



M12 cabling for power applications

A great deal of power in a small amount of space

M12 POWER cabling

Maximum power in a compact size

Device connection technology does not just have to be powerful; it also needs to be compact and flexible. Phoenix Contact is setting new standards with the introduction of power transmission in the compact M12 design. The innovative cabling system provides maximum power in an extremely space-saving size. With connectors for assembly, power cables, and distributors, we provide the ideal solution for any application thanks to our uniform product range.

Your advantages

- ✓ High power transmission in DC or AC applications up to 16 A and 690 V
- ✓ Protection against mismatching with coded pin connector patterns
- ✓ Reliable EMC protection with optional 360° shielding
- ✓ PROFINET-conforming color scheme with L-coding versions
- ✓ Standardized in accordance with IEC 61076-2-111
- ✓ Approval in accordance with UL 2237





Easy power transmission

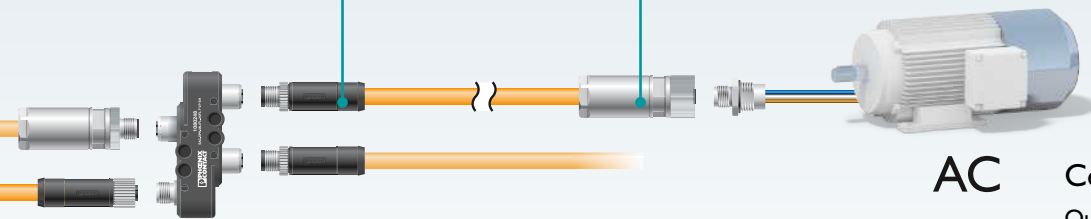
Choose from a range of assembled versions and cable qualities.

Page 4

Flexible field cabling

You can wire different cable lengths flexibly on-site with connectors for assembly.

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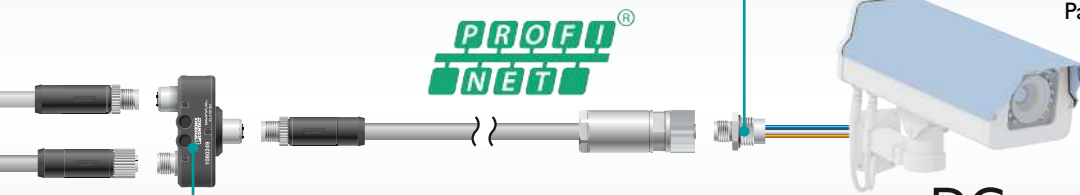


AC

Cost-effective design-in

Our M12 POWER device connectors enable a consistent architecture.

Page 14

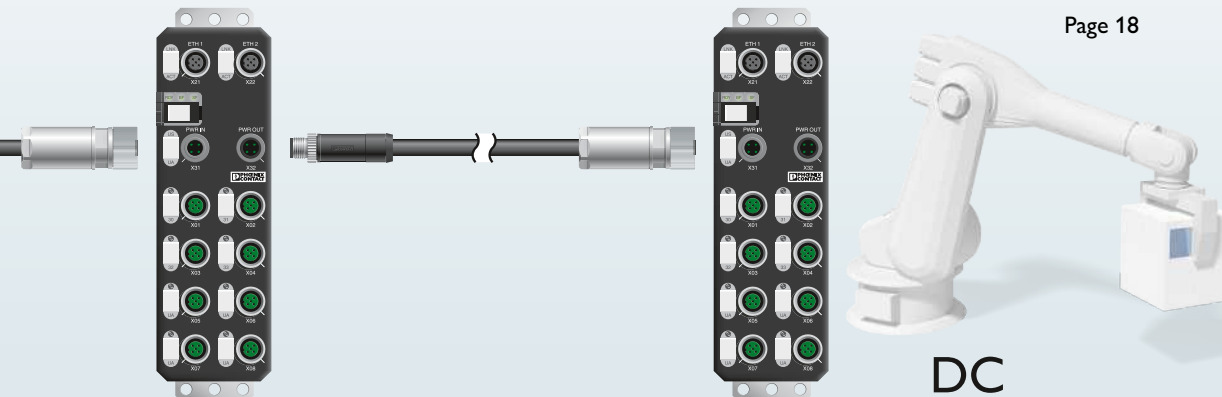


DC

Clear power distribution

With the M12 POWER distributors, you can bundle and distribute power easily and clearly.

Page 18



DC



M12 POWER cables

Reliably supplying motors and devices

Choose from a range of assembled versions and cable qualities. With straight and angled designs in both shielded and non-shielded versions, we provide the right connector and the appropriate corresponding cable for every demand. The power cables are available in PUR and PVC, and in cross sections from 1.5 to 2.5 mm².

Your advantages

- ✓ PE connection to the metallic conducting M12 knurl ensures reliable protection against electric shocks
- ✓ Exceedingly robust: Resistant against vibration, UV and ozone, extended temperature range
- ✓ Safe use with high degrees of protection
- ✓ Reliable EMC protection with optional 360° shielding
- ✓ Perfectly fitting cabling with customer-specific versions

Totally protected shielding



Advanced Shielding Technology¹²
Designed by PHOENIX CONTACT

Seamless shielding concept

In the automated production process of connectors with Advanced Shielding Technology, the pre- and metal moldings ensure improved shielding performance. The connector is reliably secured to the conductor during an initial plastic overmold process. In the second overmold process with special tin, the seamless connection between the braided shield and plug creates a secure 360° shield connection.



Totally protected

Thanks to the minimal generation of heat and the reliable flow of current in the event of a short circuit, the large-area 360° shielding ensures greater safety and reduces the risk of fire.



Totally reliable

Shock and vibration-resistant shield connection even at the highest mechanical loads in torsion, drag chain or robotics applications.



Totally resistant and robust

The robust connectors are resistant to transient overvoltages caused by the switching processes of inductive loads and can even withstand lightning currents of up to 20 kA.

M12 POWER cables, AC applications

Simply enter the web code into the search field on our website:

i Web code: [#1081](#)



2-pos.+PE, S-coded

3-pos.+PE, S-coded

230 V, 16 A

690 V, 12 A

Unshielded, 1.5 mm²

Unshielded, 1.5 mm²

Shielded, 1.5 mm²

Male

Female

Male

Female

Male

Female

Straight design with free cable end, PUR

	1 m	1175827	1176479	1408835	1408843		
	1.5 m					1424104	1424096
	2 m	1175867	1176842	1408836	1408844		
	3 m					1424105	1424097
	5 m	1175870	1176846	1408837	1408845	1424245	1424098
	10 m	1175908	1176849	1408838	1408846	1424107	1424099

Angled design with free cable end, PUR

	1 m	1176043	1176857	1408839	1408848		
	1.5 m					1424108	1424100
	2 m	1176069	1176867	1408840	1408852		
	3 m					1424109	1424101
	5 m	1176084	1176919	1408841	1408853	1424110	1424102
	10 m	1176440	1176935	1408842	1408854	1424111	1424103

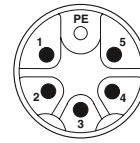
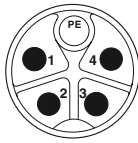
Straight design with free cable end, PVC

	1 m	1411636	1411644				
	1.5 m						
	2 m	1411637	1411645				
	3 m						
	5 m	1411638	1411646				
	10 m	1411639	1411647				

Angled design with free cable end, PVC

	1 m	1411640	1411648				
	1.5 m						
	2 m	1411641	1411649				
	3 m						
	5 m	1411642	1411650				
	10 m	1411643	1411651				

Corresponding accessories and tools are to be found on the respective product page at phoenixcontact.com



4-pos.+PE, K-coded

5-pos.+PE, M-coded

690 V, 16 A

690 V, 8 A

Unshielded, 2.5 mm²

Shielded, 2.5 mm²

Unshielded, 1.5 mm²

Shielded, 1.5 mm²

Male Female Male Female Male Female Male Female

1414866 1414770 1414867 1414771 1414949 1414901 1414950 141902

1414870 1414788 1414871 1414789 1414953 1414910 1414954 1414911

1414875 1414804 1414876 1414805 1414957 1414918 1414958 1414919

1414879 1414821 1414880 1414822 1414961 1414926 1414962 1414927

1414833 1414766 1414834 1414767 1414932 1414899 1414933 1414900

1414837 1414784 1414838 1414785 1414936 1414907 1414937 1414908

1414841 1414800 1414842 1414801 1414941 1414916 1414942 1414917

1414846 1414817 1414847 1414818 1414945 1414924 1414946 1414925

1414868 1414780 1414951 1414905 1414952 1414906

1414872 1414796 1414955 1414914 1414956 1414915

1414877 1414812 1414959 1414922 1414960 1414923

1414881 1414829 1414963 1414930 1414964 1414931

1414835 1414774 1414934 1414903 1414935 1414904

1414839 1414792 1414939 1414912 1414940 1414913

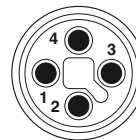
1414843 1414808 1414943 1414920 1414944 1414921

1414848 1414825 1414947 1414928 1414948 1414929

M12 POWER cables, DC applications

Simply enter the web code into the search field on our website:

i Web code: #1081



4-pos., T-coded

63 V, 12 A

Unshielded, 1.5 mm²

Shielded, 1.5 mm²

Male

Female

Male

Female

Straight design with free cable end, PUR



1 m	1408812	1408823		
1.5 m			1424120	1424112
2 m	1408813	1408824		
3 m			1424121	1424113
5 m	1408814	1408825	1424122	1424114
10 m	1408815	1408826	1424123	1424115

Angled design with free cable end, PUR



1 m	1408816	1408827		
1.5 m			1424124	1424116
2 m	1408819	1408828		
3 m			1424125	1424117
5 m	1408820	1408829	1424126	1424118
10 m	1408822	1408830	1424127	1424128

Straight design with straight female, PUR



0.3 m				
0.6 m				
1 m	1408808			
1.5 m				
2 m	1408809			
3 m				
5 m	1408810			
10 m	1408811			

Straight design with free cable end, PVC



1 m	1089952	1089970		
1.5 m				
2 m	1089953	1089971		
3 m				
5 m	1089955	1089972		
10 m	1089956	1408826		

Angled design with free cable end, PVC



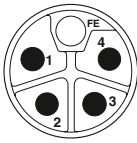
1 m	1089958	1089977		
1.5 m				
2 m	1089961	1089981		
3 m				
5 m	1089965	1089984		
10 m	1089968	1089987		

Straight design with straight female, PVC

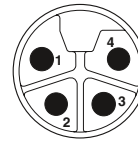


0.3 m				
0.6 m				
1 m	1089988			
1.5 m				
2 m	1089997			
3 m				
5 m	1089998			
10 m	1089973			

Corresponding accessories and tools are to be found on the respective product page at phoenixcontact.com



PROFI
NETZ



PROFI
NETZ

4-pos.+FE, L-coded

4-pos., L-coded

63 V, 16 A

63 V, 16 A

Unshielded, 2.5 mm²

Unshielded, 1.5 mm²

Unshielded, 2.5 mm²

Unshielded, 1.5 mm²

Male

Female

Male

Female

Male

Female

Male

Female

1414883

1414772

1424593

1424601

1425065

1425073

1425025

1425033

1414887

1414790

1424594

1424602

1425066

1425074

1425026

1425034

1414891

1414806

1424595

1424603

1425067

1425075

1425027

1425035

1414895

1414823

1424596

1424604

1425068

1425076

1425028

1425036

1414850

1414768

1424597

1424605

1425069

1425077

1425029

1425037

1414854

1414786

1424598

1424606

1425070

1425078

1425030

1425038

1414858

1414802

1424599

1424607

1425071

1425079

1425031

1425039

1414862

1414819

1424600

1424608

1425072

1425080

1425032

1425040

1425009

1425017

1425081

1425041

1425010

1425018

1425082

1425042

1425011

1425019

1425083

1425043

1424012

1425020

1425084

1425044

1414885

1414782

1424609

1424617

1425085

1425093

1425045

1425053

1414889

1414798

1424610

1424618

1425086

1425094

1425046

1425054

1414893

1414814

1424611

1424619

1425087

1425095

1425047

1425055

1414897

1414831

1424612

1424620

1425088

1425096

1425048

1425056

1414852

1414777

1424613

1424621

1425089

1425097

1425049

1425057

1425058

1414856

1414794

1424614

1424622

1425090

1425098

1425050

1414860

1414810

1424615

1424623

1425091

1425099

1425051

1425059

1414864

1414827

1424616

1424624

1425092

1425100

1425052

1425060

1425013

1425021

1425101

1425061

1425014

1425022

1425102

1425062

1425015

1425023

1425103

1425063

1425016

1425024

1425104

1425064



M12 POWER connectors

Flexible field cabling

You can wire different cable lengths flexibly on-site with connectors for assembly. Shielded and unshielded M12 POWER connectors are available in straight and angled versions for reliable power transmission. Choose between the quick and easy Push-Lock connection technology, the proven screw connection, or compact crimp connection.

Your advantages

- ✓ Powerful: DC and AC applications up to 16 A and 690 V
- ✓ Protection against electric shock with PE connection to all metal components
- ✓ Reliable shield connection even under extreme mechanical strain
- ✓ Protected seal in the M12 female

Always the best connection technology

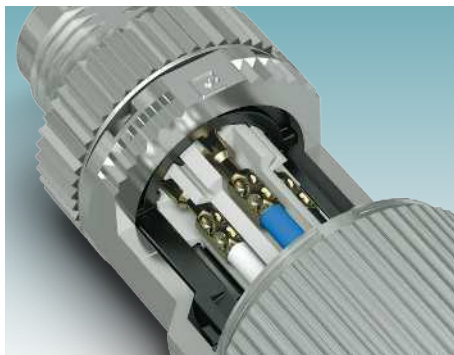
Push-Lock connection

Wire rigid and flexible conductors easily and without tools with the Push-Lock connection. The clamping chambers are opened and closed easily via a lever. This means the user has both hands free to insert the conductor, and installation is simplified significantly. The color-coding and numerical marking simplifies the assignment of the individual litz wires.



Push-Lock connection

The Push-Lock technology enables fast and convenient power cabling without tools. The proven spring-force technology guarantees a secure and reliable connection.



Crimp connection

Crimp connection technology enables a fast, automated connection wherever cables have to be assembled in large volumes. The extremely compact connector is suitable for railway applications.



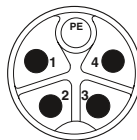
Screw connection

The screw connection is one of the classic connection technology solutions. You can assemble a variety of cables and cable qualities universally on site.

M12 POWER connectors, AC applications

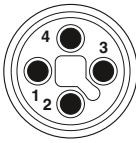
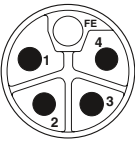
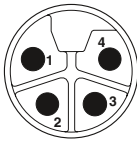
Simply enter the web code into the search field on our website:

 Web code: [#0252](#)

Simply enter the web code into the search field on our website: i Web code: #0252								
		2-pos.+PE, S-coded		3-pos.+PE, S-coded		4-pos.+PE, K-coded		
		230 V, 16 A		690 V, 12 A		690 V, 16 A		
		Male	Female	Male	Female	Male	Female	
Push-Lock connection, 1.5 mm² ... 2.5 mm², shielded								
		Straight design	1080225	1080227	1080220	1080222	1080231	1080228
Crimp connection, 1.5 mm² ... 2.5 mm², shielded								
		Straight design	1027467	1027469	1027467	1027469	1027474	1027476
Crimp contacts								
		1.5 mm²	1029394	1029395	1029394	1029395	1029394	1029396
		2.5 mm²	1029388	1029390	1029388	1029390	1029388	1029392
		PE male, 1.5 mm²	1029398		1029398			1029398
		PE male, 2.5 mm²	1029389		1029389			1029389
		PE female, 1.5 mm²		1029400		1029400	1029401	
		PE female, 2.5 mm²		1029391		1029391	1029393	
Screw connection, 0.75 mm² ... 1.5 mm², unshielded								
		Straight design	1419639	1419640	1404641	1404642		
		Angled design	1419641	1419642	1408985	1408987		

Corresponding accessories and tools are to be found on the respective product page at phoenixcontact.com

M12 POWER connectors, DC applications

Simply enter the web code into the search field on our website:  Web code: #0252							
		4-pos., T-coded		4-pos.+FE, L-coded		4-pos., L-coded	
		63 V, 12 A		63 V, 16 A		63 V, 16 A	
		Male	Female	Male	Female	Male	Female
Push-Lock connection, 1.5 mm² ... 2.5 mm², unshielded							
		Straight design	1151362	1151366	1151368	1151390	
Push-Lock connection, 1.5 mm² ... 2.5 mm², shielded							
		Straight design	1080215	1080218	1080235	1080233	1080239 1080237
Crimp connection, 1.5 mm² ... 2.5 mm², shielded							
		Straight design	1027465	1027466	1027477	1027478	1027479 1027480
Crimp contacts							
		1.5 mm ²	1029394	1029395	1029394	1029396	1029394 1029396
		2.5 mm ²	1029388	1029390	1029388	1029392	1029388 1029392
		PE male, 1.5 mm ²	1029398			1029398	
		PE male, 2.5 mm ²	1029389			1029389	
		PE female, 1.5 mm ²		1029400	1029401		
		PE female, 2.5 mm ²		1029391	1029393		
Screw connection, 0.75 mm² ... 1.5 mm², unshielded							
		Straight design	1404643	1404644			
		Angled design	1408988	1408989			

Corresponding accessories and tools are to be found on the respective product page at phoenixcontact.com

M12 POWER device connectors

Cost-effective design-in

The more versatile the connection solutions, the more flexibly you can develop your devices. Our unique range of device connectors features the ideal solution for every application. Device connection technology from Phoenix Contact for distributed modules is designed for harsh ambient conditions in industrial production processes.

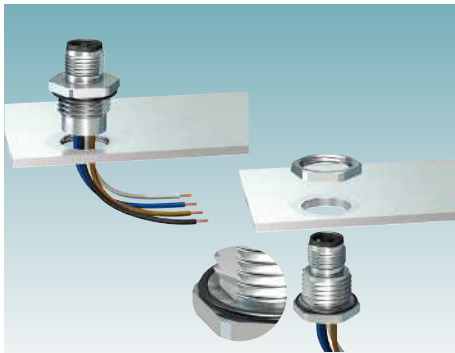
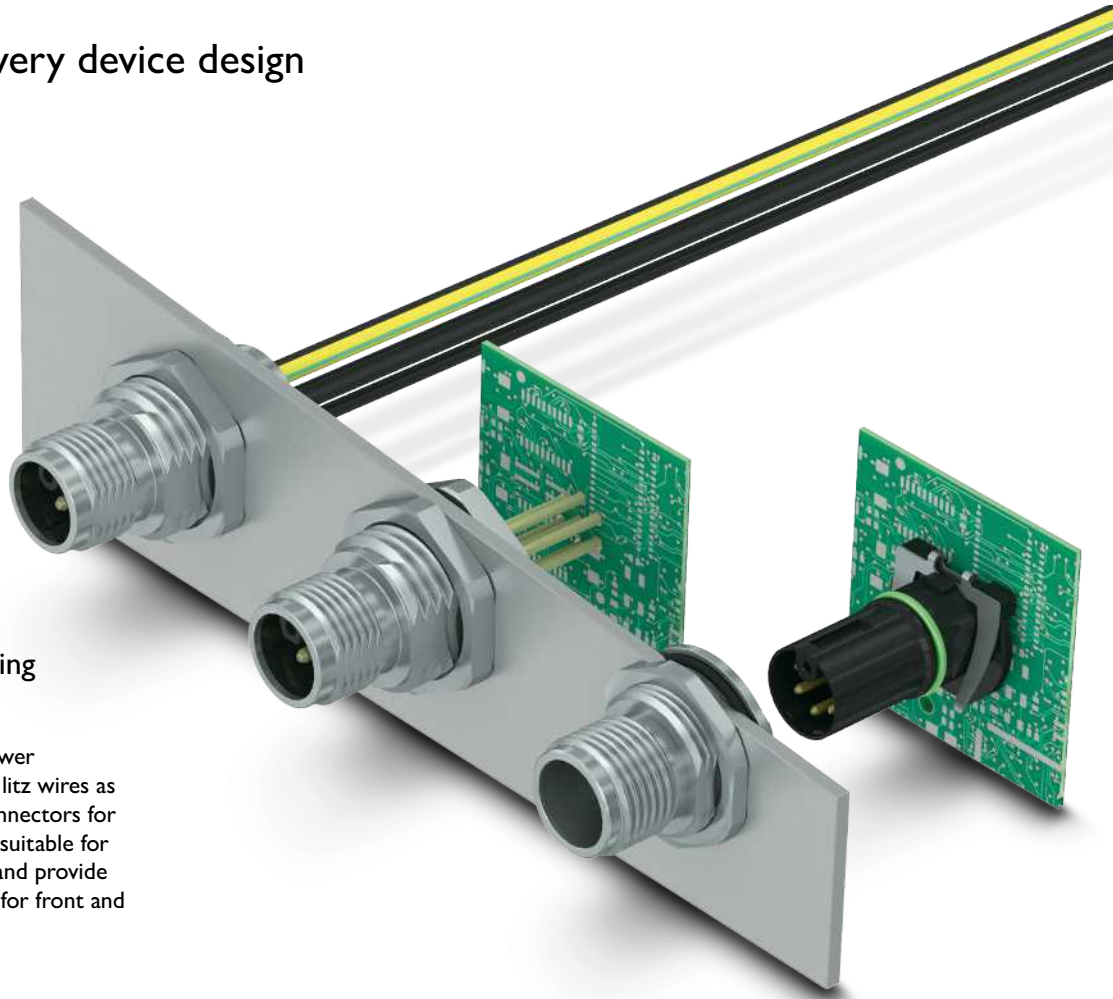
Your advantages

- ✓ More flexibility in device design with numerous pin assignments and codings
- ✓ Fast device approval with connection components complying with the VDE/cUL standard
- ✓ Easy integration into automated production processes with standardized tape-on-reel or tray packaging
- ✓ Optional shield connection

The right solution for every device design

Versatile connection and mounting solutions

Our range of flush-type connectors for power connections includes plug-in versions with litz wires as well as one-piece and two-piece device connectors for direct PCB mounting. The connectors are suitable for wave, THR, and SMT soldering processes and provide uniform mechanical installation conditions for front and rear mounting.



Safe mounting

Choose between front and rear mounting. XL housing versions simplify the device cutout. Increased safety and tightness of seal with tightening limitation.



Easy positioning

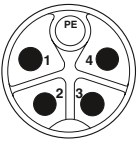
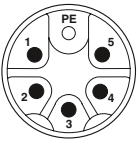
Markings on the panel feed-throughs and connectors specify the cable outlet direction, thus enabling easy positioning.



Reliable protection of the electronics

Integrated seals protect the device electronics, even when connectors are not plugged in.

M12 POWER device connectors, AC applications

Simply enter the web code into the search field on our website: i Web code: #0240									
		2-pos.+PE, S-coded		3-pos.+PE, S-coded		4-pos.+PE, K-coded		5-pos.+PE, M-coded	
		630 V, 16 A		630 V, 12 A		630 V, 16 A		630 V, 8 A	
		Unshielded		Unshielded		Unshielded		Unshielded	
		Male	Female	Male	Female	Male	Female	Male	Female
Front mounting with square flange, contact carrier with litz wires									
	0.5 m			1424129					
	25 mm square flange			1424131					
Front mounting with M16 fastening thread, contact carrier with litz wires									
	0.5 m	1411655	1411654	1424139	1424137				
	XL version, 0.5 m			1411607	1411605				
	XL version AWG 16, 0.2 m					1425635	1425636		
	XL version 2.5 mm², 0.2 m					1415291	1415292	1415300	1415301
	M16 flat nut	1504097	1504097	1504097	1504097	1504097	1504097	1504097	1504097
Rear mounting with M16 fastening thread, contact carrier with litz wires									
	0.5 m	1411653	1411652	1424132	1424133				
	XL version, 0.5 m			1411603	1411598				
	XL version AWG 16, 0.2 m					1425637	1425638		
	XL version 2.5 mm², 0.2 m					1415293	1415294	1415302	1415303
Solder connection, THR contact carrier									
	Blister pack			1406410	1406409				
	Tape-on-reel ¹⁾			1418343	1418344	1420830	1420831	1420832	1420833
	Tray pack ¹⁾					1420819	1420821	1420822	1420823
Housing screw connection for THR contact carriers									
	Front mounting screw fastening, M12	1416145 ³⁾	1416144 ³⁾	1416145 ³⁾	1416144 ³⁾				
	Front mounting screw fastening, M14	1417984 ⁴⁾	1417989 ⁴⁾	1417984 ⁴⁾	1417989 ⁴⁾	1420824 ⁴⁾	1420825 ⁴⁾	1420824 ⁴⁾	1420825 ⁴⁾
	Flat nut M14	1412077	1412077	1412077	1412077	1412077	1412077	1412077	1412077
	Rear mounting screw fastening, M15					1420826 ²⁾	1420827 ²⁾	1420826 ²⁾	1420827 ²⁾
	Front mounting press-in version	1437892 ⁴⁾	1437889 ⁴⁾	1437892 ⁴⁾	1437889 ⁴⁾				

¹⁾ Contact carrier with assembly pad

²⁾ 6 mm clearance between PCB upper edge and housing front plate inner edge

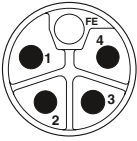
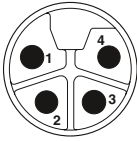
³⁾ 7.5 mm clearance between PCB upper edge and housing front plate outer edge

⁴⁾ 9 mm clearance between PCB upper edge and housing front plate outer edge

⁵⁾ PROFINET-specified

* The T-coding is also available with SMD contact carrier and the L-coding is also available for wave soldering processes.

M12 POWER device connectors, DC applications

											
4-pos., T-coded*				4-pos.+FE, L-coded*				4-pos., L-coded*			
63 V, 12 A				63 V, 16 A				63 V, 16 A			
Unshielded		Shielded		Unshielded		Shielded		Unshielded		Shielded	
Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1424130											
1424131											
1424140	1424138										
1411608	1411606										
				1425627 ⁵⁾	1425628 ⁵⁾			1425631 ⁵⁾	1425632 ⁵⁾		
				1415295 1425582 ⁵⁾	1415296 1425583 ⁵⁾			1425586 ⁵⁾	1425587 ⁵⁾		
1504097	1504097			1504097	1504097			1504097	1504097		
1424136	1424134										
1411604	1411599										
				1425629 ⁵⁾	1425630 ⁵⁾			1425633	1425634		
				1415297 1425584 ⁵⁾	1415299 1425585 ⁵⁾			1425588	1425589		
1406396	1406411	1406397	1406412								
1418339	1418340	1418341	1418342	1420828 1425599 ⁵⁾	1420829 1425600 ⁵⁾	1421317 1425601 ⁵⁾	1421318 1425602 ⁵⁾	1425605 ⁵⁾	1425606 ⁵⁾	1425641 ⁵⁾	1425642 ⁵⁾
				1420817 1425594 ⁵⁾	1420818 1425595 ⁵⁾	1421314 1425597 ⁵⁾	1421315 1425598 ⁵⁾	1425603 ⁵⁾	1425604 ⁵⁾	1425639 ⁵⁾	1425640 ⁵⁾
1416145 ³⁾	1416144 ³⁾	1416145 ³⁾	1416144 ³⁾								
1417984 ⁴⁾	1417989 ⁴⁾	1417984 ⁴⁾	1417989 ⁴⁾	1420824 ⁴⁾	1420825 ⁴⁾	1420824 ⁴⁾	1420825 ⁴⁾	1420824 ⁴⁾	1420825 ⁴⁾	1420824 ⁴⁾	1420825 ⁴⁾
1412077	1412077	1412077	1412077	1412077	1412077	1412077	1412077	1412077	1412077	1412077	1412077
				1420826 ²⁾	1420827 ²⁾	1420826 ²⁾	1420827 ²⁾	1420826 ²⁾	1420827 ²⁾	1420826 ²⁾	1420827 ²⁾
1437892 ⁴⁾	1437889 ⁴⁾	1437892 ⁴⁾	1437889 ⁴⁾								

M12 POWER distributors

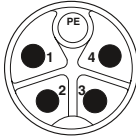
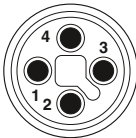
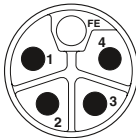
High power bundling and distribution

With M12 POWER distributor boxes as well as H and Y distributors, you can cable a large range of loads quickly and clearly. With just one supply cable, you can lead power up to your loads. Save costs through the distribution and bundling of power. Reliable shielding provides secure protection against electromagnetic interference.

Your advantages

- ✓ Powerful: DC and AC applications up to 16 A and 630 V
- ✓ Safely shielded: Reliable 360° shield connection
- ✓ Secure fixing with two mounting holes
- ✓ M12 connectors can be mounted after securing the distributor

M12 POWER distributors

AC applications			
Simply enter the web code into the search field on our website: i Web code: #0024			
	3-pos.+PE, S-coded	4-pos.+PE, K-coded	
	630 V, 12 A	630 V, 16 A	
H distributor, shielded, 1 x male to 3 x female			
	1080242	1080246	
Y distributor, shielded, 1 x male to 2 x female			
	1080243	1080247	
DC applications			
Simply enter the web code into the search field on our website: i Web code: #0024			
	4-pos., T-coded	4-pos.+FE, L-coded	
	63 V, 12 A	63 V, 16 A	
H distributor, shielded, 1 x male to 3 x female			
	1080244	1080248	
Y distributor, shielded, 1 x male to 2 x female			
	1080245	1080249	
Y distributor, unshielded, 1 x male to 2 x female			
	1410632		
Distributor box, unshielded			
	With diagnostics port	1411048	Rated voltage: 24 V DC Rated current per I/O signal: 10 A Rated current per slot: 2 x 9.25 A
	Without diagnostics port	1413929	

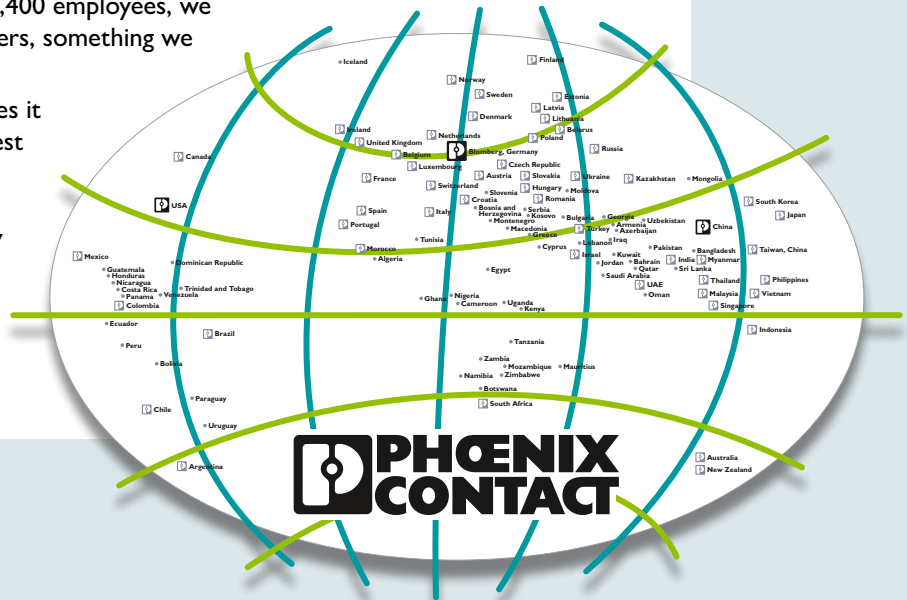
Corresponding accessories and tools are to be found on the respective product page at phoenixcontact.com

Open communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. We are known for producing future-oriented components, systems, and solutions in the fields of electrical engineering, electronics, and automation. With a global network reaching across more than 100 countries with over 17,400 employees, we maintain close relationships with our customers, something we believe is essential for success.

Our wide variety of innovative products makes it easy for our customers to implement the latest technology in a variety of applications and industries. We focus on developing the fields of energy, infrastructure, process, and factory automation.

You will find our complete product range at:
phoenixcontact.com



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