

Sensor/actuator cabling

A one-stop-shop for the entire range of solutions for field installation

In decentral connection technology, passive distributor systems connect the I/O devices to the PLC. Phoenix Contact provides the most comprehensive range of sensor/actuator cabling on the market. Passive M8, and M12 components consisting of distributor boxes, cables, and connectors for assembly are available from stock. A comprehensive selection of valve connectors rounds out the range.

The 1/2" and 7/8" range for the North American market can be found on our website.

Customer and industry-specific solutions

So as to respond flexibly to your requirements, cables and distributor boxes can be individually configured with various cable lengths and types (e.g., other materials or colors).

Phoenix Contact offers a range of suitable product series for increased requirements, such as the railway or food industry, the long-term use of products outdoors and cables for flexible use in drag chains or robot applications.

 Your web code: **#0564**

Assembled cables

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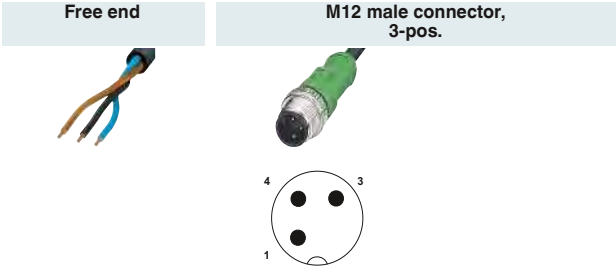
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Assembled cables

M8 SAC cable, snap-in,
3- and 4-pos.,
cable type: PUR

Notes:
For information about the cable qualities, see page 318



		Ordering data		Ordering data	Ordering data
		Order No.		Order No.	Order No.
M8 female connector, snap-in, 3-pos., straight	 	5 m	1519875	Variable	1696853
		Variable	1697593		
M8 female connector, snap-in, 3-pos., angled	 	5 m	1519891	Variable	1696882
		Variable	1697629		
M8 female connector, snap-in, 3-pos., with LEDs, angled	 	Variable	1513402	Variable	1515675
M8 female connector, snap-in, 4-pos., straight	 	Variable	1513389		
M8 female connector, snap-in, 4-pos., angled	 	Variable	1513392		
M8 female connector, snap-in, 4-pos., with LEDs, angled	 	Variable	1511954		

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 3-pos. M12 male and a straight M8 snap-in female, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1696853	PUR	4.5
Minimum order amount: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

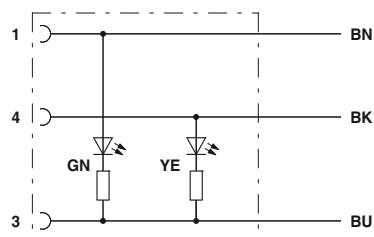
Cable description	Cable type	Suitable for
PUR, halogen-free – black E221474	PUR	3-/4-pos.
PUR, halogen-free – gray E221474	280	3-pos.
TPE-U highly flexible – gray E221474	800	3-/4-pos.

Color coding	Pin assignment 3-pos.
BN	1
BK	4
BU	3

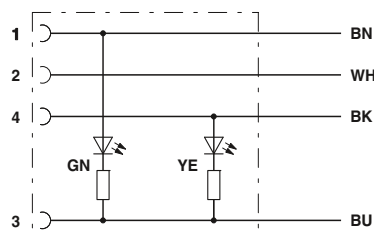
Color coding	Pin assignment 4-pos.
BN	1
WH	2
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

	Technical data	Technical data	Technical data	Technical data
	M8 3-pos.	M8 3-pos., with LEDs	M8 4-pos.	M8 4-pos., with LED
Rated voltage	48 V AC / 60 V DC	24 V / 24 V DC	48 V AC / 60 V DC	24 V / 24 V DC
Rated current	4	4	4	4
Contact material	CuSn	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au	Ni/Au	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector in accordance with:	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data				
Male connector/female connector	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of the M8 female connector with LED, 3-pos.



Contact assignment of the M8 female connector with LED, 4-pos.

Sensor/actuator cabling

Assembled cables

M8 and M12 SAC cable, 3-pos., cable type: PUR

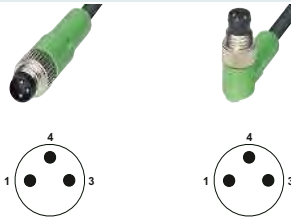
Notes:

For information about the cable qualities, see page 318

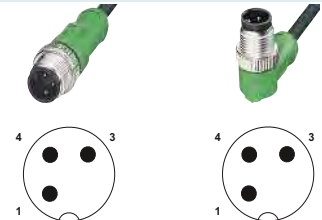
Free end

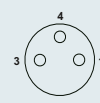
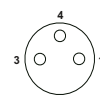
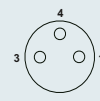
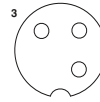
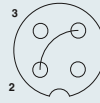
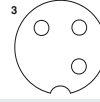
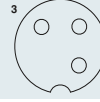
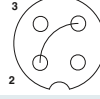
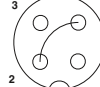


M8 male connector



M12 male connector



		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.		Order No.		Order No.	
				1.5 m	1681664	1.5 m	1681693	1.5 m	1668014	1.5 m	1668137
				3 m	1681677	3 m	1681703	3 m	1668027	3 m	1668140
				5 m	1681680	5 m	1681716	5 m	1668030	5 m	1668153
				10 m	1693584	10 m	1694114	10 m	1682566	10 m	1694444
				Variable	1697548	Variable	1697551	Variable	1696662	Variable	1696675
M8 female connector, straight											
		1.5 m	1669712	0.3 m	1681907	0.3 m	1682029	0.3 m	1668797	0.3 m	1668878
		3 m	1669725	0.6 m	1681910	0.6 m	1682032	0.6 m	1668807	0.6 m	1668881
		5 m	1669628	1.5 m	1681923	1.5 m	1682045	1.5 m	1668810	1.5 m	1668894
		10 m	1694101	3 m	1681936	3 m	1682058	3 m	1668823	3 m	1668904
		Variable	1697580	Variable	1697632	Variable	1697661	Variable	1696840	Variable	1696895
M8 female connector, angled											
		1.5 m	1669738	0.3 m	1681949	0.3 m	1682061	0.3 m	1668836	0.3 m	1668917
		3 m	1669741	0.6 m	1681952	0.6 m	1682074	0.6 m	1668849	0.6 m	1668920
		5 m	1669631	1.5 m	1681965	1.5 m	1682087	1.5 m	1668852	1.5 m	1668933
		10 m	1694169	3 m	1681978	3 m	1682090	3 m	1668865	3 m	1668946
		Variable	1697603	Variable	1697645	Variable	1697674	Variable	1696866	Variable	1696905
M8 female connector, angled, with 2 LEDs											
		1.5 m	1671069	0.3 m	1681981	0.3 m	1682100	0.3 m	1694884		
		3 m	1671072	0.6 m	1681994	0.6 m	1682113	0.6 m	1694897		
		5 m	1671085	1.5 m	1682003	1.5 m	1682126	1.5 m	1694907		
		10 m	1683594	3 m	1682016	3 m	1682139	3 m	1694910		
		Variable	1697616	Variable	1697658	Variable	1697687	Variable	1696879	Variable	1696918
M12 female connector, straight											
		1.5 m	1694486	0.3 m	1682304	0.3 m	1682388	0.3 m	1681509		
		3 m	1694499	0.6 m	1682317	0.6 m	1682391	0.6 m	1681512		
		5 m	1683510	1.5 m	1682320	1.5 m	1682401	1.5 m	1681525		
		10 m	1693034	3 m	1682333	3 m	1682414	3 m	1681538		
		Variable	1696688	Variable	1697690	Variable	1697726	Variable	1696756		
M12 female connector, straight, pin 2 - 4 bridged											
		1.5 m	1668072					0.3 m	1668315	0.3 m	1668551
		3 m	1668085					0.6 m	1668328	0.6 m	1668564
		5 m	1668098					1.5 m	1668331	1.5 m	1668577
		10 m	1694208					3 m	1668344	3 m	1668580
		Variable	1696691					Variable	1696769	Variable	1696811
M12 female connector, straight, with LED											
		1.5 m	1694185								
		3 m	1694198								
		5 m	1694787								
		10 m	1694790								
		Variable	1696701	Variable	1514197			Variable	1511802	Variable	1524763
M12 female connector, angled											
		1.5 m	1694509	0.3 m	1682346	0.3 m	1682427	0.3 m	1681541		
		3 m	1694512	0.6 m	1682359	0.6 m	1682430	0.6 m	1681554		
		5 m	1694525	1.5 m	1682362	1.5 m	1682443	1.5 m	1681567		
		10 m	1694538	3 m	1682375	3 m	1682456	3 m	1681570		
		Variable	1696714	Variable	1697700	Variable	1697739	Variable	1696772		
M12 female connector, angled, pin 2 - 4 bridged											
		1.5 m	1668195					0.3 m	1668399	0.3 m	1668632
		3 m	1668205					0.6 m	1668409	0.6 m	1668645
		5 m	1668218					1.5 m	1668412	1.5 m	1668658
		10 m	1681017					3 m	1668425	3 m	1668661
		Variable	1696727					Variable	1696785	Variable	1696824
M12 female connector, angled with LED											
		1.5 m	1694392	0.3 m	1693351	0.3 m	1682469	0.3 m	1694554		
		3 m	1694402	0.6 m	1693364	0.6 m	1682472	0.6 m	1694567		
		5 m	1694415	1.5 m	1693380	1.5 m	1682485	1.5 m	1694570		
		10 m	1694428	3 m	1693403	3 m	1682498	3 m	1694583		
		Variable	1696730	Variable	1697713	Variable	1697742	Variable	1696798		
M12 female connector, angled, with LED, pin 2 - 4 bridged											
		1.5 m	1668250					0.3 m	1668438		
		3 m	1668263					0.6 m	1668441		
		5 m	1668276					1.5 m	1668454		
		10 m	1681059					3 m	1668467		
		Variable	1696743					Variable	1696808	Variable	1696837

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 3-pos. M12 male and a straight M12 female, the ordering data is as follows:

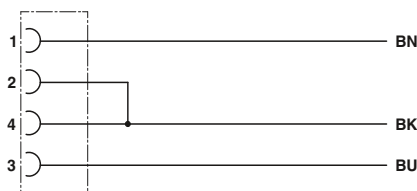
Order No.	Cable type	Length [m] 40 m, maximum
1696756	PUR	4.5
Minimum order amount: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Suitable for:
PUR, halogen-free – black E221474	PUR	M8/M12
PUR, halogen-free – gray E221474	280	M8/M12
TPE-U highly flexible – gray E221474	800	M8/M12
PUR irradiated – orange E221474	150	M12
PVC – black E221474	PVC	M8/M12
PVC – gray E221474	500	M8/M12
PVC – yellow E221474	540	M12
PVC 105° – yellow E221474	542	M12

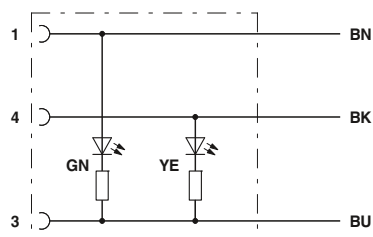
Color coding	Pin assignment
BN	1
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

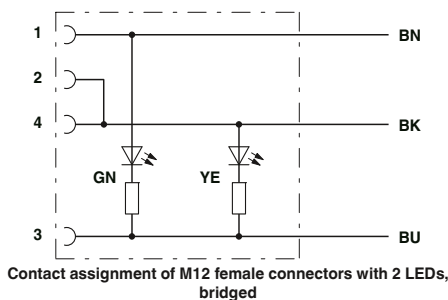
	Technical data	Technical data	Technical data	Technical data
	M8 3-pos.	M8 3-pos., with LEDs	M12 3-pos.	M12 3-pos., with LEDs
Rated voltage	48 V AC / 60 V DC	24 V / 24 V DC	250 V AC / 250 V DC	24 V / 24 V DC
Rated current	4	4	4	4
Contact material	CuSn	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au	Ni/Au	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector in accordance with:	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-101	IEC 61076-2-101
M12 circular connector in accordance with:	-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90
Male connector/female connector	[A]	[A]	[A]	[A]



Contact assignment of M12 female connectors, bridged



Contact assignment of M8/M12 female connectors with two LEDs



Contact assignment of M12 female connectors with 2 LEDs, bridged

Sensor/actuator cabling

Assembled cables

M8 and M12 SAC cable, 3-pos., cable type: PVC

Notes:

For information about the cable qualities, see page 318

Free end



M8 male connector



M12 male connector



Free end	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.		Order No.		Order No.	
	1.5 m	1415861	1.5 m	1415865	1.5 m	1414434	1.5 m	1414447	1.5 m	1414447
	3 m	1415862	3 m	1415866	3 m	1414435	3 m	1414448	3 m	1414448
	5 m	1415863	5 m	1415867	5 m	1693173	5 m	1414449	5 m	1414449
	10 m	1447280	10 m	1415869	10 m	1414437	10 m	1414450	10 m	1414450
	Variable	1697548	Variable	1697551	Variable	1696662	Variable	1696675	Variable	1696675
M8 female connector, straight 	1.5 m	1415870	0.3 m	1415877	0.3 m	1415881	0.3 m	1415525	0.3 m	1415534
	3 m	1415871	0.6 m	1415878	0.6 m	1415882	0.6 m	1415527	0.6 m	1415535
	5 m	1510748	1.5 m	1415879	1.5 m	1415883	1.5 m	1415528	1.5 m	1415536
	10 m	1506532	3 m	1415880	3 m	1415884	3 m	1415529	3 m	1415537
	Variable	1697580	Variable	1697632	Variable	1697661	Variable	1696840	Variable	1696895
M8 female connector, angled 	1.5 m	1415872	0.3 m	1415886	0.3 m	1415891	0.3 m	1415530	0.3 m	1415538
	3 m	1446320	0.6 m	1415888	0.6 m	1415892	0.6 m	1415531	0.6 m	1415539
	5 m	1403253	1.5 m	1415889	1.5 m	1415893	1.5 m	1415532	1.5 m	1415540
	10 m	1403773	3 m	1415890	3 m	1415894	3 m	1415533	3 m	1415541
	Variable	1697603	Variable	1697645	Variable	1697674	Variable	1696866	Variable	1696905
M8 female connector, angled, with 2 LEDs 	1.5 m	1415874	0.3 m	1415896	0.3 m	1415901				
	3 m	1415875	0.6 m	1415897	0.6 m	1415902				
	5 m	1508174	1.5 m	1415898	1.5 m	1415903				
	10 m	1415876	3 m	1415899	3 m	1415904				
	Variable	1697616	Variable	1697658	Variable	1697687	Variable	1696879	Variable	1696918
M12 female connector, straight 	1.5 m	1414451					0.3 m	1414576		
	3 m	1414452					0.6 m	1414577		
	5 m	1400505					1.5 m	1414578		
	10 m	1403486					3 m	1414579		
	Variable	1696688	Variable	1697690	Variable	1697726	Variable	1696756		
M12 female connector, straight, pin 2 - 4 bridged 										
	Variable	1696691					Variable	1696769	Variable	1696811
M12 female connector, straight, with 2 LEDs 	1.5 m	1414556								
	3 m	1414561								
	5 m	1508459								
	10 m	1414565								
	Variable	1696701	Variable	1514197			Variable	1511802	Variable	1524763
M12 female connector, angled 	1.5 m	1414552					0.3 m	1414580		
	3 m	1414553					0.6 m	1414581		
	5 m	1579051					1.5 m	1415519		
	10 m	1453821					3 m	1415520		
	Variable	1696714	Variable	1697700	Variable	1697739	Variable	1696772		
M12 female connector, angled, pin 2 - 4 bridged 										
	Variable	1696727					Variable	1696785	Variable	1696824
M12 female connector, angled, with 2 LEDs 	1.5 m	1414571					0.3 m	1415521		
	3 m	1414573					0.6 m	1415522		
	5 m	1505326					1.5 m	1415523		
	10 m	1414575					3 m	1415524		
	Variable	1696730	Variable	1697713	Variable	1697742	Variable	1696798		
M12 female connector, angled, with LED, pin 2 - 4 bridged 										
	Variable	1696743					Variable	1696808	Variable	1696837

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, with a straight 3-pos. M12 male and a straight M12 female, the ordering data is as follows:

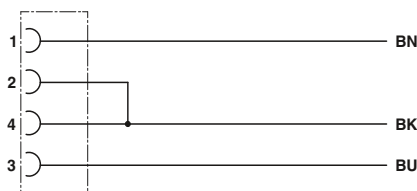
Order No.	Cable type	Length [m] 40 m, maximum
1696756	PVC	4.5
Minimum order amount: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description		Cable type	Suitable for:
PVC – black E221474		PVC	M8/M12
PVC – gray E221474		500	M8/M12
PVC – yellow E221474		540	M12
PVC 105° – yellow E221474		542	M12
PUR, halogen-free – black E221474		PUR	M8/M12
PUR irradiated – orange E221474		150	M12
PUR, halogen-free – gray E221474		280	M8/M12
TPE-U highly flexible – gray E221474		800	M8/M12

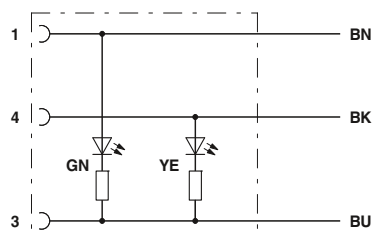
Color coding	Pin assignment
BN	1
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

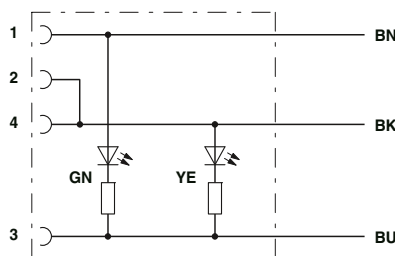
	Technical data	Technical data	Technical data	Technical data
	M8 3-pos.	M8 3-pos., with LEDs	M12 3-pos.	M12 3-pos., with LEDs
Rated voltage	48 V AC / 60 V DC	24 V / 24 V DC	250 V AC / 250 V DC	24 V / 24 V DC
Rated current	4	4	4	4
Contact material	CuSn	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au	Ni/Au	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector in accordance with:	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-101	IEC 61076-2-101
M12 circular connector in accordance with:	-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90
Male connector/female connector	[A]	[A]	[A]	[A]



Contact assignment of M12 female connectors, bridged



Contact assignment of M8/M12 female connectors with two LEDs



Contact assignment of M12 female connectors with 2 LEDs, bridged

Sensor/actuator cabling

Assembled cables

M12 SAC cable, 3-pos., cable type: 800

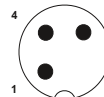
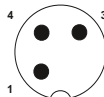
Notes:

For information about the cable qualities, see page 324

Free end



M12 male connector



Free end	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
		1.5 m	1456734	1.5 m	1456899	
		3 m	1456747	3 m	1456909	
		5 m	1456750	5 m	1456912	
		10 m	1456763	10 m	1456925	
		Variable	1696662	Variable	1696675	
		1.5 m	1456679	0.3 m	1456776	
		3 m	1456682	0.6 m	1456789	
		5 m	1456695	1.5 m	1456792	
		10 m	1456705	3 m	1456802	
		Variable	1696688	Variable	1696756	
		1.5 m	1454260	0.3 m	1456815	
		3 m	1456718	0.6 m	1456828	
		5 m	1454273	1.5 m	1456831	
		10 m	1454299	3 m	1456844	
		Variable	1696714	Variable	1696772	
		1.5 m	1454312	0.3 m	1456857	
		3 m	1456721	0.6 m	1456860	
		5 m	1454325	1.5 m	1456873	
		10 m	1454341	3 m	1456886	
		Variable	1696730	Variable	1696798	

Information for products with fixed cable length:

Products with fixed cable length are produced with the highly flexible 800 cable type and are available from stock.

Cable description

TPE-U highly flexible – gray
Robots and drag chains

Cable type

800

Color coding

BN	
BK	
BU	

Pin assignment

1
4
3

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, TPE-U 800, with a straight 3-pos. M12 connector and free cable end, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1696662	800	4.5
Minimum order amount: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

	Technical data	
	M12 3-pos.	M12 3-pos., with LEDs
Rated voltage	250 V AC / 250 V DC	24 V / 24 V DC
Rated current	4	4
Contact material	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Material, knurls	Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M12 circular connector in accordance with:	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data		
Male connector/female connector	-25 ... 90	-25 ... 90

M8 and M12 SAC cable, 3-pos., shielded, cable type: PUR

Notes:

For information about the cable qualities, see page 318

Free end



M8 male connector, 360° shielded



M12 male connector, 360° shielded



Ordering data

Ordering data

Ordering data

Ordering data

Ordering data

Free end	Order No.		Order No.		Order No.		Order No.		Order No.	
		1.5 m	1521614	1.5 m	1521669	1.5 m	1682650	1.5 m	1682689	
		3 m	1521527	3 m	1521672	3 m	1682663	3 m	1682692	
		5 m	1521630	5 m	1521685	5 m	1682676	5 m	1682702	
		10 m	1521643	10 m	1521698	10 m	1500664	10 m	1500677	
		Variable	1521656	Variable	1521708	Variable	1697425	Variable	1697438	
M8 female connector, straight, 360° shielded										
		1.5 m	1521711	0.3 m	1456310					
		3 m	1521724	0.6 m	1456323					
		5 m	1521737	1.5 m	1455285					
		10 m	1521740	3 m	1455298					
		Variable	1521753	Variable	1552052	Variable	1552078			
M8 female connector, angled, 360° shielded										
		1.5 m	1521766							
		3 m	1521779							
		5 m	1521782							
		10 m	1521795							
		Variable	1521805	Variable	1552065	Variable	1552081			
M12 female connector, straight, 360° shielded										
		1.5 m	1682786				0.3 m	1500800		
		3 m	1682799				0.6 m	1500813		
		5 m	1682809				1.5 m	1500826		
		10 m	1500680				3 m	1500839		
		Variable	1697441				Variable	1536049	Variable	1536065
M12 female connector, angled, 360° shielded										
		1.5 m	1682812				0.3 m	1500923		
		3 m	1682825				0.6 m	1500936		
		5 m	1682838				1.5 m	1500949		
		10 m	1500693				3 m	1500952		
		Variable	1697454				Variable	1536052	Variable	1536078

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 3-pos. M12 male and a straight M12 female, the ordering data is as follows:

Order No.	Cable type	Length [m]
1536049	PUR	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Suitable for:	Color coding	Pin assignment
PUR, halogen-free – black E221474	PUR	M8/M12	BN	1
PVC – black E221474	PVC	M12	BK	4
PVC – gray E221474	500	M12	BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

	Technical data	Technical data
	M8	M12
	3-pos., shielded	3-pos., shielded
Rated voltage	48 V AC / 60 V DC	48 V AC / 60 V DC
Rated current	4	4
Contact material	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector in accordance with:	IEC 61076-2-104	-
M12 circular connector in accordance with:	-	IEC 61076-2-101
Degree of protection	IP65 / IP67	IP65 / IP67
Temperature data		
Male connector/female connector	-25 ... 90	-25 ... 90

Sensor/actuator cabling

Assembled cables

M8 and M12 SAC cable, 4-pos., cable type: PUR

Notes:

For information about the cable qualities, see page 318

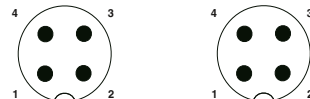
Free end



M8 male connector



M12 male connector



Free end	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.		Order No.		Order No.	
	1.5 m	1681787	1.5 m	1681813	1.5 m	1668043	1.5 m	1668166		
	3 m	1681790	3 m	1681826	3 m	1668056	3 m	1668179		
	5 m	1681800	5 m	1681839	5 m	1668069	5 m	1668182		
	10 m	1694143	10 m	1694156	10 m	1682993	10 m	1694457		
	Variable	1697755	Variable	1697768	Variable	1696947	Variable	1696950		
M8 female connector, straight 	1.5 m	1681842	0.3 m	1682142	0.3 m	1682223	0.3 m	1694923		
	3 m	1681855	0.6 m	1682155	0.6 m	1682236	0.6 m	1693076		
	5 m	1681868	1.5 m	1682168	1.5 m	1682249	1.5 m	1693089		
	10 m	1683484	3 m	1682171	3 m	1682252	3 m	1694936		
	Variable	1697771	Variable	1697797	Variable	1697810	Variable	1697072	Variable	1507874
M8 female connector, angled 	1.5 m	1681871	0.3 m	1682184	0.3 m	1682265			0.3 m	1671551
	3 m	1681884	0.6 m	1682197	0.6 m	1682278			0.6 m	1671564
	5 m	1681897	1.5 m	1682207	1.5 m	1682281			1.5 m	1671577
	10 m	1694172	3 m	1682210	3 m	1682294			3 m	1671580
	Variable	1697784	Variable	1697807	Variable	1697823	Variable	1697085		
M8 female connector, angled, with 2 LEDs 	Variable	1517673					Variable	1515031		
M12 female connector, straight 	1.5 m	1668108					0.3 m	1668357	0.3 m	1668593
	3 m	1668111					0.6 m	1668360	0.6 m	1668603
	5 m	1668124					1.5 m	1668373	1.5 m	1668616
	10 m	1683002					3 m	1668386	3 m	1668629
	Variable	1696963	Variable	1506697			Variable	1697001	Variable	1697030
M12 female connector, straight, with 2 LEDs 	1.5 m	1694800								
	3 m	1694813								
	5 m	1694826								
	10 m	1694839								
	Variable	1696976								
M12 female connector, angled 	1.5 m	1668221					0.3 m	1668470	0.3 m	1668713
	3 m	1668234					0.6 m	1668483	0.6 m	1668726
	5 m	1668247					1.5 m	1668496	1.5 m	1668739
	10 m	1681389					3 m	1668506	3 m	1668742
	Variable	1696989	Variable	1511718	Variable	1697836	Variable	1697014	Variable	1697043
M12 female connector, angled, with 3 LEDs 	1.5 m	1668289					0.3 m	1668519	0.3 m	1668755
	3 m	1668292					0.6 m	1668522	0.6 m	1668768
	5 m	1668302					1.5 m	1668535	1.5 m	1668771
	10 m	1681020					3 m	1668548	3 m	1668784
	Variable	1696992					Variable	1697027	Variable	1697056

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

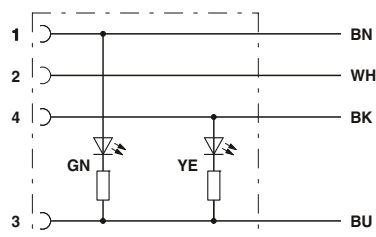
For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 4-pos. M12 male and a straight M12 female, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1697001	PUR	4.5
Minimum order amount: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

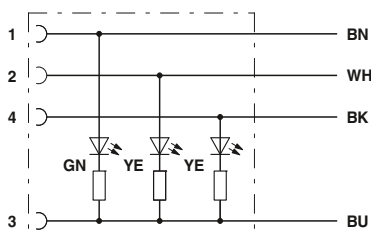
Cable description	Cable type	Suitable for:	Color coding	Pin assignment
PUR, halogen-free – black E221474	PUR	M8/M12	BN	1
PUR, halogen-free – yellow E221474	240	M12	WH	2
PUR, halogen-free – gray E221474	280	M8/M12	BK	4
TPE-U highly flexible – gray E221474	800	M8/M12	BU	3
PUR irradiated – orange E221474	150	M12		
PUR irradiated – yellow E221474	160	M12		
PVC – black E221474	PVC	M8/M12		
PVC – gray E221474	500	M8/M12		
PVC – yellow E221474	540	M12		
PVC 105° – yellow E221474	542	M12		

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

	Technical data	Technical data	Technical data	Technical data
	M8 4-pos.	M8 4-pos., with LED	M12 4-pos.	M12 4-pos., with LED
Rated voltage	48 V AC / 60 V DC	24 V / 24 V DC	250 V AC / 250 V DC	24 V / 24 V DC
Rated current	4	4	4	4
Contact material	CuSn	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au	Ni/Au	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector in accordance with:	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-101	IEC 61076-2-101
M12 circular connector in accordance with:	-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90
Male connector/female connector				



Contact assignment of M8/M12 female connectors with LED



Contact assignment of M12 female connectors with LED

Sensor/actuator cabling

Assembled cables

M8 and M12 SAC cable, 4-pos., cable type: PVC

Notes:

For information about the cable qualities, see page 318

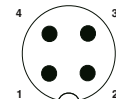
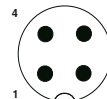
Free end



M8 male connector



M12 male connector



Free end	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.		Order No.		Order No.	
	1.5 m		1.5 m	1415542	1.5 m	1415546	1.5 m	1415585	1.5 m	1415591
	3 m		3 m	1415543	3 m	1415547	3 m	1415588	3 m	1415592
	5 m		5 m	1415544	5 m	1415548	5 m	1415589	5 m	1415593
	10 m		10 m	1415545	10 m	1415549	10 m	1415590	10 m	1415594
	Variable	1697755	Variable	1697768	Variable	1696947	Variable	1696950		
M8 female connector, straight 	1.5 m	1415550	0.3 m	1415556	0.3 m	1415576	0.3 m	1415671		
	3 m	1415551	0.6 m	1415557	0.6 m	1415577	0.6 m	1415672		
	5 m	1403252	1.5 m	1415558	1.5 m	1415578	1.5 m	1415673		
	10 m	1401062	3 m	1415560	3 m	1415579	3 m	1415674		
	Variable	1697771	Variable	1697797	Variable	1697810	Variable	1697072	Variable	1507874
M8 female connector, angled 	1.5 m	1415552	0.3 m	1415562	0.3 m	1415580			0.3 m	1415667
	3 m	1415554	0.6 m	1415572	0.6 m	1415581			0.6 m	1415668
	5 m	1403254	1.5 m	1415573	1.5 m	1415582			1.5 m	1415669
	10 m	1401064	3 m	1415574	3 m	1415583			3 m	1415670
	Variable	1697784	Variable	1697807	Variable	1697823	Variable	1697085		
M8 female connector, angled, with 2 LEDs 	Variable	1517673					Variable	1515031		
M12 female connector, straight 	1.5 m	1544976					0.3 m	1415611	0.3 m	1415627
	3 m	1404407					0.6 m	1415612	0.6 m	1415628
	5 m	1404408					1.5 m	1415613	1.5 m	1415635
	10 m	1446333					3 m	1415614	3 m	1415636
	Variable	1696963	Variable	1506697			Variable	1697001	Variable	1697030
M12 female connector, straight, with 2 LEDs 	1.5 m	1415596								
	3 m	1415597								
	5 m	1415602								
	10 m	1415605								
	Variable	1696976								
M12 female connector, angled 	1.5 m	1415606					0.3 m	1415617	0.3 m	1415642
	3 m	1693526					0.6 m	1454817	0.6 m	1415643
	5 m	1693539					1.5 m	1415618	1.5 m	1415644
	10 m	1415608					3 m	1415619	3 m	1415645
	Variable	1696989	Variable	1511718	Variable	1697836	Variable	1697014	Variable	1697043
M12 female connector, angled, with 3 LEDs 	1.5 m	1415609					0.3 m	1415620	0.3 m	1415646
	3 m	1415610					0.6 m	1415623	0.6 m	1415647
	5 m	1404961					1.5 m	1415624	1.5 m	1415648
	10 m	1401063					3 m	1415625	3 m	1415650
	Variable	1696992					Variable	1697027	Variable	1697056

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for products with variable cable:

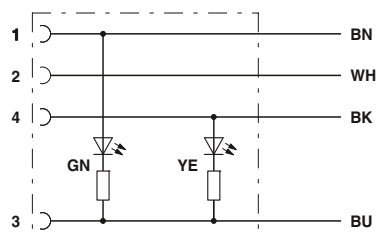
For a 4.5 m long sensor/actuator cable, PVC - black, with a straight 4-pos. M12 male and a straight M12 female, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1697001	PVC	4.5
Minimum order amount: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

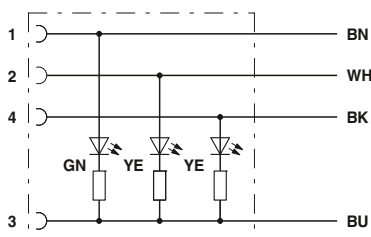
Cable description	Cable type	Suitable for:	Color coding	Pin assignment
PVC – black E221474	PVC	M8/M12	BN	1
PVC – gray E221474	500	M8/M12	WH	2
PVC – yellow E221474	540	M12	BK	4
PVC 105° – yellow E221474	542	M12	BU	3
PUR, halogen-free – black E221474	PUR	M8/M12		
PUR, halogen-free – yellow E221474	240	M12		
PUR, halogen-free – gray E221474	280	M8/M12		
PUR irradiated – orange E221474	150	M12		
PUR irradiated – yellow E221474	160	M12		
TPE-U highly flexible – gray E221474	800	M8/M12		

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

	Technical data	Technical data	Technical data	Technical data
	M8 4-pos.	M8 4-pos., with LED	M12 4-pos.	M12 4-pos., with LED
Rated voltage	48 V AC / 60 V DC	24 V / 24 V DC	250 V AC / 250 V DC	24 V / 24 V DC
Rated current	4	4	4	4
Contact material	CuSn	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au	Ni/Au	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector in accordance with:	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-101	IEC 61076-2-101
M12 circular connector in accordance with:	-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90
Male connector/female connector				



Contact assignment of M8/M12 female connectors with LED



Contact assignment of M12 female connectors with LED

Sensor/actuator cabling

Assembled cables

M12 SAC cable, 4-pos., cable type: 800

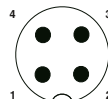
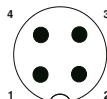
Notes:

For information about the cable qualities, see page 324

Free end



M12 male connector



Free end	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
		1.5 m	1457018	1.5 m	1457128	
		3 m	1457021	3 m	1457131	
		5 m	1457034	5 m	1457144	
		10 m	1457047	10 m	1457157	
		Variable	1696947	Variable	1696950	
		1.5 m	1456938	0.3 m	1457050	
		3 m	1456941	0.6 m	1457063	
		5 m	1567322	1.5 m	1567270	
		10 m	1567335	3 m	1457076	
		Variable	1696963	Variable	1697001	
		1.5 m	1456954	0.3 m	1457089	
		3 m	1456967	0.6 m	1567225	
		5 m	1456970	1.5 m	1567238	
		10 m	1456983	3 m	1457092	
		Variable	1696989	Variable	1697014	
		1.5 m	1456996	0.3 m	1457102	
		3 m	1457005	0.6 m	1567173	
		5 m	1567351	1.5 m	1567199	
		10 m	1567364	3 m	1457115	
		Variable	1696992	Variable	1697027	

Information for products with fixed cable length:

Products with fixed cable length are produced with the highly flexible 800 cable type and are available from stock.

Cable description

TPE-U highly flexible – gray
Robots and drag chains

Cable type

800

Color coding

BN	
WH	
BK	
BU	

Pin assignment

1
2
4
3

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, TPE-U 800, with a straight 4-pos. M12 connector and free cable end, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1696947	800	4.5
Minimum order amount: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

	Technical data	
	M12 4-pos.	M12 4-pos., with LED
Rated voltage	250 V AC / 250 V DC	24 V / 24 V DC
Rated current	4	4
Contact material	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Material, knurls	Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M12 circular connector in accordance with:	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data		
Male connector/female connector	-25 ... 90	-25 ... 90

M8 and M12 SAC cable, 4-pos., shielded, cable type: PUR

Notes:

For information about the cable qualities, see page 318

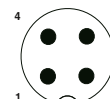
Free end



M8 male connector, 360° shielded



M12 male connector, 360° shielded



Ordering data

Ordering data

Ordering data

Ordering data

Ordering data

Free end	Order No.		Order No.		Order No.		Order No.		Order No.	
			1.5 m	1521818	1.5 m	1521863	1.5 m	1682715	1.5 m	1682870
			3 m	1521821	3 m	1521876	3 m	1682618	3 m	1682883
			5 m	1521834	5 m	1521889	5 m	1682647	5 m	1682896
			10 m	1521847	10 m	1521892	10 m	1694389	10 m	1500703
			Variable	1521850	Variable	1521902	Variable	1697467	Variable	1697470
M8 female connector, straight, 360° shielded										
			1.5 m	1521915	0.3 m	1574580				
			3 m	1521928	0.6 m	1455722				
			5 m	1521931	1.5 m	1455735				
			10 m	1521944	3 m	1574603				
			Variable	1521957	Variable	1552094	Variable	1552104		
M8 female connector, angled, 360° shielded										
			1.5 m	1521960						
			3 m	1521973						
			5 m	1521986						
			10 m	1521999						
			Variable	1522008	Variable	1552065	Variable	1552120		
M12 female connector, straight, 360° shielded										
			1.5 m	1682841					0.3 m	1500842
			3 m	1682854					0.6 m	1500855
			5 m	1682867					1.5 m	1500868
			10 m	1500716					3 m	1500871
			Variable	1697483					Variable	1536081
									Variable	1536104
M12 female connector, angled, 360° shielded										
			1.5 m	1682906					0.3 m	1500965
			3 m	1682919					0.6 m	1500978
			5 m	1682922					1.5 m	1500981
			10 m	1500729					3 m	1500994
			Variable	1697496					Variable	1536094
									Variable	1536117

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 4-pos. M12 male and a straight M12 female, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1536081	PUR	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Suitable for:	Color coding	Pin assignment
PUR, halogen-free – black E221474	PUR	M8/M12	BN	1
PVC – black E221474	PVC	M12	WH	2
PVC – gray E221474	500	M12	BK	4
			BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

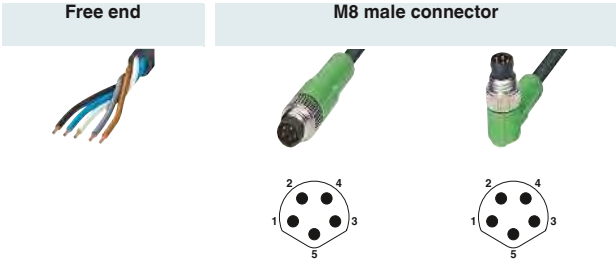
	Technical data	Technical data
	M8	M12
	4-pos., shielded	4-pos., shielded
Rated voltage	48 V AC / 60 V DC	48 V AC / 60 V DC
Rated current	4	4
Contact material	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector in accordance with:	IEC 61076-2-104	-
M12 circular connector in accordance with:	-	-
Degree of protection	IP65 / IP67	IP65 / IP67
Temperature data		
Male connector/female connector	-25 ... 90	-25 ... 90

Sensor/actuator cabling

Assembled cables

M8 SAC cable, 5-pos., B-coded, cable type: PUR

Notes:
For information about the cable qualities, see page 318



		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.	
				1.5 m	1404461	1.5 m	1404465
				3 m	1404462	3 m	1404466
				5 m	1404463	5 m	1404467
				10 m	1404464	10 m	1404468
M8 female connector, straight							
 		1.5 m	1404470	0.3 m	1404479		
		3 m	1404471	0.6 m	1404480		
		5 m	1404473	1.5 m	1404481		
		10 m	1404474	3 m	1404482		
M8 female connector, angled							
 		1.5 m	1404475				
		3 m	1404476				
		5 m	1404477				
		10 m	1404478				

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free 115 cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free – black	115	BN WH BK BU GY	1 2 4 3 5

Technical data	
M8, 5-pos.	
Rated voltage	30 V AC / 30 V DC
Rated current	3
Contact material	CuSn
Contact surface material	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing
Material, knurls	Zinc die-cast, nickel-plated
M8 circular connector in accordance with:	IEC 61076-2-104
Degree of protection	IP65 / IP67 / IP68
Temperature data	
Male connector/female connector	-25 ... 90

M12 SAC cable, 5-pos., cable type: PUR

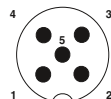
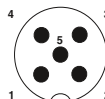
Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector



Ordering data		Ordering data		Ordering data	
Free end	Order No.	Order No.	Order No.	Order No.	Order No.
	1.5 m	1669767	1.5 m	1669796	
	3 m	1669770	3 m	1669806	
	5 m	1669783	5 m	1669819	
	10 m	1683361	10 m	1694460	
	Variable	1697098	Variable	1697108	
M12 female connector, straight 	1.5 m	1669822	0.3 m	1681583	
	3 m	1669835	0.6 m	1681596	
	5 m	1669848	1.5 m	1681606	
	10 m	1683374	3 m	1681619	
	Variable	1697111	Variable	1697140	Variable 1508734
M12 female connector, angled 	1.5 m	1669851	0.3 m	1681622	
	3 m	1669864	0.6 m	1681635	
	5 m	1669877	1.5 m	1681648	
	10 m	1694541	3 m	1681651	
	Variable	1697124	Variable	1697153	Variable 1529506
M12 female connector, angled, with 3 LEDs 	1.5 m	1669880	0.3 m	1694635	
	3 m	1669893	0.6 m	1694648	
	5 m	1669903	1.5 m	1694651	
	10 m	1694431			
	Variable	1697137	Variable	1697166	Variable 1552159

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 5-pos. M12 male and a straight M12 female, the ordering data is as follows:

Order No.	Cable type	Length [m]
1697140	PUR	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free – black E221474	PUR	BN	1
PUR, halogen-free – black, 5th wire gray E221474	115	WH	2
TPE-U highly flexible – gray, 5th wire gray E221474	800	BK	4
PUR irradiated – orange E221474	150	BU	3
PVC – black E221474	PVC	GNYE	5
PVC – black, 5th wire gray E221474	515		
PVC – gray E221474	500		
PVC 105° – yellow E221474	540		
PVC 105° – yellow, 5th wire gray E221474	542		

Technical data	Technical data
M12 5-pos.	M12 5-pos., with LED
48 V AC / 60 V DC	24 V / 24 V DC
4	4
CuSn	CuSn
Ni/Au	Ni/Au
TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
IEC 61076-2-101	IEC 61076-2-101
IP65 / IP67 / IP68	IP65 / IP67 / IP68
-25 ... 90	-25 ... 90

Rated voltage	
Rated current	[A]
Contact material	
Contact surface material	
Material of grip body	
M12 circular connector in accordance with:	
Degree of protection	
Temperature data	
Male connector/female connector	[°C]

Sensor/actuator cabling

Assembled cables

M12 SAC cable, 5-pos., cable type: PVC

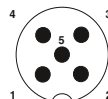
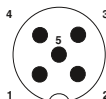
Notes:

For information about the cable qualities, see page 318

Free end



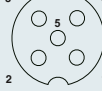
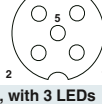
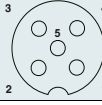
M12 male connector



Ordering data

Ordering data

Ordering data

Free end		Order No.		Order No.		Order No.	
		1.5 m		1415675	1.5 m	1415679	
		3 m		1415676	3 m	1415680	
		5 m		1415677	5 m	1415681	
		10 m		1415678	10 m	1415682	
		Variable		1697098	Variable	1697108	
M12 female connector, straight							
		1.5 m	1415683	0.3 m	1415695		
		3 m	1415684	0.6 m	1415696		
		5 m	1453889	1.5 m	1415697		
		10 m	1415685	3 m	1415698		
		Variable	1697111	Variable	1697140	Variable	1508734
M12 female connector, angled							
		1.5 m	1415686	0.3 m	1415699		
		3 m	1415687	0.6 m	1415700		
		5 m	1415688	1.5 m	1415701		
		10 m	1415689	3 m	1415702		
		Variable	1697124	Variable	1697153	Variable	1529506
M12 female connector, angled, with 3 LEDs							
		1.5 m	1415690	0.3 m	1415703		
		3 m	1415691	0.6 m	1415704		
		5 m	1415693	1.5 m	1415705		
		10 m	1415694	3 m	1415706		
		Variable	1697137	Variable	1697166	Variable	1552159

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, with a straight 5-pos. M12 male and a straight M12 female, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1697140	PVC	4.5
Minimum order amount: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description

PVC – black
E221474



Cable type

PVC

PVC – black, 5th wire gray
E221474



515

PVC – gray
E221474



500

PVC 105° – yellow
E221474



540

PVC 105° – yellow, 5th wire gray
E221474



542

PUR, halogen-free – black
E221474



PUR

PUR, halogen-free – black, 5th wire gray
E221474



115

PUR irradiated – orange
E221474



150

TPE-U highly flexible – gray, 5th wire gray
E221474



800

Color coding

BN

WH

BK

BU

GNYE

Pin assignment

1

2

4

3

5

Technical data

Technical data

Rated voltage

Rated current

Contact material

Contact surface material

Material of grip body

M12 circular connector in accordance with:

Degree of protection

Temperature data

Male connector/female connector

[A]

[°C]

M12

5-pos.

48 V AC / 60 V DC

4

CuSn

Ni/Au

TPU, hardly inflammable,
self-extinguishing

-

IP65 / IP67 / IP68

-25 ... 90

M12

5-pos., with LED

24 V / 24 V DC

4

CuSn

Ni/Au

TPU, hardly inflammable,
self-extinguishing

IEC 61076-2-101

IP65 / IP67 / IP68

-25 ... 90

M12 SAC cable, 5-pos., cable type: 802

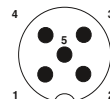
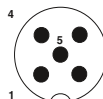
Notes:

For information about the cable qualities, see page 324

Free end



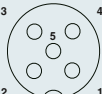
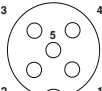
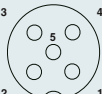
M12 male connector



Ordering data

Ordering data

Ordering data

Free end	Order No.		Order No.		Order No.	
		1.5 m	1457225	1.5 m	1457322	
		3 m	1457238	3 m	1457335	
		5 m	1457241	5 m	1457348	
		10 m	1457254	10 m	1457351	
		Variable	1697098	Variable	1697108	
M12 female connector, straight						
		1.5 m	1454419	0.3 m	1457267	
		3 m	1457160	0.6 m	1454561	
		5 m	1454422	1.5 m	1454587	
		10 m	1454448	3 m	1457270	
		Variable	1697111	Variable	1697140	
M12 female connector, angled						
		1.5 m	1457173	0.3 m	1457283	
		3 m	1457186	0.6 m	1454516	
		5 m	1457199	1.5 m	1454532	
		10 m	1457209	3 m	1457296	
		Variable	1697124	Variable	1697153	
M12 female connector, angled, with 3 LEDs						
		1.5 m	1454367	0.3 m	1457306	
		3 m	1457212	0.6 m	1454464	
		5 m	1454370	1.5 m	1454480	
		10 m	1454396	3 m	1457319	
		Variable	1697137	Variable	1697166	

Information for products with fixed cable length:

Products with fixed cable length are produced with the 802 cable type and are available from stock.

Cable description

TPE-U highly flexible – gray
Robots and drag chains

Cable type

802

Color coding

BN	
WH	
BK	
BU	
GNYE	

Pin assignment

1
2
4
3
5

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, TPE-U 802, with a straight 5-pos. M12 connector and free cable end, the ordering data is as follows:

Order No.	Cable type	Length [m]
1697098	802	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Technical data

Technical data

	M12 5-pos.	M12 5-pos., with LED
Rated voltage	48 V AC / 60 V DC	24 V / 24 V DC
Rated current	4	4
Contact material	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Material, knurls	Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M12 circular connector in accordance with:	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data		
Male connector/female connector	-25 ... 90	-25 ... 90

Sensor/actuator cabling

Assembled cables

M12 SAC cable, 5-pos., shielded, cable type: PUR

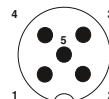
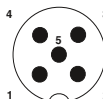
Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector, 360° shielded



Free end	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
			1.5 m	1682728	1.5 m	1682757
			3 m	1682744	3 m	1682760
			5 m	1682731	5 m	1682773
			10 m	1500732	10 m	1500745
			Variable	1697506	Variable	1697519
	M12 female connector, straight, 360° shielded		0.3 m	1500884		
			0.6 m	1500897		
			1.5 m	1500907		
			3 m	1500910		
			Variable	1536120	Variable	1536146
	M12 female connector, angled, 360° shielded		0.3 m	1501003		
			0.6 m	1501029		
			1.5 m	1501045		
			3 m	1501058		
			Variable	1536133	Variable	1536159

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 5-pos. M12 male and a straight M12 female, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1536120	PUR	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free – black E221474	PUR	BN	1
PVC – black E221474	PVC	WH	2
PVC – gray E221474	500	BK	4
		BU	3
		GY	5

Technical data

M12 5-pos., shielded	
Rated voltage	48 V AC / 60 V DC
Rated current	4 [A]
Contact material	CuSn
Contact surface material	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing
M12 circular connector in accordance with:	IEC 61076-2-101
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	-25 ... 90 [°C]

M8 SAC cable, 6-pos., cable type: PUR

Notes:

For information about the cable qualities, see page 318

Free end



M8 male connector



Ordering data

Ordering data

Ordering data

Free end	Order No.	Order No.	Order No.
		1.5 m 1522095	1.5 m 1522147
		3 m 1522105	3 m 1522150
		5 m 1522118	5 m 1522163
		10 m 1522121	10 m 1522176
		Variable 1522134	Variable 1522189
M8 female connector, straight			
	1.5 m 1522192		
	3 m 1522202		
	5 m 1522215		
	10 m 1522228		
	Variable 1522231	Variable 1551927	Variable 1551943
M8 female connector, angled			
	1.5 m 1522244		
	3 m 1522257		
	5 m 1522260		
	10 m 1522273		
	Variable 1522286	Variable 1551930	Variable 1551956

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description

PUR, halogen-free – black
E221474



Cable type

PUR

Color coding

BN

WH

BU

BK

GY

PK

Pin assignment

1

2

3

4

5

6

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 6-pos. M8 connector and open cable end, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1522134	PUR	4.5
Minimum order amount:		25 pcs.
		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Technical data

M8 6-pos.	
Rated voltage	30 V AC / 30 V DC
Rated current	1.5 [A]
Contact material	CuZn
Contact surface material	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing
M8 circular connector in accordance with:	IEC 61076-2-104
Degree of protection	IP65 / IP67 / IP68
Temperature data	
Male connector/female connector	-25 ... 90 [°C]

Sensor/actuator cabling

Assembled cables

M8 SAC cable, 6-pos., shielded, cable type: PUR

Notes:

For information about the cable qualities, see page 318

Free end



M8 male connector, 360° shielded



Free end	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
			1.5 m	1522299	1.5 m	1522341
			3 m	1522309	3 m	1522354
			5 m	1522312	5 m	1522367
			10 m	1522325	10 m	1522370
			Variable	1522338	Variable	1522383
M8 female connector, straight, 360° shielded 			1.5 m	1522396		
			3 m	1522406		
			5 m	1522419		
			10 m	1522422		
			Variable	1522435	Variable	1552010
M8 female connector, angled, 360° shielded 			1.5 m	1522448		
			3 m	1522451		
			5 m	1522464		
			10 m	1522477		
			Variable	1522480	Variable	1552023
					Variable	1552036
					Variable	1552049

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description

PUR, halogen-free – black
E221474



Cable type

PUR

Color coding

BN	
WH	
BU	
BK	
GY	
PK	

Pin assignment

1
2
3
4
5
6

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 6-pos. M8 male and a straight M8 female, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1552010	PUR	4.5
Minimum order amount: 25 pcs.		Increments:
		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Technical data

Rated voltage	
Rated current	[A]
Contact material	
Contact surface material	
Material of grip body	
M8 circular connector in accordance with:	
Degree of protection	
Temperature data	
Male connector/female connector	[°C]

M8
6-pos., shielded
30 V AC / 30 V DC
1.5
CuZn
Ni/Au
TPU, hardly inflammable, self-extinguishing
IEC 61076-2-104
IP65 / IP67
-25 ... 90

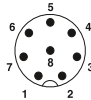
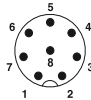
M8 SAC cable,
8-pos.,
cable type: PUR

Notes:
For information about the cable qualities, see page 318

Free end



M8 male connector



Free end	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
			1.5 m	1404178	1.5 m	1404182
			3 m	1404180	3 m	1404186
			5 m	1404181	5 m	1404185
			10 m	1404179	10 m	1404183
	M8 female connector, straight					
			1.5 m	1404187	0.3 m	1404196
			3 m	1404188	0.6 m	1404198
			5 m	1404189	1.5 m	1404199
	M8 female connector, angled					
			1.5 m	1404191	0.3 m	1404201
			3 m	1404192	0.6 m	1404202
			5 m	1404193	1.5 m	1404203
			10 m	1404194	3 m	1404204

Information for products with
fixed cable length:

Products with fixed cable length are produced with the
halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free – black	PUR	WH	1
		BN	2
		GN	3
		YE	4
		GY	5
		PK	6
		BU	7
		RD	8

Technical data	
M8 8-pos.	
Rated voltage	30 V AC / 30 V DC
Rated current	1.5
Contact material	CuSn
Contact surface material	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing
Material, knurls	Zinc die-cast, nickel-plated
M8 circular connector in accordance with:	IEC 61076-2-104
Degree of protection	IP65 / IP67 / IP68
Temperature data	
Male connector/female connector	-25 ... 85

Sensor/actuator cabling

Assembled cables

M12 SAC cable, 8-pos., cable type: PUR

Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector



Free end	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
			1.5 m	1522493	1.5 m	1522545
			3 m	1522503	3 m	1522558
			5 m	1522516	5 m	1522561
			10 m	1522529	10 m	1522574
			Variable	1522532	Variable	1522587
M12 female connector, straight 			1.5 m	1522590	0.3 m	1522671
			3 m	1522600	0.6 m	1522684
			5 m	1520369	1.5 m	1522697
			10 m	1520372	3 m	1522707
			Variable	1522613	Variable	1551969
M12 female connector, angled 			1.5 m	1522626	0.3 m	1522723
			3 m	1522639	0.6 m	1522736
			5 m	1522642	1.5 m	1522749
			10 m	1522655	3 m	1522752
			Variable	1522668	Variable	1551972

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 8-pos. M12 male and a straight M12 female, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1522710	PUR	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free – black E221474	PUR	WH	1
TPE-U highly flexible – gray E221474	800	BN	2
PVC – black E221474	PVC	GN	3
PVC – gray E221474	500	YE	4
		GY	5
		PK	6
		BU	7
		RD	8

Technical data

M12 8-pos.	
Rated voltage	30 V AC / 30 V DC
Rated current	2
Contact material	CuZn
Contact surface material	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing
M12 circular connector in accordance with:	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68
Temperature data	
Male connector/female connector	-25 ... 90

M12 SAC cable, 8-pos., cable type: PVC

Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector



Ordering data

Ordering data

Ordering data

Free end		Order No.		Order No.		Order No.	
		1.5 m	1415716	1.5 m	1415720		
		3 m	1415717	3 m	1415721		
		5 m	1415718	5 m	1415722		
		10 m	1415719	10 m	1415723		
		Variable	1522532	Variable	1522587		
M12 female connector, straight							
		1.5 m	1415724	0.3 m	1415737		
		3 m	1415725	0.6 m	1415738		
		5 m	1415726	1.5 m	1415739		
		10 m	1415727	3 m	1415740		
		Variable	1522613	Variable	1522710	Variable	1551969
M12 female connector, angled							
		1.5 m	1415732	0.3 m	1415745		
		3 m	1415734	0.6 m	1415746		
		5 m	1415735	1.5 m	1415747		
		10 m	1415736	3 m	1415748		
		Variable	1522668	Variable	1522765	Variable	1551972

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, with a straight 8-pos. M12 male and a straight M12 female, the ordering data is as follows:

Order No.	Cable type	Length [m]
1522710	PVC	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PVC – black E221474	PVC	WH	1
PVC – gray E221474	500	BN	2
PUR, halogen-free – black E221474	PUR	GN	3
TPE-U highly flexible – gray E221474	800	YE	4
		GY	5
		PK	6
		BU	7
		RD	8

Technical data

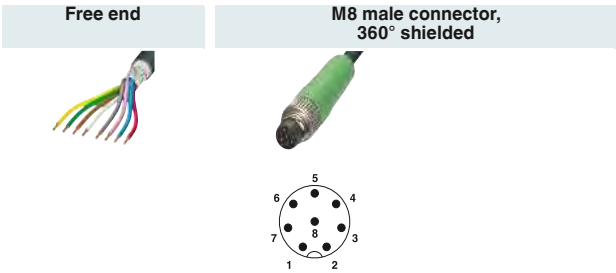
M12 8-pos.	
Rated voltage	30 V AC / 30 V DC
Rated current	2
Contact material	CuZn
Contact surface material	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing
M12 circular connector in accordance with:	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68
Temperature data	
Male connector/female connector	-25 ... 90

Sensor/actuator cabling

Assembled cables

M8 SAC cable,
8-pos., shielded,
cable type: PUR

Notes:
For information about the cable qualities, see page 318



Free end	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
			1.5 m	1404137		
			3 m	1404140		
			5 m	1404141		
			10 m	1404138		
	M8 female connector, straight, 360° shielded		1.5 m	1404147	0.3 m	1404133
			3 m	1404148	0.6 m	1404134
			5 m	1404149	1.5 m	1404135
			10 m	1404150	3 m	1404136

Information for products with
fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free – black	PUR	WH	1
		BN	2
		GN	3
		YE	4
		GY	5
		PK	6
		BU	7
		RD	8

Technical data	
M8 8-pos.	
Rated voltage	30 V AC / 30 V DC
Rated current	1.5
Contact material	CuSn
Contact surface material	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing
Material, knurls	Zinc die-cast, nickel-plated
M8 circular connector in accordance with:	IEC 61076-2-104
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	-25 ... 85

M12 SAC cable, 8-pos., shielded, cable type: PUR

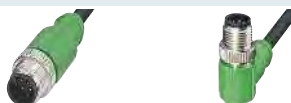
Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector, 360° shielded



Ordering data

Ordering data

Ordering data

Free end		Order No.		Order No.		Order No.	
		1.5 m	1522778	1.5 m	1522817		
		3 m	1522781	3 m	1522820		
		5 m	1526981	5 m	1522833		
		10 m	1522794	10 m	1522846		
		Variable	1522804	Variable	1522859		
M12 female connector, straight, 360° shielded							
		1.5 m	1522862	0.3 m	1522969		
		3 m	1522875	0.6 m	1522972		
		5 m	1522888	1.5 m	1522985		
		10 m	1522891	3 m	1522998		
		Variable	1522901	Variable	1523007	Variable	1551998
M12 female connector, angled, 360° shielded							
		1.5 m	1522914	0.3 m	1523010		
		3 m	1522927	0.6 m	1523023		
		5 m	1522930	1.5 m	1523036		
		10 m	1522943	3 m	1523049		
		Variable	1522956	Variable	1523052	Variable	1552007

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 8-pos. M12 male and a straight M12 female, the ordering data is as follows:

Order No.	Cable type	Length [m]
1523007	PUR	4.5
Minimum order amount:		25 pcs.
Increments:		0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description

PUR, halogen-free – black
E221474



PUR

PUR, halogen-free – gray
E221474



280

PVC – black
E221474



PVC

Color coding

WH

BN

GN

YE

GY

PK

BU

RD

Pin assignment

1

2

3

4

5

6

7

8

Technical data

Rated voltage

Rated current

Contact material

Contact surface material

Material of grip body

M12 circular connector in accordance with:

Degree of protection

Temperature data

Male connector/female connector

[A]

[°C]

M12
8-pos., shielded

30 V AC / 30 V DC

2

CuZn

Ni/Au

TPU, hardly inflammable,

self-extinguishing

IEC 61076-2-101

IP65 / IP67

-25 ... 90

Sensor/actuator cabling

Assembled cables

M12 SAC cable, 12 and 17-pos., cable type: PUR

Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector, 12-pos.



M12 male connector, 12-pos.



Free end	Ordering data		Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.		Order No.	
		1.5 m	1430530	1.5 m	1430572	1.5 m	1430695	1.5 m
		3 m	1430543	3 m	1430585	3 m	1430705	3 m
		5 m	1430556	5 m	1430598	5 m	1430718	5 m
		10 m	1430569	10 m	1430608	10 m	1430721	10 m
M12 female, 12-pos., straight 	1.5 m	1430611					1.5 m	1430734
	3 m	1430624					3 m	1430747
	5 m	1430637					5 m	1430750
	10 m	1430640					10 m	1430763
M12 female, 12-pos., angled 	1.5 m	1430653						
	3 m	1430666						
	5 m	1430679						
	10 m	1430682						
M12 female, 17-pos., straight 	1.5 m	1430776						
	3 m	1430789						
	5 m	1430792						
	10 m	1430802						
M12 female, 17-pos., angled 	1.5 m	1430815						
	3 m	1430828						
	5 m	1430831						
	10 m	1430844						

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment, 17-pos.
PUR, halogen-free – black	PUR	BN	1
		BU	2
		WH	3
		GN	4
		PK	5
		YE	6
		BK	7
		GY	8
		RD	9
		VT	10
		GYPK	11
		RDBU	12
		WHGN	13
		BNGN	14
		WHYE	15
		YEBN	16
		WHGY	17

Technical data		Technical data	
M12 12-pos.		M12 17-pos.	
Rated voltage	30 V AC / 30 V DC	Rated voltage	30 V AC / 30 V DC
Rated current	1.5	Rated current	1.5
Contact material	CuZn	Contact material	CuZn
Contact surface material	Ni/Au	Contact surface material	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	Material of grip body	TPU, hardly inflammable, self-extinguishing
M12 circular connector in accordance with:	IEC 61076-2-101	M12 circular connector in accordance with:	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	Degree of protection	IP65 / IP67 / IP68
Temperature data		Temperature data	
Male connector/female connector	-25 ... 85	Male connector/female connector	-25 ... 90

M12 SAC cable, 12 and 17-pos., cable type: PVC

Notes:

For information about the cable qualities, see page 318

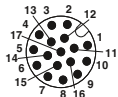
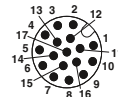
Free end



M12 male connector, 12-pos.



M12 male connector, 12-pos.



Free end	Ordering data	Ordering data	Ordering data	Ordering data	Ordering data
Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
	1.5 m 1554775	1.5 m 1554814	1.5 m 1555266	1.5 m 1555305	
	3 m 1554788	3 m 1554827	3 m 1555279	3 m 1555318	
	5 m 1554791	5 m 1554830	5 m 1555282	5 m 1555321	
	10 m 1554801	10 m 1554843	10 m 1555295	10 m 1555334	
M12 female, 12-pos., straight					
	1.5 m 1554856				
	3 m 1554869				
	5 m 1554872				
	10 m 1554885				
M12 female, 12-pos., angled					
	1.5 m 1554898				
	3 m 1554908				
	5 m 1554924				
	10 m 1554937				
M12 female, 17-pos., straight					
	1.5 m 1555347				
	3 m 1555350				
	5 m 1555363				
	10 m 1555376				
M12 female, 17-pos., angled					
	1.5 m 1555389				
	3 m 1555392				
	5 m 1555402				
	10 m 1555415				

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment, 17-pos.
PVC – black	PVC	BN	1
		BU	2
		WH	3
		GN	4
		PK	5
		YE	6
		BK	7
		GY	8
		RD	9
		VT	10
		GYPK	11
		RDBU	12
		WHGN	13
		BNGN	14
		WHYE	15
		YEBN	16
		WHGY	17

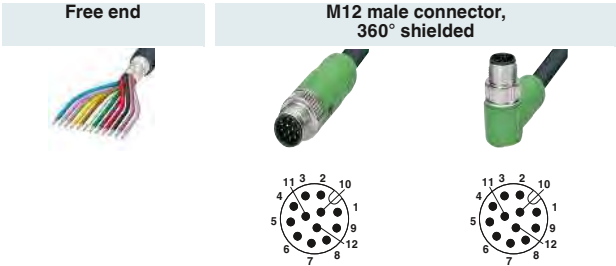
	Technical data	Technical data
	M12 12-pos.	M12 17-pos.
Rated voltage	30 V AC / 30 V DC	30 V AC / 30 V DC
Rated current	1.5	1.5
Contact material	CuZn	CuZn
Contact surface material	Ni/Au	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M12 circular connector in accordance with:	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data		
Male connector/female connector	-25 ... 90	-25 ... 90

Sensor/actuator cabling

Assembled cables

M12 SAC cable,
12-pos., shielded

Notes:
For information about the cable qualities, see page 318



Ordering data		Ordering data		Ordering data	
Free end	Order No.		Order No.		Order No.
		1.5 m	1430048	1.5 m	1430080
		3 m	1430051	3 m	1430093
		5 m	1430064	5 m	1430103
		10 m	1430077	10 m	1430116
M12 female, straight, 360° shielded					
 	0.5 m	1437083	3 m	1402551	
	1 m	1434730			
	1.5 m	1430129			
	3 m	1430132			
	5 m	1430145			
	10 m	1430158			
M12 female, angled, 360° shielded					
 	1.5 m	1430161			
	3 m	1430174			
	5 m	1430187			
	10 m	1430190			

Information for products with
fixed cable length:

Products with fixed cable length are produced with the 35T cable type and are available from stock.

Cable description	Cable type	Color coding		Pin assignment M12
PUR/PVC – black, twisted pair	35T	BN		1
		BU		2
		WH		3
		GN		4
		PK		5
		YE		6
		BK		7
		GY		8
		RD		9
		VT		10
		GYPK		11
		RDBU		12

Technical data	
M12 12-pos.	
Rated voltage	30 V AC / 30 V DC
Rated current	[A] 1.5
Contact material	CuZn
Contact surface material	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing
M12 circular connector in accordance with:	IEC 61076-2-101
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	[°C] -25 ... 85

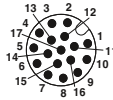
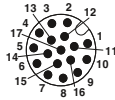
M12 SAC cable, 17-pos., shielded

Notes:
For information about the cable qualities, see page 318

Free end



M12 male connector, 360° shielded



Free end	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
			1.5 m	1430200	1.5 m	1430242
			3 m	1430213	3 m	1430255
			5 m	1430226	5 m	1430268
			10 m	1430239	10 m	1430271
	M12 female, straight, 360° shielded		1.5 m	1430284		
			3 m	1430297		
			5 m	1430307	5 m	1402421
			10 m	1430310	10 m	1402422
	M12 female, angled, 360° shielded		1.5 m	1430323		
			3 m	1430336		
			5 m	1430349		
			10 m	1430352		

Information for products with fixed cable length:

Products with fixed cable length are produced with the 35T cable type and are available from stock.

Cable description	Cable type	Color coding	Pin assignment M12
PUR/PVC – black, twisted pair	35T	BN	1
		BU	2
		WH	3
		GN	4
		PK	5
		YE	6
		BK	7
		GY	8
		RD	9
		VT	10
		GYPK	11
		RDBU	12
		WHGN	13
		BNGN	14
		WHYE	15
		YEBN	16
		WHGY	17

Technical data	
M12 17-pos.	
Rated voltage	30 V AC / 30 V DC
Rated current	1.5
Contact material	CuZn
Contact surface material	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing
M12 circular connector in accordance with:	IEC 61076-2-101
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	-25 ... 90

Sensor/actuator cabling

Assembled cables

Plastic-molded M17 and M23 signal connectors

- Feedback connectors
- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Connector head temperature range -40°C to +105°C
- Standard and counter direction contact numbering
- M17 and M23 standard thread, SPEEDCON fast locking system on request
- Angled versions rotatable

	M17, 17-position, female, standard, 60 V, 3.6 A	M23, 12-position, female, counter direction, 150 V, 9 A	M23, 12-position, female, counter direction, 150 V, 9 A
			
	E01	E00	E00
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end	2 m 1624780 5 m 1624781 10 m 1624782	2 m 1619247 5 m 1619248 10 m 1619249	2 m 1619280 5 m 1619281 10 m 1619282
M17, 17-pos., male	2 m 1624778 5 m 1624783 10 m 1624784		
M23, 12-pos., male		2 m 1619289 5 m 1619290 10 m 1619291	
M23, 12-pos., male			
M23, 17-pos., male			

Cable information:

Type/application	Color	Structure	Sheath/core material	Assignment	Temperature range
E00 Feedback	Orange	Shielded, 4 x 2x 0.25 + 2x 0.5	TPU/PP	1 - Pink 2 - Red 3 - Black 4 - Blue 5 - Brown 6 - Green 7 - Violet 8 - Gray 9 - Outer shield 10 - White 11 - n.c. 12 - Brown	Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C
E01 Feedback	Green	Shielded, 3x 2x 0.14 + 2x 0.5 + 4x 0.14 + 4x 0.22	TPU/TPM	1 - Yellow 2 - Green 3 - Red 4 - n.c. 5 - Blue 6 - n.c. 7 - Brown-blue (encoder) 8 - Green-black (+temp.) 9 - Green-red (-temp.) 10 - Brown-red (P encoder) 11 - Black 12 - Brown 13 - Orange 14 - White-black 15 - Brown-gray (OV sense) 16 - Brown-yellow (sense) 17 - n.c. Inner shield on housing	Mobile: -30°C ... 60°C Fixed: -30°C ... 80°C

M23, 12-position, female, standard, 150 V, 9 A		M23, 12-position, female, standard, 150 V, 9 A		M23, 17-position, female, standard, 100 V, 9 A		M23, 17-position, female, standard, 100 V, 9 A	
							
E00		E00		E01		E01	
Ordering data		Ordering data		Ordering data		Ordering data	
Order No.		Order No.		Order No.		Order No.	
2 m	1619250	2 m	1619285	2 m	1619277	2 m	1619286
5 m	1619273	5 m	1619283	5 m	1619278	5 m	1619287
10 m	1619274	10 m	1619284	10 m	1619279	10 m	1619288

Sensor/actuator cabling

Assembled cables

Plastic-molded

M17 power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Connector head temperature range -40°C to +105°C
- Standard contact numbering
- M17 standard thread, SPEEDCON fast locking system on request

	M17, 3+PE-position, female, standard, 630 V, 18 A	M17, 3+PE-position, female, standard, 630 V, 26 A	M17, 5+PE-position, female, standard, 630 V, 12 A
			
	B00	B01	C00
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
	2 m 1619298	2 m 1619301	2 m 1619307
	5 m 1619299	5 m 1619302	5 m 1619308
	10 m 1619300	10 m 1619303	10 m 1619309
Free end 			
M17, 3+PE-pos., male 	2 m 1619304 5 m 1619305 10 m 1619306	2 m 1619326 5 m 1619327 10 m 1619328	
M17, 5+PE-pos., male 			2 m 1619316 5 m 1619317 10 m 1619318
M17, 7+PE-pos., male 			

Cable information:

Type	Color	Structure	Sheath/core material	Assignment	Temperature range
B00 Servo	Orange	Shielded, 4 x 1.50	PUR/TPM	1 - Black U 2 - Black V 3 - Black W PE - Green-yellow	Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C
B01 Servo	Orange	Shielded, 4 x 2.50	TPU/TPM		Mobile: -20°C ... 70°C Fixed: -50°C ... 80°C
C00 Servo	Orange	Shielded, 4 x 0.75 + 2 x 0.5	PUR/TPM	1 - Black U 6 - Black V 7 - Black W PE - Green-yellow	3 - Black, 5 (brake) 4 - Black, 6 (brake) Mobile: -30°C ... 70°C Fixed: -40°C ... 80°C
C01 Servo	Orange	Shielded, 4G1 + 2 x 0.5	PUR/TPE	1 - Black U 6 - Black V 7 - Black W PE - Green-yellow	3 - Black (brake) 4 - White (brake) Mobile: -5°C ... 70°C Fixed: -30°C ... 70°C
D00 Servo	Orange	Shielded, 4 x 0.75 + 2 x 2 x 0.34	PUR/TPM	1 - Black U 2 - Black V 3 - Black W PE - Green-yellow	4 - Black 5 (brake) 5 - Black 6 (brake) 6 - Black 7 (temp. +) 7 - Black 8 (temp. -) Mobile: -30°C ... 90°C Fixed: -40°C ... 90°C
D01 Servo	Orange	Shielded, 4 x 1.0 + 2 x 2 x 0.75	PUR/TPM		Mobile: -40°C ... 60°C Fixed: -40°C ... 80°C

M17, 5+PE-position, female, standard, 630 V, 15 A		M17, 7+PE-position, female, standard, 630 V, 12 A		M17, 7+PE-position, female, standard, 630 V, 15 A	
					
		D00		D01	
Ordering data		Ordering data		Ordering data	
Order No.		Order No.		Order No.	
2 m	1619310	2 m	1624785	2 m	1619313
5 m	1619311	5 m	1624786	5 m	1619314
10 m	1619312	10 m	1624792	10 m	1619315
2 m	1619319				
5 m	1619321				
10 m	1619322				
		2 m	1624787	2 m	1619323
		5 m	1624788	5 m	1619324
		10 m	1624789	10 m	1619325

Sensor/actuator cabling

Assembled cables

Plastic-molded M23 power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Connector head temperature range -40°C to +105°C
- Standard contact numbering
- M23 standard thread, SPEEDCON fast locking system on request
- Angled version rotatable (only with reinforced device connector [1620619](#))

	M23, 3+PE-position, female, standard, 630 V, 34 A	M23, 4+PE-position, female, standard, 630 V, 34 A	M23, 5+PE-position, female, standard, 630 V, 18 A
			
	A00	A01	C02
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end	2 m 1624771 5 m 1619622 10 m 1624772	2 m 1625776 5 m 1625777 10 m 1625775	2 m 1618957 5 m 1618958 10 m 1618959
M23, 3+PE-pos., male	2 m 1624773 5 m 1619606 10 m 1624774		
M23, 4+PE-pos., male		2 m 1625779 5 m 1625781 10 m 1625780	
M23, 5+PE-pos., male			2 m 1618964 5 m 1618965 10 m 1618966

Cable information:

Type	Color	Structure	Sheath/core material	Assignment	Temperature range
A00 Energy	Gray	Shielded, 4x 4.0	PVC/PVC	1 - n.c. 2 - Black 3 PE - Green-yellow 4 - Black 1 5 - Black 2 6 - n.c.	Fixed: -40°C ... 90°C
A01 Energy	Gray	5x 4.0	PVC/PVC	1 - Black 4 2 - Black 3 PE - Green-yellow 4 - Black 1 5 - Black 2 6 - n.c.	Fixed: -40°C ... 90°C
C02 Servo	Orange	Shielded, 4x 1.50 + 2x 1.5	PUR/TPM	1 - Black U 2 - Black V 6 - Black W 4 - Black, (BR1 brake) 5 - White, (BR2 brake)	Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C
C03 Servo	Orange	Shielded, 4x 2.50 + 2x 1.5	TPU/TPM	PE - Green-yellow	Mobile: -20°C ... 70°C Fixed: -50°C ... 80°C

**M23, 5+PE-position,
female, standard,
630 V, 26 A**



C03

Ordering data

Order No.

2 m	1620418
5 m	1620419
10 m	1620420

2 m	1620406
5 m	1620407
10 m	1620408

Sensor/actuator cabling

Assembled cables

Plastic-molded M23 power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Connector head temperature range -40°C to +105°C
- Standard contact numbering
- M23 standard thread, SPEEDCON fast locking system on request
- Angled version rotatable (only with reinforced device connector [1620620](#))

	M23, 4+3+PE-position, female, standard, 250 V/630 V, 18 A	M23, 4+3+PE-position, female, standard, 250 V/630 V, 18 A	M23, 4+3+PE-position, female, standard, 250 V/630 V, 26 A
			
	D02	D02	D03
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end 	2 m	2 m	2 m
	5 m	5 m	5 m
	10 m	10 m	10 m
M23, 4+3+PE-pos., male 	2 m		2 m
	5 m		5 m
	10 m		10 m
	1620399 1620400 1620401	1620421 1620422 1620423	1620402 1620404 1620405
	1620409 1620410 1620411		1620412 1620413 1620414

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
D02 Servo	Orange	Shielded, 4x 1.5 + 2x 2x 0.75	PUR/TPM	1 - Black U 3 - Black V 4 - Black W PE - Green-yellow	A - Black 5 (brake) B - Black 6 (brake) C - Black 7 (motor temp. +) D - Black 8 (motor temp. -)	Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C
D03 Servo	Orange	Shielded, 4x 2.5 + 2x 2x 0.75	PUR/TPM			Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C

M23, 4+3+PE-position,
female, standard,
250 V/630 V, 26 A



D03

Ordering data

Order No.

2 m	1620424
5 m	1620425
10 m	1620426

Sensor/actuator cabling

Assembled cables

Plastic-molded M40 power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Connector head temperature range -40°C to +105°C
- Standard contact numbering
- M40 standard thread, SPEEDCON fast locking system on request

	M40, 2+3+PE-position, female, standard, 250 V/630 V, 26 A	M40, 2+3+PE-position, female, standard, 250 V/630 V, 34 A	M40, 2+3+PE-position, female, standard, 250 V/630 V, 44 A
			
	C03	C04	C05
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end	2 m 1619329 5 m 1620309 10 m 1620310	2 m 1620311 5 m 1620313 10 m 1620314	2 m 1620316 5 m 1620317 10 m 1620318
M40, 2+3+PE-pos., male	2 m 1620345 5 m 1620346 10 m 1620347	2 m 1620348 5 m 1620349 10 m 1620375	2 m 1620376 5 m 1620377 10 m 1620378
M40, 4+3+PE-pos., male			

Cable information:

Type	Color	Structure	Sheath/core material	Assignment	Temperature range
C03 Servo	Orange	Shielded, 4 x 2.50 + 2 x 1.5	TPU/TPM	U - Black U + - Black, (BR1) V - Black V -- White, (BR2) W - Black W PE - Green-yellow	Mobile: -20°C ... 70°C Fixed: -50°C ... 80°C
C04 Servo	Orange	Shielded, 4 x 4.00 + 2 x 1.5	TPU/TPM		Mobile: -20°C ... 70°C Fixed: -50°C ... 80°C
C05 Servo	Orange	Shielded, 4 x 6.00 + 2 x 1.5	PUR/TPE		Mobile: -40°C ... 80°C Fixed: -50°C ... 90°C
C06 Servo	Orange	Shielded, 4 x 10.0 + 2 x 1.5	TPU/TPM		Mobile: -20°C ... 70°C Fixed: -50°C ... 80°C
D03 Servo	Orange	Shielded, 4 x 2.5 + 2 x 2 x 0.75	PUR/TPM	U - Black 1 + - Black 7 (motor temp. +) V - Black 2 -- Black 8 (motor temp. -) W - Black 3 1 - Black 5 (brake) PE - Green-yellow 2 - Black 6 (brake)	Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C
D04 Servo	Orange	Shielded, 4 x 4.0 + 2 x 1.5 + 2 x 1.0	PUR/TPM		Mobile: -30°C ... 80°C Fixed: -45°C ... 80°C
D05 Servo	Orange	Shielded, 4 x 6.0 + 2 x 1.5 + 2 x 1.0	PUR/TPM		Mobile: -30°C ... 60°C Fixed: -30°C ... 80°C
D06 Servo	Orange	Shielded, 4 x 10 + 2 x 1.5 + 2 x 1.0	PUR/TPM		Mobile: -20°C ... 60°C Fixed: -40°C ... 80°C

M40, 2+3+PE-position, female, standard, 250 V/630 V, 61 A		M40, 4+3+PE-position, female, standard, 250 V/630 V, 26 A		M40, 4+3+PE-position, female, standard, 250 V/630 V, 34 A		M40, 4+3+PE-position, female, standard, 250 V/630 V, 44 A		M40, 4+3+PE-position, female, standard, 250 V/630 V, 61 A	
									
C06		D03		D04		D05		D06	
Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Order No.		Order No.		Order No.		Order No.		Order No.	
2 m	1620319	2 m	1620322	2 m	1620325	2 m	1620339	2 m	1620342
5 m	1620320	5 m	1620323	5 m	1620337	5 m	1620340	5 m	1620343
10 m	1620321	10 m	1620324	10 m	1620338	10 m	1620341	10 m	1620344
2 m	1620379								
5 m	1620380								
10 m	1620381								
		2 m	1620382	2 m	1620385	2 m	1620390	2 m	1620393
		5 m	1620383	5 m	1620386	5 m	1620391	5 m	1620394
		10 m	1620384	10 m	1620387	10 m	1620392	10 m	1620395

Sensor/actuator cabling

Assembled cables

Plastic-molded M23 hybrid connectors

- Transmission of signals, data (CAT5, 100 Mbps), and power
- Rated voltage: 630 V AC/850 V DC
- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Connector head temperature range -40°C to +105°C
- SPEEDCON fast locking system, M23 standard thread on request
- Angled version can be rotated

	M23, 4+4+4+PE-position, female, standard, 50 V/630 V, 26 A	M23, 4+4+4+PE-position, male, standard, 50 V/630 V, 26 A	M23, 4+4+4+PE-position, female, standard, 50 V/630 V, 26 A
			
	H00	H00	H00
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end	2 m 1622224 5 m 1622225 10 m 1622226	2 m 1622227 5 m 1622228 10 m 1622229	2 m 1622230 5 m 1622231 10 m 1622232
M23, 4+4+4+PE-pos., male	2 m 1622244 5 m 1622245 10 m 1622246		
M23, 4+4+4+PE-pos., male	2 m 1622247 5 m 1622248 10 m 1622249		
M23, 4+4+4+PE-pos., male			2 m 1622250 5 m 1622251 10 m 1622252

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
H00 Hybrid	Orange	Shielded, (5 x 2.5 + 2 x (2 x 0.5) + (4 x AWG 22) C) C	PUR/TPE, polyolefin	A - Black BK1 (2.5 mm ²) B - Black BK2 (2.5 mm ²) C - Black BK3 (2.5 mm ²) D - Black BK4 (2.5 mm ²) PE - Green-yellow (2.5 mm ²)	1 - Brown BN (0.5 mm ²) 2 - Violet VT (0.5 mm ²) 3 - Black BK (0.5 mm ²) 4 - Green GN (0.5 mm ²) 5 - Blue BU (0.34 mm ²) 6 - Yellow YE (0.34 mm ²) 7 - White WH (0.34 mm ²) 8 - Orange OG (0.34 mm ²)	Mobile: -30°C ... 60°C Fixed: -40°C ... 80°C

M23, 4+4+4+PE-position,
male, standard,
50 V/630 V, 26 A



H00

Ordering data

Order No.

2 m	1622233
5 m	1622234
10 m	1622243

Sensor/actuator cabling

Assembled cables

Valve connectors with Zener diode, cable type: PUR

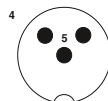
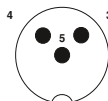
Notes:

For information about the cable qualities, see page 318

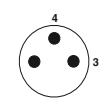
Free end



M12 male connector



M8 male connector



		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Type A		Order No.		Order No.		Order No.		Order No.		Order No.	
		1.5 m	1434989	0.3 m	1434882	0.3 m	1434934	Variable	1405650		
		3 m	1434992	0.6 m	1434895	0.6 m	1434947				
		5 m	1435001	1.5 m	1434905	1.5 m	1434950				
		10 m	1435014	3 m	1434918	3 m	1434963				
		Variable	1435027	Variable	1434921	Variable	1434976				
		1.5 m	1435386	0.3 m	1435289	0.3 m	1435331	Variable	1405651		
		3 m	1435399	0.6 m	1435292	0.6 m	1435344				
		5 m	1435409	1.5 m	1435302	1.5 m	1435357				
		10 m	1435412	3 m	1435315	3 m	1435360				
		Variable	1435425	Variable	1435328	Variable	1435373				
		1.5 m	1435234	0.3 m	1435137	0.3 m	1435182	Variable	1405652		
		3 m	1435247	0.6 m	1435140	0.6 m	1435195				
		5 m	1435250	1.5 m	1435153	1.5 m	1435205				
		10 m	1435263	3 m	1435166	3 m	1435218				
		Variable	1435276	Variable	1435179	Variable	1435221				
		1.5 m	1435535	0.3 m	1435438	0.3 m	1435483	Variable	1405653		
		3 m	1435548	0.6 m	1435441	0.6 m	1435496				
		5 m	1435551	1.5 m	1435454	1.5 m	1435506				
		10 m	1435564	3 m	1435467	3 m	1435519				
		Variable	1435726	Variable	1435629	Variable	1435674				
		1.5 m	1435687	0.3 m	1435580	0.3 m	1435632	Variable	1405654		
		3 m	1435690	0.6 m	1435593	0.6 m	1435645				
		5 m	1435700	1.5 m	1435603	1.5 m	1435658				
		10 m	1435713	3 m	1435616	3 m	1435661				
		Variable	1435577	Variable	1435470	Variable	1435522				

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, type A valve connector with Zener diode, and a 3-pos. straight M12 male connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1434921	PUR	4.5
Minimum order qty: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	M8	M12	A	B(I)	C(I)	Color coding	Pin assignment M12
PUR, halogen-free – black, 0.5 mm ²	PUR	x	x	x	x	x	BK1 1	4
PUR, halogen-free – black, 1.0 mm ²	121	x	x				BK2 2	3
PUR, halogen-free – yellow, 0.5 mm ²	240			x	x	x	GNYE	5
PUR, halogen-free – gray, 0.5 mm ²	280			x	x	x		
PUR, irradiated – orange, 0.5 mm ²	150			x	x	x		
PUR, highly flexible – gray, 0.5 mm ²	800			x	x	x		
PVC – black, 0.5 mm ²	PVC	x	x	x	x	x		
PVC – black, 0.75 mm ²	534			x	x	x		
PVC – gray, 0.5 mm ²	500			x	x	x		

Color coding M8	Pin assignment M8
BU	3
BN	4

Technical data

Connector

24 V AC / 24 V DC
4
CuSn
Ni/Au
Sn
TPU
Zinc die-cast, nickel-plated

IP65 / IP67

Rated voltage	[A]
Rated current	
Contact material	
Material contact surface M12	
Material contact surface valve connector	
Material of grip body	
Material, knurls	
Degree of protection	
Temperature data	
Male connector/female connector	[°C]
Valve connectors	[°C]

Valve connectors with Zener diode, cable type: PVC

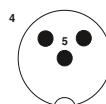
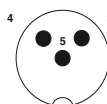
Notes:

For information about the cable qualities, see page 318

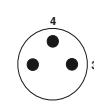
Free end



M12 male connector



M8 male connector



		Ordering data		Ordering data		Ordering data		Ordering data	
Type A		Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
		1.5 m	1438684						
		3 m	1415905						
		5 m	1439502						
		10 m	1439492						
		Variable	1435027	Variable	1434921	Variable	1434976	Variable	1405650
		1.5 m	1415922						
		3 m	1415923						
		5 m	1415924						
		10 m	1400610						
		Variable	1435425	Variable	1435328	Variable	1435373	Variable	1405651
		1.5 m	1415929						
		3 m	1400609						
		5 m	1415930						
		10 m	1400607						
		Variable	1435276	Variable	1435179	Variable	1435221	Variable	1405652
		1.5 m	1439162						
		3 m	1439515						
		5 m	1439528						
		10 m	1439531						
		Variable	1435726	Variable	1435629	Variable	1435674	Variable	1405653
		1.5 m	1439175						
		3 m	1415939						
		5 m	1415940						
		10 m	1400605						
		Variable	1435577	Variable	1435470	Variable	1435522	Variable	1405654

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PVC – black, type A valve connector with Zener diode, and a 3-pos. straight M12 male connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1434921	PVC	4.5
Minimum order qty: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	M8	M12	A	B(I)	C(I)	Color coding	Pin assignment M12
PVC – black, 0.5 mm ²	PVC	x	x	x	x	x	BK1 1	4
PVC – black, 0.75 mm ²	534		x	x	x	x	BK2 2	3
							GNYE	5
PVC – gray, 0.5 mm ²	500		x	x	x	x		
PUR, halogen-free – black, 0.5 mm ²	PUR	x	x	x	x	x		
PUR, halogen-free – black, 1.0 mm ²	121		x	x				
PUR, halogen-free – yellow, 0.5 mm ²	240		x	x	x	x		
PUR, halogen-free – gray, 0.5 mm ²	280		x	x	x	x		
PUR, irradiated – orange, 0.5 mm ²	150		x	x	x	x		
PUR, highly flexible – gray, 0.5 mm ²	800		x	x	x	x		

Color coding M8	Pin assignment M8
BU	3
BN	4

Technical data

Connector	
Rated voltage	24 V AC / 24 V DC
Rated current	4
Contact material	CuSn
Material contact surface M12	Ni/Au
Material contact surface valve connector	Sn
Material of grip body	TPU
Material, knurls	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	[-25 ... 90
Valve connectors	[-20 ... 85

Sensor/actuator cabling

Assembled cables

Valve connectors with 24 V varistor, cable type: PUR

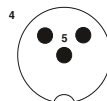
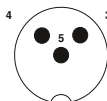
Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector



		Ordering data		Ordering data		Ordering data	
Type A			Order No.		Order No.		Order No.
		1.5 m	1443103				
		3 m	1443116				
		5 m	1443129				
		10 m	1443132				
		Variable	1400876	Variable	1400874	Variable	1400875
Type B							
		1.5 m	1443145				
		3 m	1443158				
		5 m	1443161				
		10 m	1443174				
		Variable	1400882	Variable	1400880	Variable	1400881
Type BI							
		1.5 m	1443187				
		3 m	1443190				
		5 m	1443200				
		10 m	1443213				
		Variable	1400879	Variable	1400877	Variable	1400878
Type C							
		1.5 m	1443226				
		3 m	1443239				
		5 m	1443242				
		10 m	1443255				
		Variable	1400894	Variable	1400892	Variable	1400893
Type CI							
		1.5 m	1443268				
		3 m	1443271				
		5 m	1443284				
		10 m	1443297				
		Variable	1400891	Variable	1400889	Variable	1400890

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, type B valve connector with 24 V varistor, and a 3-pos. straight M12 male connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1400880	PUR	4.5
Minimum order qty:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Cable description	Cable type
PUR, halogen-free – black, 0.5 mm ²	PUR
PUR, halogen-free – black, 1.0 mm ²	121
Type A valve connector only	
PUR, halogen-free – yellow, 0.5 mm ²	240
PUR, halogen-free – gray, 0.5 mm ²	280
PUR, irradiated – orange, 0.5 mm ²	150
PUR, highly flexible – gray, 0.5 mm ²	800
PVC – black, 0.5 mm ²	PVC
PVC – black, 0.75 mm ²	534
PVC – gray, 0.5 mm ²	500

Color coding		Pin assignment
BK1	1	4
BK2	2	3
GNYE		5

Technical data

Connector	
Rated voltage	24 V AC / 24 V DC
Rated current	4
Contact material	CuSn
Material contact surface M12	Ni/Au
Material contact surface valve connector	Sn
Material of grip body	TPU
Material, knurls	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	-25 ... 90
Valve connectors	-20 ... 85

Valve connectors with 24 V varistor, cable type: PVC

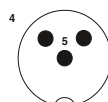
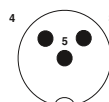
Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector



		Ordering data		Ordering data		Ordering data	
Type A		Order No.		Order No.		Order No.	
		1.5 m	1415908	Variable	1400874	Variable	1400875
		3 m	1415909				
		5 m	1415910				
		10 m	1415911				
		Variable	1400876				
		1.5 m	1415925	Variable	1400880	Variable	1400881
		3 m	1415926				
		5 m	1415927				
		10 m	1415928				
		Variable	1400882				
		1.5 m	1415931	Variable	1400877	Variable	1400878
		3 m	1415932				
		5 m	1415933				
		10 m	1415934				
		Variable	1400879				
		1.5 m	1415935	Variable	1400892	Variable	1400893
		3 m	1415936				
		5 m	1415937				
		10 m	1415938				
		Variable	1400894				
		1.5 m	1415941	Variable	1400889	Variable	1400890
		3 m	1415942				
		5 m	1415943				
		10 m	1415944				
		Variable	1400891				

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PVC – black, type B valve connector with 24 V varistor, and a 3-pos. straight M12 male connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1400880	PVC	4.5
Minimum order qty: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PVC – black, 0.5 mm ²	PVC	BK1 1	4
PVC – black, 0.75 mm ²	534	BK2 2	3
PVC – gray, 0.5 mm ²	500	GNYE	5
PUR, halogen-free – black, 0.5 mm ²	PUR		
PUR, halogen-free – black, 1.0 mm ² Type A valve connector only	121		
PUR, halogen-free – yellow, 0.5 mm ²	240		
PUR, halogen-free – gray, 0.5 mm ²	280		
PUR, irradiated – orange, 0.5 mm ²	150		
PUR, highly flexible – gray, 0.5 mm ²	800		

Technical data

Connector	
Rated voltage	24 V AC / 24 V DC
Rated current	4
Contact material	CuSn
Material contact surface M12	Ni/Au
Material contact surface valve connector	Sn
Material of grip body	TPU
Material, knurls	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	[-25 ... 90
Valve connectors	[-20 ... 85

Assembled cables

Valve connectors
with 230 V varistor,
cable type: PUR

Notes:
For information about the cable qualities, see page 318



Type A		Ordering data	
			Order No.
		1.5 m	1402985
		3 m	1400694
		5 m	1400648
		10 m	1402986

Technical data		
Connector		
Rated voltage		230 V AC / 230 V DC
Rated current	[A]	4
Material contact surface valve connector		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-20 ... 85

Valve connectors
with 230 V varistor,
cable type: PVC

Notes:
For information about the cable qualities, see page 318

Free end



Type A



Ordering data	
	Order No.
1.5 m	1415912
3 m	1415913
5 m	1415914
10 m	1415915

Technical data

		Connector
Rated voltage		230 V AC / 230 V DC
Rated current	[A]	4
Material contact surface valve connector		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-20 ... 85

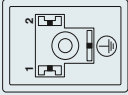
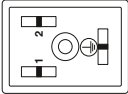
Assembled cables

Valve connectors
with energy-reducing function,
1 A

Notes:
For information about the cable qualities, see page 318

Free end
1 A



Ordering data			
Type A			Order No.
		1.5 m	1413115
		3 m	1413114
		5 m	1413116
		10 m	1413118
Type B			
		1.5 m	1401294
		3 m	1401295
		5 m	1401338
		10 m	1401339
Type BI			
		1.5 m	1401340
		3 m	1401350
		5 m	1401358
		10 m	1401359
Type C			
		1.5 m	1401434
		3 m	1401435
		5 m	1401448
		10 m	1401465
Type CI			
		1.5 m	1401466
		3 m	1401542
		5 m	1401544
		10 m	1401617

Technical data		
Connector		
Rated voltage		24 V DC ±20%
Rated current	[A]	1
Material contact surface valve connector		Ag
Degree of protection		IP67
Temperature data		
Valve connectors	[°C]	-25 ... 80

Valve connectors
with energy-reducing function,
4 A

Notes:
For information about the cable qualities, see page 318

Free end
4 A



Type A



Ordering data

Order No.

1.5 m	1400827
3 m	1401131
5 m	1401136
10 m	1401168

Technical data

Connector

Rated voltage		24 V DC ±20%
Rated current	[A]	4
Material contact surface valve connector		Ag
Degree of protection		IP67
Temperature data		
Valve connectors	[°C]	-25 ... 80

Sensor/actuator cabling

Assembled cables

Valve connectors with freewheeling diode, cable type: PUR

Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector



Type A		Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.	
		1.5 m	1400589	Variable	1417833	Variable	1417834
		3 m	1400588				
		5 m	1400798				
		10 m	1400799				
		Variable	1417832				

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for type A valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, type A valve connector with freewheeling diode, and a 3-pos. straight M12 male connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1417833	PUR	4.5
Minimum order qty: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description		Cable type	Color coding		Pin assignment	
PUR, halogen-free – black, 0.5 mm ²		PUR	BK1	1	4	
PUR, halogen-free – black, 1.0 mm ²		121	BK2	2	3	
Type A valve connector only		240	GNYE		5	
PUR, halogen-free – yellow, 0.5 mm ²		280				
PUR, halogen-free – gray, 0.5 mm ²		150				
PUR, irradiated – orange, 0.5 mm ²		800				
PUR, highly flexible – gray, 0.5 mm ²		PVC				
PVC – black, 0.5 mm ²		534				
PVC – black, 0.75 mm ²		500				
PVC – gray, 0.5 mm ²						

Technical data

Connector	
Rated voltage	24 V DC
Rated current	2
Contact material	CuSn
Material contact surface M12	Ni/Au
Material contact surface valve connector	Sn
Material of grip body	TPU
Material, knurls	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	-25 ... 90
Valve connectors	-20 ... 85

Valve connectors with freewheeling diode, cable type: PVC

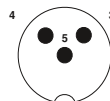
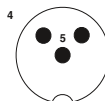
Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector



		Ordering data		Ordering data		Ordering data	
Type A			Order No.		Order No.		Order No.
 	1.5 m		1415916				
	3 m		1415917				
	5 m		1415918				
	10 m		1415919				
	Variable		1417832	Variable	1417833	Variable	1417834

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for type A valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PVC – black, type A valve connector with freewheeling diode, and a 3-pos. straight M12 male connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1417833	PVC	4.5
Minimum order qty: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PVC – black, 0.5 mm ²	PVC	BK1 1	4
PVC – black, 0.75 mm ²	534	BK2 2	3
PVC – gray, 0.5 mm ²	500	GNYE	5
PUR, halogen-free – black, 0.5 mm ²	PUR		
PUR, halogen-free – black, 1.0 mm ² Type A valve connector only	121		
PUR, halogen-free – yellow, 0.5 mm ²	240		
PUR, halogen-free – gray, 0.5 mm ²	280		
PUR, irradiated – orange, 0.5 mm ²	150		
PUR, highly flexible – gray, 0.5 mm ²	800		

Technical data

Connector	
Rated voltage	24 V DC
Rated current	2
Contact material	CuSn
Material contact surface M12	Ni/Au
Material contact surface valve connector	Sn
Material of grip body	TPU
Material, knurls	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	[°C] -25 ... 90
Valve connectors	[°C] -20 ... 85

Sensor/actuator cabling

Assembled cables

Valve connectors without wiring, cable type: PUR

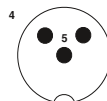
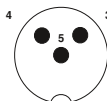
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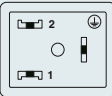
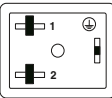
For information about the cable qualities, see page 318

Free end



M12 male connector



		Ordering data		Ordering data		Ordering data	
Type A			Order No.		Order No.		Order No.
		1.5 m	1402983	Variable	1400895	Variable	1400896
		3 m	1439544				
		5 m	1402984				
		10 m	1400732				
		Variable	1400897				
Type B							
							
		Variable	1400909	Variable	1400903	Variable	1400905
Type BI							
		5 m	1439065	Variable	1400900	Variable	1400901
		10 m	1438862				
		Variable	1400902				
Type C							
		5 m	1400814	Variable	1400919	Variable	1400920
		10 m	1400641				
		Variable	1400921				
Type CI							
							
		Variable	1400918	Variable	1400916	Variable	1400917

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free PUR cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, unwired type C valve connector, and a 3-pos. straight M12 male connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1400919	PUR	4.5
Minimum order qty: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type
PUR, halogen-free – black, 0.5 mm ²	PUR
PUR, halogen-free – black, 1.0 mm ²	121
Type A valve connector only	
PUR, halogen-free – yellow, 0.5 mm ²	240
PUR, halogen-free – gray, 0.5 mm ²	280
PUR, irradiated – orange, 0.5 mm ²	150
PUR, highly flexible – gray, 0.5 mm ²	800
PVC – black, 0.5 mm ²	PVC
PVC – black, 0.75 mm ²	534
PVC – gray, 0.5 mm ²	500

Color coding	Pin assignment
BK1 1	4
BK2 2	3
GNYE	5

		Technical data	Technical data
		Free end	Connector
Rated voltage		230 V AC / 230 V DC	48 V AC / 60 V DC
Rated current	[A]	6	4
Contact material		-	CuSn
Material contact surface M12		-	Ni/Au
Material contact surface valve connector		Sn	Sn
Material of grip body		-	TPU
Material, knurls		-	Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67	IP65 / IP67
Temperature data			
Male connector/female connector	[°C]	- ... -	-25 ... 90
Valve connectors	[°C]	-20 ... 85	-20 ... 85

Valve connectors without wiring, cable type: PVC

Notes:

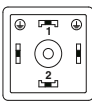
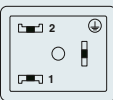
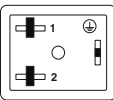
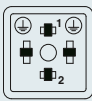
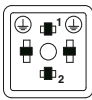
For information about the cable qualities, see page 318

Free end



M12 male connector



		Ordering data		Ordering data		Ordering data	
Type A		Order No.		Order No.		Order No.	
		1.5 m	1415920	Variable	1400895	Variable	1400896
		3 m	1415921				
		5 m	1402977				
		10 m	1402978				
		Variable	1400897				
Type B							
		Variable	1400909	Variable	1400903	Variable	1400905
Type BI							
		Variable	1400902	Variable	1400900	Variable	1400901
Type C							
		Variable	1400921	Variable	1400919	Variable	1400920
Type CI							
		Variable	1400918	Variable	1400916	Variable	1400917

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PVC – black, unwired type C valve connector, and a 3-pos. straight M12 male connector, the ordering data is as follows:

Order No.	Cable type	Length [m] Max. 40 m
1400919	PVC	4.5
Minimum order qty: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Color coding	Pin assignment
PVC – black, 0.5 mm ²	PVC	BK1 1	4
PVC – black, 0.75 mm ²	534	BK2 2	3
PVC – gray, 0.5 mm ²	500	GYE	5
PUR, halogen-free – black, 0.5 mm ²	PUR		
PUR, halogen-free – black, 1.0 mm ² Type A valve connector only	121		
PUR, halogen-free – yellow, 0.5 mm ²	240		
PUR, halogen-free – gray, 0.5 mm ²	280		
PUR, irradiated – orange, 0.5 mm ²	150		
PUR, highly flexible – gray, 0.5 mm ²	800		

		Technical data	Technical data
		Free end	Connector
Rated voltage	[A]	230 V AC / 230 V DC	48 V AC / 60 V DC
Rated current		6	4
Contact material		-	CuSn
Material contact surface M12		-	Ni/Au
Material contact surface valve connector		Sn	Sn
Material of grip body		-	TPU
Material, knurls		-	Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67	IP65 / IP67
Temperature data			
Male connector/female connector	[°C]	- ... -	-25 ... 90
Valve connectors	[°C]	-20 ... 85	-20 ... 85

Sensor/actuator cabling

Assembled cables

Valve connectors, pressure switches with 2 LEDs, cable type: PUR

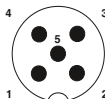
Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector



Type AD		Ordering data		Ordering data		Ordering data	
			Order No.		Order No.		Order No.
		1.5 m	1435085	0.3 m	1435030		
		3 m	1435098	0.6 m	1435043		
		5 m	1435108	1.5 m	1435056		
		10 m	1435111	3 m	1435069		
		Variable	1435124	Variable	1435072		

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for type AD valve connector cables with 2 LEDs and variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, type AD valve connector with 2 LEDs, and a 5-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1435072	PUR	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Cable description		Cable type	Color coding		Pin assignment	
PUR, halogen-free – black, 0.5 mm ²		PUR	BK1	1		1
PUR, halogen-free – yellow, 0.5 mm ²		240	BK2	2		2
PUR, halogen-free – gray, 0.5 mm ²		280	BK3	3		4
PUR irradiated – orange, 0.5 mm ²		150	BK2	4		3
PUR highly flexible – gray, 0.5 mm ²		800	GNYE			5
PVC – black, 0.5 mm ²		PVC				
PVC – black, 0.75 mm ²		534				
PVC – gray, 0.5 mm ²		500				

Technical data

Connector	
Rated voltage	24 V AC / 24 V DC
Rated current	4
Contact material	CuSn
Material contact surface M12	Ni/Au
Material contact surface valve connector	Sn
Material of grip body	TPU
Material, knurls	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	-25 ... 90
Valve connectors	-20 ... 85

Valve connectors, pressure switches with 2 LEDs, cable type: PVC

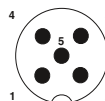
Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector



		Ordering data		Ordering data	
Type AD		Order No.	Order No.	Order No.	Order No.
 	1.5 m	1415945			
	3 m	1415946			
	5 m	1438639			
	10 m	1438671			
	Variable	1435124	Variable	1435072	

Information for products with fixed cable length:

Products with fixed cable length are produced with the PVC cable type and are available from stock.

Ordering data for type AD valve connector cables with 2 LEDs and variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, type AD valve connector with 2 LEDs, and a 5-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m]
1435072	PVC	4.5
Minimum order amount:		25 pcs.
		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

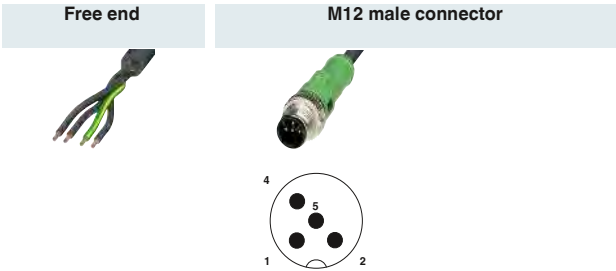
Cable description	Cable type	Color coding	Pin assignment
PVC – black, 0.5 mm ²	PVC	BK1 1	1
PVC – black, 0.75 mm ²	534	BK2 2	2
PVC – gray, 0.5 mm ²	500	BK3 3	4
		BK2 4	3
		GNYE	5
PUR, halogen-free – black, 0.5 mm ²	PUR		
PUR, halogen-free – yellow, 0.5 mm ²	240		
PUR, halogen-free – gray, 0.5 mm ²	280		
PUR irradiated – orange, 0.5 mm ²	150		
PUR highly flexible – gray, 0.5 mm ²	800		

Technical data	
Connector	
Rated voltage	24 V AC / 24 V DC
Rated current	4
Contact material	CuSn
Material contact surface M12	Ni/Au
Material contact surface valve connector	Sn
Material of grip body	TPU
Material, knurls	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	[-25 ... 90
Valve connectors	[-20 ... 85

Assembled cables

Valve connectors, pressure switches without wiring

Notes:
For information about the cable qualities, see page 318



Type AD		Ordering data	Ordering data	Ordering data
		Order No.	Order No.	Order No.
		3 m	1438956	
		Variable	1400899	Variable 1400898

Ordering data for unwired type AD valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, unwired type AD valve connector, and a 4-pos. straight M12 connector, the ordering data is as follows:

Cable description		Cable type	Color coding	Pin assignment
PUR, halogen-free – black, 0.5 mm ²		PUR	BK1 1	1
PVC – black, 0.5 mm ²		PVC	BK2 2	2
PVC – black, 0.75 mm ²		534	BK3 3	4
			GNYE	5

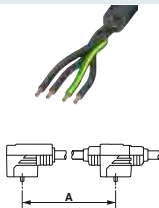
Order No.	Cable type	Length [m]
1400898	PUR	4.5
Minimum order amount:		Increments:
25 pcs.		0.2 ... 3 m = 0.1 m
		> 3 m = 0.5 m

Technical data		Technical data
Free end		Connector
Rated voltage	230 V AC / 230 V DC	48 V AC / 60 V DC
Rated current	4	4
Contact material	-	CuSn
Material contact surface M12	-	Ni/Au
Material contact surface valve connector	Sn	Sn
Material of grip body	-	TPU
Material, knurls	-	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67	IP65 / IP67
Temperature data		
Male connector/female connector	- ... -	-25 ... 90
Valve connectors	-20 ... 85	-20 ... 85

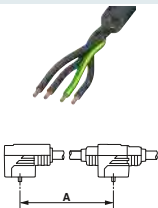
Double valve connectors
with Zener diode

Notes:
For information about the cable qualities, see page 318

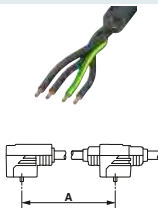
Free end
A = 10 cm



Free end
A = 15 cm



Free end
A = 20 cm



		Ordering data		Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.		Order No.	
Type A		1.5 m	1457982	1.5 m	1458020			1.5 m	1458062
		3 m	1457995	3 m	1458033			3 m	1458075
		5 m	1458004	5 m	1458046			5 m	1458088
		10 m	1458017	10 m	1458059			10 m	1458091
Type B		1.5 m	1458169	1.5 m	1458208			1.5 m	1458240
		3 m	1458172	3 m	1458211			3 m	1458253
		5 m	1458185	5 m	1458224			5 m	1458266
		10 m	1458198	10 m	1458237			10 m	1458279
Type BI		1.5 m	1458347	1.5 m	1458389			1.5 m	1458428
		3 m	1458350	3 m	1458392			3 m	1458431
		5 m	1458363	5 m	1458402			5 m	1458444
		10 m	1458376	10 m	1458415			10 m	1458457

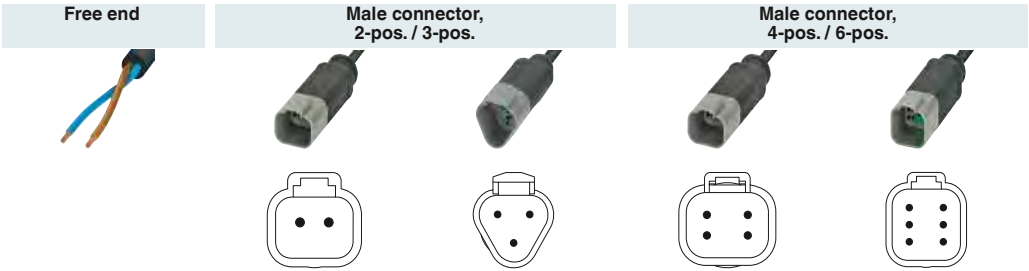
		Technical data
		Connector
Rated voltage		24 V AC / 24 V DC
Rated current	[A]	4
Material contact surface valve connector		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-25 ... 85

Sensor/actuator cabling

Assembled cables

Valve connectors, Deutsch DT06 and DT04, without wiring

Notes:
For information about the cable qualities, see page 318



		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data			
Free end		Order No.		Order No.		Order No.		Order No.		Order No.			
						1.5 m	1414999	1.5 m	1415012	1.5 m	1415030		
						3 m	1415000	3 m	1415013	3 m	1415031		
						5 m	1415001	5 m	1415014	5 m	1415032		
						10 m	1415002	10 m	1415015	10 m	1415033		
Female connector, 2-pos.			1.5 m	1410723	0.3 m	1414991							
			3 m	1410724	0.6 m	1414992							
			5 m	1410726	1.5 m	1414993							
			10 m	1410727	3 m	1414994							
Female connector, 3-pos.			1.5 m	1414995			0.3 m	1415003					
			3 m	1414996			0.6 m	1415004					
			5 m	1414997			1.5 m	1415005					
			10 m	1414998			3 m	1415006					
Female connector, 4-pos.			1.5 m	1415007					0.3 m	1415016			
			3 m	1415008					0.6 m	1415017			
			5 m	1415010					1.5 m	1415019			
			10 m	1415011					3 m	1415025			
Female connector, 6-pos.			1.5 m	1415026							0.3 m	1415035	
			3 m	1415027							0.6 m	1415036	
			5 m	1415028							1.5 m	1415037	
			10 m	1415029							3 m	1415038	

Technical data	
Connector	
Rated voltage	48 V AC / 48 V DC
Rated current	8
Contact material	Cu alloy
Material contact surface M12	Nickel-plated
Material of grip body	PA
Material, knurls	not available
Degree of protection	IP67
Temperature data	
Male connector/female connector	-20 ... 85

Valve connectors,
Deutsch DT06-2S with LED

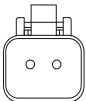
Free end



Notes:

For information about the cable qualities, see page 318

Female, 2-pos.



Ordering data

Order No.

1.5 m	1410728
3 m	1410729
5 m	1410730
10 m	1410731

Technical data

Connector

Rated voltage	24 V AC / 24 V DC
Rated current	8
Contact material	Cu alloy
Material contact surface M12	Nickel-plated
Material of grip body	PA
Material, knurls	not available
Degree of protection	IP67
Temperature data	
Male connector/female connector	-20 ... 85

Assembled cables

Valve connectors,
Deutsch DT06-2S
with freewheeling diode

Notes:
For information about the cable qualities, see page 318

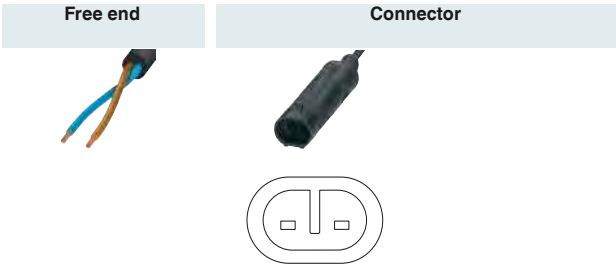


Female connector, 2-pos.		Ordering data	
			Order No.
		1.5 m	1410732
		3 m	1410733
		5 m	1410734
		10 m	1410735

		Technical data
		Connector
Rated voltage		24 V AC / 24 V DC
Rated current	[A]	3
Contact material		Cu alloy
Material contact surface M12		Nickel-plated
Material of grip body		PA
Material, knurls		not available
Degree of protection		IP67
Temperature data		
Male connector/female connector	[°C]	-20 ... 85

Valve connectors,
Superseal

Notes:
For information about the cable qualities, see page 318



		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.	
				1.5 m	1410752		
				3 m	1410753		
				5 m	1410755		
				10 m	1410756		
Female connector, straight							
		1.5 m	1410748	0.3 m	1410757		
		3 m	1410749	0.6 m	1410759		
		5 m	1410750	1.5 m	1410760		
		10 m	1410751	3 m	1410761		

		Technical data
		Connector
Rated voltage		24 V AC / 24 V DC
Rated current	[A]	8
Contact material		CuZn
Material of grip body		PA
Material, knurls		not available
Degree of protection		IP67
Temperature data		
Male connector/female connector	[°C]	-20 ... 85

Sensor/actuator cabling

Distributors and adapters

M8 Y cable, 3-pos., two cable outlets

M8 Y male connector



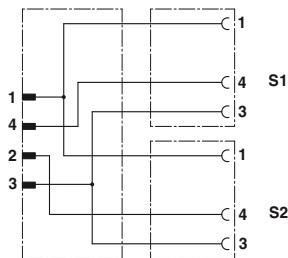
Notes:

For information about the cable qualities, see page 318

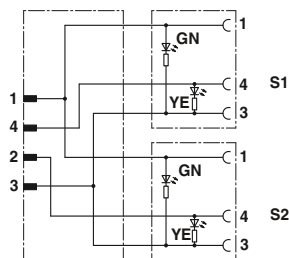
Ordering data

Free end		Order No.
	1.5 m	1458622
	3 m	1458635
	5 m	1458648
	10 m	1458651
M8 female connector, straight 	0.3 m	1458664
	0.6 m	1458677
	1.5 m	1458680
	3 m	1458693
M8 female connector, angled 	0.3 m	1458703
	0.6 m	1458716
	1.5 m	1458729
	3 m	1458732
M8 female connector, angled, with 2 LEDs 	0.3 m	1458745
	0.6 m	1458758
	1.5 m	1458761
	3 m	1458774

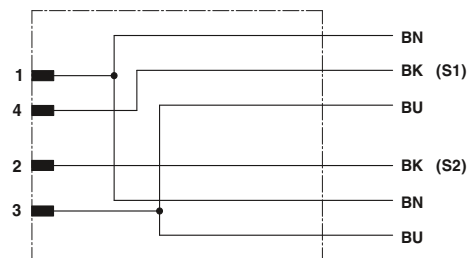
Cable description	Cable type	Color coding	Pin assignment, 3-pos.	
			Male	Female
PUR, halogen-free - black	PUR	BN	1	1
		BK	2 + 4	4
		BU	3	3



Contact assignment of the M8 connector and the M8 female connectors



Contact assignment of the M8 connector and the M8 female connectors, with LEDs



Contact assignment of the M8 Y connector

Technical data		Technical data
Y-M8		Y-M8 with LEDs
Rated voltage	48 V AC / 60 V DC	24 V / 24 V DC
Rated current	4	4
Contact material	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Material, knurls	Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M8 circular connector in accordance with:	IEC 61076-2-104	IEC 61076-2-104
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data		
Male connector/female connector	-25 ... 90	-25 ... 90

M12 Y distributors, 4-pos.,
one cable outlet

Notes:
For information about the cable qualities, see page 318
Further combinations on request.

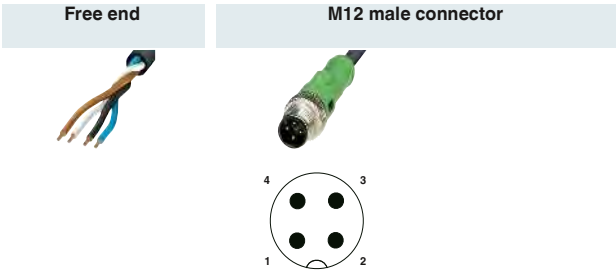
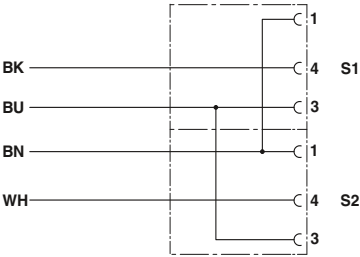
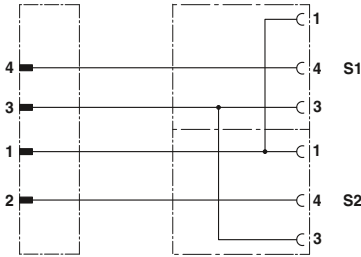


Table with 4 columns: Y connector with 2 x M12 female connectors, Ordering data, Ordering data, Ordering data. It lists various cable lengths (1.5m, 3m, 5m, 10m) and their corresponding order numbers (1436165, 1436178, 1436181, 1436194, 1436204, 1436217, 1436220, 1436233).

Table with 5 columns: Cable description, Cable type, Suitable for, Color coding, Pin assignment. It details the PUR, halogen-free - black cable type, its suitability for M12 4-pos. connectors, and provides color coding (BN, BK, WH, BU) and pin assignment (M12 4-pos., S1, S2) information.



Contact assignment: Y-distributor to free end



Contact assignment: Y-distributor to M12 SPEEDCON

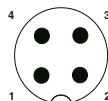
Table with 2 columns: Technical data, Y-M12. It lists technical specifications such as Rated voltage (48 V AC / 60 V DC), Rated current (4 A), Contact material (CuSn), Contact surface material (Ni/Au), Contact carrier material (TPU GF), M12 circular connector in accordance with (IEC 61076-2-101), Degree of protection (IP65 / IP67), Temperature data (-25 ... 90 °C), and Male connector/female connector.

Sensor/actuator cabling

Distributors and adapters

M12 Y-cable, 4-pos., two cable outlets

M12 Y male connector



Notes:

For information about the cable qualities, see page 318

Ordering data

Free end		Order No.
	1.5 m	1669686
	3 m	1669699
	5 m	1669754
	10 m	1694473
	Variable	1697357
M8 female connector, straight 		
	0.3 m	1671331
	0.6 m	1671344
	1.5 m	1671357
	3 m	1671360
	Variable	1697399
M8 female connector, angled 		
	0.3 m	1671373
	0.6 m	1671386
	1.5 m	1671399
	3 m	1671409
	Variable	1697409
M8 female connector, angled, with 2 LEDs 		
	0.3 m	1671412
	0.6 m	1671425
	1.5 m	1671438
	3 m	1671441
	Variable	1697412
M12 female connector, straight 		
	Variable	1699766
M12 female connector, angled 		
	Variable	1506419
M12 female connector, straight, pin 2 – 4 bridged 		
	0.3 m	1668959
	0.6 m	1668962
	1.5 m	1668975
	3 m	1668988
	Variable	1697360
M12 female connector, angled, pin 2 – 4 bridged 		
	0.3 m	1668991
	0.6 m	1669000
	1.5 m	1669013
	3 m	1669026
	Variable	1697373
M12 female connector, angled, with LED, pin 2 – 4 bridged 		
	0.3 m	1669039
	0.6 m	1669042
	1.5 m	1669055
	3 m	1669068
	Variable	1697386

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 4-pos. M12 Y-connector and two straight M12 females, the ordering data is as follows:

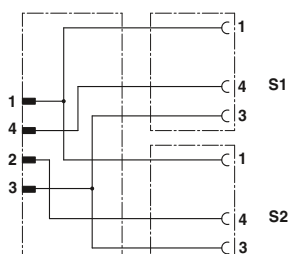
Order No.	Cable type	Length [m]
1699766	PUR	4.5
Minimum order amount: 25 pcs.		Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Cable description	Cable type	Suitable for:
PUR, halogen-free – black E221474	PUR	M8/M12
PUR, halogen-free – gray E221474	280	M12
TPE-U highly flexible – gray E221474	800	M8/M12
PUR irradiated – orange E221474	150	M12
PVC – black E221474	PVC	M8/M12
PVC – gray E221474	500	M8/M12
PVC – yellow E221474	540	M12
PVC 105° – yellow E221474	542	M12

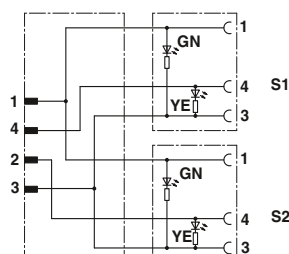
Color coding		Pin assignment, 3-pos.	
		Male	Female
BN		1	1
BK		2 + 4	4
BU		3	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

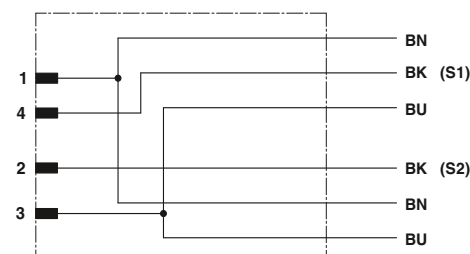
	Technical data	Technical data	Technical data	Technical data
	Y-M8	Y-M8 with LEDs	Y-M12	Y-M12 with LEDs
Rated voltage	48 V AC / 60 V DC	24 V / 24 V DC	250 V AC / 250 V DC	24 V / 24 V DC
Rated current	4	4	4	4
Contact material	CuSn	CuSn	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au	Ni/Au	Ni/Au
Material of grip body	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector in accordance with:	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-101	IEC 61076-2-101
M12 circular connector in accordance with:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of protection	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data				
Male connector/female connector	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



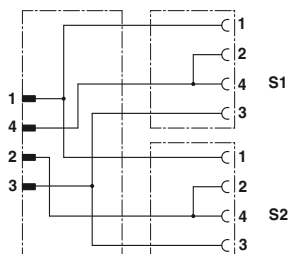
Contact assignment of the M12 male and the M8/M12 female connectors



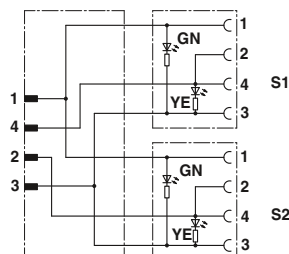
Contact assignment of the M12 male and the M8 female connectors, with LEDs



Contact assignment of the M12 Y connector



Contact assignment of the M12 male and the M12 female connector, bridged



Contact assignment of the M12 male and the M12 female connectors, with LEDs, bridged

Sensor/actuator cabling

Distributors and adapters

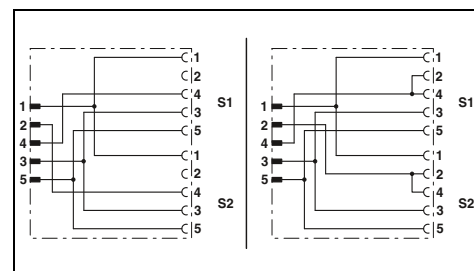
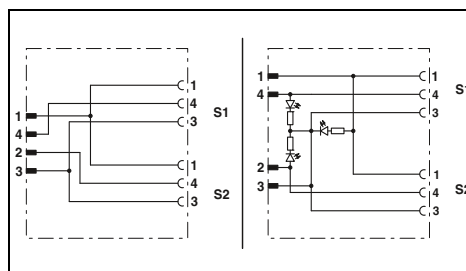
M8 and M12 Y distributors, M12 T distributors



3-pos.



3+PE-pos.



Technical data

Without LED

With 3 LEDs

IEC 61076-2-104

IEC 61076-2-101

3

IP65 / IP67

48 V AC / 60 V DC

24 V DC

4 A

CuZn

Ni/Au

HB

-25 ... 90

Ordering data

Order No.

Pcs./Pkt.

Order No.

Pcs./Pkt.

Without LED

With 3 LEDs

General data
M8 circular connector in accordance with:
M12 circular connector in accordance with:
Degree of pollution
Degree of protection
Electrical data
Rated voltage
Rated current
Material data
Contact material
Contact surface material
Flammability rating in accordance with UL 94
Temperature data
Male connector/female connector

[°C]

Technical data

Not bridged

Pins 2 and 4 bridged

IEC 61076-2-101

3

IP65 / IP67

48 V AC / 60 V DC

4 A

CuZn

Ni/Au

HB

-25 ... 90

Ordering data

Order No.

Pcs./Pkt.

Order No.

Pcs./Pkt.

Not bridged

Pins 2 and 4 bridged

M8/M12 Y-distributor	
M8 male to 2x M8 female	12 mm
M12 male to 2x M8 female	12 mm
M12 Y-distributor	
M12 male to 2x M12 female	18 mm
M12 male to 2x M12 female	21 mm
M12 Y-distributor	
M12 male to 2x M12 female	21 mm
T-distributor	
M12 male to 2x M12 female	

1696183

5

1683471

5

1683455

5

1511789

5

1683413

5

1514016

5

1403627

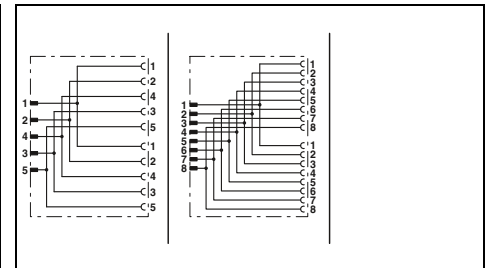
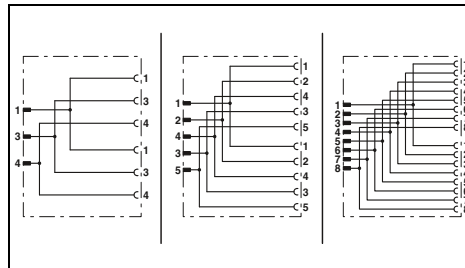
5

1519723

1

**M8 and M12 Y distributors, parallel,
M12 T distributors, parallel**


3-, 5-, 8-pos.

5-, 8-pos.,
shielded**Technical data**

3-pos.	5-pos.	8-pos.
IEC 61076-2-104	IEC 61076-2-101	-
	3	
	IP65 / IP67	
48 V AC / 60 V DC	30 V AC / 30 V DC	
4 A	2 A	
	CuZn	
	Ni/Au	
	-25 ... 90	

General data	
M8 circular connector in accordance with:	
M12 circular connector in accordance with:	
Degree of pollution	
Degree of protection	
Electrical data	
Rated voltage	
Rated current	
Material data	
Contact material	
Contact surface material	
Temperature data	
Male connector/female connector	[°C]

Technical data

5-pos.	8-pos.
IEC 61076-2-101	-
3	
IP65 / IP67	
48 V AC / 60 V DC	30 V AC / 30 V DC
4 A	2 A
	CuZn
	Ni/Au
	-25 ... 90

General data	
M8 circular connector in accordance with:	
M12 circular connector in accordance with:	
Degree of pollution	
Degree of protection	
Electrical data	
Rated voltage	
Rated current	
Material data	
Contact material	
Contact surface material	
Temperature data	
Male connector/female connector	[°C]

Ordering data

Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
3-pos.		5-pos.		8-pos.	

Ordering data

Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
5-pos.		8-pos.			

M8/M12 Y-distributor

M8 male to 2x M8 female	12 mm	1696222	5
M12 male to 2x M8 female	12 mm	1683549	5

M12 Y-distributor

M12 male to 2x M12 female	18 mm	1683468	5
M12 male to 2x M12 female	21 mm	1514029	5

M12 Y-distributor

M12 male to 2x M12 female	18 mm	1546068	5
M12 male to 2x M12 female	21 mm		
M12 male to M12 male/M12 female	21 mm	1454972	5
M12 female to 2x M12 male	21 mm		
M12 female to M12 male/M12 female	21 mm		

M12 T distributor

M12 male to 2x M12 female		1541186	1
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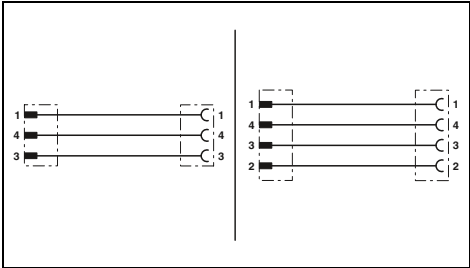
M12 T distributor, with two mounting holes

M12 female to M12 male/M12 female		1424712	1
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M8/M12 adapters



3-, 4-pos.



General data	
M8 circular connector in accordance with:	
M12 circular connector in accordance with:	
Degree of pollution	
Degree of protection	
Electrical data	
Rated voltage	
Rated current	
Material data	
Contact material	
Contact surface material	
Flammability rating in accordance with UL 94	
Temperature data	
Male connector/female connector	[°C]

Technical data	
3-pos.	4-pos.
IEC 61076-2-104	
IEC 61076-2-101	
3	
IP65 / IP67	
48 V AC / 60 V DC	30 V AC / 30 V DC
4 A	
CuSn	
Ni/Au	
HB	
-25 ... 90	

Description
Adapter
M8 male to M12 female
M12 male to M8 female
M12 male to M8 snap-in female

Ordering data			
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
3-pos.		4-pos.	
1519749	5	1519736	5
1519752	5	1519765	5
1519781	5	1519778	5

Sensor/actuator cabling

Distributors and adapters

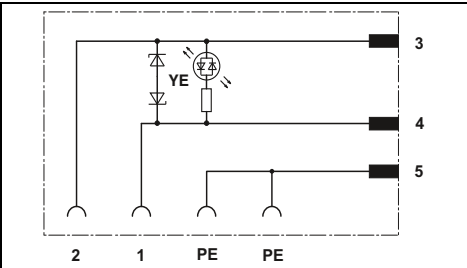
Valve connector adapters
with M12 male connector



Valve connector type A



Valve connector, AD design,
pressure switch

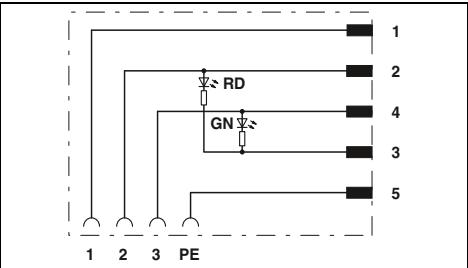


Technical data

General data	
M12 circular connector in accordance with:	IEC 61076-2-101
Valve connector in accordance with:	EN 175301-803
Degree of pollution	3
Degree of protection	IP65 / IP67
Electrical data in acc. with IEC 61076-2-101	
Rated voltage	24 V AC / 24 V DC
Rated current	4 A
Status display	Yellow LED
Material data	
Material contact M12	CuSn
Material contact valve connector	CuSn
Material contact surface M12	Ni/Au
Material contact surface valve connector	Sn
Flammability rating in accordance with UL 94	HB
Temperature data	
Valve connectors	-25 ... 85 [°C]

Ordering data

Description	Type	Order No.	Pcs./Pkt.
Valve connector type A, PE bridged, 18 mm contact spacing			
- Vertical M12 male connector	SAC-3P-MS/A-1L-Z SCO	1458525	1
- Horizontal M12 male connector	SAC-3P-MR/A-1L-Z SCO	1458538	1
Valve connector type AD, 18 mm contact spacing			
- Vertical M12 male connector			
- Horizontal M12 male connector			
Valve connector type B, 10 mm contact spacing			
- Vertical M12 male connector			
- Horizontal M12 male connector			
Valve connector type BI, 11 mm contact spacing			
- Vertical M12 male connector			
- Horizontal M12 male connector			
DESINA valve connector type A, 18 mm contact spacing			
- Vertical M12 male connector			



Technical data

General data	
IEC 61076-2-101	
EN 175301-803	
3	
IP65 / IP67	
Electrical data in acc. with IEC 61076-2-101	
Rated voltage	24 V AC / 24 V DC
Rated current	4 A
Status display	2 LEDs
Material data	
Material contact M12	CuSn
Material contact valve connector	CuSn
Material contact surface M12	Ni/Au
Material contact surface valve connector	Sn
Flammability rating in accordance with UL 94	HB
Temperature data	
Valve connectors	-25 ... 85 [°C]

Ordering data

Description	Type	Order No.	Pcs./Pkt.
Valve connector type AD, 18 mm contact spacing			
- Vertical M12 male connector	SAC-5P-MS/AD-2L SCO	1458596	1
- Horizontal M12 male connector	SAC-5P-MR/AD-2L SCO	1458606	1



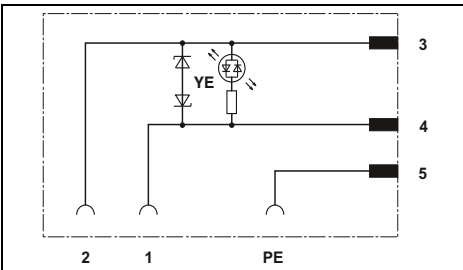
Valve connector type B



Valve connector type BI



DESINA valve connector type A



Technical data

IEC 61076-2-101
EN 175301-803
3
IP65 / IP67

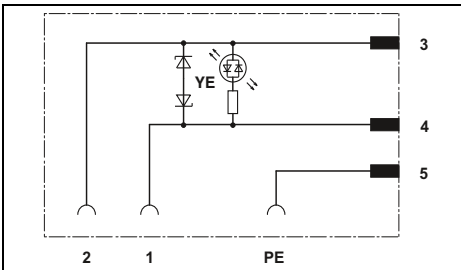
24 V AC / 24 V DC
4 A
Yellow LED

CuSn
CuSn
Ni/Au
Sn
HB

-25 ... 85

Ordering data

Type	Order No.	Pcs./Pkt.
SAC-3P-MS/B-1L-Z SCO	1458541	1
SAC-3P-MR/B-1L-Z SCO	1458554	1



Technical data

IEC 61076-2-101
-
3
IP65 / IP67

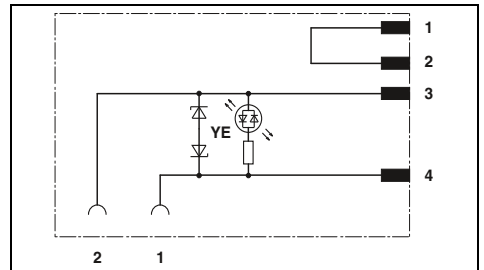
24 V AC / 24 V DC
4 A
Yellow LED

CuSn
CuSn
Ni/Au
Sn
HB

-25 ... 85

Ordering data

Type	Order No.	Pcs./Pkt.
SAC-3P-MS/BI-1L-Z SCO	1458567	1
SAC-3P-MR/BI-1L-Z SCO	1458570	1



Technical data

IEC 61076-2-101
EN 175301-803
3
IP65 / IP67

24 V AC / 24 V DC
4 A
Yellow LED

CuSn
CuSn
Ni/Au
Sn
HB

-25 ... 85

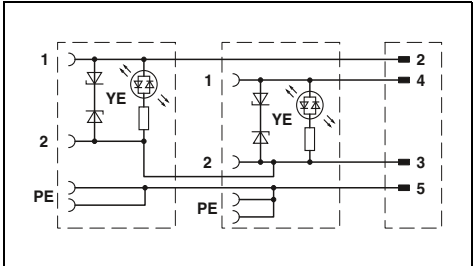
Ordering data

Type	Order No.	Pcs./Pkt.
SAC-4P-MS/A-1L-Z D SCO	1458583	1

Double valve connector adapters
with M12 male connector, type A



Type A



General data	
M12 circular connector in accordance with:	
Valve connector in accordance with:	
Degree of protection	
Electrical data	
Rated voltage	
Rated current	
Material data	
Material contact M12	
Material contact valve connector	
Material contact surface M12	
Material contact surface valve connector	
Material housing valve connector	
Temperature data	
Valve connectors	[°C]

Technical data	
IEC 61076-2-101	
EN 175301-803	
IP65 / IP67	
24 V AC / 24 V DC	
4 A	
CuSn	
CuSn	
Ni/Au	
Sn	
TPU	
-25 ... 85	

Description
Double valve connector , plug distance: 10 cm, valve connector leading to valve connector adapter with: – Vertical M12 male connector – Horizontal M12 male connector Double valve connector , plug distance: 15 cm, valve connector leading to valve connector adapter with: – Vertical M12 male connector – Horizontal M12 male connector Double valve connector , plug distance: 20 cm, valve connector leading to valve connector adapter with: – Vertical M12 male connector – Horizontal M12 male connector

Ordering data		
Type	Order No.	Pcs./Pkt.
SAC-MS/0,1-116/2XA-1L-Z SCO	1458101	1
SAC-MR/0,1-116/2XA-1L-Z SCO	1458130	1
SAC-MS/0,15-116/2XA-1L-Z SCO	1458114	1
SAC-MR/0,15-116/2XA-1L-Z SCO	1458143	1
SAC-MS/0,2-116/2XA-1L-Z SCO	1458127	1
SAC-MR/0,2-116/2XA-1L-Z SCO	1458156	1

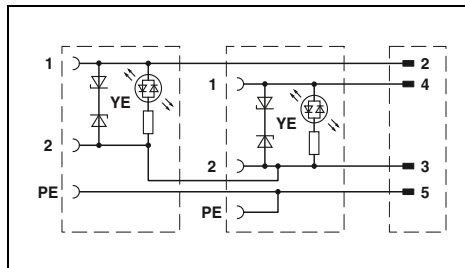
Double valve connector adapters with M12 male, type B and BI



Type B



Type BI

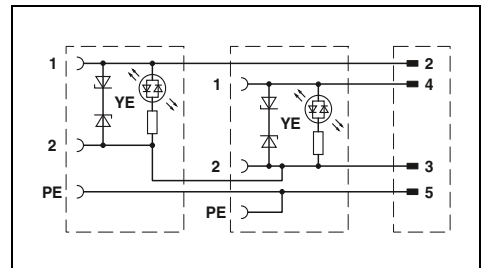


Technical data

General data	
M12 circular connector in accordance with:	IEC 61076-2-101
Valve connector in accordance with:	EN 175301-803
Degree of protection	IP65 / IP67
Electrical data	
Rated voltage	24 V AC / 24 V DC
Rated current	4 A
Material data	
Material contact M12	CuSn
Material contact valve connector	CuSn
Material contact surface M12	Ni/Au
Material contact surface valve connector	Sn
Material housing valve connector	TPU
Temperature data	
Valve connectors	-25 ... 85 [°C]

Ordering data

Description	Type	Order No.	Pcs./Pkt.
Double valve connector , plug distance: 10 cm, valve connector leading to valve connector adapter with:			
– Vertical M12 male connector	SAC-MS/0,1-116/2XB-1L-Z SCO	1458282	1
– Horizontal M12 male connector	SAC-MR/0,1-116/2XB-1L-Z SCO	1458318	1
Double valve connector , plug distance: 15 cm, valve connector leading to valve connector adapter with:			
– Vertical M12 male connector	SAC-MS/0,15-116/2XB-1L-Z SCO	1458295	1
– Horizontal M12 male connector	SAC-MR/0,15-116/2XB-1L-Z SCO	1458321	1
Double valve connector , plug distance: 20 cm, valve connector leading to valve connector adapter with:			
– Vertical M12 male connector	SAC-MS/0,2-116/2XB-1L-Z SCO	1458305	1
– Horizontal M12 male connector	SAC-MR/0,2-116/2XB-1L-Z SCO	1458334	1



Technical data

General data	
IEC 61076-2-101	
-	
IP65 / IP67	
Electrical data	
24 V AC / 24 V DC	
4 A	
Material data	
CuSn	
CuSn	
Ni/Au	
Sn	
TPU	
Temperature data	
-25 ... 85	

Ordering data

Type	Order No.	Pcs./Pkt.
SAC-MS/0,1-116/2XBI-1L-Z SCO	1458460	1
SAC-MR/0,1-116/2XBI-1L-Z SCO	1458499	1
SAC-MS/0,15-116/2XBI-1L-Z SCO	1458473	1
SAC-MR/0,15-116/2XBI-1L-Z SCO	1458509	1
SAC-MS/0,2-116/2XBI-1L-Z SCO	1458486	1
SAC-MR/0,2-116/2XBI-1L-Z SCO	1458512	1

M8 distributors with metal thread



With a master cable



M12 male-in connection, vertical



M12 male-in connection, vertical



Technical data

IP65 / IP67
IEC 61076-2-104
-

2
2
6

30 x 22
102 / 122 / 141 / 161

-30 ... 80
-
-

Ordering data

Single occupancy	Double occupancy
-	-
1516014	-
1516027	-



Technical data

IP65 / IP67
IEC 61076-2-104
IEC 61076-2-101

2
2
4

30 x 27
93 / 113 / - / -

-30 ... 80
-
-

Ordering data

Single occupancy	Double occupancy
1516234	-
-	-
-	-



Technical data

IP65 / IP67
IEC 61076-2-104
IEC 61076-2-101

1.5
1.5
1.5

30 x 27
- / - / 133 / 152

-30 ... 80
-
-

Ordering data

Single occupancy	Double occupancy
-	-
-	-
-	-

General data

Degree of protection in acc. with IEC 60529/EN 60529
M8 circular connector in accordance with:
M12 circular connector in accordance with:

Electrical data

	[A]
Rated current for each I/O signal	
Rated current per slot	
Rated current, total	

Dimensions

	[mm]
Width x height	
(Length (4 / 6 / 8 / 10 slots))	

Temperature data

	[°C]
Distributor box	
Master cable, fixed installation	
Master cable, flexible installation	

Status indication	Signal type	Rated voltage	Slots	Cable length
With LED	PNP	24 V DC	4	-
With LED	PNP	24 V DC	4	5 m
With LED	PNP	24 V DC	4	10 m
With LED	PNP	24 V DC	6	-
With LED	PNP	24 V DC	6	5 m
With LED	PNP	24 V DC	6	10 m
With LED	PNP	24 V DC	8	-
With LED	PNP	24 V DC	8	5 m
With LED	PNP	24 V DC	8	10 m
With LED	PNP	24 V DC	10	-
With LED	PNP	24 V DC	10	5 m
With LED	PNP	24 V DC	10	10 m

Notes:

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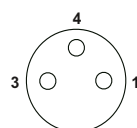
Notes:

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305

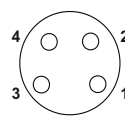
Notes:

311
305

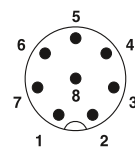
For accessories, see page
For master cable coils, see page
For master cable data, see page



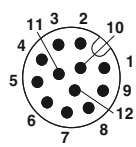
Pin assignment M8 female, 3-pos.



Pin assignment M8 female, 4-pos.



Connector pin assignment for M12 male-in connection, 8-pos.



Pin assignment for M12 male-in connection, 12-pos.

M16 plug-in connection,
verticalSpring connection,
horizontalPlug-in screw connection,
horizontalHeader for plug-in
screw connectionConnector hood,
with a master cableConnector hood,
without master cable

Technical data

IP65 / IP67
IEC 61076-2-1042
2
630 x 26
93 / 113 / 132 / 152-30 ... 80
-

Ordering data

Single occupancy
1516182Double occupancy
-

-

1516195

-

-

1516205

-

-

1516218

-

-

Notes:

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305

Technical data

IP65 / IP67
IEC 61076-2-1042
2
630 x 44
122 / 142 / 176 / 196-30 ... 80
-

Ordering data

Single occupancy
1503386Double occupancy
-

-

1503399

-

-

1511747 1503454

-

-

1503409

-

-

Notes:

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305

Technical data

IP65 / IP67
IEC 61076-2-1042
2
830 x 44
122 / 142 / 176 / 196-30 ... 80
-

Ordering data

Single occupancy
1503412Double occupancy
-

-

1503425

-

-

1511750 1503467

-

-

1503438

-

-

Notes:

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305

Technical data

IP65 / IP67
IEC 61076-2-1042
2
830 x 20
122 / 142 / 176 / 196-30 ... 80
-

Ordering data

Single occupancy
1516250Double occupancy
-

-

1516263

-

-

1516276

-

-

1516289

-

-

Notes:

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Technical data

IP65 / IP67
-2
2
830 x 24
60 / 60 / 74 / 74-30 ... 80
-40 ... 90
-5 ... 80

Ordering data

Single occupancy
-Double occupancy
-

1516292

-

1516302

-

-

1516315

-

1516328

-

-

Notes:

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330

Technical data

IP65 / IP67
-2
2
-30 x 24
- / - / --30 ... 80
-

Ordering data

Single occupancy
1521229Double occupancy
-

-

1521216

-

-

1516425

-

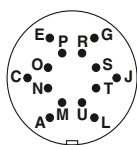
-

1516412

-

-

Notes:

Connector pin assignment for
M16 plug-in connection, 14-pos.

Sensor/actuator cabling

Distributor boxes

M12 distributors with plastic thread, middle duty



With a master cable



Spring connection, horizontal



Push-in spring connection, horizontal

General data

Degree of protection in acc. with IEC 60529/EN 60529
M12 circular connector in accordance with:

Electrical data

Rated current for each I/O signal	[A]
Rated current per slot	[A]
Rated current, total	[A]

Dimensions

Width x height	[mm]
(Length (4 / 6 / 8 / 10 slots))	[mm]
Temperature data	
Distributor box	[°C]
Master cable, fixed installation	[°C]
Master cable, flexible installation	[°C]



Technical data

IP65 / IP67
IEC 61076-2-101

2
4
12



Technical data

IP65 / IP67
IEC 61076-2-101

2
4
12



Technical data

IP65 / IP67
IEC 61076-2-101

2
4
-

Ordering data

Single occupancy	Double occupancy
-	-
1452398	1452424

Ordering data

Single occupancy	Double occupancy
1452929	1452932
-	-

Ordering data

Single occupancy	Double occupancy
-	-
-	-

Status indication	Signal type	Rated voltage	Slots	Cable length
Without LED	Universal	120 V	4	-
Without LED	Universal	120 V	4	5 m
Without LED	Universal	120 V	6	-
Without LED	Universal	120 V	6	5 m
Without LED	Universal	120 V	6	10 m
Without LED	Universal	120 V	8	-
Without LED	Universal	120 V	8	5 m
Without LED	Universal	120 V	8	10 m
With LED	PNP	24 V DC	4	-
With LED	PNP	24 V DC	4	1.5 m
With LED	PNP	24 V DC	4	5 m
With LED	PNP	24 V DC	4	10 m
With LED	PNP	24 V DC	4	15 m
With LED	PNP	24 V DC	4	20 m
With LED	PNP	24 V DC	6	-
With LED	PNP	24 V DC	6	5 m
With LED	PNP	24 V DC	6	10 m
With LED	PNP	24 V DC	8	-
With LED	PNP	24 V DC	8	1.5 m
With LED	PNP	24 V DC	8	3 m
With LED	PNP	24 V DC	8	5 m
With LED	PNP	24 V DC	8	10 m
With LED	PNP	24 V DC	8	15 m
With LED	PNP	24 V DC	8	20 m
-	-	120 V	8	25 m
-	-	120 V	8	30 m
-	-	120 V	8	50 m
With LED	NPN	24 V DC	8	5 m
With LED	NPN	24 V DC	8	10 m

For accessories, see page
For master cable coils, see page
For master cable data, see page

Notes:

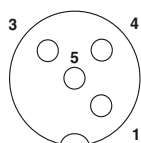
312
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Notes:

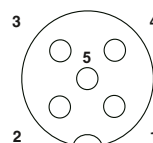
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305

Notes:

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Pin assignment of
M12 female, 4-pos.



Pin assignment of
M12 female, 5-pos.

Plug-in screw connection,
horizontalHeader for plug-in
screw connectionConnector hood,
with master cable, with
plug-in screw connectionConnector hood,
without master cable, with
plug-in screw connection

Technical data	
IP65 / IP67 IEC 61076-2-101	
2	
4	
10	
54 x 43	
117 / 123 / 149 / -	
-25 ... 80	
-	
-	



Technical data	
IP65 / IP67 IEC 61076-2-101	
2	
4	
10	
54 x 19	
117 / 123 / 149 / -	
-25 ... 80	
-	
-	



Technical data	
IP65 / IP67 -	
2	
4	
10	
54 x 25	
34 / 34 / 34 / -	
-25 ... 80	
-40 ... 90	
-5 ... 80	



Technical data	
IP65 / IP67 -	
2	
4	
-	
54 x 25	
34 / 34 / 34 / -	
-25 ... 80	
-	
-	

Ordering data

Single occupancy	Double occupancy
1452741	1452754
-	-
1452767	1452770
-	-
-	-
1452783	1452796
-	-
-	-

Ordering data

Single occupancy	Double occupancy
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

Ordering data

Single occupancy	Double occupancy
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

Ordering data

Single occupancy	Double occupancy
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

1452806 1452819

-	-
-	-
-	-
-	-
-	-
-	-

1452864 1452877

-	-
-	-
-	-
-	-
-	-
-	-

- -

-	-
-	-
-	1453083
-	1453096
-	1422784
-	-

1453229 1453229

-	-
-	-
-	-
-	-
-	-
-	-

1452822 1452835

-	-
-	-

1452880 1452893

-	-
-	-

- -
1453122 1453148

-	-
1453122	-

1453229 1453229

-	-
-	-

1452848 1452851

-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

1452903 1452916

-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

- -

-	-
-	-
-	-
1453177	1453203
1453180	1453216
-	1422787
-	1097653
-	1097661
-	1097665
-	1097669
-	-

1453229 1453229

-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

Notes:

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305

Notes:

312

Notes:

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331

Notes:

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Distributor boxes

M12 distributors with metal thread, heavy-duty



With a master cable



With halogen-free master line



Plug-in screw connection, horizontal

General data

Degree of protection in acc. with IEC 60529/EN 60529

M12 circular connector in accordance with:

Electrical data

Rated current for each I/O signal	[A]
Rated current per slot	[A]
Rated current, total	[A]
Total rated current for electrical isolation	[A]

Dimensions

Width x height	[mm]
(Length (4 / 6 / 8 / 10 slots))	[mm]
Temperature data	
Distributor box	[°C]
Master cable, fixed installation	[°C]
Master cable, flexible installation	[°C]



Technical data

IP65 / IP67 / IP69K
IEC 61076-2-101

2
4
12
-



Technical data

IP65 / IP67 / IP69K
IEC 61076-2-101

2
4
12
-



Technical data

IP65 / IP67 / IP69K
IEC 61076-2-101

2
4
10
2x 8

Ordering data

Single occupancy	Double occupancy
-	-
1516962	1516988
1516975	1516991

Ordering data

Single occupancy	Double occupancy
-	-
-	1517204
-	1517217

Ordering data

Single occupancy	Double occupancy
1516849	1516852
-	-
-	-

Status indication	Signal type	Rated voltage	Slots	Cable length
Without LED	Universal	120 V	4	-
Without LED	Universal	120 V	4	5 m
Without LED	Universal	120 V	4	10 m
Without LED	Universal	120 V	6	-
Without LED	Universal	120 V	6	5 m
Without LED	Universal	120 V	6	10 m
Without LED	Universal	120 V	8	-
Without LED	Universal	120 V	8	5 m
Without LED	Universal	120 V	8	10 m
With LED	PNP	24 V DC	4	-
With LED	PNP	24 V DC	4	5 m
With LED	PNP	24 V DC	4	10 m
With LED	PNP	24 V DC	6	-
With LED	PNP	24 V DC	6	5 m
With LED	PNP	24 V DC	6	10 m
With LED	PNP	24 V DC	8	-
With LED	PNP	24 V DC	8	1.5 m
With LED	PNP	24 V DC	8	5 m
With LED	PNP	24 V DC	8	10 m
With LED	NPN	24 V DC	4	-
With LED	NPN	24 V DC	6	-
With LED	NPN	24 V DC	8	-

Notes:

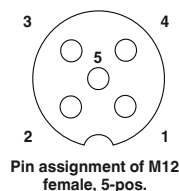
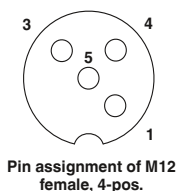
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Notes:

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333

Notes:

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305





Header for plug-in screw connection



Connector hood, with a master cable



Connector hood, without master cable



With master cable connection, rear



Plug-in spring connection, back



With FLK pin strip, rear



Technical data

IP65 / IP67 / IP69K
IEC 61076-2-1012
4
10
2x 858 x 26
117 / 126 / 153 / --30 ... 80
-
-

Ordering data

Single occupancy Double occupancy

- -
- -
- -- -
- -
- -- -
- -
- -

1516726 1516739

- -
- -
- -

1516742 1516755

- -
- -
- -

1516768 1516771

- -
- -
- -- -
- -
- -- -
- -
- -

Notes:

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Technical data

IP65 / IP67 / IP69K
-2
4
10
-58 x 21
34 / 34 / 34 / --30 ... 80
-40 ... 90
-5 ... 80

Ordering data

Single occupancy Double occupancy

- -
- -
- -- -
- -
- -- -
- -
- -

- -

1516353 1516593
1516548 1516603

- -

1516551 1516616
1516564 1516629

- -

1516577 1516632
1516580 1516645

- -

- -

- -

Notes:

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331



Technical data

IP65 / IP67 / IP69K
-2
4
-58 x 21
- / - / - / --30 ... 80
-
-

Ordering data

Single occupancy Double occupancy

- -
- -
- -- -
- -
- -- -
- -
- -

1516713 1516713

- -
- -
- -

1516713 1516713

- -
- -
- -

1516713 1516713

- -
- -
- -

- -

- -

- -

Notes:

313



Technical data

IP54
IEC 61076-2-1012
4
12
-58 x 28
- / - / 159 / --30 ... 80
-
-

Ordering data

Single occupancy Double occupancy

- -
- -
- -- -
- -
- -- -
- -
- -

- -

- -
- -
- -

- -

- -
- -
- -

- -

1437245 -

- -

- -

- -

Notes:

313



Technical data

IP54
IEC 61076-2-1012
4
8
-58 x 28
- / - / 159 / --30 ... 80
-
-

Ordering data

Single occupancy Double occupancy

- -
- -
- -- -
- -
- -- -
- -
- -

- -

- -
- -
- -

- -

- -
- -
- -

- -

- -

- -

- -

- -

Notes:

313

331



Technical data

IP54
IEC 61076-2-1010.5
0.5
4
858 x 28
- / - / 159 / --30 ... 80
-
-

Ordering data

Single occupancy Double occupancy

- -
- -
- -- -
- -
- -- -
- -
- -

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- -
- -

- -

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- -

- -

- -

Notes:

313

Sensor/actuator cabling

Distributor boxes

**QUICKON distributors,
connection cross section:
0.14 mm² ... 0.34 mm²**



With a master cable



Plug-in screw connection,
horizontal

General data

Degree of protection in acc. with IEC 60529/EN 60529

Electrical data

Rated current for each I/O signal

[A]

Rated current per slot

[A]

Rated current, total

[A]

Total rated current for electrical isolation

[A]

Dimensions

Width x height

[mm]

(Length (4 / 6 / 8 / 10 slots)

[mm]

Temperature data

Distributor box

[°C]

Master cable, fixed installation

[°C]

Master cable, flexible installation

[°C]

Status indication	Signal type	Rated voltage	Slots	Cable length
Without LED	Universal	48 V	4	-
Without LED	Universal	48 V	6	-
Without LED	Universal	48 V	8	-
With LED	PNP	24 V DC	4	-
With LED	PNP	24 V DC	4	5 m
With LED	PNP	24 V DC	4	10 m
With LED	PNP	24 V DC	6	-
With LED	PNP	24 V DC	8	-
With LED	PNP	24 V DC	8	5 m
With LED	PNP	24 V DC	8	10 m

For accessories, see page

For master cable coils, see page

For master cable data, see page



Technical data

IP65 / IP67 / IP69K

2

4

12

-

58 x 45

116 / - / 153 / -

-30 ... 80

-40 ... 90

-5 ... 80

Ordering data

Single
occupancy

Double
occupancy

-

-

-

-

1548448

1548532

1548451

1548545

-

-

1548480

1548574

1548493

1548587

Notes:

315

330



Technical data

IP65 / IP67 / IP69K

2

4

10

2x 8

58 x 45

117 / 126 / 153 / -

-30 ... 80

-

-

Ordering data

Single
occupancy

Double
occupancy

1548354

1548419

1548325

1548383

-

-

-

-

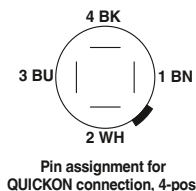
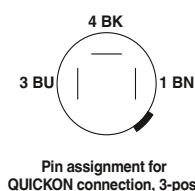
1548338

1548396

Notes:

315

305



**QUICKON distributors,
connection cross section:
0.34 mm² ... 0.75 mm²**



With a master cable

Spring connection,
horizontal**General data**

Degree of protection in acc. with IEC 60529/EN 60529

Electrical data

Rated current for each I/O signal [A]

Rated current per slot [A]

Rated current, total [A]

Dimensions

Width x height [mm]

(Length (4 / 6 / 8 / 10 slots) [mm])

Temperature data

Distributor box [°C]

Master cable, fixed installation [°C]

Master cable, flexible installation [°C]

**Technical data**

IP65 / IP67

4

4

12

60 x 44

97 / 134 / 170 / -

-25 ... 60

-40 ... 90

-5 ... 80

**Technical data**

IP65 / IP67

4

4

12

60 x 44

132 / 168 / 205 / -

-25 ... 60

-

-

Ordering data

Single occupancy

Double occupancy

-

-

1683662

-

1683675

-

Ordering data

Single occupancy

Double occupancy

1683633

-

-

-

-

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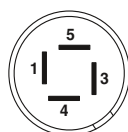
-

-

-

-

-

Pin assignment for
QUICKON connection, 4-pos.



Fast and secure connection

The M12 connectors snap into place quickly and securely with a single click thanks to the push-pull fast locking system. This offers significant advantages in particular in confined spaces or when the mating connector is difficult to see. The 360° shield connection and high vibration resistance also enable use in rail vehicles.



Connectors for assembly

With our M12 connectors for assembly, you can adapt the cabling flexibly to your requirements. In addition to connectors with convenient QUICKON (IDC) connection, we also offer versions with robust crimp and spring connection.



Assembled cables

The molded connectors in our M12 RAIL series provide a reliable cabling system for all control levels in the train. Choose your cabling from assembled sensor/actuator cables and data cables for communication networks and passenger information systems.



Flame-retardant

An important aspect in the selection of the plastics used in the railway industry is their flame retardancy. We satisfy stringent requirements regarding behavior in fire, thanks to our irradiated railway cables and PA 6.6 molding material.



Securely locked

The special vibration brake prevents the unintentional loosening of the plug-in connection in the event of vibrations.

The connectors are tested in accordance with EN 50155 for resistance to shock and vibrations.



Temperature-resistant

Particularly high or low temperatures and temperature shocks may not affect the electrical function of the components used either.

Our products are intensively tested for an extended temperature range and for resistance to temperature shocks.



Certified in accordance with IRIS

The Phoenix Contact Group is currently IRIS-certified. IRIS is an international rail industry standard for quality management systems.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # followed by the numbers in the search field.





Resistance to cleaning agents

The connectors in a hygienic and washdown design are tested for resistance to cleaning agents commonly used in the food industry in accordance with Diversey and ECOLAB standards.



Product-contacting area

The components and devices used here must meet the highest hygienic requirements. Our cabling in a hygienic design is suitable for use in this area.



Splash zone

The products in a washdown design are suitable for the splash zone. Cost-effective features include resistance to cleaning agents and cleaning methods.



Connectors for the splash zone

For the special requirements of the food industry, we offer flush-type connectors and connectors with stainless steel components for assembly.



Assembled cables for all areas

Molded cables are available with connectors in sizes M8 and M12 in a hygienic or washdown design.



Distributor boxes for the splash zone

Distributor boxes with stainless steel housing and permanently connected PVC master cable in a washdown design are available for the splash zone.



Mechanical resistance

All components for the food industry are IP69K tested. This means guaranteed sealing for applications with steam jets, even after repeated temperature shocks.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # followed by the numbers in the search field.





Adapted to the relevant requirements

Through the selection of special materials, the components are designed for use outdoors. The materials are resistant to UV, ozone, corrosion, and heat.



For a variety of applications

Outdoor components are particularly suitable for use in traffic management systems, snow cats and snow cannons, photovoltaic systems, and wind turbine generators.



UV and ozone testing

Testing with special climate cabinets ensures that the connectors and cables are suitable for the control of solar plants, for example, without any restrictions.



Connectors for assembly

The connector knurls are made from stainless steel and the plastics are resistant to atmospheric influences. The connectors are available with insulation displacement connection and screw connection.



Assembled cables

In addition to 3- to 8-pos. shielded and unshielded versions, PROFINET and Ethernet cables are also available for data applications.



Distributor boxes

Robust, fully molded sensor/actuator distributor boxes with 8 slots are available with fixed master cable or plug-in screw connection.



IP69K protection

For outdoor applications, a high IP protection class is essential because products are exposed to direct atmospheric influences.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # followed by the numbers in the search field.





High level of durability

With their special design, our cables provide a high level of durability under alternating bending stress, e.g., in drag chains.



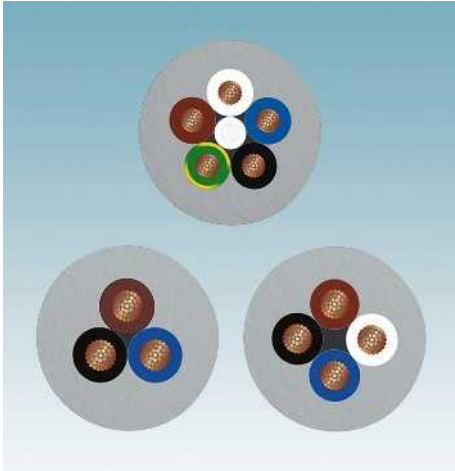
High level of resistance to welding sparks

The robust TPE-U outer sheath of the highly flexible cables is resistant to welding sparks. The cables can therefore be used in resistance welding processes.



High level of durability under torsional stress

Our cables achieve a high level of durability – even with large angles of torsion and simultaneous bending stress.



Large selection of number of positions

Our sensor/actuator cables for robots and drag chains are available in 3-, 4-, and 5-pos. versions.



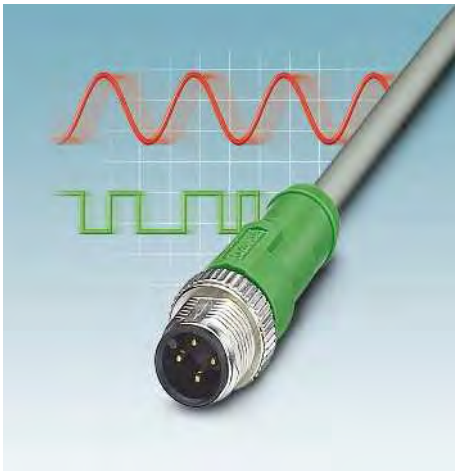
Large selection of connectors

Sensor/actuator cables with molded plug-in plugs are available both as male and female connectors and with a straight or angled cable outlet.



Highly flexible master cables

For the distribution or grouping of signals at industrial robots, we offer a corresponding sensor/actuator box with special master cable.



100% tested

All supplied components are 100% electrically tested by Quality Assurance.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # followed by the numbers in the search field.





Maximum power in a compact design

You can use the compact M12 POWER connectors to supply devices with up to 16 A or up to 630 V depending on the version. The M12 size therefore opens up new areas of application for supplying energy to your electrical devices.



DC application

The M12 POWER T and L DC codings are particularly suitable for the supply connection for decentral I/O modules and for DC motors.



AC application

The M12 POWER S, K, and M codings are designed for AC applications such as the power connection of a three-phase motor.



Connectors for assembly

The M12 connectors in straight and angled versions with crimp and screw connection are available for power transmission.



Safe transmission

With 360° shielded connectors and cables, you can transmit signals reliably even in critical EMI applications.



Power distributors

An M12 box with and without diagnostics function plus a Y-distributor with T-coding are available for power distribution.



100% tested

All supplied components are 100% electrically tested by Quality Assurance.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # followed by the numbers in the search field.



Sensor/actuator cabling

M12 cabling for power applications

M12 POWER connectors, screw connection, crimp connection

Further power codings can be found on our website under web code:

i Your web code: **#0024**

new

new



**T-coded,
4-pos.**



**L-coded,
4-pos., 4-pos.+FE**



Technical data

	4-pos., unshielded	4-pos., shielded	
General data			
Degree of pollution	3	3	
Degree of protection	IP67	IP65	
Connection method	Screw connection	Crimp connection	
Connection cross section [mm²]	0.75 mm² ... 1.5 mm²	1.5 mm² ... 2.5 mm²	
Electrical data			
Rated voltage	63 V DC	63 V DC	
Rated current	12 A (when using 1.5 mm² conductors)	12 A (when using 1.5 mm² conductors)	
Insulation resistance	> 10 GΩ	≥ 100 MΩ	
Material data			
Material contact/contact surface	CuZn / Au	- / -	
Contact carrier material	PA	PA	
Flammability rating in accordance with UL 94	V0	V0	
Temperature data			
Male connector/female connector	-40 ... 85	-40 ... 85	[°C]

Ordering data

Description	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
Connector, cable diameter: 8 mm ... 10 mm						
Female, straight	1404644	1				
Male, straight	1404643	1				
Female, angled	1408989	1				
Male, angled	1408988	1				
Connector, cable diameter: 8 mm ... 13 mm						
Female, straight						
Male, straight						
Connector, without contacts, cable diameter: 6.5 mm ... 11 mm						
Female, straight			1027466	1		
Male, straight			1027465	1		
Connector, without contacts, cable diameter: 8 mm ... 13 mm						
Female, straight						
Male, straight						
Crimp contacts for male connector, gold-plated, for conductor cross-section:						
Male, 1.5 mm², AWG 14			1029394	1		
Male, 2.5 mm²			1029388	1		
PE male, 1.5 mm², AWG 14			1029398	1		
PE male, 2.5 mm²			1029389	1		
PE female, 1.5 mm², AWG 14						1029401
PE female, 2.5 mm²						1029393
Crimp contacts for female connector, gold-plated, for conductor cross-section:						
Female, 1.5 mm², AWG 14			1029395	1		
Female, 2.5 mm²			1029390	1		
PE female, 1.5 mm², AWG 14			1029400	1		
PE female, 2.5 mm²			1029391	1		
PE male, 1.5 mm², AWG 14						1029398
PE male, 2.5 mm²						1029389

Technical data

	4-pos. + FE, shielded	4-pos., shielded	4-pos. + FE, shielded
General data			
Degree of pollution	3	3	3
Degree of protection	IP67	IP65	IP65
Connection method	Screw connection	Crimp connection	Crimp connection
Connection cross section [mm²]	1.5 mm² ... 2.5 mm²	1.5 mm² ... 2.5 mm²	1.5 mm² ... 2.5 mm²
Electrical data			
Rated voltage	63 V DC	63 V DC	63 V DC
Rated current	16 A (when using 2.5 mm² conductors)	16 A (when using 2.5 mm² conductors)	16 A (when using 2.5 mm² conductors)
Insulation resistance	> 10 GΩ	≥ 100 MΩ	≥ 100 MΩ
Material data			
Material contact/contact surface	CuZn / Au	- / -	- / -
Contact carrier material	PA	PA	PA
Flammability rating in accordance with UL 94	V0	V0	V0
Temperature data			
Male connector/female connector	-40 ... 85	-40 ... 85	-40 ... 85

Ordering data

Description	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
Connector, 4-pos. + FE, shielded						
Female, straight	1424710	1				
Male, straight	1424709	1				
Connector, 4-pos., shielded						
Female, straight						
Male, straight						
Connector, 4-pos. + FE, shielded						
Female, straight						
Male, straight						
Connector, without contacts, 4-pos. + FE, shielded						
Female, straight						
Male, straight						
Connector, without contacts, 4-pos., shielded						
Female, straight						
Male, straight						
Crimp contacts for male connector, 4-pos. + FE, shielded						
Male, 1.5 mm², AWG 14			1029394	1	1029394	1
Male, 2.5 mm²			1029388	1	1029388	1
PE male, 1.5 mm², AWG 14			1029398	1		
PE male, 2.5 mm²			1029389	1		
PE female, 1.5 mm², AWG 14						1029401
PE female, 2.5 mm²						1029393
Crimp contacts for female connector, 4-pos. + FE, shielded						
Female, 1.5 mm², AWG 14			1029396	1	1029396	1
Female, 2.5 mm²			1029392	1	1029392	1
PE female, 1.5 mm², AWG 14						
PE female, 2.5 mm²						
PE male, 1.5 mm², AWG 14						1029398
PE male, 2.5 mm²						1029389

M12 POWER connectors, screw connection, crimp connection

Further power codings can be found on
our website under web code:

i Your web code: **#0024**



**S-coded,
2-, 3-pos.+PE**



**K-coded,
4-pos.+PE**



	Technical data			Technical data		
	2-pos. + PE, unshielded	3-pos. + PE, unshielded	3-pos. + PE, shielded	4-pos. + PE, unshielded	4-pos. + PE, shielded	
General data						
Degree of pollution	3	3	3	3	3	
Degree of protection	IP67	IP67	IP65	IP67	IP65	
Connection method	Screw connection	Screw connection	Crimp connection	Screw connection	Crimp connection	
Connection cross section [mm²]	0.75 mm² ... 1.5 mm²	0.75 mm² ... 1.5 mm²	1.5 mm² ... 2.5 mm²	1.5 mm² ... 2.5 mm²	1.5 mm² ... 2.5 mm²	
Electrical data						
Rated voltage	230 V AC	630 V AC	690 V AC	630 V AC	690 V AC	
Rated current	16 A (when using 1.5 mm² conductors)	12 A (when using 1.5 mm² conductors)	12 A (when using 1.5 mm² conductors)	12 A (when using 2.5 mm² conductors)	16 A (when using 2.5 mm² conductors)	
Insulation resistance	> 10 GΩ	> 10 GΩ	≥ 100 MΩ	> 10 GΩ	≥ 100 MΩ	
Material data						
Material contact/contact surface	CuZn / Au	CuZn / Au	- / -	CuZn / Au	- / -	
Contact carrier material	PA	PA	PA	PA	PA	
Flammability rating in accordance with UL 94	V0	V0	V0	V0	V0	
Temperature data						
Male connector/female connector	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85	
	Ordering data			Ordering data		
	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.	Order No.	Pcs./ Pkt.
Connector, cable diameter: 6 mm ... 8 mm						
	Female, straight	1419640	1			
	Male, straight	1419639	1			
	Female, angled	1419642	1			
Connector, cable diameter: 8 mm ... 10 mm	Male, angled	1419641	1			
	Female, straight					
	Male, straight	1404642	1			
	Female, angled	1404641	1			
Connector, cable diameter: 8 mm ... 13 mm	Female, angled	1408987	1			
	Male, angled	1408985	1			
	Female, straight					
	Male, straight					
Connector, without contacts, cable diameter: 6.5 mm ... 11 mm	Female, straight					
	Male, straight					
	Female, straight					
	Male, straight					
Connector, without contacts, cable diameter: 8 mm ... 13 mm	Female, straight					
	Male, straight					
	Female, straight					
	Male, straight					
Crimp contacts for male connector, gold-plated, for conductor cross-section:	Male, 1.5 mm², AWG 14					
	Male, 2.5 mm²					
	PE male, 1.5 mm², AWG 14					
	PE male, 2.5 mm²					
Crimp contacts for female connector, gold-plated, for conductor cross-section:	PE female, 1.5 mm², AWG 14					
	PE female, 2.5 mm²					
	Female, 1.5 mm², AWG 14					
	Female, 2.5 mm²					
Crimp contacts for male connector, gold-plated, for conductor cross-section:	Male, 1.5 mm², AWG 14					
	Male, 2.5 mm²					
	PE male, 1.5 mm², AWG 14					
	PE male, 2.5 mm²					
Crimp contacts for female connector, gold-plated, for conductor cross-section:	Female, 1.5 mm², AWG 14					
	Female, 2.5 mm²					
	PE female, 1.5 mm², AWG 14					
	PE female, 2.5 mm²					
Crimp contacts for male connector, gold-plated, for conductor cross-section:	Male, 1.5 mm², AWG 14					
	Male, 2.5 mm²					
	PE male, 1.5 mm², AWG 14					
	PE male, 2.5 mm²					
Crimp contacts for female connector, gold-plated, for conductor cross-section:	Female, 1.5 mm², AWG 14					
	Female, 2.5 mm²					
	PE female, 1.5 mm², AWG 14					
	PE female, 2.5 mm²					

Sensor/actuator cabling

M12 cabling for power applications

M12 POWER device connectors, modular, 25 mm square flange, pre-assembled



Flange housing,
2.7 mm housing bore holes



Preassembled contact carrier
and insulating body
with 0.5 m long litz wires

ERC

ERC

Technical data

General data		
Degree of pollution	-	
Degree of protection	-	
Connection method	-	
Electrical data		
Rated voltage		
Rated current	-	
Overvoltage category	-	
Material data		
Material contact/contact surface	- / -	
Contact carrier material	-	
Cable gland material	Zinc die-cast, nickel-plated	
Cable type	-	
Temperature data		
Male connector/female connector	[°C]	-40 ... 85

Ordering data

Description	Order No.	Pcs./Pkt.
Square flange housing, with flat gasket	1424131	10
Assembled contact carrier and insulating body, with 0.5 m litz wires and crimp contacts		
Male		

Technical data

S-coded, 3-pos. + PE	T-coded, 4-pos.
3	3
IP67	IP67
Individual wires	Individual wires
630 V	63 V
12 A	12 A
III	III
CuZn / Au	CuZn / Au
PA6	PA6
-	-
UL/cUL flexible hook-up wire	UL/cUL flexible hook-up wire
-25 ... 85	-25 ... 85

Ordering data

Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
S-coded, 3-pos. + PE		T-coded, 4-pos.	
1424129	1	1424130	1

M12 POWER device connectors, 2-pos.+PE, S-coded

- M16 fastening thread
- With 0.5 m long litz wires
- S-coded



S-coded,
2-pos. + PE



		Technical data			
		Front mounting	Rear mounting		
General data					
Degree of pollution		3	3		
Degree of protection		-	IP65 / IP67		
Connection method		Individual wires	Individual wires		
Electrical data					
Rated voltage		630 V	630 V		
Rated current		16 A	16 A		
Material data					
Material contact/contact surface		CuZn / Au	CuZn / Au		
Contact carrier material		PA	PA		
Flammability rating in accordance with UL 94		V0	V0		
Cable type		UL/cUL flexible hook-up wire	UL/cUL flexible hook-up wire		
Conductor cross section		1.31 mm ²	1.31 mm ²		
Conductor cross section	[AWG]	16	16		
Temperature data					
Male connector/female connector	[°C]	-25 ... 85	-25 ... 85		
		Ordering data			
Description	Coding	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
		Front mounting		Rear mounting	
Power device connectors					
Female	S power	1411654	1	1411652	1
Male	S power	1411655	1	1411653	1
		Accessories			
Flat nut, with: M16 thread		SACC-E-MU-M16		1504097	100

Sensor/actuator cabling

M12 cabling for power applications

M12 POWER device connectors, 3-pos.+PE, S-coded, 4-pos., T-coded

- M16 fastening thread
- With 0.5 m long litz wires



S-coded,
3-pos. + PE



T-coded,
4-pos.



Technical data

	Front mounting	Rear mounting
General data		
Degree of pollution	3	3
Degree of protection	IP67	IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	630 V	630 V
Rated current	12 A	12 A
Material data		
Material contact/contact surface	CuZn / Au	CuZn / Au
Contact carrier material	PA	PA
Flammability rating in accordance with UL 94	V0	V0
Cable type	UL/cUL flexible hook-up wire	UL/cUL flexible hook-up wire
Conductor cross section	1.31 mm ²	1.31 mm ²
Conductor cross section [AWG]	16	16
Temperature data		
Male connector/female connector [°C]	-25 ... 85	-25 ... 85

Ordering data

	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
	Front mounting		Rear mounting	
Female	1424137	1	1424133	1
Male	1424139	1	1424132	1

Accessories

Flat nut, with: M16 thread	SACC-E-MU-M16	1504097	100
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Technical data

	Front mounting	Rear mounting
General data		
Degree of pollution	3	3
Degree of protection	IP67	IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	63 V	63 V
Rated current	12 A	12 A
Material data		
Material contact/contact surface	CuZn / Au	CuZn / Au
Contact carrier material	PA	PA
Flammability rating in accordance with UL 94	V0	V0
Cable type	UL/cUL flexible hook-up wire	UL/cUL flexible hook-up wire
Conductor cross section	1.31 mm ²	1.31 mm ²
Conductor cross section [AWG]	16	16
Temperature data		
Male connector/female connector [°C]	-25 ... 85	-25 ... 85

Ordering data

	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
	Front mounting		Rear mounting	
Female	1424138	1	1424134	1
Male	1424140	1	1424136	1

Accessories

Flat nut, with: M16 thread	SACC-E-MU-M16	1504097	100
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**M12 POWER XL device connectors,
3-pos.+PE, S-coded,
4-pos., T-coded**

- M16 fastening thread
- With 0.5 m long litz wires
- Tightening limitation
- Wrench size 19



**S-coded,
3-pos. + PE**



**T-coded,
4-pos.**



Technical data			
Front mounting		Rear mounting	
General data			
Degree of pollution	3	3	
Degree of protection	IP65/IP67	IP65/IP67	
Connection method	Individual wires	Individual wires	
Electrical data			
Rated voltage	630 V	630 V	
Rated current	12 A	12 A	
Material data			
Material contact/contact surface	CuZn / Au	CuZn / Au	
Contact carrier material	PA	PA	
Flammability rating in accordance with UL 94	V0	V0	
Cable type	UL/cUL flexible hook-up wire	UL/cUL flexible hook-up wire	
Conductor cross section	1.31 mm ²	1.31 mm ²	
Conductor cross section [AWG]	16	16	
Temperature data			
Male connector/female connector	-25 ... 85	-25 ... 85	

Ordering data			
Front mounting		Rear mounting	
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.

Accessories		
SACC-E-MU-M16	1504097	100



Technical data			
Front mounting		Rear mounting	
General data			
Degree of pollution	3	3	
Degree of protection	IP65/IP67	IP65/IP67	
Connection method	Individual wires	Individual wires	
Electrical data			
Rated voltage	63 V	63 V	
Rated current	12 A	12 A	
Material data			
Material contact/contact surface	CuZn / Au	CuZn / Au	
Contact carrier material	PA	PA	
Flammability rating in accordance with UL 94	V0	V0	
Cable type	UL/cUL flexible hook-up wire	UL/cUL flexible hook-up wire	
Conductor cross section	1.31 mm ²	1.31 mm ²	
Conductor cross section [AWG]	16	16	
Temperature data			
Male connector/female connector	-25 ... 85	-25 ... 85	

Ordering data			
Front mounting		Rear mounting	
Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.

Accessories		
SACC-E-MU-M16	1504097	100

General data	
Degree of pollution	
Degree of protection	
Connection method	
Electrical data	
Rated voltage	
Rated current	
Material data	
Material contact/contact surface	
Contact carrier material	
Flammability rating in accordance with UL 94	
Cable type	
Conductor cross section	
Conductor cross section [AWG]	
Temperature data	
Male connector/female connector	

Description	
-------------	--

Power device connectors	
Female	
Male	

Flat nut, with:	
M16 thread	

new

- M16 fastening thread
- With 0.2 m long litz wires
- Tightening limitation
- Wrench size 19



**K-coded,
cable cross section:
2.5 mm², 4-pos.+PE**



**K-coded,
cable cross section:
1.31 mm², 4-pos.+PE**

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M12 POWER XL device connectors, 4-pos., L-coded

- M16 fastening thread
- With 0.2 m long litz wires
- Tightening limitation
- Wrench size 19
- PROFINET-specified versions




L-coded,
cable cross section:
2.5 mm², 4-pos.

new




L-coded,
cable cross section:
1.31 mm², 4-pos.

new

	Technical data		Technical data	
	Front mounting	Rear mounting	Front mounting	Rear mounting
General data				
Degree of pollution	3	3	3	3
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data				
Rated voltage	63 V	63 V	63 V	63 V
Rated current	16 A	16 A	12 A	12 A
Material data				
Material contact/contact surface	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA	PA	PA	PA
Flammability rating in accordance with UL 94	V0	V0	V0	V0
Cable type	PEX litz wire	PEX litz wire	UL/cUL flexible hook-up wire	UL/cUL flexible hook-up wire
Conductor cross section	2.5 mm ²	2.5 mm ²	1.31 mm ²	1.31 mm ²
Conductor cross section [AWG]	14	14	16	16
Temperature data				
Male connector/female connector [°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85
	Ordering data		Ordering data	
	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
Description	Front mounting		Rear mounting	
POWER device connector, PROFINET-specified				
Female	1425587	1	1425589	1
Male	1425586	1	1425588	1
	Accessories		Accessories	
	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
Flat nut, with: M16 thread	SACC-E-MU-M16	1504097	100	

Sensor/actuator cabling

M12 cabling for power applications

M12 POWER XL device connectors, 4-pos.+FE, L-coded

- M16 fastening thread
- With 0.2 m long litz wires
- Tightening limitation
- Wrench size 19
- PROFINET-specified versions



L-coded,
cable cross section:
2.5 mm², 4-pos.+FE



L-coded,
cable cross section:
1.31 mm², 4-pos.+FE

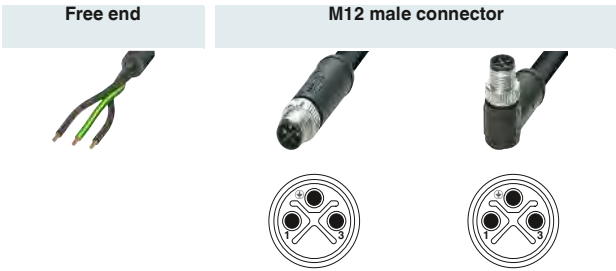
	Technical data				Technical data			
	Front mounting		Rear mounting		Front mounting		Rear mounting	
General data								
Degree of pollution	3		3		3		3	
Degree of protection	IP65/IP67		IP65/IP67		IP65/IP67		IP65/IP67	
Connection method	Individual wires		Individual wires		Individual wires		Individual wires	
Electrical data								
Rated voltage	63 V		63 V		63 V		63 V	
Rated current	16 A		16 A		12 A		12 A	
Material data								
Material contact/contact surface	CuZn / Au		CuZn / Au		CuZn / Au		CuZn / Au	
Contact carrier material	PA		PA		PA		PA	
Flammability rating in accordance with UL 94	V0		V0		V0		V0	
Cable type	PEX litz wire		PEX litz wire		UL/cUL flexible hook-up wire		UL/cUL flexible hook-up wire	
Conductor cross section	2.5 mm²		2.5 mm²		1.31 mm²		1.31 mm²	
Conductor cross section [AWG]	14		14		16		16	
Temperature data								
Male connector/female connector [°C]	-25 ... 85		-25 ... 85		-25 ... 85		-25 ... 85	
	Ordering data				Ordering data			
Description	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.	Order No.	Pcs./Pkt.
	Front mounting		Rear mounting		Front mounting		Rear mounting	
Power device connectors								
Female	1415296	1	1415299	1				
Male	1415295	1	1415297	1				
POWER device connector, PROFINET-specified								
Female	1425583	1	1425585	1	1425628	1	1425630	1
Male	1425582	1	1425584	1	1425627	1	1425629	1
	Accessories				Accessories			
Flat nut, with: M16 thread	SACC-E-MU-M16		1504097	100	SACC-E-MU-M16		1504097	100

Sensor/actuator cabling

M12 cabling for power applications

M12 POWER cables,
2-pos.+PE, S-coded,
cable type: PVC, unshielded

Notes:
For information about the cable qualities, see page 318



		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.	
			1 m	1411636		1 m	1411640
			2 m	1411637		2 m	1411641
			5 m	1411638		5 m	1411642
			10 m	1411639		10 m	1411643
M12 female connector, straight							
			1 m	1411644			
			2 m	1411645			
			5 m	1411646			
			10 m	1411647			
M12 female connector, connector, angled							
			1 m	1411648			
			2 m	1411649			
			5 m	1411650			
			10 m	1411651			

Cable description	Cable type	Color coding		Pin assignment
PVC – black	PVC	BK1	1	1
		BK2	2	3
		GNYE		PE

Technical data		
M12		
Rated voltage	[A]	230 V AC
Rated current		16
Material contact M12		CuSn
Material contact surface M12		Ni/Au
Material handle M12		PA
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67 / IP68	
Temperature data		
Male connector/female connector	[°C]	-25 ... 85

M12 cabling for power applications

**M12 POWER cables,
3-pos.+PE, S-coded,
cable type: PUR**
Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector

M12 male connector,
360° shielded

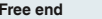
Ordering data

Ordering data

Ordering data

Ordering data

Ordering data

Free end	Order No.		Order No.		Order No.		Order No.		Order No.	
	1 m	1408835	1 m	1408839	1.5 m	1424104	1.5 m	1424108		
	2 m	1408836	2 m	1408840	3 m	1424105	3 m	1424109		
	5 m	1408837	5 m	1408841	5 m	1424245	5 m	1424110		
	10 m	1408838	10 m	1408842	10 m	1424107	10 m	1424111		

M12 female connector, straight



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

M12 female connector, angled



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

M12 female connector, straight, 360° shielded



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

M12 female connector, angled, 360° shielded



1.5 m	1424100
1.5 m	1424101
1.5 m	1424102
1.5 m	1424103

Cable description	Cable type	Color coding		Pin assignment
PUR, halogen-free – black (unshielded)	PUR	BK1	1	1
		BK2	2	2
		BK3	3	3
PUR, halogen-free – orange (shielded)	PUR	GNYE		PE

Technical data

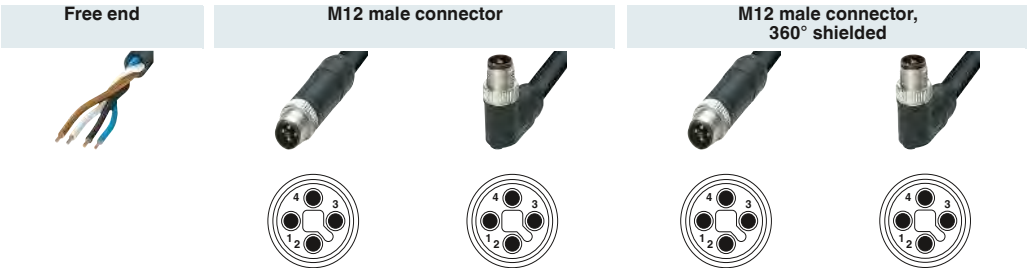
	M12
Rated voltage	690 V AC
Rated current	12
Material contact M12	CuZn
Material contact surface M12	Ni/Au
Material handle M12	PA
Material, knurls	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67 / IP68
Temperature data	
Male connector/female connector	-25 ... 85

Sensor/actuator cabling

M12 cabling for power applications

M12 POWER cables,
4-pos., T-coded,
cable type: PUR

Notes:
For information about the cable qualities, see page 318



Free end	Ordering data		Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.		Order No.	
	1 m		1408812		1 m		1408816	
	2 m		1408813		2 m		1408819	
	5 m		1408814		5 m		1408820	
	10 m		1408815		10 m		1408822	
	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		1 m		1415196	
	2 m		1408828		2 m		1415197	
	5 m		1408829		5 m		1415198	
	10 m		1408830		10 m		1415199	
	1.5 m		1424112					
	3 m		1424113					
	5 m		1424114					
	10 m		1424115					
	1.5 m		1424116				1.5 m	
	3 m		1424117				3 m	
	5 m		1424118				5 m	
	10 m		1424128				10 m	

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	[A]	63 V DC
Rated current		12
Material contact M12		CuSn
Material contact surface M12		Ni/Au
Material handle M12		PA
Material, knurls	Zinc die-cast, nickel-plated	
Degree of protection	IP65 / IP67 / IP68	
Temperature data		
Male connector/female connector	[°C]	-25 ... 85

M12 POWER cables, 4-pos., T-coded, cable type: PVC, unshielded

Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector



Ordering data

Ordering data

Ordering data

Free end	Order No.	Order No.	Order No.
		1 m	1089952
		2 m	1089953
		5 m	1089955
		10 m	1089956
		1 m	1089958
		2 m	1089961
		5 m	1089965
		10 m	1089968
M12 female connector, straight			
	1 m	1089970	1 m
	2 m	1089971	2 m
	5 m	1089972	5 m
	10 m	1408826	10 m
		1 m	1089988
		2 m	1089997
		5 m	1089998
		10 m	1089973
M12 female connector, angled			
	1 m	1089977	
	2 m	1089981	
	5 m	1089984	
	10 m	1089987	

Cable description	Cable type	Color coding	Pin assignment
PVC – black (unshielded)	PVC	BN	1
		WH	2
		BK	4
		BU	3

Technical data

	M12
Rated voltage	63 V DC
Rated current	12
Material contact M12	CuSn
Material contact surface M12	Ni/Au
Material handle M12	PA
Material, knurls	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67 / IP68
Temperature data	
Male connector/female connector	-25 ... 85

Sensor/actuator cabling

M12 cabling for power applications

M12 POWER cables, 4-pos.+PE, K-coded, cable type: PUR

Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector



M12 male connector, 360° shielded



		Ordering data		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.		Order No.	
		1.5 m	1414866	1.5 m	1414833	1.5 m	1414867	1.5 m	1414834
		3 m	1414870	3 m	1414837	3 m	1414871	3 m	1414838
		5 m	1414875	5 m	1414841	5 m	1414876	5 m	1414842
		10 m	1414879	10 m	1414846	10 m	1414880	10 m	1414847
M12 female connector, straight									
		1.5 m	1414770						
		3 m	1414788						
		5 m	1414804						
		10 m	1414821						
M12 female connector, angled									
		1.5 m	1414766						
		3 m	1414784						
		5 m	1414800						
		10 m	1414817						
M12 female connector, straight, 360° shielded									
		1.5 m	1414771						
		3 m	1414789						
		5 m	1414805						
		10 m	1414822						
M12 female connector, angled, 360° shielded									
		1.5 m	1414767						
		3 m	1414785						
		5 m	1414801						
		10 m	1414818						

Cable description	Cable type	Color coding		Pin assignment
PUR, halogen-free – black (unshielded)	PUR	BK1	1	1
		BK2	2	2
		BK3	3	3
PUR, halogen-free – orange (shielded)	PUR	BK4	4	4
		GNYE		PE

Technical data		
M12		
Rated voltage		690 V AC
Rated current	[A]	16
Material contact M12		CuSn
Material contact surface M12		Ni/Au
Material handle M12		PA
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Male connector/female connector	[°C]	-25 ... 85

M12 POWER cables, 4-pos.+PE, K-coded, cable type: PVC

Notes:

For information about the cable qualities, see page 318

Free end



M12 male connector

M12 male connector,
360° shielded

Ordering data

Ordering data

Ordering data

Ordering data

Ordering data

Free end	Order No.	Order No.	Order No.	Order No.	Order No.
		1.5 m 1414868	1.5 m 1414835	1.5 m 1414869	1.5 m 1414836
		3 m 1414872	3 m 1414839	3 m 1414874	3 m 1414840
		5 m 1414877	5 m 1414843	5 m 1414878	5 m 1414845
		10 m 1414881	10 m 1414848	10 m 1414882	10 m 1414849
M12 female connector, straight					
	1.5 m 1414780				
	3 m 1414796				
	5 m 1414812				
	10 m 1414829				
M12 female connector, angled					
	1.5 m 1414774				
	3 m 1414792				
	5 m 1414808				
	10 m 1414825				
M12 female connector, straight, 360° shielded					
	1.5 m 1414781				
	3 m 1414797				
	5 m 1414813				
	10 m 1414830				
M12 female connector, angled, 360° shielded					
	1.5 m 1414775				
	3 m 1414793				
	5 m 1414809				
	10 m 1414826				

Cable description	Cable type	Color coding		Pin assignment
PVC – black (unshielded)	PVC	BK1	1	1
		BK2	2	2
		BK3	3	3
PVC – orange (shielded)	PVC	BK4	4	4
		GNYE		PE

Technical data

M12	
Rated voltage	690 V AC
Rated current	16
Material contact M12	CuSn
Material contact surface M12	Ni/Au
Material handle M12	PA
Material, knurls	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	-25 ... 85

Sensor/actuator cabling

M12 cabling for power applications

M12 POWER cables, 4-pos.+FE, L-coded, cable type: PUR, unshielded

Notes:
For information about the cable qualities, see page 318
For shielded power cables, visit phoenixcontact.net/products

Free end



M12 male connector, wire cross section 2.5 mm²



M12 male connector, wire cross section 1.5 mm²



Free end	Ordering data	Ordering data	Ordering data	Ordering data	Ordering data
Order No.	Order No.	Order No.	Order No.	Order No.	Order No.
	1.5 m 1414883	1.5 m 1414850	1.5 m 1424593	1.5 m 1424597	
	3 m 1414887	3 m 1414854	3 m 1424594	3 m 1424598	
	5 m 1414891	5 m 1414858	5 m 1424595	5 m 1424599	
	10 m 1414895	10 m 1414862	10 m 1424596	10 m 1424600	
M12 female connector, straight, wire cross section 2.5 mm²					
	1.5 m 1414772	0.3 m 1425009			
	3 m 1414790	0.6 m 1425010			
	5 m 1414806	1.5 m 1425011			
	10 m 1414823	3 m 1425012			
M12 female connector, angled, wire cross section 2.5 mm²					
	1.5 m 1414768				
	3 m 1414786				
	5 m 1414802				
	10 m 1414819				
M12 female connector, straight, wire cross section 1.5 mm²					
	1.5 m 1424601		0.3 m 1425017		
	3 m 1424602		0.6 m 1425018		
	5 m 1424603		1.5 m 1425019		
	10 m 1424604		3 m 1425020		
M12 female connector, angled, wire cross section 1.5 mm²					
	1.5 m 1424605				
	3 m 1424606				
	5 m 1424607				
	10 m 1424608				

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free – gray Cable type 280 for 2.5 mm ²	280	BN	1
		WH	2
PUR, halogen-free – gray Cable type 290 for 1.5 mm ²	290	BU	3
		BK	4
		GY	5

Technical data		
M12		
Rated voltage	[A]	63 V DC
Rated current		16
Material contact M12		CuSn
Material contact surface M12		Ni/Au
Material handle M12		PA
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Male connector/female connector	[°C]	-25 ... 85

M12 POWER cables, 4-pos.+FE, L-coded, cable type: PVC, unshielded

Notes:

For information about the cable qualities, see page 318

For shielded power cables, visit
phoenixcontact.net/products

Free end

M12 male connector,
wire cross section 2.5 mm²M12 male connector,
wire cross section 1.5 mm²

Ordering data

Ordering data

Ordering data

Ordering data

Ordering data

Free end



Order No.

Order No.

Order No.

Order No.

Order No.

1.5 m
3 m
5 m
10 m

[1414885](#)
[1414889](#)
[1414893](#)
[1414897](#)

1.5 m
3 m
5 m
10 m

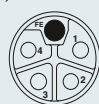
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[1414856](#)
[1414860](#)
[1414864](#)

1.5 m
3 m
5 m
10 m

[1424609](#)
[1424610](#)
[1424611](#)
[1424612](#)

1.5 m
3 m
5 m
10 m

[1424613](#)
[1424614](#)
[1424615](#)
[1424616](#)

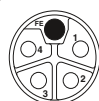
M12 female connector, straight, wire cross section 2.5 mm²

1.5 m
3 m
5 m
10 m

[1414782](#)
[1414798](#)
[1414814](#)
[1414831](#)

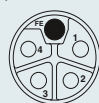
0.3 m
0.6 m
1.5 m
3 m

[1425013](#)
[1425014](#)
[1425015](#)
[1425016](#)

M12 female connector, angled, wire cross section 2.5 mm²

1.5 m
3 m
5 m
10 m

[1414777](#)
[1414794](#)
[1414810](#)
[1414827](#)

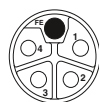
M12 female connector, straight, wire cross section 1.5 mm²

1.5 m
1.5 m
1.5 m
1.5 m

[1424617](#)
[1424618](#)
[1424619](#)
[1424620](#)

0.3 m
0.6 m
1.5 m
3 m

[1425021](#)
[1425022](#)
[1425023](#)
[1425024](#)

M12 female connector, angled, wire cross section 1.5 mm²

1.5 m
3 m
5 m
10 m

[1424621](#)
[1424622](#)
[1424623](#)
[1424624](#)

Cable description

Cable type

Color coding

Pin assignment

PVC – gray
Cable type 500 for 2.5 mm²

500

BN



1

PVC – gray

WH



2

PVC – gray

BU



3

Cable type 510 for 1.5 mm²

510

BK



4

GY



5

Technical data

M12

Rated voltage

63 V DC

Rated current

16

Material contact M12

CuSn

Material contact surface M12

Ni/Au

Material handle M12

PA

Material, knurls

Zinc die-cast, nickel-plated

Degree of protection

IP65 / IP67

Temperature data

Male connector/female connector

[°C]

-25 ... 85

Sensor/actuator cabling

M12 cabling for power applications

M12 POWER cables,
4-pos., L-coded,
cable type: PUR, unshielded

Notes:
For information about the cable qualities, see page 318
For shielded power cables, visit
phoenixcontact.net/products



		Ordering data		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.		Order No.	
		1.5 m	1425065	1.5 m	1425069	1.5 m	1425025	1.5 m	1425029
		3 m	1425066	3 m	1425070	3 m	1425026	3 m	1425030
		5 m	1425067	5 m	1425071	5 m	1425027	5 m	1425031
		10 m	1425068	10 m	1425072	10 m	1425028	10 m	1425032
		M12 female connector, straight, wire cross section 2.5 mm²							
		1.5 m	1425073	0.3 m	1425081				
		3 m	1425074	0.6 m	1425082				
		5 m	1425075	1.5 m	1425083				
		10 m	1425076	3 m	1425084				
		M12 female connector, angled, wire cross section 2.5 mm²							
		1.5 m	1425077						
		3 m	1425078						
		5 m	1425079						
		10 m	1425080						
		M12 female connector, straight, wire cross section 1.5 mm²							
		1.5 m	1425033			0.3 m	1425041		
		3 m	1425034			0.6 m	1425042		
		5 m	1425035			1.5 m	1425043		
		10 m	1425036			3 m	1425044		
		M12 female connector, angled, wire cross section 1.5 mm²							
		1.5 m	1425037						
		3 m	1425038						
		5 m	1425039						
		10 m	1425040						

Cable description	Cable type	Color coding		Pin assignment
PUR, halogen-free – black Cable type PUR for 2.5 mm²	PUR	BN		1
		WH		2
PUR, halogen-free – black Cable type 105 for 1.5 mm²	105	BU		3
		BK		4

Technical data		
M12		
Rated voltage	[A]	63 V (DC) / 63 V DC
Rated current		16
Material contact M12		CuSn
Material contact surface M12		Ni/Au
Material handle M12		PA
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Male connector/female connector	[°C]	-25 ... 85

M12 POWER cables, 4-pos., L-coded, cable type: PVC, unshielded

Notes:

For information about the cable qualities, see page 318

For shielded power cables, visit
phoenixcontact.net/products

Free end



M12 male connector, wire cross section 2.5 mm²



M12 male connector, wire cross section 1.5 mm²



Ordering data

Ordering data

Ordering data

Ordering data

Ordering data

Free end	Order No.	Order No.	Order No.	Order No.	Order No.
		1.5 m 1425085	1.5 m 1425089	1.5 m 1425045	1.5 m 1425049
		3 m 1425086	3 m 1425090	3 m 1425046	3 m 1425050
		5 m 1425087	5 m 1425091	5 m 1425047	5 m 1425051
		10 m 1425088	10 m 1425092	10 m 1425048	10 m 1425052
M12 female connector, straight, wire cross section 2.5 mm²					
	1.5 m 1425093	0.3 m 1425101			
	3 m 1425094	0.6 m 1425102			
	5 m 1425095	1.5 m 1425103			
	10 m 1425096	3 m 1425104			
M12 female connector, angled, wire cross section 2.5 mm²					
	1.5 m 1425097				
	3 m 1425098				
	5 m 1425099				
	10 m 1425100				
M12 female connector, straight, wire cross section 1.5 mm²					
	1.5 m 1425053		0.3 m 1425061		
	3 m 1425054		0.6 m 1425062		
	5 m 1425055		1.5 m 1425063		
	10 m 1425056		3 m 1425064		
M12 female connector, angled, wire cross section 1.5 mm²					
	1.5 m 1425057				
	3 m 1425058				
	5 m 1425059				
	10 m 1425060				

Cable description	Cable type	Color coding	Pin assignment
PVC – black	PVC	BN	1
Cable type PVC for 2.5 mm²		WH	2
PVC – black	110	BU	3
Cable type 110 for 1.5 mm²		BK	4

Technical data

	M12
Rated voltage	63 V DC
Rated current	16
Material contact M12	CuSn
Material contact surface M12	Ni/Au
Material handle M12	PA
Material, knurls	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	-25 ... 85

Sensor/actuator cabling

M12 cabling for power applications

M12 POWER cables,
5-pos.+PE, M-coded,
cable type: PUR

Notes:
For information about the cable qualities, see page 318

Free end

M12 male connector

M12 male connector,
360° shielded





Free end	Ordering data	Ordering data	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.	Order No.	Order No.
		1.5 m	1414949	1.5 m	1414932
		3 m	1414953	3 m	1414936
		5 m	1414957	5 m	1414941
		10 m	1414961	10 m	1414945
		1.5 m	1414950	1.5 m	1414933
		3 m	1414954	3 m	1414937
		5 m	1414958	5 m	1414942
		10 m	1414962	10 m	1414946

M12 female connector, straight



1.5 m 1414901

3 m 1414910

5 m 1414918

10 m 1414926

M12 female connector, angled



1.5 m 1414899

3 m 1414907

5 m 1414916

10 m 1414924

M12 female connector, straight, 360° shielded



1.5 m 1414902

3 m 1414911

5 m 1414919

10 m 1414927

M12 female connector, angled, 360° shielded



1.5 m 1414900

3 m 1414908

5 m 1414917

10 m 1414925

Cable description	Cable type	Color coding		Pin assignment
PUR, halogen-free – black (unshielded)	PUR	BK1	1	1
		BK2	2	2
		BK3	3	3
PUR, halogen-free – orange (shielded)	PUR	BK4	4	4
		BK5	5	5
		GNYE		PE

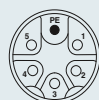
Technical data		
M12		
Rated voltage	[A]	690 V AC
Rated current		8
Material contact M12		CuSn
Material contact surface M12		Ni/Au
Material handle M12		PA
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Male connector/female connector	[°C]	-25 ... 85

**M12 POWER cables,
5-pos.+PE, M-coded,
cable type: PVC**
Notes:

For information about the cable qualities, see page 318

Free end**M12 male connector****M12 male connector,
360° shielded****Ordering data****Ordering data****Ordering data****Ordering data****Ordering data**

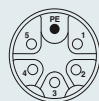
Free end	Order No.	Order No.	Order No.	Order No.	Order No.	Order No.		
	1.5 m	1414951	1.5 m	1414934	1.5 m	1414952	1.5 m	1414935
	3 m	1414955	3 m	1414939	3 m	1414956	3 m	1414940
	5 m	1414959	5 m	1414943	5 m	1414960	5 m	1414944
	10 m	1414963	10 m	1414947	10 m	1414964	10 m	1414948

M12 female connector, straight

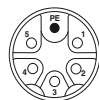
1.5 m	1414905
3 m	1414914
5 m	1414922
10 m	1414930

M12 female connector, angled

1.5 m	1414903
3 m	1414912
5 m	1414920
10 m	1414928

M12 female connector, straight, 360° shielded

1.5 m	1414906
3 m	1414915
5 m	1414923
10 m	1414931

M12 female connector, angled, 360° shielded

1.5 m	1414904
3 m	1414913
5 m	1414921
10 m	1414929

Cable description	Cable type	Color coding	Pin assignment
PVC – black (unshielded)	PVC	BK1	1
		BK2	2
		BK3	3
PVC – orange (shielded)	PVC	BK4	4
		BK5	5
		GNYE	PE

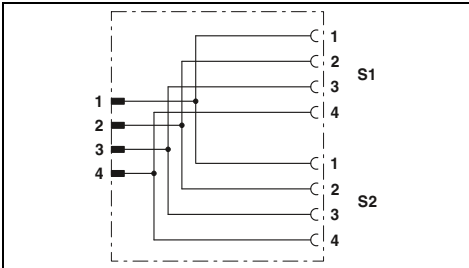
Technical data

	M12
Rated voltage	690 V AC
Rated current	8
Material contact M12	CuSn
Material contact surface M12	Ni/Au
Material handle M12	PA
Material, knurls	Zinc die-cast, nickel-plated
Degree of protection	IP65 / IP67
Temperature data	
Male connector/female connector	-25 ... 85

Y distributors
for M12 POWER connectors



Y-distributor, T-coded, 4-pos.



General data	
Degree of pollution	3
Degree of protection	IP65 / IP67
Electrical data	
Rated voltage	63 V DC
Rated current	2x 12 A (at 40°C)
Material data	
Contact material	CuZn
Contact surface material	Ni/Au
Flammability rating in accordance with UL 94	HB
Temperature data	
Male connector/female connector	[-25 ... 80 °C]

Technical data

3
IP65 / IP67
63 V DC
2x 12 A (at 40°C)
CuZn
Ni/Au
HB
[-25 ... 80 °C]

Ordering data

Description	Center distance
Y distributor, unshielded, M12 male to 2 x M12 female	
	21 mm

Type	Order No.	Pcs./Pkt.
SAC-4PY-MT/2XFT VP	1410632	5

Power distributors for M12 POWER connectors



**Power distributor
with plug-in crimp connection,
horizontal**

		Technical data		
General data				
Degree of protection		IP66 / IP67		
Electrical data				
Rated voltage		24 V DC		
Perm. operating voltage		30,5 V DC		
Rated current for each I/O signal		10 A (M12 diagnostic socket for each channel max. 50 mA)		
Rated current per slot		2x 9.25 A (at 40°C)		
Total rated current		-		
Housing material		PBT		
Dimensions				
Width x height x length	[mm]	60 x 52 x 212		
Temperature data				
Distributor box		-25°C ... 60°C		
Ordering data				
Description		Type	Order No.	Pcs./Pkt.
Power distributor , M12 female, 4 slots, 4-pos., unshielded, status indicator: yes				
- with diagnostics port		SACB-4/T-L-8FUSE DIAG CT AXL	1411048	1
- without diagnostic port		SACB-4/T-L-8FUSE CT AXL	1413929	1
Accessories				
M12 screw plug fast locking system		PROT-MS SCO	1553129	5
for unused M12 sockets of sensor/actuator cables, boxes, and device connectors				
UniCard, for labeling Phoenix Contact devices, Axioline				
Lettering field size: 7 x 10 mm, 30 individual labels		UCT-EM (7X10)	0830765	10
Torque screwdriver				
With preset torque of 0.4 Nm and 4 mm hexagonal drive		TSD 04 SAC	1208429	1
Nut				
for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive		SAC BIT M12-D15	1208432	1
Nut				
for assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive		SACC BIT M12-D20	1208445	1

Sensor/actuator cabling

By the meter

Cable coils for sensor cables

The standard SAC cables are also available in 100 m cable coils for connecting the M8 and M12 connectors for assembly.

Cables between 110 m and 500 m in length are supplied on cable drums. Please refer to the ordering example below.

Notes:

For information about the cable qualities, see page 318



Cable coil, 100 m, unshielded

Ordering data			
Description		Type	Order No. Pcs./Pkt.
PUR, halogen-free - black, cable type: PUR			
3 x 0.25 mm ² , conductor colors: BN/BU/BK		SAC-3P-100,0-PUR/0,25	1501689 1
3 x 0.34 mm ² , conductor colors: BN/BU/BK		SAC-3P-100,0-PUR/0,34	1501650 1
4 x 0.25 mm ² , conductor colors: BN/WH/BU/BK		SAC-4P-100,0-PUR/0,25	1501692 1
4 x 0.34 mm ² , conductor colors: BN/WH/BU/BK		SAC-4P-100,0-PUR/0,34	1501663 1
5 x 0.34 mm ² , conductor colors: BN/WH/BU/BK/GN/YE		SAC-5P-100,0-PUR/0,34	1501676 1
6 x 0.25 mm ² , conductor colors: BN/WH/BU/BK/GY/PK		SAC-6P-100,0-PUR/0,25	1550614 1
8 x 0.25 mm ² , conductor colors: WH/BN/GN/YE/GY/PK/BU/RD		SAC-8P-100,0-PUR/0,25	1550630 1
PVC - black, cable type: PVC			
3 x 0.25 mm ² , conductor colors: BN/BU/BK		SAC-3P-100,0-PVC/0,25	1501854 1
3 x 0.34 mm ² , conductor colors: BN/BU/BK		SAC-3P-100,0-PVC/0,34	1501825 1
4 x 0.25 mm ² , conductor colors: BN/WH/BU/BK		SAC-4P-100,0-PVC/0,25	1501867 1
4 x 0.34 mm ² , conductor colors: BN/WH/BU/BK		SAC-4P-100,0-PVC/0,34	1501838 1
5 x 0.34 mm ² , conductor colors: BN/WH/BU/BK/GN/YE		SAC-5P-100,0-PVC/0,34	1501841 1
8 x 0.25 mm ² , conductor colors: WH/BN/GN/YE/GY/PK/BU/RD		SAC-8P-100,0-PVC/0,25	1550698 1
12 x 0.14 mm ² , conductor colors: BN/BU/WH/GN/PK/YE/BK/GY/RD/VT/GYPK/RDBU		SAC-12P-100,0-PVC/0,14	1441532 1
17 x 0.14 mm ² , conductor colors: BN/BU/WH/GN/PK/YE/BK/GY/RD/VT/GYPK/RDBU/WHGN/BNGN/WHYE/YEBN/WHGY		SAC-17P-100,0-PVC/0,14	1441545 1
PUR/PVC - black, twisted pair, cable type: 35T			
12 x 0.14 mm ² , conductor colors: (BN/BU)/(WH/GN)/(PK/YE)/(BK/GY)/(RD/VT)/(GYPK/RDBU)			

Ordering example for cable drums with variable cable length:

For cable type: PVC, black, 5 x 0.34 mm², shielded and 340 m in length, the ordering data is as follows:

Order No.	Length [m]
1408527	340
	Increment: 10 m
	Minimum length: 110 m
	Maximum length: 500 m



Cable drum, 110 m to 500 m,
unshielded



Cable coil, 100 m,
shielded



Cable drum, 110 m to 500 m,
shielded

Ordering data			Ordering data			Ordering data		
Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
SAC-3P-PUR-0,25/...	1408505	1	SAC-3P-100,0-PUR/SH-0,25	1526525	1	SAC-3P-PUR-0,25-SH/...	1408511	1
SAC-3P-PUR-0,34/...	1408506	1	SAC-3P-100,0-PUR/SH-0,34	1501702	1	SAC-3P-PUR-0,34-SH/...	1408512	1
SAC-4P-PUR-0,25/...	1408507	1	SAC-4P-100,0-PUR/SH-0,25	1535794	1	SAC-4P-PUR-0,25-SH/...	1408513	1
SAC-4P-PUR-0,34/...	1408508	1	SAC-4P-100,0-PUR/SH-0,34	1501715	1	SAC-4P-PUR-0,34-SH/...	1408514	1
SAC-5P-PUR-0,34/...	1408509	1	SAC-5P-100,0-PUR/SH-0,34	1501728	1	SAC-5P-PUR-0,34-SH/...	1408515	1
SAC-8P-PUR-0,25/...	1408510	1	SAC-6P-100,0-PUR/SH-0,14	1550627	1	SAC-8P-PUR-0,25-SH/...	1408516	1
SAC-8P-PUR-0,25/...	1408510	1	SAC-8P-100,0-PUR/SH-0,25	1550643	1			
SAC-3P-PVC-0,25/...	1408518	1				SAC-3P-PVC-0,34-SH/...	1408525	1
SAC-3P-PVC-0,34/...	1408519	1	SAC-3P-100,0-PVC/SH-0,34	1550656	1	SAC-4P-PVC-0,34-SH/...	1408526	1
SAC-4P-PVC-0,25/...	1408521	1	SAC-4P-100,0-PVC/SH-0,34	1550669	1	SAC-5P-PVC-0,34-SH/...	1408527	1
SAC-4P-PVC-0,34/...	1408522	1	SAC-5P-100,0-PVC/SH-0,34	1550672	1	SAC-8P-PVC-0,25-SH/...	1408528	1
SAC-5P-PVC-0,34/...	1408523	1	SAC-8P-100,0-PVC/SH-0,25	1550708	1			
SAC-8P-PVC-0,25/...	1408524	1						
			SAC-12P-100,0-35T/SH-0,14	1405789	1			

Sensor/actuator cabling

By the meter

Cable coils for valve connector cables

The special SAC cables are also available in 100 m cable coils for connecting the valve connectors for assembly.

Cables between 110 m and 500 m in length are supplied on cable drums. Please refer to the ordering example below.

Notes:

For information about the cable qualities, see page 318



Cable coil, 100 m,
unshielded



Cable drum, 110 m to 500 m,
unshielded

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs./Pkt.	Type	Order No.	Pcs./Pkt.
PUR, halogen-free - black, cable type: PUR						
3 x 0.5 mm ² , conductor colors: BK 1/BK 2/GN YE	SAC-3P-100,0-PUR/0,5	1457393	1	SAC-3P-PUR-0,5/...	1408529	1
5 x 0.5 mm ² , conductor colors: BK 1/BK 2/BK 3/BK 4/ GN YE	SAC-5P-100,0-PUR/0,5	1457403	1	SAC-5P-PUR-0,5/...	1408530	1
PVC - black, cable type: 534						
3 x 0.75 mm ² , conductor colors: BK 1/BK 2/GN YE	SAC-3P-100,0-534/0,75	1457432	1			
5 x 0.75 mm ² , conductor colors: BK 1/BK 2/BK 3/BK 4/ GN YE	SAC-5P-100,0-534/0,75	1457445	1			

Ordering example for cable drums with variable cable length:

For cable type: PUR, halogen-free, black,
5 x 0.5 mm², unshielded and 340 m in length,
the ordering data is as follows:

Order No.	Length [m]
1408530	340
	Increment: 10 m Minimum length: 110 m Maximum length: 500 m

Master cable coils for sensor/actuator boxes

Master cable coils are available for distributor boxes with spring connection or plug-in screw connection. Similarly, master cables can also be connected to hoods and M23 sockets for assembly.

Notes:

For information about the cable qualities, see page 330



Ordering data			
Description	Type	Order No.	Pcs./Pkt.
Master cable coil with PE conductor, PUR/PVC, unshielded, length: 50 m			
4 x 0.34 mm ² / 3 x 0.75 mm ²	SACB- 4X0,34/ 3X0,75-50,0 PUR	1503328	1
6 x 0.34 mm ² / 3 x 0.75 mm ²	SACB- 6X0,34/ 3X0,75-50,0 PUR	1503331	1
8 x 0.34 mm ² / 3 x 0.75 mm ²	SACB- 8X0,34/ 3X0,75-50,0 PUR	1503344	1
8 x 0.5 mm ² / 3 x 1.0 mm ²	SACB- 8X0,5/ 3X1,0-50,0 PUR	1503357	1
12 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-12X0,5/ 3X1,0-50,0 PUR	1503360	1
16 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-16X0,5/ 3X1,0-50,0 PUR	1503373	1
Master cable coil with PE conductor, PUR/PVC, unshielded, length: 200 m			
16 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-16X0,5/ 3X1,0-200,0 PUR	1559893	1
Master cable coil with PE conductor, PUR/PVC, shielded, length: 50 m			
8 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-8X0,5/3X1,0-50 PUR SH	1401240	1
16 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-16X0,5/3X1,0-50 PUR SH	1539156	1
Master cable coil with PE conductor, PUR/PP halogen-free, unshielded, length: 50 m			
8 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-8X0,5/3X1,0-50,0 HPUR	1401690	1
16 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-16X0,5/ 3X1,0-50,0 VPUR	1430938	1
Master cable coil with PE conductor, PUR/PP, halogen-free, highly flexible, unshielded, length: 50 m			
16 x 0.5 mm ² / 3 x 1.0 mm ²	SACB-16X0,5/ 3X1,0-50,0 80MC	1402304	1
Master cable coil without PE conductor, PUR/PVC, unshielded, length: 50 m			
4 x 0.34 mm ² / 2 x 0.75 mm ²	SACB- 4X0,34/2X0,75-50 PUR	1517576	1
6 x 0.34 mm ² / 2 x 0.75 mm ²	SACB- 6X0,34/2X0,75-50 PUR	1517589	1
8 x 0.34 mm ² / 2 x 0.75 mm ²	SACB- 8X0,34/2X0,75-50 PUR	1517592	1
10 x 0.34 mm ² / 2 x 0.75 mm ²	SACB-10X0,34/2X0,75-50 PUR	1517602	1
16 x 0.34 mm ² / 2 x 0.75 mm ²	SACB-16X0,34/2X0,75-50 PUR	1539350	1

Assembly tools
for sensor/actuator cables

The screwdriver with preset torque is the ideal tool for screwing in all M12 and M8 circular connectors with lengthwise knurl. The advantage of this tool becomes particularly evident when connecting distributor boxes. The tight arrangement and the large number of slots rarely makes it possible to install them correctly by hand. Thanks to the open design of the top unit, tracking is especially easy when screwing in.



Ordering data			
Description	Type	Order No.	Pcs./Pkt.
Torque screwdriver with preset torque of 0.2 Nm and 4 mm hexagonal drive ①	TSD 02 SAC	1208487	1
Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive ②	SAC BIT M8-D10	1208461	1
Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 12 mm, for 4 mm hexagonal drive ③	SACC BIT M8-D12	1208474	1
Torque screwdriver With preset torque of 0.4 Nm and 4 mm hexagonal drive ④	TSD 04 SAC	1208429	1
Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive ⑤	SAC BIT M12-D15	1208432	1
for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 16 mm, for 4 mm hexagonal drive	SAC BIT M12-D16	1200305	1
Nut for assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive ⑥	SACC BIT M12-D20	1208445	1

Assembly tools for sensor/actuator cables

To achieve tight plug-in connections, we recommend using assembly tools. M12 and 7/8" circular 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 high-grade steel knurl is also made from high-grade steel. This prevents the connector knurls from being contaminated by corrosive materials.

For greater flexibility, screwdrivers with adjustable torque are available. When used in conjunction with the adapter insert, the available nuts can also be accommodated.



Description	
Torque screwdriver with a preset torque of 0.8 Nm and a 4 mm hexagonal drive	①
Nut for assembling 7/8" connectors, with a knurl diameter of 25 mm, with 4 mm hexagonal drive	②
Torque screwdriver with preset torque of 0.4 Nm and 4 mm hexagonal drive	③
Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a hexagonal knurl wrench size of 14 mm, with 4 mm hexagonal drive	④
Torque screwdriver , accuracy in accordance with standard EN ISO 6789 adjustable from 0.3 ... 1.2 Nm adjustable from 1.2 ... 3 Nm adjustable from 3 ... 6 Nm	⑤
Adapter insert for torque screwdrivers with adjustable torque, for accommodating plug attachments with 4 mm hexagonal drive	⑥

Ordering data			
Type	Order No.	Pcs./Pkt.	
TSD 08 SAC	1212597	1	
SAC BIT MIN-D25	1212512	1	
TSD 04 SAC	1208429	1	
SAC BIT M12-W14	1212513	1	
TSD-M 1,2NM	1212224	1	
TSD-M 3NM	1212225	1	
TSD-M 6NM	1212226	1	
TSD-M SAC-BIT ADAPTER	1212600	1	

Sealing elements

During transport or when in the field, unused plug-in connections must be protected or sealed. Plastic or metal screw plugs, sealing caps, and sealing plugs can be used for this. IP65/IP67 and IP69K protection is achieved.



Description	Ordering data		
	Type	Order No.	Pcs./Pkt.
M5 screw plug ① for unused M5 sockets of sensor/actuator cables, boxes, and device connectors	PROT-M5	1533288	10
M8 screw plug ② for unused M8 sockets of sensor/actuator cables, boxes, and device connectors	PROT-M8	1682540	5
M12 screw plug ③ for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	PROT-M12	1680539	5
M12 screw plug fast locking system ④ for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	PROT-MS SCO	1553129	5
M12 sealing cap ⑤ for unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	PROT-M12 FS	1560251	5
M12 screw plug, metal ⑥ for unused M12 sockets of shielded sensor/actuator cables, boxes, and device connectors	PROT-M12 SH	1503302	5
Metal M12 sealing cap ⑦ for unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	PROT-M12 FS-M	1430488	10
Stainless steel M12 screw plug ⑧ for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	PROT-M12 FB	1555538	5
Closing cap ⑨ for Pg9/ Pg11, to close unoccupied connections	Q-PROT 9/11	1670235	10
M16 screw plug 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 the 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.
Screw plug made from plastic with retaining strap, for sealing unused sockets ①			
M8 for SAC cables	PROT-M 8 MS-PA-CHAIN	1430860	10
M8 with 3 mm fastening eye	PROT-M 8 MS-PA-CHAIN-EYE-DM3	1441105	10
M8 with 12 mm fastening eye	PROT-M 8 MS-PA-CHAIN-EYE	1441095	10
M12 for SAC cables	PROT-M12 MS-PA-CHAIN	1430899	5
M12 with 15 mm fastening eye	PROT-M12 MS-PA-CHAIN-EYE-DM14	1456200	5
7/8" for SAC cables	PROT-MINMS-PA-CHAIN	1430925	10
Plastic sealing cap with holding band, for closing unoccupied connectors ②			
M8 for SAC cables	PROT-M 8 FS-PA-CHAIN	1430857	10
M8 with 8 mm fastening eye	PROT-M 8 FS-PA-CHAIN-EYE	1441082	10
M12 for SAC cables	PROT-M12 FS-PA-CHAIN	1430873	5
M12 with 12 mm fastening eye	PROT-M12 FS-PA-CHAIN-EYE-DM12	1456187	5
M12 with 15 mm fastening eye	PROT-M12 FS-PA-CHAIN-EYE-DM14	1456190	5
7/8" for SAC cables	PROT-MINFS-PA-CHAIN	1430912	10
Sealing cap made of metal with fixing chain and 16 mm fastening eye, for sealing: ③			
unused M12 connectors	PROT-M12 FS-M-CHAIN	1430491	10

Accessories for M8 distributor boxes with plug-in master cable connection

The torque screwdriver with an M8 nut is the ideal tool for screwing in all M8 connectors with lengthwise knurl.

A replacement connector hood is available for distributors with 4 to 10 slots. The corresponding screwdriver, torque screwdriver, and W24 nut for defined tightening of the pressure nut can be found in the ordering data.

The PROT M8 screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.



Notes:
Additional marking material and tools can be found in Catalog 3.

Description	
Sensor/actuator connector hood, with marking label, for sensor/actuator box with:	①
4 single-occupancy M8 slots	
6 single-occupancy M8 slots	
8 single-occupancy M8 slots	
Ten single-occupancy M8 slots	
M8 screw plug	②
for unused M8 sockets of sensor/actuator cables, boxes, and device connectors	
Labeling material, 10-section	③
- Unprinted	
- Configurable	
Torque screwdriver	④
with preset torque of 0.2 Nm and 4 mm hexagonal drive	
Nut	⑤
for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive	
Nut	⑥
for assembling M8 connectors with longitudinal knurl and a knurl diameter of 12 mm, for 4 mm hexagonal drive	
Screwdriver	⑦
Size: PZ2 x 100 mm, length: 205 mm	
Torque screwdriver	⑧
with a preset torque of 2.5 Nm and 4 mm hexagonal drive	
Nut	⑨
for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm	

Ordering data		
Type	Order No.	Pcs./Pkt.
SACB-C-H180- 4/3-M8	1521229	1
SACB-C-H180- 6/3-M8	1521216	1
SACB-C-H180- 8/3-M8	1516425	1
SACB-C-H180-10/3-M8	1516412	1
PROT-M8	1682540	5
ZBF10:UNBEDRUCKT	0809997	10
ZBF10 CUS	0825031	1
TSD 02 SAC	1208487	1
SAC BIT M8-D10	1208461	1
SACC BIT M8-D12	1208474	1
SZK PZ2 VDE	1206463	10
TSD 25 SAC	1212315	1
SAC BIT HOOD-W 24	1212486	1

Accessories for M8 distributor boxes with M12 and M16 plug-in connection

Corresponding sockets in angled format for distributors with 4 to 10 slots are available in the ordering data. In order to use a master cable in accordance with the specific requirements, sockets for free assembly are available in straight and angled format.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

The torque screwdriver with matching nuts is the ideal tool for screwing together all M8 connectors with lengthwise knurl.

The PROT M8 screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.



Notes:

Additional marking material and tools can be found in Catalog 3.

Description	
M16 socket , angled, with master cable, for sensor/actuator box with:	①
4 slots, cable length: 5 m	
4 slots, cable length: 10 m	
6 slots, cable length: 5 m	
6 slots, cable length: 10 m	
8 slots, cable length: 5 m	
8 slots, cable length: 10 m	
10 slots, cable length: 5 m	
10 slots, cable length: 10 m	
M12 socket , angled, with connected master cable, for sensor/actuator box with:	②
4 slots, cable length: 5 m	
4 slots, cable length: 10 m	
4 slots, cable length: variable	
6 slots, cable length: 5 m	
6 slots, cable length: 10 m	
6 slots, cable length: variable	
M16 socket , 14-pos., straight, freely configurable, with solder connection, for external cable diameter of 6.0 mm ... 8.0 mm	③
M16 socket , 14-pos., angled, freely configurable, with solder connection, for external cable diameter of 6.0 mm ... 8.0 mm	④
M8 screw plug for unused M8 sockets of sensor/actuator cables, boxes, and device connectors	⑤
Labeling material , 10-section - Unprinted - Configurable	⑥
Torque screwdriver with preset torque of 0.2 Nm and 4 mm hexagonal drive	⑦
Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive	⑧
Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 12 mm, for 4 mm hexagonal drive	⑨

Ordering data

Type	Order No.	Pcs./Pkt.
SAC-8P- 5,0-PUR/M16FR	1693681	1
SAC-8P-10,0-PUR/M16FR	1693694	1
SAC-10P- 5,0-PUR/M16FR	1693704	1
SAC-10P-10,0-PUR/M16FR	1693717	1
SAC-12P- 5,0-PUR/M16FR	1693720	1
SAC-12P-10,0-PUR/M16FR	1693733	1
SAC-14P- 5,0-PUR/M16FR	1693746	1
SAC-14P-10,0-PUR/M16FR	1693759	1
SAC-6P- 5,0-PURMC/M12FR	1407820	1
SAC-6P-10,0-PURMC/M12FR	1407821	1
SAC-6P-M12FR-PURMC/	1520987	1
SAC-8P- 5,0-PURMC/M12FR	1407822	1
SAC-8P-10,0-PURMC/M12FR	1407823	1
SAC-8P-M12FR-PURMC/	1520990	1
SACC-M16FS-14CON-M	1500554	1
SACC-M16FR-14CON-M	1500253	1
PROT-M8	1682540	5
ZBF10:UNBEDRUCKT	0809997	10
ZBF10 CUS	0825031	1
TSD 02 SAC	1208487	1
SAC BIT M8-D10	1208461	1
SACC BIT M8-D12	1208474	1

Ordering example for a socket with variable master cable:

For an M12 socket for 4 slots and a master cable length of 15 m, the ordering data is as follows:

Order No.	Length [m] 40 m, maximum
1520987	15.0
	Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Accessories for M12 distributor boxes with plastic thread and connector hood

The torque screwdriver with M12 nut is the ideal tool for screwing all M12 connectors with longitudinal knurl.

A replacement connector hood is available for the distributors. The corresponding screwdriver, torque screwdriver, and W24 nut for defined tightening of the pressure nut can be found in the ordering data.

The PROT-MS SCO screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.



Notes:		Ordering data		
Additional marking material and tools can be found in Catalog 3.		Type	Order No.	Pcs./Pkt.
Connector hood with integrated connector, for M12 sensor/actuator boxes with plastic thread and plug-in screw connection, for 4, 6 or 8 slots				
M12 screw plug fast locking system for unused M12 sockets of sensor/actuator cables, boxes, and device connectors		SACB-C-H180-8/16 SCO P	1453229	1
Labeling material, 5-section - Unprinted, white - Unprinted, yellow - Configurable, white - Configurable, yellow		PROT-MS SCO	1553129	5
Torque screwdriver with preset torque of 0.4 Nm and 4 mm hexagonal drive		UC-EM (17,5X9) UC-EM (17,5X9) YE UC-EM (17,5X9) CUS UC-EM (17,5X9) YE CUS	0827490 0827494 0828238 0828239	10 10 1 1
Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive		TSD 04 SAC	1208429	1
Nut for assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive		SAC BIT M12-D15	1208432	1
Screwdriver Size: PZ2 x 100 mm, length: 205 mm		SACC BIT M12-D20	1208445	1
Torque screwdriver with a preset torque of 2.5 Nm and 4 mm hexagonal drive		SZK PZ2 VDE	1206463	10
Nut for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm		TSD 25 SAC	1212315	1
Screwdriver, suitable for all screw terminal blocks up to 1.5 mm ² connection cross section, without VDE approval		SAC BIT HOOD-W 24	1212486	1
Blade: 0,4 x 2,0 x 60 mm, length: 157 mm Ferrules, without plastic sleeves, CSA-certified				
0.5 mm ²		SZS 0,4X2,0	1205202	10
0.75 mm ²		A 0,5 - 6	3200218	1000
1.0 mm ²		A 0,75-10	3200234	1000
1.5 mm ²		A 1 -10	3200250	1000
		A 1,5 -10	3200276	1000

Accessories for M12 distributor boxes with metal thread and pluggable screw connection

The torque screwdriver with M12 nut is the ideal tool for screwing all M12 connectors with longitudinal knurl.

A replacement connector hood is available for the distributors. The corresponding screwdriver, torque screwdriver, and W24 nut for defined tightening of the pressure nut can be found in the ordering data.

The PROT-MS SCO screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.



Notes:

Additional marking material and tools can be found in Catalog 3.

Ordering data			
Description		Type	Order No. Pcs./Pkt.
Connector hood with integrated connector, for M12 sensor/actuator boxes with metal thread and plug-in screw connection, for 4, 6 or 8 slots ①		SACB-C-H180 8/16 SCO	1516713 10
M12 screw plug fast locking system ②		PROT-MS SCO	1553129 5
Labeling material , 5-section ③		UC-EM (17,5X9)	0827490 10
- Unprinted, white		UC-EM (17,5X9) YE	0827494 10
- Unprinted, yellow		UC-EM (17,5X9) CUS	0828238 1
- Configurable, white		UC-EM (17,5X9) YE CUS	0828239 1
- Configurable, yellow			
Torque screwdriver ④		TSD 04 SAC	1208429 1
with preset torque of 0.4 Nm and 4 mm hexagonal drive			
Nut ⑤		SAC BIT M12-D15	1208432 1
for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive			
Nut ⑥		SACC BIT M12-D20	1208445 1
for assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive			
Screwdriver ⑦		SZK PZ1 VDE	1206450 10
Size: PZ1 x 80 mm, length: 178 mm		TSD 25 SAC	1212315 1
Torque screwdriver ⑧			
with a preset torque of 2.5 Nm and 4 mm hexagonal drive		SAC BIT HOOD-W 24	1212486 1
Nut ⑨			
for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm			

For the distributors, suitable shielded female connectors are available in angled design with a pre-assembled master cable. Further accessories include straight and angled M23 sockets for free assembly.

The PROT M12 SH screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

The torque screwdriver with matching nuts is the ideal tool for screwing together all M12 connectors with lengthwise knurl.



Additional marking material and tools can be found in Catalog 3.

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Courtesy of Steven Engineering, Inc - (800) 258-9200 - sales@steveneng.com - www.stevenengineering.com

Accessories for QUICKON distributor boxes with a connection cross section of 0.14 mm² ... 0.34 mm²

The Q-PROT 9/11 sealing plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

A torque screwdriver with W13 nut is available for the fast connection pressure nut. The handling of the tools is self-explanatory.

A replacement connector hood is available for the distributors. The corresponding screwdriver, torque screwdriver, and W24 nut for defined tightening of the pressure nut can be found in the ordering data.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

The QUICKON replacement set, consisting of splice ring, pressure nut, and cable seal.



Notes:

Additional marking material and tools can be found in Catalog 3.

Description	
Connector hood with an integrated connector, for sensor/actuator boxes with QUICKON fast connection technology and plug-in screw connection, for 4, 6 or 8 slots	①
Closing cap for Pg9/ Pg11, to close unoccupied connections	②
Labeling material , 5-section - Unprinted, white - Unprinted, yellow - Configurable, white - Configurable, yellow	③
QUICKON set for replacement purposes, consisting of splice ring, pressure nut and conductor seal	④
Screwdriver Size: PZ1 x 80 mm, length: 178 mm	⑤
Torque screwdriver with a preset torque of 2.0 Nm and 4 mm hexagonal drive	⑥
Nut for secure tightening of the pressure nuts with 13 mm wrench size, for TSD 20 SAC, for 0.8 Nm, and 2.0 Nm	⑦
Torque screwdriver with a preset torque of 2.5 Nm and 4 mm hexagonal drive	⑧
Nut for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm	⑨

Ordering data

Type	Order No.	Pcs./Pkt.
SACB-C-H180 8/4 QO-0,34	1560235	1
Q-PROT 9/11	1670235	10
UC-EM (17,5X9)	0827490	10
UC-EM (17,5X9) YE	0827494	10
UC-EM (17,5X9) CUS	0828238	1
UC-EM (17,5X9) YE CUS	0828239	1
QO-SET	1548626	20
SZK PZ1 VDE	1206450	10
TSD 20 SAC	1212020	1
SAC BIT QUICKON-W13	1212033	1
TSD 25 SAC	1212315	1
SAC BIT HOOD-W 24	1212486	1

Accessories for QUICKON distributor boxes with a connection cross section of 0.34 mm² ... 0.75 mm²

The distributors are supplied as standard with a black rubber seal for an external cable diameter of 6.5 mm to 9.5 mm. Further rubber seals for master cables from 4.0 mm to 6.5 mm (yellow seal) or 9.0 mm to 13.0 mm (red seal) are available in the ordering data. The torque screwdriver with W24 nut is suitable for the defined tightening of the pressure nut.

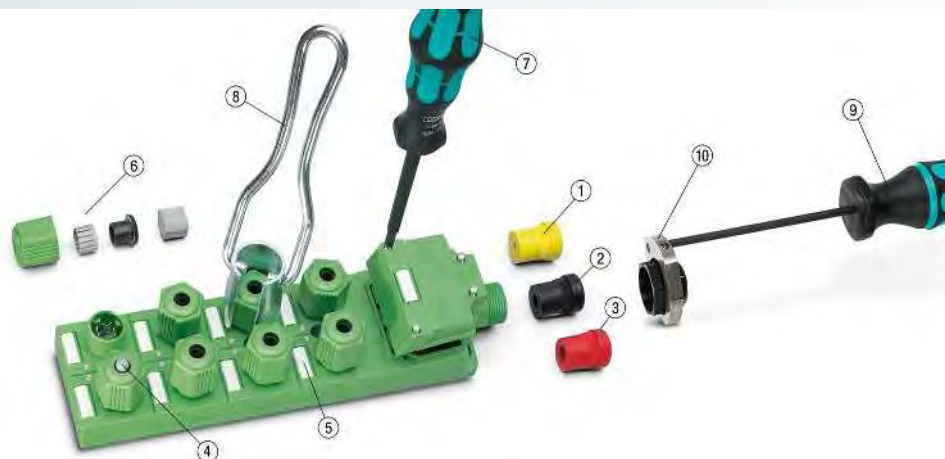
The QUICKON replacement set consists of pressure nut, cap, cable seal, and splice ring.

The socket wrench is used to conveniently loosen and fasten the QUICKON pressure nut.

The Q-PROT 9/11 sealing plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

Notes:
Additional marking material and tools can be found in Catalog 3.



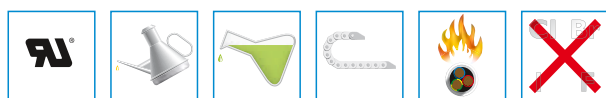
Description	
Rubber seal for Pg13.5 screw connection	①
for cable Ø: 4.0 mm ... 6.5 mm	
Rubber seal for Pg13.5 screw connection	②
for cable Ø: 6.5 mm ... 9.5 mm	
Rubber seal for Pg13.5 screw connection	③
for cable Ø: 9.0 mm ... 13.0 mm	
Closing cap for Pg9/ Pg11, to close unoccupied connections	④
Labeling material	⑤
- Unprinted, white	
- Unprinted, yellow	
- Configurable, white	
- Configurable, yellow	
QUICKON set for replacement purposes, consisting of pressure nut, cap, conductor seal and splice ring	⑥
Screwdriver	⑦
Size: PZ1 x 80 mm, length: 178 mm	
Slotted socket wrench for QUICKON nuts and panel feed-throughs	⑧
1.5 mm², 5-pos. / 2.5 mm², 4-pos. / wrench size 22 mm	
Torque screwdriver with a preset torque of 2.5 Nm and 4 mm hexagonal drive	⑨
Nut	⑩
for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm	

Ordering data		
Type	Order No.	Pcs./Pkt.
SACB-D PG 13,5 (4,0-6,5) YE	1680377	10
SACB-D PG 13,5 (6,5-9,5) BK	1680380	10
SACB-D PG 13,5 (9,0-13,0) RD	1680393	10
Q-PROT 9/11	1670235	10
ZBN 18:UNBEDRUCKT	2809128	10
UC-TMF 16 YE	0819259	10
ZBN 18 CUS	0825059	1
ZBN 18 YE CUS	0825058	1
Q SET-11/4 COD1 SACB-Q	1670743	25
SZK PZ1 VDE	1206450	10
QSS 22	1670206	1
TSD 25 SAC	1212315	1
SAC BIT HOOD-W 24	1212486	1

Symbol key

	With UL style		Suitable for drag chain applications		Resistant to welding sparks
	UV-resistant		Flame-retardant		High temperature resistance
	Good oil resistance		Good resistance to chemicals		Suitable for torsional stress
	Halogen-free		Suitable for the food industry		Suitable for railway applications

PUR, halogen-free – PHOENIX CONTACT standard



Permanently flexible control cables designed for use in drag chains, revolving/swivel tables, and as machine control cables for extreme operating conditions. The control cables are suitable for bending cycle loads with long-term durability. The special PUR outer sheath offers excellent resistance to oils in accordance with DIN EN 60811-2-1, lubricants, cooling agents, and other aggressive substances.

Additional features of the control cables: halogen- and PVC-free, free of silicone and substances that would hinder coating with paint or varnish, resistant to hydrolysis, and flame-retardant in accordance with UL-FT2.

Outer sheath material	PUR
Minimum bending cycles	4 million
Minimum bending radius	10 x D
Traverse path	10 m
Acceleration	10 m/s²
Speed	3 m/s
Tested at	+20°C ... +25°C

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	3-pos.	M8	3 x 0.25 mm ² (32 x 0.1 mm)		Brown, blue, black	PP	Moving: -25°C ... +80°C Fixed: -40°C ... +80°C	186 248 250 302
		M8 Shielded	3 x 0.25 mm ² (32 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PP	Moving: -25°C ... +80°C Fixed: -40°C ... +80°C	193 302
		M12	3 x 0.34 mm ² (42 x 0.1 mm)		Brown, blue, black	PP	Moving: -25°C ... +80°C Fixed: -40°C ... +80°C	186 250 302
		M12 Shielded	3 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PP	Moving: -25°C ... +80°C Fixed: -40°C ... +80°C	193
		Valve connectors	3 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, green-yellow	PP	Moving: -15°C ... +80°C Fixed: -40°C ... +80°C	230 to 238 304

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	4-pos.	M8	4 x 0.25 mm ² (32 x 0.1 mm)		Brown, white, blue, black	PP	Moving: -25°C ... +80°C Fixed: -40°C ... +80°C	186 194 302
		M8 Shielded	4 x 0.25 mm ² (32 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PP	Moving: -25°C ... +80°C Fixed: -40°C ... +80°C	199 302
		M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	PP	Moving: -25°C ... +80°C Fixed: -40°C ... +80°C	194 249 302
		M12 Shielded	4 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PP	Moving: -25°C ... +80°C Fixed: -40°C ... +80°C	199 302
		M12 POWER	4 x 1.5 mm ² (84 x 0.15 mm)		Brown, white, blue, black	PP	Moving: -30°C ... +90°C Fixed: -40°C ... +90°C	290
		M12 POWER	4 x 1.5 mm ² (84 x 0.15 mm)		Black 1, black 2, black 3, green-yellow	PP	Moving: -30°C ... +90°C Fixed: -40°C ... +90°C	289
		M12 POWER Shielded	4 x 1.5 mm ² (78 x 0.15 mm) Shielding: copper braid		Brown, white, blue, black	PP	Moving: -30°C ... +90°C Fixed: -40°C ... +90°C	290
		M12 POWER	4 x 2.5 mm ² (141 x 0.15 mm)		Brown, white, blue, black	PP	Moving: -30°C ... +80°C Fixed: -50°C ... +80°C	296
		Valve connectors	4 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, black 3, green-yellow	PP	Moving: -20°C ... +80°C Fixed: -40°C ... +80°C	230 to 238
	5-pos.	M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, green-yellow	PP	Moving: -25°C ... +80°C Fixed: -40°C ... +80°C	201 302
		M12 Shielded	5 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, gray	PP	Moving: -25°C ... +80°C Fixed: -40°C ... +80°C	204 302
		Valve connectors	5 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Moving: -15°C ... +80°C Fixed: -40°C ... +80°C	242 304

Sensor/actuator cabling

Sensor/actuator cabling – cable range

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	5-pos.	M12 Power	5 x 2.5 mm ² (141 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	292
		M12 Power Shielded	5 x 2.5 mm ² (141 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	292
	6-pos.	M8	6 x 0.25 mm ² (32 x 0.1 mm)		Brown, white, blue, black, gray, pink	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	205 302
		M8 Shielded	6 x 0.14 mm ² (18 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, gray, pink	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	206 302
		M12 Power	6 x 1.5 mm ² (78 x 0.15 mm)		Black 1, black 2, black 3, black 4, black 5, green-yellow	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	See: phoenix contact.net/ products
		M12 Power Shielded	6 x 1.5 mm ² (78 x 0.15 mm)		Black 1, black 2, black 3, black 4, black 5, green-yellow	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	See: phoenix contact.net/ products
	8-pos.	M8	8 x 0.14 mm ² (18 x 0.1 mm)		In accordance with DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	207
		M8 Shielded	8 x 0.14 mm ² (18 x 0.1 mm) Shielding: copper braid		In accordance with DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	210
		M12	8 x 0.25 mm ² (32 x 0.1 mm)		In accordance with DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	208 302
		M12 Shielded	8 x 0.25 mm ² (32 x 0.1 mm) Shielding: copper braid		In accordance with DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	211 302
	12-pos.	M12	12 x 0.14 mm ² (18 x 0.1 mm)		In accordance with DIN 47100	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	212
	17-pos.	M12	17 x 0.14 mm ² (18 x 0.1 mm)		In accordance with DIN 47100	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	212

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Orange	4-pos.	M12 Power Shielded	4 x 1.5 mm ² (78 x 0.15 mm) Shielding: copper braid		Black 1, black 2, black 3, green-yellow	PP	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C	289
115 Black	5-pos.	M8	5 x 0.25 mm ² (32 x 0.1 mm)		Brown, white, blue, black, gray	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	200
		M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, gray	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	201
121 Black	3-pos.	Valve connectors	3 x 1.0 mm ² (32 x 0.20 mm)		Black 1, black 2, green-yellow	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	230 232
240 Yellow	3-pos.	Valve connectors	3 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	230 to 238
	4-pos.	M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	194
	5-pos.	Valve connectors	5 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	230 to 238
280 Gray	3-pos.	M8	3 x 0.25 mm ² (32 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	186 188 250
		M12	3 x 0.34 mm ² (42 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	188 250
		Valve connectors	3 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	230 to 238
	4-pos.	M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	194

Sensor/actuator cabling

Sensor/actuator cabling – cable range

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
280 Gray	5-pos.	Valve connectors	5 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Moving: -15°C ... +80°C Fixed: -40°C ... +80°C	242
		M12 POWER	5 x 2.5 mm ² (141 x 0.15 mm)		Brown, white, blue, black, gray	PP	Moving: -30°C ... +80°C Fixed: -50°C ... +80°C	294
	8-pos.	M12 Shielded	8 x 0.25 mm ² (32 x 0.1 mm) Shielding: copper braid		In accordance with DIN 47100	PP	Moving: -25°C ... +80°C Fixed: -40°C ... +80°C	211
290 Gray	5-pos.	M12 POWER	5 x 1.5 mm ² (78 x 0.15 mm)		Brown, white, blue, black, gray	PP	Moving: -30°C ... +80°C Fixed: -50°C ... +80°C	294

PUR/PVC (also applies to type PUR for M5 connectors)



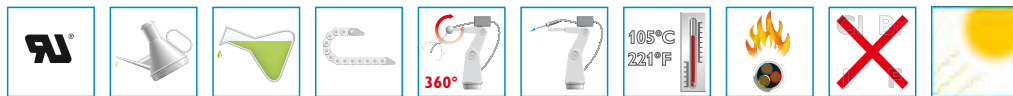
The cables are designed for robust use in machine tools, assembly/production lines, as well as production involving metal cutting. The cables are free of silicone and substances that would hinder coating with paint or varnish and have a high resistance to abrasion. The outer sheath also offers excellent resistance to chemicals and oil in accordance with DIN EN 60811-2-1 and

is flame-retardant in accordance with DIN EN 50265. The outer sheath is manufactured using the coextrusion process.

Outer sheath material	PUR
Inner sheath material	PVC
Minimum bending cycles	2 million
Minimum bending radius	10 x D
Traverse path	5 m
For type 35 T	10 m
Acceleration	5 m/s²
For type 35 T	10 m/s²
Speed	3 m/s
Tested at	+20°C ... +25°C

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
35T Black Twisted pair	12-pos.	M12 Shielded	6 x 2 x 0.14 mm ² (18 x 0.1 mm) Shielding: copper braid		In accordance with DIN 47100	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +80°C	214
	17-pos.	M12 Shielded	7 x 2 x 0.14 mm ² 1 x 3 x 0.14 mm ² (18 x 0.1 mm) Shielding: copper braid		In accordance with DIN 47100	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +80°C	215
PUR Black For M5	3-pos.	M5	3 x 0.14 mm ² (18 x 0.1 mm)		Brown, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -15°C ... +80°C	See: phoenix contact.net/ products
	4-pos.	M5	4 x 0.14 mm ² (18 x 0.1 mm)		Brown, white, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -15°C ... +80°C	See: phoenix contact.net/ products

PUR cross-linking through irradiation, resistant to welding sparks



Due to the cross-linking of the PUR outer sheath through irradiation, the properties typical of PUR, e.g., resistance to temperature, UV, and welding sparks, are greatly improved. The cables are designed for robust use in the field of robot technology. Thanks to their very high durability, the cables are particularly suitable for welding robots.

Flame-retardant in accordance with DIN VDE 0472, Part 804, test type B.

Outer sheath material PUR irradiated

Minimum bending cycles	5 million
Minimum bending radius	10 x D
Traverse path	10 m
Acceleration	10 m/s ²
Speed	3 m/s
Torsion	±360°
Tested at	+20°C ... +25°C

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
150 Orange	3-pos.	M12	3 x 0.34 mm ² (42 x 0.1 mm)		Brown, blue, black	Halogen-free polyester-based plastic	Moving: -40°C ... +105°C Fixed: -50°C ... +105°C	188 250
		Valve connectors	3 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, green-yellow	Halogen-free polyester-based plastic	Moving: -40°C ... +105°C Fixed: -50°C ... +105°C	230 to 238
	4-pos.	M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	Halogen-free polyester-based plastic	Moving: -40°C ... +105°C Fixed: -50°C ... +105°C	194
	5-pos.	M12	4 x 0.34 mm ² + 1 x 0.5 mm ² (42 x 0.1 mm, 24 x 0.15 mm)		Brown, white, blue, black, green-yellow	Halogen-free polyester-based plastic	Moving: -40°C ... +105°C Fixed: -50°C ... +105°C	201
		Valve connectors	5 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	Halogen-free polyester-based plastic	Moving: -40°C ... +105°C Fixed: -50°C ... +105°C	242
160 Yellow	4-pos.	M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	Halogen-free polyester-based plastic	Moving: -40°C ... +105°C Fixed: -50°C ... +105°C	194

TPE-U highly flexible



Permanently flexible control cables excellent for use in drag chains and industrial robots. The cables can be used wherever extreme bending and torsional stress are present at the same time, and considerably longer durability has to be achieved. The control cables are resistant to welding sparks and are thus the only type suitable for use in resistance welding processes. The use of new materials eliminates irradiation cross-linking, which makes the cables easier to recycle. The cables thus meet the requirements of DIN EN ISO 14001.

Further features of the control cables: halogen and PVC-free, flame-retardant in accordance with UL-FT1, VW1 and 1581 §1061, very good resistance to oils in accordance with VDE 0250 Part 407 and chemicals, lubricants, and coolants as well as other aggressive substances.

Due to the very robust outer sheath, the cable sheath is only removed in 5 cm increments.

Outer sheath material	TPE-U
Minimum bending cycles	10 million
Minimum bending radius	
Fixed	5 x D
Moving	7.5 x D
Traverse path	5 m
Acceleration	20 m/s²
Speed	3.33 m/s
Torsion angle	±360°
Min. torsion cycles	13 million
Tested at	+20°C ... +25°C

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
800 Gray	3-pos.	M8	3 x 0.25 mm ² (32 x 0.1 mm)		Brown, blue, black	Polyester	Moving: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3,000 h	186 188 250
		M12	3 x 0.34 mm ² (42 x 0.1 mm)		Brown, blue, black	Polyester	Moving: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3,000 h	188 250 192
	4-pos.	M8	4 x 0.25 mm ² (32 x 0.1 mm)		Brown, white, blue, black	Polyester	Moving: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3,000 h	186 194
		M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	Polyester	Moving: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3,000 h	194 198
	5-pos.	M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, gray	Polyester	Moving: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3,000 h	201
	8-pos.	M12	8 x 0.25 mm ² (32 x 0.1 mm)		In accordance with DIN 47100	Polyester	Moving: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3,000 h	208
802 Gray	5-pos.	M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, green-yellow	Polyester	Moving: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3,000 h	203

PVC – 80°C and 105°C

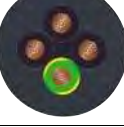


This very reasonably priced high-quality cable is suitable for use under dry conditions and average mechanical strain associated with machine tools, packaging machines, and assembly/production lines. The cable offers a certain degree of resistance to chemicals and oil and is less susceptible to wear. Flame-retardant to VW-1 in accordance with UL 758.

VW-1 is the toughest flame test for single cables.

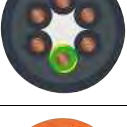
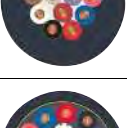
Outer sheath material PVC

Minimum bending radius 10 x D

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PVC Black	3-pos.	M8	3 x 0.25 mm ² (14 x 0.15 mm)		Brown, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	188 250 302
		M12	3 x 0.34 mm ² (19 x 0.15 mm)		Brown, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	188 250 302
		M12 Shielded	3 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	193 302
		Valve connectors	3 x 0.5 mm ² (16 x 0.2 mm)		Black 1, black 2, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +80°C	230 to 238
	4-pos.	M8	4 x 0.25 mm ² (14 x 0.15 mm)		Brown, white, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	194 302
		M12	4 x 0.34 mm ² (19 x 0.15 mm)		Brown, white, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	194 302
		M12 Shielded	4 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	199 302
		Valve connectors	4 x 0.5 mm ² (16 x 0.2 mm)		Black 1, black 2, black 3, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +80°C	242
		M12 POWER	4 x 2.5 mm ² (141 x 0.15 mm)		Brown, white, blue, black	PVC	Moving: -20°C ... +80°C Fixed: -40°C ... +80°C	297

Sensor/actuator cabling

Sensor/actuator cabling – cable range

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PVC Black	5-pos.	M12	5 x 0.34 mm ² (19 x 0.15 mm)		Brown, white, blue, black, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	201 302
		M12 Shielded	5 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	204 302
		Valve connectors	5 x 0.5 mm ² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +80°C	230 to 238
		M12 POWER	5 x 2.5 mm ² (141 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Moving: -20°C ... +80°C Fixed: -40°C ... +80°C	293
		M12 POWER Shielded	5 x 2.5 mm ² (141 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Moving: -20°C ... +80°C Fixed: -40°C ... +80°C	293
	6-pos.	M12 POWER	6 x 1.5 mm ² (78 x 0.15 mm)		Black 1, black 2, black 3, black 4, black 5, green-yellow	PVC	Moving: -20°C ... +80°C Fixed: -40°C ... +80°C	See: phoenix contact.net/ products
		M12 POWER Shielded	6 x 1.5 mm ² (78 x 0.15 mm)		Black 1, black 2, black 3, black 4, black 5, green-yellow	PVC	Moving: -20°C ... +80°C Fixed: -40°C ... +80°C	See: phoenix contact.net/ products
	8-pos.	M12	8 x 0.25 mm ² (14 x 0.15 mm)		White, brown, green, yellow, gray, pink, blue, red	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	208 302
		M12 Shielded	8 x 0.25 mm ² (32 x 0.1 mm) Shielding: copper braid and flexible filler lead		White, brown, green, yellow, gray, pink, blue, red	PVC	Moving: -5°C ... +105°C Fixed: -25°C ... +105°C	211 302
	12-pos.	M12	12 x 0.14 mm ² (18 x 0.1 mm)		In accordance with DIN 47100	PVC	Moving: -5°C ... +90°C Fixed: -40°C ... +90°C	213 302
	17-pos.	M12	17 x 0.14 mm ² (18 x 0.1 mm)		In accordance with DIN 47100	PVC	Moving: -5°C ... +90°C Fixed: -25°C ... +90°C	213 302
110 Black	4-pos.	M12 POWER	4 x 1.5 mm ² (78 x 0.15 mm)		Brown, white, blue, black	PVC	Moving: -20°C ... +80°C Fixed: -40°C ... +80°C	291 297

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
500 Gray	3-pos.	M8	3 x 0.25 mm ² (14 x 0.15 mm)		Brown, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	188 250
		M12	3 x 0.34 mm ² (19 x 0.15 mm)		Brown, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	188 250
		M12 Shielded	3 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	193
	4-pos.	M8	4 x 0.25 mm ² (14 x 0.15 mm)		Brown, white, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	194
		M12	4 x 0.34 mm ² (19 x 0.15 mm)		Brown, white, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	194
		M12 Shielded	4 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	199
	5-pos.	M12	5 x 0.34 mm ² (19 x 0.15 mm)		Brown, white, blue, black, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	201
		M12 Shielded	5 x 0.34 mm ² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, gray	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	204
		M12 POWER	5 x 2.5 mm ² (141 x 0.15 mm)		Brown, white, blue, black, gray	PVC	Moving: -20°C ... +80°C Fixed: -40°C ... +80°C	295
	8-pos.	M12	8 x 0.25 mm ² (14 x 0.15 mm)		White, brown, green, yellow, gray, pink, blue, red	PVC	Moving: -5°C ... +80°C Fixed: -25°C ... +80°C	208
510 Gray	5-pos.	M12 POWER	5 x 1.5 mm ² (78 x 0.15 mm)		Brown, white, blue, black, gray	PVC	Moving: -20°C ... +80°C Fixed: -40°C ... +80°C	295
515 Black	5-pos.	M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, gray	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +80°C	201

Sensor/actuator cabling

Sensor/actuator cabling – cable range

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
534 Black	3-pos.	Valve connectors	3 x 0.75 mm ² (24 x 0.2 mm)		Black 1, black 2, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	230 to 238 304
	4-pos.	Valve connectors	4 x 0.75 mm ² (24 x 0.2 mm)		Black 1, black 2, black 3, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	242
	5-pos.	Valve connectors	5 x 0.75 mm ² (24 x 0.2 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	242 304
540 Yellow	3-pos.	M12	3 x 0.34 mm ² (42 x 0.1 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	188 250
	4-pos.	M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	194
	5-pos.	M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	201
542 Yellow	3-pos.	M12	3 x 0.34 mm ² (42 x 0.1 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	188 250
	4-pos.	M12	4 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	194
	5-pos.	M12	5 x 0.34 mm ² (42 x 0.1 mm)		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	201

Sensor/actuator cabling

Sensor/actuator boxes – cable range

PUR/PVC (for sensor/actuator boxes)



The cables are designed for robust use in machine tools, assembly/production lines, as well as production involving metal cutting. The cables are free of silicone and substances that would hinder coating with paint or varnish and have a high resistance to abrasion. The outer sheath also offers excellent resistance to chemicals and oil in accordance with VDE 0472 Part 803, is flame-retardant in accordance with DIN EN 50265, and is resistant to hydrolysis. The outer sheath is

manufactured using the coextrusion process.

Outer sheath material	PUR
Inner sheath material	PVC
Minimum bending cycles	1.5 ... 2 million
Minimum bending radius	10 x D
Traverse path	2 m
Speed	2 m/s
Tested at	+20°C ... +25°C

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR/PVC Black	3-pos., single- occupancy	M8 and QUICKON up to 0.34 mm ² 4 slots	4 x 0.34 mm ² 2 x 0.75 mm ²		White, green, yellow, gray, brown, blue	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	260 266 305
		M8 and QUICKON up to 0.34 mm ² 6 slots	6 x 0.34 mm ² 2 x 0.75 mm ²		White, green, yellow, gray, pink, red, brown, blue	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	260 266 305
		M8 and QUICKON up to 0.34 mm ² 8 slots	8 x 0.34 mm ² 2 x 0.75 mm ²		White, green, yellow, gray, pink, red, black, violet, brown, blue	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	260 266 305
		M8 10 slots	10 x 0.34 mm ² 2 x 0.75 mm ²		White, green, yellow, gray, pink, red, black, violet, white-pink, pink-brown, brown, blue	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	260 305
	4-pos., double- occupancy	QUICKON up to 0.34 mm ² 4 slots	8 x 0.34 mm ² 2 x 0.75 mm ²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	266
		M8 and QUICKON up to 0.34 mm ² 8 slots	16 x 0.34 mm ² 2 x 0.75 mm ²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	260 266 305

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR/PVC Black	4-pos., single- occupancy	M12 and QUICKON up to 0.75 mm ² 4 slots	4 x 0.34 mm ² 3 x 0.75 mm ²		White, green, yellow, gray, brown, blue, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	262 264 267 305
		M12 and QUICKON up to 0.75 mm ² 6 slots	6 x 0.34 mm ² 3 x 0.75 mm ²		White, green, yellow, gray, pink, red, brown, blue, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	262 264 267 305
		M12 and QUICKON up to 0.75 mm ² 8 slots	8 x 0.34 mm ² 3 x 0.75 mm ²		White, green, yellow, gray, pink, red, black, violet, brown, blue, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	262 264 267 305
	5-pos., double- occupancy	M12 4 slots	8 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	262 264 305
		M12 6 slots	12 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, brown, blue, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	262 264 305
		M12 8 slots	16 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	262 264 305

Sensor/actuator cabling

Sensor/actuator boxes – cable range

PUR/PVC shielded (for sensor/actuator boxes)



The cables are designed for robust use in machine tools, assembly/production lines, as well as production involving metal cutting. Thanks to the tin-plated copper braid with 85% coverage, the cables reliably protect analog signals against electromagnetic influences. The cables are free of silicone and substances that would hinder coating with paint or varnish and have a high

resistance to abrasion. The outer sheath also offers excellent resistance to oil and resistance to chemicals in accordance with VDE 0472 Part 803, is flame-retardant in accordance with DIN EN 50265, and is resistant to hydrolysis.

Outer sheath material	PUR
Inner sheath material	PVC
Minimum bending cycles	1.5 ... 2 million
Minimum bending radius	10 x D
Traverse path	2 m
Speed	2 m/s
Tested at	+20°C ... +25°C

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR/PVC shielded Black	5-pos., double- occupancy	M12 4 slots	8 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, blue, white-green, brown-green, brown, blue, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	305
		M12 6 slots	12 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, blue, white-green, brown-green, white-yellow, yellow-brown, brown, blue, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	305
		M12 8 slots	16 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PVC	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	305

PVC – for the food industry (for sensor/actuator boxes)



Master cable resistant to cleaning agents designed for use in the splash zone. Can be used together with our stainless steel sensor/actuator box to implement signal distribution in a washdown design. The cable is flame-retardant in accordance with IEC 60332-1-2 and UL 758 FT2 and has an oil-resistant outer sheath in accordance with DIN EN 60811-404.

Outer sheath material	PVC
Minimum bending radius	
Fixed	5 x D
Moving	10 x D

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PVC Black	5-pos., double- occupancy	M12 8 slots	16 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PVC	Moving: -5°C ... +90°C Fixed: -40°C ... +90°C	See: phoenix contact.net/ products

PUR, halogen-free (for sensor/actuator boxes)

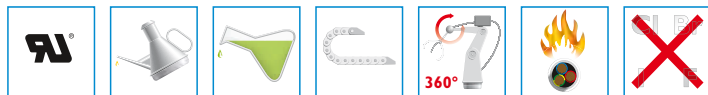
Permanently flexible control cables designed for use in drag chains and as machine control cables for extreme operating conditions. The cables are suitable for bending cycle loads with long-term durability. The special PUR outer sheath offers excellent resistance to oils in accordance with VDE 0472 Part 803, lubricants, cooling agents, and other

aggressive substances. Additional features: halogen and PVC-free, free of silicone and substances that would hinder coating with paint or varnish, resistant to hydrolysis, and flame-retardant in accordance with DIN EN 50265.

Outer sheath material PUR

Minimum bending cycles 1.5 ... 2 million
Minimum bending radius 10 x D
Traverse path 2 m
Speed 2 m/s
Tested at +20°C ... +25°C

Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	5-pos., double- occupancy	M12 4 slots	8 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue, green-yellow	PP	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	264 305
		M12 6 slots	12 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, brown, blue, green-yellow	PP	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	264 305
		M12 8 slots	16 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PP	Moving: -5°C ... +80°C Fixed: -40°C ... +90°C	264 305

80 MC – highly flexible (for sensor/actuator boxes)

Permanently flexible cables designed for use in drag chains, industrial robots or portal tables. The cables are suitable for bending cycle loads and torsional stress with long-term durability. The special PUR outer sheath offers excellent resistance to oils in accordance with DIN EN 60811-2-1, chemicals, and hydrolysis.

The cable is also flame-retardant in accordance with DIN EN 50265-2-1 and is halogen-free.

Outer sheath material PUR
Minimum bending cycles 5 million
Minimum bending radius 10 x D
Traverse path 5 m
Acceleration 5 m/s²
Speed 3 m/s
Torsion angle +/- 120°
Min. torsion cycles 3 million
Test length 1 m
Tested at +20°C ... +25°C

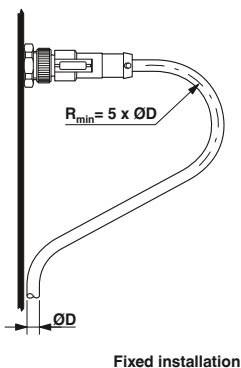
Type	Number of positions	Application	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
80MC Black	5-pos., double- occupancy	M12 8 slots	16 x 0.50 mm ² 3 x 1.00 mm ²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PP	Moving: +5°C ... +70°C Fixed: -30°C ... +70°C	305



The following pages provide an overview of the appropriate installation of SAC cables in harsh industrial environments that will guarantee a long service life and reduce costs.

Bending radius

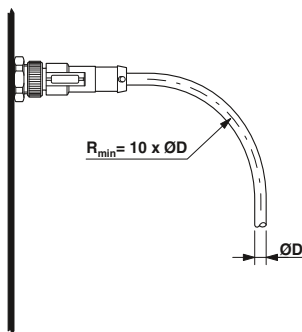
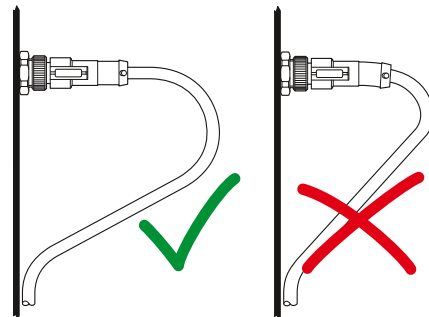
In the case of a moving installation, a generous bending radius can be advantageous. The greater the bending radius, the lower the stress that occurs as a result of movement. The result is an increased cable service life (take into account the minimum cable-specific bending radii).



Fixed installation

Load

Prevent the material from aging prematurely by creating a sufficient cable loop at the connection point. This provides sufficient play for absorbing any additional stress that may occur.



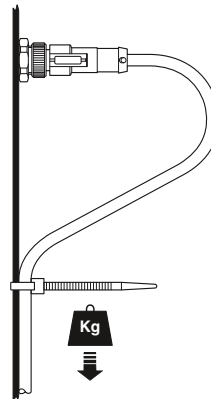
Moving installation

Strain relief for connectors

When installing connectors, make sure that they are protected against tensile loads that may occur. This applies in particular to moveable installations. Support the cables with cable ties, for example.

Moving installation

In the case of a moving installation, the cable length should be sufficient to adequately absorb the tensile loads as efficiently as possible. This can be realized, for example, via cable loops and C drag chains.



Cables in power track chains

Where possible, cables should be laid individually and loosely next to each other within power track chains. Isolating segments or bridges should be placed between the various cables. Or the cables may be arranged in separate drill holes in the neutral zone.

The laying of cables that have very different outer diameters next to or across each other is not recommended. If, however, this cannot be avoided for design reasons, isolating segments or bridges should be installed to ensure a long service life. If it is not possible to install isolating segments between each cable, we recommend that cables with an outer diameter of <10 mm are laid loose in a guide tube. When doing so, combine cables with similar cross sections.

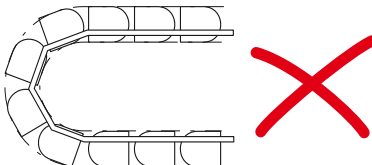
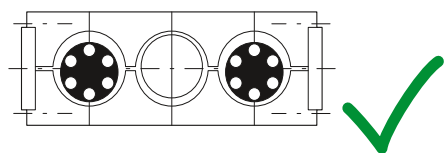
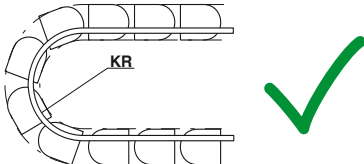
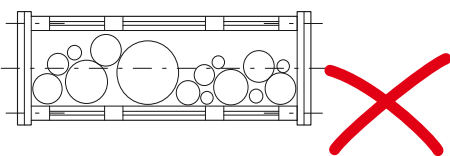
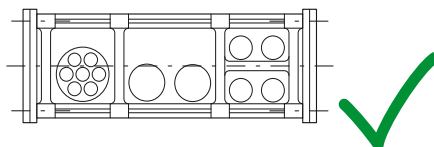
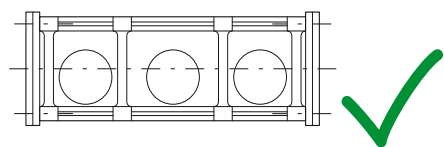
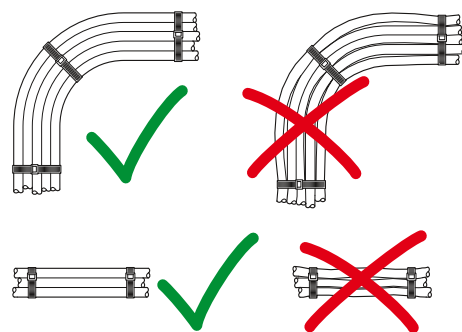
When arranging the cables, it is important to ensure that heavy cables are routed on the outside and light cables, such as the SAC cables, are routed on the inside. Ensure that there is strain relief on both sides, or at least on the movable end of the drag chain. As a guide value, the distance between the bending motion end and the attachment should be 20 to 30 times the outer diameter.

The cables must be able to move completely freely within the radius of curvature in order to prevent forced guidance of the drag chain. Guide value: 10% of the outer diameter should be allocated as free space.

Note: When laying the cables, observe the information provided by the drag chain manufacturer.

Cable bundling

When bundling several individual cables, it is important to ensure that the cables can move freely within the bundle. The cables must not become deformed. Round cables with greatly varying outer diameters should only be laid next to each other when bridges are used.



KR = radius of curvature