

# M5 to M12 circular plug-in connectors

## Sensor/actuator device plug-in connectors

A comprehensive range of M5, M8, and M12 flush-type plug-in connectors and panel feed-throughs has emerged as a result of the various requirements for sensor/actuator device connection technology in industrial environments. Customer-specific developments enable optimum adaptation to individual device concepts.

## Sensor/actuator plug-in connectors for assembly

Safe and efficient assembly is of utmost importance in field wiring. The 5 selection options of the connection technology enable precise adaptation to the respective application or requirements in the field. The plug-in connectors for assembly are available in various versions, unshielded and EMC-compliant.

## Sensor/actuator device plug-in connectors

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# M5 to M12 circular plug-in connectors

## M5/M8 sensor/actuator device plug-in connectors

### M5, front/rear mounting

**Notes:**  
Flat nut recommended for housing wall thicknesses < 2.5 mm.



Front mounting,  
with 0.5 m long litz wires



Rear mounting, one-piece, straight,  
for wave soldering processes



General data	
M5 circular plug-in connector according to:	
Pollution degree	3
Degree of protection	IP67
Connection method	Individual wires
Electrical data	
Rated voltage	60 V
Rated current	1 A
Volume resistance	≤ 3 mΩ
Material data	
Material contact / contact surface	CuSn / Au
Contact carrier material	PA 66
Inflammability class according to UL 94	HB
Cable type	TPE litz wire
Temperature data	
Plug / socket	[°C] -25 ... 85

Technical data			
3-pos.		4-pos.	
IEC 61076-2-105		IEC 61076-2-105	
3		3	
IP67		IP67	
Individual wires		Individual wires	
60 V		60 V	
1 A		1 A	
≤ 3 mΩ		≤ 3 mΩ	
CuSn / Au		CuSn / Au	
PA 66		PA 66	
HB		HB	
TPE litz wire		TPE litz wire	
-25 ... 85		-25 ... 85	

Technical data			
3-pos.		4-pos.	
IEC 61076-2-105		IEC 61076-2-105	
3		3	
IP67		IP67	
Solder pins		Solder pins	
60 V		60 V	
1 A		1 A	
≤ 3 mΩ		≤ 3 mΩ	
CuSn / Au		CuSn / Au	
PA 66		PA 66	
HB		HB	
-		-	
-25 ... 80		-25 ... 85	

Ordering data	
Description	Coding
<b>Device plug-in connectors</b>	
Socket	A - standard
Plug	A - standard

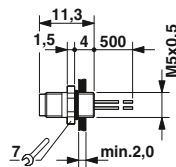
Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
3-pos.		4-pos.	
1530605	1	1530618	1
1530582	1	1530595	1

Ordering data			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
3-pos.		4-pos.	
1530647	20	1530650	20
1530621	20	1530634	20

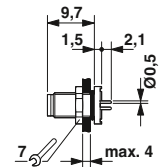
Accessories	
Flat nut, with: M5 thread	

Accessories		
SACC-E-MU-M 5	1535901	100

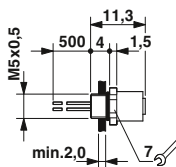
Accessories		



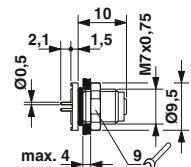
M5 flush-type plug



M5 flush-type plug, one-piece



M5 flush-type socket



M5 flush-type socket, one-piece

# M5 to M12 circular plug-in connectors

## M5/M8 sensor/actuator device plug-in connectors

**M8, front mounting,  
with 0.5 m long litz wires**



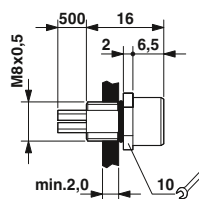
M8, 3, 4, 5-pos.



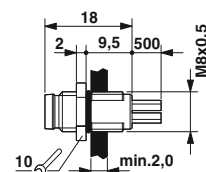
M8, 6, 8-pos.



	Technical data			Technical data			
	3-pos.	4-pos.	5-pos.	6-pos.	8-pos.		
<b>General data</b>							
M8 circular plug-in connector according to:	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	-	
Pollution degree	3	3	3	3	3	-	
Degree of protection	IP67	IP67	IP67	IP67	IP67	-	
Connection method	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	-	
<b>Electrical data</b>							
Rated voltage	60 V	30 V	30 V	30 V	30 V	-	
Rated current	4 A	4 A	3 A	2 A	1.5 A	-	
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	-	
<b>Material data</b>							
Material contact / contact surface	Cu alloy / Au	Cu alloy / Au	Cu alloy / Au	Cu alloy / Au	Cu alloy / Au	- / -	
Contact carrier material	PA 66	PA 66	PA 66	PA 66	PA 66	-	
Inflammability class according to UL 94	HB	HB	HB	HB	HB	-	
Cable type	TPE litz wire	TPE litz wire	PVC litz wire	TPE litz wire	PVC litz wire	-	
<b>Temperature data</b>							
Plug / socket	[-25 ... 85 °C]			[-25 ... 85 °C]			
<b>Ordering data</b>							
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3-pos.	4-pos.	5-pos.	6-pos.	8-pos.	
<b>Device plug-in connectors</b>							
Socket	A - standard	1500350	1	1500363	1	1542677	1
Plug	A - standard	1500334	1	1500347	1	1542664	1
Socket	B - inverse				1424233	1424232	1
Plug	B - inverse				1424234	1424232	1
<b>Accessories</b>							
<b>Flat nut, with:</b>		SACC-E-MU-M 8		1504071	100	SACC-E-MU-M 8	
M8 thread						1504071	100



M8 flush-type socket



M8 flush-type plug

## M5 to M12 circular plug-in connectors

### M5/M8 sensor/actuator device plug-in connectors

**M8, rear mounting, one-piece, straight, for wave soldering processes**



M8, 3, 4-pos.



M8, 6, 8-pos.



#### Technical data

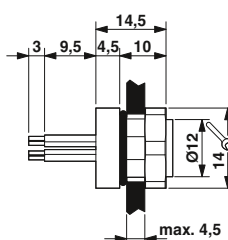
#### Technical data

	3-pos.		4-pos.		6-pos.		8-pos.	
	IEC 61076-2-104		IEC 61076-2-104		IEC 61076-2-104		IEC 61076-2-104	
General data	3		3		3		3	
M8 circular plug-in connector according to:	3		3		3		3	
Pollution degree	IP67		IP67		IP67		IP67	
Degree of protection	Solder pins		Solder pins		Solder pins		Solder pins	
Connection method	60 V		30 V		30 V		30 V	
Electrical data	4 A		4 A		1.5 A		1.5 A	
Rated voltage	≤ 3 mΩ		≤ 3 mΩ		≤ 3 mΩ		≤ 3 mΩ	
Rated current	CuSn / Au		CuSn / Au		CuSn / Au		CuSn / Au	
Volume resistance	PA 66		PA 66		PA 66		PA 66	
Material data	HB		HB		HB		HB	
Material contact / contact surface	-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85	
Contact carrier material	[°C]		[°C]		[°C]		[°C]	
Inflammability class according to UL 94								
Temperature data								
Plug / socket								

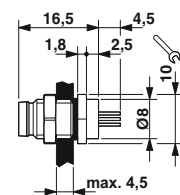
#### Ordering data

#### Ordering data

Description	Coding	3-pos.		4-pos.		6-pos.		8-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Device plug-in connectors</b>									
Socket	A - standard	1694363	20	1694376	20	1436534	20	1424237	20
Plug	A - standard	1694334	20	1694347	20	1436521	20	1424238	20



M8 flush-type socket



M8 flush-type plug

# M5 to M12 circular plug-in connectors

## M5/M8 sensor/actuator device plug-in connectors

**M8, rear mounting,  
with 0.5 m long litz wires**



3, 4-pos.



6, 8-pos.



	Technical data	
	3-pos.	4-pos.
General data		
M8 circular plug-in connector according to:	IEC 61076-2-104	IEC 61076-2-104
Pollution degree	3	3
Degree of protection	IP67	IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	4 A
Volume resistance	≤ 3 mΩ	≤ 3 mΩ
Material data		
Material contact / contact surface	Cu alloy / Au	Cu alloy / Au
Contact carrier material	PUR / PA66	PUR / PA66
Inflammability class according to UL 94	HB	HB
Cable type	TPE litz wire	TPE litz wire
Temperature data		
Plug / socket	[°C] -25 ... 85	[°C] -25 ... 85
Cable, fixed installation	[°C] -25 ... 90	[°C] -25 ... 90



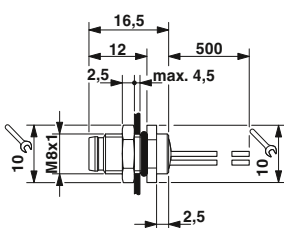
	Technical data	
	6-pos.	8-pos.
General data		
M8 circular plug-in connector according to:	IEC 61076-2-104	IEC 61076-2-104
Pollution degree	3	3
Degree of protection	IP67	IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	30 V	30 V
Rated current	2 A	1.5 A
Volume resistance	≤ 3 mΩ	≤ 3 mΩ
Material data		
Material contact / contact surface	Cu alloy / Au	Cu alloy / Au
Contact carrier material	PUR / PA66	PUR / PA66
Inflammability class according to UL 94	HB	HB
Cable type	TPE litz wire	PVC litz wire
Temperature data		
Plug / socket	[°C] -25 ... 85	[°C] -25 ... 85
Cable, fixed installation	[°C] -25 ... 90	[°C] -25 ... 85

Description	Coding	Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Flush-type plug-in connector, M8 fastening thread</b>					
Plug	A - standard	1453478	1	1453481	1
<b>Flush-type plug-in connector, M10 fastening thread</b>					
Socket	A - standard	1456080	1	1456093	1
<b>Flush-type plug-in connector, M12 fastening thread</b>					
Socket	A - standard	1453449	1	1453452	1

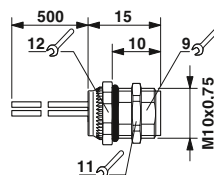
Description	Coding	Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Flush-type plug-in connector, M8 fastening thread</b>					
Plug	A - standard	1453494	1	1424230	1
<b>Flush-type plug-in connector, M10 fastening thread</b>					
Socket	A - standard	1456103	1	1424229	1
<b>Flush-type plug-in connector, M12 fastening thread</b>					
Socket	A - standard	1453465	1		

Accessories	Ordering data	
	Order No.	Pcs. / Pkt.
Flat nut, with: M8 thread	SACC-E-MU-M 8	1504071 100

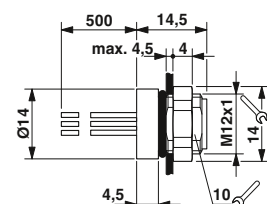
Accessories	Ordering data	
	Order No.	Pcs. / Pkt.
Flat nut, with: M8 thread	SACC-E-MU-M 8	1504071 100



M8 flush-type plug, M8 fastening thread



M8 flush-type socket, M10 fastening thread



M8 flush-type socket, M12 fastening thread

## M5 to M12 circular plug-in connectors

### M5/M8 sensor/actuator device plug-in connectors

**M8, rear mounting, two-piece,  
for wave soldering processes, shielded**



Angled, 3, 4-pos.



Angled, 5, 6-pos.

	Technical data			
	3-pos.		4-pos.	
General data	IEC 61076-2-104		IEC 61076-2-104	
M8 circular plug-in connector according to:	3		3	
Pollution degree	IP67		IP67	
Degree of protection	Solder pins		Solder pins	
Connection method	30 V		30 V	
Electrical data	4 A		4 A	
Rated voltage	$\leq 3 \text{ m}\Omega$		$\leq 3 \text{ m}\Omega$	
Rated current	Cu alloy / Au		Cu alloy / Au	
Volume resistance	PA 66		PA 66	
Material data	HB		HB	
Material contact / contact surface	-25 ... 85		-25 ... 85	
Contact carrier material	30 V		30 V	
Inflammability class according to UL 94	3 A		3 A	
Temperature data	$\leq 3 \text{ m}\Omega$		$\leq 3 \text{ m}\Omega$	
Plug / socket	Cu alloy / Au		Cu alloy / Au	
	PA 66		PA 66	
	HB		HB	
	-25 ... 85		-25 ... 85	

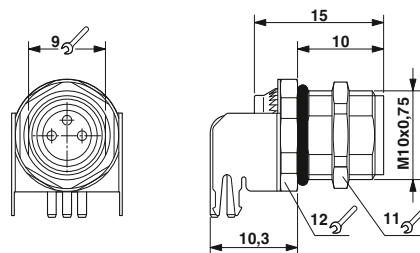
	Technical data			
	5-pos.		6-pos.	
General data	IEC 61076-2-104		IEC 61076-2-104	
M8 circular plug-in connector according to:	3		3	
Pollution degree	IP67		IP67	
Degree of protection	Solder pins		Solder pins	
Connection method	30 V		30 V	
Electrical data	4 A		4 A	
Rated voltage	$\leq 3 \text{ m}\Omega$		$\leq 3 \text{ m}\Omega$	
Rated current	Cu alloy / Au		Cu alloy / Au	
Volume resistance	PA 66		PA 66	
Material data	HB		HB	
Material contact / contact surface	-25 ... 85		-25 ... 85	
Contact carrier material	30 V		30 V	
Inflammability class according to UL 94	3 A		3 A	
Temperature data	$\leq 3 \text{ m}\Omega$		$\leq 3 \text{ m}\Omega$	
Plug / socket	Cu alloy / Au		Cu alloy / Au	
	PA 66		PA 66	
	HB		HB	
	-25 ... 85		-25 ... 85	

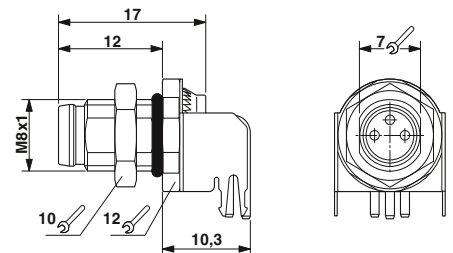
	Coding	Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3-pos.		4-pos.	
<b>Device plug-in connectors</b>					
Socket	A - standard	1456145	20	1456158	20
Plug	A - standard	1456035	20	1456048	20
Socket	B - inverse				
Plug	B - inverse				

	Coding	Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		5-pos.		6-pos.	
Socket		1424239	20	1424243	20
Plug		1424240	20	1424244	20



M8 flush-type socket, angled



M8 flush-type plug, angled



# M5 to M12 circular plug-in connectors

## M5/M8 sensor/actuator device plug-in connectors

**M8, rear mounting, two-piece, for wave soldering processes, unshielded**



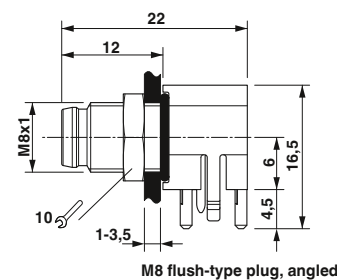
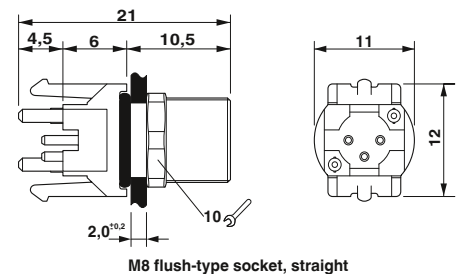
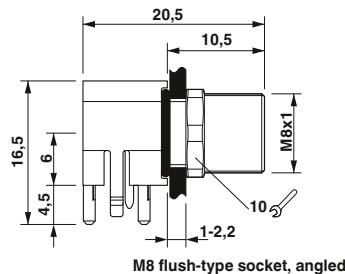
Angled, 3, 4-pos.



Straight, 3, 4-pos.



	Technical data				
	3-pos.		4-pos.		
General data	M8 circular plug-in connector according to:				
Pollution degree	3		3		
Degree of protection	IP67		IP67		
Connection method	Solder pins		Solder pins		
Electrical data					
Rated voltage	60 V		30 V		
Rated current	4 A		4 A		
Volume resistance	≤ 3 mΩ		≤ 3 mΩ		
Material data					
Material contact / contact surface	CuSn / Au		CuSn / Au		
Contact carrier material	PA 66		PA 66		
Inflammability class according to UL 94	HB		HB		
Temperature data					
Plug / socket	-25 ... 85 [°C]		-25 ... 85		
	Ordering data				
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	
Description	3-pos.		4-pos.		
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	
Device plug-in connectors					
Socket	A - standard	1524788	20	1526169	20
Plug	A - standard	1440070	20	1440096	20







# M5 to M12 circular plug-in connectors

## M12 sensor/actuator device plug-in connectors, front mounting

Pg9 fastening thread,  
with 0.5 m long litz wires



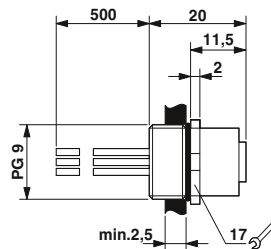
4, 5, 8-pos.



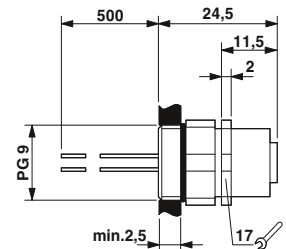
Can be positioned, 4, 5, 8-pos.



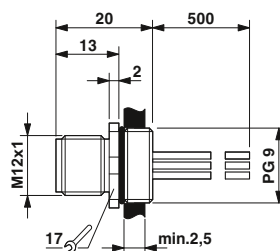
	Technical data			Technical data			
	4-pos.	5-pos.	8-pos.	4-pos.	5-pos.	8-pos.	
General data							
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Pollution degree	3	3	3	3	3	3	
Degree of protection	IP67	IP67	IP67	IP67	IP67	IP67	
Connection method	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage	250 V	60 V	30 V	250 V	60 V	30 V	
Rated current	4 A	4 A	2 A	4 A	4 A	2 A	
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	
Material data							
Material contact / contact surface	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	
Contact carrier material	PA66	PA66	PA66	PA66	PA66	PA66	
Inflammability class according to UL 94	V0	V0	V0	V0	V0	V0	
Cable type	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	
Temperature data							
Plug / socket	[-25 ... 85 °C]	[-25 ... 85 °C]	[-25 ... 85 °C]	[-25 ... 85 °C]	[-25 ... 85 °C]	[-25 ... 85 °C]	
<b>Ordering data</b>							
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.	5-pos.	8-pos.	4-pos.	5-pos.	8-pos.
<b>Device plug-in connectors</b>							
Socket	A - standard	1693788	1	1671098	1	1513758	1
Plug	A - standard	1693762	1	1671111	1	1513774	1
Socket	B - inverse						
Plug	B - inverse						
<b>Accessories</b>							
Flat nut, with: Pg9 thread		SACC-E-MU-PG9		1504084		100	



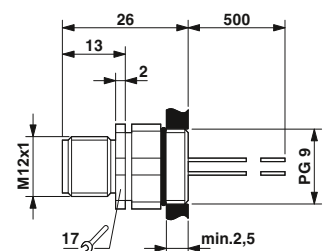
M12 flush-type socket



M12 flush-type socket, can be positioned



M12 flush-type plug



M12 flush-type plug, can be positioned

# M5 to M12 circular plug-in connectors

## M12 sensor/actuator device plug-in connectors, front mounting

M16 fastening thread,  
with 0.5 m long litz wires



4, 5, 8-pos.



12, 17-pos.



	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3
Degree of protection	IP67	IP67	IP67
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ
Material data			
Material contact / contact surface	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au
Contact carrier material	PA 66	PA 66	PA 66
Inflammability class according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug / socket	-25 ... 85	-25 ... 85	-25 ... 85



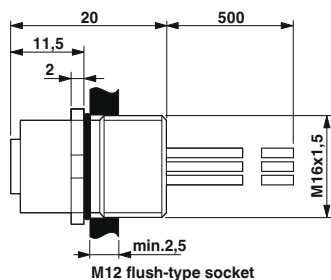
	Technical data		
	12-pos.	17-pos.	
General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	-
Pollution degree	3	3	-
Degree of protection	IP67	IP67	-
Connection method	Individual wires	Individual wires	-
Electrical data			
Rated voltage	30 V	30 V	-
Rated current	1.5 A	1.5 A	-
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	-
Material data			
Material contact / contact surface	CuZn / Ni/Au	CuZn / Ni/Au	- / -
Contact carrier material	PA 66	PA 66	-
Inflammability class according to UL 94	V0	V0	-
Cable type	TPE litz wire	TPE litz wire	-
Temperature data			
Plug / socket	-25 ... 85	-25 ... 85	-

Description	Coding	Ordering data					
		4-pos.		5-pos.		8-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Device plug-in connectors</b>							
Socket	A - standard	1523434	1	1520039	1	1523476	1
Plug	A - standard	1523450	1	1520055	1	1523492	1
Socket	D - data	1535202	1				
Plug	D - data	1551558	1				
Socket	B - inverse			1520000	1		
Plug	B - inverse			1520013	1		

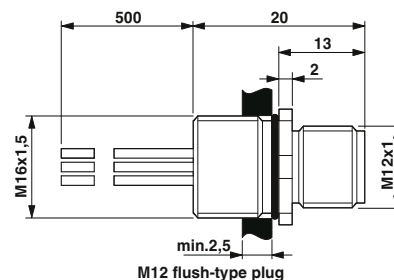
Description	Coding	Ordering data					
		12-pos.		17-pos.			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Device plug-in connectors</b>							
Socket	A - standard	1556252	1	1556294	1		
Plug	A - standard	1556265	1	1556304	1		

	Accessories		
	Order No.	Pcs. / Pkt.	
Flat nut, with: M16 thread	SACC-E-MU-M16	1504097	100

	Accessories		
	Order No.	Pcs. / Pkt.	
Flat nut, with: M16 thread	SACC-E-MU-M16	1504097	100



M12 flush-type socket



M12 flush-type plug

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, front mounting

M16 fastening thread, with 0.5 m long litz wires, can be positioned



Can be positioned, 4, 5-pos.



Can be positioned, 8-pos.



#### Technical data

General data	
M12 circular plug-in connector according to:	IEC 61076-2-101
Pollution degree	3
Degree of protection	IP67
Connection method	Individual wires
Electrical data	
Rated voltage	250 V
Rated current	4 A
Volume resistance	≤ 3 mΩ
Material data	
Material contact / contact surface	CuZn / Ni/Au
Contact carrier material	PA 66
Inflammability class according to UL 94	V0
Cable type	TPE litz wire
Temperature data	
Plug / socket	[-25 ... 85] °C

4-pos.

5-pos.



#### Ordering data

Description	Coding	4-pos.		5-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Device plug-in connectors</b>					
Socket	A - standard	1523447	1	1520042	1
Plug	A - standard	1523463	1	1520068	1
Socket	D - data	1535215	1		
Plug	D - data	1552256	1		
Socket	B - inverse			1519998	1
Plug	B - inverse			1520026	1



#### Technical data

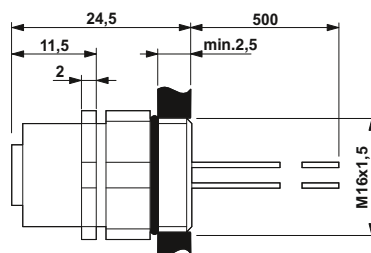
General data	
M12 circular plug-in connector according to:	IEC 61076-2-101
Pollution degree	3
Degree of protection	IP67
Connection method	Individual wires
Electrical data	
Rated voltage	30 V
Rated current	2 A
Volume resistance	≤ 3 mΩ
Material data	
Material contact / contact surface	CuZn / Ni/Au
Contact carrier material	PA 66
Inflammability class according to UL 94	V0
Cable type	TPE litz wire
Temperature data	
Plug / socket	[-25 ... 85] °C

8-pos.

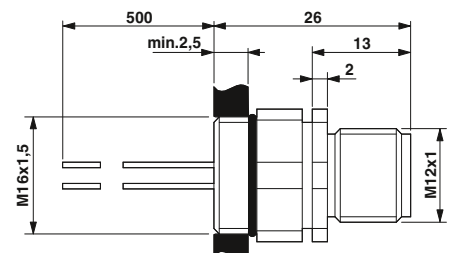


#### Ordering data

Description	Coding	8-pos.	
		Order No.	Pcs. / Pkt.
<b>Device plug-in connectors</b>			
Socket	A - standard	1523489	1
Plug	A - standard	1523502	1



M12 flush-type socket, can be positioned



M12 flush-type plug, can be positioned

**M20 fastening thread,  
with 0.5 m long litz wires**

**N**

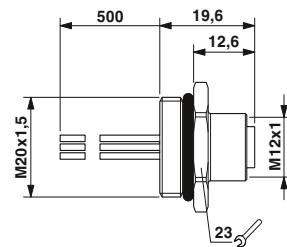
– Housing material: brass, nickel-plated



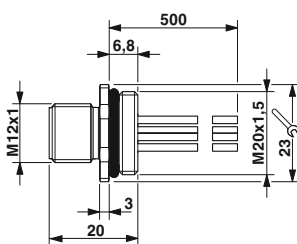
4, 5, 8-pos.

	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3
Degree of protection	IP67/IP69K	IP67/IP69K	IP67/IP69K
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ
Material data			
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66
Inflammability class according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug / socket	[°C]	[°C]	[°C]
Cable, fixed installation	-25 ... 85	-25 ... 85	-25 ... 85
	-25 ... 90	-25 ... 90	-25 ... 90

Description	Coding	Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.	
<b>Device plug-in connectors</b>							
Socket	A - standard	1408436	1	1408454	1	1408453	1
Plug	A - standard	1408451	1	1408446	1	1408442	1



M12 flush-type socket



M12 flush-type plug

## M5 to M12 circular plug-in connectors

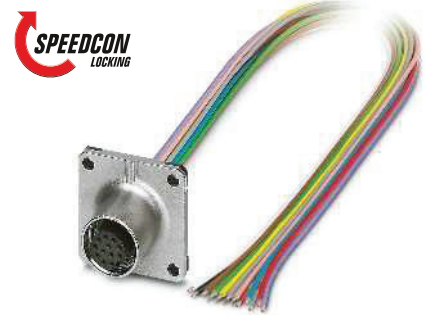
### M12 sensor/actuator device plug-in connectors, front mounting

One-piece, 20 mm square flange, with 0.5 m long litz wires

- 4 x fixing hole, 3.2 mm
- With form seal for M3 screws



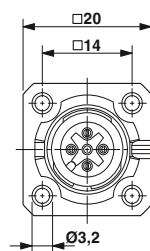
4, 5, 8-pos.



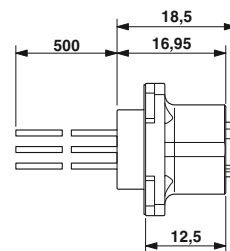
12, 17-pos.



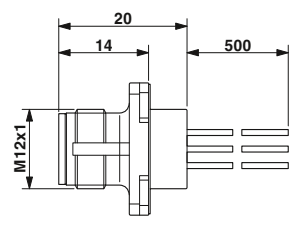
	Technical data			Technical data			
	4-pos.	5-pos.	8-pos.	12-pos.	17-pos.		
General data							
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	-	
Pollution degree	3	3	3	3	3	-	
Degree of protection	IP67	IP67	IP67	IP67	IP67	-	
Connection method	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	-	
Electrical data							
Rated voltage	250 V	60 V	30 V	30 V	30 V	-	
Rated current	4 A	4 A	2 A	1.5 A	1.5 A	-	
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	-	
Material data							
Material contact / contact surface	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	- / -	
Contact carrier material	PA 66	PA 66	PA 66	PA 66	PA 66	-	
Inflammability class according to UL 94	V0	V0	V0	V0	V0	-	
Cable type	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	-	
Temperature data							
Plug / socket	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-	
	Ordering data			Ordering data			
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
<b>Device plug-in connectors</b>							
Socket	A - standard	1419797	1	1441655	1	1441697	1
Plug	A - standard	1419784	1	1441642	1	1441684	1
Socket	D - data	1441639	1			1441707	1
Plug	D - data	1441626	1			1441723	1
Socket	B - inverse			1441671	1		
Plug	B - inverse			1441668	1		



M12 flush-type socket, square flange



M12 flush-type plug, square flange

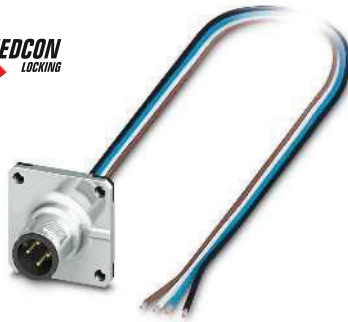


# M5 to M12 circular plug-in connectors

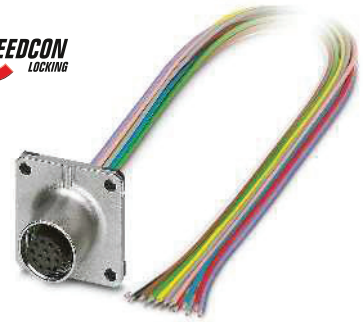
## M12 sensor/actuator device plug-in connectors, front mounting

One-piece, 25 mm square flange, with 0.5 m long litz wires

- 4 x fixing hole, 2.7 mm
- With form seal for M2.5 screws



4, 5, 8-pos.

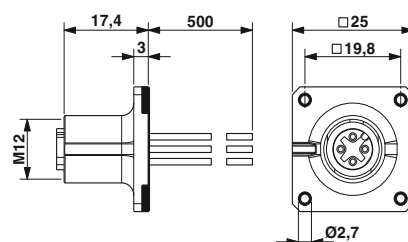


12, 17-pos.

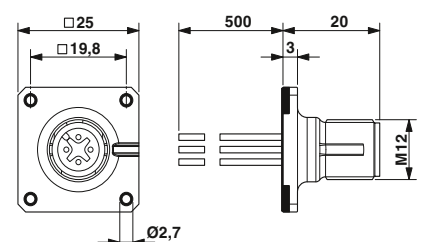


	Technical data			Technical data		
	4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data						
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	-
Pollution degree	3	3	3	3	3	-
Degree of protection	IP67	IP67	IP67	IP67	IP67	-
Connection method	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	-
Electrical data						
Rated voltage	250 V	60 V	30 V	30 V	30 V	-
Rated current	4 A	4 A	2 A	1.5 A	1.5 A	-
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	-
Material data						
Material contact / contact surface	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	- / -
Contact carrier material	PA 66	PA 66	PA 66	PA 66	PA 66	-
Inflammability class according to UL 94	V0	V0	V0	V0	V0	-
Cable type	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	-
Temperature data						
Plug / socket	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-

Description	Coding	Ordering data									
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.				
<b>Device plug-in connectors</b>											
Socket	A - standard	1420003	1	1440986	1	1441574	1	1441590	1	1441613	1
Plug	A - standard	1419991	1	1440973	1	1441561	1	1441587	1	1441600	1
Socket	D - data	1440960	1								
Plug	D - data	1440957	1								
Socket	B - inverse			1441558	1						
Plug	B - inverse			1440999	1						



M12 flush-type socket, square flange



M12 flush-type plug, square flange

# M5 to M12 circular plug-in connectors

## M12 sensor/actuator device plug-in connectors, front mounting

Modular, 25 mm square flange, pre-assembled



Flange housing, housing bore holes 3.2 mm



With 0.5 m long litz wires, assembled contact carrier and insulating body



### Technical data

General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	-	-
Pollution degree	-	-	-
Degree of protection	-	-	-
Connection method	-	-	-
Electrical data			
Rated voltage	-	-	-
Rated current	-	-	-
Volume resistance	-	-	-
Material data			
Material contact / contact surface	- / -	- / -	- / -
Contact carrier material	-	-	-
Cable gland material	Zinc die-cast, nickel-plated	-	-
Inflammability class according to UL 94	-	-	-
Cable type	-	-	-
Temperature data			
Plug / socket	[°C]	-25 ... 85	-
Cable, fixed installation	[°C]	-	-

### Ordering data

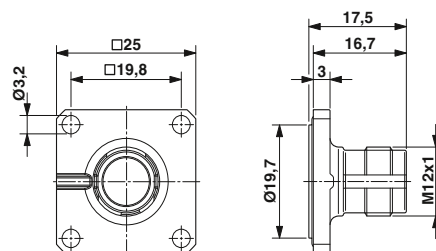
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.	5-pos.	8-pos.			
Square flange housing, with O-ring		1419959	10				
Assembled contact carrier and insulating body, with 0.5 m litz wires and crimp contacts							
Plug	A - standard						
Plug	D - data						
Plug	B - inverse						

### Technical data

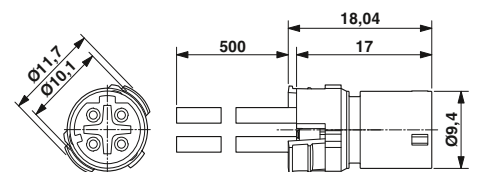
4-pos.	5-pos.	8-pos.
IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
3	3	3
IP67	IP67	IP67
Crimp contacts	Crimp contacts	Crimp contacts
250 V	60 V	30 V
4 A	4 A	2 A
≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ
CuZn / Au	CuZn / Au	CuZn / Au
PA 66	PA 66	PA 66
-	-	-
V0	V0	V0
TPE litz wire	TPE litz wire	TPE litz wire
-25 ... 85	-25 ... 85	-25 ... 85
-25 ... 85	-25 ... 85	-25 ... 85

### Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4-pos.	5-pos.	8-pos.			
1440805	1	1440818	1	1457827	1
1440821	1	1440759	1		



M12 square flange housing



M12 contact carrier, with litz wires



Modular, 25 mm square flange,  
for free assembly



Flange housing,  
housing bore holes 3.2 mm



Contact carriers  
and insulating bodies for assembly



### Technical data

General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	-	-
Pollution degree	-	-	-
Degree of protection	-	-	-
Connection method	-	-	-
Electrical data			
Rated voltage	-	-	-
Rated current	-	-	-
Volume resistance	-	-	-
Material data			
Contact carrier material	-	-	-
Cable gland material	Zinc die-cast, nickel-plated	-	-
Inflammability class according to UL 94	-	-	-
Temperature data			
Plug / socket	-25 ... 85	-	-



### Technical data

4-pos.	5-pos.	8-pos.
IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
3	3	3
IP67	IP67	IP67
Crimp contacts	Crimp contacts	Crimp contacts
250 V	60 V	30 V
4 A	4 A	2 A
≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ
PA 66	PA 66	PA 66
-	-	-
V0	V0	V0
-25 ... 85	-25 ... 85	-25 ... 85

### Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.	5-pos.	8-pos.	8-pos.		
Square flange housing, with O-ring		1419959	10				
Contact carriers and insulating bodies							
Plug	A - standard						
Plug	D - data						
Plug	B - inverse						

### Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4-pos.	5-pos.	8-pos.	8-pos.	8-pos.	8-pos.
1440931	10	1419988	10	1440928	10
1440944	10	1440915	10		
		1452356	100	1452356	100
				1452372	100

**Crimp contacts**, for 4 and 5-pos. contact carriers, contact material: CuZn, surface: gold-plated, connection cross section: 0.08 mm<sup>2</sup> ... 0.34 mm<sup>2</sup>

Contact Ø: 1.0 mm

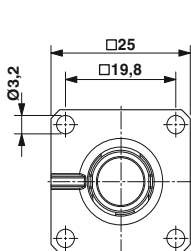
**Crimp contacts**, for 8-pos. contact carriers, contact material: CuZn, surface: gold-plated, connection cross section: 0.08 mm<sup>2</sup> ... 0.34 mm<sup>2</sup>  
Contact Ø: 0.8 mm

### Accessories

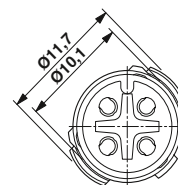
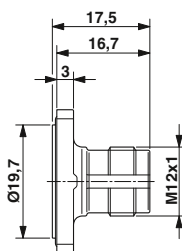
Order No.	Pcs. / Pkt.

### Accessories

Order No.	Pcs. / Pkt.
CRIMPFOX-TC MP	1212510 1



M12 square flange housing



M12 contact carrier

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, front mounting

One-piece, 20 mm square flange, for wave soldering processes

- M12 PCB connector for direct soldering with integrated torsion protection and shield connection

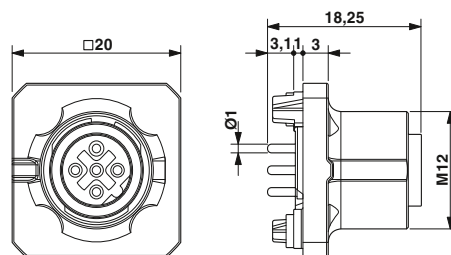


4, 5-pos.

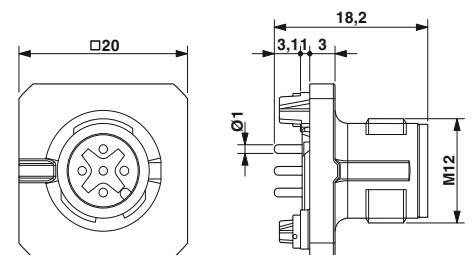


8-pos.

	Technical data		Technical data		Technical data			
	4-pos.	5-pos.	8-pos.					
General data								
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101			-		
Pollution degree	3	3	3			-		
Degree of protection	IP67	IP67	IP67			-		
Connection method	Solder pins	Solder pins	Solder pins			-		
Electrical data								
Rated voltage	250 V	60 V	30 V			-		
Rated current	4 A	4 A	2 A			-		
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ			-		
Material data								
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au			- / -		
Contact carrier material	PA 66	PA 66	PA 66			-		
Inflammability class according to UL 94	V0	V0	V0			-		
Temperature data								
Plug / socket	[°C]	-25 ... 85	-25 ... 85			-		
	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Description	Coding							
<b>Device plug-in connectors</b>								
Socket	A - standard	1456420	10	1456446	10	1408573	10	
Plug	A - standard	1456417	10	1456433	10	1408574	10	
Socket	D - data	1456404	10					
Plug	D - data	1456394	10					
Socket	B - inverse			1456462	10			
Plug	B - inverse			1456459	10			



M12 flush-type socket, square flange (4/5-pos. version)



M12 flush-type plug, square flange (4/5-pos. version)

# M5 to M12 circular plug-in connectors

## M12 sensor/actuator device plug-in connectors, front mounting

Contact carrier, plastic,  
with solder cups or with litz wires



Solder connection, 5, 8-pos.



With 0.5 m long litz wires, 5, 8-pos.



### Technical data

General data	
M12 circular plug-in connector according to:	
Pollution degree	3
Degree of protection	IP67
Connection method	Solder cup
Electrical data	
Rated voltage	60 V
Rated current	4 A
Volume resistance	≤ 3 mΩ
Material data	
Material contact / contact surface	CuZn / Au
Contact carrier material	PA 66
Inflammability class according to UL 94	HB
Cable type	-
Temperature data	
Plug / socket	[°C]
Cable, fixed installation	[°C]

5-pos.		8-pos.	
IEC 61076-2-101		IEC 61076-2-101	
3		3	
IP67		IP67	
Solder cup		Solder cup	
60 V		30 V	
4 A		2 A	
≤ 3 mΩ		≤ 3 mΩ	
CuZn / Au		CuZn / Au	
PA 66		PA 66	
HB		HB	
-		-	
-25 ... 85		-25 ... 85	
-		-	



### Technical data

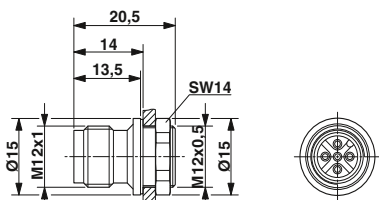
5-pos.		8-pos.	
IEC 61076-2-101		IEC 61076-2-101	
3		3	
IP67		IP67	
Individual wires		Individual wires	
60 V		30 V	
4 A		2 A	
≤ 3 mΩ		≤ 3 mΩ	
CuZn / Au		CuZn / Au	
PA 66		PA 66	
HB		HB	
TPE litz wire		TPE litz wire	
-25 ... 85		-25 ... 85	
-25 ... 90		-25 ... 90	

### Ordering data

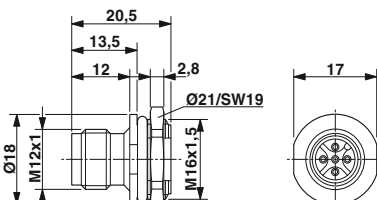
Description	Coding
Flush-type plug-in connector, M16 fastening thread	
Plug	A - standard
Flush-type plug-in connector, M12 fastening thread	
Plug	A - standard

5-pos.		8-pos.	
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
1436398	20	1436408	20
1436437	20	1436440	20

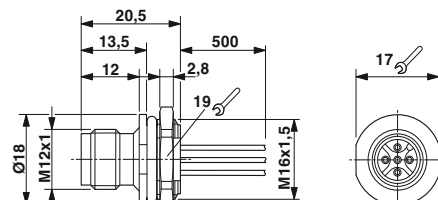
5-pos.		8-pos.	
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
1436411	1	1436424	1



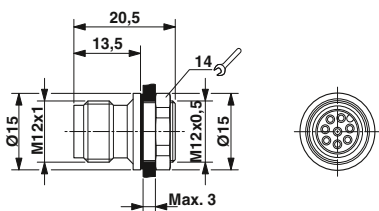
M12 pin, M12 fastening thread, solder cups



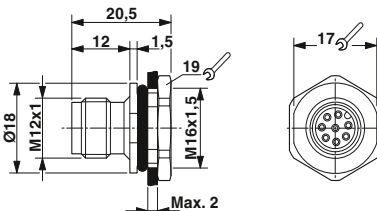
M12 pin, M16 fastening thread, solder cups



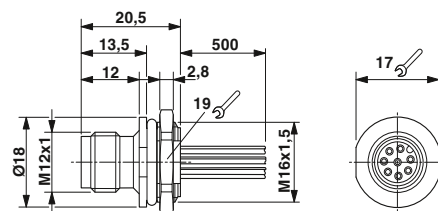
M12 pin, M16 fastening thread



M12 pin, M12 fastening thread, solder cups



M12 pin, M16 fastening thread, solder cups



M12 pin, M16 fastening thread

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

Pg9 fastening thread,  
with 0.5 m long litz wires



4, 5, 8-pos.



12, 17-pos.



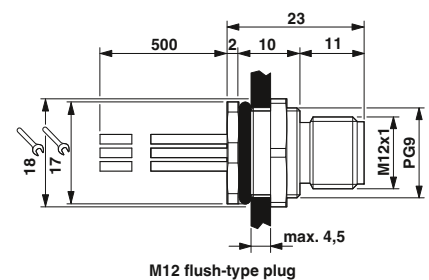
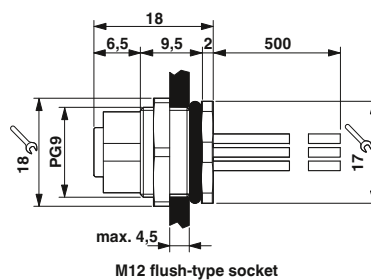
	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3
Degree of protection	IP67	IP67	IP67
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ
Material data			
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66
Inflammability class according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug / socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85
Cable, fixed installation [°C]	-25 ... 85	-25 ... 85	-25 ... 85



	Technical data		
	12-pos.	17-pos.	
General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	-
Pollution degree	3	3	-
Degree of protection	IP67	IP67	-
Connection method	Individual wires	Individual wires	-
Electrical data			
Rated voltage	30 V	30 V	-
Rated current	1.5 A	1.5 A	-
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	-
Material data			
Material contact / contact surface	CuZn / Au	CuZn / Au	- / -
Contact carrier material	PA 66	PA 66	-
Inflammability class according to UL 94	V0	V0	-
Cable type	TPE litz wire	TPE litz wire	-
Temperature data			
Plug / socket [°C]	-25 ... 85	-25 ... 85	-
Cable, fixed installation [°C]	-25 ... 85	-25 ... 85	-

Description	Coding	Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.	
<b>Device plug-in connectors</b>							
Socket	A - standard	1556621	1	1542729	1	1542732	1
Plug	A - standard	1556618	1	1542703	1	1542716	1
Socket	D - data	1551529	1				
Plug	D - data	1551532	1				
Socket	B - inverse			1543676	1		
Plug	B - inverse			1543663	1		

Description	Coding	Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		12-pos.		17-pos.		Order No.	Pcs. / Pkt.
<b>Device plug-in connectors</b>							
Socket	A - standard	1430446	1	1430462	1		
Plug	A - standard	1430459	1	1430475	1		



# M5 to M12 circular plug-in connectors

## M12 sensor/actuator device plug-in connectors, rear mounting

M12 fastening thread,  
with 0.5 m long litz wires



4, 5, 8-pos.



12, 17-pos.



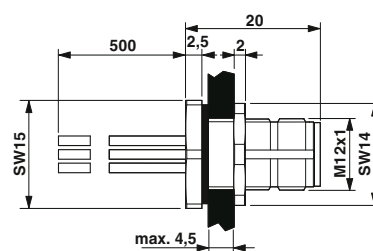
	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3
Degree of protection	IP67	IP67	IP67
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ
Material data			
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66
Inflammability class according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug / socket	[°C]	[°C]	[°C]
Cable, fixed installation	-25 ... 85	-25 ... 85	-25 ... 85



	Technical data		
	12-pos.	17-pos.	
General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	-
Pollution degree	3	3	-
Degree of protection	IP67	IP67	-
Connection method	Individual wires	Individual wires	-
Electrical data			
Rated voltage	30 V	30 V	-
Rated current	1.5 A	1.5 A	-
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	-
Material data			
Material contact / contact surface	CuZn / Au	CuZn / Au	-/-
Contact carrier material	PA 66	PA 66	-
Inflammability class according to UL 94	V0	V0	-
Cable type	TPE litz wire	TPE litz wire	-
Temperature data			
Plug / socket	-25 ... 85	-25 ... 85	-
Cable, fixed installation	-25 ... 85	-25 ... 85	-

Description	Coding	Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.	
<b>Device plug-in connectors</b>							
Plug	A - standard	1551875	1	1551888	1	1551914	1
Plug	D - data	1551901	1				
Plug	B - inverse			1551891	1		

Description	Coding	Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		12-pos.		17-pos.			
<b>Device plug-in connectors</b>							
Plug	A - standard	1437122	1	1437135	1		



M12 flush-type plug, M12 fastening thread

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

#### M16 fastening thread, with 0.5 m long litz wires



4, 5, 8-pos.



12, 17-pos.



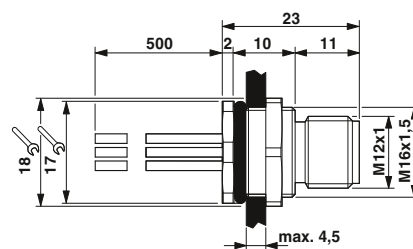
	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular plug-in connector According to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3
Degree of protection	IP67	IP67	IP67
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ
Material data			
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66
Inflammability class according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug / socket	[°C]	[°C]	[°C]
Cable, fixed installation	-25 ... 85	-25 ... 85	-25 ... 85



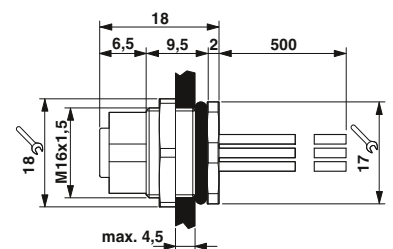
	Technical data		
	12-pos.	17-pos.	
General data			
M12 circular plug-in connector According to:	IEC 61076-2-101	IEC 61076-2-101	-
Pollution degree	3	3	-
Degree of protection	IP67	IP67	-
Connection method	Individual wires	Individual wires	-
Electrical data			
Rated voltage	30 V	30 V	-
Rated current	1.5 A	1.5 A	-
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	-
Material data			
Material contact / contact surface	CuZn / Au	CuZn / Au	- / -
Contact carrier material	PA 66	PA 66	-
Inflammability class according to UL 94	V0	V0	-
Cable type	TPE litz wire	TPE litz wire	-
Temperature data			
Plug / socket	-25 ... 85	-25 ... 85	-
Cable, fixed installation	-25 ... 85	-25 ... 85	-

Description	Coding	Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.	
<b>Device plug-in connectors</b>							
Socket	A - standard	1419632	1	1419658	1	1419690	1
Plug	A - standard	1419629	1	1419645	1	1419687	1
Socket	D - data	1419616	1				
Plug	D - data	1419603	1				
Socket	B - inverse			1419674	1		
Plug	B - inverse			1419661	1		

Description	Coding	Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		12-pos.		17-pos.		Order No.	Pcs. / Pkt.
<b>Device plug-in connectors</b>							
Socket	A - standard	1419713	1	1419739	1		
Plug	A - standard	1419700	1	1419726	1		



M12 flush-type plug



M12 flush-type socket

# M5 to M12 circular plug-in connectors

## M12 sensor/actuator device plug-in connectors, rear mounting

M16 fastening thread,  
with assembled cable, shielded

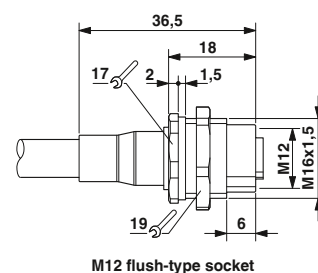
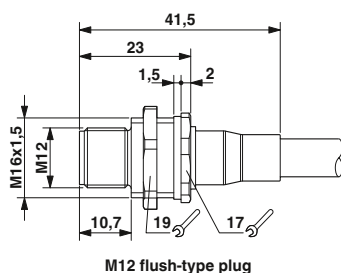


PUR cable, 4, 5, 8-pos., shielded



PVC cable, 12, 17-pos., shielded

	Technical data			Technical data								
	4-pos.	5-pos.	8-pos.	12-pos.	17-pos.							
General data												
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	-						
Pollution degree	3	3	3	3	3	-						
Degree of protection	IP67	IP67	IP67	IP67	IP67	-						
Connection method	Free cable end	Free cable end	Free cable end	Free cable end	Free cable end	-						
Electrical data												
Rated voltage	60 V	60 V	30 V	30 V	30 V	-						
Rated current	4 A	4 A	2 A	1.5 A	1.5 A	-						
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	-						
Material data												
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	- / -						
Contact carrier material	PA 66	PA 66	PA 66	PA 66	PA 66	-						
Inflammability class according to UL 94	V0	V0	V0	V0	V0	-						
Cable type	PUR halogen-free black	PUR halogen-free black	PUR halogen-free black	PVC black	PVC black	-						
Temperature data												
Plug / socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-						
Cable, fixed installation [°C]	-30 ... 85	-30 ... 85	-30 ... 85	-30 ... 85	-30 ... 85	-						
	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
<b>Flush-type plug-in connector, A-coded</b>												
Socket	1 m	1419302	1	1419328	1	1419357	1	1442188	1	1442269	1	
Plug	1 m	1419399	1	1419409	1	1419425	1	1442227	1	1442308	1	
Socket	2 m	1419315	1	1419331	1	1419344	1	1442191	1	1442272	1	
Plug	2 m	1419386	1	1419412	1	1419438	1	1442230	1	1442311	1	



## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

Pg9 fastening thread, one-piece, for wave soldering processes



Straight, 4, 5, 8-pos.



Straight, 12, 17-pos.



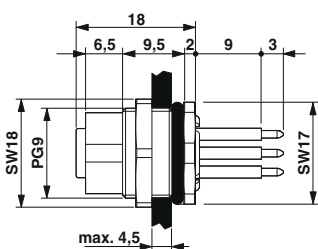
	Technical data					
	4-pos.		5-pos.		8-pos.	
General data	M12 circular plug-in connector according to:					
Pollution degree	3		3		3	
Degree of protection	IP67		IP67		IP67	
Connection method	Solder pins		Solder pins		Solder pins	
Electrical data	250 V		60 V		30 V	
Rated voltage	4 A		4 A		2 A	
Rated current	≤ 3 mΩ		≤ 3 mΩ		≤ 3 mΩ	
Volume resistance	CuZn / Au		CuZn / Au		CuZn / Au	
Material data	PA 66		PA 66		PA 66	
Material contact / contact surface	V0		V0		V0	
Contact carrier material	-25 ... 85		-25 ... 85		-25 ... 85	
Inflammability class according to UL 94	-		-		-	
Temperature data	-		-		-	
Plug / socket	[°C]		[°C]		[°C]	

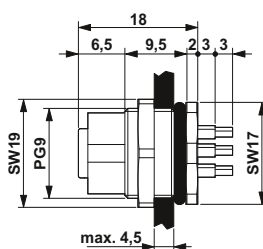
	Technical data					
	12-pos.		17-pos.			
General data	M12 circular plug-in connector according to:					
Pollution degree	3		3		-	
Degree of protection	IP67		IP67		-	
Connection method	Solder pins		Solder pins		-	
Electrical data	30 V		30 V		-	
Rated voltage	1.5 A		1.5 A		-	
Rated current	≤ 3 mΩ		≤ 3 mΩ		-	
Volume resistance	CuZn / Au		CuZn / Au		- / -	
Material data	PA 66		PA 66		-	
Material contact / contact surface	V0		V0		-	
Contact carrier material	-25 ... 85		-25 ... 85		-	
Inflammability class according to UL 94	-		-		-	
Temperature data	-		-		-	
Plug / socket	[°C]		[°C]		[°C]	

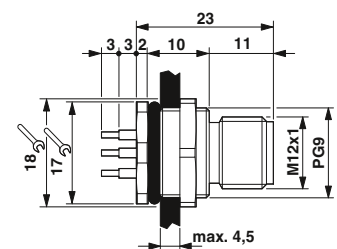
Description	Coding	Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Device plug-in connector, solder pin length: 6 mm</b>							
Socket	A - standard	1553462	20	1542761	20	1542774	20
Plug	A - standard	1553459	20	1542745	20	1542758	20
Socket	D - data	1551503	20				
Plug	D - data	1551516	20				
Socket	B - inverse			1543650	20		
Plug	B - inverse			1543647	20		
<b>Device plug-in connector, solder pin length: 12 mm</b>							
Socket	A - standard			1552285	20	1408770	20
Plug	A - standard			1552311	20		
Socket	D - data	1552272	20				
Plug	D - data	1552308	20				
Socket	B - inverse			1552298	20		
Plug	B - inverse			1552324	20		



M12 flush-type socket, contact length: 12 mm



M12 flush-type socket, contact length: 6 mm



M12 flush-type plug, contact length: 6 mm



Pg9 fastening thread, one-piece, for wave soldering processes, shielded



Ethernet



Straight, 4, 5, 8-pos.



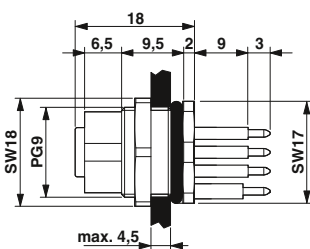
Straight, 12, 17-pos.



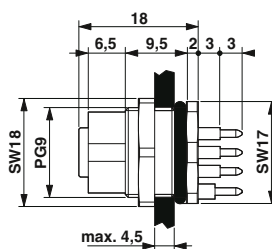
	Technical data			Technical data		
	4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data	M12 circular plug-in connector according to:					
Pollution degree	3	3	3	3	3	-
Degree of protection	IP67	IP67	IP67	IP67	IP67	-
Connection method	Solder pins	Solder pins	Solder pins	Solder pins	Solder pins	-
Electrical data						
Rated voltage	250 V	60 V	30 V	30 V	30 V	-
Rated current	4 A	4 A	2 A	1.5 A	1.5 A	-
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	-
Material data						
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	- / -
Contact carrier material	PA 66	PA 66	PA 66	PA 66	PA 66	-
Inflammability class according to UL 94	V0	V0	V0	V0	V0	-
Temperature data						
Plug / socket	[-25 ... 85			[-25 ... 85		

Description	Coding	Ordering data			Ordering data		
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Device plug-in connector, solder pin length: 6 mm</b>							
Socket	A - standard	1556841	20	1553019	20	1553860	20
Plug	A - standard			1553048	20	1553873	20
Socket	D - data	1553006	20			1436770	20
Plug	D - data	1553035	20			1436783	20
Socket	B - inverse			1553022	20	1436806	20
Plug	B - inverse			1553051	20	1436819	20
<b>Device plug-in connector, solder pin length: 12 mm</b>							
Socket	A - standard	1558522	20	1558548	20	1408771	20
Plug	A - standard	1558535	20	1558551	20		
Socket	D - data	1558506	20				
Plug	D - data	1558519	20				
Socket	B - inverse			1558564	20		
Plug	B - inverse			1558577	20		

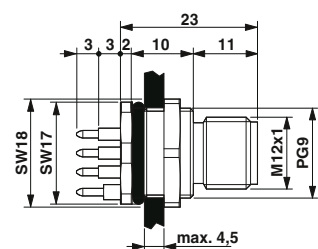
Accessories		Accessories	
EMC hexagonal nuts with fine toothing, for all flush-type plug-in connectors with: Pg9 fastening thread	SACC-PG9-KD-NUT-SH	1440177	10



M12 flush-type socket, contact length: 12 mm



M12 flush-type socket, contact length: 6 mm



M12 flush-type plug, contact length: 6 mm

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

M12 fastening thread, one-piece, for wave soldering processes



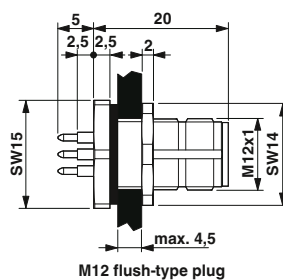
Straight, 4, 5, 8-pos.



Straight, 12, 17-pos.



	Technical data						
	4-pos.		5-pos.		8-pos.		
General data							
M12 circular plug-in connector according to:	IEC 61076-2-101		IEC 61076-2-101		IEC 61076-2-101		
Pollution degree	3		3		3		
Degree of protection	IP67		IP67		IP67		
Connection method	Solder pins		Solder pins		Solder pins		
Electrical data							
Rated voltage	250 V		60 V		30 V		
Rated current	4 A		4 A		2 A		
Volume resistance	≤ 3 mΩ		≤ 3 mΩ		≤ 3 mΩ		
Material data							
Material contact / contact surface	CuZn / Au		CuZn / Au		CuZn / Au		
Contact carrier material	PA 66		PA 66		PA 66		
Inflammability class according to UL 94	V0		V0		V0		
Temperature data							
Plug / socket [°C]	-25 ... 85		-25 ... 85		-25 ... 85		
	Ordering data						
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	
Description	Coding		Coding		Coding		
<b>Device plug-in connectors</b>							
Plug	A - standard	1551820	20	1551833	20	1551862	20
Plug	D - data	1551859	20			1559945	20
Plug	B - inverse			1551846	20	1559974	20



M12 fastening thread, one-piece, for wave soldering processes, shielded



Straight, 4, 5, 8-pos.



Straight, 12, 17-pos.



	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3
Degree of protection	IP67	IP67	IP67
Connection method	Solder pins	Solder pins	Solder pins
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ
Material data			
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66
Inflammability class according to UL 94	V0	V0	V0
Temperature data			
Plug / socket	-25 ... 85	-25 ... 85	-25 ... 85



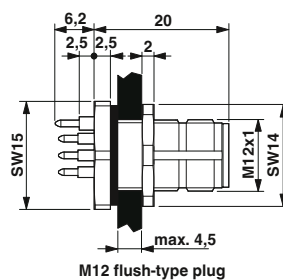
	Technical data		
	12-pos.	17-pos.	
General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	-
Pollution degree	3	3	-
Degree of protection	IP67	IP67	-
Connection method	Solder pins	Solder pins	-
Electrical data			
Rated voltage	30 V	30 V	-
Rated current	1.5 A	1.5 A	-
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	-
Material data			
Material contact / contact surface	CuZn / Au	CuZn / Au	-/-
Contact carrier material	PA 66	PA 66	-
Inflammability class according to UL 94	V0	V0	-
Temperature data			
Plug / socket	-25 ... 85	-25 ... 85	-

Description	Coding	Ordering data					
		4-pos.		5-pos.		8-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Device plug-in connectors</b>							
Plug	A - standard	1552955	20	1552968	20	1552997	20
Plug	D - data	1552984	20				
Plug	B - inverse			1552971	20		

Description	Coding	Ordering data					
		12-pos.		17-pos.			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Device plug-in connectors</b>							
Plug	A - standard	1437106	20	1437119	20		

Accessories		
EMC hexagonal nuts with fine toothing, for all flush-type plug-in connectors with:		
M12 fastening thread	SACC-M12-KD-NUT-SH	1440151 10

Accessories		
EMC hexagonal nuts with fine toothing, for all flush-type plug-in connectors with:		
M12 fastening thread	SACC-M12-KD-NUT-SH	1440151 10



## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

### M16 fastening thread, one-piece, for wave soldering processes



Straight, 4, 5, 8-pos.



Straight, 12, 17-pos.



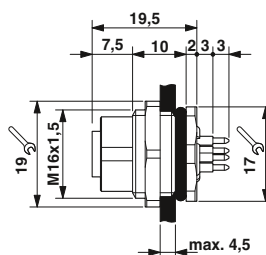
	Technical data					
	4-pos.		5-pos.		8-pos.	
General data	IEC 61076-2-101					
M12 circular plug-in connector according to:	IEC 61076-2-101		IEC 61076-2-101		IEC 61076-2-101	
Pollution degree	3		3		3	
Degree of protection	IP67		IP67		IP67	
Connection method	Solder pins		Solder pins		Solder pins	
Electrical data	250 V		60 V		30 V	
Rated voltage	4 A		4 A		2 A	
Rated current	≤ 3 mΩ		≤ 3 mΩ		≤ 3 mΩ	
Volume resistance	CuZn / Au		CuZn / Au		CuZn / Au	
Material data	PA 66		PA 66		PA 66	
Material contact / contact surface	V0		V0		V0	
Contact carrier material	-25 ... 85		-25 ... 85		-25 ... 85	
Inflammability class according to UL 94	-		-		-	
Temperature data	-		-		-	
Plug / socket	[°C]		[°C]		[°C]	

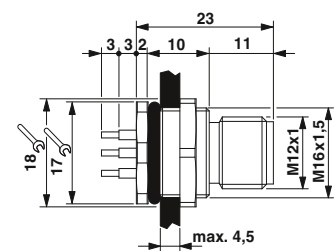
	Technical data					
	12-pos.		17-pos.			
General data	IEC 61076-2-101					
M12 circular plug-in connector according to:	IEC 61076-2-101		IEC 61076-2-101		-	
Pollution degree	3		3		-	
Degree of protection	IP67		IP67		-	
Connection method	Solder pins		Solder pins		-	
Electrical data	30 V		30 V		-	
Rated voltage	1.5 A		1.5 A		-	
Rated current	≤ 3 mΩ		≤ 3 mΩ		-	
Volume resistance	CuZn / Au		CuZn / Au		- / -	
Material data	PA 66		PA 66		-	
Material contact / contact surface	V0		V0		-	
Contact carrier material	-25 ... 85		-25 ... 85		-	
Inflammability class according to UL 94	-		-		-	
Temperature data	-		-		-	
Plug / socket	[°C]		[°C]		[°C]	

Description	Coding	Ordering data									
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.				
<b>Device plug-in connectors</b>		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.	
Socket	A - standard	1419755	20	1441778	20	1441817	20	1441833	20	1441859	20
Plug	A - standard	1419742	20	1441765	20	1441804	20	1441820	20	1441846	20
Socket	D - data	1441752	20								
Plug	D - data	1441749	20								
Socket	B - inverse			1441794	20						
Plug	B - inverse			1441781	20						



M12 flush-type socket



M12 flush-type plug

M16 fastening thread, one-piece, for wave soldering processes, shielded



Straight, 4, 5, 8-pos.



Straight, 12, 17-pos.



	Technical data					
	4-pos.		5-pos.		8-pos.	
General data	M12 circular plug-in connector according to:					
Pollution degree	IEC 61076-2-101		IEC 61076-2-101		IEC 61076-2-101	
Degree of protection	3		3		3	
Connection method	IP67		IP67		IP67	
Electrical data	Solder pins		Solder pins		Solder pins	
Rated voltage	250 V		60 V		30 V	
Rated current	4 A		4 A		2 A	
Volume resistance	≤ 3 mΩ		≤ 3 mΩ		≤ 3 mΩ	
Material data	CuZn / Au		CuZn / Au		CuZn / Au	
Material contact / contact surface	PA 66		PA 66		PA 66	
Contact carrier material	V0		V0		V0	
Inflammability class according to UL 94	-25 ... 85		-25 ... 85		-25 ... 85	
Temperature data	[°C]		[°C]		[°C]	
Plug / socket	-		-		-	

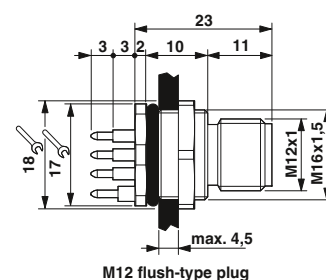
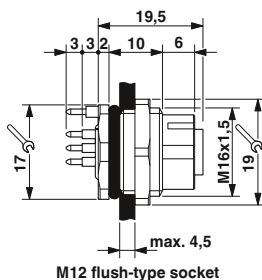
	Technical data					
	12-pos.		17-pos.			
General data	M12 circular plug-in connector according to:					
Pollution degree	IEC 61076-2-101		IEC 61076-2-101		-	
Degree of protection	3		3		-	
Connection method	IP67		IP67		-	
Electrical data	Solder pins		Solder pins		-	
Rated voltage	30 V		30 V		-	
Rated current	1.5 A		1.5 A		-	
Volume resistance	≤ 3 mΩ		≤ 3 mΩ		-	
Material data	CuZn / Au		CuZn / Au		-/-	
Material contact / contact surface	PA 66		PA 66		-	
Contact carrier material	V0		V0		-	
Inflammability class according to UL 94	-25 ... 85		-25 ... 85		-	
Temperature data	[°C]		[°C]		[°C]	
Plug / socket	-		-		-	

Description	Coding	Ordering data									
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.				
<b>Device plug-in connectors</b>		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.	
Socket	A - standard	1419771	20	1441891	20	1441930	20	1441956	20	1441972	20
Plug	A - standard	1419768	20	1441888	20	1441927	20	1441943	20	1441969	20
Socket	D - data	1441875	20								
Plug	D - data	1441862	20								
Socket	B - inverse			1441914	20						
Plug	B - inverse			1441901	20						

Description	Accessories		
	Order No.	Pcs. / Pkt.	Order No.
EMC hexagonal nuts with fine toothing, for all flush-type plug-in connectors with:			
M16 fastening thread	SACC-M16-KD-NUT-SH	1440164	10



## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

Contact carrier, two-piece, angled,  
for wave soldering processes



Angled, 4, 5, 8-pos.



Angled, shielded, 4, 5, 8-pos.



	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3
Degree of protection	IP67	IP67	IP67
Connection method	Solder pins	Solder pins	Solder pins
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ
Material data			
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66
Inflammability class according to UL 94	V0	V0	V0
Temperature data			
Plug / socket	-25 ... 85	-25 ... 85	-25 ... 85



	Technical data		
	4-pos.	5-pos.	8-pos.
General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3
Degree of protection	IP67	IP67	IP67
Connection method	Solder pins	Solder pins	Solder pins
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ
Material data			
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66
Inflammability class according to UL 94	V0	V0	V0
Temperature data			
Plug / socket	-25 ... 85	-25 ... 85	-25 ... 85

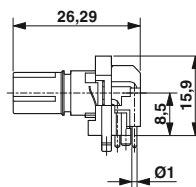
Description	Coding	Ordering data					
		4-pos.		5-pos.		8-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Contact carrier</b>							
Socket	A - standard	1436628	20	1436644	20	1436990	20
Plug	A - standard	1436660	20	1436686	20	1436987	20
Socket	D - data						
Plug	D - data						
Socket	B - inverse						
Plug	B - inverse						

Description	Coding	Ordering data					
		4-pos.		5-pos.		8-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Contact carrier</b>							
Socket	A - standard	1432444	20	1432431	20	1437009	20
Plug	A - standard	1439887	20	1439890	20	1437038	20
Socket	D - data	1432457	20				
Plug	D - data	1436673	20				
Socket	B - inverse			1432512	20		
Plug	B - inverse			1436699	20		

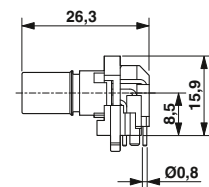
Accessories
See page 258 onwards

Accessories
See page 258 onwards

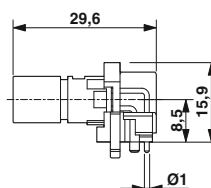
**Housing screw connections**, SPEEDCON screw versions and press-in versions, for all two-piece THR and wave soldering contact carriers



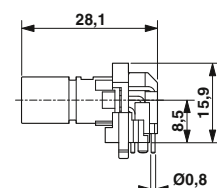
M12 socket contact carrier, angled, 4, 5-pos.



M12 socket contact carrier, angled, 8-pos.



M12 pin contact carrier, angled, 4, 5-pos.



M12 pin contact carrier, angled, 8-pos.

Contact carrier, two-piece, angled,  
for wave soldering processes

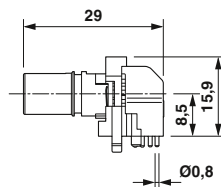


Angled, 12, 17-pos.

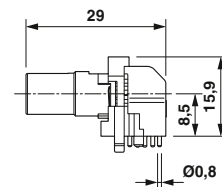


Angled, shielded, 12, 17-pos.

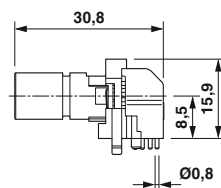
	Technical data			Technical data			
	12-pos.	17-pos.		12-pos.	17-pos.		
General data							
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	-	IEC 61076-2-101	IEC 61076-2-101	-	
Pollution degree	3	3	-	3	3	-	
Degree of protection	IP67	IP67	-	IP67	IP67	-	
Connection method	Solder pins	Solder pins	-	Solder pins	Solder pins	-	
Electrical data							
Rated voltage	30 V	30 V	-	30 V	30 V	-	
Rated current	1.5 A	1.5 A	-	1.5 A	1.5 A	-	
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	-	≤ 3 mΩ	≤ 3 mΩ	-	
Material data							
Material contact / contact surface	CuZn / Au	CuZn / Au	- / -	CuZn / Au	CuZn / Au	- / -	
Contact carrier material	PA6T	PA6T	-	PA6T	PA6T	-	
Inflammability class according to UL 94	V0	V0	-	V0	V0	-	
Temperature data							
Plug / socket [°C]	-25 ... 85	-25 ... 85	-	-25 ... 85	-25 ... 85	-	
	Ordering data			Ordering data			
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		12-pos.		17-pos.		12-pos.	17-pos.
<b>Device plug-in connectors</b>							
Socket	A - standard	1424195	20	1424197	20	1424199	20
Plug	A - standard	1424194	20	1424196	20	1424198	20
		Accessories			Accessories		
<b>Housing screw connections, SPEEDCON screw versions and press-in versions, for all two-piece THR and wave soldering contact carriers</b>		See page 258 onwards			See page 258 onwards		



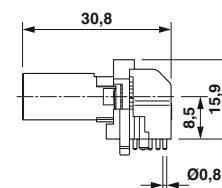
M12 socket contact carrier, angled, 12-pos.



M12 socket contact carrier, angled, 17-pos.



M12 pin contact carrier, angled, 12-pos.



M12 pin contact carrier, angled, 17-pos.

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

Contact carrier, two-piece,  
for wave soldering processes



Straight, 5-pos.



Straight, shielded, 4, 5-pos.



Technical data			
5-pos.			
General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	-	-
Pollution degree	3	-	-
Degree of protection	IP67	-	-
Connection method	Solder pins	-	-
Electrical data			
Rated voltage	60 V	-	-
Rated current	4 A	-	-
Volume resistance	≤ 3 mΩ	-	-
Material data			
Material contact / contact surface	CuZn / Au	- / -	- / -
Contact carrier material	PA 66	-	-
Inflammability class according to UL 94	V0	-	-
Temperature data			
Plug / socket	-25 ... 85	-	-

Ordering data					
Description	Coding	5-pos.			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Contact carrier</b>					
Socket	A - standard	1551464	20		
Socket	D - data				
Socket	B - inverse				

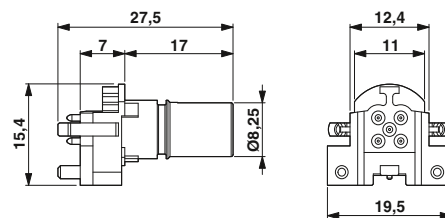
Accessories	
See page 258 onwards	



Technical data			
4-pos.		5-pos.	
General data			
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	-
Pollution degree	3	3	-
Degree of protection	IP67	IP67	-
Connection method	Solder pins	Solder pins	-
Electrical data			
Rated voltage	250 V	60 V	-
Rated current	4 A	4 A	-
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	-
Material data			
Material contact / contact surface	CuZn / Au	CuZn / Au	- / -
Contact carrier material	PA 66	PA 66	-
Inflammability class according to UL 94	V0	V0	-
Temperature data			
Plug / socket	-25 ... 85	-25 ... 85	-

Ordering data					
Description	Coding	4-pos.		5-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Contact carrier</b>					
Socket	A - standard	1551480	20		
Socket	D - data				
Socket	B - inverse			1551477	20

Accessories	
See page 258 onwards	



M12 socket contact carrier, straight, 4, 5-pos.







Two-piece, for reflow processes,  
shielded, tray packaging,  
tape-on-reel packing



Straight, 4, 5, 8-pos.



Straight, 12, 17-pos.



	Technical data			Technical data		
	4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data						
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	-
Pollution degree	3	3	3	3	3	-
Degree of protection	IP67	IP67	IP67	IP67	IP67	-
Connection method	THR solder connection	THR solder connection	THR solder connection	THR solder connection	THR solder connection	-
Electrical data						
Rated voltage	250 V	60 V	30 V	30 V	30 V	-
Rated current	4 A	4 A	2 A	1.5 A	1.5 A	-
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	-
Material data						
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	- / -
Contact carrier material	PPA	PPA	PPA	PPA	PPA	-
Inflammability class according to UL 94	V0	V0	V0	V0	V0	-
Temperature data						
Plug / socket	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-

	Coding	Ordering data			Ordering data		
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Contact carrier, tray packaging</b>							
Socket	A - standard	1439955	60	1432363	60	1551422	60
Plug	A - standard	1439939	60	1432350	60	1557581	60
Socket	D - data	1551451	60				
Plug	D - data	1552214	60				
Socket	B - inverse			1551435	60		
Plug	B - inverse			1552230	60		
<b>Contact carrier, tape-on-reel packing with assembly pad</b>							
Socket	A - standard	1457623	100	1457652	100	1457681	100
Plug	A - standard	1457500	100	1457539	100	1457568	100
Socket	D - data	1457636	100				
Plug	D - data	1457513	100				
Socket	B - inverse			1457665	100		
Plug	B - inverse			1457542	100		

	Accessories	Accessories
Housing screw connections, SPEEDCON screw versions and press-in versions, for all two-piece THR and wave soldering contact carriers	See page 258 onwards	See page 258 onwards

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

#### Housing screw connections, screw versions

– For two-piece M12 device plug-in connectors



With O-ring



With flat gasket



Material data
Material
Temperature data
Ambient temperature (operation)

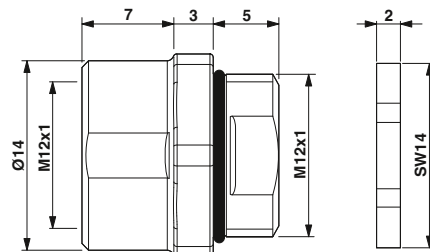
Technical data		
Material	Zinc die-cast (nickel-plated)	
Temperature data	-25 °C ... 85 °C	

Technical data		
Material	Zinc die-cast (nickel-plated)	
Temperature data	-25 °C ... 85 °C	

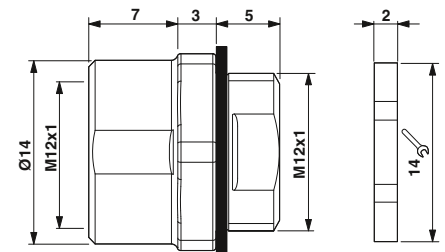
Description
<b>Housing screw connections, SPEEDCON screw versions for all two-piece THR and wave soldering contact carriers</b>
Socket
Plug

Ordering data		
Type	Order No.	Pcs. / Pkt.
SACC-M12-SCO NUT	1552243	60
SACC-M12-SCO PLUG	1551493	60

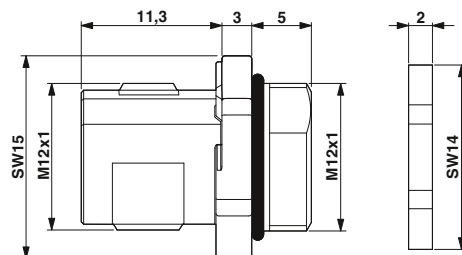
Ordering data		
Type	Order No.	Pcs. / Pkt.
SACC-M12-SCO NUT L 90	1432460	10
SACC-M12-SCO PLUG L 90	1436709	10



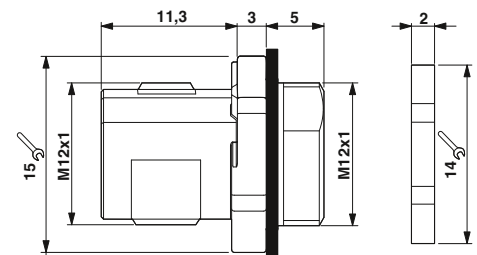
Socket housing screw connection, with O-ring



Socket housing screw connection, with flat gasket



Pin housing screw connection, with O-ring



Pin housing screw connection, with flat gasket

### Housing screw connections, press-in versions

– For two-piece M12 device plug-in connectors



M12 socket



M12 pin

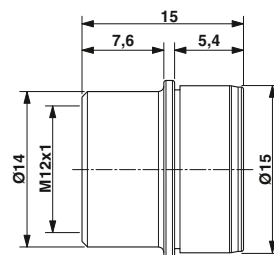


Technical data		
Material data		
Material	CuZn (nickel-plated)	
Temperature data		
Ambient temperature (operation)	-25 °C ... 85 °C	
Ordering data		
Type	Order No.	Pcs. / Pkt.
SACC-M12 NUT PRESS	1437889	10

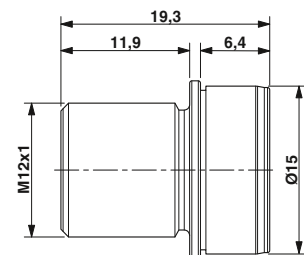


Technical data		
Material data		
Material	CuZn (nickel-plated)	
Temperature data		
Ambient temperature (operation)	-25 °C ... 85 °C	
Ordering data		
Type	Order No.	Pcs. / Pkt.
SACC-M12 PLUG PRESS	1437892	10

Description	
<b>Housing screw connection</b> , for all two-piece THR and wave soldering contact carriers	
Socket	
Plug	



Socket housing screw connection



Pin housing screw connection

# M5 to M12 circular plug-in connectors

## M12 sensor/actuator device plug-in connectors, rear mounting

### M12 flush-type plug-in connector, solder connection



CAT6<sub>A</sub>, X-coded



Ethernet



CAT5/CAT5e



Technical data				Technical data			
SACC-DSI-...-L180-10G SCO				SACC-DSI-...4CON-L180/...		SACC-DSI-...8CON-L180/...	
Electrical data				250 V	30 V		
Nominal voltage U <sub>N</sub>	48 V			4 A	2 A		
Rated current	0.5 A			CAT5 (IEC 11801:2002), CAT5e (TIA 568B:2001)	CAT5 (IEC 11801:2002), CAT5e (TIA 568B:2001)		
Transmission characteristics (category)	CAT6 <sub>A</sub>			CuZn	CuZn		
Contact material	CuZn			Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated		
Material of grip body	Zinc die-cast, nickel-plated			V0	V0		
Inflammability class according to UL 94	V0			4	8		
No. of pos.	8			≥ 100	≥ 100		
Insertion/withdrawal cycles	≥ 100						
Temperature data							
Plug / socket	[°C]	-40 ... 85		-25 ... 85		-25 ... 85	
Ordering data				Ordering data			
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.	
<b>Flush-type plug-in connector, CAT6<sub>A</sub>, Ethernet, 8-pos., M12 SPEEDCON, rear/screw mounting with Pg9 thread, with straight solder connection</b> Socket	<b>SACC-DSIV-FS-8CON-L180-10G SCO</b>	<b>1440669</b>	20				
<b>Contact carrier, CAT6<sub>A</sub>, Ethernet, 8-pos., rear mounting, with straight solder connection</b> Socket	<b>SACC-CI-M12FS-8CON-L180-10G</b>	<b>1402457</b>	20				
<b>Housing screw connections, SPEEDCON screw versions and press-in versions, for all two-piece THR and wave soldering contact carriers</b> Socket	<b>SACC-M12-SCO NUT L 90</b>	<b>1432460</b>	10				
<b>Flush-type plug-in connector, Ethernet, 4-pos., M12 SPEEDCON, with shield contact, D-coded, rear/screw mounting with M16 thread, with straight solder connection</b> Socket Plug				<b>SACC-DSI-FSD-4CON-L180/SH TQ</b> <b>SACC-DSI-MSD-4CON-L180/SH TQ</b>	<b>1456527</b> <b>1456514</b>	20 20	
<b>Flush-type plug-in connector, Ethernet, 8-pos., M12 SPEEDCON, with shield contact, rear/screw mounting with M16 thread, with polarity protection, with straight solder connection</b> Socket Plug				<b>SACC-DSI-FS-8CON-L180/SH TQ</b> <b>SACC-DSI-MS-8CON-L180/SH TQ</b>	<b>1456543</b> <b>1456530</b>	20 20	
<b>Flush-type plug-in connector, PROFINET, 4-pos., M12 SPEEDCON, with shield contact, D-coded, rear/screw mounting with M16 thread, with straight solder connection</b> Socket Plug				<b>SACC-DSI-FSD-4CON-L180/SH GN</b> <b>SACC-DSI-MSD-4CON-L180/SH GN</b>	<b>1456569</b> <b>1456556</b>	20 20	
<b>Flush-type plug-in connector, Ethernet, 4-pos., M12 SPEEDCON, with shield contact, D-coded, rear/screw mounting with M12 thread, with angled solder connection</b> Socket				<b>SACC-DSIV-FSD-4CON-L90 SCO</b>	<b>1436550</b>	10	
<b>Flush-type plug-in connector, Ethernet, 4-pos., M12 SPEEDCON, with shield contact, D-coded, rear/screw mounting with M12 thread, with polarity protection, with straight solder connection</b> Socket				<b>SACC-DSIV-FSD-4CON-L180 SCO</b>	<b>1542619</b>	10	
<b>Flush-type plug-in connector, Ethernet, 8-pos., M12 SPEEDCON, with shield contact, A-coded, rear/screw mounting with M12 thread, with straight THR solder connection</b> Socket				<b>SACC-DSIV-FS-8CON-L180-THR SH</b>	<b>1557549</b>	60	
<b>Flush-type plug-in connector, Ethernet, 4-pos., M12 SPEEDCON, with shield contact, D-coded, rear/screw mounting with M12 thread, with polarity protection, with straight THR solder connection</b> Socket				<b>SACC-DSIV-FSD-4CON-L180 SCOTHR</b>	<b>1542648</b>	60	

### M12 flush-type plug-in connector, solder connection



CAT6<sub>A</sub>, X-coded

### Ethernet



CAT5e, Y-coded

	Technical data			Technical data		
Electrical data	SACC-DSI-FSX-8CON...			VS-08-DSIV-L180-HYB SCO		
Nominal voltage U <sub>N</sub>	48 V			30 V (Data)		
Rated current	0.5 A			0.5 A (Data) / 6 A (Power)		
Transmission characteristics (category)	CAT6 <sub>A</sub>			CAT5 (IEC 11801:2002), CAT5e (TIA 568B:2001)		
Contact material	CuZn			CuZn		
Material of grip body	Zinc die-cast, nickel-plated			Zinc die-cast, nickel-plated		
Inflammability class according to UL 94	V0			V0		
No. of pos.	8			8		
Insertion/withdrawal cycles	≥ 100			≥ 100		
Temperature data						
Plug / socket	[-40 ... 85] [°C]			-40 ... 85		
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
<b>Flush-type socket</b> , CAT6 <sub>A</sub> , Ethernet, one-piece, 8-pos., M12 SPEEDCON, with straight solder connection, rear/screw mounting with: M16 fastening thread Pg9 fastening thread	SACC-DSI-FSX-8CON-M16-L180 SCO	1424177	20	VS-08-DSIV-L180-HYB SCO	1456666	20
	SACC-DSI-FSX-8CON-PG9-L180 SCO	1404741	20			
<b>Hybrid flush-type plug-in connector for the reflow soldering process</b> , with straight solder connection, 4 x power contacts, 4 x signal contacts, rear mounting, SPEEDCON						
Socket				SACC-DSI-FSY-8CON-M16-L180 SCO	1407503	20
<b>Hybrid flush-type plug-in connector for the wave soldering process</b> , with straight solder connection, 4 x power contacts, 4 x signal contacts, rear mounting, SPEEDCON						
Socket				SACC-CI-M12FSY-8CON-L90	1424193	20
<b>Contact carrier, two-piece</b> , CAT6 <sub>A</sub> , Ethernet, 8-pos., rear mounting, with angled solder connection	SACC-CI-M12FSX-8CON-L90	1424180	20			
<b>Hybrid contact carrier, two-piece</b> , Ethernet, 8-pos., rear/screw mounting, with angled solder connection						
	Accessories			Accessories		
<b>Housing screw connection</b> , SPEEDCON, for all two-piece THR and wave soldering contact carriers	See page 258 onwards			See page 258 onwards		

# M5 to M12 circular plug-in connectors

## M12 sensor/actuator device plug-in connectors, rear mounting

M12, two-piece,  
for wave soldering processes

### Ethernet



Straight, 4, 5, 8-pos.

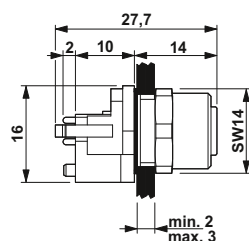


Straight, shielded, 5-pos.

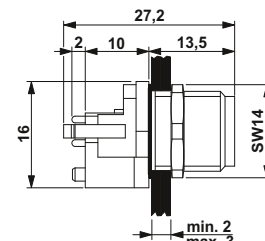
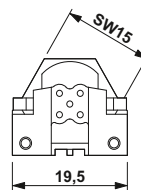


	Technical data			Technical data		
	4-pos.	5-pos.	8-pos.	5-pos.		
General data						
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	-	-
Pollution degree	3	3	3	3	-	-
Degree of protection	IP67	IP67	IP67	IP67	-	-
Connection method	Solder pins	Solder pins	Solder pins	Solder pins	-	-
Electrical data						
Rated voltage	250 V	60 V	30 V	60 V	-	-
Rated current	4 A	4 A	2 A	4 A	-	-
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	-	-
Material data						
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	- / -	- / -
Contact carrier material	PA 66	PA 66	PA 66	PA 66	-	-
Inflammability class according to UL 94	HB	HB	HB	HB	-	-
Temperature data						
Plug / socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-	-

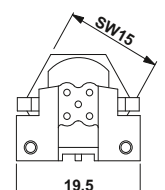
Description	Coding	Ordering data			Ordering data		
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Flush-type plug-in connector, straight</b>							
Socket	A - standard			1694237	10	1556854	10
Plug	A - standard			1694211	10	1437193	10
Socket	D - data	1534627	10				
Socket	B - inverse			1515934	10	1437180	10
Plug	B - inverse			1514883	10	1437203	10



M12 flush-type socket, straight,



M12 flush-type plug, straight,





### Pg9 fastening thread, plastic



Solder connection, 5, 8-pos.



With 0.5 m long litz wires, 5, 8-pos.



#### Technical data

General data	
M12 circular plug-in connector according to:	
Pollution degree	3
Degree of protection	IP67
Electrical data	
Rated voltage	60 V
Rated current	4 A
Volume resistance	≤ 3 mΩ
Material data	
Material contact / contact surface	CuZn / Au
Contact carrier material	PA 66
Inflammability class according to UL 94	HB
Temperature data	
Plug / socket	[°C]
Cable, fixed installation	[°C]

5-pos.		8-pos.	
IEC 61076-2-101		IEC 61076-2-101	
3		3	
IP67		IP67	
60 V		30 V	
4 A		2 A	
≤ 3 mΩ		≤ 3 mΩ	
CuZn / Au		CuZn / Au	
PA 66		PA 66	
HB		HB	
-25 ... 85		-25 ... 85	
-		-	



#### Technical data

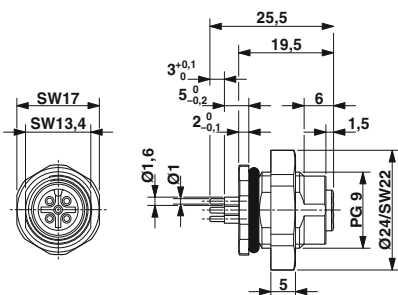
5-pos.		8-pos.	
IEC 61076-2-101		IEC 61076-2-101	
3		3	
IP67		IP67	
60 V		30 V	
4 A		2 A	
≤ 3 mΩ		≤ 3 mΩ	
CuZn / Au		CuZn / Au	
PA 66		PA 66	
HB		HB	
-25 ... 85		-25 ... 85	
-25 ... 85		-25 ... 85	

#### Ordering data

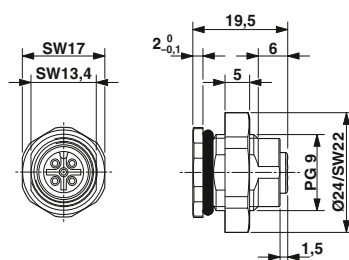
Description	Coding
<b>Flush-type plug-in connector, with solder pins</b>	
Socket	A - standard
<b>Flush-type plug-in connector, with solder cups</b>	
Socket	A - standard
<b>Flush-type plug-in connector, with litz wires</b>	
Socket	A - standard

5-pos.		8-pos.	
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
1436330	20	1436343	20
1436314	20	1436327	20

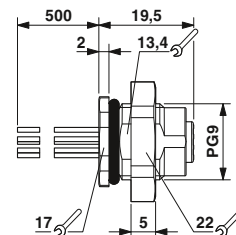
5-pos.		8-pos.	
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
1436356	1	1436369	1



M12, Pg9 fastening thread, solder pins



M12 socket, Pg9 fastening thread, solder cups



M12 socket, Pg9 fastening thread, with litz wires

## M5 to M12 circular plug-in connectors

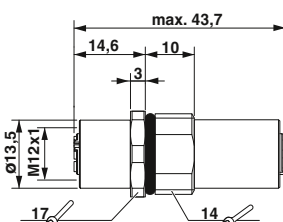
### M12 sensor/actuator device plug-in connectors, rear mounting

#### Control cabinet feed-through

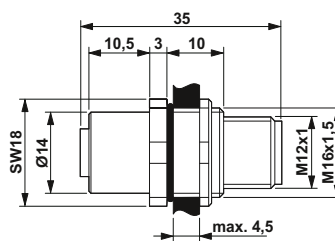


4, 5, 8-pos.

		Technical data					
		4-pos.	5-pos.	8-pos.			
General data							
M12 circular plug-in connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101			
Pollution degree		3	3	3			
Degree of protection		IP67	IP67	IP67			
Electrical data							
Rated voltage		60 V	24 V	24 V			
Rated current		4 A	4 A	1.5 A			
Volume resistance		≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ			
Material data							
Contact material		CuZn	CuZn	CuZn			
Contact surface material		Au	Au	Au			
Contact carrier material		PA 66	PA 66	PA 66			
Inflammability class according to UL 94		HB	HB	HB			
Temperature data							
Plug / socket		-25 ... 85	-25 ... 85	-25 ... 85			
		Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.	
Control cabinet feed-through, M16 fastening thread							
Plug on socket	A - standard			1551671	1	1551697	1
Plug on socket	B - inverse			1551684	1		
Socket to socket	D - data	1424326	1				



Control cabinet feed-through, socket to socket on both sides



Control cabinet feed-through, socket to pin on both sides

Front mounting,  
Pg13.5 fastening thread,  
with 0.5 m long litz wires

**Notes:**

Flat nut recommended for housing wall thicknesses < 2.5 mm.



3, 4-pos.



5-pos.



	Technical data	
	3-pos.	4-pos.
General data		
Pollution degree	3	3
Degree of protection	IP67	IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	250 V	250 V
Rated current	12 A	9 A
Volume resistance	≤ 5 mΩ	≤ 5 mΩ
Surge voltage category	II	II
Material data		
Material contact / contact surface	CuZn / Au	CuZn / Au
Contact carrier material	PUR	PUR
Inflammability class according to UL 94	HB	HB
Cable type	PVC litz wire	PVC litz wire
Temperature data		
Plug / socket	[°C] -40 ... 85	[°C] -40 ... 85
Cable, fixed installation	[°C] -40 ... 85	[°C] -40 ... 85



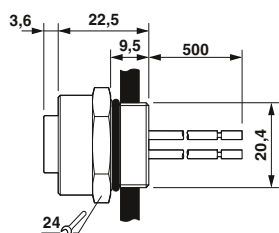
	Technical data	
	5-pos.	
General data		
Pollution degree	3	-
Degree of protection	IP67	-
Connection method	Individual wires	-
Electrical data		
Rated voltage	250 V	-
Rated current	9 A	-
Volume resistance	≤ 5 mΩ	-
Surge voltage category	II	-
Material data		
Material contact / contact surface	CuZn / Au	- / -
Contact carrier material	PUR	-
Inflammability class according to UL 94	HB	-
Cable type	PVC litz wire	-
Temperature data		
Plug / socket	[°C] -40 ... 85	-
Cable, fixed installation	[°C] -40 ... 85	-

Description	Coding	Ordering data			
		3-pos.		4-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Device plug-in connectors</b>					
Socket	A - standard	1521407	1	1521423	1
Plug	A - standard	1521410	1	1521436	1

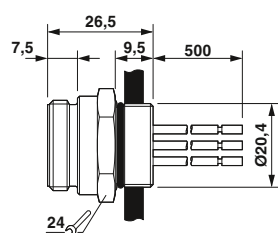
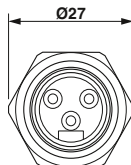
Description	Coding	Ordering data			
		5-pos.		Order No.	Pcs. / Pkt.
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Device plug-in connectors</b>					
Socket	A - standard	1521449	1		
Plug	A - standard	1521452	1		

Accessories		
Flat nut, with: Pg13.5 thread	SACC-E-MU-PG13,5	1539143 100

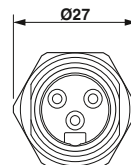
Accessories		
Flat nut, with: Pg13.5 thread	SACC-E-MU-PG13,5	1539143 100



7/8" flush-type socket



7/8" flush-type plug



# M5 to M12 circular plug-in connectors

## 7/8" sensor/actuator device plug-in connectors, rear mounting

### 7/8", with 1.0 m long litz wires



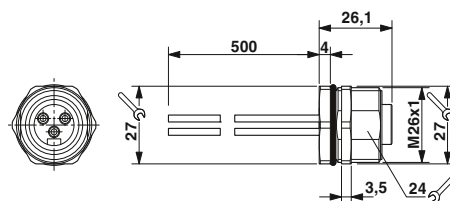
3, 4, 5-pos.



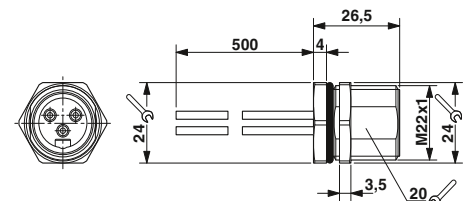
3, 4, 5-pos.



	Technical data			Technical data		
	3-pos.	4-pos.	5-pos.	3-pos.	4-pos.	5-pos.
General data						
Pollution degree	3	3	3	3	3	3
Degree of protection	IP67	IP67	IP67	IP67	IP67	IP67
Connection method	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data						
Rated voltage	250 V	250 V	250 V	250 V	250 V	250 V
Rated current	12 A	9 A	9 A	12 A	9 A	9 A
Volume resistance	≤ 5 mΩ	≤ 5 mΩ	≤ 5 mΩ	≤ 5 mΩ	≤ 5 mΩ	≤ 5 mΩ
Surge voltage category	II	II	II	II	II	II
Material data						
Contact material	CuZn	CuZn	CuZn	CuZn	CuZn	CuZn
Contact surface material	Au	Au	Au	Au	Au	Au
Contact carrier material	PUR	PUR	PUR	PUR	PUR	PUR
Inflammability class according to UL 94	HB	HB	HB	HB	HB	HB
Temperature data						
Plug / socket	[°C]	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85
Cable, fixed installation	[°C]	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85
	Ordering data			Ordering data		
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Flush-type plug-in connector, M26 fastening thread</b>						
Socket	<b>1453782</b>	<b>1</b>	<b>1453795</b>	<b>1</b>	<b>1453805</b>	<b>1</b>
<b>Flush-type plug-in connector, 7/8" fastening thread</b>						
Plug	<b>1453753</b>	<b>1</b>	<b>1453766</b>	<b>1</b>	<b>1453799</b>	<b>1</b>



7/8" flush-type socket



7/8" flush-type plug

# M5 to M12 circular plug-in connectors

## 7/8" sensor/actuator device plug-in connectors, rear mounting

7/8" rear mounting,  
for wave soldering processes



3, 4, 5-pos.



3, 4, 5-pos.



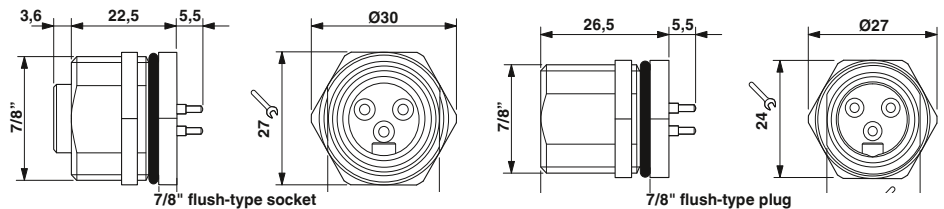
### Technical data

	Technical data			Technical data		
	3-pos.	4-pos.	5-pos.	3-pos.	4-pos.	5-pos.
General data						
Pollution degree	3	3	3	3	3	3
Degree of protection	IP67	IP67	IP67	IP67	IP67	IP67
Connection method	Solder pins	Solder pins	Solder pins	Solder pins	Solder pins	Solder pins
Electrical data						
Rated voltage	250 V	250 V	250 V	250 V	250 V	250 V
Rated current	12 A	9 A	9 A	12 A	9 A	9 A
Volume resistance	≤ 5 mΩ	≤ 5 mΩ	≤ 5 mΩ	≤ 5 mΩ	≤ 5 mΩ	≤ 5 mΩ
Surge voltage category	II	II	II	II	II	II
Material data						
Contact material	CuZn	CuZn	CuZn	CuZn	CuZn	CuZn
Contact surface material	Au	Au	Au	Au	Au	Au
Contact carrier material	PUR	PUR	PUR	PUR	PUR	PUR
Inflammability class according to UL 94	HB	HB	HB	HB	HB	HB
Temperature data						
Plug / socket	[°C]					
	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85



### Technical data

	Coding	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.		
Description		3-pos.		4-pos.		5-pos.		3-pos.		4-pos.		5-pos.	
Flush-type plug-in connector, M26 fastening thread													
Socket	A - standard	1457830	1	1457843	1	1457775	1						
Flush-type plug-in connector, 7/8" fastening thread													
Plug	A - standard							1455007	1	1455010	1	1457487	1



# M5 to M12 circular plug-in connectors

## M12 sensor/actuator device plug-in connectors, stainless steel versions

Front mounting,  
Pg9/M16 fastening thread,  
with 0.5 m long litz wires

– Housing material, stainless steel 1.4404



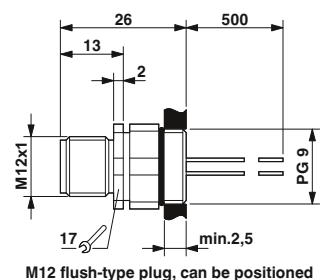
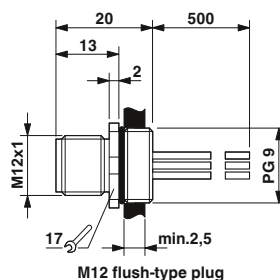
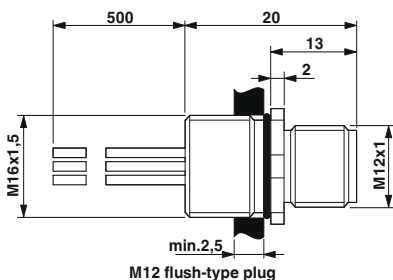
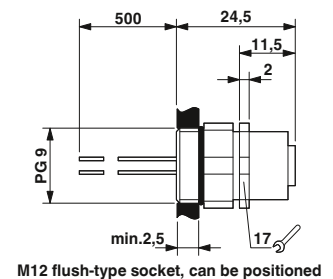
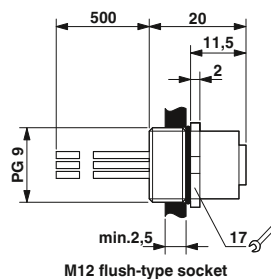
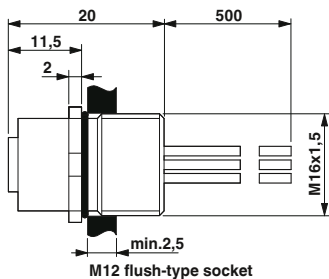
4, 5, 8-pos.



Can be positioned, 4, 5, 8-pos.



	Technical data						Technical data						
	4-pos.		5-pos.		8-pos.		4-pos.		5-pos.		8-pos.		
General data	M12 circular plug-in connector according to:						M12 circular plug-in connector according to:						
Pollution degree	3		3		3		3		3		3		
Degree of protection	IP67/IP69K		IP67/IP69K		IP67/IP69K		IP67/IP69K		IP67/IP69K		IP67/IP69K		
Connection method	Individual wires		Individual wires		Individual wires		Individual wires		Individual wires		Individual wires		
Electrical data	250 V		60 V		30 V		250 V		60 V		30 V		
Rated voltage	4 A		4 A		2 A		4 A		4 A		2 A		
Rated current	≤ 3 mΩ		≤ 3 mΩ		≤ 3 mΩ		≤ 3 mΩ		≤ 3 mΩ		≤ 3 mΩ		
Volume resistance	CuZn / Au		CuZn / Au		CuZn / Au		CuZn / Au		CuZn / Au		CuZn / Au		
Material data	PA66 GF		PA66 GF		PA66 GF		PA66 GF		PA66 GF		PA66 GF		
Material contact / contact surface	V0		V0		V0		V0		V0		V0		
Contact carrier material	TPE litz wire		TPE litz wire		TPE litz wire		TPE litz wire		TPE litz wire		TPE litz wire		
Inflammability class according to UL 94	-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85		
Cable type	-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85		
Temperature data	-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85		
Plug / socket	-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85		
	Ordering data						Ordering data						
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Device plug-in connector, Pg9 fastening thread		4-pos.	5-pos.	8-pos.	4-pos.	5-pos.	8-pos.	4-pos.	5-pos.	8-pos.	4-pos.	5-pos.	8-pos.
Socket	A - standard	1555448	1	1699863	1	1554607	1	1554649	1	1554652	1	1554665	1
Plug	A - standard	1554555	1	1554568	1	1554571	1	1554610	1	1554623	1	1554636	1
Device plug-in connector, M16 fastening thread													
Socket	A - standard	1458855	1	1458871	1	1458842	1						
Plug	A - standard	1405233	1	1458868	1	1405221	1						



Front mounting,  
M20 fastening thread,  
with 0.5 m long litz wires

– Housing material, stainless steel 1.4404



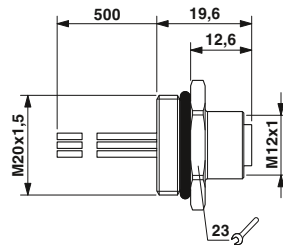
4, 5, 8-pos.

### Technical data

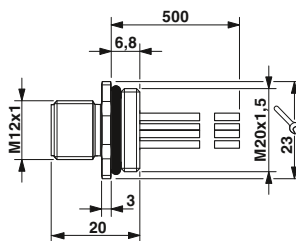
	4-pos.	5-pos.	8-pos.
<b>General data</b>			
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3	3
Degree of protection	IP67/IP69K	IP67/IP69K	IP67/IP69K
Connection method	Individual wires	Individual wires	Individual wires
<b>Electrical data</b>			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ
<b>Material data</b>			
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA 66	PA 66	PA 66
Inflammability class according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
<b>Temperature data</b>			
Plug / socket	-25 ... 85	-25 ... 85	-25 ... 85

### Ordering data

Description	Coding	4-pos.		5-pos.		8-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Device plug-in connectors</b>							
Socket	A - standard	1408416	1	1452071	1	1452110	1
Plug	A - standard	1408415	1	1452068	1	1452107	1
Socket	B - inverse			1452097	1		
Plug	B - inverse			1452084	1		



M12 flush-type socket



M12 flush-type plug

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, stainless steel versions

#### Device plug-in connector, rear mounting

– Housing material, stainless steel 1.4404



With 0.5 m long litz wires, 4, 5, 8-pos.



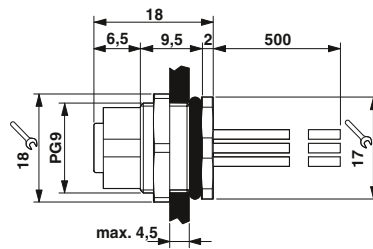
For wave soldering processes, 4, 5, 8-pos.



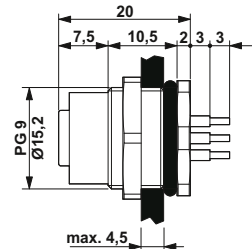
	Technical data						
	4-pos.		5-pos.		8-pos.		
General data							
M12 circular plug-in connector according to:	IEC 61076-2-101		IEC 61076-2-101		IEC 61076-2-101		
Pollution degree	3		3		3		
Degree of protection	IP67/IP69K		IP67/IP69K		IP67/IP69K		
Connection method	Individual wires		Individual wires		Individual wires		
Electrical data							
Rated voltage	250 V		60 V		30 V		
Rated current	4 A		4 A		2 A		
Volume resistance	≤ 3 mΩ		≤ 3 mΩ		≤ 3 mΩ		
Material data							
Material contact / contact surface	CuZn / Au		CuZn / Au		CuZn / Au		
Contact carrier material	PA 66		PA 66		PA 66		
Inflammability class according to UL 94	V0		V0		V0		
Cable type	TPE litz wire		TPE litz wire		TPE litz wire		
Temperature data							
Plug / socket	[-25 ... 85] [°C]		[-25 ... 85]		[-25 ... 85]		
		Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.	
<b>Device plug-in connectors</b>							
Socket	A - standard	1405240	1	1554717	1	1554720	1
Plug	A - standard	1405239	1	1554681	1	1554694	1

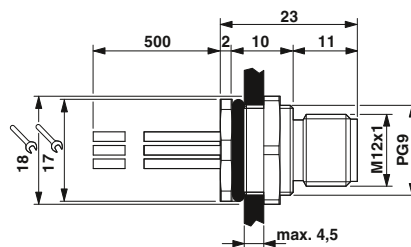
	Technical data						
	4-pos.		5-pos.		8-pos.		
General data							
M12 circular plug-in connector according to:	IEC 61076-2-101		IEC 61076-2-101		IEC 61076-2-101		
Pollution degree	3		3		3		
Degree of protection	IP67/IP69K		IP67/IP69K		IP67/IP69K		
Connection method	Solder pins		Solder pins		Solder pins		
Electrical data							
Rated voltage	250 V		60 V		30 V		
Rated current	4 A		4 A		2 A		
Volume resistance	≤ 3 mΩ		≤ 3 mΩ		≤ 3 mΩ		
Material data							
Material contact / contact surface	CuZn / Au		CuZn / Au		CuZn / Au		
Contact carrier material	PA 66		PA 66		PA 66		
Inflammability class according to UL 94	V0		V0		V0		
Cable type	-		-		-		
Temperature data							
Plug / socket	[-25 ... 85]		[-25 ... 85]		[-25 ... 85]		
		Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.	
<b>Device plug-in connectors</b>							
Socket	A - standard	1404974	20	1554733	20	1529797	20
Plug	A - standard	1404979	20	1554746	20	1529807	20



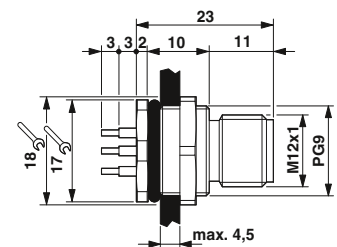
M12 flush-type socket



M12 flush-type socket



M12 flush-type plug



M12 flush-type plug





# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly

### M8, insulation displacement connection



0.08 mm<sup>2</sup> - 0.25 mm<sup>2</sup>, 3, 4-pos.



0.25 mm<sup>2</sup> - 0.5 mm<sup>2</sup>, 3, 4-pos.



#### Technical data

	3-pos.	4-pos.
General data		
M8 circular plug-in connector according to:	IEC 61076-2-104	
Pollution degree	3	
Degree of protection	IP65/67	
Connection method	Insulation displacement connection	
Cable diameter	2.5 mm ... 5 mm ± 0.2 mm	
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	
Volume resistance	≤ 5 mΩ	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact / contact surface	CuSn / Ni/Au	
Contact carrier material	TPU GF	
Inflammability class according to UL 94	HB	
Temperature data		
Plug / socket	-25 ... 80 [°C]	



#### Technical data

	3-pos.	4-pos.
General data		
M8 circular plug-in connector according to:	IEC 61076-2-104	
Pollution degree	3	
Degree of protection	IP65/67	
Connection method	Insulation displacement connection	
Cable diameter	2.5 mm ... 5 mm ± 0.2 mm	
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	
Volume resistance	≤ 5 mΩ	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact / contact surface	CuSn / Ni/Au	
Contact carrier material	TPU GF	
Inflammability class according to UL 94	HB	
Temperature data		
Plug / socket	-25 ... 80 [°C]	

#### Ordering data

Description	3-pos.		4-pos.	
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Plug-in connector</b>				
Socket, straight	1441040	1	1441053	1
Plug, straight	1441008	1	1441011	1

#### Ordering data

Description	3-pos.		4-pos.	
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Plug-in connector</b>				
Socket, straight	1441066	1	1441079	1
Plug, straight	1441024	1	1441037	1

# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly

### M8, screw connections



Unshielded, 3, 4-pos.



Shielded, 3, 4-pos.



	Technical data	
	3-pos.	4-pos.
General data	IEC 61076-2-104	
M8 circular plug-in connector according to:	3	
Pollution degree	IP67	
Degree of protection	Screw connection	
Connection method	3.5 mm ... 5 mm	
Cable diameter	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>	
Connection cross section [mm <sup>2</sup> ]		
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	
Volume resistance	≤ 3 mΩ	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact / contact surface	CuZn / Au	
Contact carrier material	PA	
Inflammability class according to UL 94	HB	
Temperature data		
Plug / socket	-40 ... 85	



	Technical data	
	3-pos.	4-pos.
General data	IEC 61076-2-104	
M8 circular plug-in connector according to:	3	
Pollution degree	IP67	
Degree of protection	Screw connection	
Connection method	3.5 mm ... 5 mm	
Cable diameter	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>	
Connection cross section [mm <sup>2</sup> ]		
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	
Volume resistance	≤ 3 mΩ	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact / contact surface	CuSn / Au	
Contact carrier material	PUR / PA66	
Inflammability class according to UL 94	HB	
Temperature data		
Plug / socket	-40 ... 85	

Description	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.	
<b>Plug-in connector</b>				
Socket, straight	1506888	1	1506891	1
Plug, straight	1501252	1	1501265	1
Socket, angled	1407582	1	1407584	1
Plug, angled	1407583	1	1407585	1

Description	Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.	
<b>Plug-in connector</b>				
Socket, straight	1542907	1	1542910	1
Plug, straight	1542884	1	1542897	1

Pressure screw and seal, for cable diameters:	Accessories		
	Order No.	Pcs. / Pkt.	Order No.
2.5 mm ... 3.5 mm	SACC-M 8-SET/2,2-3,5	1436945	5

Pressure screw and seal, for cable diameters:	Accessories		
	Order No.	Pcs. / Pkt.	Order No.
2.5 mm ... 3.5 mm			

# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly

### M8, solder connection



Unshielded, 3, 4-pos.



Shielded, 3, 4-pos.



#### Technical data

	3-pos.	4-pos.
General data		
M8 circular plug-in connector according to:	IEC 61076-2-104	
Pollution degree	3	
Degree of protection	IP67	
Connection method	Solder connection	
Cable diameter	3.5 mm ... 5 mm	
Connection cross section [mm <sup>2</sup> ]	0.08 mm <sup>2</sup> ... 0.25 mm <sup>2</sup>	
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	
Volume resistance	≤ 3 mΩ	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact / contact surface	CuSn / Au	
Contact carrier material	PUR / PA66	
Inflammability class according to UL 94	V0	
Temperature data		
Plug / socket	-40 ... 85 [°C]	



#### Technical data

	3-pos.	4-pos.
General data		
M8 circular plug-in connector according to:	IEC 61076-2-104	
Pollution degree	3	
Degree of protection	IP67	
Connection method	Solder connection	
Cable diameter	3.5 mm ... 5 mm	
Connection cross section [mm <sup>2</sup> ]	0.08 mm <sup>2</sup> ... 0.25 mm <sup>2</sup>	
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	
Volume resistance	≤ 3 mΩ	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact / contact surface	CuSn / Au	
Contact carrier material	PUR / PA66	
Inflammability class according to UL 94	HB	
Temperature data		
Plug / socket	-40 ... 85	

#### Ordering data

Description	3-pos.		4-pos.	
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Plug-in connector</b>				
Socket, angled	1529399	1	1513444	1
Plug, angled	1699902	1	1554209	1
Socket, straight	1681172	1	1681185	1
Plug, straight	1681156	1	1681169	1

#### Ordering data

Description	3-pos.		4-pos.	
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Plug-in connector</b>				
Socket, angled	1436479	1	1436482	1
Plug, angled	1436453	1	1436466	1
Socket, straight	1506927	1	1506930	1
Plug, straight	1506901	1	1506914	1

#### Accessories

Pressure screw and seal, for cable diameters:	Order No.	Pcs. / Pkt.
2.5 mm ... 3.5 mm	SACC-M 8-SET/2,2-3,5	1436945 5

#### Accessories

Pressure screw and seal, for cable diameters:	Order No.	Pcs. / Pkt.
2.5 mm ... 3.5 mm	SACC-M 8-SET/2,2-3,5	1436945 5

# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly

### M12, solder and Piercecon® connection



Solder connection, 12-pos.



Piercecon® connection, 12, 17-pos.



	Technical data		Technical data						
	Unshielded	Shielded	12-pos.		17-pos.				
General data									
M12 circular plug-in connector according to:	IEC 61076-2-101		IEC 61076-2-101						
Pollution degree	3		3						
Degree of protection	IP67		IP67						
Connection method	Solder connection		Piercecon® fast connection						
Cable diameter	6 mm ... 8 mm		5.4 mm ... 8.2 mm						
Electrical data									
Rated voltage	30 V		30 V						
Rated current	1 A		1.5 A						
Volume resistance	≤ 3 mΩ		≤ 5 mΩ						
Insulation resistance	> 10 GΩ		≥ 100 MΩ						
Material data									
Material contact / contact surface	CuSn / Au		CuZn / Ni/Au						
Contact carrier material	PA		PA						
Inflammability class according to UL 94	-		V0						
Temperature data									
Plug / socket	-25 ... 85 [°C]		-25 ... 85						
	Ordering data				Ordering data				
	Unshielded		Shielded		12-pos.		17-pos.		
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Plug-in connector</b>									
Socket, straight	A - standard	1404420	1	1404411	1	1559631	1	1559644	1
Plug, straight	A - standard	1404419	1	1404410	1	1559592	1	1559602	1
Socket, angled	A - standard	1404423	1	1404413	1				
Plug, angled	A - standard	1404421	1	1404412	1				

# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly

### M12 plug-in connector, for assembly

#### Ethernet



M12 plug-in connector, 10 Gbps, Piercecon® connection

#### Ethernet



M12 plug-in connector, 100 Mbps, screw connection



#### Electrical data

Nominal voltage $U_N$
Rated current
Transmission characteristics (category)
Material contact / contact surface
Material of grip body
Inflammability class according to UL 94
No. of pos.
Connection method
Connection cross section AWG
Insertion/withdrawal cycles

#### Temperature data

Ambient temperature (operation)

#### Technical data

VS-08-M12...-10G-P SCO

48 V
0.5 A
CAT6 <sub>A</sub>
CuSn / Ni/Au
Zinc die-cast, nickel-plated
V0
8
Piercecon®
26
≥ 100

-40 °C ... 85 °C

#### Ordering data

Type	Order No.	Pcs. / Pkt.
VS-08-M12MS-10G-P SCO	1417430	1
VS-08-M12MR-10G-P SCO	1417443	1

#### Accessories

VS-CABLE-STRIP-VARIO	1657407	1
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#### Technical data

SACC-M12MSD-4CON-...-SH

60 V
4 A
CAT5 (IEC 11801:2002), CAT5e (TIA 568B:2001)
CuZn / Au
Zinc die-cast, nickel-plated
HB
4
Screw connection
24 ... 18
≥ 100

-40 °C ... 85 °C

#### Ordering data

Type	Order No.	Pcs. / Pkt.
SACC-M12MSD-4CON-PG 7-SH	1521258	1
SACC-M12MSD-4CON-PG 9-SH	1521261	1

#### Accessories

VS-CABLE-STRIP-VARIO	1657407	1
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#### Description

**Plug-in connector**, CAT6<sub>A</sub>, plug, 8-pos., shielded, X-coded, **cable diameter: 4 mm ... 8 mm**

Straight  
Angled

**Plug-in connector**, Pg7 screw connection, 4-pos., D-coded, **cable diameter: 4 mm ... 6 mm**

Plug, straight

**Plug-in connector**, Pg9 screw connection, 4-pos., D-coded, **cable diameter: 4 mm ... 8 mm**

Plug, straight

**Stripping tool**, for multiple-stage repositioning of shielded conductors



# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly

### M12, insulation displacement connection



0.14 mm<sup>2</sup> ... 0.34 mm<sup>2</sup>



0.34 mm<sup>2</sup> ... 0.75 mm<sup>2</sup>



	Technical data	Technical data
General data	4-pos.	4-pos.
M12 circular plug-in connector according to:	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3
Degree of protection	IP65/67	IP65/67
Connection method	Insulation displacement connection	Insulation displacement connection
Cable diameter	3.5 mm ... 6 mm	4 mm ... 8 mm
Electrical data		
Rated voltage	125 V	250 V
Rated current	4 A	4 A
Volume resistance	≤ 5 mΩ	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ
Material data		
Material contact / contact surface	CuSn / Ni/Au	CuSn / Ni/Au
Contact carrier material	TPU	TPU
Inflammability class according to UL 94	V0	V0
Temperature data		
Plug / socket	-25 ... 80 [°C]	-25 ... 80

		Ordering data			Ordering data		
Description	Coding	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
<b>Plug-in connector, with plastic knurl</b>							
Socket, straight	A - standard	SACC-M12FS-4QO-0,34	1641701	1	SACC-M12FS-4QO-0,75	1641756	1
Plug, straight	A - standard	SACC-M12MS-4QO-0,34	1641714	1	SACC-M12MS-4QO-0,75	1641769	1
<b>Plug-in connector, with metal knurl, SPEEDCON</b>							
Socket, straight	A - standard	SACC-FS-4QO-0,34-M SCO	1521588	1	SACC-FS-4QO-0,75-M SCO	1521601	1
Plug, straight	A - standard	SACC-MS-4QO-0,34-M SCO	1521575	1	SACC-MS-4QO-0,75-M SCO	1521591	1
<b>Plug-in connector, with metal knurl</b>							
Socket, straight	A - standard	SACC-M12FS-4QO-0,34-M	1641688	1	SACC-M12FS-4QO-0,75-M	1641772	1
Plug, straight	A - standard	SACC-M12MS-4QO-0,34-M	1641691	1	SACC-M12MS-4QO-0,75-M	1641785	1
<b>Plug-in connector, with stainless steel knurl</b>							
Socket, straight	A - standard	SACC-M12FS-4QO-0,34-VA	1440766	1	SACC-M12FS-4QO-0,75-VA	1440782	1
Plug, straight	A - standard	SACC-M12MS-4QO-0,34-VA	1440753	1	SACC-M12MS-4QO-0,75-VA	1440779	1



# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly

### M12, spring-cage connections



Unshielded, 4, 5-pos.



Shielded, 4, 5-pos.



	Technical data	
	4-pos.	5-pos.
General data		
M12 circular plug-in connector according to:	IEC 61076-2-101	
Pollution degree	3	
Degree of protection	IP67	
Connection method	Spring-cage conn.	
Cable diameter	4 mm ... 8 mm	
Connection cross section [mm <sup>2</sup> ]	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>	
Electrical data		
Rated voltage	250 V	60 V
Rated current	4 A	
Volume resistance	≤ 8 mΩ	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact / contact surface	CuSn / Ni/Au	
Contact carrier material	TPU	
Inflammability class according to UL 94	V0	
Temperature data		
Plug / socket	-40 ... 85	



	Technical data	
	4-pos.	5-pos.
General data		
M12 circular plug-in connector according to:	IEC 61076-2-101	
Pollution degree	3	
Degree of protection	IP67	
Connection method	Spring-cage conn.	
Cable diameter	4 mm ... 8 mm	
Connection cross section [mm <sup>2</sup> ]	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>	
Electrical data		
Rated voltage	60 V	
Rated current	4 A	
Volume resistance	≤ 8 mΩ	
Insulation resistance	≥ 100 MΩ	
Material data		
Material contact / contact surface	CuSn / Ni/Au	
Contact carrier material	TPU	
Inflammability class according to UL 94	V0	
Temperature data		
Plug / socket	-40 ... 85	

Description	Coding	Ordering data			
		4-pos.		5-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Plug-in connector</b> , terminal marking: standard color coding and numbering					
Socket, angled	A - standard	1432622	1	1432596	1
Plug, angled	A - standard	1432606	1	1432570	1
Socket, straight	A - standard	1432619	1	1432583	1
Plug, straight	A - standard	1432635	1	1432567	1

Description	Coding	Ordering data			
		4-pos.		5-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Plug-in connector</b> , terminal marking: standard color coding and numbering					
Socket, angled	A - standard	1432758	1	1432677	1
Plug, angled	A - standard	1432732	1	1432651	1
Socket, straight	A - standard	1432745	1	1432664	1
Plug, straight	A - standard	1432729	1	1432648	1

# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly

### M12, screw connections



Plastic knurl, 4, 5-pos.



Metal knurl, SPEEDCON, 4, 5-pos.



Technical data	
4-pos.	5-pos.
General data	
M12 circular plug-in connector according to:	
IEC 61076-2-101	
Pollution degree	
3	
Degree of protection	
IP67	
Connection method	
Screw connection	
Connection cross section [mm²]	
0.25 mm² ... 0.75 mm²	
Electrical data	
Rated voltage	
250 V	60 V
Rated current	
4 A	
Volume resistance	
≤ 8 mΩ	
Insulation resistance	
≥ 100 MΩ	
Material data	
Material contact / contact surface	
CuZn / CuSnZn	
Contact carrier material	
PA 66	
Inflammability class according to UL 94	
HB	
Temperature data	
Plug / socket [°C]	
-40 ... 85	



Technical data	
4-pos.	5-pos.
General data	
M12 circular plug-in connector according to:	
IEC 61076-2-101	
Pollution degree	
3	
Degree of protection	
IP67	
Connection method	
Screw connection	
Connection cross section [mm²]	
0.25 mm² ... 0.75 mm²	
Electrical data	
Rated voltage	
250 V	60 V
Rated current	
4 A	
Volume resistance	
≤ 8 mΩ	
Insulation resistance	
≥ 100 MΩ	
Material data	
Material contact / contact surface	
CuZn / CuSnZn	
Contact carrier material	
PA 66	
Inflammability class according to UL 94	
HB	
Temperature data	
Plug / socket [°C]	
-40 ... 85	



Ordering data	
Description	Coding
<b>Plug-in connector, with Pg7 screw connection, cable diameter: 4 mm ... 6 mm</b>	
Socket, angled	A - standard
Plug, angled	A - standard
Socket, straight	A - standard
Plug, straight	A - standard
<b>Plug-in connector, with Pg9 screw connection, cable diameter: 6 mm ... 8 mm</b>	
Socket, angled	A - standard
Plug, angled	A - standard
Socket, straight	A - standard
Plug, straight	A - standard
<b>Power plug-in connector, with Pg11 screw connection, cable diameter: 8 mm ... 10 mm, rated current: up to 8 A (5th pos. max. 2 A) with 1.5 mm² wires/litz wires</b>	
Socket, straight	A - standard
Plug, straight	A - standard



Ordering data							
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.		
4-pos.		5-pos.		4-pos.		5-pos.	
1681130	1	1662308	1	1543058	1	1543061	1
1681091	1	1662269	1	1542981	1	1542994	1
1681114	1	1662298	1	1543029	1	1543032	1
1681088	1	1662256	1	1542952	1	1542965	1
		1500790	1			1543414	1
		1513431	1			1543003	1
		1500787	1			1543045	1
		1500774	1			1542978	1



Accessories	
<b>Pressure screw and seal, for cable diameters:</b>	
2.5 mm ... 3.5 mm	



Accessories	
<b>Pressure screw and seal, for cable diameters:</b>	
2.5 mm ... 3.5 mm	

# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly



Metal knurl, 4, 5, 8-pos.



Metal knurl, 4, 5-pos., with SKINTOP® screw connection



Stainless steel knurl, 4, 5-pos.



Technical data		
4-pos.	5-pos.	8-pos.
IEC 61076-2-101		
3		
IP67		
Screw connection		
0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>	0.25 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>	
250 V	60 V	30 V
4 A		2 A
≤ 8 mΩ		≤ 3 mΩ
	≥ 100 MΩ	
CuZn / CuSnZn		CuZn / Au
	PA 66	
	HB	
	-40 ... 85	

Technical data		
4-pos.	5-pos.	
IEC 61076-2-101		
3		
IP67		
Screw connection		
0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>	- ... -	
250 V	125 V	-
4 A		-
≤ 8 mΩ		-
	≥ 100 MΩ	-
CuZn / CuSnZn		- / -
	PA 66	-
	HB	-
	-20 ... 80	-

Technical data		
4-pos.	5-pos.	
IEC 61076-2-101		
3		
IP67/IP69K		
Screw connection		
0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>	- ... -	
250 V	60 V	-
4 A		-
≤ 3 mΩ		-
	≥ 100 MΩ	-
CuZn / Au		- / -
	PA 66	-
	V0	-
	-40 ... 85	-

Ordering data					
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4-pos.		5-pos.		8-pos.	
1681143	1	1662984	1		
1681101	1	1663129	1		
1681127	1	1662968	1		
1662528	1	1663116	1		
		1681499	1		
		1681473	1		
		1681486	1	1513347	1
		1681460	1	1513334	1

Ordering data					
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4-pos.		5-pos.			
1430381	1	1559000	1		
1556870	1	1456466	1		
		1556812	1		
		1561742	1		
		1556838	1		
		1556825	1		

Ordering data					
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4-pos.		5-pos.			
1553284	1	1553297	1		
1553200	1	1553213	1		
1553242	1	1553255	1		
1553161	1	1553187	1		
		1553307	1		
1553226	1	1553239	1		
1553268	1	1553271	1		
1553174	1	1553190	1		

1404416	1	1404418	1
1404415	1	1404417	1

Accessories			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
SACC-M12-SET/2,5-3,5		1436505	5

Accessories			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

Accessories			
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.

# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly

### M12, screw connection, shielded



Zinc die-cast housing, 4, 5, 8-pos.



Stainless steel housing, 5-pos.



	Technical data						Technical data						
	4-pos.		5-pos.		8-pos.		5-pos.						
General data													
M12 circular plug-in connector according to:			IEC 61076-2-101				IEC 61076-2-101						
Pollution degree			3				3						
Degree of protection			IP67				IP67/IP69K						
Connection method			Screw connection				Screw connection						
Connection cross section [mm²]			0.25 mm² ... 0.75 mm²				0.25 mm² ... 0.75 mm²						
Electrical data													
Rated voltage			60 V		30 V		60 V						
Rated current			4 A		2 A		4 A						
Volume resistance			≤ 3 mΩ				≤ 3 mΩ						
Insulation resistance			≥ 100 MΩ				≥ 100 MΩ						
Material data													
Material contact / contact surface			CuZn / Au				CuZn / Au				- / -		
Contact carrier material			PA 66				PA 66						
Inflammability class according to UL 94			HB				V0						
Temperature data													
Plug / socket [°C]			-40 ... 85				-40 ... 85						
	Ordering data						Ordering data						
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		5-pos.					
<b>Plug-in connector, with Pg7 screw connection, cable diameter: 4 mm ... 6 mm</b>													
Plug, angled	A - standard	1694279	1	1693429	1								
Socket, straight	A - standard	1694295	1	1694305	1								
Plug, straight	A - standard	1693830	1	1693416	1								
<b>Plug-in connector, with Pg9 screw connection, cable diameter: 6 mm ... 8 mm</b>													
Socket, angled	A - standard			1430433	1								
Plug, angled	A - standard			1694282	1								
Socket, straight	A - standard	1515170	1	1694318	1	1511860	1						
Plug, straight	A - standard	1501540	1	1694266	1	1511857	1						
<b>Plug-in connector, with Pg9 screw connection, cable diameter: 6 mm ... 8.5 mm</b>													
Socket, straight	A - standard			1508365	1								
Plug, straight	A - standard			1508352	1								
<b>Plug-in connector, with M16 screw connection, cable diameter: 3 mm ... 5.5 mm</b>													
Socket, straight	A - standard							1440038	1				
Plug, straight	A - standard							1440012	1				
<b>Plug-in connector, with M16 screw connection, cable diameter: 5.5 mm ... 8.6 mm</b>													
Socket, straight	A - standard							1440041	1				
Plug, straight	A - standard							1440025	1				

**M12, power plug-in connector, screw connection**



Metal knurl, 3-pos. + PE, S-coded



Metal knurl, 4-pos., T-coded

	Technical data			Technical data		
	<b>3-pos. + PE</b>			<b>4-pos.</b>		
General data						
Pollution degree	3			3		
Degree of protection	IP67			IP67		
Connection method	Screw connection			Screw connection		
Connection cross section [mm <sup>2</sup> ]	0.75 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>			0.75 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>		
Electrical data						
Rated voltage	630 V			60 V		
Rated current	12 A			12 A		
Volume resistance	≤ 3 mΩ			≤ 3 mΩ		
Insulation resistance	> 10 GΩ			> 10 GΩ		
Material data						
Material contact / contact surface	CuZn / Au			CuZn / Au		
Contact carrier material	PA 46			PA 46		
Inflammability class according to UL 94	V0			V0		
Temperature data						
Plug / socket	-40 ... 85 [°C]			-40 ... 85		
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
<b>Plug-in connector, with Pg11 screw connection, cable diameter: 8 mm ... 10 mm</b>						
Socket, straight	SACC-M12FSS-3PECON-PG11-M	1404642	1	SACC-M12FST-3PECON-PG11-M	1404644	1
Plug, straight	SACC-M12MSS-3PECON-PG11-M	1404641	1	SACC-M12MST-3PECON-PG11-M	1404643	1

# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly

### M12, DUO plug-in connector, screw connection

**Notes:**  
SPEEDCON and plastic knurls without key areas.



Metal knurl, 4, 5-pos.



SPEEDCON metal knurl/plastic knurl, 5 pos.

	Technical data				Technical data				
	4-pos.		5-pos.		Metal knurl, SPEEDCON, 5-pos.		Plastic knurl, 5-pos.		
General data									
M12 circular plug-in connector according to:	IEC 61076-2-101				IEC 61076-2-101				
Pollution degree	3				3				
Degree of protection	IP67				IP67				
Connection method	Screw connection				Screw connection				
Connection cross section [mm <sup>2</sup> ]	0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>				0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>				
Electrical data									
Rated voltage	250 V		60 V		60 V				
Rated current	4 A				4 A				
Volume resistance	≤ 8 mΩ				≤ 8 mΩ				
Insulation resistance	≥ 100 MΩ				≥ 100 MΩ				
Material data									
Material contact / contact surface	CuZn / CuSnZn				CuZn / CuSnZn				
Contact carrier material	PA 66				PA 66				
Inflammability class according to UL 94	V0				V0				
Temperature data									
Plug / socket	[°C]		-40 ... 85		-40 ... 85		-25 ... 85		
	Ordering data				Ordering data				
Description	Coding	4-pos.		5-pos.		Metal knurl, SPEEDCON, 5-pos.		Plastic knurl, 5-pos.	
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Plug-in connector, with Pg11 DUO screw connection, cable diameter: 2 x 3 mm ... 5.2 mm</b>									
Socket, straight	A - standard							1694596	1
Plug, straight	A - standard	1507052	1	1662748	1	1543016	1	1662285	1
Plug, angled	A - standard							1531044	1

# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly

7/8", screw connection



Connection cross section:  
1.5 mm<sup>2</sup>, 3, 4, 5-pos.



Connection cross section:  
2.5 mm<sup>2</sup>, 5-pos.



	Technical data			Technical data		
	3-pos.	4-pos.	5-pos.	5-pos.		
General data						
Pollution degree		3		3		-
Degree of protection		IP67		IP67		-
Connection method		Screw connection		Screw connection		-
Connection cross section		0.34 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>		0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>	- ... -	-
Connection cross section AWG		22 ... 16		22 ... 14	- ... -	-
Electrical data						
Rated voltage		250 V		250 V		-
Rated current	12 A		9 A	9 A		-
Volume resistance		≤ 5 mΩ		≤ 5 mΩ		-
Insulation resistance		≥ 100 MΩ		≥ 100 MΩ		-
Material data						
Material contact / contact surface		CuZn / Au		CuZn / Au		- / -
Contact carrier material		PUR / PA66		PUR / PA66		-
Inflammability class according to UL 94		HB		HB		-
Temperature data						
Plug / socket		-25 ... 85		-25 ... 85		-

Description	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Plug-in connector, with Pg9 screw connection, cable diameter: 6 mm ... 8 mm</b>												
Socket, angled	1521478	1	1521494	1	1521517	1						
Plug, angled	1521465	1	1521481	1	1521504	1						
Socket, straight	1521300	1	1521342	1	1521384	1						
Plug, straight	1521287	1	1521326	1	1521668	1						
<b>Plug-in connector, with Pg11 screw connection, cable diameter: 8 mm ... 10 mm</b>												
Socket, angled					1456297	1						
Plug, angled					1456242	1						
Socket, straight					1456271	1						
Plug, straight					1456226	1						
<b>Plug-in connector, with Pg13.5 screw connection, cable diameter: 10 mm ... 12 mm</b>												
Socket, angled							1456307	1				
Plug, angled							1456255	1				
Socket, straight	1521313	1	1521355	1	1521397	1	1456284	1				
Plug, straight	1521290	1	1521339	1	1521371	1	1456213	1				
<b>Plug-in connector, with Pg16 screw connection, cable diameter: 12 mm ... 14 mm</b>												
Socket, straight					1559071	1	1456268	1				
Plug, straight					1559039	1	1456239	1				





**M12 power flush-type plug-in connectors, modular, 25 mm square flange, pre-assembled**



Flange housing, 2.7 mm housing bore holes



Pre-assembled contact carrier and insulating body with 0.5 m long litz wires

	Technical data		Technical data	
			S-coded, 3-pos. + PE	T-coded, 4-pos.
General data				
Pollution degree	-	-	3	3
Degree of protection	-	-	IP67	IP67
Connection method	-	-	Individual wires	Individual wires
Electrical data				
Rated voltage	-	-	630 V	60 V
Rated current	-	-	12 A	12 A
Volume resistance	-	-	≤ 3 mΩ	≤ 3 mΩ
Surge voltage category	-	-	III	III
Material data				
Material contact / contact surface	- / -	- / -	CuZn / Au	CuZn / Au
Contact carrier material	-	-	PA6	PA6
Cable gland material	Zinc die-cast, nickel-plated	-	-	-
Cable type	-	-	PP litz wire	PP litz wire
Temperature data				
Plug / socket [°C]	-40 ... 85	-	-25 ... 85	-25 ... 85
Cable, fixed installation [°C]	-	-	-40 ... 90	-40 ... 90
	Ordering data		Ordering data	
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
<b>Square flange housing, with flat gasket</b>			<b>S-coded, 3-pos. + PE</b>	<b>T-coded, 4-pos.</b>
	<b>1424131</b>	<b>10</b>		
<b>Assembled contact carrier and insulating body, with 0.5 m litz wires and crimp contacts</b>				
<b>Plug</b>			<b>1424129</b>	<b>1</b>
			<b>1424130</b>	<b>1</b>

# M5 to M12 circular plug-in connectors

## M12 power plug-in connectors

**M12, power device plug-in connector, two-piece, for reflow processes, rear mounting**

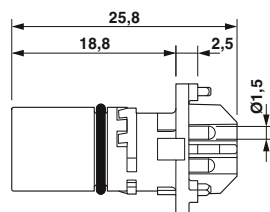


S-coded, 3-pos. + PE

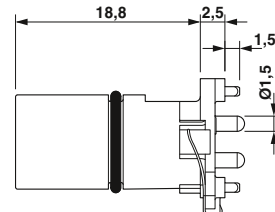
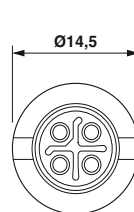


T-coded, 4-pos.

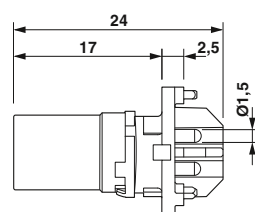
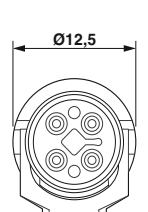
	Technical data		Technical data	
	Plug	Socket	Plug	Socket
General data				
Pollution degree	3	3	3	3
Degree of protection	IP67	IP67	IP67	IP67
Connection method	THR solder connection	THR solder connection	THR solder connection	THR solder connection
Electrical data				
Rated voltage	630 V	630 V	60 V	60 V
Rated current	12 A	12 A	12 A	12 A
Volume resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ
Surge voltage category	III	III	III	III
Material data				
Material contact / contact surface	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA4T	PA4T	PA4T	PA4T
Inflammability class according to UL 94	V0	V0	V0	V0
Temperature data				
Plug / socket	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85
	[°C]			
	Ordering data		Ordering data	
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Plug	Socket	Plug	Socket
Contact carrier, for reflow processes	1406410	20	1406409	20
Contact carrier, shielded, for reflow processes				
			1406396	60
			1406411	60
			1406397	60
			1406412	60
	Accessories		Accessories	
Housing screw connections, SPEEDCON screw versions and press-in versions, for all two-piece THR and wave soldering contact carriers	See page 258 onwards		See page 258 onwards	



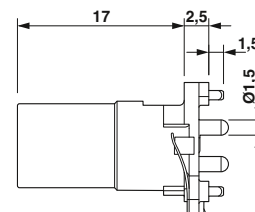
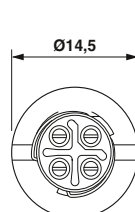
M12 flush-type plug



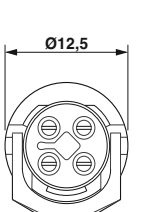
M12 flush-type plug



M12 flush-type socket



M12 flush-type socket



### M12, power plug-in connector, screw connection



S-coded, 3-pos. + PE

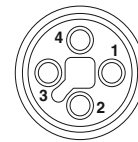


T-coded, 4-pos.

	Technical data	Technical data				
General data						
Pollution degree	3	3				
Degree of protection	IP67	IP67				
Connection method	Screw connection	Screw connection				
Cable diameter	8 mm ... 10 mm	8 mm ... 10 mm				
Connection cross section [mm <sup>2</sup> ]	0.75 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>	0.75 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>				
Electrical data						
Rated voltage	630 V	60 V				
Rated current	12 A	12 A				
Volume resistance	≤ 3 mΩ	≤ 3 mΩ				
Surge voltage category	III	III				
Material data						
Material contact / contact surface	CuZn / Au	CuZn / Au				
Contact carrier material	PA 46	PA 46				
Temperature data						
Plug / socket	-40 ... 85 [°C]	-40 ... 85				
	Ordering data	Ordering data				
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
<b>Plug-in connector, with Pg11 screw connection, cable diameter: 8 mm ... 10 mm</b> Socket, straight Plug, straight	SACC-M12FSS-3PECON-PG11-M	1404642	1	SACC-M12FST-3PECON-PG11-M	1404644	1
	SACC-M12MSS-3PECON-PG11-M	1404641	1	SACC-M12MST-3PECON-PG11-M	1404643	1



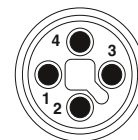
Pin assignment of M12 socket, 4-pos., S-coded, view of socket side



Pin assignment of M12 socket, 4-pos., T-coded, view of socket side



Pin assignment of M12 plug, 4-pos., S-coded, view of plug side



Pin assignment of M12 plug, 4-pos., T-coded, view of plug side

# M5 to M12 circular plug-in connectors

## M12 power plug-in connectors

**M12-SPEEDCON power cable, 3-pos.+PE, S-coded, unshielded**

Free end



M12 plug, SPEEDCON



Ordering data

Ordering data

Ordering data

Free end

Order No.

Order No.

Order No.



1 m	1408835	1 m	1408839
2 m	1408836	2 m	1408840
5 m	1408837	5 m	1408841
10 m	1408838	10 m	1408842

M12 socket, SPEEDCON, straight



1 m	1408843
2 m	1408844
5 m	1408845
10 m	1408846

M12 socket, SPEEDCON, angled



1 m	1408848
2 m	1408852
5 m	1408853
10 m	1408854

Cable description	Cable type	Color coding		Pin assignment
PUR, halogen-free - black	PUR	BK1	1	1
		BK2	2	2
		BK3	3	3
		GNYE		PE

### Technical data

		M12
Rated voltage	[V]	630
Rated current	[A]	12
Volume resistance		≤ 3 mΩ
Material contact M12		CuZn
Material contact surface M12		Au
Material handle M12		TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug / socket	[°C]	-25 ... 85

**M12-SPEEDCON power cable, 3-pos.+PE, S-coded, shielded**

Free end



M12 plug, SPEEDCON, 360° shielded



Ordering data

Ordering data

Ordering data

Free end	Order No.	Order No.	Order No.	Order No.	
		1.5 m	1424104	1.5 m	1424108
		3 m	1424105	3 m	1424109
		5 m	1424245	5 m	1424110
		10 m	1424107	10 m	1424111

**M12 socket, SPEEDCON, straight, 360° shielded**



1.5 m	1424096
3 m	1424097
5 m	1424098
10 m	1424099

**M12 socket, SPEEDCON, angled, 360° shielded**



1.5 m	1424100
3 m	1424101
5 m	1424102
10 m	1424103

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - orange	PUR	BK1	1
		BK2	2
		BK3	3
		GNYE	PE

**Technical data**

		M12
Rated voltage	[V]	630
Rated current	[A]	12
Volume resistance		≤ 3 mΩ
Material contact M12		CuZn
Material contact surface M12		Au
Material handle M12		TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug / socket	[°C]	-25 ... 85

# M5 to M12 circular plug-in connectors

## M12 power plug-in connectors

### M12-SPEEDCON power cable, 4-pos., T-coded, unshielded

Free end








M12 plug, SPEEDCON







Ordering data

Ordering data

Ordering data

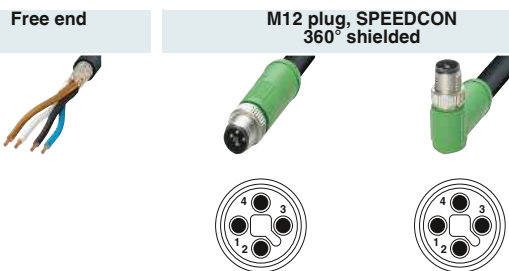
Free end	Order No.	Order No.	Order No.	
		1 m	1408812	
		2 m	1408813	
		5 m	1408814	
		10 m	1408815	
 	1 m	1408823	1 m	1408808
	2 m	1408824	2 m	1408809
	5 m	1408825	5 m	1408810
	10 m	1408826	10 m	1408811
 	1 m	1408827		
	2 m	1408828		
	5 m	1408829		
	10 m	1408830		

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black	PUR	BN 	1
		WH 	2
		BK 	4
		BU 	3

#### Technical data

		M12
Rated voltage	[V]	60
Rated current	[A]	12
Volume resistance		≤ 3 mΩ
Material contact M12		CuZn
Material contact surface M12		Au
Material handle M12		TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug / socket	[°C]	-25 ... 85

### M12-SPEEDCON power cable, 4-pos., T-coded, shielded



Ordering data      Ordering data      Ordering data

Free end	Order No.	Order No.	Order No.	Order No.		
		1.5 m	1424120	1.5 m	1424124	
			3 m	1424121	3 m	1424125
			5 m	1424122	5 m	1424126
			10 m	1424123	10 m	1424127
	1.5 m	1424112				
	3 m	1424113				
	5 m	1424114				
	10 m	1424115				
	1.5 m	1424116				
	3 m	1424117				
	5 m	1424118				
	10 m	1424128				

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black	PUR	BN	1
		WH	2
		BK	4
		BU	3

#### Technical data

		M12
Rated voltage	[V]	60
Rated current	[A]	12
Volume resistance		≤ 3 mΩ
Material contact M12		CuZn
Material contact surface M12		Au
Material handle M12		TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug / socket	[°C]	-25 ... 85

# M5 to M12 circular plug-in connectors

## Accessories

### Sealing elements

During transport or in the field, unoccupied plug-in connections must be protected or closed. The screw plugs, sealing caps and closing caps made of plastic or metal are suitable for this purpose. IP65/IP67 protection as well as IP69K protection is thereby achieved.



Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
<b>M5 screw plug</b> ① For unoccupied M5 sockets of the sensor/actuator cables, boxes and flush-type plug-in connectors	PROT-M5	1533288	10
<b>M8 screw plug</b> ② For unoccupied M8 sockets of the sensor/actuator cables, boxes and flush-type plug-in connectors	PROT-M8	1682540	5
<b>M12 screw plug</b> ③ For the unused M12 sockets of the sensor/actuator cables, boxes and flush-type plug-in connectors	PROT-M12	1680539	5
<b>M12 screw plug with SPEEDCON quick locking</b> ④ For unoccupied M12 sockets of the sensor/actuator cables, boxes and flush-type plug-in connectors	PROT-MS SCO	1553129	5
<b>M12 sealing cap</b> ⑤ For unoccupied M12 plugs of the sensor/actuator cables, flush-type plug-in connectors and I/O devices in the field	PROT-M12 FS	1560251	5
<b>M12 screw plug, metal</b> ⑥ For unoccupied M12 sockets of the shielded sensor/actuator cables, boxes and flush-type plug-in connectors	PROT-M12 SH	1503302	5
<b>M12 sealing cap, metal</b> ⑦ For unoccupied M12 plugs of the sensor/actuator cables, flush-type plug-in connectors and I/O devices in the field	PROT-M12 FS-M	1430488	10
<b>M12 screw plug, stainless steel</b> ⑧ For unused M12 sockets of the sensor/actuator cables, boxes, and flush-type plug-in connectors in the food and outdoor range	PROT-M12 FB	1555538	5
<b>Closing cap</b> ⑨ For Pg9/ Pg11, to close unoccupied connections	Q-PROT 9/11	1670235	10
<b>M16 locking screw</b> ⑩ With flat nut for oval housing cutouts	SACC-M16-SEALING PLUG SET	1453368	10



**Sealing elements with holding band or fixing chain**

All IP67 interfaces can be closed tightly using the screw plugs and sealing caps in sizes M8, M12 and 7/8". The holding bands are fastened on the cable or the housing and are thus held captive.

The M12 metal protective cap with fixing chain is suitable for all pin versions. It is used in harsh industrial environments or for EMC applications.



Ordering data			
Description	Type	Order No.	Pcs. / Pkt.
<b>Screw plug</b> made from <b>plastic</b> with retaining strap, for sealing unused <b>sockets</b> ①  M8 for SAC cables M8 with 3 mm fastening eye M8 with 12 mm fastening eye M12 for SAC cables M12 with 15 mm fastening eye 7/8" for SAC cables	<b>PROT-M 8 MS-PA-CHAIN</b> <b>PROT-M 8 MS-PA-CHAIN-EYE-DM3</b> <b>PROT-M 8 MS-PA-CHAIN-EYE</b> <b>PROT-M12 MS-PA-CHAIN</b> <b>PROT-M12 MS-PA-CHAIN-EYE-DM14</b> <b>PROT-MINMS-PA-CHAIN</b>	1430860 1441105 1441095 1430899 1456200 1430925	10 10 10 5 5 10
<b>Plastic sealing cap</b> with holding band, for closing unoccupied <b>connectors</b> ②  M8 for SAC cables M8 with 8 mm fastening eye M12 for SAC cables M12 with 12 mm fastening eye M12 with 15 mm fastening eye 7/8" for SAC cables	<b>PROT-M 8 FS-PA-CHAIN</b> <b>PROT-M 8 FS-PA-CHAIN-EYE</b> <b>PROT-M12 FS-PA-CHAIN</b> <b>PROT-M12 FS-PA-CHAIN-EYE-DM12</b> <b>PROT-M12 FS-PA-CHAIN-EYE-DM14</b> <b>PROT-MINFS-PA-CHAIN</b>	1430857 1441082 1430873 1456187 1456190 1430912	10 10 5 5 5 10
<b>Metal sealing cap</b> with fixing chain, for closing unoccupied <b>connectors</b> ③  M12 with 16 mm fastening eye	<b>PROT-M12 FS-M-CHAIN</b>	1430491	10

## M5 to M12 circular plug-in connectors

### Accessories

#### Accessories for flush-type plug-in connectors

Special fixing nuts are available for EMC-compliant installation of M12 flush-type plug-in connectors on coated or varnished housing surfaces. When tightened, these cut through the surface coating, thus establishing contact between the housing and the connector.

Alternatively, flat gaskets can be used as the seal between the housing panel and the device plug. Flat gaskets are recommended for thin panels, as the housing cutouts do not have to be chamfered.



Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
<b>EMC hexagonal nuts</b> with fine tooting, for all flush-type plug-in connectors with: ①			
<b>M12</b> fastening thread	<b>SACC-M12-KD-NUT-SH</b>	<b>1440151</b>	10
<b>EMC hexagonal nuts</b> with fine tooting, for all flush-type plug-in connectors with: ②			
<b>M16</b> fastening thread	<b>SACC-M16-KD-NUT-SH</b>	<b>1440164</b>	10
<b>Pg9</b> fastening thread	<b>SACC-PG9-KD-NUT-SH</b>	<b>1440177</b>	10
<b>Flat gasket</b> for all flush-type plug-in connectors with: ③			
<b>M16</b> fastening thread	<b>SACC-M16-SEAL CLM</b>	<b>1430394</b>	10
<b>Pg9</b> fastening thread	<b>SACC-PG9-SEAL CLM</b>	<b>1556320</b>	10

### Assembly tools for sensor/actuator cables

To achieve tight plug-in connections, we recommend using assembly tools. M12 and 7/8" circular plug-in connectors can be assembled using a torque screwdriver and plug attachment.

The benefits of the plug attachment become particularly clear when connecting the connectors to the distributor boxes. Thanks to the open design, it enables quick adjustment and installation even when space is at a premium.

The version for M12 connectors with hexagonal stainless steel knurl is also made from stainless steel. This prevents the connector knurls from being contaminated by corrosive materials.

For greater flexibility, screwdrivers with adjustable torque are also available. When used in conjunction with the adapter insert, they can also be used to accommodate the available plug attachments.



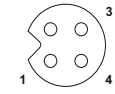
		Ordering data		
Description		Type	Order No.	Pcs. / Pkt.
<b>Torque screwdriver</b> With a preset torque of 0.8 Nm and a 4 mm hexagonal drive	①	TSD 08 SAC	1212597	1
<b>Nut</b> For assembling 7/8" plug-in connectors, with 4 mm hexagonal drive	②	SAC BIT MIN-D25	1212512	1
<b>Torque screwdriver</b> With preset torque of 0.4 Nm and 4 mm hexagonal drive	③	TSD 04 SAC	1208429	1
<b>Nut</b> For mounting M12 plug-in connectors with hexagonal stainless steel knurl, wrench size 14, with 4 mm hexagonal drive	④	SAC BIT M12-W14	1212513	1
<b>Torque screwdriver</b> , accuracy according to standard EN ISO 6789 Adjustable from 0.3 - 1.2 Nm Adjustable from 1.2 - 3 Nm Adjustable from 3 - 6 Nm	⑤	TSD-M 1,2NM TSD-M 3NM TSD-M 6NM	1212224 1212225 1212226	1 1 1
<b>Adapter insert</b> For torque screwdrivers with adjustable torque, for accommodating plug attachments with 4 mm hexagonal drive	⑥	TSD-M SAC-BIT ADAPTER	1212600	1

# M5 to M12 circular plug-in connectors

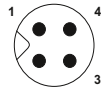
## Pin assignments

### M5 flush-type plug-in connectors

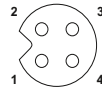
#### Pin assignments



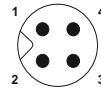
Socket, 3-pos.



Plug, 3-pos.



Socket, 4-pos.



Plug, 4-pos.

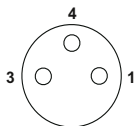
#### Litz wire colors

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

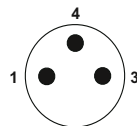
Assignment: M5 flush-type plugs/sockets

### M8 flush-type plug-in connectors

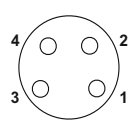
#### Pin assignments



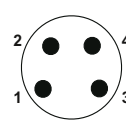
Socket, 3-pos.



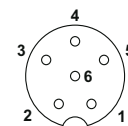
Plug, 3-pos.



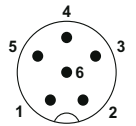
Socket, 4-pos.



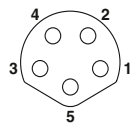
Plug, 4-pos.



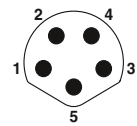
Socket, 6-pos.



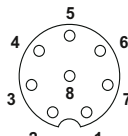
Plug, 6-pos.



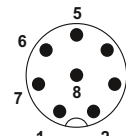
Socket, 5-pos.,  
DeviceNet™, B-coded



Plug, 5-pos.,  
DeviceNet™, B-coded



Socket, 8-pos.



Plug, 8-pos.

#### Litz wire colors

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

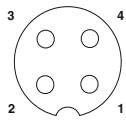
Assignment: M8 flush-type plugs/sockets

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

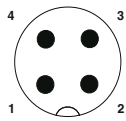
Assignment: CANopen®/DeviceNet™

### M12 flush-type plug-in connectors

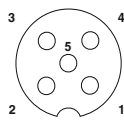
#### Pin assignments



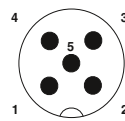
Socket, 4-pos.,  
A-coded



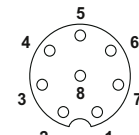
Plug, 4-pos.,  
A-coded



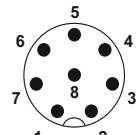
Socket, 5-pos.,  
A-coded



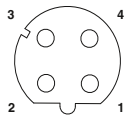
Plug, 5-pos.,  
A-coded



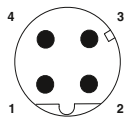
Socket, 8-pos.



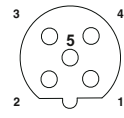
Plug, 8-pos.



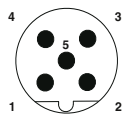
Socket, 4-pos.,  
D-coded



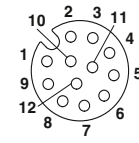
Plug, 4-pos.,  
D-coded



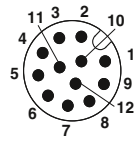
Socket, 5-pos.,  
B-coded



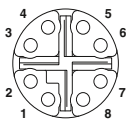
Plug, 5-pos.,  
B-coded



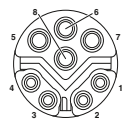
Socket, 12-pos.



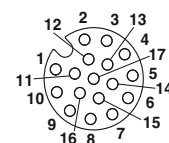
Plug, 12-pos.



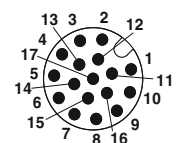
Socket, 8-pos.,  
X-coded



Socket, 8-pos.,  
Y-coded



Socket, 17-pos.



Plug, 17-pos.

#### Litz wire colors

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

Assignment: M12 flush-type plugs/sockets

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 flush-type plugs/sockets

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

Assignment: M12 flush-type plugs/sockets

Pin	Wire color	Signal PROFIBUS
1	-	-
2	GN	A cable
3	-	-
4	RD	B cable
5	Filler litz wire	-

Shield on housing

Assignment: PROFIBUS

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

Shield on housing

Assignment: CANopen®

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

Shield on housing

Assignment: DeviceNet™

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

Shield on housing

Assignment: Ethernet

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

Assignment: M12 flush-type plugs/sockets

Pin	Wire color	Signal INTERBUS
1	YE	DO
2	GN	DO
3	GY	DI
4	PK	DI
5	BN	COM
-	WH	NC

Shield on housing

Assignment: INTERBUS

Pin	Wire color	Signal Ethernet
1	WH	D1+
2	OG	D1-
3	WH	D2+
4	GN	D2-
5	WH	D4+
6	BN	D4-
7	WH	D3-
8	BU	D3+

Assignment: Ethernet CAT6<sub>A</sub>

## M5 to M12 circular plug-in connectors

### Pin assignments

## M12 power flush-type plug-in connectors

### Pin assignments



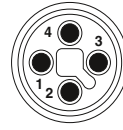
Socket, S-coded, 3+PE



Plug, A-coded, 3+PE



Socket, T-coded, 4-pos.



Plug, T-coded, 4-pos.

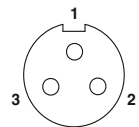
### Litz wire colors

Pin	3+PE, S-cod.	Pin	4-pos, T-cod.
1	BK1	1	BN
2	BK2	2	WH
3	BK3	3	BU
PE	GNYE	4	BK

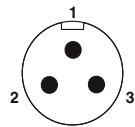
Assignment: M12 flush-type plugs/sockets

## 7/8" flush-type plug-in connectors

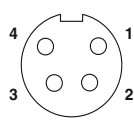
### Pin assignments



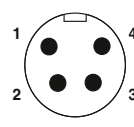
Socket, 3-pos.



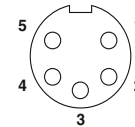
Plug, 3-pos.



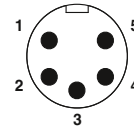
Socket, 4-pos.



Plug, 4-pos.



Socket, 5-pos.



Plug, 5-pos.

### Litz wire colors

Pin	3-pos.	4-pos.	5-pos.
1	BK	BK	BK
2	BN	BU	BU
3	BU	BN	GNYE
4	-	WH	BN
5	-	-	WH

Assignment: 7/8" flush-type plugs/sockets

## THR processing notes

### Information for THR processing

PCB thickness	Max. 1.6 mm
Residual ring	Recommended: 0.5 mm
Overprinting on soldering mold	Residual ring diameter: 0.2 mm
Soldering mold thickness	150 µm
Soldering profile	IEC 61760-3

### Further information

RoHS conformance	Attained
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