



Solutions for lights and lighting systems

Connectors and electronics housings

Your strong partner for lighting connection technology

The lighting industry is changing and the global market requires efficient and progressive lighting concepts. As such, the focus is firmly placed on the design, cost-effectiveness, quality, sustainability, and flexibility of the lights.

Bringing more than 90 years of experience and expertise to the table, Phoenix Contact offers you a comprehensive range of connectors in the field of connection technology.



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The right solution for every application

Regardless of whether it is for flexible LED PCBs, modern office lighting, or lighting in outdoor applications – Phoenix Contact offers you the right connection solution.

Over the next few pages, gain an overview of our comprehensive range of connectors, consisting of more than 50,000 articles.



Professional solutions for every application



Office



Architectural lights



Outdoor applications



Industry



Signal and display technology



Sales areas

Wire modern LED PCBs efficiently and safely

Benefit from the advantages of the connectors from the PTSM series, optimized for LED applications and only 5 mm high. Integrate numerous components in a confined space, e.g. on a PCB. This means you save time during installation due to the fast push-in connection.

Your advantages

- ✓ Comprehensive range with wire-to-board, board-to-board and wire-to-wire connectors
- ✓ Powerful push-in connection for currents up to 6 A
- ✓ High mechanical safety, thanks to the stable lateral solder anchor
- ✓ Designed for automated SMT and THR processes

Main features

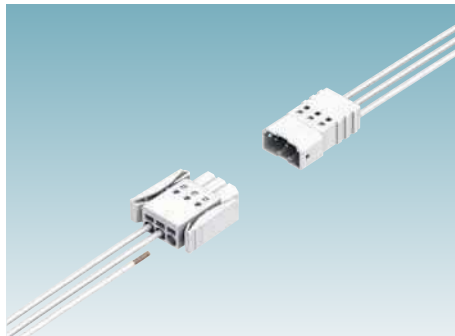
- Currents up to 6 A
- Voltages up to 320 V
- Conductor cross sections up to 0.75 mm²
- 2- to 8-pos.
- 5 mm design height
- 2.5 mm pitch
- White and black versions available

Three connection solutions – one design



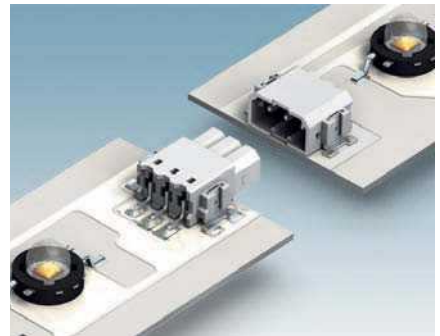
Wire-to-board – PTSM series

Connect and release solid and stranded conductors easily by means of the push-in connection.



PTSM wire-to-wire – PTSM series

Establish free-hanging connections quickly and easily.



PTSM board-to-board – PTSM series

Connect PCBs safely and durably to one another.

Connect flexible PCBs easily on site

With the new connectors from the PTF series, you can quickly and easily connect flexible LED PCBs. The white connectors can be integrated discretely into the application and minimize unwanted shadows on the LED PCB thanks to their flat design.

Your advantages

- ✓ Not necessary to solder the connection litz wires onto the contact surfaces
- ✓ Secure hold on the PCB thanks to integrated locking mechanism
- ✓ Available as a supply element or as a butt connector for 8 mm and 10 mm wide LED strips
- ✓ High current carrying capacity enables long LED strips to be connected without an additional power supply
- ✓ Small corner connectors or T-pieces simplify integration into the lighting application



Main features

- Currents up to 10 A per connector
- Voltages up to 25 V
- AWG 22 cables for the supply
- 2- and 4-pos. supply version
- Operating temperature from -30°C to +70°C

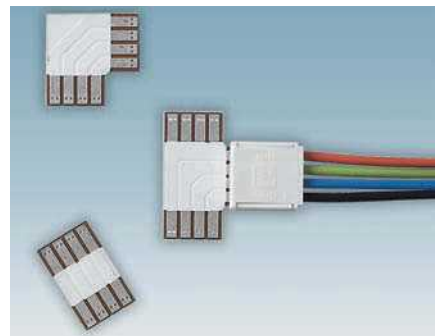
The innovative connection for flexible LED PCBs



Butt connectors – PTF series
Secure PCB connection thanks to an integrated locking mechanism.



Supply element – PTF series
Two- or four-pos. connectors with connected cables for energy supply.



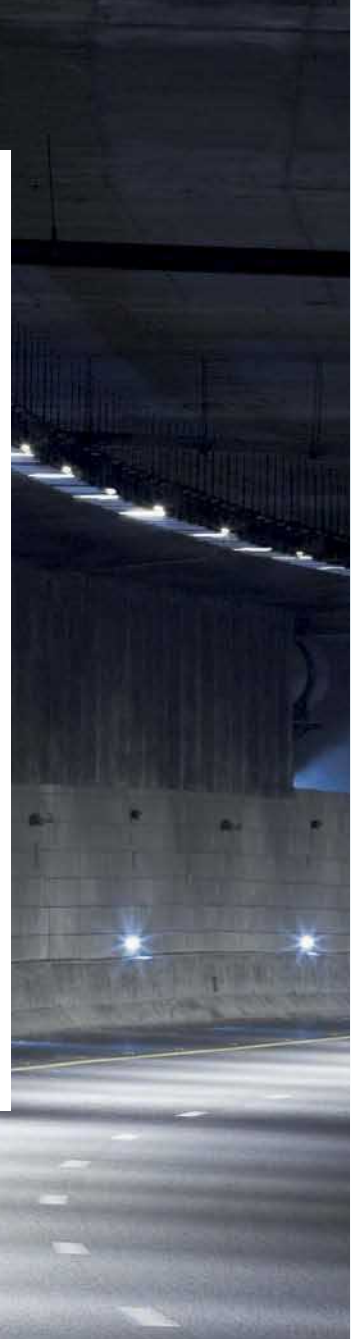
PCB connectors – PTF series
Connecting elements for easy installation of flexible LED PCBs.

Compact connection solutions for ballasts and LED drivers

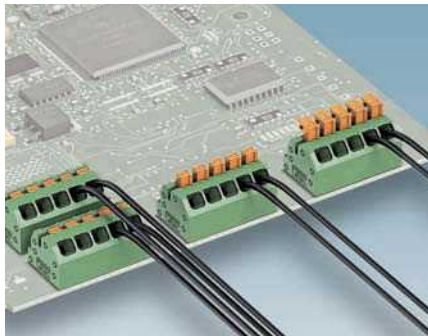
Integrate compact and innovative connection solutions from the comprehensive COMBICON range into your ballasts and LED drivers. As such, you ensure that your customers use lighting technology efficiently.

Your advantages

- ✓ Flexible choice of connection and mounting technology
- ✓ Easy integration into fully-automated production, thanks to components for THR/SMT processes
- ✓ Long service life, thanks to fully tested contact geometries and surfaces
- ✓ Developed and produced according to the latest standards

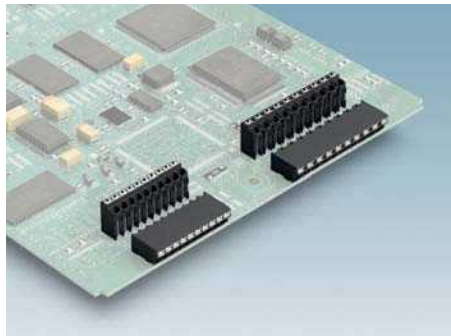


Versatile PCB terminal blocks for your devices



SPTAF 1

Angled connection and convenient operation at a low height.



SPT-THR and SPT-SMD

Quick, simple push-in connection and full reflow solderability.



PT and PTS

Freely selectable connection technology with the same size.



PTSA

Customizable color coding for easy conductor assignment.

Main features

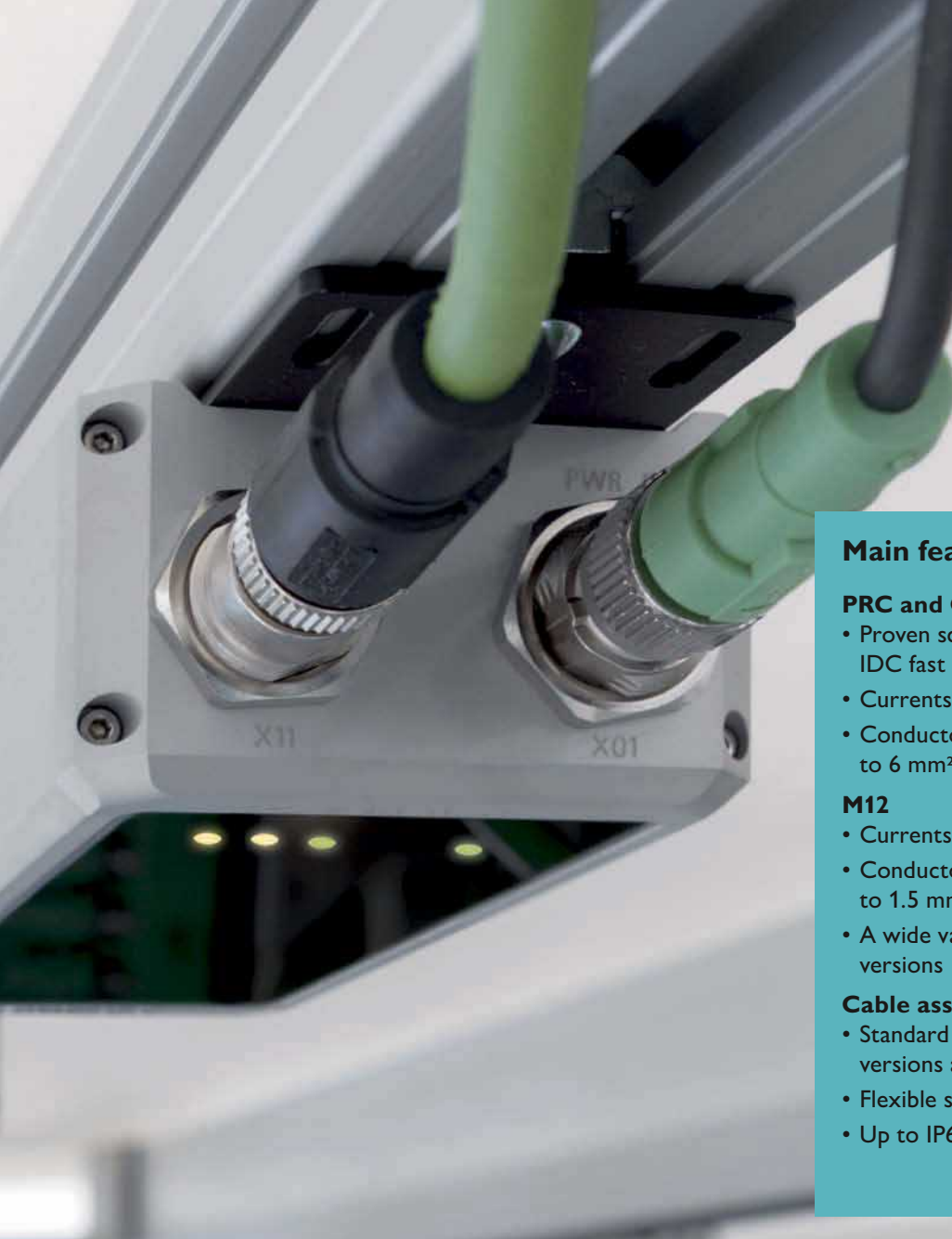
- Screw, spring or IDC connection
- Available as PCB terminal block and connector
- For wave and reflow soldering technology
- Optional color coding
- Mixed pitches possible

Robust connection technology for industrial and outdoor lighting

High demands are placed on lighting concepts for harsh industrial environments and for outdoor applications. For this reason, Phoenix Contact offers a comprehensive range of IP-protected circular connectors and cable assemblies. Select connectors for assembly with a screw or IDC connection or use pre-assembled cables.

Your advantages

- ✓ High level of reliability, thanks to robust connectors with a IP65 to IP69K degree of protection
- ✓ Powerful connection solutions for currents up to 35 A and voltages up to 690 V
- ✓ Connectors with screw and IDC connection for flexible on-site installation
- ✓ Pre-assembled cables for fast, fault-free cabling
- ✓ Wide variety of device connectors for easy integration into your devices



Main features

PRC and QPD

- Proven screw connection or time-saving IDC fast connection
- Currents up to 35 A, voltages up to 690 V
- Conductor cross sections from 1.5 mm² to 6 mm²

M12

- Currents up to 16 A, voltages up to 630 V
- Conductor cross sections from 0.14 mm² to 1.5 mm²
- A wide variety of codings and mounted versions

Cable assembly

- Standard assemblies or customer-specific versions available
- Flexible selection of lengths and cable types
- Up to IP69K degree of protection

Reliable circular connectors for harsh environments



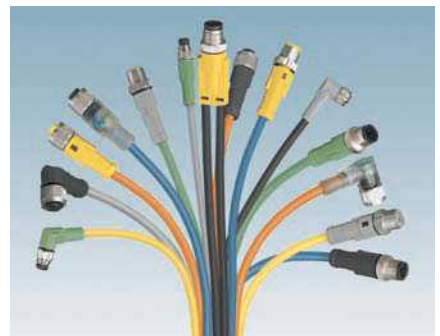
M12 connectors

Connectors for self-assembly and assembled cables in accordance with the industry standard.



PRC and QPD

3- to 5-pos. connectors with screw and fast connection technology.



Cable assembly

Customer-specific cable assembly for quick, secure and fault-free connections.



Electronics housings for light controls and building technology

Take advantage of the versatile housing range from Phoenix Contact for your lighting technology devices. The BC housings designed for distributor boards in accordance with DIN 43880 feature a contemporary design and optional bus connector. The EH basic housings for universal applications offer an excellent price-performance ratio and are suitable for both DIN rail mounting and fastening directly to a wall.

Your advantages

- ✓ Maximum flexibility thanks to free choice of PCB connection technology and various overall widths
- ✓ Freedom in device development as the PCB can be aligned in several spatial directions
- ✓ Optimum adaptation to device requirements thanks to different cover versions
- ✓ Save time thanks to quick and easy mounting



Main features

EH basic housings

- 2 heights, 7 overall widths, 3 cover versions
- Integrated marking field
- DIN rail or wall mounting
- ABS material with HB (UL94) flammability rating

BC building installation housings

- 6 overall widths, 2 cover versions
- Optional 16-pos. bus connector
- Selectable terminal installation depth (11 or 22 mm)
- Suitable for distributor boards in accordance with DIN 43880

Electronics housings for distributor boards and optional wall mounting



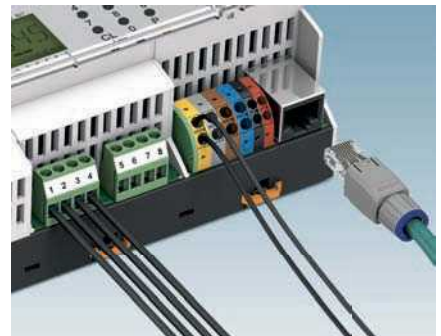
BC building installation housings

Designed in accordance with DIN 43880 for distributor boards.



EH basic housings

Functional housing system for universal use.



PCB terminal blocks and PCB connectors for the BC and EH series

Free choice from a wide variety of connection methods.

Surge protection and device protection for LED lighting systems

LED technology provides durable solutions for road and building lighting. Premature blackouts caused by surge voltages significantly reduce the savings potential of energy-saving LED lights. This is often caused by ballasts which are sensitive to transient voltages. The dimensions of the LED arresters allow them to be installed directly in the lamp or the cable junction box. Due to the increased insulation, usage in LED applications in protection class II equipment is easily possible.

Your advantages

- ✓ Easy retrofitting thanks to compact design
- ✓ Flexible mounting thanks to integrated, elongated holes
- ✓ Can be used in a wide variety of applications thanks to versions for protection classes I and II
- ✓ High electric strength due to double insulation
- ✓ Wide range of possible applications thanks to wide voltage range



Main features

- Reinforced (double) insulation for use in insulation class II
- Expanded signaling of the protection status through L connection
- For insulated and grounded lighting installation
- Low voltage protection level of $< 1.3 \text{ kV}$
- Nominal voltage range $100 \text{ V AC} \dots 277 \text{ V AC}$
- Tested and certified by KEMA

Protecting lighting systems from damage due to surge voltage



Type 1/2 surge protective device
VALVETRAB MS available for various grid configurations and performance classes for use in the distributor box.



Type 2 surge protective device
BLOCKTRAB for insulation class I with PE connection for direct use in the lamp or in the cable junction box.



Type 2 surge protective device
BLOCKTRAB for insulation class II without PE connection for direct use in the lamp or in the cable junction box.

PCB terminal blocks and PCB connectors

Find out more with the web code

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



Web code: #1234 (example)

This allows you to access information on our website quickly.

It couldn't be simpler:

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




Or use the direct link:

phoenixcontact.net/webcode/#1234





Connectors for flexible LED strips – PTF series



Webcode: #0938






	Product range	Notes	Number of positions	Pitch	Current (A)	Voltage (V)	Connection direction
	PTF 0,3/...WB	Connectors for flexible LED PCBs	2–4	For 8 mm and 10 mm-wide flexible LED strips	10 A / connector	24	0°
	PTF 0,3/...BB	PCB connectors for flexible PCBs	4		10 A / connector	24	0°
	PTF 0,3/...Flex	Connection PCBs	4	For 8 mm and 10 mm-wide flexible LED strips	10 A / element	24	0°

PCB terminal blocks and PCB connectors – PTSM series










 Webcode: #0937	Product range	Notes	Number of positions	Pitch	Current (A)	Voltage (V)	Connection direction
	PTSM 0,5/...H-SMD	Higher voltage possible (IEC in accordance with II/2: 320 V), white, with latching	1–8	2.5	6	160	0°
	PTSM 0,5/...V-SMD	Higher voltage possible (IEC in accordance with II/2: 320 V), white, with latching	2–8	2.5	6	160	90°
	PTSM 0,5/...-P	Higher voltage possible (IEC in accordance with II/2: 320 V), white, with latching	2–8	2.5	6	160	0°
	PTSM 0,5/...-PI	Higher voltage possible (IEC in accordance with II/2: 320 V), white, with latching	2–8	2.5	6	160	0°
	PTSM 0,5/...-PL	Higher voltage possible (IEC in accordance with II/2: 320 V), white, with latching	2–8	2.5	6	160	0°
	PTSM 0,5/...-HH-SMD	Higher voltage possible (IEC in accordance with II/2: 320 V), white, with latching	2–8	2.5	6	160	0°
	PTSM 0,5/...-HV-SMD	Higher voltage possible (IEC in accordance with II/2: 320 V), white, with latching	2–8	2.5	6	160	90°
	PTSM 0,5/...-HTB-SMD	Higher voltage possible (IEC in accordance with II/2: 320 V), white, with latching	2–8	2.5	6	160	90°
	PTSM 0,5/...-HHI-SMD	Higher voltage possible (IEC in accordance with II/2: 320 V), white, with latching	2–8	2.5	6	160	0°

PCB terminal blocks and PCB connectors

PCB connectors with push-in spring connection

 Web code: #0940	Product range	Notes	Number of positions	Pitch	Current (A)	Voltage (V)	Connection direction
	PTS 1,5/...-PH		2–12	5	12	400	0°
	PST 1,3/...-5,0-SF		2–12	5	12	400	90°
	PST 1,3/...-5,0	THR/wave soldering-capable	2–16	5	12	320	90°
	PTS 1,5/...-H		2–12	5	12	400	0°





PCB terminal blocks with push-in spring connection

 Web code: #0940	Product range	Notes	Number of positions	Pitch	Current (A)	Voltage (V)	Connection direction
	PTSA 0,5/...-Z	Mixed pitches possible with PTSA 1,5, special versions on request	2–16	2.5	2	250	45°
	PTSA 1,5/...-Z	Mixed pitches possible with PTSA 0,5, special versions on request	2–16	2.5	2	250	45°
	SPTAF 1/...-3,5 IL	Integrated release button	2–16	3.5 and 5.0	8	160	45°
	SPTAF 1/...-5,0 IL	Integrated release button	2–16	5.0	8	320	45°
	SPTAF 1/...-3,5 EL	Raised release button	2–16	3.5	8	160	45°
	SPTAF 1/...-5,0 EL	Raised release button	2–16	5.0	8	320	45°
	SPTAF 1/...-3,5 LL	Release button with locking function	2–16	3.5	8	160	45°
	SPTAF 1/...-5,0 LL	Release button with locking function	2–16	5.0	8	320	45°

PCB terminal blocks with push-in spring connection







 Web code: #0942	Product range	Notes	Number of positions	Pitch	Current (A)	Voltage (V)	Connection direction
	SPT 1,5/..H-SMD	SMT soldering	2–12	3.5; 3.81; 5; 5.08	13.5	320	0°
	SPT 1,5/..V-SMD	SMT soldering	2–12	3.5; 3.81; 5; 5.08	13.5	320	90°

PCB terminal blocks with screw connection with wire guard





 Web code: #0941	Product range	Notes	Number of positions	Pitch	Current (A)	Voltage (V)	Connection direction
	PT 1,5/..-H		2–16	3.5 and 5.0	16	400	0°
	PT 1,5/..-V		2–16	3.5 and 5.0	16	400	90°
	PTA 1,5		2–16	3.5 and 5.0	16	400	45°

Circular connectors








M12 circular connectors

 Web code: #0964	Note	Number of pos.	Conductor cross section	Current (A)	Voltage (V)
	Flush-type connector, contact carrier socket, A-coded	4		4	250
	Flush-type connector with individual litz wires, socket, S-coded	3+PE	1.5 mm ²	12	630
	Connector for field assembly, screw connection, pin, S-coded	3+PE	1.5 mm ²	12	630
	Housing screw connection for M12 socket inserts, flat gasket, for all Speedcon-capable THR and wave soldering contact carriers				
	M12 housing screw connection with tolerance-compensating function, for straight, THR-capable M12 socket contact inserts, suitable for front plate panel thickness of 1.7 mm ... 2.5 mm				











Assembled M12 cables and QPD installation system

 Web code: #0965	Note	Number of pos.	Conductor cross section	Current (A)	Voltage (V)	Length
	Power cable, straight M12 SPEEDCON connector, S-coded on free end of cable	4	1.5 mm ²	12	630	2.0 m
	Sensor/actuator cable, various cable types and lengths, straight M12 connector, A-coded, straight M12 to socket, A-coded	4	Variable	4	250	Variable
	Pre-assembled cable with QUICKON connectors, with 5 x 2.5 PVC cable	4+PE	2.5 mm ²	20	690	1.0 m

Circular connectors with screw connection – PRC series

 Web code: #0200	Note	Number of positions	Conductor cross section	Current (A)	Voltage (V)
	Connector with screw connection, for cable diameters from 10 mm ... 12 mm	5	1.5 mm ² ... 6 mm ²	30	630
	Device connector with litz wires, cable length 150 mm	5	2.5 mm ² litz wire	30	630
	Connector with screw connection, for cable diameters from 8 mm ... 12 mm	3	1.5 mm ² ... 6 mm ²	30	630
	Device connector with litz wires, cable length 150 mm	3	2.5 mm ² litz wire	30	630
	Device connectors, contact carriers for crimp contacts	3	For 2.5 ... 6 mm ² crimp contacts	30	630
	Crimp contact for 2.5 mm ² conductor cross section		2.5 mm ²	30	630

Installation system with IDC fast connection – QPD series








 Web code: #0963	Note	Number of positions	Conductor cross section	Current (A)	Voltage (V)
	H-distributor, for 4-9 mm cable diameters	2+PE	0.5-1.5 mm ² / AWG 20-16	17.5	690
	H-distributor, for 5-10 mm cable diameters	4+PE	0.5-1.5 mm ² / AWG 20-16	17.5	690
	T-distributor, for 4-9 mm cable diameters	2+PE	0.5-1.5 mm ² / AWG 20-16	17.5	690
	Cable connector, for 4-9 mm cable diameters	2+PE	0.5-1.5 mm ² / AWG 20-16	17.5	690
	Cable connector, for 5-10 mm cable diameters	4+PE	0.5-1.5 mm ² / AWG 20-16	17.5	690
	Panel feed-through, solder or spade connection	2+PE	0.5-1.5 mm ² / AWG 20-16	17.5	690
	Panel feed-through, litz wires	4+PE	0.5-1.5 mm ² / AWG 20-16	17.5	690
	Panel feed-through, litz wires	2+PE	0.5-1.5 mm ² / AWG 20-16	17.5	690
	Connectors, for 4-9 mm cable diameters	2+PE	0.5-1.5 mm ² / AWG 20-16	17.5	690

Electronics housings and surge protective devices





Basic housings for universal applications – EH series

 Web code: #0387	Note	Housing width in mm	Color
	Tall design	22.5 / 35 / 45 / 52.5 / 67.5 / 70 / 90	Light gray
	Tall design	22.5 / 35 / 45 / 52.5 / 67.5 / 70 / 90	Black
	Upper part, both sides open	22.5 / 35 / 45 / 52.5 / 67.5 / 70 / 90	Light gray
	Upper part, one side open	22.5 / 35 / 45 / 52.5 / 67.5 / 70 / 90	Black
	Flat design	22.5 / 35 / 45 / 52.5 / 67.5 / 70 / 90	Light gray
	Flat design	22.5 / 35 / 45 / 52.5 / 67.5 / 70 / 90	Black
	Upper part, both sides open	22.5 / 35 / 45 / 52.5 / 67.5 / 70 / 90	Light gray
	Upper part, one side open	22.5 / 35 / 45 / 52.5 / 67.5 / 70 / 90	Black
	Left MSTBO header, 4-pos.	22.5 / 35 / 45 / 52.5 / 67.5 / 70 / 90	Green
	Right MSTBO header, 4-pos.	22.5 / 35 / 45 / 52.5 / 67.5 / 70 / 90	Green

Modular building installation housings – BC series

 Web code: #0311	Note	Housing width in mm	Terminal installation depth in mm
	Lower part	17.8 / 35.6 / 53.6 / 71.6 / 107.6 / 161.6	
	Upper part	17.8 / 35.6 / 53.6 / 71.6 / 107.6 / 161.6	11/22
	Cover, permanently snapped in	17.8 / 35.6 / 53.6 / 71.6 / 107.6 / 161.6	
	Cover, transparent with fitted cover	17.8 / 35.6 / 53.6 / 71.6 / 107.6 / 161.6	
	HBUS connector, 16-pos.	17.8 / 35.6 / 53.6 / 71.6 / 107.6 / 161.6	
	HBUS power connector, 16-pos., 500 mm cable length		22 mm

Surge protective devices

 Web code: #0926	Name	Note	Nominal voltage	Rated load current	Nominal discharge current	Voltage protection level
	BLT-T2	Insulation class II	100–277 V AC	16 A	5 kA	1.3 kV class
	BLT-T2-1S	Insulation class I	100–277 V AC	16 A	5 kA	1.3 kV class
	VAL-MS-T1/T2		240/415 V AC (TN-S)	80 A	12.5 kA	≤ 1.2 kV

Professional service

In addition to our comprehensive range of standard products, we can also offer a high degree of flexibility when it comes to customer-specific modifications. From color versions, to printing, right through to special packaging, we can provide you with almost anything – even brand new product developments.

Flexible versions

Whether it's individual colors, modern special printing, a specific number of contacts or complete cable assembly – our service centers will be happy to support you in quickly implementing your requirements.

Innovation expertise

Benefit from our extensive development and manufacturing expertise for your individual solution – from the initial idea to series production.

Professional service and support

During the design-in process, we'll offer advice and support from the initial inquiry right up to the finished product, wherever you are in the world.



An example of outstanding individual customer solutions: LED street lighting from Hella.



Wide range of color versions



Customer-specific cable assemblies



Individual printing



Special punching, coding, and pin lengths



Connection block for temperature sensors



Connection technology for flexible LED PCBs outdoors



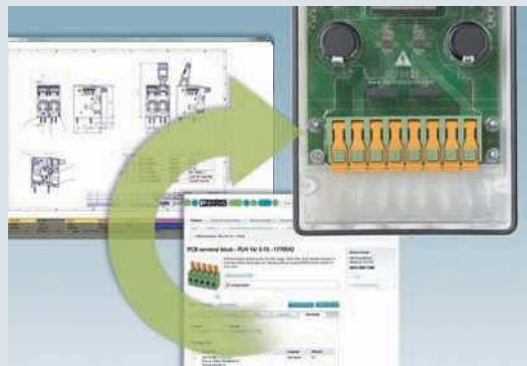
Connection system for LED street lighting



Controller housing with front connection technology



Fast product selection using web tools



Convenient 3D data download



International training on products and technologies

Open communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. We are known for producing forward-thinking products and solutions for the comprehensive electrification, networking, and automation of all sectors of the economy and infrastructure. With a global network, we maintain close relationships with our customers, something we believe is essential for our common success.

You can find your local partner at
phoenixcontact.com

