

2015/2016

Modular rectangular connectors

Modular rectangular connectors for signals, data, and power

The PLUSCON device connector system offers compact connections for transmitting currents up to 70 A and voltages up to 630 V in devices and terminal boxes.

The basis of the program consists of modular contact inserts with screw and PCB connection, as well as fixed contact inserts with crimp connection for turned and punched contacts.

With IP68/IP69K degree of protection, the connector system guarantees maximum reliability, even under extreme conditions.



The right connection technology for every application



Variable frequency drive



Inverter



Control cabinet



Battery units

Your advantages

- Modular contact insert structure
- Combination of power, signal, and fiber optics in one connector
- Housing designs made of plastic and metal
- Aluminum housing suitable for EMC applications
- Easy configuration via online configurator:
select.phoenixcontact.com



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Find out more with the web code

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

i Web code: #1234 (example)

This allows you to obtain further 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. Receive more information and product versions

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

The modular connector system with a compact design

The PLUSCON device product range enables power, signal, and data transmission to be combined in a single connector. It is possible to select screw, crimp or direct PCB connection for the device side. Crimp contact inserts are available for applications with a high contact density. Additional modules are available for data transmission via fiber optics.

Sleeve housings and cable glands
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Cable glands

Sleeve housings

Fixed-position contact insert sets
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Pin contacts

Pin contact carriers

Socket contact carriers

Socket contacts

Modular contact inserts and frames
pages 10-12

Sleeve frames

Modular pin contact inserts

Panel mounting frame with panel mounting flanges

Modular socket contact inserts

Connectors



Pre-assembled contact insert sets

Complete sets consisting of: frame, fixing screws, pre-assembled modules, and coding profiles



High-position contact carriers

Pin and socket contact carriers for turned and rolled crimp contacts for applications with up to 65 positions



Modular structure

Easy combination of power, signal, and fiber optics in one connector



Four sizes

Widths from 32.4 mm to 77.4 mm with two to five module slots



Different cable outlets

Sleeve housings with angled and straight cable outlet make mounting easy



Various materials

Sleeve housing made of plastic and die-cast aluminum, panel mounting base and coupling housing made of die-cast zinc for a range of applications

Device connection



PCB connection

Contact inserts with PCB connection for parallel or perpendicular arrangements of the PCB to the device panel



Screw and crimp connection

Contact inserts with screw and crimp connection for connecting device-internal litz wires



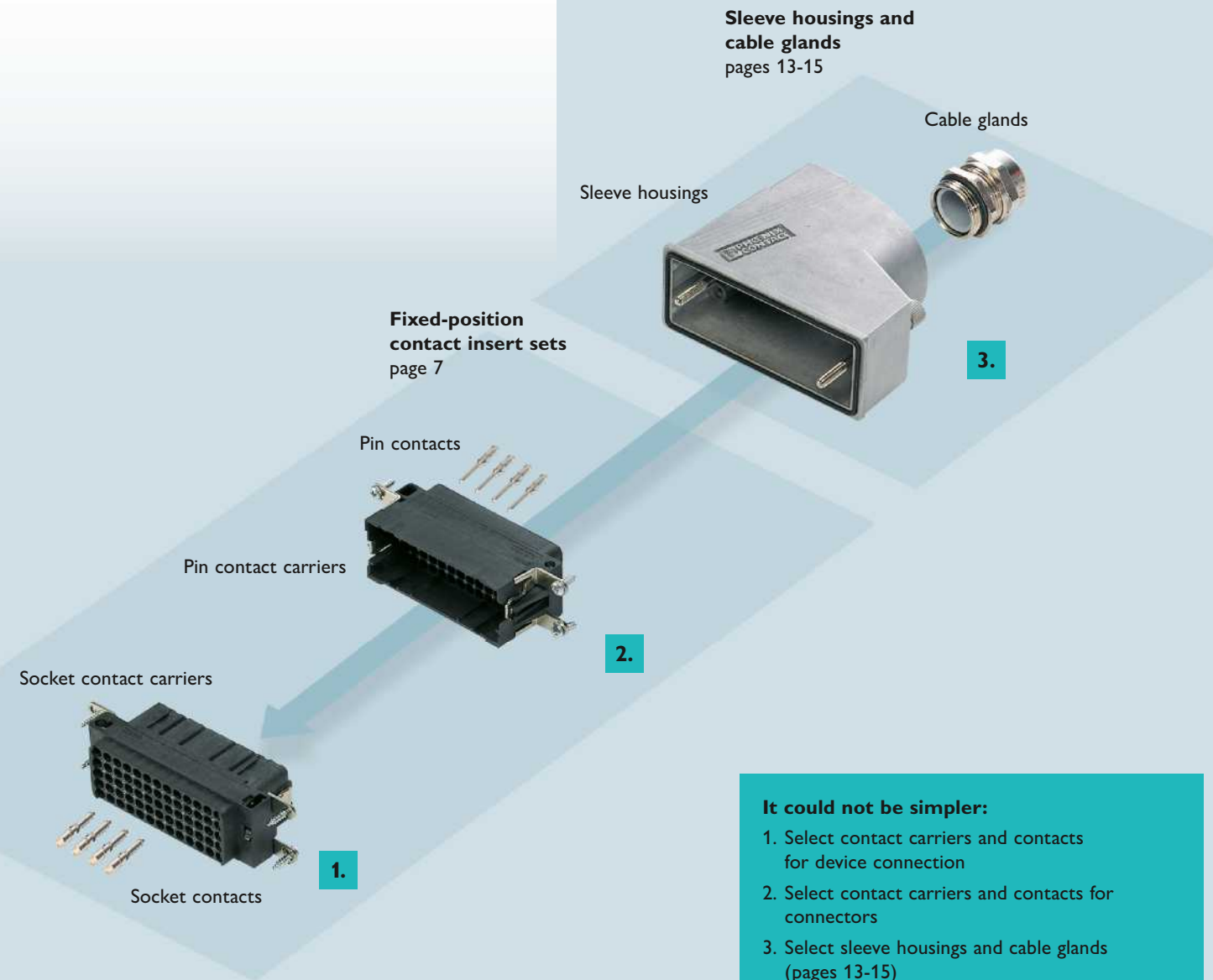
Panel mounting base and coupling housing

For plug-in cabling directly on the device panel or free-hanging connections




Configuration overview for fixed-position contact inserts

You transmit signals in the most confined space with fixed-position contact inserts.


Simply combine the contact inserts and crimp contacts to realize connections for up to 65 positions.



Contact carriers and crimp contacts

		Connectors	Device connection	
i Web code: #0530				
Size	Number of positions/ conductor cross section	Pin contact carriers for turned/rolled crimp contacts*	Socket contact carriers for turned crimp contacts*	Socket contact carriers for rolled crimp contacts*
VC1	15 x 0.14 mm ² ... 1.5 mm ²	1855018	1855050	1884801
VC2	30 x 0.14 mm ² ... 1.5 mm ²	1855021	1855063	1884791
VC3	50 x 0.14 mm ² ... 1.5 mm ²	1855034	1855076	1884788
VC4	65 x 0.14 mm ² ... 1.5 mm ²	1855047	1855089	1884775

Crimp contacts*

i Web code: #0531					
Type of contact	Conductor cross section	Turned pin contacts	Rolled pin contacts	Turned socket contacts	Rolled socket contacts
Single contact, silver-plated	0.14 mm ² / AWG 26	1663336	–	1663394	–
	0.50 mm ² / AWG 20	1663349	–	1663404	–
	0.75 mm ² / AWG 18	1663352	1884092	1663417	1884128
	1.00 mm ² / AWG 18	1663365	–	1663420	–
	1.50 mm ² / AWG 16	1663378	1884089	1663433	1884115
Single contact, gold-plated	0.14 mm ² / AWG 26	1674901	–	1674969	–
	0.50 mm ² / AWG 20	1672453	–	1674480	–
	0.75 mm ² / AWG 18	1674914	–	1672440	–
	1.00 mm ² / AWG 18	1674888	–	1674943	–
	1.50 mm ² / AWG 16	1674875	–	1674930	–
Taped products, silver-plated					
	0.75 mm ² / AWG 18	–	1884157	–	1884186
	1.50 mm ² / AWG 16	–	1884144	–	1884173
Crimping tools					
	–	1687419	1884843	1687419	1884843

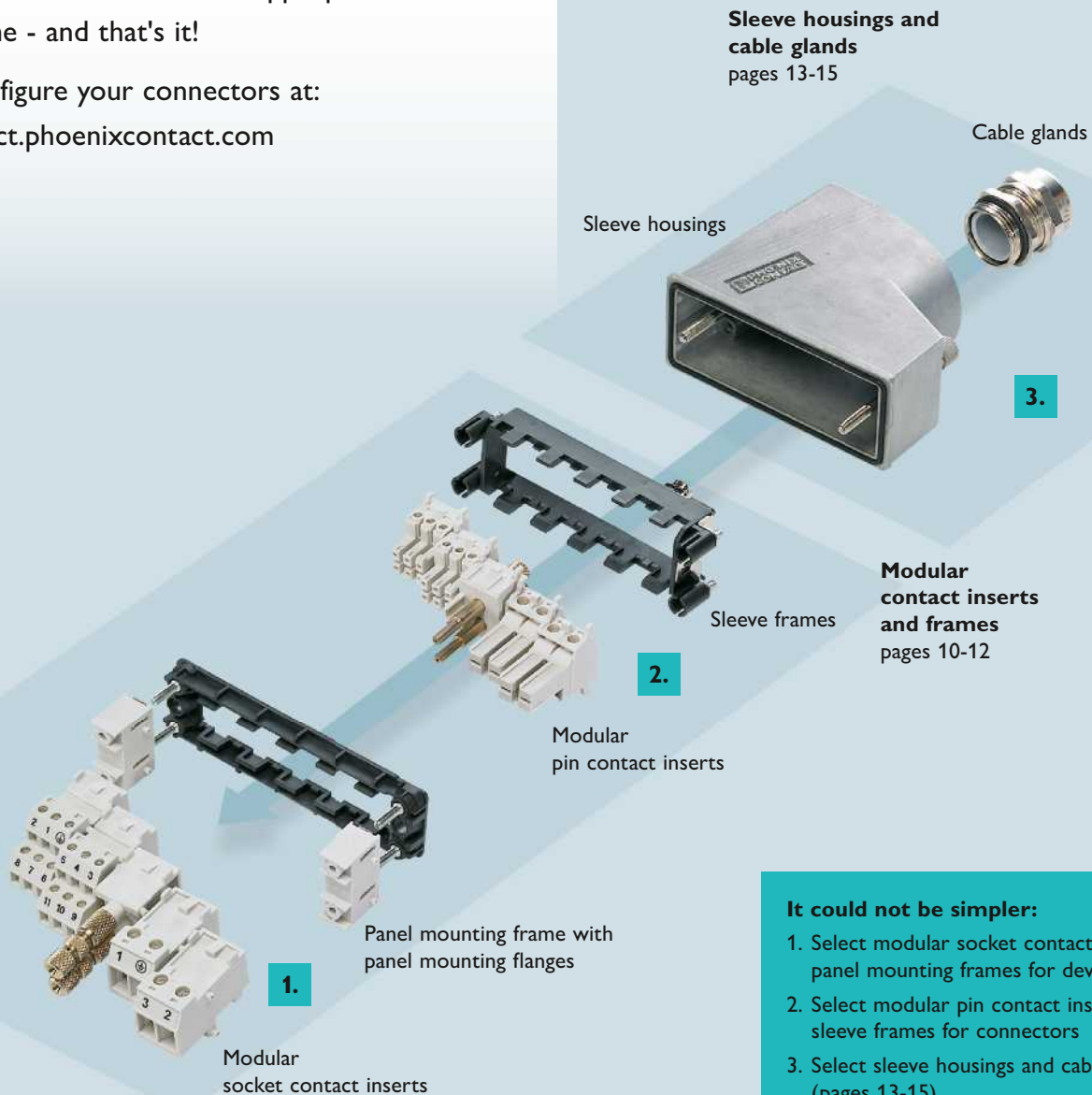
* Please order crimp contacts separately

Configuration overview for modular contact inserts

The modular contact inserts enable power, signal, and data transmission to be combined in any way in one connector. Select the corresponding size according to the number of modules.

The modules can simply be joined together and then inserted in the appropriate frame - and that's it!

Configure your connectors at:
select.phoenixcontact.com



It could not be simpler:

1. Select modular socket contact inserts and panel mounting frames for device connection
2. Select modular pin contact inserts and sleeve frames for connectors
3. Select sleeve housings and cable glands (pages 13-15)

Size VC1, 2 module slots

panel cutout: $19.5^{+0.2}$ mm x $32.4^{+0.3}$ mm



2 x 6-pos. signals

Size VC2, 3 module slots

panel cutout: $19.5^{+0.2}$ mm x $47.4^{+0.3}$ mm



1 x 2-pos. power
1 x 6-pos. signals
1 x 8-pos. signals

Size VC3, 4 module slots

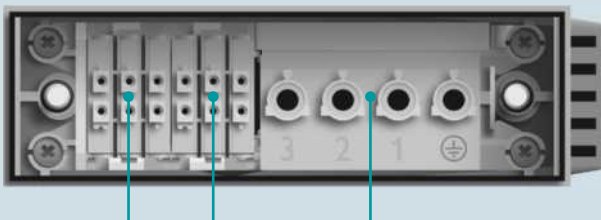
panel cutout: $19.5^{+0.2}$ mm x $62.4^{+0.3}$ mm



1 x 2-pos. data
1 x 2-pos. power
1 x 6-pos. signals
1 x 8-pos. signals

Size VC4, 5 module slots

panel cutout: $19.5^{+0.2}$ mm x $77.4^{+0.3}$ mm






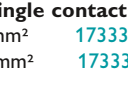


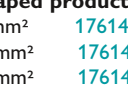


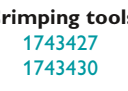








2 x 6-pos. signals
1 x 3+1-pos. power

Modular contact inserts and panel mounting frames for device connection


Modular contact inserts

i Web code: #0537

Type	Number of positions	Module slots	PCB connection			Screw connection		Crimp connection		
				180°	90°	90° with PE				
FO	2	1		–	–	–		1885240		
1.5 mm ²	6	1		1884872	1853531	–		1854019 1583555 ¹⁾		Single contacts 4 mm ² 1733385 10 mm ² 1733372
1.5 mm ²	8	1		1884885	1852833	–		1854022 1583568 ¹⁾		Taped products 4 mm ² 1761467 10 mm ² 1761470 16 mm ² 1761483
4 mm ²	2	1		1884979	1852859	–		1853528 1583542 ¹⁾		Crimping tools 1743427 1743430
16 mm ²	4	3		–	1607509	1607516		1607745		1583877 ²⁾
16 mm ²	5	4		–	1607523	1607530		1607748		1583878 ²⁾

Panel mounting frame

i Web code: #0539

	Size	Module slots	Order No. standard	Order No. with EMC
	VC1	2	1852972 ³⁾	1853214 ³⁾
	VC2	3	1852985 ³⁾	1853227 ³⁾
	VC3	4	1852998 ³⁾	1853230 ³⁾
	VC4	5	1853007 ³⁾	1853243 ³⁾

¹⁾ Contact insert with PE marking








²⁾ Items do not require separate panel mounting frame

³⁾ A panel mounting flange set (1852862) must be ordered for each panel mounting frame

Modular contact inserts and sleeve frames for the connector


Modular contact inserts

i Web code: #0536

Type	Number of positions	Module slots		Order No.
FO	2	1		1855814
1.5 mm ²	6	1		1853476 1583526 ¹⁾
1.5 mm ²	8	1		1852820 1583536 ¹⁾
4 mm ²	2	1		1852846 1583513 ¹⁾
16 mm ²	4	4 (of which 1 is free)		1607488
16 mm ²	4	5 (of which 2 are free)		1607495
16 mm ²	5	5 (of which 1 is free)		1607502

Sleeve frames

i Web code: #0538

	Size	Module slots	Order No.
	VC1	2	1607059
	VC2	3	1607062
	VC3	4	1607075
	VC4	5	1607088

¹⁾Contact insert with PE marking

Modular contact insert sets for device connection and connectors

Device connection

Connectors

i Web code: #0528

i Web code: #0529



Size	Number of positions/ conductor cross section	Pin contact inserts incl. panel mounting frame and flange	Socket contact inserts incl. sleeve frames
VC1	16 x 1.5 mm ²	1607394	1607239
	12 x 1.5 mm ²	1607346	1607191
	4 x 4 mm ²	1607298	1607143
VC2	24 x 1.5 mm ²	1607407	1607250
	18 x 1.5 mm ²	1607359	1607202
	6 x 4 mm ²	1607311	1607154
	4 x 16 mm ²	1607745	1607467
VC3	32 x 1.5 mm ²	1607418	1607263
	24 x 1.5 mm ²	1607370	1607215
	8 x 4 mm ²	1607322	1607167
	5 x 16 mm ²	1607748	1607474
VC4	40 x 1.5 mm ²	1607431	1607274
	30 x 1.5 mm ²	1607383	1607226
	10 x 4 mm ²	1607335	1607178
	7 x 16 mm ²	1607751	1607481

Housing for connectors

Sleeve housings

i Web code: #0532



Size	Module slots	Cable gland	Aluminum			Plastic			
			metric	for 2 cable glands	metric	metric	Pg	Integrated Pg screw connection	Flat cable outlet
VC1	2	Thread type	M20	–	M25	M20	Pg16	–	–
		Cylinder head screw	1583597	–	1583607	1852935	1852930	–	1607703
		Knurled screw	1583610	–	1583623	1855097	1855092	–	–
VC2	3	Thread type	M20	–	M25	M25	Pg21	Pg29	–
		Cylinder head screw	1583636	–	1583649	1852948	1852943	1583880	1607680
		Knurled screw	1583652	–	1583665	1855107	1855102	–	–
VC3	4	Thread type	M25	M25/M20	M32	M25	Pg21	Pg29	–
		Cylinder head screw	1583678	1583681	1583694	1852961	1852956	1424368	1607677
		Knurled screw	1583704	1583717	1583720	1855120	1855115	–	–
VC4	5	Thread type	M25	M25/M20	M32	M25	Pg21	–	–
		Cylinder head screw	1583733	1583746	1583759	1852974	1852969	–	1607693
		Knurled screw	1583762	1583775	1583788	1855133	1855128	–	–

Supporting base element

i Web code: #0545



Size	Module slots	Cable gland	Panel mounting base with open bottom		Box mounting base with fixing holes		Coupling housing with closed bottom	
			Pg16	Pg21	Pg16	Pg21	Pg16	Pg21
VC1	2		1884403	–	1884720	–	1884568	–
VC2	3		–	1884416	–	1884733	–	1884571
VC3	4		–	1884429	–	1884746	–	1884584
VC4	5		–	1884432	–	1884759	–	1884597

Cable glands for one cable

Metric cable glands

i Web code: #0533



Thread type	Cable diameter [mm]	Plastic	Cable diameter [mm]	Metal	Cable diameter [mm]	EMC
M20	8 ... 13	1690626	9 ... 13	1690561	7 ... 12.5	1690503
	–	–	11 ... 16	1645998	–	–
	–	–	19 ... 27	1646010	–	–
M25	11 ... 17	1690639	11 ... 16	1690574	9 ... 16.5	1690516
	–	–	14 ... 21	1646007	–	–
M32	15 ... 21	1690642	14 ... 21	1690587	11 ... 21	1690529

Pg cable glands

i Web code: #0534



Type of thread	Cable diameter [mm]	with plastic pressure screw	with brass pressure screw	EMC screw connection with iris spring
Pg16	4 ... 6.5	1854459	1853942	–
	5 ... 8	1853735	1853955	–
	6.5 ... 9.5	1853748	1853968	1854132
	7 ... 10.5	1853751	1853971	1854161
	9 ... 13	1853764	1853984	1854174
	11.5 ... 15.5	1854844	1854857	–
Pg21	7 ... 10.5	1853890	1853997	–
	9 ... 13	1853900	1854006	1854200
	9 ... 13	–	–	1854213
	11.5 ... 15.5	1853913	1854035	1854242
	14 ... 18	1853926	1854048	1854255
	17 ... 20.5	1853939	1854051	–

Cable glands for several cables

Pg cable glands

 Web code: #0535



Type of thread	Cable diameter [mm]	with plastic pressure screw	with brass pressure screw
Pg16	1 x 3 / 1 x 8	1885376	1885457
	1 x 3 / 1 x 9	1885389	1885460
	1 x 6 / 1 x 8	1885392	1885473
	1 x 5 / 1 x 9	1885402	1885486
	1 x 3 / 2 x 8	1885415	1885499
	1 x 5 / 2 x 6	1885428	1885509
	2 x 6 / 1 x 7	1885431	1885512
	3 x 7	1885444	1885525
Pg21	1 x 6 / 2 x 9	1885538	1885619
	1 x 8.5 / 1 x 12	1885279	1854970
	2 x 4.5 / 1 x 13	1885282	–
	2 x 6 / 2 x 8	1885554	1885635
	2 x 7.2 / 1 x 10.5	1885567	1885648
	3 x 7	1885570	1885651
	3 x 9	1885583	1885664
	4 x 6.5	1885596	1885677
	4 x 8	1885606	1885680

Hybrid connectors for direct motor connection

The HC-MOT hybrid connector combines signals and power in the same housing. The two cables are connected to the contact insert in no time at all using a push-in spring connection.

A safe connection between the connector and the motor is established quickly and easily, even under challenging installation conditions, via a vibration-resistant locking latch. This saves a considerable amount of time, particularly during servicing. Thanks to the plug-in star-delta bridge, presetting the drives is now a thing of the past.

Combine the HC-MOT and VARIOCON hybrid connectors – from the motor to the frequency inverter.

Technical data

- Voltage (power) 800/400 V
- Voltage (signal) 250 V
- Current (power/signal) 16.5/2.5 A
- IP67 protection class in plugged-in condition
- Connection cross section (power/signal) 0.5–2.5/0.5–1.5 m²

HC-MOT



Your advantages



Integrated star-delta bridge for fast and easy rewiring



Simple and robust locking latch plus fast and reliable push-in spring connection



Signals and power combined in parallel in the same housing










HYBRID



VARIOCON

Ordering data

i Web code: #0540

	Panel mounting base for drives		Sleeve connectors		
	Description	Order No.	Description	Order No.	
	Motor-mounted EMC housing	1409053		Sleeve housing with EMC protection	1409066
	Paint protection cover	1409147		IP54 protective cover	1409134
	Crimp contacts (pins), Ø 1.0 mm 0.14 mm ² - 0.5 mm ² 0.14 mm ² - 1.0 mm ²	1409121 1409082		Star-delta bridge	1409150
	Crimp contacts (pins) Ø 2.0 mm 0.35 mm ² - 1.0 mm ² 1.5 mm ² - 2.5 mm ²	1409118 1409095		Coding profile	1600027
	Crimping pliers for contacts Ø 1 mm/ Ø 2 mm	1212620			

More than just the standard

Our service – added value for you

Our comprehensive housing and connector range includes a variety of options for modern device design. Almost everything is possible from color versions to special printing up to special packaging – even completely new developments.

Unique variety as standard

With more than 50,000 products, we offer you the complete device connection technology range for signals, data, and power – from miniature connectors to high-current feed-through terminal blocks.



Flexibility in different versions

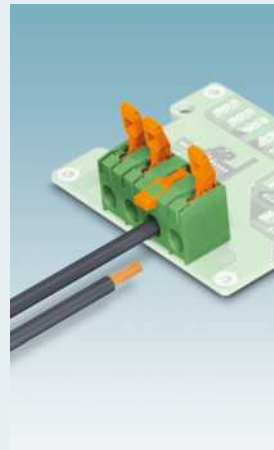
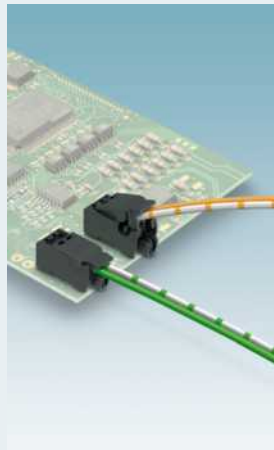
Whether individual colors, modern special printing, special contact assembly or complete cable assembly – our service center will be pleased to support you with the implementation of your requirements.



Expertise in new developments

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







Always up-to-date, always available to you. Here you'll find everything on our products, solutions and service:

phoenixcontact.com

Product range

- Cables and wires
- Connectors
- Controllers
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- Electronic switchgear and motor control
- Fieldbus components and systems
- Functional safety
- HMIs and industrial PCs
- I/O systems
- Industrial communication technology
- Industrial Ethernet
- Installation and mounting material
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- Modular terminal blocks
- Monitoring
- PCB terminal blocks and PCB connectors
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- Protective devices
- Relay modules
- Sensor/actuator cabling
- Software
- Surge protection and interference filters
- System cabling for controllers
- Tools
- Wireless data communication

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