



M5 to M12 circular connectors

Product overview 2019/2020

Circular connectors for demanding applications

The PLUSCON circular M5 to M12 product range from Phoenix Contact contains standardized circular connectors. These have become the industry standard in various areas of application.

The wide selection of designs enables comprehensive connection solutions for devices with data rates up to 10 Gbps. Versions are also available for signals up to 17-pos. and for supplying power up to 630 V and 16 A.

Signals up to 17-pos.

- Currents up to 4 A
- Voltages up to 250 V
- Available with an optional shield connection

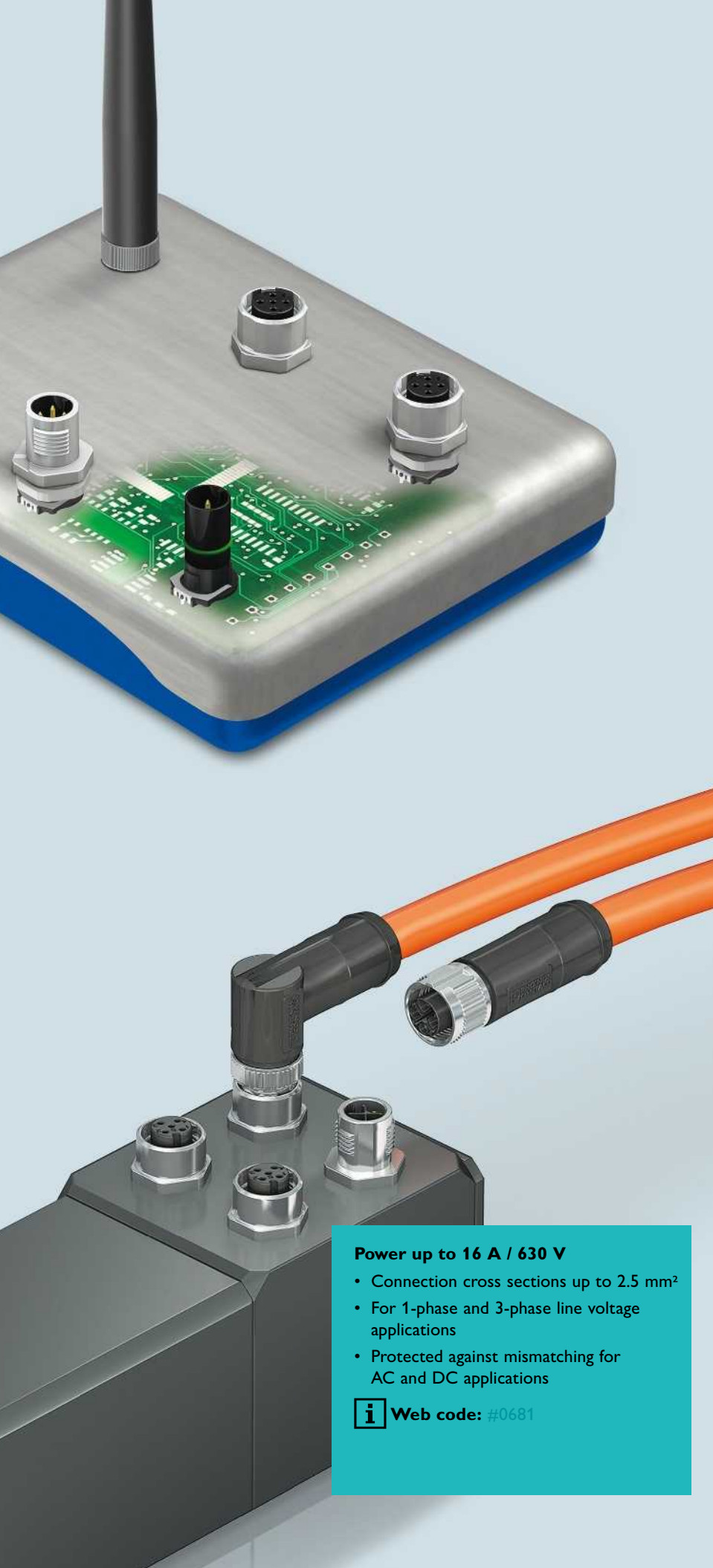
i Web code: #0680

Data up to 10 Gbps

- Codings for all commonly used fieldbus systems
- Hybrid connectors for simultaneous data and power transmission (Power over Ethernet)
- Components in accordance with CAT6_A

i Web code: #0682





Power up to 16 A / 630 V

- Connection cross sections up to 2.5 mm²
- For 1-phase and 3-phase line voltage applications
- Protected against mismatching for AC and DC applications

i Web code: #0681

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Find out more with the web code

You will find web codes throughout this brochure: a hash symbol followed by a four-digit number combination.

i Web code: #1234 (example)

This allows you to access information on our website quickly.

It could not be easier:

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

Unique variety for signals, data, and power

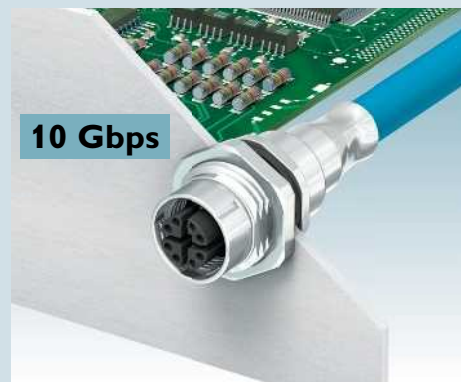
The pace of development of industrial electronics constantly places new demands on device connection technology.

Phoenix Contact is your innovative partner for practice-oriented integration of device connectors in almost all applications.

The modular structure of device connectors facilitates the simple and cost-effective integration of various data, signal, and power supply pin assignments into a device concept.



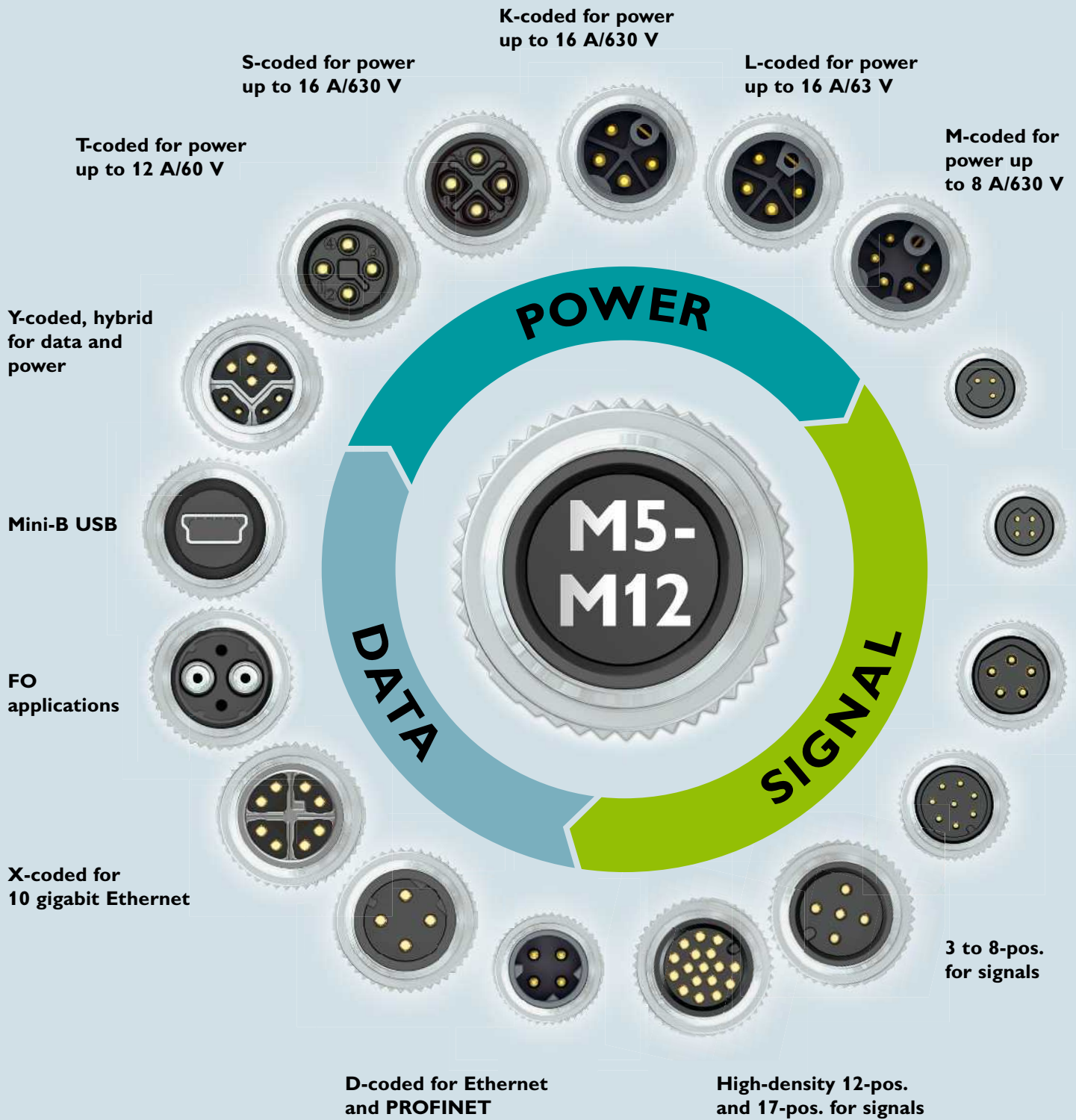
For high contact density



For fast data transmission



For high power



Device connectors with litz wire and cable connection

Pluggable device connectors with litz wires or round cables are available in size M5, M8, and M12 as an alternative to a fixed cable connection. Thanks to a wide range of housing designs, Phoenix Contact can offer an appropriate solution for every individual application.



Various mounting options



Front mounting



Rear mounting



Modular mounting

Main features

- Pre-assembled with litz wires or cables
- Optional shield connection
- Various assembly methods with metric or Pg fastening threads



Advantages at a glance



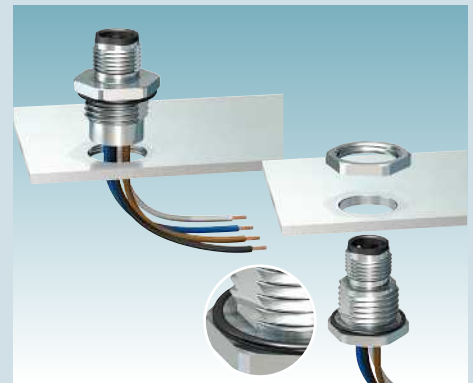
Pre-assembled cables

- No field assembly necessary
- Various cable lengths and assemblies



Easy positioning

- Defined cable outlet direction



Safe mounting

- XL housing versions simplify the device cut-out
- Increased safety and tightness, thanks to tightening limitation



Reliable seals

- When unplugged
- Device electronics protection



Reliable transmission

- 360° shield connection
- Fieldbus-specific cables



Fieldbus-specific coding

- Protection against mismatching, thanks to colored and mechanical fieldbus-specific codings

Device connectors for PCB connection

Phoenix Contact offers a wide range of one-piece and two-piece device connectors for PCB assembly in M5, M8, and M12 types. This provides you with a wide range of connection solutions for wave, THR, and SMD soldering processes.

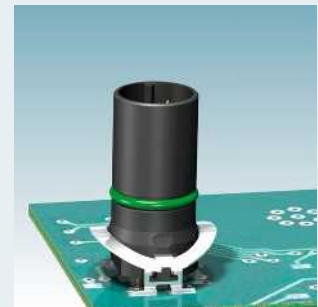
The two-piece device connectors let you implement all numbers of positions and codings for signal, data, and power supply in identical mechanical installation conditions.



PCB connection



One-piece and two-piece, for wave soldering processes



Two-piece, for SMD processes



Two-piece, for THR processes

Main features

- One-piece connectors for the wave soldering process with 6 mm and 12 mm contact lengths
- Available with an optional shield connection
- Two-piece device connectors for wave, THR, and SMD soldering processes in all available numbers of positions and codings
- Easy housing integration, thanks to uniform design-in

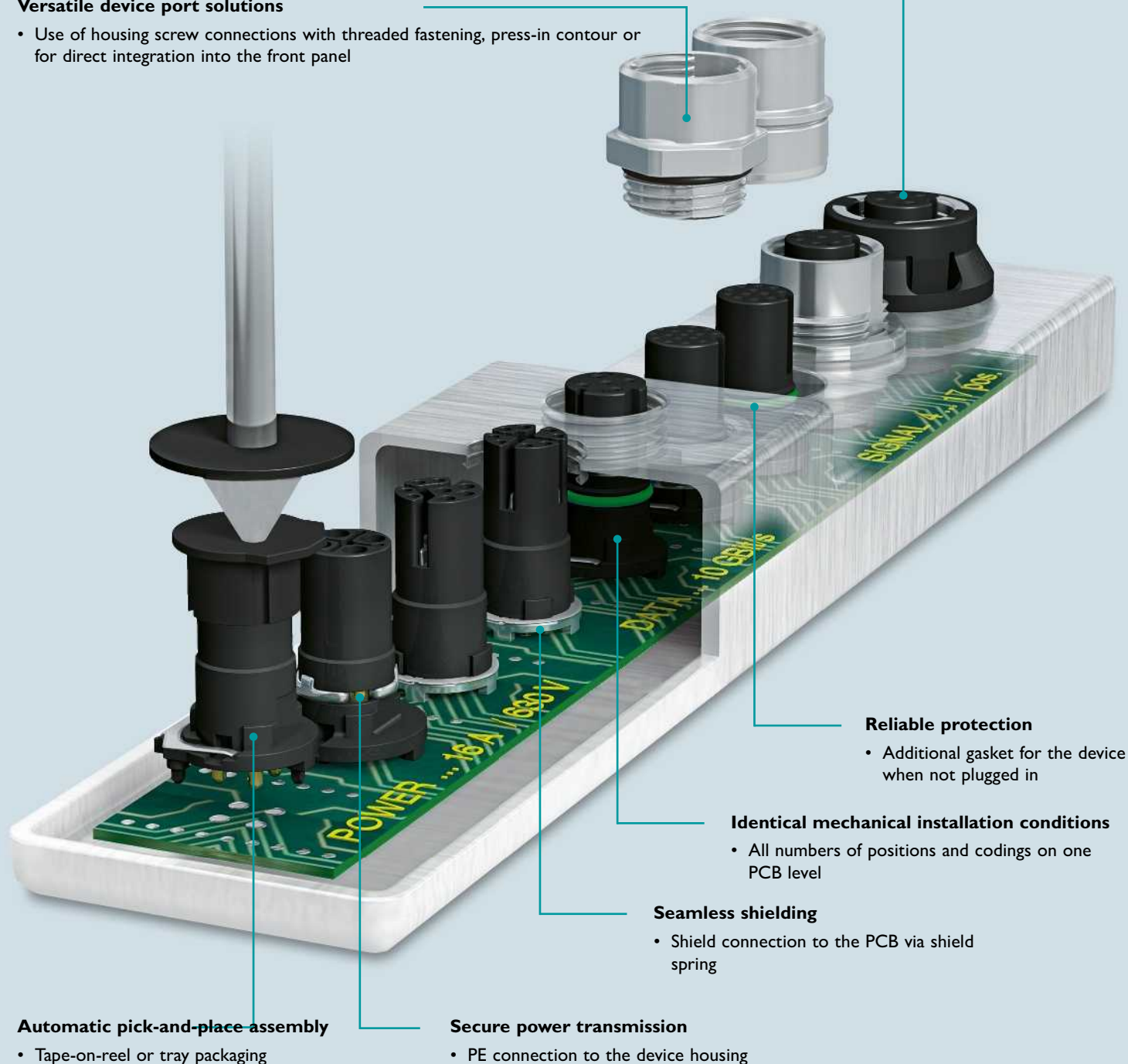
Advantages at a glance

Unique tolerance compensation

- M12 VARIOPORT screw connection compensates for process-related production tolerances between the housing and PCB

Versatile device port solutions

- Use of housing screw connections with threaded fastening, press-in contour or for direct integration into the front panel



Automatic pick-and-place assembly

- Tape-on-reel or tray packaging

Secure power transmission

- PE connection to the device housing

Seamless shielding

- Shield connection to the PCB via shield spring

Identical mechanical installation conditions

- All numbers of positions and codings on one PCB level

Reliable protection

- Additional gasket for the device when not plugged in

Connectors and cables for field cabling

Connect your devices quickly and safely in the field. You can wire different cable types and lengths on-site with connectors for assembly.

You have access to a comprehensive product range of assembled cables for quick and convenient field cabling. Halogen-free PUR cables, which we use as standard, already meet the requirements in many fields of application.



Wide variety of cabling



For fieldbuses and networks



For signals,
3 to 17-pos.



For power,
up to 16 A/690 V

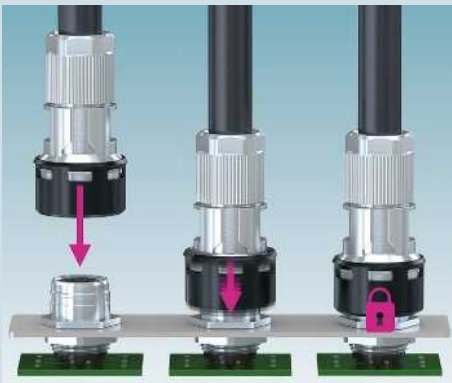
Main features

- Short connect time, thanks to push-pull fast locking system
- The right cable and connector for every application
- Flexible cabling arrangement, thanks to connectors for assembly in socket and pin versions
- Customer-specific assemblies and cable lengths



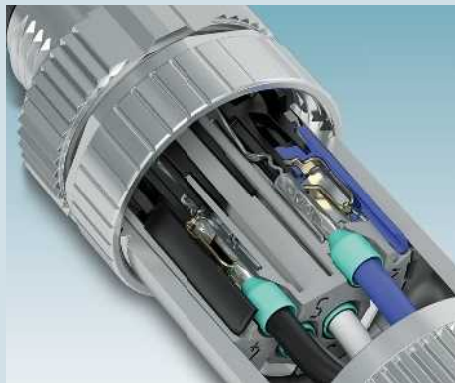
Phoenix Contact offers comprehensive shielding concepts and torsion-resistant cables for reliable operation of systems and robots.

Advantages at a glance



Fast locking with a click

- Non manufacturer-specific M12 push-pull locking system for signal and data transmission (PROFINET CAT6_A)



Push-in connection

- Easy, secure wiring for all conductor and insulation types with and without ferrules



IDC insulation displacement connection QUICKON

- Fastest connection on the market, gas-tight contact and vibration-resistant



Crimp connection

- Extremely compact
- Connection capable of automation for high production volumes



Screw connection

- Well-known connection technology for all conductor and insulation types



Pierce connection

- Reliable connection in very tight installation spaces

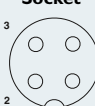
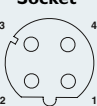
Page navigation – Circular connectors in M5, M8, and M12

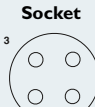
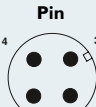
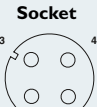
Design	Number of positions	3	4		5	
	Coding	A	A	D	A	B
M12 device connectors for litz wire connection						
	Front mounting with litz wires	–	14 / 37	14	14	14
	Rear mounting with litz wires	–	16	16	16	16
	Front mounting, modular, crimp connection	–	16	16	16	16
	Front mounting, with solder cups	–	–	–	18	–
	Rear mounting, with solder cups	–	–	–	20	–
M12 device connectors with assembled cable						
	Front mounting	–	–	31	36	34
	Rear mounting	–	18 / 37	31 / 33	18 / 36	34
M12 device connectors for PCB connection						
	One-piece, front mounting	–	18	18	18	18
	One-piece, rear mounting	–	20 / 37	20 / 31 33	20 / 36	34
	Two-piece, for wave/THR soldering processes	–	22	22	22	22
	Two-piece, for SMD soldering processes	–	24	24	24	24
M12 connectors, for assembly/with molded cable						
	Plastic-molded cables	49	49	50	49	49
	For assembly	–	44	47	44 / 47	47
M8 device connectors with litz wires						
	Front mounting	26	26	–	–	39
	Rear mounting	26	26	–	–	–
M8 device connectors for PCB connection						
	One-piece, rear mounting	26	26	–	–	39
	Two-piece, for SMD soldering processes	28	28	39	–	39
M8 connectors, for assembly/with molded cable						
	Plastic-molded cables	49	49	49	–	–
	For assembly	46	46	–	–	–
M5 device connectors with litz wires						
	Front mounting	30	30	–	–	–
M5 device connectors for PCB connection						
	One-piece, rear mounting	30	30	–	–	–

6	8			12	17	2+PE	3+PE	4	4+PE	4/4+FE	5+PE
A	A	X	Y	A	A	S	S	T	K	L	M
–	14	–	–	14	14	40	40	40	40	40	40
–	16	–	32	16	16	40	40	40	40	40	40
–	16	–	–	–	–	–	40	40	–	–	–
–	18	–	–	–	–	–	–	–	–	–	–
–	20	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	18 / 31 33	32	32	18	18	–	–	–	–	–	–
–	18	–	–	–	–	–	–	–	–	–	–
–	20	32	32	20	20	–	–	–	–	43	–
–	22	32	32	22	22	–	42	42	43	43	43
–	24	32	32	24	24	–	–	42	–	–	–
–	50	50	–	–	–	–	51	51	51	51	51
–	44 / 47	47	–	–	45	48	48	48	48	48	–
26	26	–	–	–	–	–	–	–	–	–	–
26	26	–	–	–	–	–	–	–	–	–	–
26	26	–	–	–	–	–	–	–	–	–	–
28	28	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–

Signal – M12, with litz wires, front mounting		4-pos.			
Pre-assembled with 0.5 m long litz wires	Coding	A		D	
	Rated voltage	250 V		250 V	
	Nominal current	4 A		4 A	
	Conductor cross section	0.34 mm²		0.34 mm²	
 Web code: #0207	Pin assignment	Pin	Socket	Pin	Socket
					
Versions with zinc die-cast housing, for screw fastening					
	Pg9	1693762	1693788	–	–
	Flat nut, Pg9				
	M16 x 1.5	1523450	1523434	1551558	1535202
	Flat nut M16 x 1.5				
	M16 x 1.5, XL versions, wrench size 19	1411577	1411568	1411578	1411569
	Push-pull, M16 x 1.5	–	–	–	1027686
	Flat nut M16 x 1.5				
	Pg9, can be positioned	1693775	1693791	–	–
	M16 x 1.5, can be positioned	1523463	1523447	1552256	1535215
	20 mm square flange, mounting holes 4 x Ø 3.2 mm	1419784	1419797	1441626	1441639
	25 mm square flange, mounting holes 4 x Ø 2.7 mm	1419991	1420003	1440957	1440960
Versions with plastic and brass housing (nickel-plated), for screw fastening					
	Plastic M16 x 1.5	–	–	–	–
	Brass (nickel-plated) M20 x 1.5	1408451	1408436	–	–
Versions with stainless steel housing (1.4404), for screw fastening					
	Pg9	1554555	1555448	–	–
	Flat nut, Pg9				
	M16 x 1.5	1405233	1458855	–	–
	Flat nut M16 x 1.5				
	Pg9, can be positioned	1554610	1554649	–	–
	M20 x 1.5	1408415	1408416	–	–

5-pos.				8-pos.		12-pos.		17-pos.	
A		B		A		A		A	
60 V		60 V		30 V		30 V		30 V	
4 A		4 A		2 A		1.5 A		1.5 A	
0.34 mm ²		0.34 mm ²		0.25 mm ²		0.14 mm ²		0.14 mm ²	
Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket
									
1671111	1671098	—	—	1513774	1513758	—	—	—	—
1504084									
1520055	1520039	1520013	1520000	1523492	1523476	1556265	1556252	1556304	1556294
1504097									
1411579	1411571	1411580	1411572	1411581	1411573	1411582	1411574	1411583	1411576
1504097									
—	1027683	—	—	—	—	—	—	—	—
1504097									
1671124	1671108	1515057	1515044	1513787	1513761	—	—	—	—
—									
1520068	1520042	1520026	1519998	1523502	1523489	—	—	—	—
—									
1441642	1441655	1441668	1441671	1441684	1441697	1441707	1441710	1441723	1441736
—									
1440973	1440986	1440999	1441558	1441561	1441574	1441587	1441590	1441600	1441613
—									
1436411	—	—	—	1436424	—	—	—	—	—
—									
1408446	1408454	—	—	1408442	1408453	—	—	—	—
—									
1554568	1699863	—	1452343	1554571	1554607	—	—	—	—
1404984									
1458868	1458871	—	—	1405221	1458842	1405238	1405242	1405243	1405244
1404983									
1554623	1554652	—	1424023	1554636	1554665	—	—	—	—
—									
1452068	1452071	1452084	1452097	1452107	1452110	—	—	—	—
—									

Signal – M12, crimp connection, front mounting		4-pos.			
Modular	Coding	A		D	
	Rated voltage	250 V		250 V	
	Nominal current	4 A		4 A	
	Conductor cross section	0.34 mm ²		0.34 mm ²	
 Web code: #0208	Pin assignment	 		 	
	25 mm square flange, mounting holes 4 x Ø 3.2 mm				
	Pre-assembled contact carrier, with 0.5 m long litz wires	1440805	–	1440821	–
	Contact carrier for crimp contacts, for assembly	1440931	–	1440944	–
	Crimp contacts Ø 1.0 mm, 0.08 ... 0.5 mm ²	1452356	–	1452356	–
	Crimp contacts Ø 0.8 mm, 0.08 ... 0.34 mm ²	–	–	–	–
	Crimping tool				

Signal – M12, with litz wires, rear mounting		4-pos.			
Pre-assembled with 0.5 m long litz wires	Coding	A		D	
	Rated voltage	250 V		250 V	
	Nominal current	4 A		4 A	
	Conductor cross section	0.34 mm ²		0.34 mm ²	
 Web code: #0209	Pin assignment	 		 	
Versions with zinc die-cast housing, for screw fastening					
	Pg9	1556618	1556621	1551532	1551529
	M12 x 1	1551875	–	1551901	–
	M16 x 1.5	1419629	1419632	1419603	1419616
	M16 x 1.5, XL versions, wrench size 19	1411591	1411584	1411592	1411585
	Push-pull, M16 x 1.5	–	–	–	1027670
Versions with plastic housing, for screw fastening					
	Pg9	–	–	–	–
Versions with stainless steel housing (1.4404), for screw fastening					
	Pg9	1405239	1405240	–	–

5-pos.		8-pos.		12-pos.		17-pos.	
A		B		A		A	
60 V		60 V		30 V		30 V	
4 A		4 A		2 A		1.5 A	
0.34 mm ²		0.34 mm ²		0.25 mm ²		0.14 mm ²	
Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket

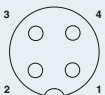
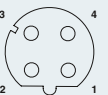
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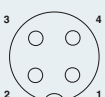
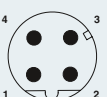
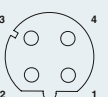
1440818	–	1440759	–	1457827	–	–	–	–	–
–									
1419988	–	1440915	–	1440928	–	–	–	–	–
–									
1452356	–	1452356	–	–	–	–	–	–	–
–	–	–	–	1452372	–	–	–	–	–
1212510									

5-pos.		8-pos.		12-pos.		17-pos.	
A		B		A		A	
60 V		60 V		30 V		30 V	
4 A		4 A		2 A		1.5 A	
0.34 mm ²		0.34 mm ²		0.25 mm ²		0.14 mm ²	
Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket

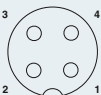
1542703	1542729	1543663	1543676	1542716	1542732	1430459	1430446	1430475	1430462
1551888	–	1551891	–	1551914	–	1437122	–	1437135	–
1419645	1419658	1419661	1419674	1419687	1419690	1419700	1419713	1419726	1419739
1411593	1411586	1411594	1411587	1411595	1411588	1411596	1411589	1411597	1411590
–	1027666	–	–	–	–	–	–	–	–
–	1436356	–	–	–	1436369	–	–	–	–

1554681	1554717	–	–	1554694	1554720	–	–	–	–
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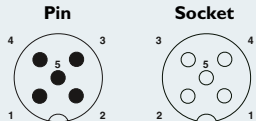
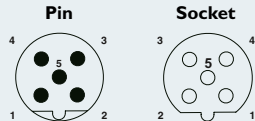
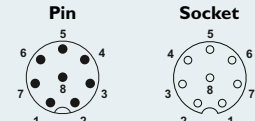
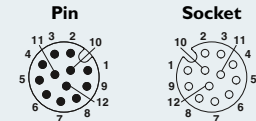
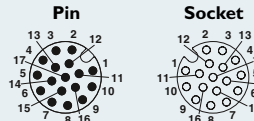
Signal – M12, with cable, rear mounting		4-pos.			
Assembled cable/control cabinet feed-through	Coding	A		D	
	Rated voltage	250 V		250 V	
	Nominal current	4 A		4 A	
 Web code: #0210	Pin assignment	Pin	Socket	Pin	Socket
					
Versions for screw fastening, shielded					
	M16 x 1.5 Cable length 1 m, PUR black	1419399	1419302	–	–
	M16 x 1.5 Cable length 2 m, PUR black	1419386	1419315	–	–
Control cabinet feed-throughs for screw fastening					
	M16 x 1.5 Pin to socket	–	–	–	–
	M16 x 1.5 Socket to socket	–	–	–	1424326

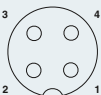
Signal – M12, solder connection, front mounting		4-pos.			
For soldering processes	Coding	A		D	
	Rated voltage	250 V		250 V	
	Nominal current	4 A		4 A	
 Web code: #0212	Pin assignment	Pin	Socket	Pin	Socket
					
Versions for PCB mounting featuring torsion protection, for wave soldering processes					
	20 mm square flange, direct PCB mounting	1456417	1456420	1456394	1456404
Plastic versions, with solder cups, for screw fastening					
	M12 x 1	–	–	–	–
	M16 x 1.5	–	–	–	–

5-pos.				8-pos.		12-pos.		17-pos.	
A		B		A		A		A	
60 V		60 V		30 V		30 V		30 V	
4 A		4 A		2 A		1.5 A		1.5 A	
Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket
1419409	1419328	—	—	1419425	1419357	1442227	1442188	1442308	1442269
—									
1419412	1419331	—	—	1419438	1419344	1442230	1442191	1442311	1442272
—									
1551671	—	1551684	—	1551697	—	—	—	—	—
—									
—	—	—	—	—	—	—	—	—	—
—									
5-pos.				8-pos.		12-pos.		17-pos.	
A		B		A		A		A	
60 V		60 V		30 V		30 V		30 V	
4 A		4 A		2 A		1.5 A		1.5 A	
Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket
1456433	1456446	1456459	1456462	1408574	1408573	—	—	—	—
—									
1436437	—	—	—	1436440	—	—	—	—	—
—									
1436398	—	—	—	1436408	—	—	—	—	—
—									

Signal – M12, solder connection, rear mounting			4-pos.			
For wave soldering processes	Coding		A		D	
	Rated voltage		250 V		250 V	
	Nominal current		4 A		4 A	
 Web code: #0213	Pin assignment		Pin 		Socket 	
			Pin 		Socket 	
Versions with zinc die-cast housing, one-piece, straight, for screw fastening						
	Pg9	6 mm solder pins	1553459	1553462	1551516	1551503
		12 mm solder pins	–	1410777	1552308	1552272
	M12 x 1	6 mm solder pins	1551820	–	1551859	–
	M16 x 1.5	6 mm solder pins	1419742	1419755	1441749	1441752
	Push-pull, M16 x 1.5	6 mm solder pins	–	–	–	1027696
	Pg9, with shield contact	6 mm solder pins	–	1556841	1553035	1553006
		12 mm solder pins	1558535	1558522	1558519	1558506
	M12 x 1, with shield contact	6 mm solder pins	1552955	–	1552984	–
	M16 x 1.5, with shield contact	6 mm solder pins	1419768	1419771	1441862	1441875
Versions with plastic housing, one-piece, straight, for screw fastening						
	Pg9		–	–	–	–
	Pg9 with solder cups	Max. 0.34 mm²	–	–	–	–
		Max. 0.25 mm²	–	–	–	–
Versions with stainless steel housing (1.4404), one-piece, straight, for screw fastening						
	Pg9		1404979	1404974	–	–
Versions with brass housing (nickel-plated), two-piece including housing, straight*						
	Straight, shielded, for fastening in the feed-through hole		–	–	–	1534627
	Straight, for fastening in the feed-through hole		–	–	–	–

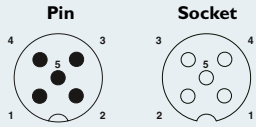
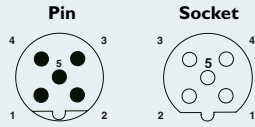
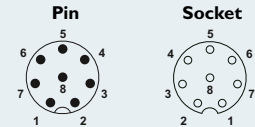
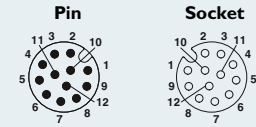
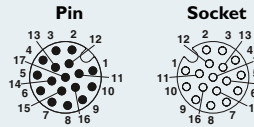
* Cannot be combined with two-piece contact carriers for PCB mounting for THR, SMD, or wave soldering processes.

5-pos.				8-pos.		12-pos.		17-pos.	
A		B		A		A		A	
60 V		60 V		30 V		30 V		30 V	
4 A		4 A		2 A		1.5 A		1.5 A	
									
1542745	1542761	1543647	1543650	1542758	1542774	1559932	1559929	1559961	1559958
1552311	1552285	1552324	1552298	—	1408770	—	—	—	—
1551833	—	1551846	—	1551862	—	1559945	—	1559974	—
1441765	1441778	1441781	1441794	1441804	1441817	1441820	1441833	1441846	1441859
—	1027669	—	—	—	—	—	—	—	—
1553048	1553019	1553051	1553022	1553873	1553860	1436783	1436770	1436819	1436806
1558551	1558548	1558577	1558564	—	1408771	—	—	—	—
1552968	—	1552971	—	1552997	—	1437106	—	1437119	—
—									
1441888	1441891	1441901	1441914	1441927	1441930	1441943	1441956	1441969	1441972
—									
—	1436330	—	—	—	1436343	—	—	—	—
—	1436314	—	—	—	—	—	—	—	—
—	—	—	—	—	1436327	—	—	—	—
—									
—									
1554746	1554733	—	—	1529807	1529797	—	—	—	—
—									
—									
1437193	1421685	1437203	1437180	—	—	—	—	—	—
—									
1694211	1694237	1514883	1515934	1424017	1556854	—	—	—	—
—									

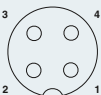
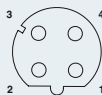
Signal – M12, solder connection, PCB mounting		4-pos.			
For reflow and wave soldering processes	Coding	A		D	
	Rated voltage	250 V		250 V	
	Nominal current	4 A		4 A	
 Web code: #0214	Pin assignment	Pin 		Socket 	
		Pin 		Socket 	
Two-piece, THR contact carriers					
	Straight, shielded, THR, tray packaging	1439939	–	1552214	1551451
	Straight, shielded, THR, tape-on-reel	1457500*	1457623*	1457513*	1457636*
	Straight, THR, tray packaging	1437164	1439942	–	1414071
	Straight, THR, tape-on-reel	1457490*	1457610*	–	–
Two-piece, wave soldering contact carriers					
	Angled, shielded, wave soldering, blister pack	1439887	1432444	1436673	1432457
	Angled, wave soldering, blister pack	1436660	1436628	–	–
	Straight, shielded, wave soldering, blister pack	–	–	–	1551480
	Straight, wave soldering, blister pack	–	–	–	–
Two-piece, housing screw connections for THR and wave soldering contact carriers					
	Push-pull versions with O-ring				
	Rear mounting, M15 x 1 screw fastening	–	–	–	1027662 ¹⁾
	Front mounting, M14 x 1 screw fastening	–	–	–	1027678 ⁵⁾
The push-pull versions are also suitable for 8-pos. X-coded (CAT6 _A), see Section Data, page 32					
	Screw versions, rear mounting, M15 x 1 screw fastening				
	SPEEDCON versions, rear mounting M15 x 1 screw fastening				
	Clip-in versions, for straight, two-piece socket contact carriers, tolerance-compensating, rear snap-in mounting (not suitable for S-coded THR contact carriers or SPEEDCON mating connectors) Threaded sleeve Fixing sleeve, can be used universally with any threaded sleeve		For housing panel thickness 1.0 ... 1.8 mm		
			For housing panel thickness 1.7 ... 2.5 mm		
			For housing panel thickness 2.4 ... 3.2 mm		
			For housing panel thickness 3.1 ... 3.9 mm		
Color					
	SPEEDCON versions with O-ring, front mounting, screw fastening M12 x 1				
	Screw versions with O-ring, front mounting		M12 x 1 screw fastening		
			M14 x 1 screw fastening		
	SPEEDCON screw versions with flat gasket, front mounting, M14 x 1 screw fastening				
	Press-in versions, front mounting				

^{1), 2)} Distance from PCB upper edge to housing front panel rear edge: ¹⁾ 6 mm ²⁾ 6.8 mm

^{3), 4), 5)} Distance from PCB upper edge to housing front panel outer edge: ³⁾ 6 mm ⁴⁾ 7.5 mm ⁵⁾ 9 mm

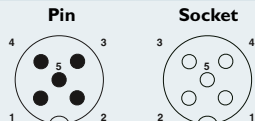
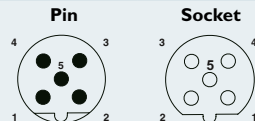
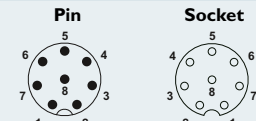
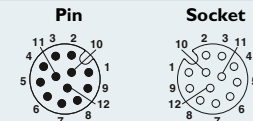
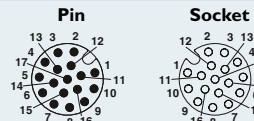
5-pos.				8-pos.		12-pos.		17-pos.	
A		B		A		A		A	
60 V		60 V		30 V		30 V		30 V	
4 A		4 A		2 A		1.5 A		1.5 A	
									
1432350	1432363	1552230	1551435	1557581	1551422	1442065*	1442052*	1442081*	1442078*
1457539*	1457652*	1457542*	1457665*	1457568*	1457681*	1457584*	1457704*	1457607*	1457720*
1552227	1551448	—	1414070	1552269	1557808	1441985*	1441970*	1442007*	1441998*
1457526*	1457649*	—	—	1457555*	1457678*	1457571*	1457694*	1457597*	1457717*
1439890	1432431	1436699	1432512	1437038	1437009	1424198	1424199	1424200	1424201
1436686	1436644	—	—	1436987	1436990	1424194	1424195	1424196	1424197
—	—	—	1551477	—	—	—	—	—	—
—	1551464	—	—	—	—	—	—	—	—
—	1027662 ¹⁾	—	—	—	—	—	—	—	—
—	1027678 ⁵⁾	—	—	—	—	—	—	—	—
Pin: 1413997 ¹⁾ / 1413996 ²⁾ / Socket: 1414004 ¹⁾ / 1414003 ²⁾									
—									
Pin: 1413999 ¹⁾ / 1413998 ²⁾ / Socket: 1414020 ¹⁾ / 1414005 ²⁾									
—									
Socket: 1419630 ⁵⁾									
Socket: 1419631 ⁵⁾									
Socket: 1419633 ⁵⁾									
Socket: 1419634 ⁵⁾									
Black	Blue	Water blue	Red	Yellow	Green	Violet	Orange		
1419697	1417782	1417783	1417784	1417785	1417787	1417788	1417789		
Pin: 1551493 ⁴⁾ / Socket: 1552243 ⁴⁾									
—									
Pin: 1416145 ⁴⁾ / Socket: 1416144 ⁴⁾									
Pin: 1417984 ⁵⁾ / Socket: 1417989 ⁵⁾									
Pin: 1436709 ³⁾ / Socket: 1432460 ³⁾									
—									
Pin: 1437892 ⁵⁾ / Socket: 1437889 ⁵⁾									
—									

* Contact carrier with assembly pad

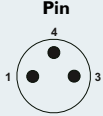
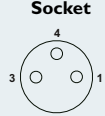
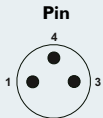
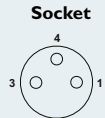
Signal – M12, solder connection, PCB mounting		4-pos.			
For reflow soldering processes	Coding	A		D	
	Rated voltage	250 V		250 V	
	Nominal current	4 A		4 A	
 Web code: #0215	Pin assignment				
					
Two-piece, SMD contact carriers					
 	Straight, SMD, tray packaging	1411924*	1411907	1411925*	1411912
	Straight, SMD, tape-on-reel	1411982*	1411974	1411983*	1411975
 	Straight, shielded, SMD, tray packaging, additional gasket for the device when not plugged in	1411955*	1411949	1411956*	1411950
	Straight, shielded, SMD, tape-on-reel, additional gasket for the device when not plugged in	1412010*	1412004	1412011*	1412005
 	Straight, SMD, tray packaging, additional gasket for the device when not plugged in	1411941*	1411935	1411942*	1411936
	Straight, SMD, tape-on-reel, additional gasket for the device when not plugged in	1411996*	1411990	1411997*	1411991
Two-piece, housing screw connections for SMD contact carriers					
 	Screw versions, rear mounting, M15 x 1 screw fastening				
	SPEEDCON screw versions, rear mounting, M15 x 1 screw fastening				
 	Clip-in versions, tolerance-compensating, rear snap-in mounting, threaded sleeve	For housing panel thickness 0.9 ... 1.6 mm			
		For housing panel thickness 1.6 ... 2.3 mm			
		For housing panel thickness 2.3 ... 3.0 mm			
	Fixing sleeve, can be used universally with any threaded sleeve	Color			
 	Screw versions, front mounting, M14 x 1 screw fastening				
	Flat nut M14 x 1				
 	Press-in versions, front mounting				

²⁾ Distance from PCB upper edge to housing front panel rear edge: 6 mm

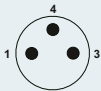
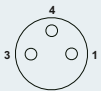
³⁾ Distance from PCB upper edge to housing front panel outer edge: 9 mm

5-pos.				8-pos.		12-pos.		17-pos.	
A		B		A		A		A	
60 V		60 V		30 V		30 V		30 V	
4 A		4 A		2 A		1.5 A		1.5 A	
									
1411926*	1411913	1411927*	1411914	1411928*	1411915	1411929*	1411916	1411930*	1411917
—									
1411984*	1411976	1411985*	1411977	1411986*	1411978	1411987*	1411979	1411988*	1411980
—									
1411957*	1411951	1411958*	1411952	1411959*	1411953	1411960*	1411954	1411961*	1411966 ¹⁾
—									
1412012*	1412006	1412013*	1412007	1412014*	1412008	1412015*	1412009	1412016*	1412018 ¹⁾
—									
1411943*	1411937	1411944*	1411938	1411945*	1411939	1411946*	1411940	1411947*	—
—									
1411998*	1411992	1411999*	1411993	1412000*	1411994	1412001*	1411995	1412002*	—
—									
Pin: 1414000 ²⁾ / Socket: 1414021 ²⁾									
—									
Pin: 1414002 ²⁾ / Socket: 1414023 ²⁾									
—									
Socket: 1419569 ³⁾									
Socket: 1419570 ³⁾									
Socket: 1419571 ³⁾									
Black	Water blue			Green		Violet			
1419568	1419565			1419566		1419567			
Pin: 1412078 ³⁾ / Socket: 1412079 ³⁾									
—									
1412077									
—									
Pin: 1412080 ³⁾ / Socket: 1412081 ³⁾									
—									

* Contact carrier with assembly pad ¹⁾ Without additional gasket for the device when not plugged in

Signal – M8, with litz wires		3-pos.	
Pre-assembled with 0.5 m long litz wires	Coding	A	
	Rated voltage	50 V AC/60 V DC	
	Nominal current	4 A	
	Conductor cross section	0.25 mm²	
 Web code: #0216	Pin assignment		
Front mounting			
	M8 x 0.5 fastening thread	1500334	1500350
	M8 flat nut		
	M10 fastening thread	–	–
Rear mounting			
	M8 x 1 fastening thread	1453478	–
	M10 fastening thread	–	1456080
	M12 fastening thread	–	1453449
Signal – M8, solder connection		3-pos.	
For wave soldering processes	Coding	A	
	Rated voltage	50 V AC/60 V DC	
	Nominal current	4 A	
 Web code: #0218	Pin assignment		
Rear mounting, one-piece			
	M8 fastening thread, straight	1694334	–
	M12 fastening thread, straight	–	1694363
	M8 fastening thread, straight, shielded	1455997	–
	M8 fastening thread, angled, shielded	1456035	–
	M10 fastening thread, straight, shielded	–	1456116
	M10 fastening thread, angled, shielded	–	1456145
Rear mounting, two-piece			
	M8 fastening thread, straight	–	1524776
	M8 fastening thread, angled	1440070	1524788

4-pos.		6-pos.		8-pos.	
A		A		A	
50 V AC/60 V DC		30 V AC/30 V DC		30 V AC/30 V DC	
4 A		2 A		1.5 A	
0.25 mm ²		0.14 mm ²		0.14 mm ²	
Pin	Socket	Pin	Socket	Pin	Socket
					
1500347	1500363	1542664	1542677	—	—
1504071					
—	—	—	—	1424232	1424231
—					
1453481	—	1453494	—	1424230	—
—					
—	1456093	—	1456103	—	—
—	1453452	—	1453465	—	—
4-pos.		6-pos.		8-pos.	
A		A		A	
50 V AC/60 V DC		30 V AC/30 V DC		30 V AC/30 V DC	
4 A		2 A		1.5 A	
Pin	Socket	Pin	Socket	Pin	Socket
					
1694347	—	1436521	—	1424238	—
—					
—	1694376	—	1436534	—	1424237
—					
1456019	—	1456022	—	1424236	—
1456048	—	1424244	—	—	—
—	1456129	—	1456132	—	1424235
—	1456158	—	1424243	—	—
—					
—	1524789	—	—	—	—
—					
1440096	1526169	—	—	—	—
—					

Signal – M8, solder connection, PCB mounting		3-pos.	
For reflow soldering processes	Coding	A	
	Rated voltage	50 V AC/60 V DC	
	Nominal current	4 A	
 Web code: #0219		Pin assignment	Pin  Socket 
Two-piece, SMD contact carriers			
	Straight, SMD, tray packaging	1412225*	1412220
	Straight, SMD, tape-on-reel	1412248*	1412243
	Straight, shielded, SMD, tray packaging, additional gasket for the device when not plugged in	1412240*	1412235
	Straight, shielded, SMD, tape-on-reel, additional gasket for the device when not plugged in	1412263*	1412257
	Straight, SMD, tray packaging, additional gasket for the device when not plugged in	1412233*	1412227
	Straight, SMD, tape-on-reel, additional gasket for the device when not plugged in	1412255*	1412250
Two-piece, housing screw connections for SMD contact carriers			
	Screw versions, rear mounting, M12 x 1 screw fastening		
	Screw versions, front mounting, M10 x 0.75 screw fastening		
	Flat nut M10 x 0.75		
	Press-in versions for front mounting		

¹⁾ Distance from PCB upper edge to housing front panel rear edge: 6 mm

²⁾ Distance from PCB upper edge to housing front panel outer edge: 9 mm

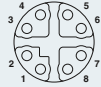
4-pos.		6-pos.		8-pos.	
A		A		A	
50 V AC/60 V DC		30 V AC/30 V DC		30 V AC/30 V DC	
4 A		2 A		1.5 A	
Pin	Socket	Pin	Socket	Pin	Socket
					
1412226*	1412221	—	1412223	—	1412224
—					
1412249*	1412244	—	1412246	—	1412247
—					
1412241*	1412236	—	1412238	—	1412239
—					
1412264*	1412258	—	1412261	—	1412262
—					
1412234*	1412228	—	1412230	—	1412232
—					
1412256*	1412251	—	1412253	—	1412254
—					
Pin: 1412505¹⁾ / Socket: 1412506¹⁾					
—					
Pin: 1412502²⁾ / Socket: 1412504²⁾					
—					
1412508					
—					
Pin: 1412500²⁾ / Socket: 1412501²⁾					
—					

* Contact carrier with assembly pad
Two-piece SMD contact carrier 5-pos. D-coded, see Section Data – M8 for fieldbuses, page 39.

Signal – M5		3-pos.		4-pos.	
	Coding	A		A	
	Rated voltage	60 V		60 V	
	Nominal current	1 A		1 A	
	Conductor cross section	0.14 mm²		0.14 mm²	
 Web code: #0220	Pin assignment	Pin	Socket	Pin	Socket
					
Front mounting, pre-assembled with 0.5 m long litz wires					
	M5 fastening thread	1530582	1530605	1530595	1530618
		–			
	Flat nut with M5 thread	1535901			
		–			
Rear mounting, one-piece for wave soldering processes					
	M5 fastening thread	1530621	1530647	1530634	1530650
		–			
	Flat nut with M5 thread	1535901			
		–			

Data – M12 for networks		4-pos.		8-pos.	
 Web code: #0222	Coding	D		A	
	Rated voltage	250 V		30 V	
	Nominal current	4 A		2 A	
	Conductor cross section	0.14/0.34 mm ²		0.14 mm ²	
Pin assignment					
Front/screw mounting, with assembled cable					
Ethernet 	M16 x 1.5, can be positioned, water blue, cable type 93E	2 m	–	1405837	–
				–	–
Rear/screw mounting, with assembled cable					
Ethernet 	M16 x 1.5, water blue, cable type 93E	2 m	–	1405866	–
	M16 x 1.5, water blue, cable type 94B	5 m	–	–	1407877
	M16 x 1.5, water blue, cable type 94C	2 m	–	–	1412820
Rear/screw mounting, for wave soldering processes					
Ethernet 	M16 x 1.5, one-piece, contact carrier, water blue		1456514	1456527	–
				–	–
Rear/screw mounting, with assembled cable					
PROFI NET 	Pg9, green, cable type 93B	0.5 m	1437805	1437766	–
		1 m	1437818	1437779	–
		2 m	1437821	1437782	–
		5 m	1437834	1437795	–
	M16 x 1.5, green, cable type 93C	2 m	–	1416209	–
	M16 x 1.5, green, cable type 93R	2 m	–	1416263	–
Rear/screw mounting, for wave soldering processes					
PROFI NET 	M16 x 1.5, one-piece, contact carrier, green		1456556	1456569	–
				–	–

See Section Signal – M12 for additional 4-pos. D-coded connectors and 8-pos. A-coded connectors, from page 14.

Data – M12 for networks			8-pos.	8-pos.	
	Coding		X (CAT6_A)	Y (hybrid)	
	Rated voltage		50 V AC/60 V DC	60 V	
	Nominal current		0.5 A	0.5 A/6 A	
	Conductor cross section		0.25 mm ²	0.14/0.5 mm ²	
 Web code: #0224	Pin assignment		Socket	Socket	
					
Rear/screw mounting, with assembled cable					
 Ethernet		M16 x 1.5, water blue, cable type 94F	0.5 m	1424135	–
			1 m	1424148	–
			2 m	1424151	–
			5 m	1424164	–
Hybrid		M16 x 1.5, black, cable type 94H	0.5 m	–	1407504
			1 m	–	1407505
			2 m	–	1407506
			5 m	–	1407507
Rear/screw mounting, pre-assembled with 0.5 m long litz wires					
Hybrid		M16 x 1.5	–	–	1407618
			–	–	–
Rear/screw mounting, for wave soldering processes					
 Ethernet	Hybrid	M16 x 1.5, one-piece, wave soldering	1424177	–	1407503
			–	–	–
		Pg9, one-piece, wave soldering	1404741	–	–
Two-piece, contact carriers for wave and reflow soldering processes					
 Ethernet	 	Straight, shielded, THR, blister pack	1402457	–	–
		Straight, shielded, THR, tape-on-reel	1413446*	–	–
		Straight, shielded, SMD, tray packaging	1411964*	–	–
		Straight, shielded, SMD, tape-on-reel	1081252*	–	–
		Angled, shielded, wave soldering	1424180	–	–
Hybrid	 	Straight, shielded, THR, blister pack	–	–	1405225
		Straight, shielded, THR, tape-on-reel	–	–	1413445*
		Straight, shielded, SMD, tray packaging	–	–	1411965*
		Straight, shielded, SMD, tape-on-reel	–	–	1069566*
		Angled, shielded, wave soldering	–	–	1424193

Housing screw connections for THR and wave soldering contact carriers, see page 22.

Housing screw connections for SMD contact carriers, see page 24.

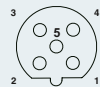
* Contact carrier with assembly pad

Data – M12 for networks			4-pos.		8-pos.	
	Coding		D		A	
	Rated voltage		250 V		30 V	
	Nominal current		4 A		2 A	
	Conductor cross section		0.14/0.34 mm²		0.14 mm²	
 Web code: #0226	Pin assignment		Pin	Socket	Pin	Socket
						
Rear/screw mounting, with assembled cable						
 the automation bus	M16 x 1.5, red, cable type 93K	0.5 m	1419158	1419154	–	–
		1 m	1419159	1419155	–	–
		2 m	1419160	1419156	–	–
		5 m	1419161	1419157	–	–
Rear/screw mounting, for wave soldering processes						
 the automation bus	M16 x 1.5, one-piece, contact carrier, red	1457979	1457966	–	–	
		–				
Rear/screw mounting, with assembled cable						
 Technology Group	M16 x 1.5, green, cable type 93G	0.5 m	1419138	1419134	–	–
		1 m	1419139	1419135	–	–
		2 m	1419140	1419136	–	–
		5 m	1419141	1419137	–	–
Rear/screw mounting, for wave soldering processes						
 Technology Group	M16 x 1.5, one-piece, contact carrier, green	1456556	1456569	–	–	
		–				
Rear/screw mounting, with assembled cable						
	M16 x 1.5, black, cable type 970, 6-wire	0.5 m	–	–	1429059	1429091
		1 m	–	–	1429062	1429101
		2 m	–	–	1429075	1429114
		5 m	–	–	1429088	1429127

See Section Signal – M12 for additional 4-pos. D-coded connectors and 8-pos. A-coded connectors, from page 14.

Data – M12 for fieldbuses			5-pos.	
	Coding		B	
	Rated voltage		60 V	
	Nominal current		4 A	
	Conductor cross section		0.34 mm²	
Web code: #0229	Pin assignment		Pin 	Socket 
Front/screw mounting, with assembled cable				
	M16 x 1.5, can be positioned, violet, cable type 910	0.5 m	1525555	1525597
		1 m	1525568	1525607
		2 m	1519561	1519574
		5 m	1525571	1525610
Rear/screw mounting, with assembled cable				
	Pg9, violet, cable type 910	0.5 m	1437481	1437449
		1 m	1437494	1437452
		2 m	1437504	1437465
		5 m	1437517	1437478
	M16 x 1.5, violet, cable type 910	0.5 m	1534342	1534384
		1 m	1534355	1534397
		2 m	1534368	1534407
		5 m	1534371	1534410
Rear/screw mounting, for wave soldering processes				
	M16 x 1.5, one-piece, contact carrier, violet		1456475	1456488

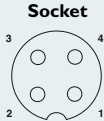
See Section Signal – M12 for additional 5-pos. B-coded connectors, from page 14.

Data – M12 for fieldbuses			5-pos.	
 Web code: #0230	Coding		B	
	Rated voltage		60 V	
	Nominal current		4 A	
	Conductor cross section		0.34 mm ²	
	Pin assignment		Pin	Socket
Front/screw mounting, with assembled cable				
 	M16 x 1.5, green, cable type 910	0.5 m	1529629	1529742
		1 m	1530223	1529755
		2 m	1529726	1529768
		5 m	1529739	1529771
Rear/screw mounting, with assembled cable				
 	Pg9, green, cable type 900	0.5 m	1437643	1437601
		1 m	1437656	1437614
		2 m	1437669	1437627
		5 m	1437672	1437630
	Pg9 EMC nut	1440177		
	M16 x 1.5, green, cable type 900	0.5 m	1534504	1534546
		1 m	1534517	1534559
		2 m	1534520	1534562
		5 m	1534533	1534575
	M16 x 1.5 EMC nut	1440164		
Rear/screw mounting, for wave soldering processes				
 	M16 x 1.5, one-piece, contact carrier, green		1456572	1456585
			—	
	M16 x 1.5 EMC nut	1440164		
			—	

See Section Signal – M12 for additional 5-pos. B-coded connectors, from page 14.

Data – M12 for fieldbuses			5-pos.		
	Coding	A			
	Rated voltage	60 V			
	Nominal current	4 A			
	Conductor cross section	0.25/0.34 mm²			
 Web code: #0231	Pin assignment	Pin	Socket		
					
Front/screw mounting, with assembled cable					
 	M16 x 1.5, violet, cable type 920	0.5 m	1525623	1525678	
		1 m	1525636	1525681	
		2 m	1525649	1525694	
		5 m	1525652	1525704	
	Rear/screw mounting, with assembled cable				
 	Pg9, violet, cable type 920	0.5 m	1437562	1437520	
		1 m	1437575	1437533	
		2 m	1437588	1437546	
		5 m	1437591	1437559	
	Pg9 EMC nut	1440177			
	M16 x 1.5, violet, cable type 920	0.5 m	1534423	1534465	
		1 m	1534436	1534478	
		2 m	1534449	1534481	
		5 m	1534452	1534494	
	M16 x 1.5 EMC nut	1440164			
	Rear/screw mounting, for wave soldering processes				
	 	M16 x 1.5, one-piece, contact carrier, violet		1456491	1456501
			–		
M16 x 1.5 EMC nut		1440164			
	Pg9, one-piece, stainless steel (1.4404)		1554746	1554733	
		–			
	M16 x 1.5, one-piece, contact carrier, blue		1457953	1457940	
		–			

See Section Signal – M12 for additional 5-pos. A-coded connectors, from page 14.

Data – M12 for fieldbuses			4-pos.	
	Coding	A		
	Rated voltage	250 V		
	Nominal current	4 A		
	Conductor cross section	0.34 mm²		
 Web code: #0232	Pin assignment			
Rear/screw mounting, with assembled cable				
 	M16 x 1.5, red, cable type 990	0.5 m	–	1559819
		1 m	–	1559822
		2 m	–	1559835
		5 m	–	1559848
	Pg9, red, cable type 990	0.5 m	–	1437847
		1 m	–	1437850
		2 m	–	1437863
		5 m	–	1437876
Rear/screw mounting, for wave soldering processes				
 	M16 x 1.5, one-piece, contact carrier, red	1457856	1457869	
		–		
Front/screw mounting, pre-assembled with 0.5 m long litz wires				
 	Pg9, shielded	1431432	1431429	
	Flat nut, Pg9	1504084		
Rear/screw mounting, for wave soldering processes, shielded				
	M16 x 1.5, one-piece, contact carrier, yellow	1457872	1457885	
		–		

See Section Signal – M12 for additional 4-pos. A-coded connectors, from page 14.

Data – M12 for USB		USB	
 Web code: #0235	Pin assignment		
Rear/screw mounting, for wave soldering processes			
 	M12 x 1, Mini-B USB 2.0	1440711	–
		–	–

Data – M12 for FO			FO
 Web code: #0236			
Rear/screw mounting, for wave soldering processes			
	M16 x 1.5, fiber optic transceiver	–	1416716
		–	–

Data – M8 for fieldbuses		4-pos.	5-pos.		
	Coding	D	B		
	Rated voltage	60 V AC/DC	30 V AC/DC		
	Nominal current	4 A	3 A		
	Conductor cross section	–	0.25 mm²		
 Web code: #0237	Pin assignment	Socket	Pin	Socket	
					
Front mounting, pre-assembled with 0.5 m long litz wires					
 	M10 fastening thread	–	1424234	1424233	
				–	
Rear mounting, for wave soldering processes					
 	M8 fastening thread, straight, shielded	–	1424242	–	
	M8 fastening thread, angled, shielded	–	1424240	–	
	M10 fastening thread, straight, shielded	–	–	1424241	
	M10 fastening thread, angled, shielded	–	–	1424239	
Two-piece, SMD contact carriers for reflow soldering processes					
 	Straight, SMD, tray packaging	–	–	1412222	
	Straight, SMD, tape-on-reel	–	–	1412245	
	Straight, SMD, tray packaging, additional gasket for the device when not plugged in		–	–	1412229
		shielded	–	–	1412237
New Ethernet  	Straight, SMD, tape-on-reel	1068453	–	1412252	
	shielded	1068454	–	1412259	

Housing screw connections for SMD contact carriers, see page 28.

Power – M12 up to 16 A/630 V			3 (2+PE)-pos.		4 (3+PE)-pos.	
 Web code: #0238	Coding		S (AC)		S (AC)	
	Rated voltage		630 V		630 V	
	Nominal current		16 A		12 A	
	Conductor cross section		AWG 16		AWG 16	
Pin assignment			Pin 	Socket 	Pin 	Socket 
Front mounting, pre-assembled with 0.2/0.5 m long litz wires						
	M16 x 1.5 fastening thread, one-piece		1411655 ¹⁾	1411654 ¹⁾	1424139 ¹⁾	1424137 ¹⁾
	Flat nut M16 x 1.5		1504097			
New 	M16 x 1.5 fastening thread, XL versions, wrench size 19	AWG 16 litz wires	–	–	1411607 ¹⁾	1411605 ¹⁾
		2.5 mm² litz wires	–	–	–	–
	 PROFINET-specified, AWG 16 litz wires PROFINET-specified, 2.5 mm² litz wires					
	Flat nut M16 x 1.5		–	–		
	25 mm square flange, modular, mounting holes 4 x Ø 2.7 mm		–	–	1424131	
	Pre-assembled contact carrier, modular		–	–	1424129 ¹⁾	–
Rear mounting, pre-assembled with 0.2/0.5 m long litz wires						
	M16 x 1.5 fastening thread, one-piece		1411653 ¹⁾	1411652 ¹⁾	1424132 ¹⁾	1424133 ¹⁾
New 	M16 x 1.5 fastening thread, XL versions, wrench size 19	AWG 16 litz wires	–	–	1411603 ¹⁾	1411598 ¹⁾
		2.5 mm² litz wires	–	–	–	–
	 PROFINET-specified, AWG 16 litz wires PROFINET-specified, 2.5 mm² litz wires					

L-coding, 4+FE-pos.: FE not connected to accessible metal parts, no protective function

¹⁾ With 0.5 m long litz wires ²⁾ With 0.2 m long litz wires

* Deviation from the standard color of black: gray contact carrier

4-pos.		4-pos.		5 (4+FE)-pos.		5 (4+PE)-pos.		6 (5+PE)-pos.	
T (DC)		L (DC)		L (DC)		K (AC)		M (AC)	
63 V		63 V		63 V		630 V		630 V	
12 A		12 A/16 A		12 A/16 A		12 A/16 A		8 A	
AWG 16		AWG 16/2.5 mm ²		AWG 16/2.5 mm ²		AWG 16/2.5 mm ²		AWG 16	
Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket
									
1424140 ¹⁾	1424138 ¹⁾	—	—	—	—	—	—	—	—
		—	—	—	—			—	—
—									
1411608 ¹⁾	1411606 ¹⁾	—	—	—	—	1425635 ²⁾	1425636 ²⁾	1415300 ²⁾	1415301 ²⁾
—	—	—	—	1415295 ²⁾	1415296 ²⁾	1415291 ²⁾	1415292 ²⁾	—	—
		1425631 ²⁾	1425632 ²⁾	1425627 ²⁾ *	1425628 ²⁾ *				
		1425586 ²⁾	1425587 ²⁾	1425582 ²⁾ *	1425583 ²⁾ *				
1504097									
—									
1424131		—	—	—	—			—	—
—									
1424130 ¹⁾	—	—	—	—	—			—	—
—									
1424136 ¹⁾	1424134 ¹⁾	—	—	—	—			—	—
—									
1411604 ¹⁾	1411599 ¹⁾	—	—	—	—	1425637 ²⁾	1425638 ²⁾	1415302 ²⁾	1415303 ²⁾
—	—	—	—	1415297 ²⁾	1415299 ²⁾	1415293 ²⁾	1415294 ²⁾	—	—
		1425633 ²⁾	1425634 ²⁾	1425629 ²⁾ *	1425630 ²⁾ *				
		1425588 ²⁾	1425589 ²⁾	1425584 ²⁾ *	1425585 ²⁾ *				

Power – M12 up to 16 A/630 V		4 (3+PE)-pos.		4-pos.	
For reflow soldering processes	Coding	S (AC)		T (DC)	
	Rated voltage	630 V		63 V	
	Nominal current	12 A		12 A	
 Web code: #0240	Pin assignment	Pin	Socket	Pin	Socket
					
Two-piece, THR contact carriers					
	Straight, THR, blister pack	1406410	1406409	1406396	1406411
	Straight, THR, tape-on-reel	1418343	1418344	1418339*	1418340*
	Straight, shielded, THR, blister pack	–	–	1406397	1406412
	Straight, shielded, THR, tape-on-reel	–	–	1418341*	1418342*
Two-piece, SMD contact carriers					
	Straight, SMD, tray packaging	–	–	1411931*	1411918
	Straight, SMD, tape-on-reel	–	–	1411989*	1411981
	Straight, shielded, SMD, tray packaging	–	–	–	1411967
	Straight, shielded, SMD, tape-on-reel	–	–	–	1412019
	Straight, SMD, tray packaging, additional gasket for the device when not plugged in	–	–	1411948*	–
	Straight, SMD, tape-on-reel, additional gasket for the device when not plugged in	–	–	1412003*	–
	Straight, shielded, SMD, tray packaging, additional gasket for the device when not plugged in	–	–	1411962*	–
	Straight, shielded, SMD, tape-on-reel, additional gasket for the device when not plugged in	–	–	1412017*	–

Housing screw connections for S- and T-coded THR contact carriers, see page 22.

Housing screw connections for T-coded SMD contact carriers, see page 24.

* Contact carrier with assembly pad

Power – M12 up to 16 A/630 V		4-pos.		5 (4+FE)-pos.		5 (4+PE)-pos.		6 (5+PE)-pos.	
For wave and reflow soldering processes	Coding	L (DC)		L (DC)		K (AC)		M (AC)	
	Rated voltage	63 V		63 V		630 V		630 V	
	Nominal current	16 A		16 A		16 A		8 A	
 Web code: #0240	Pin assignment	Pin	Socket	Pin	Socket	Pin	Socket	Pin	Socket
									
One-piece, wave soldering, rear/screw mounting									
	M16 x 1.5, XL versions, wrench size 19	–	–	1415337	1415338	–	–	–	–
									
	PROFINET-specified	1425592	1425593	1425590 ³⁾	1425591 ³⁾	–	–	–	–
Two-piece, THR contact carriers									
	Straight, THR, tray packaging	–	–	1420817	1420818	1420819	1420821	1420822	1420823
									
	PROFINET-specified	1425603	1425604	1425594 ³⁾	1425595 ³⁾	–	–	–	–
	Straight, THR, tape-on-reel*	–	–	1420828	1420829	1420830	1420831	1420832	1420833
									
	PROFINET-specified	1425605	1425606	1425599 ³⁾	1425600 ³⁾	–	–	–	–
	Straight, shielded, THR, tray packaging*	–	–	1421314	1421315	–	–	–	–
									
	PROFINET-specified	1425639	1425640	1425597 ³⁾	1425598 ³⁾	–	–	–	–
	Straight, shielded, THR, tape-on-reel*	–	–	1421317	1421318	–	–	–	–
									
	PROFINET-specified	1425641	1425642	1425601 ³⁾	1425602 ³⁾	–	–	–	–
Two-piece, housing screw connections for K-, L-, and M-coded THR contact carriers									
	Front mounting, M14 x 1 screw fastening	Pin: 1420824 ²⁾ / Socket: 1420825 ²⁾							
		–							
	Flat nut M14 x 1	1412077							
	Rear mounting, M15 x 1 screw fastening	Pin: 1420826 ¹⁾ / Socket: 1420827 ¹⁾							
		–							

K- and M-coding: PE applied to housing.

L-coding: 4+FE-pos.: FE separately applied to the PCB, not connected to accessible metal parts, no protective function.

* Contact carrier with assembly pad

¹⁾ Distance from PCB upper edge to housing front panel rear edge: 6 mm

²⁾ Distance from PCB upper edge to housing front panel outer edge: 9 mm

³⁾ Deviation from the standard color black: gray contact carrier

Signal – M12 connectors for assembly

 Web code: #0243	Coding	Design	4-pos.		5-pos.		8-pos.	
			Pin	Socket	Pin	Socket	Pin	Socket
Push-in connection								
	A	Straight	1424657	1424655	1424649	1424652	–	–
	A	Angled	1424654	1424656	1424651	1424653	–	–
Push-in connection, shielded								
	A	Straight	1424666	1424668	1424658	1424660	–	–
		Angled	1424667	1424669	1424659	1424661	–	–
	B	Straight	–	–	1424662	1424664	–	–
		Angled	–	–	1424663	1424665	–	–
IDC connection, conductor cross section: 0.14 mm² ... 0.34 mm²								
	A	Straight	1641691	1641688	–	–	–	–
IDC connection, conductor cross section: 0.14 mm² ... 0.5 / 0.75 mm²								
 	A	Straight	–	–	1414600	1414601	1424433	1424434
IDC connection, conductor cross section: 0.34 mm² ... 0.75 mm²								
	A	Straight	1641785	1641772	–	–	–	–
IDC connection, conductor cross section: 0.14 mm² ... 0.5/0.75 mm², shielded								
	A	Straight	1413993	1413994	1413991	1413992	1414610	1414611
	A	Straight	1043110	1043111	1043112	1043113	–	–
Crimp connection, shielded								
 	A	Straight	1422850	1422852	1422850	1422852	–	–
	A	Angled	1422851	1422853	1422851	1422853	–	–
	Crimp contacts 0.14...0.34 mm²		1064040	1064041	1064040	1064041	–	–
	Crimp contacts 0.34...1.0 mm²		1423645	1423646	1423645	1423646	–	–
Crimp connection, shielded, with push-pull locking								
 	A	Straight	1021815	–	1021815	–	–	–
 Web code: #1831	A	Angled	1021816	–	1021816	–	–	–
	Crimp contacts 0.14...0.34 mm²		1064040	–	1064040	–	–	–
	Crimp contacts 0.34...1.0 mm²		1423645	–	1423645	–	–	–

Signal – M12 connectors for assembly

 Web code: #0242	Coding	Design	4-pos.		5-pos.		8-pos.	
			Pin	Socket	Pin	Socket	Pin	Socket
Screw connection, cable outer Ø: 4 mm ... 6 mm								
	A	Straight	1662528	1681127	1663116	1662968	—	—
	A	Angled	1681101	1681143	1663129	1662984	—	—
Screw connection, cable outer Ø: 6 mm ... 8 mm								
	A	Straight	1523230	1696439	1681460	1681486	1513334	1513347
	A	Angled	—	—	1681473	1681499	—	—
Screw connection, cable outer Ø: 4 mm ... 6 mm, with SKINTOP® screw connection								
	A	Straight	1556870	1430381	1456466	1559000	—	—
Screw connection, cable outer Ø: 6 mm ... 8 mm, with SKINTOP® screw connection								
	A	Straight	—	—	1556825	1556838	—	—
	A	Angled	—	—	1561742	1556812	—	—
Screw connection, cable outer Ø: 4 mm ... 6 mm, shielded								
	A	Straight	1693830	1694295	1693416	1694305	—	—
	A	Angled	1694279	—	1693429	—	—	—
Screw connection, cable outer Ø: 6 mm ... 8 mm, shielded								
	A	Straight	1501540	1515170	1694266	1694318	1511857	1511860
	A	Angled	—	—	1694282	1430433	—	—

Signal – M12 connectors for assembly, high-position

 Web code: #0245	Coding	Design	12-pos.		17-pos.		
			Pin	Socket	Pin	Socket	
Piercecon® connection, conductor cross section: 0.14 mm²							
	A	Straight	1559592	1559631	1559602	1559644	
Solder connection, conductor cross section: 0.08 mm² ... 0.25 mm², shielded							
	A	Straight	1404410	1404411	—	—	
	A	Angled	1404412	1404413	—	—	

Signal – M8 connectors for assembly



Web code: #0246

 Web code: #0246	Design	3-pos.		4-pos.	
		Pin	Socket	Pin	Socket
IDC connection, conductor cross section: 0.08 mm² ... 0.25 mm²					
	Straight	1441008	1441040	1441011	1441053
IDC connection, conductor cross section: 0.25 mm² ... 0.5 mm²					
	Straight	1441024	1441066	1441037	1441079
Screw connection, conductor cross section: 0.14 mm² ... 0.5 mm²					
	Straight	1501252	1506888	1501265	1506891
	Angled	1407583	1407582	1407585	1407584
Screw connection, conductor cross section: 0.14 mm² ... 0.5 mm², shielded					
	Straight	1542884	1542907	1542897	1542910
Solder connection, conductor cross section: 0.08 mm² ... 0.25 mm²					
	Straight	1681156	1681172	1681169	1681185
	Angled	1699902	1529399	1554209	1513444
Solder connection, conductor cross section: 0.08 mm² ... 0.25 mm², shielded					
	Straight	1506901	1506927	1506914	1506930
	Angled	1436453	1436479	1436466	1436482

Data – M12 connectors for assembly

i Web code: #0249

Fieldbuses/ networks	Design	4-pos.		5-pos.		8-pos.	
		Pin	Socket	Pin	Socket	Pin	Socket

Push-in connection, shielded

	PROFINET	Straight	1424682	1424683	—	—	—	—	
		Angled	1424684	1424685	—	—	—	—	
	DeviceNet™	Straight	—	—	1424670	1424672	—	—	
		Angled	—	—	1424671	1424673	—	—	
	INTERBUS	Straight	—	—	1424674	1424676	—	—	
		Angled	—	—	1424675	1424677	—	—	
				2 pos.		—	—	—	—
				Pin	Socket	—	—	—	—
	PROFIBUS DP	Straight	1424678	1424680	—	—	—	—	
		Angled	1424679	1424681	—	—	—	—	

IDC connection, shielded

	Ethernet	Straight	1411066	1411069	–	–	1421679	1421680
		Angled	1553624	1553637	–	–	1553653	1553666
	PROFINET	Straight	1411068	1411071	–	–	–	–
		Angled	1554539	1554542	–	–	–	–
	CAT 6 _A	Straight	–	–	–	–	1411043	1414586

IDC connection, shielded

	DeviceNet™ PROFIBUS PA	Straight	—	—	1422759	1422760	—	—
		Straight	1413933	1413934	—	—	—	—
	PROFIBUS DP	2 pos.						
			Pin	Socket				
		Straight	1413931	1413932				

Crimp connection, shielded

	PROFINET	Straight	1422846	1422848	–	–	–	–
		Angled	1422847	1422849	–	–	–	–
	PROFINET CAT 6 _A	Straight	–	–	–	–	1422844	–
		Angled	–	–	–	–	1422845	–
	Crimp contacts 0.14... 0.34 mm ²		1064040	1064041	–	–	1423643	–
	Crimp contacts 0.34... 1.0 mm ²		1423645	1423646	–	–	–	–

Crimp connection, shielded, with push-pull locking

	PROFINET	Straight	1021830	–	–	–	–	–
		Angled	1021831	–	–	–	–	–
	PROFINET CAT 6 _A	Straight	–	–	–	–	1021783	–
		Angled	–	–	–	–	1021784	–
	Crimp contacts 0.14... 0.34 mm ²		1064040	–	–	–	1423643	–
	Crimp contacts 0.34... 1.0 mm ²		1423645	–	–	–	–	–

Data – M12 connectors for assembly

 Web code: #0249	Fieldbuses/ networks	Design	4-pos.		5-pos.		8-pos.	
			Pin	Socket	Pin	Socket	Pin	Socket
Piercecon® connection, shielded								
	CAT6 _A	Straight	–	–	–	–	1417430	–
		Angled	–	–	–	–	1417443	–

Data – Cable connectors with IDC

 Web code: #0249						
Conductor cross section [mm²]	0.14 ... 0.34	0.14 ... 0.34	0.25 ... 0.5	0.25 ... 0.75		
	CAT6 _A	Ethernet 4-pos.	PROFINET 4-pos.	PROFIBUS		
	1414412	1414415	1414416	1420426		

Signal – Cable connectors with IDC

 Web code: #0243						
Conductor cross section [mm²]	0.14 ... 0.34	0.34 ... 0.75	0.5 ... 1.5	0.14 ... 0.75		
No. of pos.	Unshielded	Unshielded	Unshielded	Shielded		
3	–	–	1414702	–		
4	1641879	1642140	1414698	1414418		
5	–	–	1414742	1414417		
8	–	–	–	1414612		

Power – M12 connectors for assembly

 Web code: #0252	Coding	Design	2+PE-pos. (AC)		3+PE-pos. (AC)		4-pos. (DC)		
			Pin	Socket	Pin	Socket	Pin	Socket	
Screw connection, conductor cross section up to 1.5 mm²									
	T	Straight	—	—	—	—	1404643	1404644	
		Angled	—	—	—	—	1408988	1408989	
	S	Straight	1419639	1419640	1404641	1404642	—	—	
		Angled	1419641	1419642	1408985	1408987	—	—	
Screw connection, conductor cross section up to 2.5 mm²									
New		K	Straight					4+PE-pos. (AC)	
				—	—	—	—	1424707	1424708
		L	Straight					4+FE-pos. (DC)	
				—	—	—	—	1424709	1424710

Signal – Cables with M8 or M12 connectors

i Web code: #0283



Cable
length

Signal cable
M8, 3-pos.

Signal cable
M8, 4-pos.

Signal cable
M12, 3-pos.

Signal cable
M12, 4-pos.

Signal cable
M12, 5-pos.

Signal cable
M12, 5-pos.
shielded

Straight connector, free cable end

3 m	1681677	1681790	1668027	1668056	1669770	1682744
5 m	1681680	1681800	1668030	1668069	1669783	1682731
10 m	1693584	1694143	1682566	1682993	1683361	1500732

Straight socket, free cable end

3 m	1669725	1681855	1694499	1668111	1669835	1682948
5 m	1669628	1681868	1683510	1668124	1669848	1682951
10 m	1694101	1683484	1693034	1683002	1683374	1500758

Straight male connector, straight socket

0.3 m	1681907	–	–	1668357	1681583	–
0.6 m	1681910	–	–	1668360	1681596	–
1.5 m	1681923	–	–	1668373	1681606	–
3 m	1681936	–	–	1668386	1681619	–

Angled socket, free cable end

3 m	1669741	1681884	1694512	1668234	1669864	1682977
5 m	1669631	1681897	1694525	1668247	1669877	1682980
10 m	1694169	1694172	1694538	1681389	1694541	1500761

Data – Network cables with M8 connectors

i Web code: #1656

New

Ethernet
**PROFI
NET**



New

Ethernet
**PROFI
NET**



New

Ethernet
**PROFI
NET**



Cable
length

4-pos., D-coded

Straight male connector,
free cable end

Straight male connector,
straight male connector

Straight male connector,
RJ45

1 m	1423703	1423707	1423711
2 m	1423704	1423708	1423712
5 m	1423705	1423709	1423713
10 m	1423706	1423710	1423714

Additional cable qualities and cables with connectors in sizes M5 to M40 for signals, data, and power can be found at phoenixcontact.com.

Data – Network cables with M12 connectors

i Web code: #0284



Cable length	Ethernet X-coded	Ethernet D-coded	Ethernet Y-coded	PROFINET D-coded	PROFIBUS B-coded	DeviceNet™/CANopen® A-coded
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Straight connector, free cable end

1 m	1407467	1407356	1407487	1407495	–	–
2 m	1407468	1407357	1407488	1407496	1518025	1518177
5 m	1407469	1407358	1407489	1407497	1518038	1518180
10 m	1407470	1407359	1407490	1407498	1518041	1518193
15 m	–	–	–	–	–	–
Variable	1408648	1408713	1408642	1408640	1538050	1538115

Straight socket, free cable end

1 m	–	1407380	–	1407528	–	–
2 m	–	1407381	–	1407529	1518067	1518216
5 m	–	1407382	–	1407530	1518070	1518229
10 m	–	1407383	–	1407531	1518083	1518232
15 m	–	–	–	–	1518096	1518245
Variable	–	1408697	–	1408623	1538076	1538131

Straight male connector, straight socket

0.3 m	–	–	–	–	1518106	1518258
0.5 m	–	–	–	–	1518119	1518261
0.6 m	–	–	–	–	–	–
1 m	–	1407400	–	1407553	1518122	1518274
2 m	–	1407401	–	1407554	1518135	1518287
5 m	–	1407402	–	1407555	1518148	1518290
10 m	–	1407403	–	1407556	1518151	1518300
15 m	–	–	–	–	1518164	1518313
Variable	–	1408692	–	1408617	1538092	1538157

Straight male connector, straight male connector

1 m	1407483	1407376	1407491	1407524	–	–
2 m	1407484	1407377	1407492	1407525	–	–
5 m	1407485	1407378	1407493	1407526	–	–
10 m	1407486	1407379	1407494	1407527	–	–
Variable	1408644	1408706	1408641	1408634	1433252	1433294

Termination resistors, M12 male

					PROFIBUS	DeviceNet™/CANopen®
					1507803	1507816

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Power – Cables with M12 connectors (PUR)

i Web code: #1081

						
Coding	S	T	L	L	K	M
Number of positions	3+PE	4	4	4+FE	4+PE	5+PE
Cond. cross section	1.5 mm ²	1.5 mm ²	2.5 mm ²	2.5 mm ²	2.5 mm ²	1.5 mm ²
Cable length			PROFINET-specified	PROFINET-specified		

Straight male connector, free cable end, unshielded

2 m	1408836	1408813	–	–	–	–
3 m	–	–	1425066	1414887	1414870	1414953
5 m	1408837	1408814	1425067	1414891	1414875	1414957
10 m	1408838	1408815	1425028	1414895	1414879	1414961

Straight socket, free cable end, unshielded

2 m	1408844	1408824	–	–	–	–
3 m	–	–	1425074	1414790	1414788	1414910
5 m	1408845	1408825	1425075	1414806	1414804	1414918
10 m	1408846	1408826	1425076	1414823	1414821	1414926

Angled socket, free cable end, unshielded

2 m	1408852	1408828	–	–	–	–
3 m	–	–	1425078	1414786	1414784	1414907
5 m	1408853	1408829	1425079	1414802	1414800	1414916
10 m	1408854	1408830	1425080	1414819	1414817	1414924

Straight male connector, free cable end, shielded

3 m	1424105	1424121	–	1414888	1414871	1414954
5 m	1424245	1424122	–	1414892	1414876	1414958
10 m	1424107	1424123	–	1414896	1414880	1414962

Straight socket, free cable end, shielded

3 m	1424097	1424113	–	1414791	1414789	1414911
5 m	1424098	1424114	–	1414807	1414805	1414919
10 m	1424099	1424115	–	1414824	1414822	1414927

Angled socket, free cable end, shielded

3 m	1424101	1424117	–	1414787	1414785	1414908
5 m	1424102	1424118	–	1414803	1414801	1414917
10 m	1424103	1424128	–	1414820	1414818	1414925

Additional cable qualities and cables with connectors in sizes M5 to M40 for signals, data, and power can be found at phoenixcontact.com.

Accessories

i Web code: #0559

 Web code: #0559	Size	M5		M8		M12	
		Male connectors	Sockets	Male connectors	Sockets	Male connectors	Sockets
Locking screw							
	Plastic	–	1533288	–	1682540	–	1680539
	Metal	–	–	–	–	–	1503302 ¹⁾ 1414148 ²⁾
	Stainless steel V4A	–	–	–	–	–	1555538
Locking screw for SPEEDCON versions							
	Plastic	–	–	–	–	–	1553129
Sealing cap							
	Plastic	–	–	–	–	1560251	–
	Metal	–	–	–	–	1430488	–
Sealing elements for non-assigned housing cut-outs							
	Sealing plug, plastic, for Pg9/Pg11					1670235	
	Locking screw, metal, M16 x 1.5					1453368	
Plastic sealing caps and locking screws, with retaining strap							
	For cables			1430857	1430860	1430873	1430899
	With Ø 3 mm fastening eye			–	1441105	–	–
	With Ø 8 mm fastening eye			1441082	–	–	–
	With Ø 12 mm fastening eye			–	1441095	1456187	–
	With Ø 15 mm fastening eye			–	–	1456190	1456200
Metal sealing caps and locking screws, with fastening chain							
	With Ø 16 mm fastening eye			–	–	1430491	1414147

¹⁾ With slotted screw head

²⁾ With hexagonal screw head

Accessories



Web code: [#0559](#)

EMC hexagonal nut with fine toothing for device connectors



With fine toothing facing inwards.
This prevents visible scratch marks
from appearing on the device
surface.

M12 x 1

[1440151](#)

M16 x 1.5

[1440164](#)

Pg9

[1440177](#)

Seal for device connector



Seal for M8 socket

[1437070](#)

Flat gasket for M12 fastening thread

[1424275](#)

Flat gasket for M16 fastening thread

[1430394](#)

Flat gasket for Pg9 fastening thread

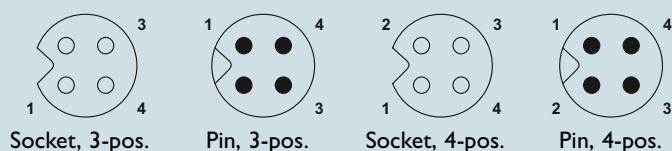
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Pin assignments and litz wire colors

Signal

M5 device connector

Pin assignments



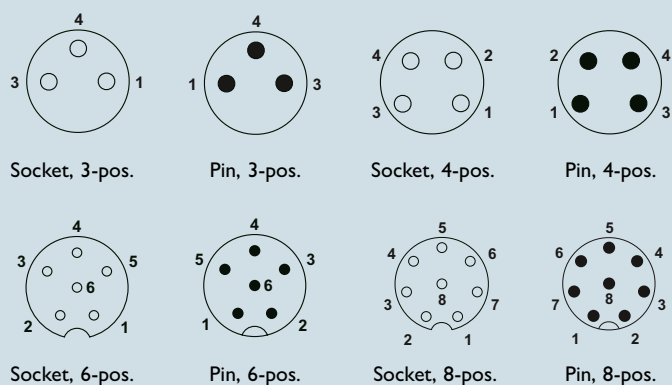
Litz wire colors

Assignment: M5 pin/socket

Pin	Wire color			
	3-pos.		4-pos.	
1	BN		BN	
2	—		WH	
3	BU		BU	
4	BK		BK	

M8 device connectors

Pin assignments



Litz wire colors

Assignment: M8 pin/socket

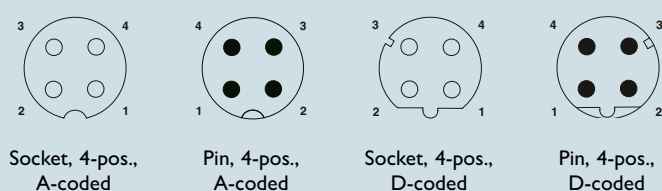
Pin	Wire color			
	3-pos.		4-pos.	
1	BN		BN	
2	—		WH	
3	BU		BU	
4	BK		BK	
5	—		—	
6	—		—	

Assignment: M8 pin/socket

Pin	Wire color			
	6-pos.		8-pos.	
1	BN		WH	
2	WH		BN	
3	BU		GN	
4	BK		YE	
5	GY		GY	
6	PK		PK	
7	—		BU	
8	—		RD	

M12 device connectors

Pin assignments



Litz wire colors

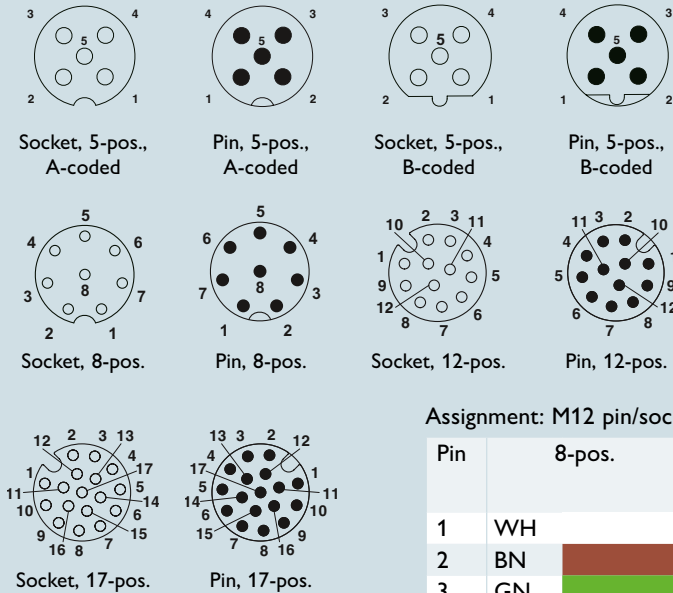
Assignment: M12 pin/socket

Pin	4-pos. A-coded		4-pos. D-coded	
1	BN		YE	
2	WH		WH	
3	BU		OG	
4	BK		BU	

Signal

M12 device connectors

Pin assignments



Assignment: M12 pin/socket

Pin	8-pos.	12-pos.
1	WH	BN
2	BN	BU
3	GN	WH
4	YE	GN
5	GY	PK
6	PK	YE
7	BU	BK
8	RD	GY
9	—	RD
10	—	VT
11	—	GYPK
12	—	RDBU

Litz wire colors

Assignment: M12 pin/socket

Pin	5-pos. A-coded	5-pos. B-coded
1	BN	BN
2	WH	WH
3	BU	BU
4	BK	BK
5	GY	GY

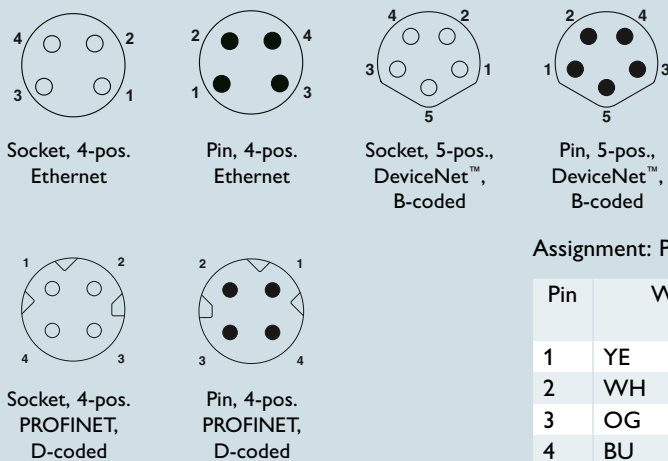
Assignment: M12 pin/socket

Pin	17-pos.
1	BN
2	BU
3	WH
4	GN
5	PK
6	YE
7	BK
8	GY
9	RD
10	VT
11	GYPK
12	RDBU
13	WHGN
14	BNGN
15	WHYE
16	YEBN
17	WHGY

Data

M8 device connectors

Pin assignments



Assignment: CANopen®/DeviceNet™, 5-pos. B-coded

Pin	Wire color	Signal DeviceNet™
1	Shield	Drain
2	RD	V+
3	WH	CAN_H
4	BK	V-
5	BU	CAN_L

Assignment: PROFINET, 4-pos. D-coded

Pin	Wire color	Signal PROFINET
1	YE	TD+
2	WH	RD+
3	OG	TD-
4	BU	RD-

Assignment: Ethernet, 4-pos., A-coded

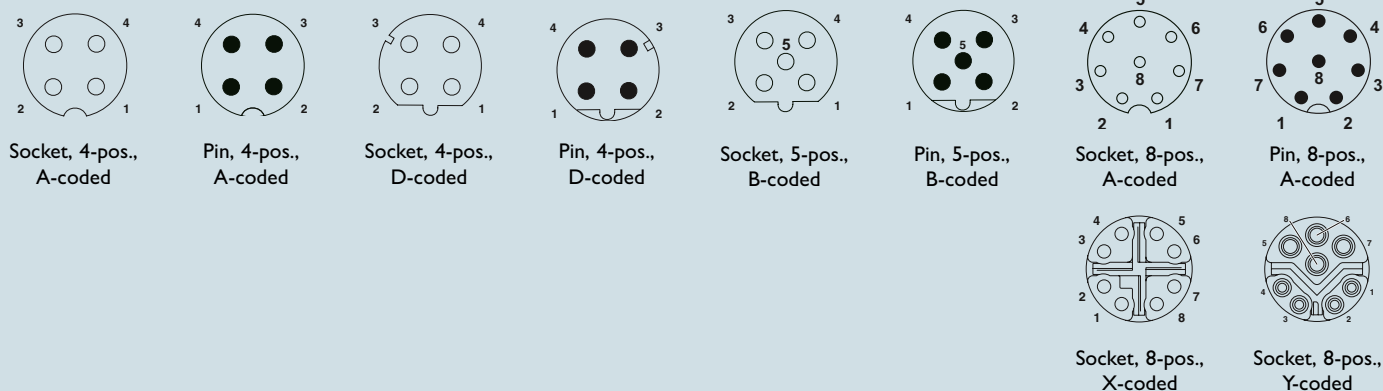
Pin	Wire color	Signal Ethernet
1	YE	TD+
2	OG	TD-
3	WH	RD+
4	BU	RD-

Pin assignments and litz wire colors

Data

M12 device connectors

Pin assignments



Litz wire colors

Assignment: PROFIBUS, 5-pos., B-coded

Pin	Wire color	Signal PROFIBUS
1	—	—
2	GN	A cable
3	—	—
4	RD	B cable
5	Flexible filler lead	—

Shield on housing

Assignment: CANopen®, 5-pos. A-coded

Pin	Wire color	Signal CANopen®
1	Shield	Drain
2	RD	V+
3	BK	V-
4	WH	CAN_H
5	BU	CAN_L

Shield on housing

Assignment: DeviceNet™, 5-pos. A-coded

Pin	Wire color	DeviceNet™ signal
1	Shield	Drain
2	RD	V+
3	BK	V-
4	WH	CAN_H
5	BU	CAN_L

Shield on housing

Assignment: INTERBUS, 5-pos., B-coded

Pin	Wire color	Signal
1	YE	DO
2	GN	<u>DO</u>
3	GY	DI
4	PK	<u>DI</u>
5	BN	COM
—	WH	NC

Shield on housing

Assignment: PROFINET, EtherCAT, Sercos, 4-pos. D-coded

Pin	Wire color	Signal
1	YE	TD+
2	WH	RD+
3	OG	TD-
4	BU	RD-

Assignment: Ethernet, 4-pos. D-coded

Pin	Wire color	Signal Ethernet
1	WHOG	TD+
2	WHGN	RD+
3	OG	TD-
4	GN	RD-

Shield on housing

Assignment: FOUNDATION Fieldbus, 4-pos. A-coded

Pin	Wire color	Signal
1	BU	DATA-
2	OG	DATA+
3		Shield
4		

Data

M12 device connectors

Litz wire colors

Assignment: Ethernet, 8-pos., A-coded

Pin	Wire color	Signal Ethernet
1	WHBU	D3–
2	WHBN	D4+
3	BN	D4–
4	OG	D1–
5	WHGN	D2+
6	WHOG	D1+
7	BU	D3+
8	GN	D2–

Assignment: Ethernet, 8-pos., X-coded

Pin	Wire color	Signal Ethernet
1	WHOG	D1+
2	OG	D1–
3	WHGN	D2+
4	GN	D2–
5	WHBN	D4+
6	BN	D4–
7	WHBU	D3–
8	BU	D3+

Assignment: Ethernet hybrid, 8-pos., Y-coded

Pin	Wire color	Signal Ethernet
1	WHOG	TD+
2	OG	TD–
3	WHGN	RD+
4	GN	RD–
5	BU	
6	WH	
7	BN	
8	BK	

Assignment: VARAN, 8-pos., A-coded

Pin	Wire color	Signal
1	n. c.	
2	OG	TD–
3	WHOG	TD+
4	n. c.	
5	WHGN	RD+
6	BU	
7	BN	
8	GN	RD–

Assignment: AS-Interface, 4-pos., A-coded

Pin	Wire color	Signal
1	BU	AS-i+
2	WH	
3	BN	AS-i–
4	BK	

Assignment: CC-Link, 4-pos., A-coded

Pin	Wire color	Signal
1	Shield	SLD
2	WH	DS
3	YE	DG
4	BU	DA

Power

M12 device connectors

Pin assignments



Socket, 2+PE, S-coded



Pin, 2+PE, S-coded



Socket, 3+PE, S-coded



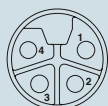
Pin, 3+PE, S-coded



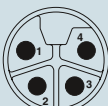
Socket, 4-pos., T-coded



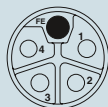
Pin, 4-pos., T-coded



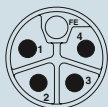
Socket, 4-pos., L-coded



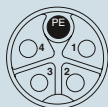
Pin, 4-pos., L-coded



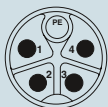
Socket, 4+FE, L-coded



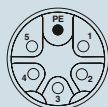
Pin, 4+FE, L-coded



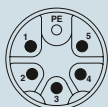
Socket, 4+PE, K-coded



Pin, 4+PE, K-coded



Socket, 5+PE, M-coded



Pin, 5+PE, M-coded

Litz wire colors

Assignment: 2+PE, S-coded

Pin	Wire color
1	BK1
3	BK2
PE	GNYE

Assignment: 3+PE, S-coded

Pin	Wire color
1	BK1
2	BK2
3	BK3
PE	GNYE

Assignment: 5+PE, M-coded

Pin	Wire color
1	BK1
2	BK2
3	BK3
4	BK4
5	BK5
PE	GNYE

Assignment: 4-pos., T-coded

Pin	Wire color
1	BN
2	WH
3	BU
4	BK

Assignment: 4+PE, K-coded

Pin	Wire color
1	BK1
2	BK2
3	BK3
4	BK4
PE	GNYE

Assignment: 4/4+FE, L-coded

Pin	Wire color
1	BN
2	WH
3	BU
4	BK
FE*	GY

* Omitted for 4-pos.

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