

# Amphenol

Amphenol-Tuchel Electronics GmbH

## C 112 Series

M12 - Connectors



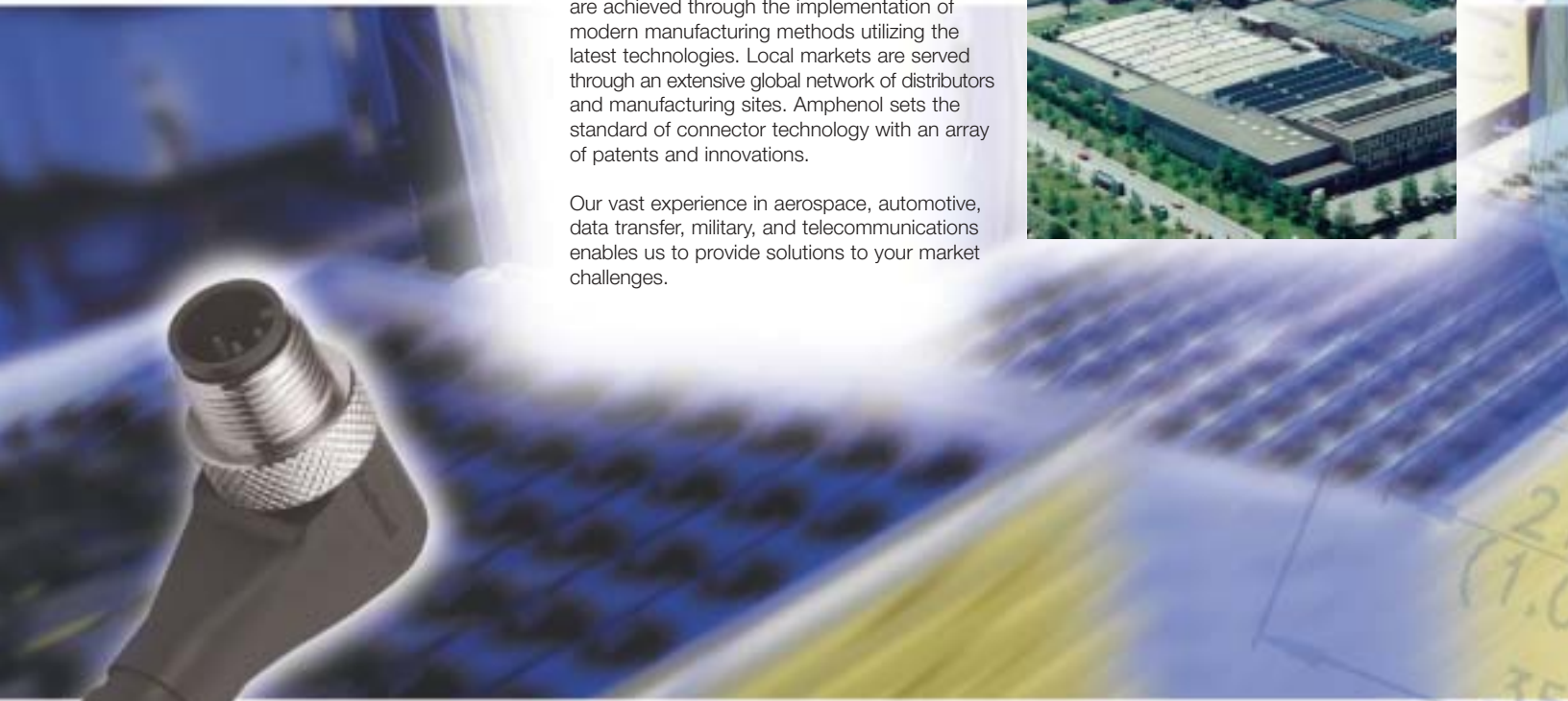
# We connect com

## The company

Amphenol-Tuchel Electronics is a worldwide leader in electrical connectors and contacting devices.

Our line of high quality, peak performance products are achieved through the implementation of modern manufacturing methods utilizing the latest technologies. Local markets are served through an extensive global network of distributors and manufacturing sites. Amphenol sets the standard of connector technology with an array of patents and innovations.

Our vast experience in aerospace, automotive, data transfer, military, and telecommunications enables us to provide solutions to your market challenges.



## System Description

The M-12 connectors from Amphenol's Series C112M feature a compact and functional design, excellent vibration resistance, IP 65 / 67 protection class and sound mechanical and electrical properties.

For applications in electro-magnetic sensitive areas, shielded versions are available. To provide a secure 360 degree shielding, the insert of the connector is covered by a metallic enclosure. This metallic enclosure is connected to the locking ring and to the braid of the shielded cable. If the other end of the cable's braid is connected just as thoroughly to the ground, the shielding effectiveness is equivalent to that of double shielded cables.

Series C112 connectors are utilised in a wide range of applications, ranging from sensor connections to automation systems and all areas of test measurement and control. M-12 connectors are used to carry electrical signals and power supply as well.



# Continents



## Standards

Our connectors meet these standards: IEC 61076-2-101, interfaces according to (IEC 60947-5-2) and proximity switches (VDE 0660 part 208).



## EMI

Shielded M12 Connectors meet the European EMI regulations (EMI-guideline: 89/336 EWG) when correctly assembled in the appliance.

## Application

Connectors with and without breaking capacity must be used solely in accordance with the corresponding rated data, published in the manufacturer's data sheets. It should be noted, that this rated data may frequently be data which has been determined under specific application conditions. Accordingly, it may vary based upon the duration of use and application criteria. Connector series C112M has been developed for application in machine building, test-measurement and control applications and sensor technology. The application of the connector in

these or any other possible areas of application remains the sole responsibility of the user. In particular, the standards applicable to the intended end product, especially those concerning the rated voltage and corresponding insulation and creepage distances have to be observed. All rated data and in particular rated voltages in this catalogue are based upon over-voltage category III and pollution degree 2/3. In addition, complete mating and locking are mandatory for the safe use of connectors.



## Assembly and Operation

The metal housing and all metal parts that may assume voltage potential in case of a failure, must be safely connected to the protective earth system of the device where they are installed.

Furthermore, the connectors must be assembled in accordance with the manufacturer's recommendations. All threaded connections must be fastened utilizing the specified torques.

## Connection

Cables of manually assembled connectors must always be secured by a sufficient strain relief, utilizing for example the internal cable clamp system where available. If an internal cable clamp system is not available, other external means of strain relief must be used.

During storage and operation, the cable should be protected against mechanical and chemical abuse.

Cables for use under excessive vibrations are available upon request.

And finally: the proper connection of the lead wires to the connector's contacts is a further basic requirement for the trouble free use of connectors.

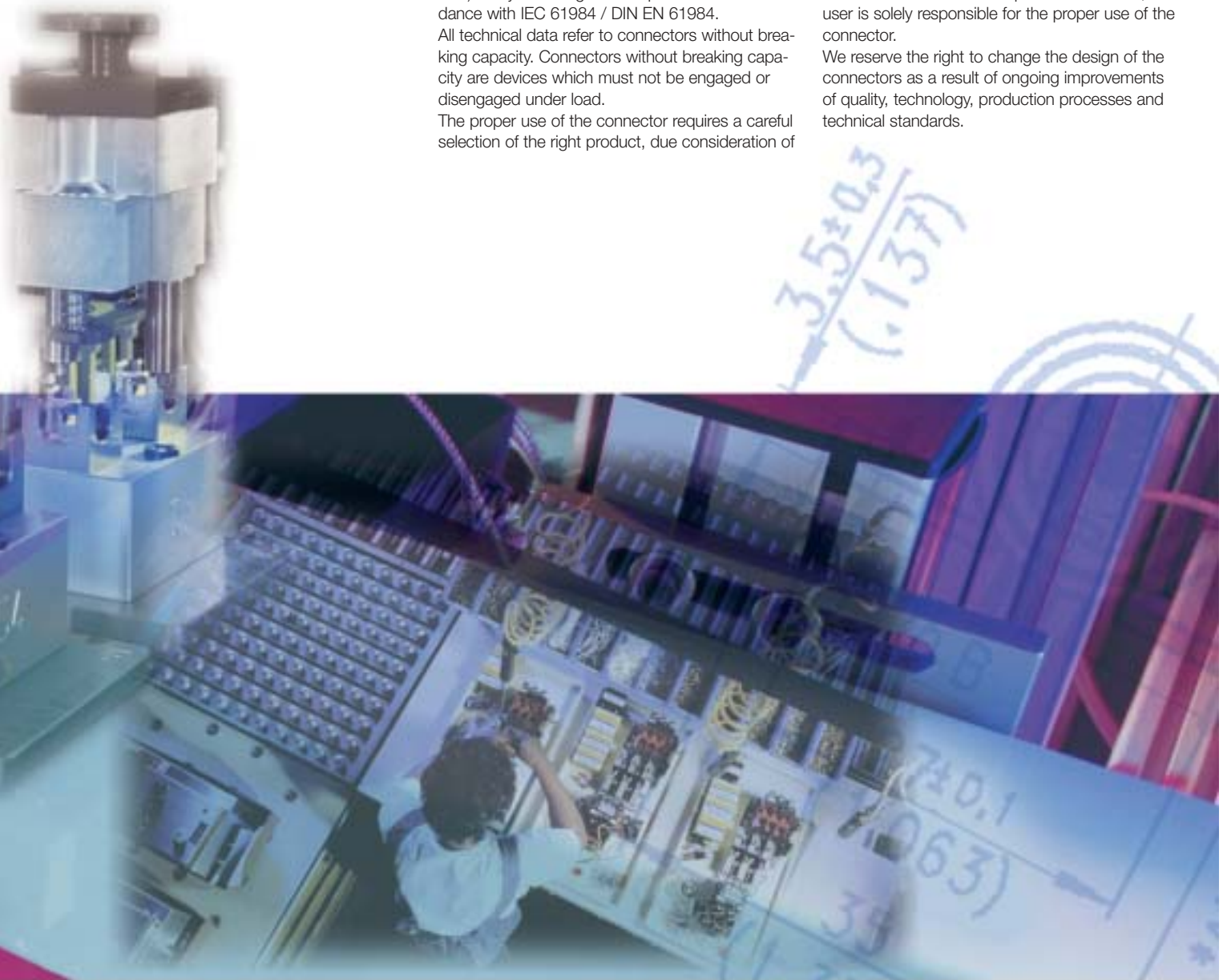


# General Information

The C112M series connectors meet the requirements of the "Low Voltage Directive" 72 / 23 / EWG and the Gerätesicherheitsgesetz (German Law). They are designed and produced in accordance with IEC 61984 / DIN EN 61984. All technical data refer to connectors without breaking capacity. Connectors without breaking capacity are devices which must not be engaged or disengaged under load. The proper use of the connector requires a careful selection of the right product, due consideration of

all technical, application and ambient conditions and correct installation. The technical data in this catalogue is intended to give the user suitable assistance in this selection process. However, the user is solely responsible for the proper use of the connector.


We reserve the right to change the design of the connectors as a result of ongoing improvements of quality, technology, production processes and technical standards.





## Safety classification according to DIN VDE 0627 and IEC 61984


	Fixed connector	Free connector	Non rewirable	Rewirable	Termination type	Existence of enclosure	Existence of protective contact
Male cable connector overmolded		x	x		crimp overmolded	x	
Male panel connector with connection leads	x		x		crimp		
Male panel connector pcb-mount type	x			x	dip solder		
Female cable connector overmolded		x	x		crimp overmolded	x	
Female panel connector with connection leads	x		x		crimp		
Female panel connector pcb-mount type	x			x	dip solder		
Male cable connector for customer assembly		x		x	screw	x	
Female cable connector for customer assembly		x		x	screw	x	
Female cable connector 3+PE		x		x	screw	x	x
Y distributor		x	x		crimp/solder overmolded		


# Content

	<b>Male cable connectors / Female cable connectors, overmolded</b>	
	Male cable connector, straight	Page 10
	Male cable connector, right angled	Page 10
	Female cable connector, straight	Page 11
	Female cable connector, right angled	Page 11
	Male cable connector, straight, shielded	Page 12
	Male cable connector, right angled, shielded	Page 12
	Female cable connector, straight, shielded	Page 13
	Female cable connector, right angled, shielded	Page 13

	<b>Male cable connectors / Female cable connectors, customer assembly</b>	
	Male cable connector, straight and right angled	Page 16
	Female cable connector, straight and right angled	Page 16
	Male cable connector, straight, shielded	Page 17
	Female cable connector, straight, shielded	Page 17
	Female cable connector, right angled, non-standard special	Page 17

	<b>Cordsets, overmolded</b>	
	Male connector, straight / Female connector, straight	Page 22
	Male connector, straight / Female connector, right angled	Page 22
	<b>Cordsets, shielded, overmolded</b>	
	Male connector, straight / Female connector, straight	Page 23
	Male connector, straight / Female connector, right angled	Page 23

	<b>Male and female panel connectors</b>	
	Male panel connector, front mounting	Page 27
	Female panel connector, front mounting	Page 27
	Male panel connector, rear mounting	Page 28
	Female panel connector, rear mounting	Page 28
	Male panel connector, rear mounting, pcb-mount type	Page 29
	Female panel connector, rear mounting, pcb-mount type	Page 29
	Male panel connector, non-standard special	Page 29

	<b>Splitters</b>	
	Y-Splitter	Page 33

# Male/Female Cable Connectors overmolded

## C112 series



Male cable connector, straight, unshielded  
anti-vibration coupling nut and overmolded cable ... Page 10

Male cable connector, straight, shielded  
anti-vibration coupling nut and overmolded cable ... Page 12



Male cable connector, right angled, unshielded  
anti-vibration coupling nut and overmolded cable ... Page 10

Male cable connector, right angled, shielded  
anti-vibration coupling nut and overmolded cable ... Page 12



Female cable connector, straight, unshielded  
anti-vibration coupling nut and overmolded cable ... Page 11

Female cable connector, straight, shielded  
anti-vibration coupling nut and overmolded cable ... Page 13



Female cable connector, right angled, unshielded  
anti-vibration coupling nut and overmolded cable ... Page 11

Female cable connector, right angled, shielded  
anti-vibration coupling nut and overmolded cable ... Page 13

### Description

Cables with male or female M12 connectors,  
straight or angled, cable jacket PVC or PUR.

Shielded cables with male or female M12  
connectors, straight or angled, cable jacket  
PVC or PUR.



General characteristics	Standard	Standard Version	Shielded
Number of contacts	IEC 61076-2-101	3 / 4 / 5 <sup>3)</sup>	3 / 4 / 5 <sup>3)</sup>

#### Electrical characteristics

Contact resistance	IEC 60512-2-1 test 2a	≤ 10 mΩ (without cable)	
Current carrying capacity	IEC 60512-5-2 test 5b	4 A at T <sub>U</sub> = 40°C	
Rated voltage	IEC 60664-1 <sup>2)</sup>	3+4 cont. 250 V AC/DC	60 V AC/DC
		5 cont. 60 V AC/DC	
Rated impulse voltage	IEC 60664-1 <sup>2)</sup>	3+4 cont. 2,5 kV	1,5 kV
		5 cont. 1,5 kV	
Insulation resistance	IEC 60512-3-1 test 3a	> 10 <sup>8</sup> Ω	
Pollution degree	IEC 60664-1 <sup>2)</sup>	3 <sup>1)</sup>	
Material group	IEC 60664-1 <sup>2)</sup>	I	
Test voltage	IEC 60664-1 <sup>2)</sup>	3 + 4 cont. 1,4 kV AC	1,0 kV AC
		5 cont. 1,0 kV AC	

#### Climatic characteristics

Climatic category	IEC 60068-1	25 / 85 / 21	
Temperature range	IEC 60512-11-9 test 11i	-25°C - +85°C	
	IEC 60512-11-10 test 11j	-13°F - +185°F	

#### Materials

Contact insert		TPU
Contact plating		Au
Overmolding		TPU
Housing		-
Knurled screw / knurled nut		CuZn nickel plated
O-Ring		Viton

#### Mechanical characteristics

Protection class	IEC 60529	IP 65 and IP 67 when properly mated
Mechanical operation	IEC 60512-9-1 test 9a	≥ 100 mating cycles
Insertion force	IEC 60512-13-2 test 13b	≤ 25 N
Withdrawal force	IEC 60512-13-2 test 13b	≤ 30 N

#### Other technical characteristics

Type of termination		crimp (overmolded)
Wire size		0,34 mm <sup>2</sup> (AWG 22)
Flammability		UL 94 HB
Locking		Screw coupling

<sup>1)</sup> In mated position only

<sup>2)</sup> IEC 60664-1 corresponds to DIN VDE 0110

<sup>3)</sup> Contact No. 5 is a "first make – last brake contact" (1 mm in relation to the other contacts) and may be used for grounding purposes.

When used for grounding purposes, the user must mark the lead wire accordingly and must ensure that the connector is not mated with other connectors where contact no. 5 may assume voltage potential.



### Cable construction PVC

- Partly oil and chemical proof
- Especially suited for dry areas

	Color code	Conductors	Cable jacket	
			Ø mm	material
Cable 01	Brown, blue, black	3 x 0,34 mm <sup>2</sup> (AWG 22)	5	PVC
Cable 02	Brown, white, blue, black	4 x 0,34 mm <sup>2</sup> (AWG 22)	5	PVC
Cable 03	Brown, white, blue, black, grey	5 x 0,34 mm <sup>2</sup> (AWG 22)	5	PVC
Cable 07	Brown, blue, black	3 x 0,34 mm <sup>2</sup> (AWG 22)	5	PVC shielded
Cable 08	Brown, white, blue, black	4 x 0,34 mm <sup>2</sup> (AWG 22)	5	PVC shielded
Cable 09	Brown, white, blue, black, grey	5 x 0,34 mm <sup>2</sup> (AWG 22)	5	PVC shielded

### Cable construction PUR

- Very good oil and chemical resistance
- Especially suitable for applications in the machine and installation area with rough environments

	Color code	Conductors	Cable jacket	
			Ø mm	material
Cable 04	Brown, blue, black	3 x 0,34 mm <sup>2</sup> (AWG 22)	5	PUR
Cable 05	Brown, white, blue, black	4 x 0,34 mm <sup>2</sup> (AWG 22)	5	PUR
Cable 06	Brown, white, blue, black, grey	5 x 0,34 mm <sup>2</sup> (AWG 22)	5	PUR
Cable 10	Brown, blue, black	3 x 0,34 mm <sup>2</sup> (AWG 22)	5	PUR shielded
Cable 11	Brown, white, blue, black	4 x 0,34 mm <sup>2</sup> (AWG 22)	5	PUR shielded
Cable 12	Brown, white, blue, black, grey	5 x 0,34 mm <sup>2</sup> (AWG 22)	5	PUR shielded

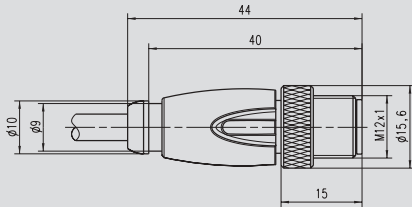
### Ordering example for different cable lengths

<p>C 112    10A    013    <b>020</b>    10</p> <p style="margin-left: 100px;">             2.0 m        020              5.0 m        050              10.0 m       100           </p> <p style="margin-left: 150px;">} cable length</p>
--

Standard cable lengths: 2 m and 5 m.  
 Non-standard cable lengths upon request. Minimum order quantities will apply.



**Male cable connector, straight, unshielded**  
with anti-vibration coupling nut and overmolded cable  
A-coded



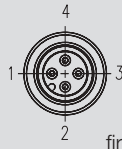
Contacts	Cable		Order No.
	jacket	length	
3	PVC	2 m	<b>C112 10A013 020 10</b>
		5 m	<b>C112 10A013 050 10</b>
		10 m	<b>C112 10A013 100 10</b>
	PUR	2 m	<b>C112 10A043 020 10</b>
		5 m	<b>C112 10A043 050 10</b>
		10 m	<b>C112 10A043 100 10</b>
4	PVC	2 m	<b>C112 10A024 020 10</b>
		5 m	<b>C112 10A024 050 10</b>
		10 m	<b>C112 10A024 100 10</b>
	PUR	2 m	<b>C112 10A054 020 10</b>
		5 m	<b>C112 10A054 050 10</b>
		10 m	<b>C112 10A054 100 10</b>
5	PVC	2 m	<b>C112 10A035 020 10</b>
		5 m	<b>C112 10A035 050 10</b>
		10 m	<b>C112 10A035 100 10</b>
	PUR	2 m	<b>C112 10A065 020 10</b>
		5 m	<b>C112 10A065 050 10</b>
		10 m	<b>C112 10A065 100 10</b>

Other cable lengths, cables and codings upon request.

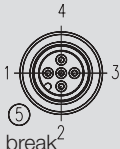
3 contacts



4 contacts



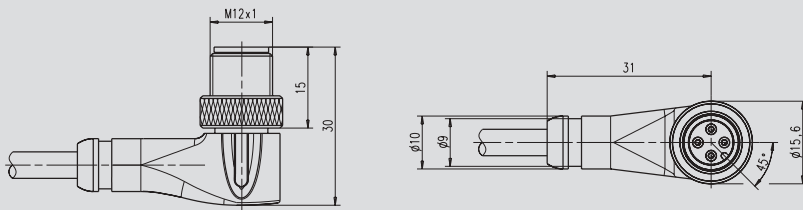
5 contacts



first make – last break



**Male cable connector, right angled, unshielded**  
with anti-vibration coupling nut and overmolded cable  
A-coded



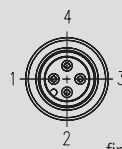
Contacts	Cable		Order No.
	jacket	length	
3	PVC	2 m	<b>C112 10B013 020 10</b>
		5 m	<b>C112 10B013 050 10</b>
		10 m	<b>C112 10B013 100 10</b>
	PUR	2 m	<b>C112 10B043 020 10</b>
		5 m	<b>C112 10B043 050 10</b>
		10 m	<b>C112 10B043 100 10</b>
4	PVC	2 m	<b>C112 10B024 020 10</b>
		5 m	<b>C112 10B024 050 10</b>
		10 m	<b>C112 10B024 100 10</b>
	PUR	2 m	<b>C112 10B054 020 10</b>
		5 m	<b>C112 10B054 050 10</b>
		10 m	<b>C112 10B054 100 10</b>
5	PVC	2 m	<b>C112 10B035 020 10</b>
		5 m	<b>C112 10B035 050 10</b>
		10 m	<b>C112 10B035 100 10</b>
	PUR	2 m	<b>C112 10B065 020 10</b>
		5 m	<b>C112 10B065 050 10</b>
		10 m	<b>C112 10B065 100 10</b>

Other cable lengths, cables and codings upon request.

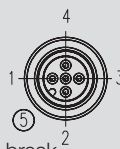
3 contacts



4 contacts



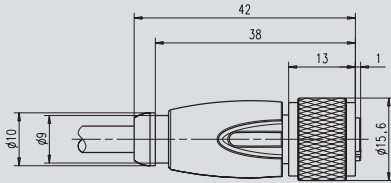
5 contacts



first make – last break



**Female cable connector, straight, unshielded**  
with anti-vibration coupling nut and overmolded cable  
A-coded



Contacts	Cable		Order No.
	jacket	length	
3	PVC	2 m	<b>C112 10C013 020 10</b>
		5 m	<b>C112 10C013 050 10</b>
		10 m	<b>C112 10C013 100 10</b>
	PUR	2 m	<b>C112 10C043 020 10</b>
		5 m	<b>C112 10C043 050 10</b>
		10 m	<b>C112 10C043 100 10</b>
4	PVC	2 m	<b>C112 10C024 020 10</b>
		5 m	<b>C112 10C024 050 10</b>
		10 m	<b>C112 10C024 100 10</b>
	PUR	2 m	<b>C112 10C054 020 10</b>
		5 m	<b>C112 10C054 050 10</b>
		10 m	<b>C112 10C054 100 10</b>
5	PVC	2 m	<b>C112 10C035 020 10</b>
		5 m	<b>C112 10C035 050 10</b>
		10 m	<b>C112 10C035 100 10</b>
	PUR	2 m	<b>C112 10C065 020 10</b>
		5 m	<b>C112 10C065 050 10</b>
		10 m	<b>C112 10C065 100 10</b>

Other cable lengths, cables and codings upon request.

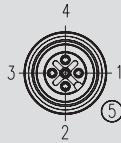
3 contacts



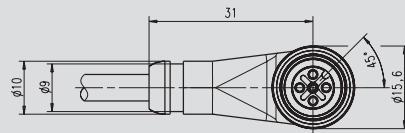
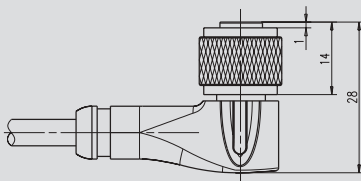
4 contacts



5 contacts



**Female cable connector, right angled, unshielded**  
with anti-vibration coupling nut and overmolded cable  
A-coded



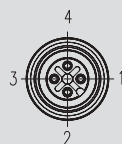
Contacts	Cable		Order No.
	jacket	length	
3	PVC	2 m	<b>C112 10D013 020 10</b>
		5 m	<b>C112 10D013 050 10</b>
		10 m	<b>C112 10D013 100 10</b>
	PUR	2 m	<b>C112 10D043 020 10</b>
		5 m	<b>C112 10D043 050 10</b>
		10 m	<b>C112 10D043 100 10</b>
4	PVC	2 m	<b>C112 10D024 020 10</b>
		5 m	<b>C112 10D024 050 10</b>
		10 m	<b>C112 10D024 100 10</b>
	PUR	2 m	<b>C112 10D054 020 10</b>
		5 m	<b>C112 10D054 050 10</b>
		10 m	<b>C112 10D054 100 10</b>
5	PVC	2 m	<b>C112 10D035 020 10</b>
		5 m	<b>C112 10D035 050 10</b>
		10 m	<b>C112 10D035 100 10</b>
	PUR	2 m	<b>C112 10D065 020 10</b>
		5 m	<b>C112 10D065 050 10</b>
		10 m	<b>C112 10D065 100 10</b>

Other cable lengths, cables and codings upon request.

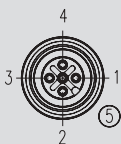
3 contacts



4 contacts



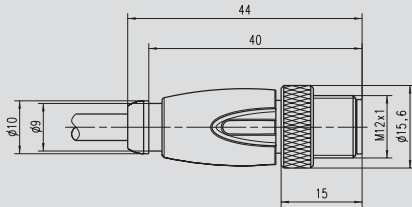
5 contacts







**Male cable connector, straight, shielded**  
with anti-vibration coupling nut and overmolded cable  
A-coded



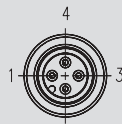
Contacts	Cable		Order No.
	jacket	length	
3	PVC	2 m	<b>C112 11A073 020 10</b>
		5 m	<b>C112 11A073 050 10</b>
		10 m	<b>C112 11A073 100 10</b>
	PUR	2 m	<b>C112 11A103 020 10</b>
		5 m	<b>C112 11A103 050 10</b>
		10 m	<b>C112 11A103 100 10</b>
4	PVC	2 m	<b>C112 11A084 020 10</b>
		5 m	<b>C112 11A084 050 10</b>
		10 m	<b>C112 11A084 100 10</b>
	PUR	2 m	<b>C112 11A114 020 10</b>
		5 m	<b>C112 11A114 050 10</b>
		10 m	<b>C112 11A114 100 10</b>
5	PVC	2 m	<b>C112 11A095 020 10</b>
		5 m	<b>C112 11A095 050 10</b>
		10 m	<b>C112 11A095 100 10</b>
	PUR	2 m	<b>C112 11A125 020 10</b>
		5 m	<b>C112 11A125 050 10</b>
		10 m	<b>C112 11A125 100 10</b>

Other cable lengths, cables and codings upon request.

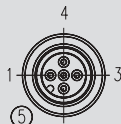
3 contacts



4 contacts



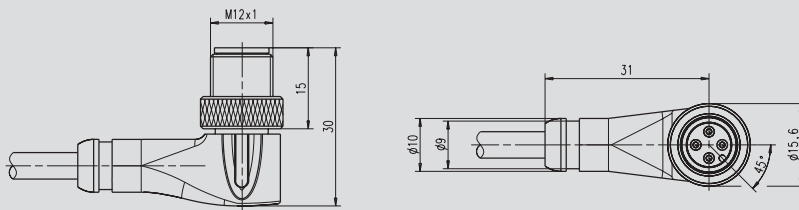
5 contacts



first make – last break



**Male cable connector, right angled, shielded**  
with anti-vibration coupling nut and overmolded cable  
A-coded



Contacts	Cable		Order No.
	jacket	length	
3	PVC	2 m	<b>C112 11B073 020 10</b>
		5 m	<b>C112 11B073 050 10</b>
		10 m	<b>C112 11B073 100 10</b>
	PUR	2 m	<b>C112 11B103 020 10</b>
		5 m	<b>C112 11B103 050 10</b>
		10 m	<b>C112 11B103 100 10</b>
4	PVC	2 m	<b>C112 11B084 020 10</b>
		5 m	<b>C112 11B084 050 10</b>
		10 m	<b>C112 11B084 100 10</b>
	PUR	2 m	<b>C112 11B114 020 10</b>
		5 m	<b>C112 11B114 050 10</b>
		10 m	<b>C112 11B114 100 10</b>
5	PVC	2 m	<b>C112 11B095 020 10</b>
		5 m	<b>C112 11B095 050 10</b>
		10 m	<b>C112 11B095 100 10</b>
	PUR	2 m	<b>C112 11B125 020 10</b>
		5 m	<b>C112 11B125 050 10</b>
		10 m	<b>C112 11B125 100 10</b>

Other cable lengths, cables and codings upon request.

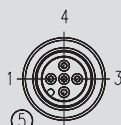
3 contacts



4 contacts



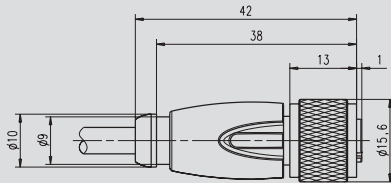
5 contacts



first make – last break



**Female cable connector, straight, shielded**  
with anti-vibration coupling nut and overmolded cable  
A-coded



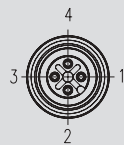
Contacts	Cable		Order No.
	jacket	length	
3	PVC	2 m	<b>C112 11C073 020 10</b>
		5 m	<b>C112 11C073 050 10</b>
		10 m	<b>C112 11C073 100 10</b>
	PUR	2 m	<b>C112 11C103 020 10</b>
		5 m	<b>C112 11C103 050 10</b>
		10 m	<b>C112 11C103 100 10</b>
4	PVC	2 m	<b>C112 11C084 020 10</b>
		5 m	<b>C112 11C084 050 10</b>
		10 m	<b>C112 11C084 100 10</b>
	PUR	2 m	<b>C112 11C114 020 10</b>
		5 m	<b>C112 11C114 050 10</b>
		10 m	<b>C112 11C114 100 10</b>
5	PVC	2 m	<b>C112 11C095 020 10</b>
		5 m	<b>C112 11C095 050 10</b>
		10 m	<b>C112 11C095 100 10</b>
	PUR	2 m	<b>C112 11C125 020 10</b>
		5 m	<b>C112 11C125 050 10</b>
		10 m	<b>C112 11C125 100 10</b>

Other cable lengths, cables and codings upon request.

3 contacts



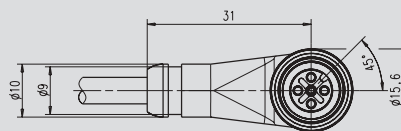
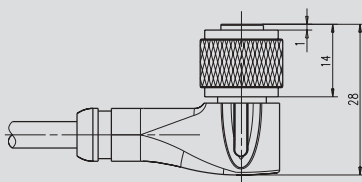
4 contacts



5 contacts



**Female cable connector, right angled, shielded**  
with anti-vibration coupling nut and overmolded cable  
A-coded



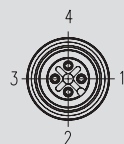
Contacts	Cable		Order No.
	jacket	length	
3	PVC	2 m	<b>C112 11D073 020 10</b>
		5 m	<b>C112 11D073 050 10</b>
		10 m	<b>C112 11D073 100 10</b>
	PUR	2 m	<b>C112 11D103 020 10</b>
		5 m	<b>C112 11D103 050 10</b>
		10 m	<b>C112 11D103 100 10</b>
4	PVC	2 m	<b>C112 11D084 020 10</b>
		5 m	<b>C112 11D084 050 10</b>
		10 m	<b>C112 11D084 100 10</b>
	PUR	2 m	<b>C112 11D114 020 10</b>
		5 m	<b>C112 11D114 050 10</b>
		10 m	<b>C112 11D114 100 10</b>
5	PVC	2 m	<b>C112 11D095 020 10</b>
		5 m	<b>C112 11D095 050 10</b>
		10 m	<b>C112 11D095 100 10</b>
	PUR	2 m	<b>C112 11D125 020 10</b>
		5 m	<b>C112 11D125 050 10</b>
		10 m	<b>C112 11D125 100 10</b>

Other cable lengths, cables and codings upon request.

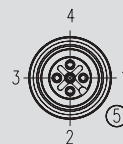
3 contacts

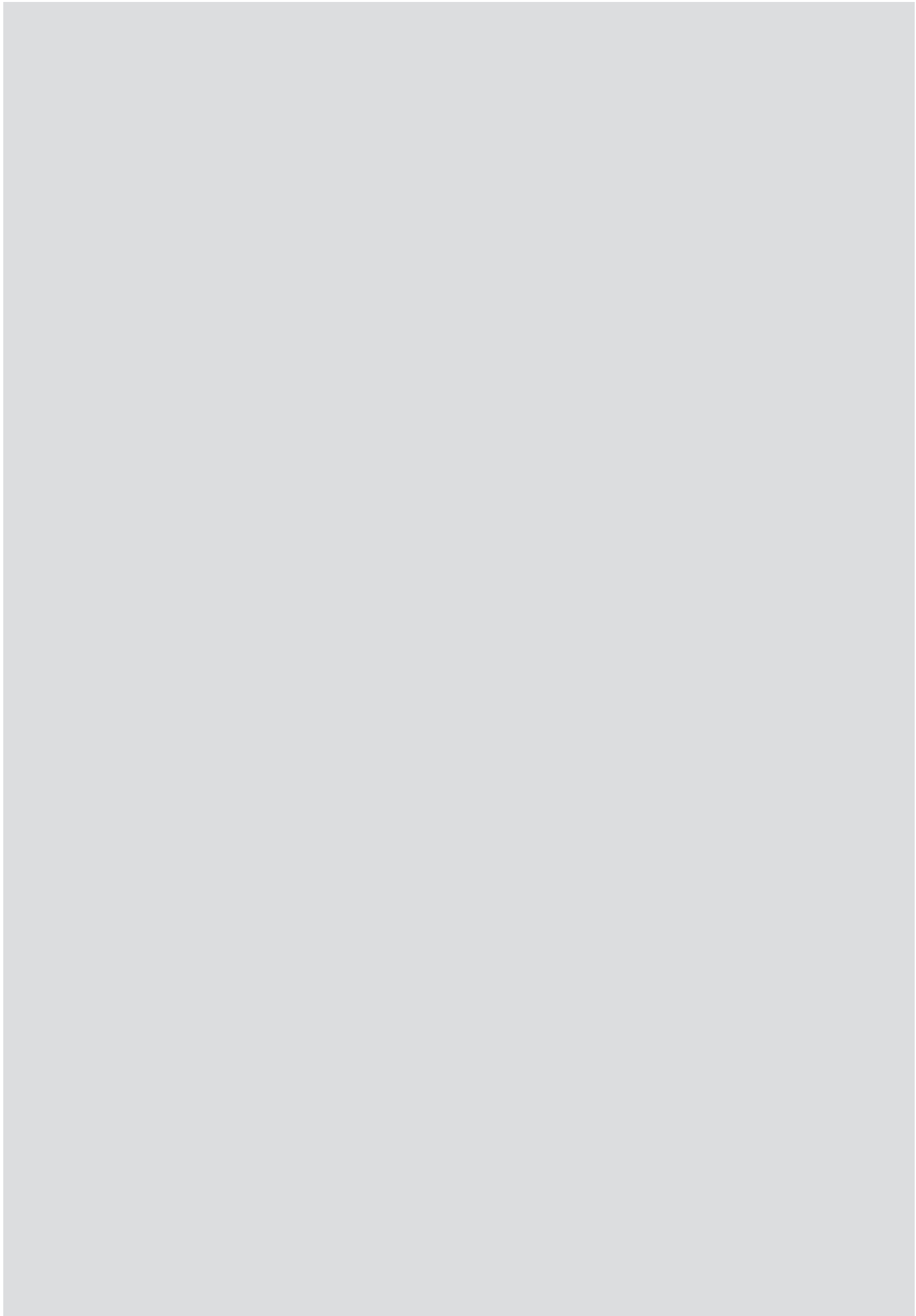


4 contacts



5 contacts







# Male cable connectors / Female cable connectors customer assembly

## C112 Series



Male cable connector, unshielded, straight and right angled, for customer assembly... Page 16



Female cable connector, unshielded, straight and right angled, for customer assembly... Page 16



Male cable connector and Female cable connector, shielded, for customer assembly... Page 17



Female cable connector, unshielded, right angled, non-standard special, 3/3+PE, with and without electronic circuit, for customer assembly... Page 17

### Description

Male and female cable connectors, straight and right angled for customer assembly.

Female cable connectors, right angled, 3/3+PE, for customer assembly, with and without electronic circuit.

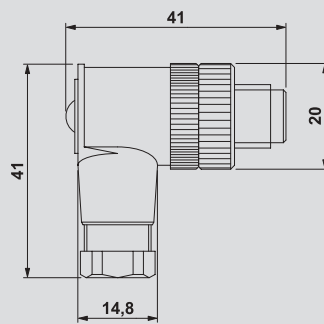
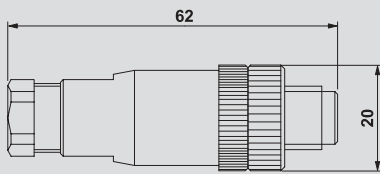




**Male cable connectors, unshielded**  
**Metal locking nut**  
 for customer assembly, A-coded

**Screw connection**  
 4 Ampere  
 wire size  
 0,25 - 0,75 mm<sup>2</sup> (AWG 24-18)  
 cable diameter  
 4 - 6 mm

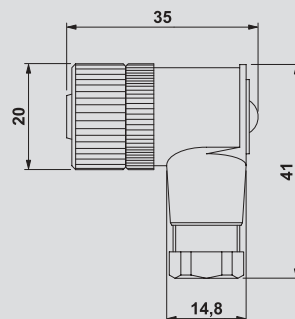
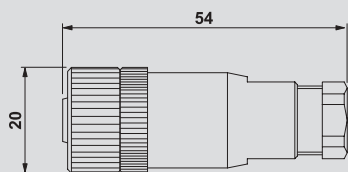
Contacts	Voltage	Design	Order No.
4	250 V	straight	<b>C112 13A004 000 24</b>
		right angled	<b>C112 13B004 000 24</b>
5	60 V	straight	<b>C112 13A005 000 24</b>
		right angled	<b>C112 13B005 000 24</b>

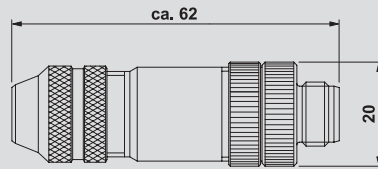


**Female cable connectors, unshielded**  
**Metal locking nut**  
 for customer assembly, A-coded

**Screw connection**  
 4 Ampere  
 wire size  
 0,25 - 0,75 mm<sup>2</sup> (AWG 24-18)  
 cable diameter  
 4 - 6 mm

Contacts	Voltage	Design	Order No.
4	250 V	straight	<b>C112 13C004 000 24</b>
		right angled	<b>C112 13D004 000 24</b>
5	60 V	straight	<b>C112 13C005 000 24</b>
		right angled	<b>C112 13D005 000 24</b>





**Male cable connectors, shielded, straight**

for customer assembly, A-coded

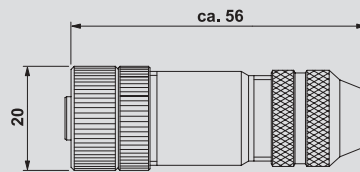
**Screw connection**

4 Ampere

wire size 0,25-0,75 mm<sup>2</sup> (AWG 24-18)

cable diameter 4-6 mm

Contacts	Voltage	Order No.
4	250 V	<b>C112 14A004 000 24</b>
5	60 V	<b>C112 14A005 000 24</b>



**Female cable connector, shielded, straight**

for customer assembly, A-coded

**Screw connection**

4 Ampere

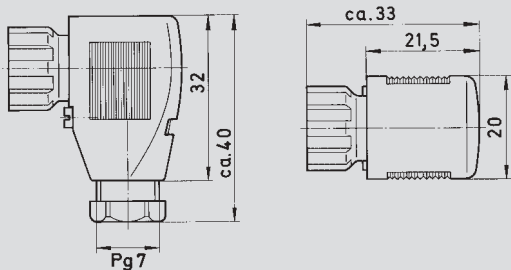
wire size 0,25-0,75 mm<sup>2</sup> (AWG 24-18)

cable diameter 4-6 mm

Contacts	Voltage	Order No.
4	250 V	<b>C112 14C004 000 24</b>
5	60 V	<b>C112 14C005 000 24</b>



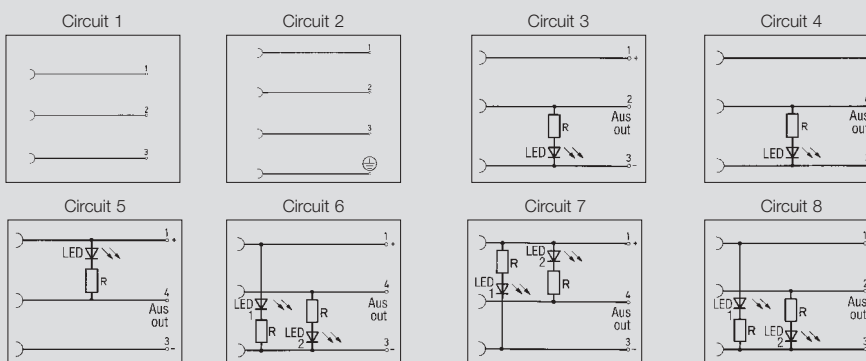
**Female cable connector, unshielded, right angled, non-standard special<sup>1)</sup>**  
customer assembly



Contacts	LED 1	LED 2	Circuit	Order No.
3	-	-	1	<b>C112 13D004 000 01</b>
3+PE	-	-	2	<b>C112 13D004 000 02</b>
3	yel.	-	3	<b>C112 13D004 000 03</b>
		-	4	<b>C112 13D004 000 04</b>
		-	5	<b>C112 13D004 000 05</b>
	gre.	yel.	6	<b>C112 13D004 000 06</b>
		-	7	<b>C112 13D004 000 07</b>
		-	8	<b>C112 13D004 000 08</b>

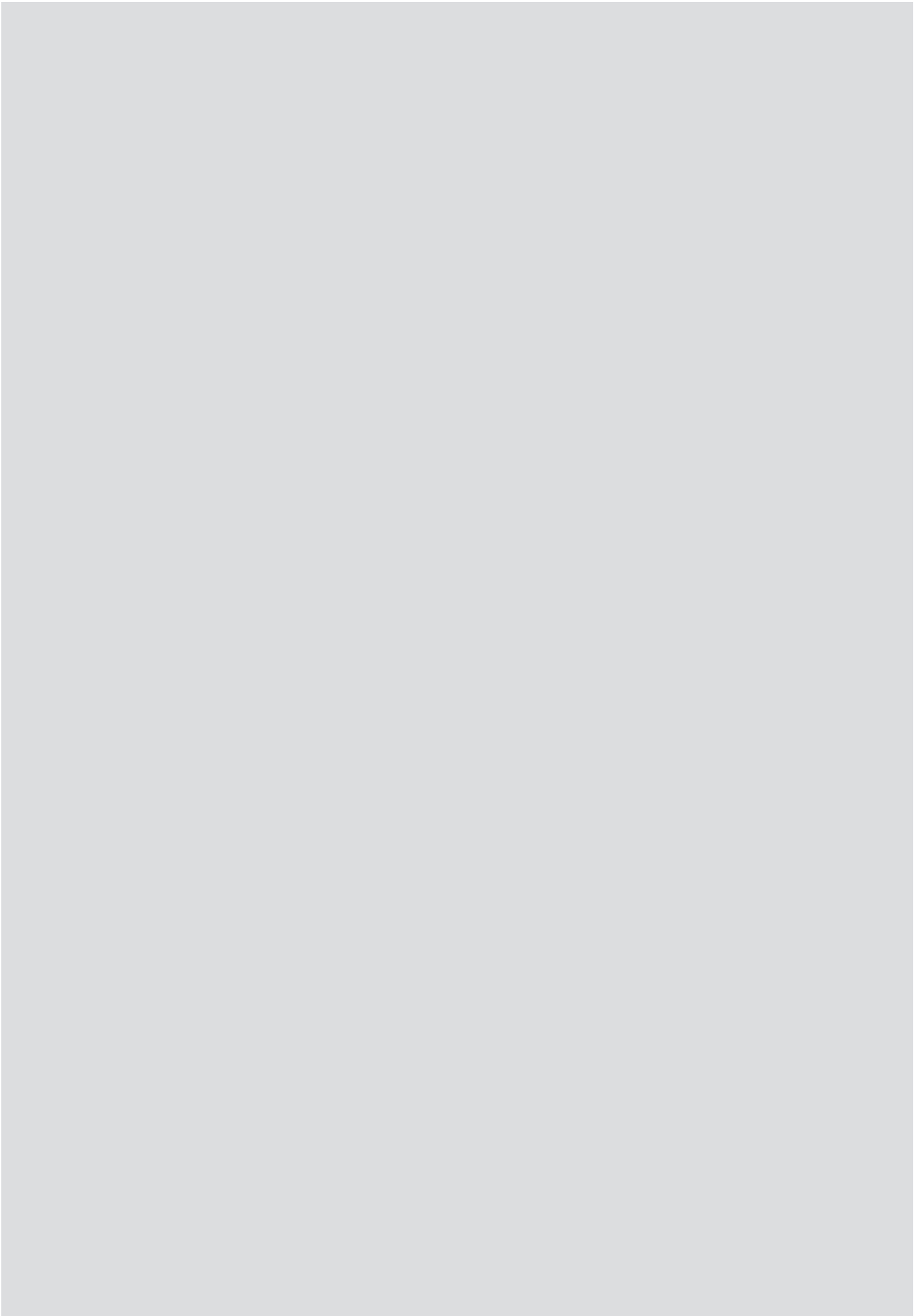
	with LED	without LED
Current at T <sub>u</sub> = 40°C	3,5 A	7 A
Rated voltage	36 V	250 V
Pollution degree	3	3
IP-class (when mated)	65	65
Wire connection	screw	
Wire sizes	0,14-0,5 mm <sup>2</sup> (AWG 24-20)	
Flammability	UL 94 V-0	

Wiring scheme



<sup>1)</sup> derating from IEC 61076-2-101





# Cordsets overmolded

## C 112 Series



Cordset, unshielded  
Male connector, straight/Female connector, straight  
overmolded with anti-vibration coupling nut ... Page 22



Cordset, unshielded  
Male connector, straight/Female connector, right angled  
overmolded with anti-vibration coupling nut ... Page 22



Cordset, shielded  
Male connector, straight/Female connector, straight  
overmolded with anti-vibration coupling nut ... Page 23



Cordset, shielded  
Male connector, straight/Female connector, right angled  
overmolded with anti-vibration coupling nut ... Page 23

### Description

M12 cordset with male and female connector, straight or right angled and standard cable with PVC or PUR insulation.  
Other combinations on request.

Shielded M12 cordsets with male and female connector, straight or right angled, and standard cable with PVC or PUR insulation.  
Other combinations on request.



General characteristics	Standard	Standard Version	Shielded
Number of contacts	IEC 61076-2-101	3 / 4 / 5 <sup>3)</sup>	3 / 4 / 5 <sup>3)</sup>

#### Electrical characteristics

Contact resistance	IEC 60512-2-1 test 2a	≤ 10 mΩ (without cable)	
Current carrying capacity	IEC 60512-5-2 test 5b	4 A at T <sub>U</sub> = 40°C	
Rated voltage	IEC 60664-1 <sup>2)</sup>	3+4 cont. 250 V AC/DC	60 V AC/DC
		5 cont. 60 V AC/DC	
Rated impulse voltage	IEC 60664-1 <sup>2)</sup>	3+4cont. 2,5 kV	1,5 kV
		5 cont. 1,5 kV	
Insulation resistance	IEC 60512-3-1 test 3a	> 10 <sup>8</sup> Ω	
Pollution degree	IEC 60664-1 <sup>2)</sup>	3 <sup>1)</sup>	
Material group	IEC 60664-1 <sup>2)</sup>	I	
Test voltage	IEC 60644-1 <sup>2)</sup>	3 + 4 cont. 1,4 kV AC	1,0 kV AC
		5 cont. 1,0 kV AC	

#### Climatic characteristics

Climatic category	IEC 60068-1	25 / 85 / 21	
Temperature range	IEC 60512-11-9 test 11i	-25°C - +85°C	
	IEC 60512-11-10 test 11j	-13°F - +185°F	

#### Materials

Contact insert		TPU
Contact plating		Au
Overmolding		TPU
Housing		-
Knurled screw / knurled nut		CuZn nickel plated
O-Ring		Viton

#### Mechanical characteristics

Protection class	IEC 60529	IP 65 and IP 67, when properly mated
Mechanical operation	IEC 60512-9-1 test 9a	≥ 100 mating cycles
Insertion force	IEC 60512-13-2 test 13b	≤ 25 N
Withdrawal force	IEC 60512-13-2 test 13b	≤ 30 N

#### Other technical characteristics

Type of termination		crimp (overmolded)
Wire size		0,34 mm <sup>2</sup> (AWG 22)
Flammability		UL 94 HB
Locking		Screw coupling

<sup>1)</sup> In mated position only

<sup>2)</sup> IEC 60664-1 corresponds to DIN VDE 0110

<sup>3)</sup> Contact No. 5 is a "first make – last brake contact" (1 mm in relation to the other contacts) and may be used for grounding purposes.

When used for grounding purposes, the user must mark the lead wire accordingly and must ensure that the connector is not mated with other connectors where contact no. 5 may assume voltage potential.

### Cable construction PVC

- Fair oil and chemical resistance
- Especially suited for dry areas

	Color code	Conductors	Cable jacket	
			Ø mm	material
Cable 01	Brown, blue, black	3 x 0,34 mm <sup>2</sup> (AWG 22)	5	PVC
Cable 02	Brown, white, blue, black	4 x 0,34 mm <sup>2</sup> (AWG 22)	5	PVC
Cable 03	Brown, white, blue, black, grey	5 x 0,34 mm <sup>2</sup> (AWG 22)	5	PVC
Cable 07	Brown, blue, black	3 x 0,34 mm <sup>2</sup> (AWG 22)	5	PVC shielded
Cable 08	Brown, white, blue, black	4 x 0,34 mm <sup>2</sup> (AWG 22)	5	PVC shielded
Cable 09	Brown, white, blue, black, grey	5 x 0,34 mm <sup>2</sup> (AWG 22)	5	PVC shielded

### Cable construction PUR

- Good oil and chemical resistance
- Especially suited for applications in abrasive environments.

	Color code	Conductors	Cable jacket	
			Ø mm	material
Cable 04	Brown, blue, black	3 x 0,34 mm <sup>2</sup> (AWG 22)	5	PUR
Cable 05	Brown, white, blue, black	4 x 0,34 mm <sup>2</sup> (AWG 22)	5	PUR
Cable 06	Brown, white, blue, black, grey	5 x 0,34 mm <sup>2</sup> (AWG 22)	5	PUR
Cable 10	Brown, blue, black	3 x 0,34 mm <sup>2</sup> (AWG 22)	5	PUR shielded
Cable 11	Brown, white, blue, black	4 x 0,34 mm <sup>2</sup> (AWG 22)	5	PUR shielded
Cable 12	Brown, white, blue, black, grey	5 x 0,34 mm <sup>2</sup> (AWG 22)	5	PUR shielded

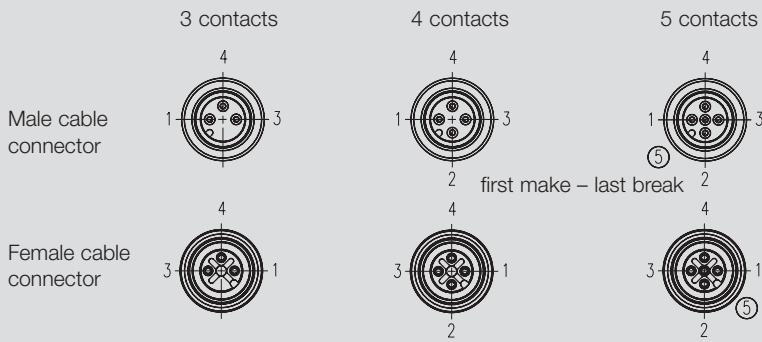
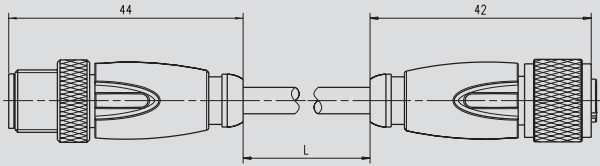
### Ordering example for different cable lengths

C 112	20C	013	<b>006</b>	10	
	0.6 m		006	} cable length	
	1.0 m		010		
	2.0 m		020		

Standard cable length: 0.6 m, 1.0 m and 2.0 m.  
Other cable lengths or cables upon request.



**Cordset, unshielded**  
**Male connector, straight /**  
**Female connector, straight**  
 with anti-vibration coupling nut  
 A-coded

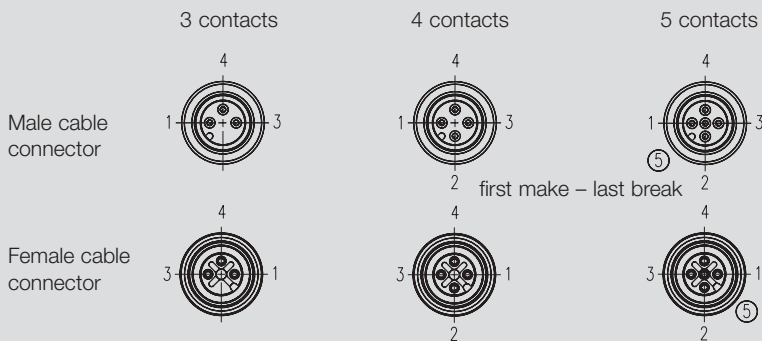
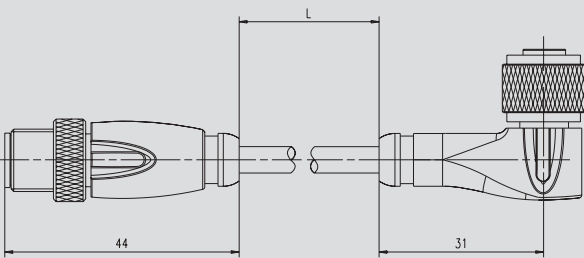


Contacts	Cable		Order No.
	jacket	length	
3	PVC	0,6 m	<b>C112 20C013 006 10</b>
		1,0 m	<b>C112 20C013 010 10</b>
		2,0 m	<b>C112 20C013 020 10</b>
	PUR	0,6 m	<b>C112 20C043 006 10</b>
		1,0 m	<b>C112 20C043 010 10</b>
		2,0 m	<b>C112 20C043 020 10</b>
4	PVC	0,6 m	<b>C112 20C024 006 10</b>
		1,0 m	<b>C112 20C024 010 10</b>
		2,0 m	<b>C112 20C024 020 10</b>
	PUR	0,6 m	<b>C112 20C054 006 10</b>
		1,0 m	<b>C112 20C054 010 10</b>
		2,0 m	<b>C112 20C054 020 10</b>
5	PVC	0,6 m	<b>C112 20C035 006 10</b>
		1,0 m	<b>C112 20C035 010 10</b>
		2,0 m	<b>C112 20C035 020 10</b>
	PUR	0,6 m	<b>C112 20C065 006 10</b>
		1,0 m	<b>C112 20C065 010 10</b>
		2,0 m	<b>C112 20C065 020 10</b>

Other cable lengths upon request.



**Cordset, unshielded**  
**Male connector, straight /**  
**Female connector, right angled**  
 with anti-vibration coupling nut  
 A-coded



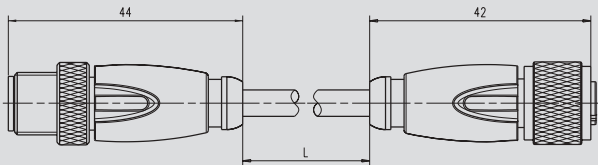
Contacts	Cable		Order No.
	jacket	length	
3	PVC	0,6 m	<b>C112 20D013 006 10</b>
		1,0 m	<b>C112 20D013 010 10</b>
		2,0 m	<b>C112 20D013 020 10</b>
	PUR	0,6 m	<b>C112 20D043 006 10</b>
		1,0 m	<b>C112 20D043 010 10</b>
		2,0 m	<b>C112 20D043 020 10</b>
4	PVC	0,6 m	<b>C112 20D024 006 10</b>
		1,0 m	<b>C112 20D024 010 10</b>
		2,0 m	<b>C112 20D024 020 10</b>
	PUR	0,6 m	<b>C112 20D054 006 10</b>
		1,0 m	<b>C112 20D054 010 10</b>
		2,0 m	<b>C112 20D054 020 10</b>
5	PVC	0,6 m	<b>C112 20D035 006 10</b>
		1,0 m	<b>C112 20D035 010 10</b>
		2,0 m	<b>C112 20D035 020 10</b>
	PUR	0,6 m	<b>C112 20D065 006 10</b>
		1,0 m	<b>C112 20D065 010 10</b>
		2,0 m	<b>C112 20D065 020 10</b>

Other cable lengths upon request.



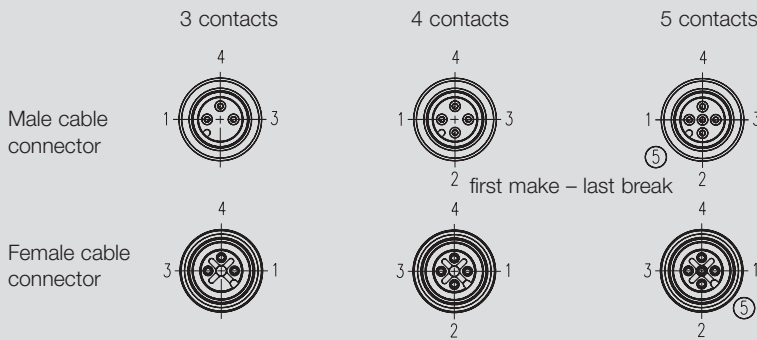


**Cordset, shielded**  
**Male connector, straight /**  
**Female connector, straight**  
 with anti-vibration coupling nut  
 A-coded

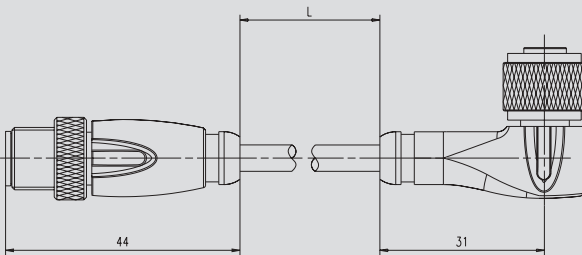


Contacts	Cable		Order No.
	jacket	length	
3	PVC	0,6 m	<b>C112 21C073 006 10</b>
		1,0 m	<b>C112 21C073 010 10</b>
		2,0 m	<b>C112 21C073 020 10</b>
	PUR	0,6 m	<b>C112 21C103 006 10</b>
		1,0 m	<b>C112 21C103 010 10</b>
		2,0 m	<b>C112 21C103 020 10</b>
4	PVC	0,6 m	<b>C112 21C084 006 10</b>
		1,0 m	<b>C112 21C084 010 10</b>
		2,0 m	<b>C112 21C084 020 10</b>
	PUR	0,6 m	<b>C112 21C114 006 10</b>
		1,0 m	<b>C112 21C114 010 10</b>
		2,0 m	<b>C112 21C114 020 10</b>
5	PVC	0,6 m	<b>C112 21C095 006 10</b>
		1,0 m	<b>C112 21C095 010 10</b>
		2,0 m	<b>C112 21C095 020 10</b>
	PUR	0,6 m	<b>C112 21C125 006 10</b>
		1,0 m	<b>C112 21C125 010 10</b>
		2,0 m	<b>C112 21C125 020 10</b>

Other cable lengths upon request.

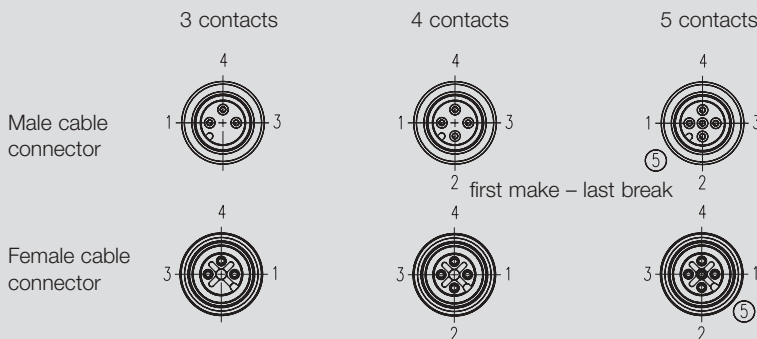


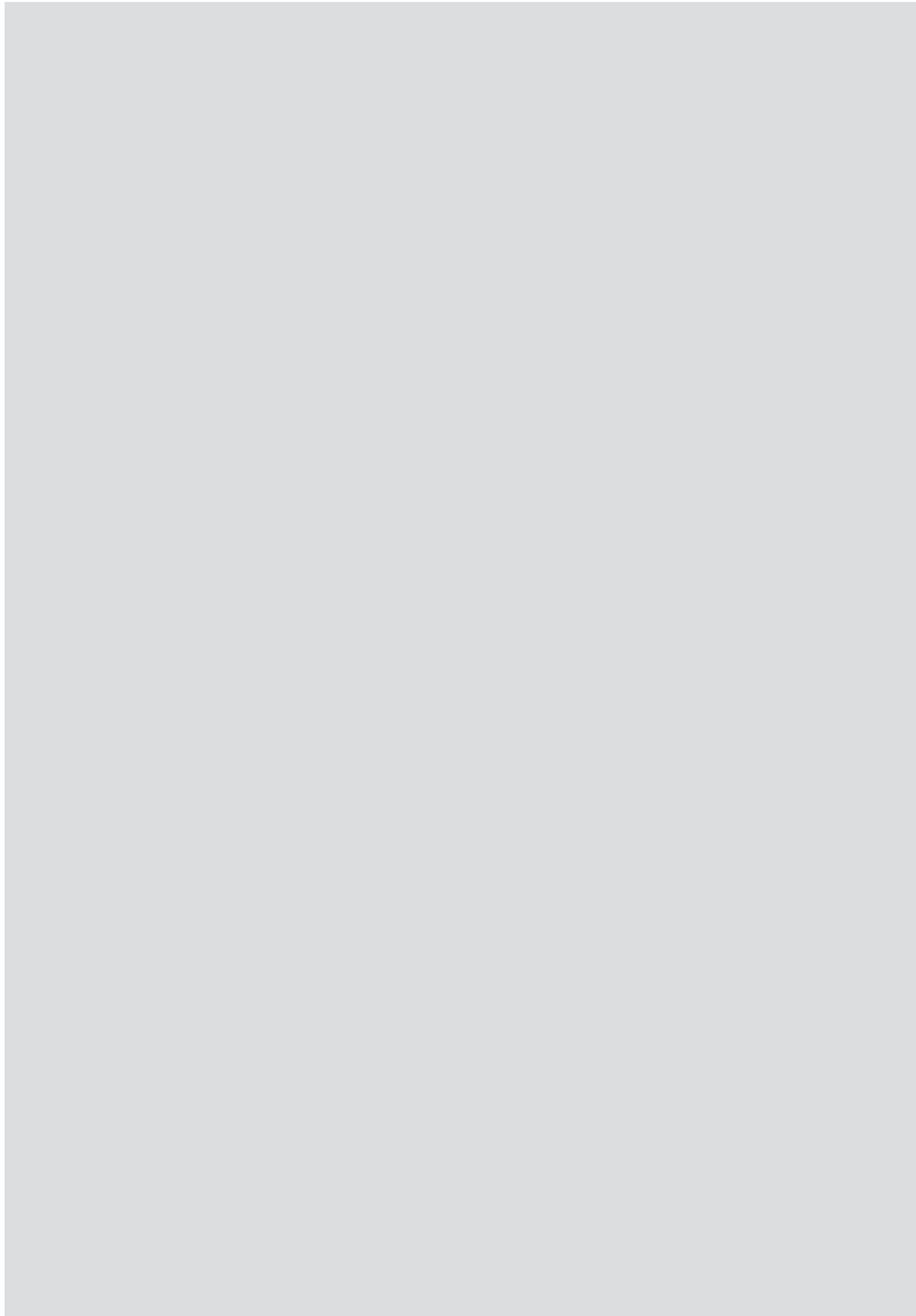
**Cordset, shielded**  
**Male connector, straight /**  
**Female connector, right angled**  
 with anti-vibration coupling nut  
 A-coded



Contacts	Cable		Order No.
	jacket	length	
3	PVC	0,6 m	<b>C112 21D073 006 10</b>
		1,0 m	<b>C112 21D073 010 10</b>
		2,0 m	<b>C112 21D073 020 10</b>
	PUR	0,6 m	<b>C112 21D103 006 10</b>
		1,0 m	<b>C112 21D103 010 10</b>
		2,0 m	<b>C112 21D103 020 10</b>
4	PVC	0,6 m	<b>C112 21D084 006 10</b>
		1,0 m	<b>C112 21D084 010 10</b>
		2,0 m	<b>C112 21D084 020 10</b>
	PUR	0,6 m	<b>C112 21D114 006 10</b>
		1,0 m	<b>C112 21D114 010 10</b>
		2,0 m	<b>C112 21D114 020 10</b>
5	PVC	0,6 m	<b>C112 21D095 006 10</b>
		1,0 m	<b>C112 21D095 010 10</b>
		2,0 m	<b>C112 21D095 020 10</b>
	PUR	0,6 m	<b>C112 21D125 006 10</b>
		1,0 m	<b>C112 21D125 010 10</b>
		2,0 m	<b>C112 21D125 020 10</b>

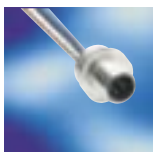
Other cable lengths upon request.





# Male and female panel connectors

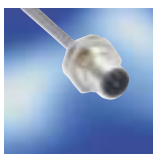
## C 112 Series



Male panel connector, front mounting assembled with wire ... Page 27



Female panel connector, front mounting assembled with wire ... Page 27



Male panel connector, rear mounting assembled with wire ... Page 28



Female panel connector, rear mounting assembled with wire ... Page 28



Male panel connector, non-standard special ... Page 29



Female panel connector, rear mounting pcb-mount type ... Page 29



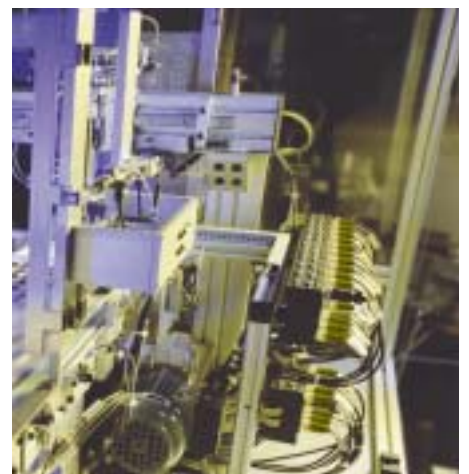
Male panel connector, rear mounting pcb-mount type ... Page 29

### Description

Male and female M12 panel connectors for front or rear mounting, assembled with wires.

Male and female M12 panel connectors, pcb-mount type.

Male M12 panel connectors non-standard special.



General characteristics	Standard	Standard Version	Non Standard Special
Number of contacts	IEC 61076-2-101	3 / 4 / 5 / 8	3 / 4

#### Electrical characteristics

Contact resistance	IEC 60512-2-1 test 2a	≤ 10 mΩ (without cable)	≤ 10 mΩ
Current carrying capacity	IEC 60512-5-2 test 5b	3+4+5-cont. 4 A at T <sub>U</sub> = 40°C	4 A at T <sub>U</sub> = 40°C
		8-cont. 2 A at T <sub>U</sub> = 40°C	
Rated voltage	IEC 60 664-1 <sup>2)</sup>	3+4 cont. 250 V AC/DC	250 V AC/DC
		5 cont. 60 V AC/DC	
		8-cont. 30 V AC/DC	
Rated impulse voltage unmated	IEC 60 664-1 <sup>2)</sup>	3+4 cont. 2,5 kV	2,5 kV
		5 cont. 1,5 kV	
		8-cont. 0,8 kV	
Insulation resistance	IEC 60512-3-1 test 3a	> 10 <sup>8</sup> Ω	> 10 <sup>8</sup> Ω
Pollution degree	IEC 60664-1 <sup>2)</sup>	3 <sup>1)</sup>	3 <sup>1)</sup>
Material group	IEC 60664-1 <sup>2)</sup>	I	II
Test voltage	IEC 60664-1 <sup>2)</sup>	3 + 4 cont. 1,4 kV AC	
		5 cont. 1,0 kV AC	
		8-cont. 0,65 kV AC	

#### Climatic characteristics

Climatic category	IEC 60068-1	25 / 85 / 21	30 / 100 / 56
Temperature range	IEC 60512-11-9 test 11i	-25°C - +85°C	-30°C - +100°C
	IEC 60512-11-10 test 11j	-13°F - +185°F	-22°F - +212°F

#### Materials

Contact insert		TPU	PA
Contact plating		Au	Ag
Housing / Mounting screw		CuZn nickel plated	PA
O-Ring		Viton	NBR

#### Mechanical characteristics

Protection class	IEC 60529	IP 65 and IP 67 when properly mated	IP 65 when properly mated
Mechanical operation	IEC 60512-9-1 test 9a	≥ 100 mating cycles	≥ 50 mating cycles
Insertion force	IEC 60512-13-2 test 13b	≤ 25 N	≤ 25 N
Withdrawal force	IEC 60512-13-2 test 13b	≤ 30 N	≤ 30 N

#### Other technical characteristics

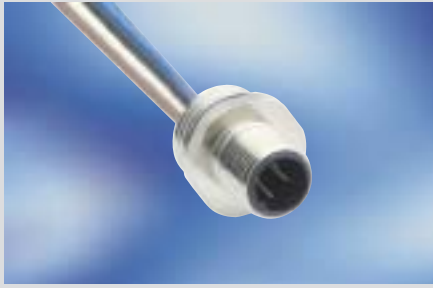
Type of termination		crimp	solder
Wire size		0,34 mm <sup>2</sup> (AWG 22)	0,14 - 0,5 mm <sup>2</sup> (AWG 24-20)
Flammability		UL 94 HB	UL 94 V-0
Locking		Screw coupling	Screw coupling

<sup>1)</sup> In mated position only

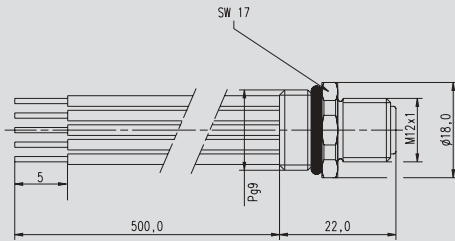
<sup>2)</sup> IEC 60664-1 corresponds to DIN VDE 0110

#### Wire construction

	Color code	Conductors	Insulation
Wire 01	Brown, blue, black	3 x 0,34 mm <sup>2</sup> (AWG 22)	PVC
Wire 02	Brown, white, blue, black	4 x 0,34 mm <sup>2</sup> (AWG 22)	PVC
Wire 03	Brown, white, blue, black, grey	5 x 0,34 mm <sup>2</sup> (AWG 22)	PVC
Wire 04	Brown, white, blue, grey, green, yellow, red, pink	8 x 0,25 mm <sup>2</sup> (AWG 24)	PVC



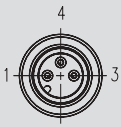
**Male panel connector, front mounting with PVC-insulated wire A-coded**



Contacts	Colors of wire insulation	Mounting thread	Lead length	Order No.
3	Brown-blue-black	PG9	200 mm	<b>C112 30A013 002 10</b>
			500 mm	<b>C112 30A013 005 10</b>
4	Brown-white-blue-black	PG9	200 mm	<b>C112 30A024 002 10</b>
			500 mm	<b>C112 30A024 005 10</b>
5	Brown-white-blue-black-grey	PG9	200 mm	<b>C112 30A035 002 10</b>
			500 mm	<b>C112 30A035 005 10</b>
8	Brown-white-blue-grey-green-yellow-red-pink	PG9	200 mm	<b>C112 30A048 002 10</b>
			500 mm	<b>C112 30A048 005 10</b>

Other lead lengths and codings upon request.

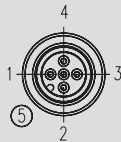
3 contacts



4 contacts



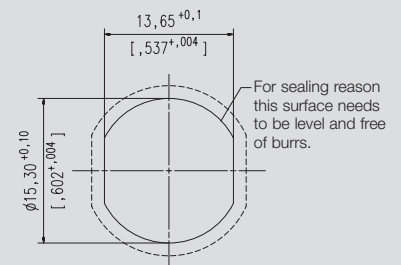
5 contacts



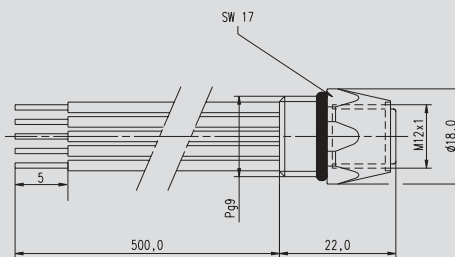
8 contacts



Mounting cut-out



**Female panel connector, front mounting with PVC-insulated wire A-coded**



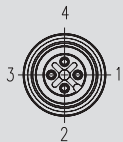
Contacts	Colors of wire insulation	Mounting thread	Lead length	Order No.
3	Brown-blue-black	PG9	200 mm	<b>C112 30C013 002 10</b>
			500 mm	<b>C112 30C013 005 10</b>
4	Brown-white-blue-black	PG9	200 mm	<b>C112 30C024 002 10</b>
			500 mm	<b>C112 30C024 005 10</b>
5	Brown-white-blue-black-grey	PG9	200 mm	<b>C112 30C035 002 10</b>
			500 mm	<b>C112 30C035 005 10</b>
8	Brown-white-blue-grey-green-yellow-red-pink	PG9	200 mm	<b>C112 30C048 002 10</b>
			500 mm	<b>C112 30C048 005 10</b>

Other lead lengths and codings upon request.

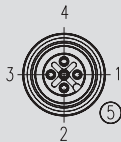
3 contacts



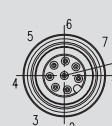
4 contacts



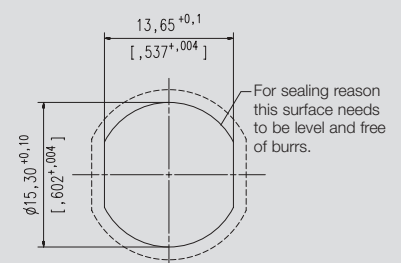
5 contacts



8 contacts



Mounting cut-out



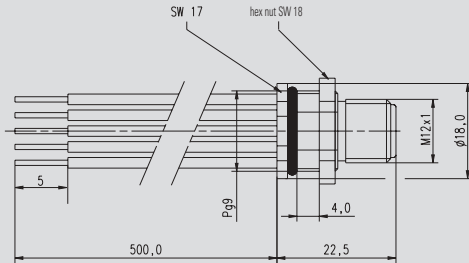




**Male panel connector, rear mounting with PVC-insulated wire A-coded**

Contacts	Colors of wire insulation	Mounting thread	Lead length	Order No.
3	Brown-blue-black	PG9	200 mm	<b>C112 30B013 002 10</b>
			500 mm	<b>C112 30B013 005 10</b>
4	Brown-white-blue-black	PG9	200 mm	<b>C112 30B024 002 10</b>
			500 mm	<b>C112 30B024 005 10</b>
5	Brown-white-blue-black-grey	PG9	200 mm	<b>C112 30B035 002 10</b>
			500 mm	<b>C112 30B035 005 10</b>
8	Brown-white-blue-grey-green-yellow-red-pink	PG9	200 mm	<b>C112 30B048 002 10</b>
			500 mm	<b>C112 30B048 005 10</b>

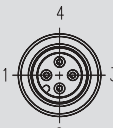
Other lead lengths and codings upon request.



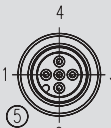
3 contacts



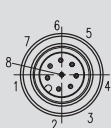
4 contacts



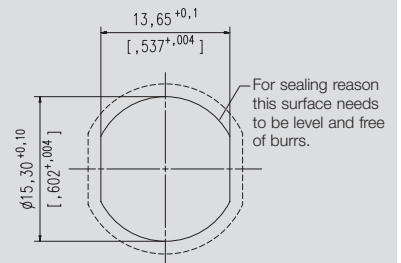
5 contacts



8 contacts



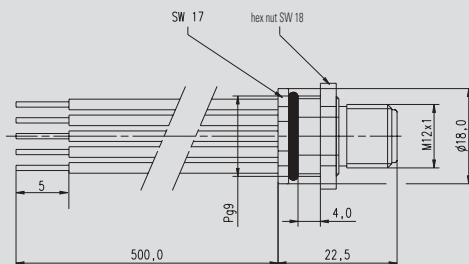
Mounting cut-out



**Female panel connector, rear mounting with PVC-insulated wire A-coded**

Contacts	Colors of wire insulation	Mounting thread	Lead length	Order No.
3	Brown-blue-black	PG9	200 mm	<b>C112 30D013 002 10</b>
			500 mm	<b>C112 30D013 005 10</b>
4	Brown-white-blue-black	PG9	200 mm	<b>C112 30D024 002 10</b>
			500 mm	<b>C112 30D024 005 10</b>
5	Brown-white-blue-black-grey	PG9	200 mm	<b>C112 30D035 002 10</b>
			500 mm	<b>C112 30D035 005 10</b>
8	Brown-white-blue-grey-green-yellow-red-pink	PG9	200 mm	<b>C112 30D048 002 10</b>
			500 mm	<b>C112 30D048 005 10</b>

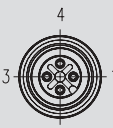
Other lead lengths and codings upon request.



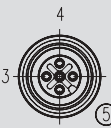
3 contacts



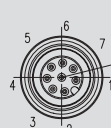
4 contacts



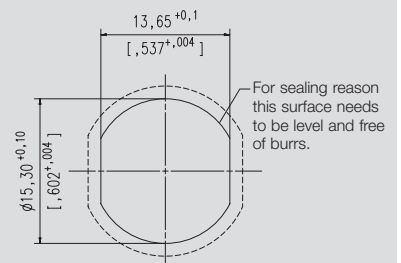
5 contacts



8 contacts



Mounting cut-out





**Male panel connector,  
rear mounting  
pcb-mount type**

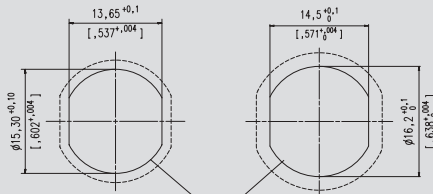
Contacts	<b>Order No.<sup>1)</sup></b>
4	<b>C112 30X004 000 XX</b>
5	<b>C112 30X005 000 XX</b>

**Specification<sup>1)</sup>**

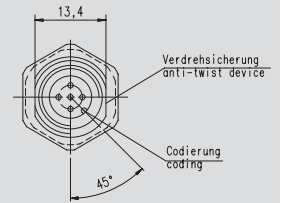
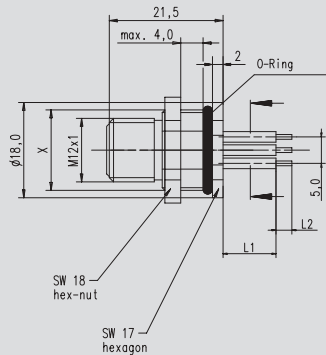
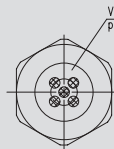
	L1	L2	Coding
PG 9			A
M 16			B

Mounting cut-out  
PG 9

Mounting cut-out  
metrically, M 16



For sealing reason this surface needs to be level and free of burrs.



**Female panel connector,  
rear mounting  
pcb-mount type**

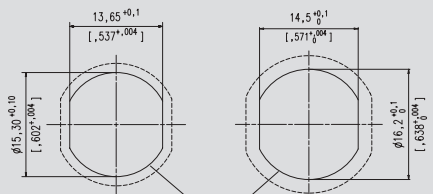
Contacts	<b>Order No.<sup>1)</sup></b>
4	<b>C112 30X004 000 XX</b>
5	<b>C112 30X005 000 XX</b>

**Specification<sup>1)</sup>**

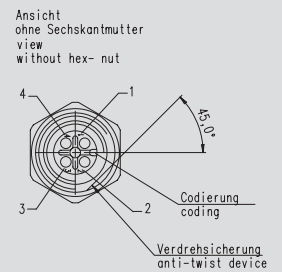
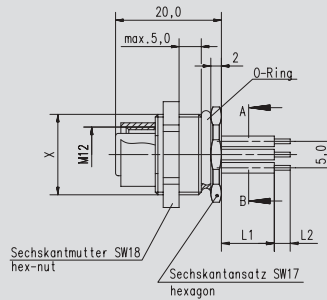
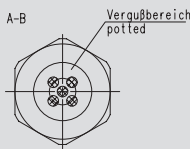
	L1	L2	Coding
PG 9			A
M 16			B

Mounting cut-out  
PG 9

Mounting cut-out  
metrically, M 16



For sealing reason this surface needs to be level and free of burrs.

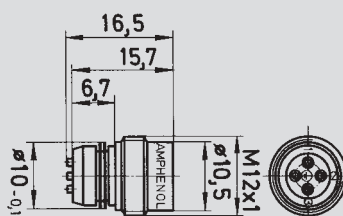


<sup>1)</sup> It would be too in-depth to show all the possible versions of these pcb-mount types in this catalogue. There are for example versions with different contact ends, with pg- or with metric mounting thread, with different coding etc. Accordingly, we only state the preliminary part numbers here for these types. If you inform us about the desired contact ends, required mounting thread and coding, we will advise you of the corresponding part number. To do so, you may also wish to use the above specification tables for your convenience.

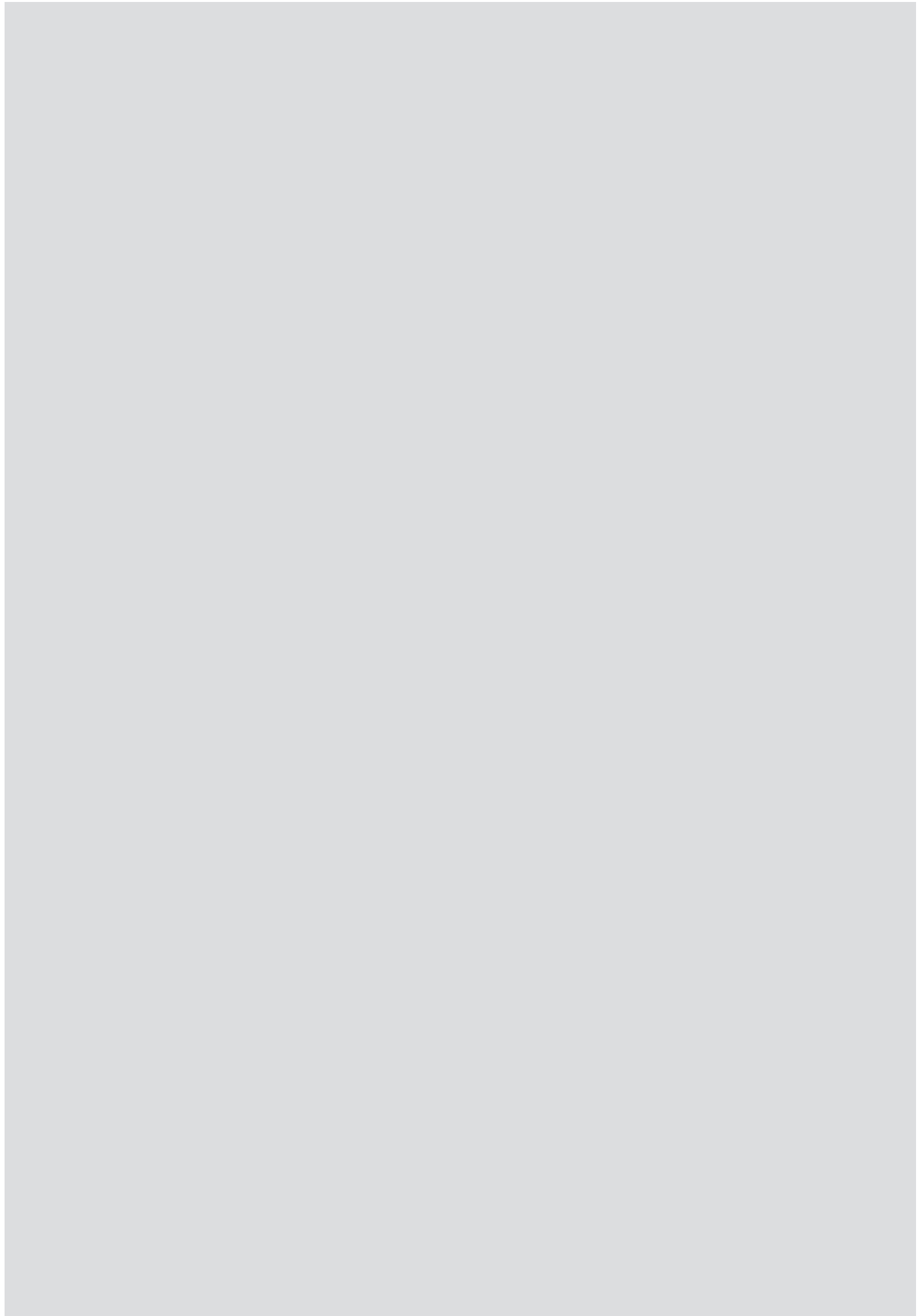


**Male panel connector,  
non-standard special <sup>2)</sup>**

Contacts	<b>Order No.</b>
3+PE	<b>C112 31A003 000 10</b>
4	<b>C112 31A004 000 10</b>



<sup>2)</sup> derating from IEC 61076-2-101



# Splitters

## C 112 Series



Y-Splitter ... Page 33

### Description

M12-Y-Splitter for twofold distribution.



General characteristics	Standard	Y-Splitter
Contacts	IEC 61076-2-101	3 / 4 / 5

#### Electrical characteristics

Contact resistance	IEC 60512-2-1 test 2a	≤ 5 mΩ (single contact) ≤ 25 mΩ (complete circuit)
Current carrying capacity	IEC 60512-5-2 test 5b	4 A / 40°C
Rated voltage	IEC 60664-1 <sup>2)</sup>	60 V AC/DC
Rated impulse voltage	IEC 60664-1 <sup>2)</sup>	1,5 kV
Insulation resistance	IEC 60512-3-1 test 3a	> 10 <sup>8</sup> Ω
Pollution degree	IEC 60664-1 <sup>2)</sup>	3 <sup>1)</sup>
Material group	IEC 60664-1 <sup>2)</sup>	I
Test voltage	IEC 60664-1 <sup>2)</sup>	1,0 kV AC

#### Climatic characteristics

Climatic category	IEC 60068-1	25 / 85 / 21
Temperature range	IEC 60512-11-9 test 11i IEC 60512-11-10 test 11j	-25°C - +85°C -13°F - +185°F

#### Materials

Contact insert		TPU
Contact plating		Au
Body		TPU
Housing		-
Knurled screw / knurled nut		CuZn nickel plated
O-Ring		Viton

#### Mechanical characteristics

Protection class	IEC 60529	IP 67 when properly mated
Mechanical operation	IEC 60512-9-1 test 9a	≥ 100 mating cycles
Insertion force	IEC 60512-13-2 test 13b	≤ 25 N
Withdrawal force	IEC 60512-13-2 test 13b	≤ 30 N

#### Other technical characteristics

Type of termination		crimp (overmolded)
Flammability		UL 94 HB
Locking		Screw coupling

<sup>1)</sup> In mated position only

<sup>2)</sup> IEC 60664-1 corresponds to DIN VDE 0110

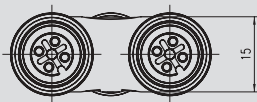




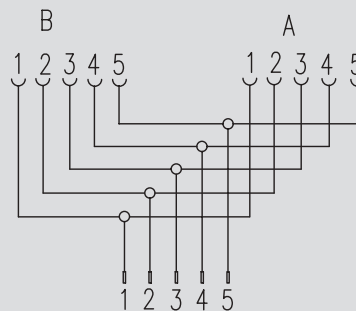
### Y-Splitter

A-coded

One entrance, two parallel exits.  
Other Connections upon request.



### Verdrahtungsplan circuit diagram

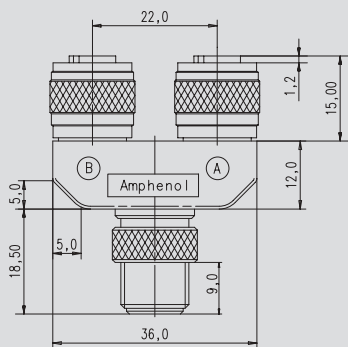


	Contacts	Design	Order No.
unshielded	4	m / fm - fm	<b>C112 40A004 000 10</b>
		fm / m - m	<b>C112 40B004 000 10</b>
		fm / fm - m	<b>C112 40E004 000 10</b>
		m / m - fm	<b>C112 40F004 000 10</b>
	5	m / fm - fm	<b>C112 40A005 000 10</b>
		fm / m - m	<b>C112 40B005 000 10</b>
		fm / fm - m	<b>C112 40E005 000 10</b>
		m / m - fm	<b>C112 40F005 000 10</b>

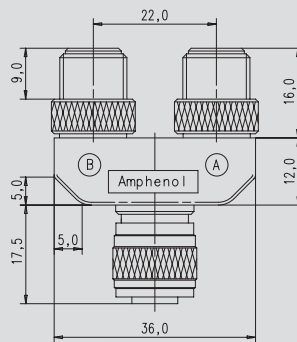
m = male; fm = female

	Contacts	Design	Order No.
shielded	4	m / fm - fm	<b>C112 41A004 000 10</b>
		fm / m - m	<b>C112 41B004 000 10</b>
		fm / fm - m	<b>C112 41E004 000 10</b>
		m / m - fm	<b>C112 41F004 000 10</b>
	5	m / fm - fm	<b>C112 41A005 000 10</b>
		fm / m - m	<b>C112 41B005 000 10</b>
		fm / fm - m	<b>C112 41E005 000 10</b>
		m / m - fm	<b>C112 41F005 000 10</b>

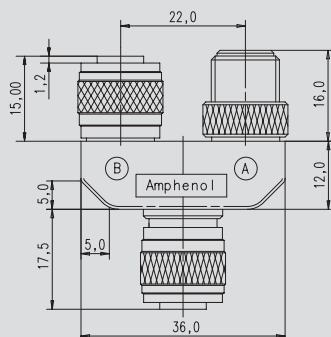
m = male; fm = female



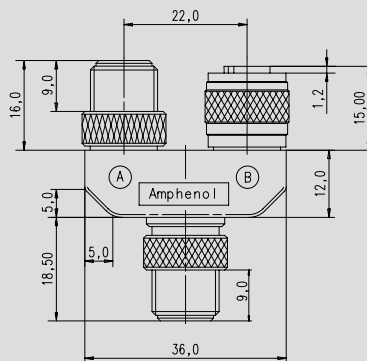
Version A: m / fm - fm



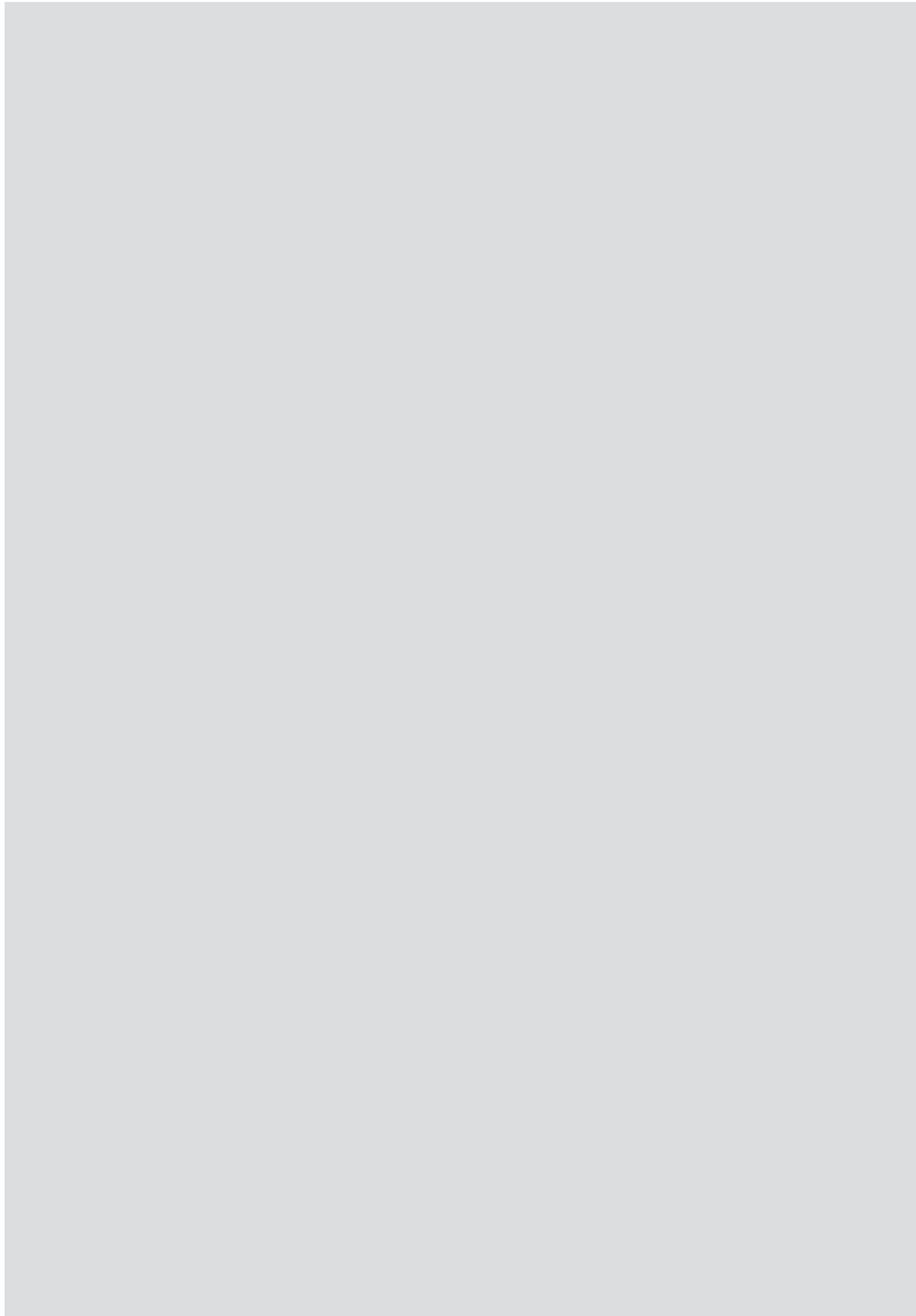
Version B: fm / m - m



Version E: fm / fm - m



Version F: m / m - fm



# Order number register

Order No.	Page	Order No.	Page	Order No.	Page
C112 10A013...10	10	C112 13B004 000 24	16	C112 30C013...10	27
C112 10A024...10	10	C112 13B005 000 24	16	C112 30C024...10	27
C112 10A035...10	10	C112 13C004 000 24	16	C112 30C035...10	27
C112 10A043...10	10	C112 13C005 000 24	16	C112 30C048...10	27
C112 10A054...10	10	C112 13D004 000 24	16	C112 30D013...10	28
C112 10A065...10	10	C112 13D005 000 24	16	C112 30D024...10	28
C112 10B013...10	10	C112 13D004 000 01	17	C112 30D035...10	28
C112 10B024...10	10	C112 13D004 000 02	17	C112 30D048...10	28
C112 10B035...10	10	C112 13D004 000 03	17	C112 30X004 000 XX	29
C112 10B043...10	10	C112 13D004 000 04	17	C112 30X005 000 XX	29
C112 10B054...10	10	C112 13D004 000 05	17	C112 31A003 000 10	29
C112 10B065...10	10	C112 13D004 000 06	17	C112 31A004 000 10	29
C112 10C013...10	11	C112 13D004 000 07	17	C112 40A004 000 10	33
C112 10C024...10	11	C112 13D004 000 08	17	C112 40A005 000 10	33
C112 10C035...10	11	C112 14A004 000 24	17	C112 40B004 000 10	33
C112 10C043...10	11	C112 14A005 000 24	17	C112 40B005 000 10	33
C112 10C054...10	11	C112 14C004 000 24	17	C112 40E004 000 10	33
C112 10C065...10	11	C112 14C005 000 24	17	C112 40E005 000 10	33
C112 10D013...10	11	C112 20C013...10	22	C112 40F004 000 10	33
C112 10D024...10	11	C112 20C024...10	22	C112 40F005 000 10	33
C112 10D035...10	11	C112 20C035...10	22	C112 41A004 000 10	33
C112 10D043...10	11	C112 20C043...10	22	C112 41A005 000 10	33
C112 10D054...10	11	C112 20C054...10	22	C112 41B004 000 10	33
C112 10D065...10	11	C112 20C065...10	22	C112 41B005 000 10	33
C112 11A073...10	12	C112 20D013...10	22	C112 41E004 000 10	33
C112 11A084...10	12	C112 20D024...10	22	C112 41E005 000 10	33
C112 11A095...10	12	C112 20D035...10	22	C112 41F004 000 10	33
C112 11A103...10	12	C112 20D043...10	22	C112 41F005 000 10	33
C112 11A114...10	12	C112 20D054...10	22		
C112 11A125...10	12	C112 20D065...10	22		
C112 11B073...10	12	C112 21C073...10	23		
C112 11B084...10	12	C112 21C084...10	23		
C112 11B095...10	12	C112 21C095...10	23		
C112 11B103...10	12	C112 21C103...10	23		
C112 11B114...10	12	C112 21C114...10	23		
C112 11B125...10	12	C112 21C125...10	23		
C112 11C073...10	13	C112 21D073...10	23		
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C112 11C114...10	13	C112 21D114...10	23		
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C112 11D073...10	13	C112 30A013...10	27		
C112 11D084...10	13	C112 30A024...10	27		
C112 11D095...10	13	C112 30A035...10	27		
C112 11D103...10	13	C112 30A048...10	27		
C112 11D114...10	13	C112 30B013...10	28		
C112 11D125...10	13	C112 30B024...10	28		
C112 13A004 000 24	16	C112 30B035...10	28		
C112 13A005 000 24	16	C112 30B048...10	28		

## International

### Argentina

Amphenol Argentina  
Av. Callao 930  
2nd Floor Office B "Plaza"  
C1023 AAP Buenos Aires  
Phone +54 / 11 / 4815 68 86  
Fax +54 / 11 / 4814 57 79

### Australia

Amphenol Australia Ltd.  
2 Fiveways Blvd  
Keysborough  
Victoria 31 73  
Phone +61 / 3 / 87 96 / 88 88  
Fax +61 / 3 / 87 96 / 88 01

### Austria

Amphenol-Tuchel Austria  
Lannerweg 14  
A-4614 Marchtrenk  
Phone +43 / 72 43 / 5 25 55  
Fax +43 / 72 43 / 5 35 35

### Belgium

Amphenol-Tuchel Belgium  
Brusselbaan 524b  
B 1600 Sint-Pieters-Leeuw  
Phone +32 / 23 77 / 25 49  
Fax +32 / 23 77 / 53 03

### Brasilia

Amphenol do Brasil Ltda.  
Rua Diogo Moreira 132, 20th Floor  
CEP 05423-010 Sao Paulo SP  
Phone +55 / 11 / 38 15.10 03  
Fax +55 / 11 / 38 15.16 29

### China

Amphenol-Tuchel Electronics GmbH  
China Branch  
210-1 Taishan Road  
Changzhou 213 022  
Phone +86 / 05 19 / 5 11 03 01  
Fax +86 / 05 19 / 5 11 02 99

### France

Amphenol-Tuchel France  
Bât. Le Newton C  
7 Mail B. Thimonnier  
77185 Lognes  
Phone +33 / 164 62 76 76  
Fax +33 / 164 62 76 77

### Germany

Amphenol-Tuchel Electronics GmbH  
August-Haeusser-Str. 10  
74980 Heilbronn  
Phone +49 / 71 31 / 9 29-0  
Fax +49 / 71 31 / 9 29-486

### Great Britain

Amphenol-Tuchel Great Britain  
14 Plover Close  
Kempshott, Basingstoke  
Hants, RG22 5PQ  
Phone +44 / 12 56 / 33 07 49  
Fax +44 / 12 56 / 33 07 49

### Hong Kong

Amphenol East Asia Limited  
Units 2201-02, Railway Plaza  
39 Chatham Road South  
Tsimshatsui, Kowloon  
Phone +8 52 / 26 99 / 26 63  
Fax +8 52 / 26 88 / 09 74

### India

Amphetronix Limited  
Plot No. 105 Bhosari Industrial Area  
Pune - 411 026  
Phone +91 / 20 / 27 12 14 18  
Fax +91 / 20 / 27 12 05 81

### Italy

Amphenol-Tuchel Italy  
Via Barbaiana n. 5  
I-20020 Lainate (MI)  
Phone +39 / 2 / 93 25 41  
Fax +39 / 2 / 93 25 44 44

### Japan

Amphenol Japan, K.K.  
2-3-27, Kudan Minami  
Chiyoda-Ku  
Tokyo 102  
Phone +81 / 3 / 32 63 / 56 11  
Fax +81 / 3 / 52 76 / 70 59

### Korea

Amphenol DaeShin Limited  
#802 Joong-Dong 1131-5  
Wonmi-Ku  
Bucheon-City  
Kyunggi-Do  
Korea 420-020  
Phone +82 / 2 / 785 / 15 88  
Fax +82 / 2 / 589 / 15 14

### Mexico

Amphenol Mexico  
Prolongacion Reforma 61 - 6 B2  
Col. Paseo de las Lomas  
C.P. 01330 Mexico D.F.  
Phone +52 / 55 / 52 58.99 84  
Fax +52 / 55 / 50 81.68 90

### Singapore

Amphenol East Asia Limited  
Asia Pacific Sales Operation  
Singapore Branch  
300 Beach Road  
#25-07 The Concourse  
Singapore 199555  
Phone +27 / 11 / 305-95 74  
Fax +27 / 11 / 305-95 76

### South Africa

Amphenol International Ltd  
Chislehurst  
30 Impala Road  
Chislehurst  
Sandton, 2146  
Phone +27 / 11 / 7 83 95 17  
Fax +27 / 11 / 7 83 95 19

### Spain

Amphenol-Tuchel Spain  
Ctra Sabadell a Mollet,  
km 4,5 Nave 5  
08130 Santa Perpetue de Mogoda  
(Barcelona)  
Phone +34 / 93 / 5 74 41 34  
Fax +34 / 93 / 5 74 10 09

### Sweden

Amphenol-Tuchel Scandinavia  
P.O. Box 20  
SE 195 42 Märsta  
Phone +46 / 85 91 / 1 75 76  
Fax +46 / 85 91 / 1 75 76

### Taiwan

Amphenol East Asia Ltd.  
Taiwan Branch (H.K.)  
116 Zhong Shan Road  
Lane 956 Taoyuan City  
Taiwan R.O.C. 330  
Phone +886 / 3 / 370 / 78 55  
Fax +886 / 3 / 360 / 72 59

### Turkey

Amphenol Türkiye  
Ayazaga Mah. Meydan Sk. No. 28  
Beybi Giz Plaza, Kat. 26  
34396 Maslak/Istanbul  
Phone +90 / 0212 / 3 35 25 01  
Fax +90 / 0212 / 3 35 25 00

### USA

Amphenol-Tuchel Electronics  
6900 Haggerty Road  
Suite 200  
Canton, Michigan 48187  
Phone +1 / 800 / 380 80 52  
Phone +1 / 734 / 451 64 00  
Fax +1 / 734 / 451 71 97

Amphenol Corporation  
Corporate Headquarters  
358 Hall Avenue  
Wallingford, CT 06492  
Phone +1 / 203 / 2 65 / 89 00  
Fax +1 / 203 / 2 65 / 86 28

Your engineering sales representative:

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# Amphenol

Amphenol-Tuchel Electronics GmbH

August-Haeusser-Str. 10 · D-74080 Heilbronn · Deutschland · Phone +49 (0)71 31/9 29-0 · Fax +49 (0)71 31/9 29-486 · www.amphenol.info