sections up to 6 mm²



Male contacts

	Standard	Flange	Shield
	 PC(V) 4/...-G-7,62	 PC(V) 4/...-GF-7,62	

	UL 1059 User group		IEC 60664 Pollution degree	
	B	300 V - 20 A	2	630 V - 20 A
	C	300 V - 20 A	3	400 V - 20 A
	D	– - –		

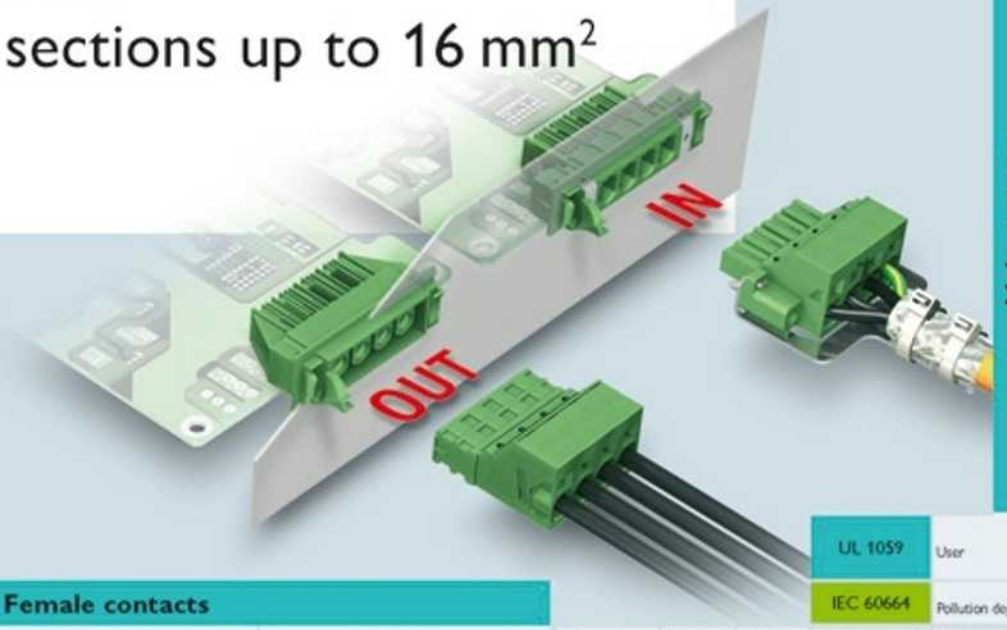
Female contacts

		Standard	Flange	Shield	Approval	User group	Pollution degree	Rated insulation voltage	Rated current	UL 508 (C)	UL 840
7.62 mm pitch	AWG 30 – 10 / 4 mm²	 PC 4/...-ST-7,62	 PC 4/...-STF-7,62		UL 1059	B		300 V - 20 A		300 V - 20 A	
						C		300 V - 20 A		300 V - 20 A	
						D		600 V - 5 A		–	
					IEC 60664		2	630 V - 20 A			–
							3	400 V - 20 A			–
	AWG 24 – 8 / 6 mm²	 600 V UL PC 5/...-ST(CL)1-7,62	 600 V UL PC 5/...-STF1-7,62	 600 V UL PC 5/...-STF-SH1-7,62	UL 1059	B		600 V - 41 A		300 V - 20 A	
						C		600 V - 41 A		300 V - 20 A	
						D		– - –		–	
					IEC 60664		2	1000 V - 41 A			630 V - 20 A
							3	1000 V - 41 A			400 V - 20 A
		 600 V UL SPC 5/...-ST(CL)-7,62	 600 V UL SPC 5/...-STF-7,62	 600 V UL SPC 5/...-STF-SH-7,62	UL 1059	B		600 V - 35 A			
						C		600 V - 35 A			
						D		– - –			
					IEC 60664		2	1000 V - 41 A			
							3	1000 V - 41 A			
		 600 V UL TSPC 5/...-ST(CL)-7,62	 600 V UL TSPC 5/...-STF-7,62		UL 1059	B		600 V - 31 A			
						C		600 V - 31 A			
						D		– - –			
					IEC 60664		2	1000 V - 41 A			
							3	1000 V - 41 A			
		 IPC(V) 5/...-G(U)-7,62	 IPC(V) 5/...-GF(U)-7,62		UL 1059	B		300 V - 41 A			
						C		300 V - 41 A			
						D		600 V - 5 A			
					IEC 60664		2	630 V - 41 A			
							3	630 V - 41 A			

7.62 mm pitch

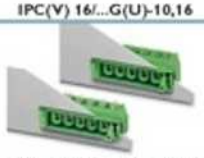
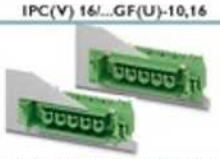
AWG 30 – 10 4 mm²			AWG 24 – 8 6 mm²				
							
DFK-PC 4/...-G-7,62-FS4,8	DFK-PC 4/...-GF-7,62	PCVK 4-7,62	PC(V) 5/...-G(U)-7,62	IPC 5/...-ST(GCL)-7,62	ISPC 5/...STGCL-7,62	DFK-PC 5/...ST-7,62	DFK-PC(V) 5/...-G(U)-7,62
							
			PC(V) 5/...-GF(U)-7,62	IPC 5/...-ST(G)F-7,62	ISPC 5/...-ST(G)F-7,62	DFK-PC 5/...STF-7,62	DFK-PC(V) 5/...-GF(U)-7,62
							
				IPC 5/...-ST(G)F-SH-7,62		DFK-PC 5/...STF-SH-7,62	DFK-PC 5/...-GF(U)-SH-7,62
300 V - 20 A	300 V - 20 A	300 V - 20 A	300 V - 41 A	600 V - 41 A	600 V - 35 A	600 V - 41 A	300 V - 41 A
300 V - 20 A	300 V - 20 A	300 V - 20 A	150 V - 41 A	600 V - 41 A	600 V - 35 A	600 V - 41 A	150 V - 41 A
– - –	600 V - 5 A	600 V - 5 A	– - –	– - –	– - –	– - –	– - –
400 V - 15 A	630 V - 20 A	630 V - 20 A	630 V - 41 A	1000 V - 41 A	1000 V - 41 A	1000 V - 41 A	630 V - 41 A
400 V - 15 A	400 V - 20 A	500 V - 20 A	500 V - 41 A	1000 V - 41 A	1000 V - 41 A	1000 V - 41 A	500 V - 41 A
UL 508 (C)	**UL 508 (C)**	**UL 508 (C)**					
300 V - 20 A	300 V - 20 A	300 V - 20 A					
300 V - 20 A	300 V - 20 A	300 V - 20 A					
–	600 V - 5 A	600 V - 5 A					
UL 840	**UL 840**	**UL 840**					
–	–	–					
–	–	–					
UL 508 (C)	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**
300 V - 20 A	300 V - 20 A	300 V - 20 A	300 V - 41 A	600 V - 41 A	600 V - 35 A	600 V - 41 A	300 V - 41 A
300 V - 20 A	300 V - 20 A	300 V - 20 A	150 V - 41 A	600 V - 41 A	600 V - 35 A	600 V - 41 A	150 V - 41 A
–	600 V - 5 A	600 V - 5 A	–	–	–	–	–
UL 840	**UL 840**	**UL 840**	**UL 840**	**UL 840**	**UL 840**	**UL 840**	**UL 840**
400 V - 20 A	630 V - 20 A	630 V - 20 A	630 V - 41 A	1000 V - 41 A	1000 V - 35 A	1000 V - 41 A	630 V - 41 A
400 V - 20 A	400 V - 20 A	500 V - 20 A	500 V - 41 A	1000 V - 41 A	1000 V - 35 A	1000 V - 41 A	500 V - 41 A
UL 508 (C)	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**
300 V - 20 A	300 V - 20 A	300 V - 20 A	300 V - 35 A	600 V - 35 A	600 V - 35 A	600 V - 35 A	300 V - 35 A
300 V - 20 A	300 V - 20 A	300 V - 20 A	150 V - 35 A	600 V - 35 A	600 V - 35 A	600 V - 35 A	150 V - 35 A
–	600 V - 5 A	600 V - 5 A	–	–	–	–	–
UL 840	**UL 840**	**UL 840**	**UL 840**	**UL 840**	**UL 840**	**UL 840**	**UL 840**
400 V - 20 A	630 V - 20 A	630 V - 20 A	630 V - 35 A	1000 V - 35 A	1000 V - 35 A	1000 V - 35 A	630 V - 35 A
400 V - 20 A	400 V - 20 A	500 V - 20 A	500 V - 35 A	1000 V - 35 A	1000 V - 35 A	1000 V - 35 A	500 V - 35 A
UL 508 (C)	**UL 508 (C)**		**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**
300 V - 20 A	300 V - 20 A		300 V - 31 A	600 V - 31 A	600 V - 31 A	600 V - 31 A	300 V - 31 A
300 V - 20 A	300 V - 20 A		150 V - 31 A	600 V - 31 A	600 V - 31 A	600 V - 31 A	150 V - 31 A
–	600 V - 5 A		–	–	–	–	–
UL 840	**UL 840**		**UL 840**	**UL 840**	**UL 840**	**UL 840**	**UL 840**
400 V - 20 A	630 V - 20 A		630 V - 31 A	1000 V - 31 A	1000 V - 31 A	1000 V - 31 A	630 V - 31 A
400 V - 20 A	400 V - 20 A		500 V - 31 A	1000 V - 31 A	1000 V - 31 A	1000 V - 31 A	500 V - 31 A
			UL 508 (C)	**UL 508 (C)**	**UL 508 (C)**		
			300 V - 41 A	300 V - 41 A	300 V - 35 A		
			150 V - 41 A	300 V - 41 A	300 V - 35 A		
			–	600 V - 5 A	600 V - 5 A		
			UL 840	**UL 840**	**UL 840**		
			630 V - 41 A	630 V - 41 A	630 V - 35 A		
			500 V - 41 A	630 V - 41 A	630 V - 35 A		

Plug-in connectors for conductor cross sections up to 16 mm²



Male contacts

Female contacts

			Standard	Flange	Shield	Approval	Use group	Pollution degree	Rated insulation voltage		Rated current
						UL 1059	User				
						IEC 60664		Pollution degree			
10.16 mm pitch	AWG 20 – 8	6 mm²	 600 V UL PC(U) 6/...-ST-10,16	 600 V UL PC 6/...-STF-10,16	 600 V UL PC 6/...-STF-SH-10,16	UL 1059	B		600 V	-	50 A
							C		600 V	-	50 A
							D		–	-	–
						IEC 60664		2	1000 V	-	41 A
								3	1000 V	-	41 A
	AWG 20 – 6	16 mm²	 600 V UL PC 16/...-ST-10,16	 600 V UL PC 16/...-STF-10,16	 600 V UL PC 16/...-STF-SH-10,16	UL 1059	B		600 V	-	55 A
							C		600 V	-	55 A
							D		–	-	–
						IEC 60664		2	1000 V	-	76 A
								3	1000 V	-	76 A
			 600 V UL TPC 16/...-ST-10,16	 600 V UL TPC 16/...-STF-10,16		UL 1059	B		600 V	-	60 A
							C		600 V	-	60 A
							D		–	-	–
						IEC 60664		2	1000 V	-	76 A
								3	1000 V	-	76 A
			 IPC(V) 16/...G(U)-10,16	 IPC(V) 16/...GF(U)-10,16		UL 1059	B		300 V	-	66 A
							C		300 V	-	66 A
							D		600 V	-	5 A
						IEC 60664		2	1000 V	-	76 A
								3	1000 V	-	76 A
			 DFK-IPC(V) 16/...-G(U)-10,16	 DFK-IPC(V) 16/...-GF(U)-10,16	 DFK-IPC16/...-GF(U)-SH-10,16	UL 1059	B		300 V	-	66 A
							C		300 V	-	66 A
							D		600 V	-	5 A
						IEC 60664		2	1000 V	-	76 A
								3	1000 V	-	76 A
			 600 V UL DFK-IPC 16/...-ST-10,16	 600 V UL DFK-IPC 16/...-STF-10,16	 600 V UL DFK-IPC 16/...-STF-SH-10,16	UL 1059	B		600 V	-	55 A
							C		600 V	-	55 A
							D		–	-	–
						IEC 60664		2	1000 V	-	76 A
								3	1000 V	-	76 A
	AWG 18 – 4		 600 V UL SPC 16/...-ST-10,16	 600 V UL SPC 16/...-STF-10,16	 600 V UL SPC 16/...-STF-SH-10,16	UL 1059	B		600 V	-	66 A
							C		600 V	-	66 A
							D		–	-	–
						IEC 60664		2	1000 V	-	76 A
								3	1000 V	-	76 A

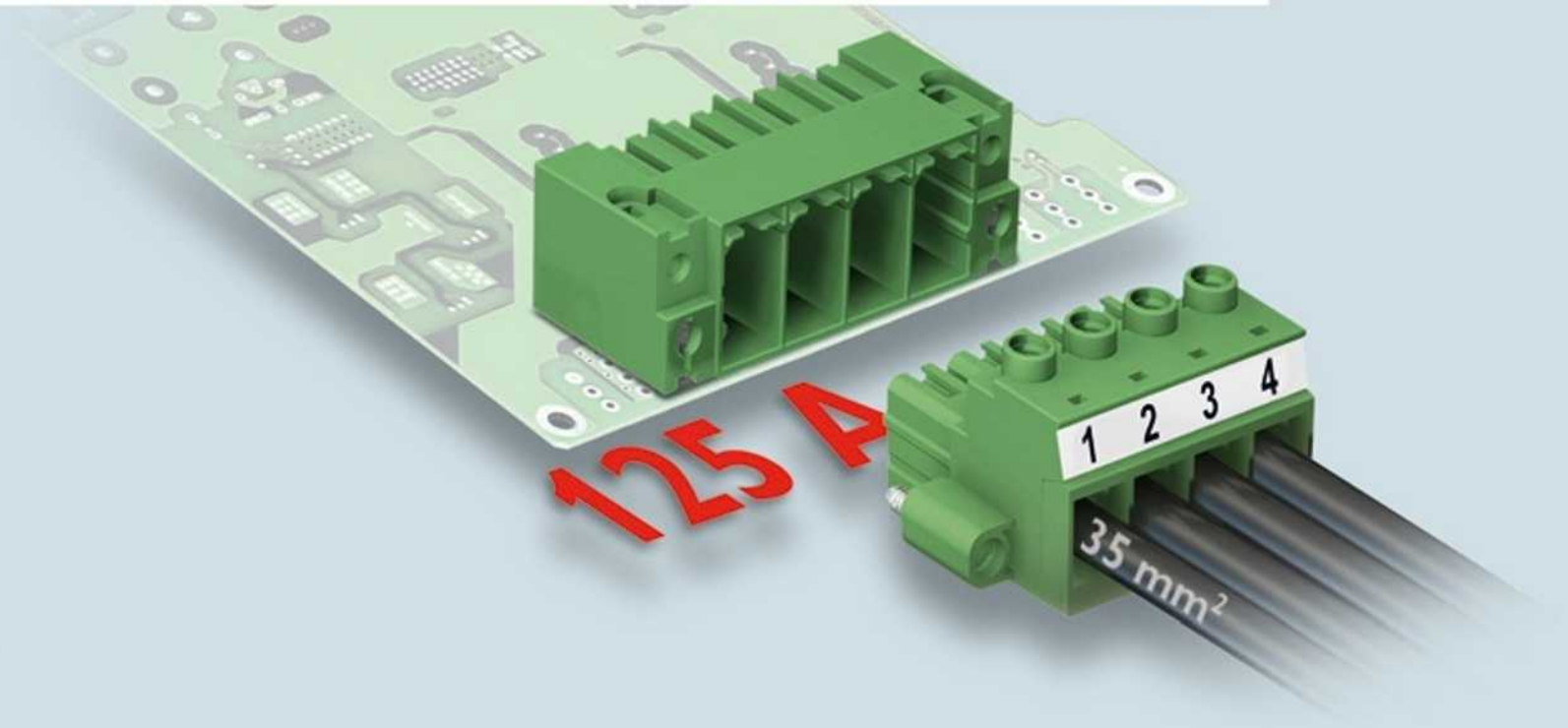
10.16 mm pitch

AWG 18 – 6

16 mm²

Standard	 PC(V) 6-16 /...-G1(U)-10,16	 IPC 16 /...-ST-10,16	 ISPC 16 /...-ST-10,16	 DFK-PC 6-16/...-G(U)-10,16	 DFK-PC 16/...-ST-10,16
Flange	 PC(V) 6-16/...-G1F(U)-10,16	 IPC 16/...-ST(G)F-10,16	 ISPC 16/...-ST(G)F-10,16	 DFK-PC 6-16/...-GF(U)-10,16	 DFK-PC 16/...-STF-10,16
Shield		 IPC 16/...-ST(G)F-SH-10,16		 DFK-PC 6-16/...-GF(U)-SH-10,16	 DFK-PC 16/...-STF-SH-10,16
B	300 V - 66 A	600 V - 55 A	600 V - 66 A	300 V - 66 A	600 V - 55 A
C	300 V - 66 A	600 V - 55 A	600 V - 66 A	300 V - 66 A	600 V - 55 A
D	600 V - 5 A	– - –	– - –	600 V - 5 A	– - –
2	1000 V - 76 A	1000 V - 76 A	1000 V - 76 A	1000 V - 76 A	1000 V - 76 A
3	1000 V - 76 A	1000 V - 76 A	1000 V - 76 A	1000 V - 76 A	1000 V - 76 A
	UL 508 (C)	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**
	300 V - 50 A	600 V - 50 A	600 V - 50 A	300 V - 50 A	600 V - 50 A
	300 V - 50 A	600 V - 50 A	600 V - 50 A	300 V - 50 A	600 V - 50 A
	600 V - 5 A	–	–	600 V - 5 A	–
	UL 840	**UL 840**	**UL 840**	**UL 840**	**UL 840**
	1000 V - 50 A	1000 V - 50 A	1000 V - 50 A	1000 V - 50 A	1000 V - 50 A
	1000 V - 50 A	1000 V - 50 A	1000 V - 50 A	1000 V - 50 A	1000 V - 50 A
	UL 508 (C)	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**
	300 V - 55 A	600 V - 55 A	600 V - 55 A	300 V - 55 A	600 V - 55 A
	300 V - 55 A	600 V - 55 A	600 V - 55 A	300 V - 55 A	600 V - 55 A
	600 V - 5 A	–	–	600 V - 5 A	–
	UL 840	**UL 840**	**UL 840**	**UL 840**	**UL 840**
	1000 V - 55 A	1000 V - 55 A	1000 V - 55 A	1000 V - 55 A	1000 V - 55 A
	1000 V - 55 A	1000 V - 55 A	1000 V - 55 A	1000 V - 55 A	1000 V - 55 A
	UL 508 (C)	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**
	300 V - 60 A	600 V - 55 A	600 V - 60 A	300 V - 60 A	600 V - 55 A
	300 V - 60 A	600 V - 55 A	600 V - 60 A	300 V - 60 A	600 V - 55 A
	600 V - 5 A	–	–	600 V - 5 A	–
	UL 840	**UL 840**	**UL 840**	**UL 840**	**UL 840**
	1000 V - 60 A	1000 V - 55 A	1000 V - 60 A	1000 V - 60 A	1000 V - 55 A
	1000 V - 60 A	1000 V - 55 A	1000 V - 60 A	1000 V - 60 A	1000 V - 55 A
	UL 508 (C)	**UL 508 (C)**	**UL 508 (C)**		
	300 V - 66 A	300 V - 55 A	300 V - 66 A		
	300 V - 66 A	300 V - 55 A	300 V - 66 A		
	600 V - 5 A	600 V - 5 A	600 V - 5 A		
	UL 840	**UL 840**	**UL 840**		
	1000 V - 66 A	1000 V - 55 A	1000 V - 66 A		
	1000 V - 66 A	1000 V - 55 A	1000 V - 66 A		
		UL 508 (C)	**UL 508 (C)**		
		300 V - 55 A	300 V - 66 A		
		300 V - 55 A	300 V - 66 A		
		600 V - 5 A	600 V - 5 A		
		UL 840	**UL 840**		
		1000 V - 55 A	1000 V - 66 A		
		1000 V - 55 A	1000 V - 66 A		
		UL 508 (C)	**UL 508 (C)**		
		600 V - 55 A	600 V - 55 A		
		600 V - 55 A	600 V - 55 A		
		–	–		
		UL 840	**UL 840**		
		1000 V - 55 A	1000 V - 55 A		
		1000 V - 55 A	1000 V - 55 A		
	UL 508 (C)	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**	**UL 508 (C)**
	300 V - 66 A	600 V - 55 A	600 V - 66 A	300 V - 66 A	600 V - 55 A
	300 V - 66 A	600 V - 55 A	600 V - 66 A	300 V - 66 A	600 V - 55 A
	600 V - 5 A	–	–	600 V - 5 A	–
	UL 840	**UL 840**	**UL 840**	**UL 840**	**UL 840**
	1000 V - 66 A	1000 V - 55 A	1000 V - 66 A	1000 V - 66 A	1000 V - 55 A
	1000 V - 66 A	1000 V - 55 A	1000 V - 66 A	1000 V - 66 A	1000 V - 55 A

Plug-in connectors for conductor cross sections up to 35 mm²



		Female contacts							
		Flange	Shield					UL 1059	
								IEC 60664	
				Approval	Use group	Pollution degree	Rated insulation voltage		
15 mm pitch	AWG 20 – 2 35 mm²	 600 V UL PC 35 HC/...-STF-15,0	 600 V UL PC 35 HC/4-STF-SH-15,0	UL 1059	B		600 V	-	
					C		600 V	-	
					D		–	-	
				IEC 60664		2	1000 V	-	
						3	1000 V	-	
		 600 V UL IPC 35 HC/...-GF	 600 V UL DFK-IPC 35 HC/...-GF-15,00	UL 1059	B		600 V	-	
					C		600 V	-	
					D		–	-	
				IEC 60664		2	1000 V	-	
						3	1000 V	-	
		 600 V UL IPCV 35 HC/...-GF	 600 V UL DFK-IPCV 35 HC/...-GF-15,00	UL 1059	B		600 V	-	
					C		600 V	-	
					D		600 V	-	
				IEC 60664		2	1000 V	-	
						3	1000 V	-	

Male contacts		15 mm pitch		
		AWG 20 – 2		
		35 mm²		
	Flange	 600 V UL	 600 V UL	 600 V UL
		PC(V) 35/...-GF-15,0	IPC 35 HC/...-STF	IPC 35 HC/...-STGF
	Shield	 600 V UL	 600 V UL	 600 V UL
		PC 35/4-GF-SH-15,0	IPC 35 HC/4-STF-SH	PC 35 HC/4-STGF-SH
Use group	B	600 V - 115 A	600 V - 115 A	600 V - 115 A
	C	600 V - 115 A	600 V - 115 A	600 V - 115 A
	D	– - –	– - –	– - –
Pollution degree	2	1000 V - 125 A	1000 V - 125 A	1000 V - 125 A
	3	1000 V - 125 A	1000 V - 125 A	1000 V - 125 A
Rated current				
		UL 508 (C)	UL 508 (C)	UL 508 (C)
115 A		600 V - 115 A	600 V - 115 A	600 V - 115 A
115 A		600 V - 115 A	600 V - 115 A	600 V - 115 A
–		–	–	–
		UL 840	UL 840	UL 840
125 A		1000 V - 115 A	1000 V - 115 A	1000 V - 115 A
125 A		1000 V - 115 A	1000 V - 115 A	1000 V - 115 A
		UL 508 (C)	UL 508 (C)	UL 508 (C)
115 A		600 V - 115 A	600 V - 115 A	600 V - 115 A
115 A		600 V - 115 A	600 V - 115 A	600 V - 115 A
–		–	–	–
		UL 840	UL 840	UL 840
125 A		1000 V - 115 A	1000 V - 115 A	1000 V - 115 A
125 A		1000 V - 115 A	1000 V - 115 A	1000 V - 115 A
		UL 508 (C)	UL 508 (C)	UL 508 (C)
115 A		600 V - 115 A	600 V - 115 A	600 V - 115 A
115 A		600 V - 115 A	600 V - 115 A	600 V - 115 A
115 A		–	–	–
		UL 840	UL 840	UL 840
125 A		1000 V - 115 A	1000 V - 115 A	1000 V - 115 A
125 A		1000 V - 115 A	1000 V - 115 A	1000 V - 115 A

PCB terminal blocks with spring connection for conductor cross sections up to 16 mm²

Push-in spring connection

Approval	Use group	Pollution degree	7.5 mm pitch		10 mm
			AWG 24 – 8		AWG
			6 mm²		16
				 600 V UL	
			SPT 5/1-H/V-7,5	SPT 5/...H/V-7,5-ZB	SPT 16/1-H/V-10,0
			UL 1059/UL 508 (C)	UL 1059/UL 508 (C)	UL 1059/UL 508 (C)
UL 1059	B		300 V - 35 A	600 V - 35 A	300 V - 66 A
	C		150 V - 35 A	600 V - 35 A	150 V - 66 A
	D		600 V - 5 A	–	300 V - 10 A
			IEC 60664/UL 840	IEC 60664/UL 840	IEC 60664
IEC 60664		2	1000 V - 41 A²	1000 V - 41 A²	400 V - 76 A[1]
		3	800 V - 41 A²	800 V - 41 A²	400 V - 76 A[1]

Spring-cage connection

Approval	Use group	Pollution degree	7.5 mm pitch	10 mm pitch	
			AWG 24 – 10		AWG
			4 mm²		16
					
			ZFKDS 4-7,5	ZFKDS 4-10	ZFKDS 10-10
			UL 1059/UL 508 (C)	UL 1059/UL 508 (C)	UL 1059/UL 508 (C)
UL 1059	B		300 V - 30 A	300 V - 30 A	300 V - 65 A
	C		150 V - 30 A	150 V - 30 A	150 V - 65 A
	D		300 V - 10 A	600 V - 5 A	300 V - 10 A
			IEC 60664/UL 840	IEC 60664/UL 840	IEC 60664
IEC 60664		2	630 V - 32 A*	630 V - 32 A*	400 V - 76 A*
		3	500 V - 32 A*	630 V - 32 A*	320 V - 76 A*

Push-lock spring connection

Approval	Use group	Pollution degree	7.5 mm pitch		
			AWG 24 – 8		
			6 mm²		
				 600 V UL	
			PLH 5/1-7,5	PLH 5/...-7,5-ZF	PLA 5/1-7,5
			UL 1059/UL 508 (C)	UL 1059/UL 508 (C)	UL 1059/UL 508 (C)
UL 1059	B		300 V* - 35 A*	600 V* - 35 A*	300 V* - 35 A*
	C		300 V* - 35 A*	600 V* - 35 A*	300 V* - 35 A*
	D		600 V* - 5 A*	–	600 V* - 5 A*
			IEC 60664/UL 840	IEC 60664/UL 840	IEC 60664/UL 840
IEC 60664		2	1000 V - 41 A²	1000 V - 41 A²	1000 V - 41 A²
		3	1000 V - 41 A²	1000 V - 41 A²	1000 V - 41 A²

* The specified UL value will be expected during inspection.
The corresponding approval for this product is in preparation.

pitch			
18 – 4			
mm²			
 600 V UL			
SPT 16/...-H/V-10,0-ZB			
UL 1059/UL 508 (C)			
600 V - 66 A			
600 V - 66 A			
–			
IEC 60664			
1000 V - 76 A[5]			
1000 V - 76 A[5]			

15 mm pitch			
24 – 6			
mm²			
 600 V UL			
ZFKDS 10-15			
UL 1059/UL 508 (C)			
600 V - 65 A			
600 V - 65 A			
–			
IEC 60664			
1000 V - 76 A*			
1000 V - 76 A*			

	10 mm pitch		15 mm pitch
	AWG 18 – 4		
	16 mm²		
 600 V UL		 600 V UL	 600 V UL
PLA 5/...-7,5-ZF	PLH 16/...10	PLH 16/...10-ZF	PLH 16/...15
UL 1059/UL 508 (C)	UL 1059/UL 508 (C)	UL 1059/UL 508 (C)	UL 1059/UL 508 (C)
600 V[5] - 35 A[6]	300 V - 51 A	600 V - 66 A	600 V - 66 A
600 V[5] - 35 A[6]	300 V - 51 A	600 V - 66 A	600 V - 66 A
–	–	–	–
IEC 60664/UL 840	IEC 60664/UL 840	IEC 60664/UL 840	IEC 60664/UL 840
1000 V - 41 A[2]	400 V - 76 A[3]	1000 V - 76 A[5]	1000 V - 76 A[5]
1000 V - 41 A[2]	400 V - 76 A[3]	1000 V - 76 A[5]	1000 V - 76 A[5]

[1] Current value according to UL 840: 30 A
[2] Current value according to UL 840: 35 A
[3] Current value according to UL 840: 51 A
* Current value according to UL 840: 65 A
[5] Current value according to UL 840: 66 A

PCB terminal blocks with screw connection for conductor cross sections up to 25 mm²

Screw connection

Approval	Use group	Pollution degree		
			 MKDS 5/...-6,35	 SMKDS 5/...-6,35
			UL 1059/UL 508 (C)	**UL 1059/UL 508 (C)**
UL 1059	B		300 V - 30 A	250 V - 30 A
	C		–	–
	D		300 V - 10 A	300 V - 10 A
			IEC 60664/UL 840	**IEC 60664/UL 840**
IEC 60664		2	630 V - 32 A[1]	630 V - 32 A[1]
		3	500 V - 32 A[1]	500 V - 32 A[1]
				9.5 mm pitch
Approval	Use group	Pollution degree		
			 MKDS 5/...-9,5	 SMKDS 5/...-9,5
			UL 1059/UL 508 (C)	**UL 1059/UL 508 (C)**
UL 1059	B		300 V - 30 A	250 V - 30 A
	C		300 V - 30 A	300 V - 30 A
	D		600 V - 5 A	–
			IEC 60664/UL 840	**IEC 60664/UL 840**
IEC 60664		2	1000 V - 32 A[1]	1000 V - 32 A[1]
		3	690 V - 32 A[1]	690 V - 32 A[1]
			6.35 mm pitch	**7.62 mm pitch**
Approval	Use group	Pollution degree	AWG 24 – 10 4 mm²	
			 FRONT 4-H/V-6,35	 FRONT 4-H/V-7,62
			UL 1059/UL 508 (C)	**UL 1059/UL 508 (C)**
UL 1059	B		250 V - 30 A	250 V - 30 A
	C		–	–
	D		300 V - 10 A	300 V - 10 A
			IEC 60664/UL 840	**IEC 60664/UL 840**
IEC 60664		2	320 V - 32 A[1]	630 V - 32 A[1]
		3	320 V - 32 A[1]	500 V - 32 A[1]
				10.16 mm pitch
Approval	Use group	Pollution degree		AWG 16
			 MKDSP 10 HV/...-10,16	 MKDSP 10 N/...-10,16
			UL 1059/UL 508 (C)	**UL 1059/UL 508 (C)**
UL 1059	B		300 V - 60 A	300 V - 60 A
	C		300 V - 60 A	300 V - 60 A
	D		600 V - 5 A	600 V - 5 A
			IEC 60664	**IEC 60664**
IEC 60664		2	1000 V - 76 A[3]	1000 V - 76 A[3]
		3	690 V - 76 A[3]	690 V - 76 A[3]

6.35 mm pitch

AWG 24 – 10

4 mm²

MKKDS 5/...-6,35

UL 1059/UL 508 (C)

300 V - 30 A

–

300 V - 10 A

IEC 60664/UL 840

630 V - 32 A[1]

500 V - 32 A[1]

MKDS 5N HV/...-ZB-6,35

UL 1059/UL 508 (C)

600 V - 30 A

600 V - 30 A

–

IEC 60664/UL 840

1000 V - 41 A[1]

800 V - 41 A[1]

7.62 mm pitch

MKDS 5/...-7,62

UL 1059/UL 508 (C)

300 V - 30 A

–

300 V - 10 A

IEC 60664/UL 840

630 V - 32 A[1]

500 V - 32 A[1]

9.52 mm pitch

AWG 24 – 10

4 mm²

MKKDS 5/...-9,5

UL 1059/UL 508 (C)

300 V - 30 A

300 V - 30 A

600 V - 5 A

IEC 60664/UL 840

1000 V - 32 A[1]

690 V - 32 A[1]

MKDS 5 HV/...-9,52

UL 1059/UL 508 (C)

300 V - 30 A

300 V - 30 A

600 V - 5 A

IEC 60664/UL 840

1000 V - 32 A[1]

800 V - 32 A[1]

MKDS 5 HV/...-9,52-Z

UL 1059/UL 508 (C)

600 V - 30 A

600 V - 30 A

–

IEC 60664/UL 840

1000 V - 32 A[1]

690 V - 32 A[1]

10 mm pitch

AWG 24 – 6

16 mm²

KDS 10(-PE)-SO

UL 1059/UL 508 (C)

250 V - 65 A

300 V - 65 A

600 V - 5 A

IEC 60664

630 V - 76 A

630 V - 76 A

KDS 10(-PE)

UL 1059/UL 508 (C)

250 V - 65 A

300 V - 65 A

600 V - 5 A

IEC 60664

320 V - 76 A

250 V - 76 A

12.7 mm pitch

20 – 6

mm²

MKDS 10 HV/...-ZB...-10,16

UL 1059/UL 508 (C)

600 V - 60 A

600 V - 60 A

–

IEC 60664

1000 V - 76 A[2]

800 V - 76 A[2]

MKDSP 10 HV/...-12,7

UL 1059/UL 508 (C)

600 V - 60 A

600 V - 60 A

–

IEC 60664

1000 V - 76 A[2]

800 V - 76 A[2]

15 mm pitch

AWG 20 – 2

25 mm²

MKDSP 25/...-15(-F)

UL 1059/UL 508 (C)

600 V - 115 A

600 V - 115 A

–

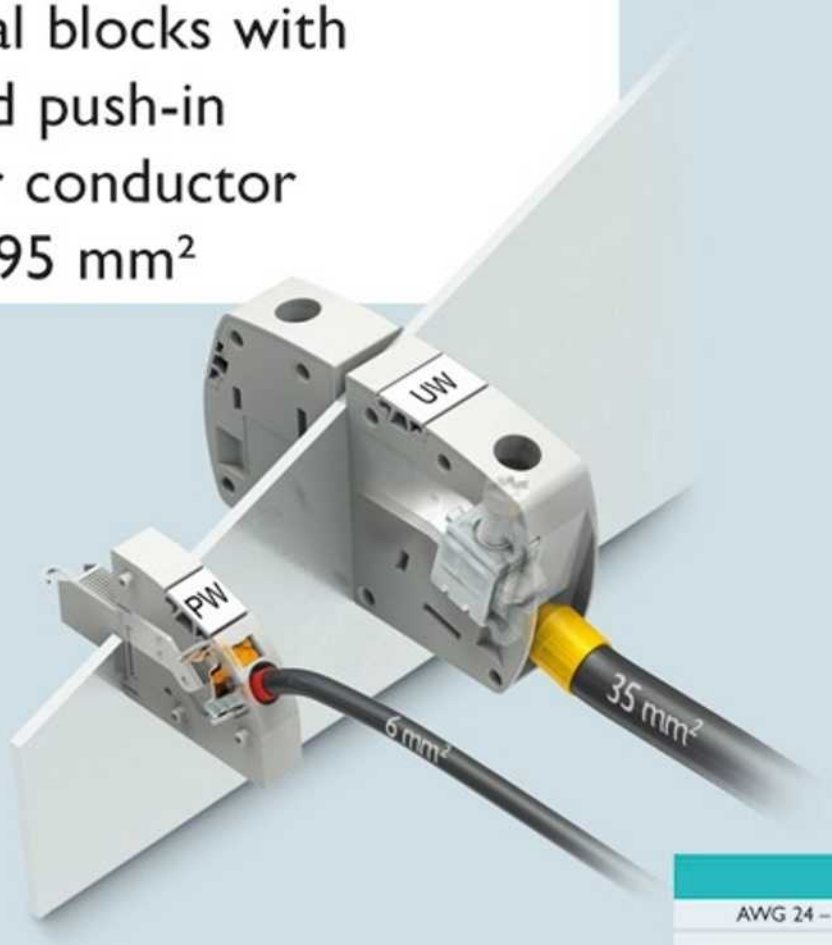
IEC 60664

1000 V - 125 A[3]

1000 V - 125 A[3]

[1] Current value according to UL 840: 30 A
[2] Current value according to UL 840: 60 A
[3] Current value according to UL 840: 115 A

Feed-through terminal blocks with screw connection and push-in spring connection for conductor cross sections up to 95 mm²



	Push-in spring connection	Screw connection	Approval	Use group	Pollution degree	AWG 24 – 12
						4 m
						PW 4...
Horizontal conductor connection		 UW...	UL 1059	B C D		
			IEC 60664		2 3	
Vertical conductor connection		 UWV...	UL 1059	B C D		
			IEC 60664		2 3	
Horizontal conductor connection Molded terminal block	 PW 4-POT...	 UW...-POT				**UL 1059/UL 508 (C)**
			UL 1059	B		300 V - 30 A
				C		300 V - 30 A
				D		600 V - 5 A
						IEC 60664/UL 840
			IEC 60664		2	1000 V - 20 A
					3	800 V - 20 A
Vertical conductor connection Molded terminal block		 UWV...-POT	UL 1059	B C D		
			IEC 60664		2 3	

[1] The voltage specifications apply for mounting on a conductive housing panel and when using spacer plates.

Type designation

PW

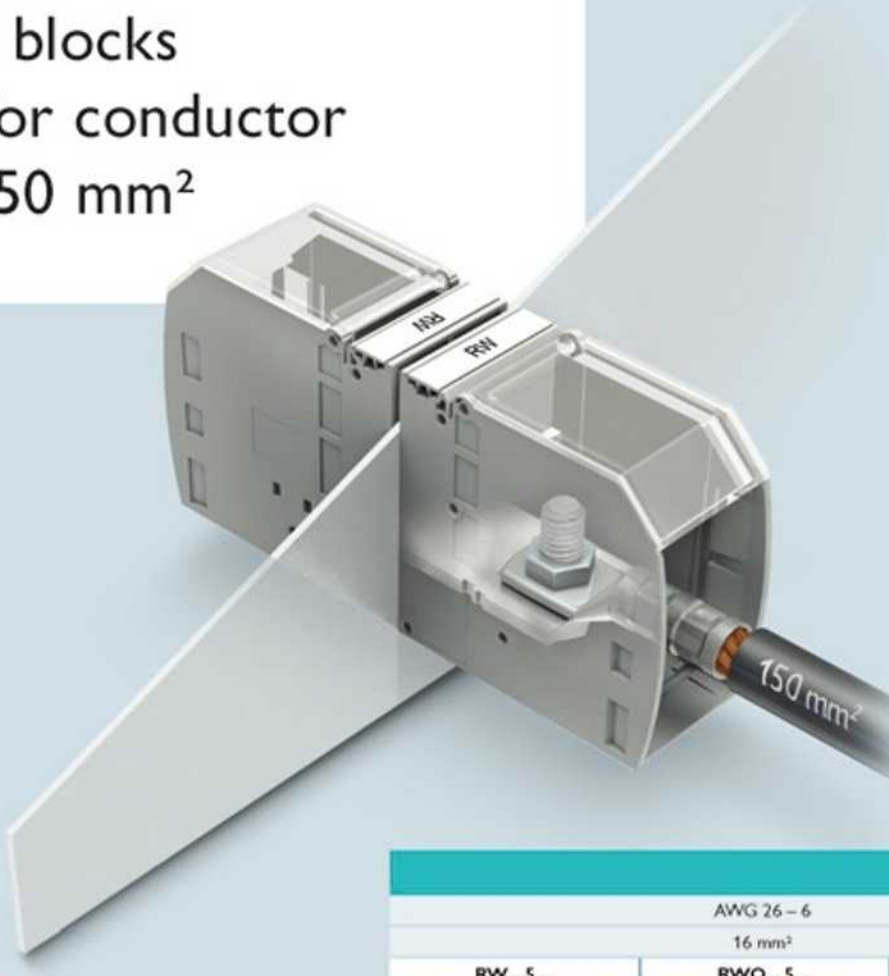
- Push-in spring connection

UW/HDFK

- Screw connection with tension sleeve

Conductor cross section					
AWG 24 – 10	AWG 20 – 6	AWG 10 – 4	AWG 10 – 2	AWG 6 – 0	42 – 133 kcmil
mm²	10 mm²	16 mm²	25 mm²	50 mm²	95 mm²
UW…4…	**UW…10…**	**UW…16…**	**UW…25…**	**HDFK…50…**	**HDFK…95…**
UL 1059/UL 508 (C)	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**
300 V [1] - 30 A	300 V [1] - 65 A	600 V [1] - 85 A	600 V [1] - 112.5 A	600 V - 150 A	600 V - 230 A
300 V [1] - 30 A	300 V [1] - 65 A	600 V [1] - 85 A	600 V [1] - 112.5 A	600 V - 150 A	600 V - 230 A
600 V [1] - 5 A	600 V [1] - 5 A	–	–	–	–
IEC 60664/UL 840	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**
630 V [1] - 41 A	630 V [1] - 76 A	1000 V [1] - 101 A	1000 V [1] - 125 A	1000 V - 150 A	1000 V - 232 A
500 V [1] - 41 A	500 V [1] - 76 A	800 V [1] - 101 A	800 V [1] - 125 A	690 V - 150 A	1000 V - 232 A
UL 1059/UL 508 (C)	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**
300 V [1] - 30 A	300 V [1] - 65 A	600 V [1] - 85 A	600 V [1] - 112.5 A	600 V - 150 A	600 V - 230 A
300 V [1] - 30 A	300 V [1] - 65 A	600 V [1] - 85 A	600 V [1] - 112.5 A	600 V - 150 A	600 V - 230 A
600 V [1] - 5 A	600 V [1] - 5 A	–	–	–	–
IEC 60664/UL 840	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**
630 V [1] - 41 A	630 V [1] - 76 A	1000 V [1] - 101 A	1000 V [1] - 125 A	1000 V - 150 A	1000 V - 232 A
500 V [1] - 41 A	500 V [1] - 76 A	800 V [1] - 101 A	800 V [1] - 125 A	690 V - 150 A	1000 V - 232 A
UL 1059/UL 508 (C)	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**
300 V [1] - 30 A	300 V [1] - 65 A	600 V [1] - 85 A	600 V [1] - 112.5 A	600 V - 150 A	600 V - 230 A
300 V [1] - 30 A	300 V [1] - 65 A	600 V [1] - 85 A	600 V [1] - 112.5 A	600 V - 150 A	600 V - 230 A
600 V [1] - 5 A	600 V [1] - 5 A	–	–	–	–
IEC 60664/UL 840	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**
630 V [1] - 41 A	630 V [1] - 76 A	1000 V [1] - 101 A	1000 V [1] - 125 A	1000 V - 150 A	1000 V - 232 A
500 V [1] - 41 A	500 V [1] - 76 A	800 V [1] - 101 A	800 V [1] - 125 A	690 V - 150 A	1000 V - 232 A
	UL 1059/UL 508 (C)	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	
	300 V [1] - 65 A	600 V [1] - 85 A	600 V [1] - 112.5 A	600 V - 150 A	
	300 V [1] - 65 A	600 V [1] - 85 A	600 V [1] - 112.5 A	600 V - 150 A	
	600 V [1] - 5 A	–	–	–	
	IEC 60664/UL 840	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**	
	630 V [1] - 76 A	1000 V [1] - 101 A	1000 V [1] - 125 A	1000 V - 150 A	
	500 V [1] - 76 A	800 V [1] - 101 A	800 V [1] - 125 A	690 V - 150 A	

Feed-through terminal blocks with bolt connection for conductor cross sections up to 150 mm²

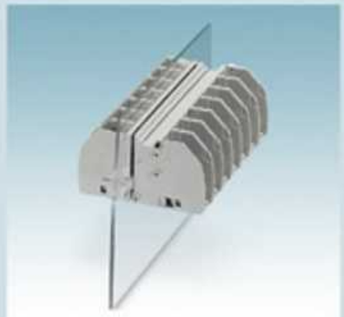


Bolt connection		Approval	Use group	Pollution degree	AWG 26 – 6 16 mm² RW...5...	AWG 26 – 6 16 mm² RWO...5...
					UL 1059/UL 508 (C)	UL 1059/UL 508 (C)
Horizontal conductor connection	 RW...	UL 1059	B		600 V - 65 A	600 V - 65 A
			C		600 V - 65 A	600 V - 65 A
			D		–	–
					IEC 60664/UL 840	IEC 60664/UL 840
		IEC 60664		2	1000 V - 76 A	1000 V - 76 A
				3	1000 V - 76 A	1000 V - 76 A
					UL 1059/UL 508 (C)	UL 1059/UL 508 (C)
Vertical conductor connection	 RWV...	UL 1059	B		600 V - 65 A	600 V - 65 A
			C		600 V - 65 A	600 V - 65 A
			D		–	–
					IEC 60664/UL 840	IEC 60664/UL 840
		IEC 60664		2	1000 V - 76 A	1000 V - 76 A
				3	1000 V - 76 A	1000 V - 76 A
					UL 1059/UL 508 (C)	UL 1059/UL 508 (C)
Horizontal conductor connection Molded terminal block	 RW...-POT	UL 1059	B		600 V - 65 A	600 V - 65 A
			C		600 V - 65 A	600 V - 65 A
			D		–	–
					IEC 60664/UL 840	IEC 60664/UL 840
		IEC 60664		2	1000 V - 76 A	1000 V - 76 A
				3	1000 V - 76 A	1000 V - 76 A
					UL 1059/UL 508 (C)	UL 1059/UL 508 (C)
Vertical conductor connection Molded terminal block	 RWV...-POT	UL 1059	B		600 V - 65 A	600 V - 65 A
			C		600 V - 65 A	600 V - 65 A
			D		–	–
					IEC 60664/UL 840	IEC 60664/UL 840
		IEC 60664		2	1000 V - 76 A	1000 V - 76 A
				3	1000 V - 76 A	1000 V - 76 A

* The specified UL value will be expected during inspection.
The corresponding approval for this product is in preparation.

Type designation

RW
- Bolt connection



RWO
- Bolt connection, open version with hexagonal nut

TC
- Bolt connection with transparent cover

Conductor cross section

	AWG 14 – 2			10 – 300 kcmil	
	35 mm²			150 mm²	
RWO...5...-TC	RW...8...	RWO...8...	RWO...8...-TC	RWO...10...	RWO...10...-TC
UL 1059/UL 508 (C)	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**
600 V - 65 A	600 V - 115 A	600 V - 115 A	600 V - 115 A	600 V * - 225 A *	600 V * - 225 A *
600 V - 65 A	600 V - 115 A	600 V - 115 A	600 V - 115 A	600 V * - 225 A *	600 V * - 225 A *
–	–	–	–	–	–
IEC 60664/UL 840	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**
1000 V - 76 A	1000 V - 125 A	1000 V - 125 A	1000 V - 125 A	1000 V - 309 A	1000 V - 309 A
1000 V - 76 A	1000 V - 125 A	1000 V - 125 A	1000 V - 125 A	1000 V - 309 A	1000 V - 309 A
UL 1059/UL 508 (C)	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**		
600 V - 65 A	600 V - 115 A	600 V - 115 A	600 V - 115 A		
600 V - 65 A	600 V - 115 A	600 V - 115 A	600 V - 115 A		
–	–	–	–		
IEC 60664/UL 840	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**		
1000 V - 76 A	1000 V - 125 A	1000 V - 125 A	1000 V - 125 A		
1000 V - 76 A	1000 V - 125 A	1000 V - 125 A	1000 V - 125 A		
UL 1059/UL 508 (C)	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**		
600 V - 65 A	600 V - 115 A	600 V - 115 A	600 V - 115 A		
600 V - 65 A	600 V - 115 A	600 V - 115 A	600 V - 115 A		
–	–	–	–		
IEC 60664/UL 840	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**		
1000 V - 76 A	1000 V - 125 A	1000 V - 125 A	1000 V - 125 A		
1000 V - 76 A	1000 V - 125 A	1000 V - 125 A	1000 V - 125 A		
UL 1059/UL 508 (C)	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**	**UL 1059/UL 508 (C)**		
600 V - 65 A	600 V - 115 A	600 V - 115 A	600 V - 115 A		
600 V - 65 A	600 V - 115 A	600 V - 115 A	600 V - 115 A		
–	–	–	–		
IEC 60664/UL 840	**IEC 60664/UL 840**	**IEC 60664/UL 840**	**IEC 60664/UL 840**		
1000 V - 76 A	1000 V - 125 A	1000 V - 125 A	1000 V - 125 A		
1000 V - 76 A	1000 V - 125 A	1000 V - 125 A	1000 V - 125 A		

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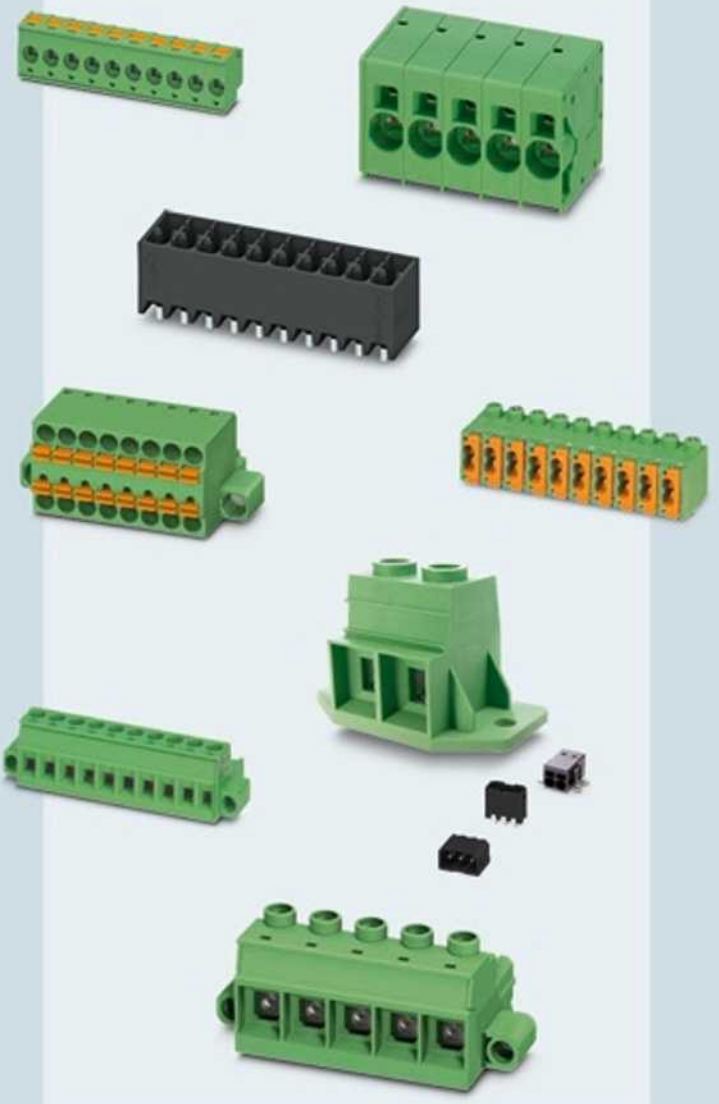

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