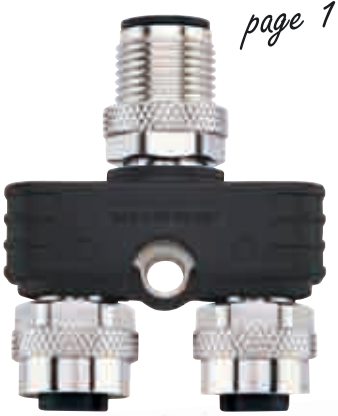
ESCHA
2014

Food & Beverage hygienic:
M12x1, M8x1: hygienic design
referring to EHEDG,
FDA-compliant materials
page 74-75 and 142-143

Automation Line robotic:
new cable quality, PUR,
drag-chain adapted, torsion-
resistant, weld-field immune
and ORANGE page 28

Shielded flanges
with overmoulded
grip + colored
contact-carriers

New: shielded T-/Y-splitters
page 174/180



ESCHA Bauelemente GmbH
Elberfelder Str. 32 | 58553 Halver
Phone +49 2353 708-800
Fax +49 2353 708-8410
Germany

www.escha.net



ESCHA: the company

ESCHA has stood for competence and quality in connectivity- and housing technology for more than 30 years. We develop and manufacture connectivity that stands up to the industrial requirements of automation as well as numerous other application areas.

Through our innovative strength and a highly in-depth production, we realize industry-related special solutions and custom-made products on a daily basis.

Our claim is, let our customer experience the extraordinary. Getting pleasure from service, innovation and technology are our roadmap to economic success; social responsibility and sustainable budgeting are our benchmark.

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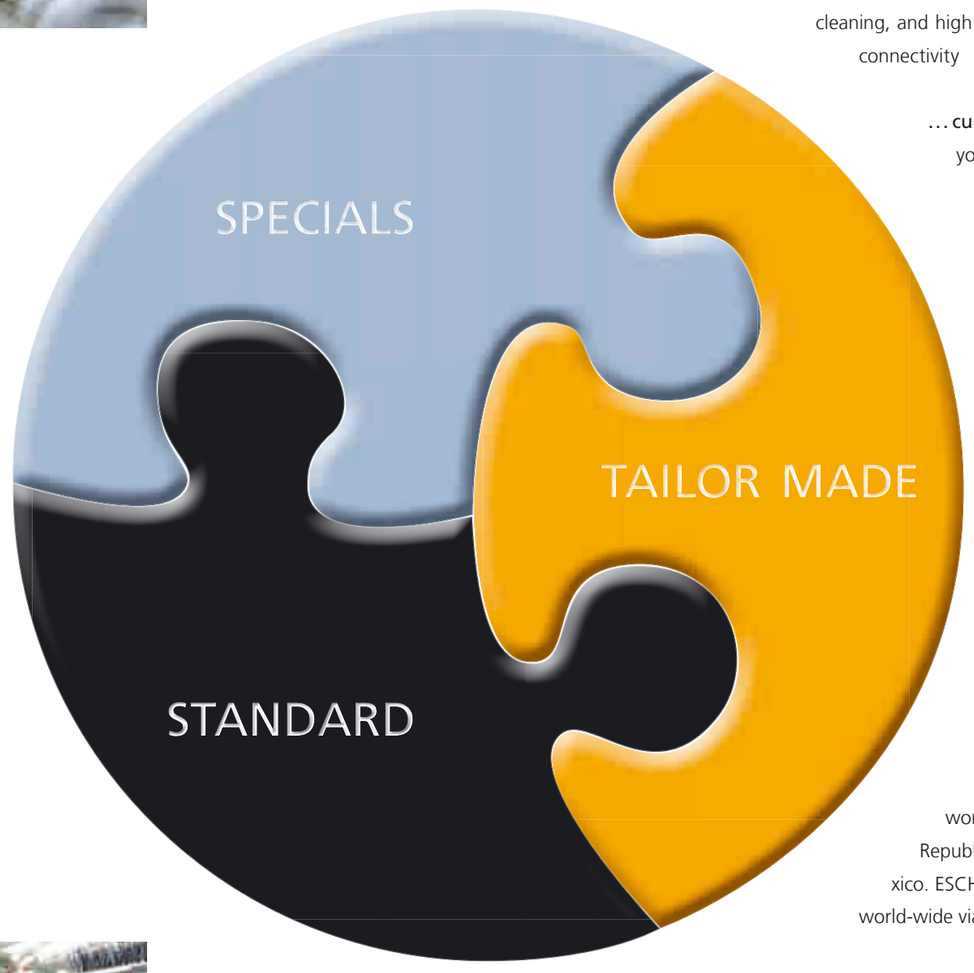

ESCHA: Connector- and Housing technology

…. **as an entire standard-programme** robust, with highest protection classes (IP67 | IP68 | IP69K), 360° shielded, bus capable, drag chain- and robot suitable, oil-, chemicals resistant

… **for special requirements** resistant to detergents, high-pressure- and steam-jet cleaning, and high tem-peratures, special data transmission features, quick connectivity

… **custom-made solutions** modified standard products for your application – quick, flexible and professional – individual product development beginning with the idea through design, tool-making up to series production


ESCHA: worldwide

Our base is Halver/Germany. Here, we develop and manufacture with about 500 employees. We guarantee high availability and consistent quality of our products worldwide through production capacities in Germany, Czech Republic and China as well as licensed production in USA and Mexico. ESCHA connectivity- and housing technology is at your disposal world-wide via a network of sales partners.

Since June 2009, ESCHA has had the status of Authorized Economic Operator. This AEO-Certification provides us with customs-law simplifications and guarantees our customers high security standards within the entire international supply chain.

We are committed to the Code of Conduct of the Bundesverband Materialwirtschaft, Einkauf und Logistik e.V. (BME) (Federal Association Material Management, Purchasing and Logistics).

Visit our online catalogue at www.escha.net

ESCHA

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  - ☐ High temperature-proof
- Cable length
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Product line	Description
base line	Our standard connector line: high quality, reasonable prices. Available with two cable qualities PVC and PUR.
Automation Line	Automation Line combines all specific requirements of automation industry: halogen-, PVC-, and silicone-free; drag-chain-adapted; weld-field immune; chemicals-, oil-, microbes-, and hydrolysis resistant; tight according to IP67, IP69K and UL approved. A comprehensive portfolio with: LED-versions; threaded grip for protective tubing; 360° shielding through reliable and patented two-shell shielding-concept (ESCHA 2SSK-technology). Available with three cable qualities: PVC; PUR; highly drag-chain adapted and torsion-resistant PUR robotic.
Quick-turn connection	Quick-turn connection sealed according to IP67, compatible with all M12x1 threads, safe locking, high cohesion.
with defined torque	M12x1 with integrated torque control. Tightened and sealed according to IP67 by hand when it rotates freely.
Food&Beverage hygienic	New Food&Beverage line in hygienic design referring to EHEDG directives. FDA-compliant materials guarantee a high resistance to sour and alkaline cleaning and disinfectants agents. Dust- and waterproof, protected against water with high pressure and steam jet cleaning according to IP67 and IP69K.
High temperature-proof	High-temperature proof materials guarantee a reliable performance of this connector line in applications with a permanent operating temperature of -20°C to +150°C and a short term maximum operating temperature of +200°C.
I/O-junction boxes	M8x1/Ø8 snap or M12x1 I/O junction boxes with 4, 6, 8 ports; cable outlet, top- or front connection.

ƒ = female | m = male | ↑ = straight | ↦ = angled | ⊙ = shielded | LED = display for operating voltage and switching conditions | thread type = grip with thread | = field-wireable

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Products

Molded connectors

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- Connector B-side
- Cable quality
- Cable length
- Certifications

♀ = female | ♂ = male | ↑ = straight | ↱ = angled | ⊙ = shielded | LED = display for operating voltage and switching conditions | thread type = grip with thread | ✋ = field-wireable

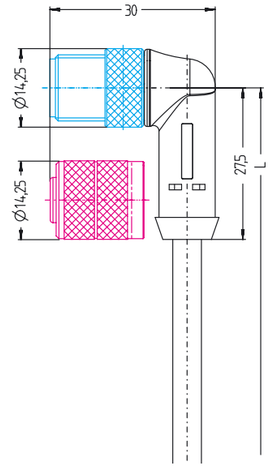
BL – | W | WAK | 3 – | m / | P00

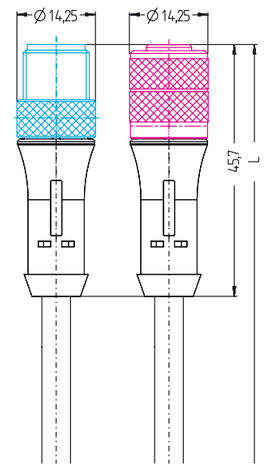
- P00: Cable quality
- m /: Cable length [m]
- 3 –: Poles
- WAK: Round connector M12x1 | *female* | WAS: *male*
- W: angled ↦ | without: straight ↑
- BL –: base line

not for P00

Product line	Version	Cable quality	Poles	Type-designation	2m	5m	10m
BL_M12x1	*f* | ↑	PVC | P00	3	BL-WAK3-m/P00	8048554	8047903	8048483
			4	BL-WAK4-m/P00	8048555	8047904	8048484
			5	BL-WAK4.5-m/P00	8048742	8047906	8048743
		PVC | P01 ®	3	BL-WAK3-m/P01	8050937	8050938	8050939
			4	BL-WAK4-m/P01	8050941	8050940	8050942
			5	BL-WAK4.5-m/P01	8050946	8050947	8050948
	f | ↦	PVC | P00	3	BL-WWAK3-m/P00	8050793	8047908	8050794
			4	BL-WWAK4-m/P00	8050298	8047909	8050536
			5	BL-WWAK4.5-m/P00	8050799	8047911	8050803
		PVC | P01 ®	3	BL-WWAK3-m/P01	8050952	8050953	8050954
			4	BL-WWAK4-m/P01	8050955	8050956	8050957
			5	BL-WWAK4.5-m/P01	8050961	8050962	8050963
	m | ↑	PVC | P00	3	BL-WAS3-m/P00	8050815	8047913	8050818
			4	BL-WAS4-m/P00	8050821	8047914	8050823
			5	BL-WAS4.5-m/P00	8050311	8047916	8050831
		PVC | P01 ®	3	BL-WAS3-m/P01	8050931	8050932	8050933
			4	BL-WAS4-m/P01	8050934	8050935	8050936
			5	BL-WAS4.5-m/P01	8050970	8050971	8050972
	m | ↦	PVC | P00	3	BL-WWAS3-m/P00	8050837	8047918	8050839
			4	BL-WWAS4-m/P00	8050297	8047919	8050840
			5	BL-WWAS4.5-m/P00	8050864	8047921	8050867
		PVC | P01 ®	3	BL-WWAS3-m/P01	8050976	8050977	8050978
			4	BL-WWAS4-m/P01	8050979	8050980	8050981
			5	BL-WWAS4.5-m/P01	8050985	8050986	8050987

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

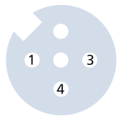




Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	5	60V
Current load [Imax]	3, 4, 5	4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carriers	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts *(female)*	CuSn, gold-plated
	Contacts *(male)*	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A

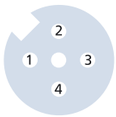
3 poles | *female*



1BN | 3BU | 4BK

3 poles | *male*

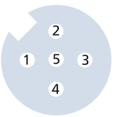
4 poles | *female*



1BN | 2WH | 3BU | 4BK

4 poles | *male*

5 poles | *female*



1BN | 2WH | 3BU | 4BK | 5GY

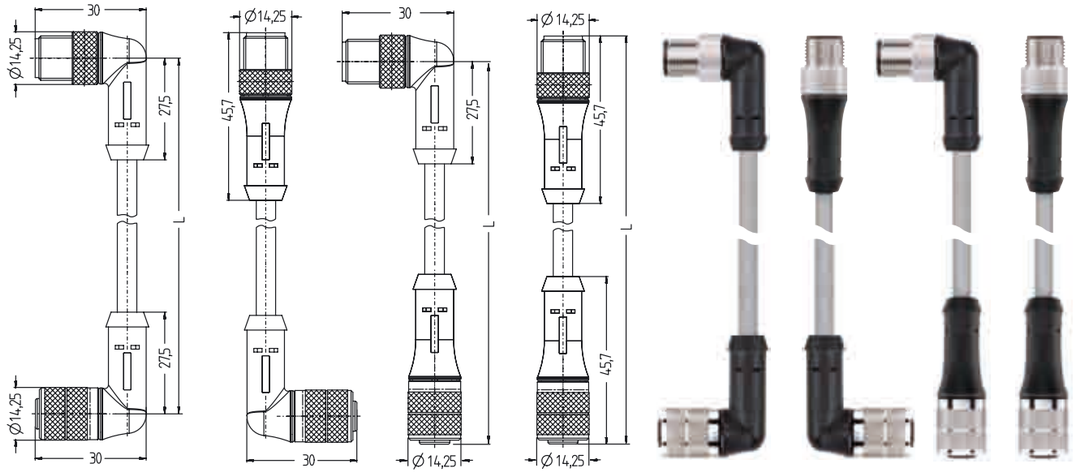
5 poles | *male*

BL –	W	WAK	3 –	m –	BL –	W	WAS	3 /	P00
									Cable quality
								Poles	
							Round connector M12x1 | WAS: *male*		
						W: angled ↦ | without: straight ↑			
					base line				
				Cable length [m]					
			Poles						
		Round connector M12x1 | WAK: *female*							
	W: angled ↦ | without: straight ↑								
base line									

not for P00

Product line	Version	Cable quality	Poles	Type-designation	1m	Cable length m 2m	5m
BL_M12x1	*f* | ↑ __ *m* | ↑	PVC | P00	3	BL-WAK3-m-BL-WAS3/P00	8052016	8050870	8047923
			4	BL-WAK4-m-BL-WAS4/P00	8052017	8050871	8047924
			5	BL-WAK4.5-m-BL-WAS4.5/P00	8052018	8048906	8047925
		PVC | P01 ®	3	BL-WAK3-m-BL-WAS3/P01	8052030	8050992	8050993
			4	BL-WAK4-m-BL-WAS4/P01	8052031	8050995	8050996
			5	BL-WAK4.5-m-BL-WAS4.5/P01	8052033	8050998	8050999
	f | ↑ __ *m* | ↦	PVC | P00	3	BL-WAK3-m-BL-WWAS3/P00	8052022	8050892	8047929
			4	BL-WAK4-m-BL-WWAS4/P00	8052023	8050894	8047930
			5	BL-WAK4.5-m-BL-WWAS4.5/P00	8052024	8050896	8047931
		PVC | P01 ®	3	BL-WAK3-m-BL-WWAS3/P01	8052038	8051010	8051011
			4	BL-WAK4-m-BL-WWAS4/P01	8052039	8051013	8051014
			5	BL-WAK4.5-m-BL-WWAS4.5/P01	8052040	8051016	8051017
	f | ↦ __ *m* | ↑	PVC | P00	3	BL-WWAK3-m-BL-WAS3/P00	8052025	8047957	8047932
			4	BL-WWAK4-m-BL-WAS4/P00	8052026	8050903	8047933
			5	BL-WWAK4.5-m-BL-WAS4.5/P00	8052029	8050911	8047934
		PVC | P01 ®	3	BL-WWAK3-m-BL-WAS3/P01	8052041	8051019	8051020
			4	BL-WWAK4-m-BL-WAS4/P01	8052042	8051022	8051023
			5	BL-WWAK4.5-m-BL-WAS4.5/P01	8052043	8051025	8051026
	f | ↦ __ *m* | ↦	PVC | P00	3	BL-WWAK3-m-BL-WWAS3/P00	8052019	8050886	8047926
			4	BL-WWAK4-m-BL-WWAS4/P00	8052020	8050888	8047927
			5	BL-WWAK4.5-m-BL-WWAS4.5/P00	8052021	8050890	8047928
		PVC | P01 ®	3	BL-WWAK3-m-BL-WWAS3/P01	8052034	8051001	8051002
			4	BL-WWAK4-m-BL-WWAS4/P01	8052035	8051004	8051005
			5	BL-WWAK4.5-m-BL-WWAS4.5/P01	8052036	8051007	8051008

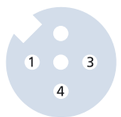
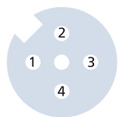
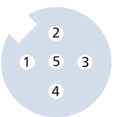
Other versions and cable-lengths are available upon request.



base line PVC | M12x1 junction cable

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	5	60V
Current load [Imax]	3, 4, 5	4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts *(female)*	CuSn, gold-plated
	Contacts *(male)*	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A

3 poles | *female*	3 poles | *male*	4 poles | *female*	4 poles | *male*	5 poles | *female*	5 poles | *male*
					
1BN | 3BU | 4BK		1BN | 2WH | 3BU | 4BK		1BN | 2WH | 3BU | 4BK | 5GY	

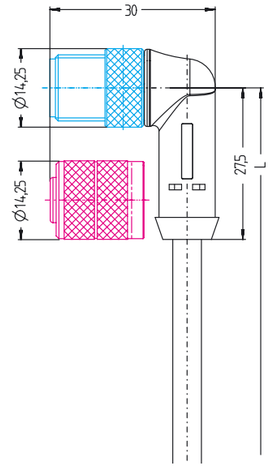
BL – W WAK 3 – m / S370

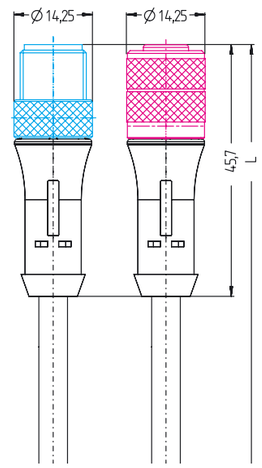
- S370: Cable quality
- m /: Cable length [m]
- 3 –: Poles
- WAK: Round connector M12x1 | WAK: *female* | WAS: *male*
- W: W: angled ↦ | without: straight ↑
- BL –: base line

not for P00

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
BL_M12x1	ƒ | ↑	PUR | S370	3	BL-WAK3-m/S370	8047935	8047871	8048461
			4	BL-WAK4-m/S370	8048462	8047872	8048463
			5	BL-WAK4.5-m/S370	8048467	8047874	8048468
		PUR | S370GY	3	BL-WAK3-m/S370GY	8058625	8058626	8058627
			4	BL-WAK4-m/S370GY	8058718	8058719	8058720
	ƒ | ↦	PUR | S370	3	BL-WWAK3-m/S370	8050702	8047876	8050703
			4	BL-WWAK4-m/S370	8050704	8047877	8050537
			5	BL-WWAK4.5-m/S370	8050709	8047879	8050710
		PUR | S370GY	3	BL-WWAK3-m/S370GY	8058739	8058740	8058741
			4	BL-WWAK4-m/S370GY	8058742	8058743	8058744
	m | ↑	PUR | S370	3	BL-WAS3-m/S370	8048464	8047881	8048465
			4	BL-WAS4-m/S370	8048173	8047882	8048466
			5	BL-WAS4.5-m/S370	8048469	8047884	8048470
		PUR | S370GY	3	BL-WAS3-m/S370GY	8058745	8058785	8058786
			4	BL-WAS4-m/S370GY	8058748	8058749	8058750
	m | ↦	PUR | S370	3	BL-WWAS3-m/S370	8050717	8047886	8050718
			4	BL-WWAS4-m/S370	8050719	8047887	8050720
			5	BL-WWAS4.5-m/S370	8050723	8047889	8050724
		PUR | S370GY	3	BL-WWAS3-m/S370GY	8058751	8058752	8058753
			4	BL-WWAS4-m/S370GY	8058754	8058755	8058756

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request



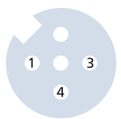


base°line **PUR** | M12x1

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	5	60V
Current load [Imax]	3, 4, 5	4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carriers	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts *(female)*	CuSn, gold-plated
	Contacts *(male)*	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A

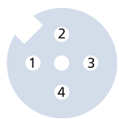
3 poles | *female*



1BN | 3BU | 4BK

3 poles | *male*

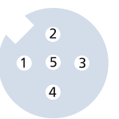
4 poles | *female*



1BN | 2WH | 3BU | 4BK

4 poles | *male*

5 poles | *female*



1BN | 2WH | 3BU | 4BK | 5GY

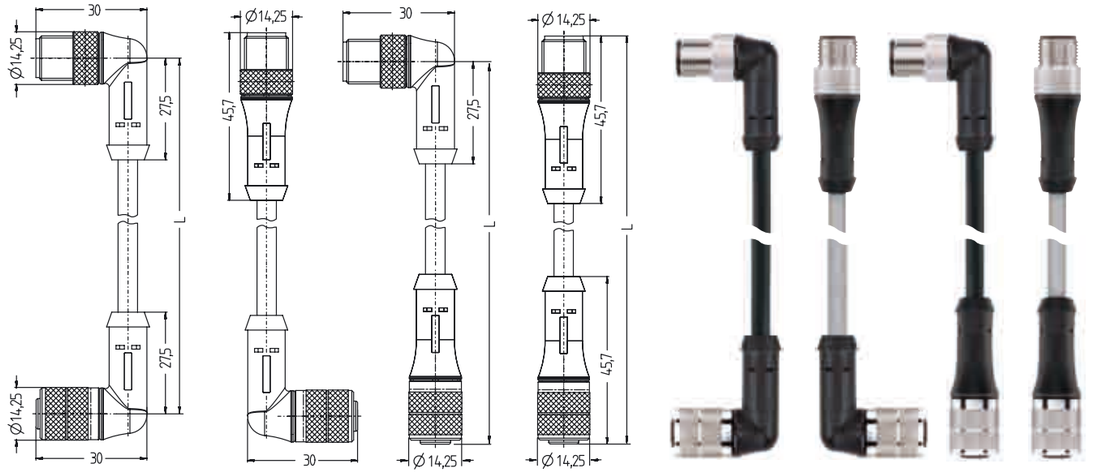
5 poles | *male*

BL –	W	WAK	3 –	m –	BL –	W	WAS	3 /	S370
									Cable quality
								Poles	
							Round connector M12x1 | WAS: *male*		
						W: angled ↦ | without: straight ↑			
					base line				
				Cable length [m]					
			Poles						
		Round connector M12x1 | WAK: *female*							
	W: angled ↦ | without: straight ↑								
base line									

not for P00

Product line	Version	Cable quality	Poles	Type-designation	1m	Cable length m 2m	5m
BL_M12x1	*f* | ↑ __ *m* | ↑	PUR | S370	3	BL-WAK3-m-BL-WAS3/S370	8052002	8047937	8047798
			4	BL-WAK4-m-BL-WAS4/S370	8052003	8050728	8047892
			5	BL-WAK4.5-m-BL-WAS4.5/S370	8052005	8050136	8047893
		PUR | S370GY	3	BL-WAK3-m-BL-WAS3/S370GY	8058721	8058722	8058723
			4	BL-WAK4-m-BL-WAS4/S370GY	8058757	8058758	8058759
	f | ↑ __ *m* | ↦	PUR | S370	3	BL-WAK3-m-BL-WWAS3/S370	8052009	8050736	8047897
			4	BL-WAK4-m-BL-WWAS4/S370	8052010	8050738	8047898
			5	BL-WAK4.5-m-BL-WWAS4.5/S370	8052011	8050740	8047899
		PUR | S370GY	3	BL-WAK3-m-BL-WWAS3/S370GY	8058760	8058761	8058762
			4	BL-WAK4-m-BL-WWAS4/S370GY	8058763	8058764	8058765
	f | ↦ __ *m* | ↑	PUR | S370	3	BL-WWAK3-m-BL-WAS3/S370	8052012	8050742	8047900
			4	BL-WWAK4-m-BL-WAS4/S370	8052013	8050744	8047901
			5	BL-WWAK4.5-m-BL-WAS4.5/S370	8052014	8050746	8047902
		PUR | S370GY	3	BL-WWAK3-m-BL-WAS3/S370GY	8058766	8058813	8058814
			4	BL-WWAK4-m-BL-WAS4/S370GY	8058767	8058768	8058769
	f | ↦ __ *m* | ↦	PUR | S370	3	BL-WWAK3-m-BL-WWAS3/S370	8052006	8050730	8047894
			4	BL-WWAK4-m-BL-WWAS4/S370	8052007	8050732	8047895
			5	BL-WWAK4.5-m-BL-WWAS4.5/S370	8052008	8050734	8047896
		PUR | S370GY	3	BL-WWAK3-m-BL-WWAS3/S370GY	8058770	8058771	8058772
			4	BL-WWAK4-m-BL-WWAS4/S370GY	8058773	8058774	8058775

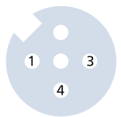
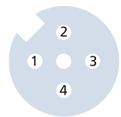
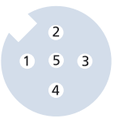
Other versions and cable-lengths are available upon request.



base line PUR | M12x1 junction cable

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	5	60V
Current load [Imax]	3, 4, 5	4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts *(female)*	CuSn, gold-plated
	Contacts *(male)*	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A

3 poles | *female*	3 poles | *male*	4 poles | *female*	4 poles | *male*	5 poles | *female*	5 poles | *male*
					
1BN | 3BU | 4BK		1BN | 2WH | 3BU | 4BK		1BN | 2WH | 3BU | 4BK | 5GY	

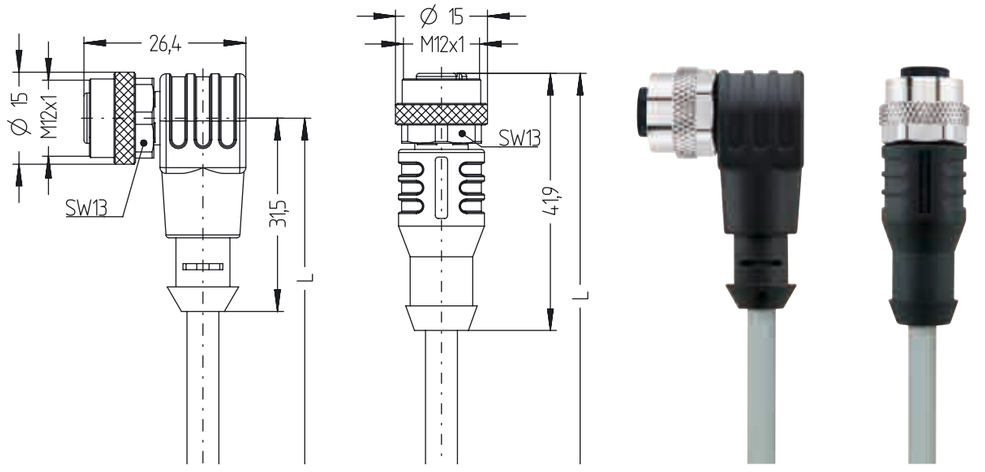
AL – | W | WAK | E* | 3 – | m / | P00

- P00: Cable quality
- m: Cable length [m]
- 3: Poles
- E*: *optional: V4A locking mechanism
- WAK: Round connector M12x1 | WAK: *female*
- W: W: angled ↦ | without: straight ↑
- AL: Automation Line

not for P00,12-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_M12x1	*f* | ↑	PVC | P00	3	AL-WAK3-m/P00	8051043	8051044	8051045
			4	AL-WAK4-m/P00	8049341	8051055	8051056
			4+PE	AL-WAK5-m/P00	8051077	8051078	8051079
			5	AL-WAK4.5-m/P00	8051067	8051068	8051069
			8	AL-WAK8-m/P00	8051089	8051090	8051091
			12	AL-WAK12-m/P00	8051101	8051102	8051103
		PVC | P01®	3	AL-WAK3-m/P01	8051250	8051251	8051252
			4	AL-WAK4-m/P01	8051262	8051263	8051264
			4+PE	AL-WAK5-m/P01	8051286	8051287	8051288
			5	AL-WAK4.5-m/P01	8051274	8051275	8051276
			8	AL-WAK8-m/P01	8051298	8051299	8051300
			12	AL-WAK12-m/P01	8051310	8051311	8051312
	f | ↦	PVC | P00	3	AL-WWAK3-m/P00	8051046	8051047	8051048
			4	AL-WWAK4-m/P00	8049342	8049343	8051057
			4+PE	AL-WWAK5-m/P00	8051080	8051081	8051082
			5	AL-WWAK4.5-m/P00	8049344	8051070	8051071
			8	AL-WWAK8-m/P00	8051092	8051093	8051094
			12	AL-WWAK12-m/P00	8051104	8051105	8051106
		PVC | P01®	3	AL-WWAK3-m/P01	8051253	8051254	8051255
			4	AL-WWAK4-m/P01	8051265	8051266	8051267
			4+PE	AL-WWAK5-m/P01	8051289	8051290	8051291
			5	AL-WWAK4.5-m/P01	8051277	8051278	8051279
			8	AL-WWAK8-m/P01	8051301	8051302	8051303
			12	AL-WWAK12-m/P01	8051313	8051314	8051315

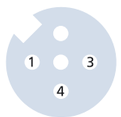
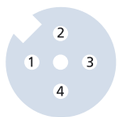
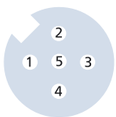
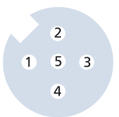
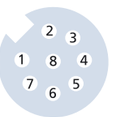
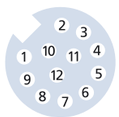
Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request



AUTOMATION LINE© PVC | M12x1 *female*

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE, 5	60V
	8, 12	30V
Current load [Imax]	3, 4, 4+PE, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A | *female*

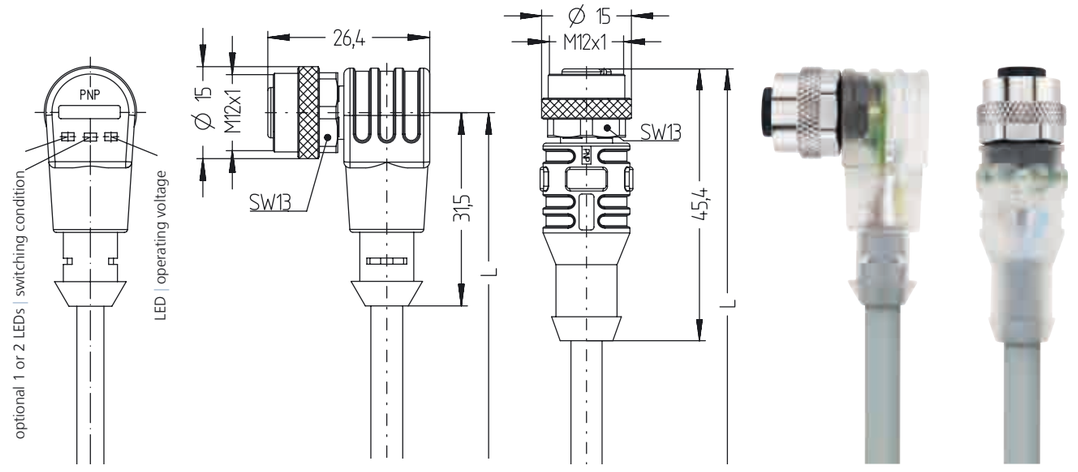
3 poles	4 poles	4 poles+PE	5 poles	8 poles	12 poles
					
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH | 3BU 4BK | 5GN/YE	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH 4GN | 5PK | 6YE | 7BK 8GY | 9RD | 10VT 11GY/PK | 12RD/BU

AL –	W	WAK	E*	3 –	P2 –	m /	P00
Automation Line	W: angled ↦ | without: straight ↑	Round connector M12x1 | WAK: *female*	*optional: V4A locking mechanism	Poles	PNP | Quantity LEDs + circuit	Cable length [m]	Cable quality

not for P00

Product line	Version		Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_M12x1	*f* | ↑ |	LED 2	PVC | P00	3	AL-WAK3P2-m/P00	8052508	8052509	8052510
		LED 2		4	AL-WAK4P2-m/P00	8052514	8052515	8052516
		LED 2	PVC | P01®	3	AL-WAK3P2-m/P01	8052511	8052512	8052513
		LED 2		4	AL-WAK4P2-m/P01	8052517	8052518	8052519
	f | ↦ |	LED 2	PVC | P00	3	AL-WWAK3P2-m/P00	8051121	8051119	8051120
		LED 2		4	AL-WWAK4P2-m/P00	8051122	8051123	8051124
		LED 3		4	AL-WWAK4P3-m/P00	8051125	8051126	8051127
		LED 3.1		4	AL-WWAK4P3.1-m/P00	8051128	8051129	8051130
		LED 3.2		4	AL-WWAK4P3.2-m/P00	8051131	8051132	8051133
		LED 3		4+PE	AL-WWAK5P3-m/P00	8051134	8051135	8051136
		LED 3.1		4+PE	AL-WWAK5P3.1-m/P00	8051137	8051138	8051139
		LED 2	PVC | P01®	3	AL-WWAK3P2-m/P01	8051328	8051329	8051330
		LED 2		4	AL-WWAK4P2-m/P01	8051331	8051332	8051333
		LED 3		4	AL-WWAK4P3-m/P01	8051334	8051335	8051336
		LED 3.1		4	AL-WWAK4P3.1-m/P01	8051337	8051338	8051339
		LED 3.2		4	AL-WWAK4P3.2-m/P01	8051340	8051341	8051342
		LED 3		4+PE	AL-WWAK5P3-m/P01	8051343	8051344	8051345
		LED 3.1		4+PE	AL-WWAK5P3.1-m/P01	8051346	8051347	8051348

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

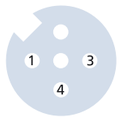


AUTOMATION LINE® PVC | M12x1 *female* LED

Technical data	Poles	Value
Rated voltage [Umax]	3, 4, 4+PE	24 VDC
Current load [Imax]	3, 4, 4+PE	4 A
Insulation resistance		≥ 10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, transparent
	Contact carriers	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

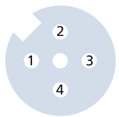
Coding A | *female*

3 poles



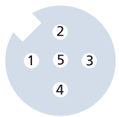
1BN | 3BU | 4BK

4 poles



1BN | 2WH | 3BU | 4BK

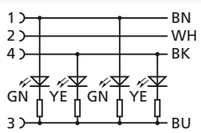
4 poles+PE



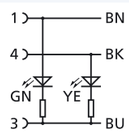
1BN | 2WH | 3BU | 4BK | 5GN/YE

LED-versions

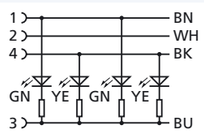
3P2 ↑



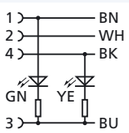
3P2↦



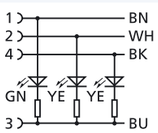
4P2 ↑



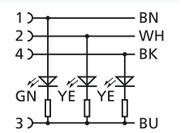
4P2 ↦



4P3



5P3



3.1 = GN/RD/YE | 3.2 = GN/WH/YE

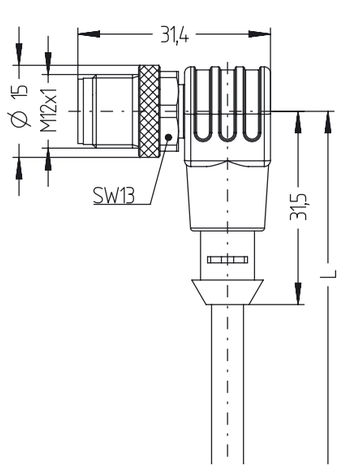
M12x1
AUTOMATION LINE®

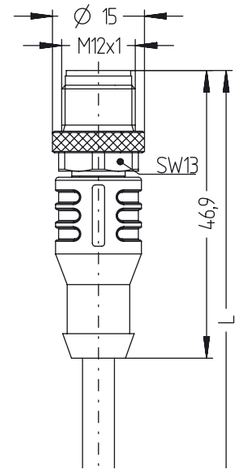
AL –	W	WAS	E*	3 –	m /	P00
						Cable quality
					Cable length [m]	
				Poles		
			*optional: V4A locking mechanism			
		Round connector M12x1 | WAS: *male*				
	W: angled ↱ | without: straight ↑					
Automation Line						

not for P00,12-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_M12x1	*m* | ↑	PVC | P00	3	AL-WAS3-m/P00	8051049	8051050	8051051
			4	AL-WAS4-m/P00	8049339	8051058	8051059
			4+PE	AL-WAS5-m/P00	8051083	8051084	8051085
			5	AL-WAS4.5-m/P00	8051072	8051073	8049345
			8	AL-WAS8-m/P00	8051095	8051096	8051097
			12	AL-WAS12-m/P00	8051107	8051108	8051109
		PVC | P01[®]	3	AL-WAS3-m/P01	8051256	8051257	8051258
			4	AL-WAS4-m/P01	8051268	8051269	8051270
			4+PE	AL-WAS5-m/P01	8051292	8051293	8051294
			5	AL-WAS4.5-m/P01	8051280	8051281	8051282
			8	AL-WAS8-m/P01	8051304	8051305	8051306
			12	AL-WAS12-m/P01	8051316	8051317	8051318
	m | ↱	PVC | P00	3	AL-WWAS3-m/P00	8051052	8051053	8051054
			4	AL-WWAS4-m/P00	8051869	8051870	8051871
			4+PE	AL-WWAS5-m/P00	8051086	8051087	8051088
			5	AL-WWAS4.5-m/P00	8051074	8051075	8051076
			8	AL-WWAS8-m/P00	8051098	8051099	8051100
			12	AL-WWAS12-m/P00	8051110	8051111	8051112
		PVC | P01[®]	3	AL-WWAS3-m/P01	8051259	8051260	8051261
			4	AL-WWAS4-m/P01	8051271	8051272	8051273
			4+PE	AL-WWAS5-m/P01	8051295	8051296	8051297
			5	AL-WWAS4.5-m/P01	8051283	8051284	8051285
			8	AL-WWAS8-m/P01	8051307	8051308	8051309
			12	AL-WWAS12-m/P01	8051319	8051321	8051320

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request





AUTOMATION LINE© PVC | M12x1 *male*

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE, 5	60V
	8, 12	30V
Current load [Imax]	3, 4, 4+PE, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carriers	TPU, BK
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A | *male*

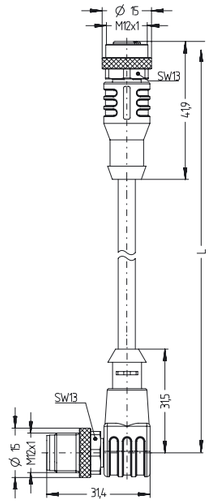
3 poles	4 poles	4 poles+PE	5 poles	8 poles	12 poles
					
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH | 3BU 4BK | 5GN/YE	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH 4GN | 5PK | 6YE | 7BK 8GY | 9RD | 10VT 11GY/PK | 12RD/BU

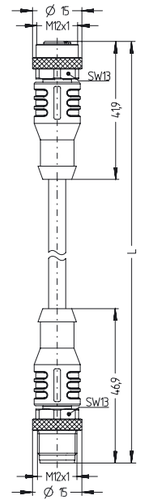
AL –	WAK	E*	3 –	m –	AL –	W	WAS	E*	3 /	P00
Automation Line										Cable quality
	Round connector M12x1 | WAK: *female*, straight ↑								Poles	
		*optional: V4A locking mechanism								
			Poles							
				Cable length [m]						
					Automation Line					
						W: angled ↱ | without: straight ↑				
							Round connector M12x1 | WAS: *male*			
								*optional: V4A locking mechanism		

not for P00,12-pol.

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
AL_M12x1	*f* | ↑ __ *m* | ↑	PVC | P00	3	AL-WAK3-m-AL-WAS3/P00	8051459	8051460	8051461
			4	AL-WAK4-m-AL-WAS4/P00	8051471	8051472	8051473
			4+PE	AL-WAK5-m-AL-WAS5/P00	8051495	8051496	8051497
			5	AL-WAK4.5-m-AL-WAS4.5/P00	8051483	8051484	8051485
			8	AL-WAK8-m-AL-WAS8/P00	8051507	8051508	8051509
			12	AL-WAK12-m-AL-WAS12/P00	8051519	8051520	8051521
		PVC | P01[®]	3	AL-WAK3-m-AL-WAS3/P01	8051667	8051668	8051669
			4	AL-WAK4-m-AL-WAS4/P01	8051679	8051680	8051681
			4+PE	AL-WAK5-m-AL-WAS5/P01	8051703	8051704	8051705
			5	AL-WAK4.5-m-AL-WAS4.5/P01	8051691	8051692	8051693
			8	AL-WAK8-m-AL-WAS8/P01	8051715	8051716	8051717
			12	AL-WAK12-m-AL-WAS12/P01	8051727	8051728	8051729
	f | ↑ __ *m* | ↱	PVC | P00	3	AL-WAK3-m-AL-WWAS3/P00	8051465	8051466	8051467
			4	AL-WAK4-m-AL-WWAS4/P00	8051477	8051478	8051479
			4+PE	AL-WAK5-m-AL-WWAS5/P00	8051501	8051502	8051503
			5	AL-WAK4.5-m-AL-WWAS4.5/P00	8051489	8051490	8051491
			8	AL-WAK8-m-AL-WWAS8/P00	8051513	8051514	8051515
			12	AL-WAK12-m-AL-WWAS12/P00	8051525	8051526	8051527
		PVC | P01[®]	3	AL-WAK3-m-AL-WWAS3/P01	8051673	8051674	8051675
			4	AL-WAK4-m-AL-WWAS4/P01	8051685	8051686	8051687
			4+PE	AL-WAK5-m-AL-WWAS5/P01	8051709	8051710	8051711
			5	AL-WAK4.5-m-AL-WWAS4.5/P01	8051697	8051698	8051699
			8	AL-WAK8-m-AL-WWAS8/P01	8051721	8051722	8051723
			12	AL-WAK12-m-AL-WWAS12/P01	8051733	8051734	8051735

Other versions and cable-lengths are available upon request.

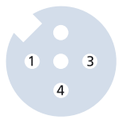
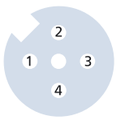
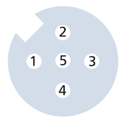
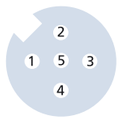
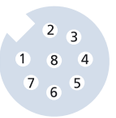
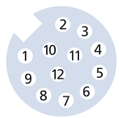




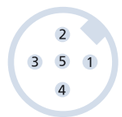
Automation Line© PVC | M12x1 junction cable

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE, 5	60V
	8, 12	30V
Current load [Imax]	3, 4, 4+PE, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A | *female*

3 poles	4 poles	4 poles+PE	5 poles	8 poles	12 poles
					

Coding A | *male*

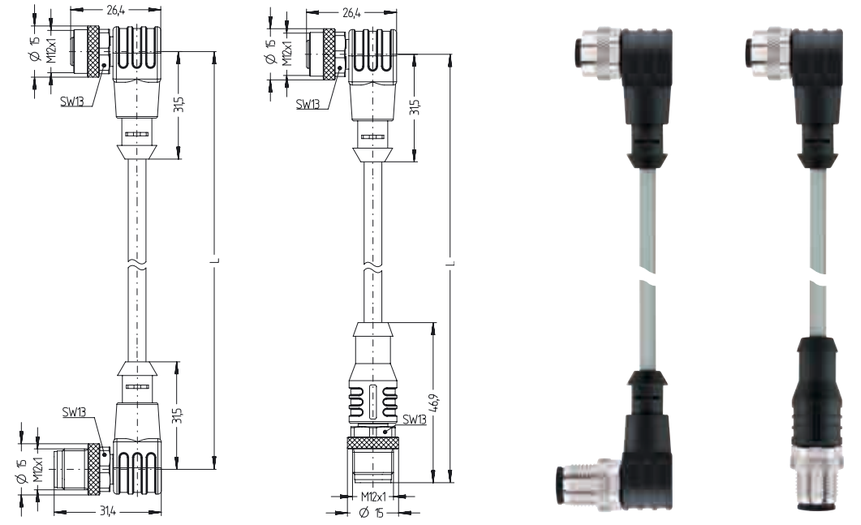
3 poles	4 poles	4 poles+PE	5 poles	8 poles	12 poles
					
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GN/YE	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH 4GN | 5PK | 6YE | 7BK 8GY | 9RD | 10VT 11GY/PK | 12RD/BU

AL –	W	WAK	E*	3 –	m –	AL –	W	WAS	E*	3 /	P00
											Cable quality
										Poles	
									*optional: V4A locking mechanism		
								Round connector M12x1 | WAS: *male*			
							W: angled ↱ | without: straight ↑				
						Automation Line					
					Cable length [m]						
				Poles							
			*optional: V4A locking mechanism								
		Round connector M12x1 | WAK: *female*									
	W: angled ↱ | without: straight ↑										
Automation Line											

not for P00,12-poles.

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
AL_M12x1	*f* | ↱ *m* | ↑	PVC | P00	3	AL-WWAK3-m-AL-WAS3/P00	8051468	8051469	8051470
			4	AL-WWAK4-m-AL-WAS4/P00	8051480	8051481	8051482
			4+PE	AL-WWAK5-m-AL-WAS5/P00	8051504	8051505	8051506
			5	AL-WWAK4.5-m-AL-WAS4.5/P00	8051492	8051493	8051494
			8	AL-WWAK8-m-AL-WAS8/P00	8051516	8051517	8051518
			12	AL-WWAK12-m-AL-WAS12/P00	8051528	8051529	8051530
		PVC | P01®	3	AL-WWAK3-m-AL-WAS3/P01	8051676	8051677	8051678
			4	AL-WWAK4-m-AL-WAS4/P01	8051688	8051689	8051690
			4+PE	AL-WWAK5-m-AL-WAS5/P01	8051712	8051713	8051714
			5	AL-WWAK4.5-m-AL-WAS4.5/P01	8051700	8051701	8051702
			8	AL-WWAK8-m-AL-WAS8/P01	8051724	8051725	8051726
			12	AL-WWAK12-m-AL-WAS12/P01	8051736	8051737	8051738
	f | ↱ *m* | ↱	PVC | P00	3	AL-WWAK3-m-AL-WWAS3/P00	8051462	8051463	8051464
			4	AL-WWAK4-m-AL-WWAS4/P00	8051474	8051475	8051476
			4+PE	AL-WWAK5-m-AL-WWAS5/P00	8051498	8051499	8051500
			5	AL-WWAK4.5-m-AL-WWAS4.5/P00	8051486	8051487	8051488
			8	AL-WWAK8-m-AL-WWAS8/P00	8051510	8051511	8051512
			12	AL-WWAK12-m-AL-WWAS12/P00	8051522	8051523	8051524
		PVC | P01®	3	AL-WWAK3-m-AL-WWAS3/P01	8051671	8051670	8051672
			4	AL-WWAK4-m-AL-WWAS4/P01	8051682	8051683	8051684
			4+PE	AL-WWAK5-m-AL-WWAS5/P01	8051706	8051707	8051708
			5	AL-WWAK4.5-m-AL-WWAS4.5/P01	8051694	8051695	8051696
			8	AL-WWAK8-m-AL-WWAS8/P01	8051718	8051719	8051720
			12	AL-WWAK12-m-AL-WWAS12/P01	8051730	8051731	8051732

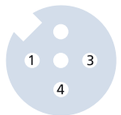
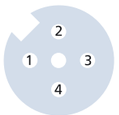
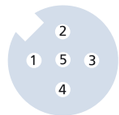
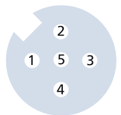
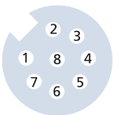
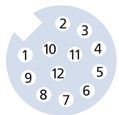
Other versions and cable-lengths are available upon request.



AUTOMATION LINE® PVC | M12x1 junction cable

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE, 5	60V
	8, 12	30V
Current load [Imax]	3, 4, 4+PE, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carriers	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A | *female*

3 poles	4 poles	4 poles+PE	5 poles	8 poles	12 poles
					
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GN/YE	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH 4GN | 5PK | 6YE | 7BK 8GY | 9RD | 10VT 11GY/PK | 12RD/BU

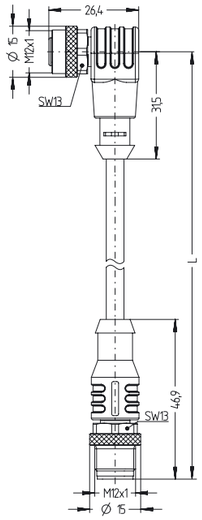
Coding A | *male*

AL –	W	WAK	E*	3 –	P2 –	m –	AL –	WAS	E*	3 /	P00
Automation Line	W: angled ↱ | without: straight ↑	Round connector M12x1 | WAK: *female*	*optional: V4A locking mechanism	Poles	PNP | Quantity LEDs + circuit	Cable length [m]	Automation Line	Round connector M12x1 | WAS: *male*, straight ↑	*optional: V4A locking mechanism	Poles	Cable quality

not for P00

Product line	Version		Cable quality	Poles	Type-designation	1m	2m	5m
AL_M12x1	*f* | ↑ |	LED 2 __ *m* | ↑	PVC | P00	3	AL-WAK3P2-m-AL-WAS3/P00	8052745	8052747	8052746
		LED 2		4	AL-WAK4P2-m-AL-WAS4/P00	8052520	8052521	8052522
		LED 2	PVC | P01®	3	AL-WAK3P2-m-AL-WAS3/P01	8052749	8052748	8052750
		LED 2		4	AL-WAK4P2-m-AL-WAS4/P01	8052523	8052524	8052525
	f | ↱ |	LED 2 __ *m* | ↑	PVC | P00	3	AL-WWAK3P2-m-AL-WAS3/P00	8051537	8051538	8051539
		LED 2		4	AL-WWAK4P2-m-AL-WAS4/P00	8051540	8051541	8051542
		LED 3		4	AL-WWAK4P3-m-AL-WAS4/P00	8051543	8051545	8051544
		LED 3.1		4	AL-WWAK4P3.1-m-AL-WAS4/P00	8051546	8051547	8051548
		LED 3.2		4	AL-WWAK4P3.2-m-AL-WAS4/P00	8051549	8051550	8051551
		LED 3		4+PE	AL-WWAK5P3-m-AL-WAS5/P00	8051552	8051553	8051554
		LED 3.1		4+PE	AL-WWAK5P3.1-m-AL-WAS5/P00	8051555	8051556	8051557
		LED 2	PVC | P01®	3	AL-WWAK3P2-m-AL-WAS3/P01	8051745	8051746	8051747
		LED 2		4	AL-WWAK4P2-m-AL-WAS4/P01	8051748	8051749	8051750
		LED 3		4	AL-WWAK4P3-m-AL-WAS4/P01	8051751	8051752	8051753
		LED 3.1		4	AL-WWAK4P3.1-m-AL-WAS4/P01	8051754	8051755	8051756
		LED 3.2		4	AL-WWAK4P3.2-m-AL-WAS4/P01	8051757	8051758	8051759
		LED 3		4+PE	AL-WWAK5P3-m-AL-WAS5/P01	8051760	8051761	8051762
		LED 3.1		4+PE	AL-WWAK5P3.1-m-AL-WAS5/P01	8051763	8051764	8051765

Other versions and cable-lengths are available upon request.

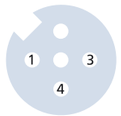


AUTOMATION LINE© PVC | M12x1 junction cable

Technical data	Poles	Value
Rated voltage [Umax]	3, 4, 4+PE	24 VDC
Current load [Imax]	3, 4, 4+PE	4 A
Insulation resistance		≥10⁸ Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK | LED-version: TPU, transparent
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A

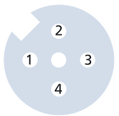
3 poles | *female*



1BN | 3BU | 4BK

3 poles | *male*

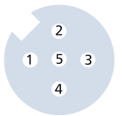
4 poles | *female*



1BN | 2WH | 3BU | 4BK

4 poles | *male*

4 poles+PE | *female*

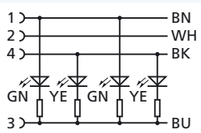


1BN | 2WH | 3BU | 4BK | 5GN/YE

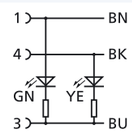
4 poles+PE | *male*

LED-Versionen

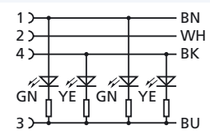
3P2 ↑



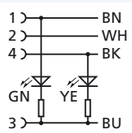
3P2↱



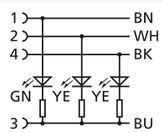
4P2 ↑



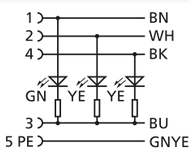
4P2 ↱



4P3



5P3



3.1 = GN/RD/YE | 3.2 = GN/WH/YE

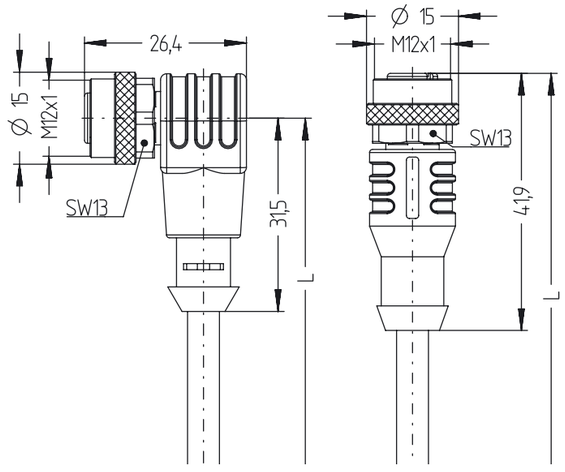
AL – | W | WAK | E* | 3 – | m / | S370

- S370: Cable quality
- m /: Cable length [m]
- 3 –: Poles
- E*: *optional: V4A locking mechanism
- WAK: Round connector M12x1 | *female*
- W: angled ↦ | without: straight ↑
- AL: Automation Line

not for P00,12-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_M12x1	*f* | ↑	PUR | S370®	3	AL-WAK3-m/S370	8043798	8043799	8043800
			4	AL-WAK4-m/S370	8043811	8043812	8043813
			4+PE	AL-WAK5-m/S370	8045034	8045035	8046043
			5	AL-WAK4.5-m/S370	8043823	8043824	8043825
			8	AL-WAK8-m/S370	8046903	8046904	8046905
			12	AL-WAK12-m/S370	8046918	8046920	8046921
		PUR | S370GY®	3	AL-WAK3-m/S370GY	8058853	8058854	8058855
			4	AL-WAK4-m/S370GY	8058856	8058857	8058858
			4+PE	AL-WAK5-m/S370GY	8058859	8058860	8058861
		PUR | S7400® robotic	3	AL-WAK3-m/S7400	8058862	8058863	8058864
			4	AL-WAK4-m/S7400	8058865	8058866	8058867
			4+PE	AL-WAK5-m/S7400	8058868	8058869	8058870
	f | ↦	PUR | S370®	3	AL-WWAK3-m/S370	8043801	8043802	8043803
			4	AL-WWAK4-m/S370	8043814	8043815	8043816
			4+PE	AL-WWAK5-m/S370	8046021	8046022	8046023
			5	AL-WWAK4.5-m/S370	8043826	8043827	8043828
			8	AL-WWAK8-m/S370	8046906	8046907	8046908
			12	AL-WWAK12-m/S370	8046923	8046924	8046925
		PUR | S370GY®	3	AL-WWAK3-m/S370GY	8058871	8058872	8058873
			4	AL-WWAK4-m/S370GY	8058874	8058875	8058876
			4+PE	AL-WWAK5-m/S370GY	8058877	8058878	8058879
		PUR | S7400® robotic	3	AL-WWAK3-m/S7400	8058880	8058881	8058882
			4	AL-WWAK4-m/S7400	8058883	8058884	8058885
			4+PE	AL-WWAK5-m/S7400	8058886	8058887	8058888

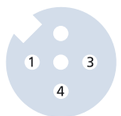
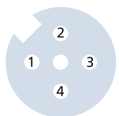
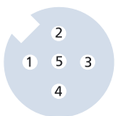
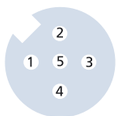
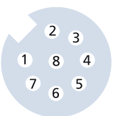
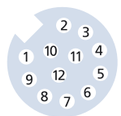
Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request



AUTOMATION LINE© PUR | M12x1 *female*

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE, 5	60V
	8, 12	30V
Current load [Imax]	3, 4, 4+PE, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A | *female*

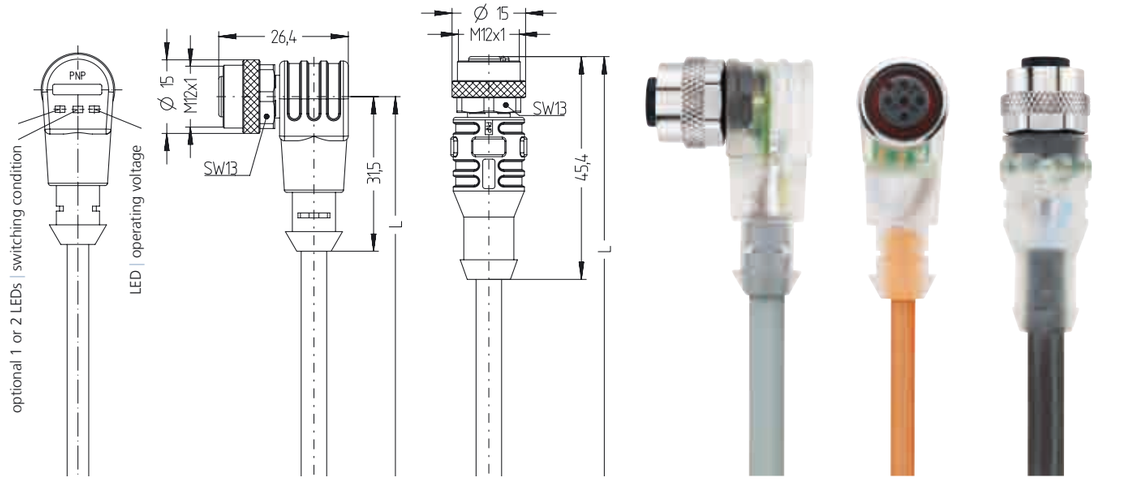
3 poles	4 poles	4 poles+PE	5 poles	8 poles	12 poles
					
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH | 3BU 4BK | 5GN/YE	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH 4GN | 5PK | 6YE | 7BK 8GY | 9RD | 10VT 11GY/PK | 12RD/BU

AL –	W	WAK	E*	3 –	P2 –	m /	S370
							Cable quality
						Cable length [m]	
					PNP | Quantity LEDs + circuit		
				Poles			
			*optional: V4A locking mechanism				
		Round connector M12x1 | WAK: *female*					
	W: angled ↦ | without: straight ↑						
Automation Line							

not for P00

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_M12x1	*f* | ↑ | LED 2	PUR | S370 ®	3	AL-WAK3P2-m/S370	8044524	8045592	8047386
	LED 2		4	AL-WAK4P2-m/S370	8048938	8048114	8048116
	LED 2	PUR | S370GY ®	3	AL-WAK3P2-m/S370GY	8058922	8058923	8058924
	LED 2		4	AL-WAK4P2-m/S370GY	8058925	8058926	8058927
	LED 2	PUR | S7400 ® robotic	3	AL-WAK3P2-m/S7400	8058928	8058929	8058930
	LED 2		4	AL-WAK4P2-m/S7400	8058931	8058932	8058933
	f | ↦ | LED 2	PUR | S370 ®	3	AL-WWAK3P2-m/S370	8044219	8045217	8044523
	LED 2		4	AL-WWAK4P2-m/S370	8045237	8045238	8045239
	LED 3		4	AL-WWAK4P3-m/S370	8044220	8044565	8044566
	LED 3.1		4	AL-WWAK4P3.1-m/S370	8045911	8045912	8045913
	LED 3.2		4	AL-WWAK4P3.2-m/S370	8045914	8045915	8045916
	LED 3		4+PE	AL-WWAK5P3-m/S370	8044221	8045218	8045219
	LED 3.1		4+PE	AL-WWAK5P3.1-m/S370	8045917	8045918	8045919
	LED 2	PUR | S370GY ®	3	AL-WWAK3P2-m/S370GY	8059930	8059931	8059932
	LED 2		4	AL-WWAK4P2-m/S370GY	8059933	8059934	8059935
	LED 3		4	AL-WWAK4P3-m/S370GY	8059936	8059937	8059938
	LED 3.1		4	AL-WWAK4P3.1-m/S370GY	8059939	8059940	8059941
	LED 3.2		4	AL-WWAK4P3.2-m/S370GY	8059942	8059943	8059944
	LED 3		4+PE	AL-WWAK5P3-m/S370GY	8059945	8059946	8059947
	LED 3.1		4+PE	AL-WWAK5P3.1-m/S370GY	8059948	8059949	8059950
	LED 2	PUR | S7400 ® robotic	3	AL-WWAK3P2-m/S7400	8058934	8058935	8058936
	LED 2		4	AL-WWAK4P2-m/S7400	8058937	8058938	8058939
	LED 3		4	AL-WWAK4P3-m/S7400	8058940	8058941	8058942
	LED 3.1		4	AL-WWAK4P3.1-m/S7400	8058943	8058944	8058945
	LED 3.2		4	AL-WWAK4P3.2-m/S7400	8058946	8058947	8058948
	LED 3		4+PE	AL-WWAK5P3-m/S7400	8058949	8058950	8058951
	LED 3.1		4+PE	AL-WWAK5P3.1-m/S7400	8058952	8058953	8058954

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

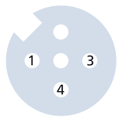


AUTOMATION LINE© PUR | M12x1 *female* LED

Technical data	Poles	Value
Rated voltage [Umax]	3, 4, 4+PE	24 VDC
Current load [Imax]	3, 4, 4+PE	4 A
Insulation resistance		≥ 10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, transparent
	Contact carriers	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

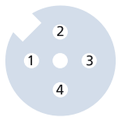
Coding A | *female*

3 poles



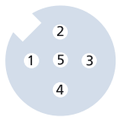
1BN | 3BU | 4BK

4 poles



1BN | 2WH | 3BU | 4BK

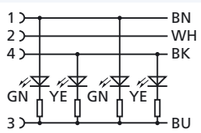
4 poles+PE



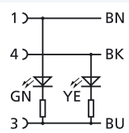
1BN | 2WH | 3BU | 4BK | 5GN/YE

LED-versions

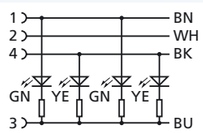
3P2 ↑



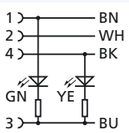
3P2↦



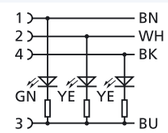
4P2 ↑



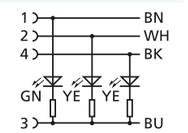
4P2 ↦



4P3



5P3



3.1 = GN/RD/YE | 3.2 = GN/WH/YE

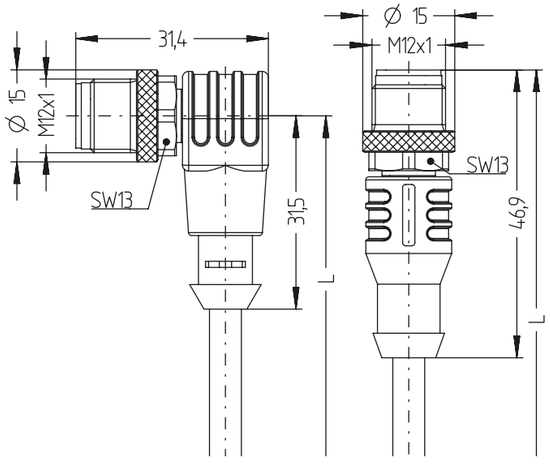
AL – | W | WAS | E* | 3 – | m / | S370

- S370: Cable quality
- m: Cable length [m]
- 3: Poles
- E*: *optional: V4A locking mechanism
- WAS: Round connector M12x1 | *male*
- W: angled ↱ | without: straight ↑
- AL: Automation Line

not for P00,12-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_M12x1	*m* | ↑	PUR | S370 ®	3	AL-WAS3-m/S370	8043804	8043805	8043806
			4	AL-WAS4-m/S370	8043817	8043818	8043819
			4+PE	AL-WAS5-m/S370	8046024	8046026	8046027
			5	AL-WAS4.5-m/S370	8043829	8043830	8043831
			8	AL-WAS8-m/S370	8046909	8046910	8046911
			12	AL-WAS12-m/S370	8046926	8046927	8046928
		PUR | S370GY ®	3	AL-WAS3-m/S370GY	8058955	8058956	8058957
			4	AL-WAS4-m/S370GY	8058958	8058959	8058960
			4+PE	AL-WAS5-m/S370GY	8058961	8058962	8058963
		PUR | S7400 ® robotic	3	AL-WAS3-m/S7400	8058964	8058965	8058966
			4	AL-WAS4-m/S7400	8058967	8058968	8058969
			4+PE	AL-WAS5-m/S7400	8058970	8058971	8058972
	m | ↱	PUR | S370 ®	3	AL-WWAS3-m/S370	8043808	8043809	8043810
			4	AL-WWAS4-m/S370	8043820	8043821	8043822
			4+PE	AL-WWAS5-m/S370	8046028	8046029	8046030
			5	AL-WWAS4.5-m/S370	8043832	8043833	8043834
			8	AL-WWAS8-m/S370	8046912	8046913	8046914
			12	AL-WWAS12-m/S370	8046929	8046930	8046931
		PUR | S370GY ®	3	AL-WWAS3-m/S370GY	8058973	8058974	8058975
			4	AL-WWAS4-m/S370GY	8058976	8058977	8058978
			4+PE	AL-WWAS5-m/S370GY	8058979	8058980	8058981
		PUR | S7400 ® robotic	3	AL-WWAS3-m/S7400	8058982	8058983	8058984
			4	AL-WWAS4-m/S7400	8058985	8058986	8058987
			4+PE	AL-WWAS5-m/S7400	8058988	8058989	8058990

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request



AUTOMATION LINE© PUR | M12x1 *male*

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE, 5	60V
	8, 12	30V
Current load [Imax]	3, 4, 4+PE, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carriers	TPU, BK
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A | *male*

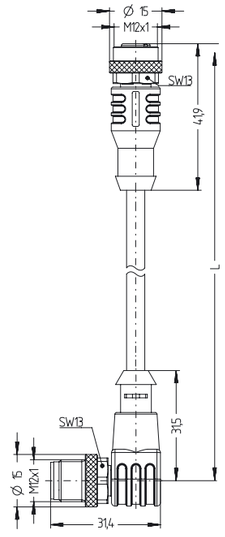
3 poles	4 poles	4 poles+PE	5 poles	8 poles	12 poles
					
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH | 3BU 4BK | 5GN/YE	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH 4GN | 5PK | 6YE | 7BK 8GY | 9RD | 10VT 11GY/PK | 12RD/BU

AL –	WAK	E*	3 –	m –	AL –	W	WAS	E*	3 /	S370
Automation Line										Cable quality
	Round connector M12x1 | WAK: *female*, straight ↑								Poles	
		*optional: V4A locking mechanism						*optional: V4A locking mechanism		
			Poles				Round connector M12x1 | WAS: *male*			
				Cable length [m]		W: angled ↱ | without: straight ↑				
					Automation Line					

not for P00,12-pol.

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
AL_M12x1	*f* | ↑ __ *m* | ↑	PUR | S370 ®	3	AL-WAK3-m-AL-WAS3/S370	8044858	8044029	8044030
			4	AL-WAK4-m-AL-WAS4/S370	8044813	8044041	8044042
			4+PE	AL-WAK5-m-AL-WAS5/S370	8046647	8046031	8046032
			5	AL-WAK4.5-m-AL-WAS4.5/S370	8050226	8044053	8044054
			8	AL-WAK8-m-AL-WAS8/S370	8049781	8046932	8046933
			12	AL-WAK12-m-AL-WAS12/S370	8051872	8046944	8046945
		PUR | S370GY ®	3	AL-WAK3-m-AL-WAS3/S370GY	8058889	8058890	8058891
			4	AL-WAK4-m-AL-WAS4/S370GY	8058892	8058893	8058894
			4+PE	AL-WAK5-m-AL-WAS5/S370GY	8058895	8058896	8058897
		PUR | S7400 ® robotic	3	AL-WAK3-m-AL-WAS3/S7400	8058921	8058898	8058899
			4	AL-WAK4-m-AL-WAS4/S7400	8057296	8057322	8057324
			4+PE	AL-WAK5-m-AL-WAS5/S7400	8058900	8058901	8058902
	f | ↑ __ *m* | ↱	PUR | S370 ®	3	AL-WAK3-m-AL-WWAS3/S370	8051873	8044035	8044036
			4	AL-WAK4-m-AL-WWAS4/S370	8051874	8044047	8044048
			4+PE	AL-WAK5-m-AL-WWAS5/S370	8046056	8046037	8046038
			5	AL-WAK4.5-m-AL-WWAS4.5/S370	8051875	8044059	8044060
			8	AL-WAK8-m-AL-WWAS8/S370	8051876	8046938	8046939
			12	AL-WAK12-m-AL-WWAS12/S370	8051877	8046950	8046951
		PUR | S370GY ®	3	AL-WAK3-m-AL-WWAS3/S370GY	8058903	8058904	8058905
			4	AL-WAK4-m-AL-WWAS4/S370GY	8058906	8058907	8058908
			4+PE	AL-WAK5-m-AL-WWAS5/S370GY	8058909	8058910	8058911
		PUR | S7400 ® robotic	3	AL-WAK3-m-AL-WWAS3/S7400	8058912	8058913	8058914
			4	AL-WAK4-m-AL-WWAS4/S7400	8058915	8058916	8058917
			4+PE	AL-WAK5-m-AL-WWAS5/S7400	8058918	8058919	8058920

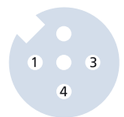
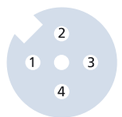
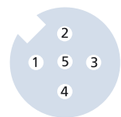
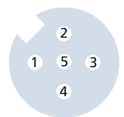
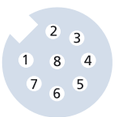
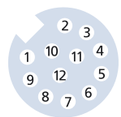
Other versions and cable-lengths are available upon request.



Automation Line© PUR | M12x1 junction cable

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE, 5	60V
	8, 12	30V
Current load [Imax]	3, 4, 4+PE, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A | *female*

3 poles	4 poles	4 poles+PE	5 poles	8 poles	12 poles
					
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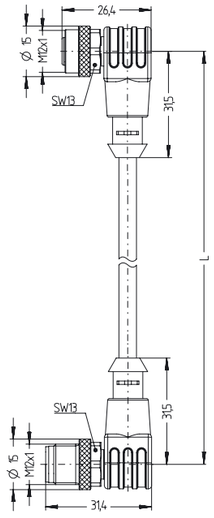
Coding A | *male*

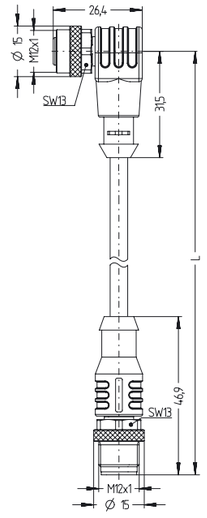
AL –	W	WAK	E*	3 –	m –	AL –	W	WAS	E*	3 /	S370
											Cable quality
										Poles	
									*optional: V4A locking mechanism		
								Round connector M12x1 | WAS: *male*			
							W: angled ↦ | without: straight ↑				
						Automation Line					
					Cable length [m]						
				Poles							
			*optional: V4A locking mechanism								
		Round connector M12x1 | WAK: *female*									
	W: angled ↦ | without: straight ↑										
Automation Line											

not for P00,12-poles.

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
AL_M12x1	*f* | ↦__ *m* | ↑	PUR | S370 ®	3	AL-WWAK3-m-AL-WAS3/S370	8047133	8044038	8044039
			4	AL-WWAK4-m-AL-WAS4/S370	8044664	8044050	8044051
			4+PE	AL-WWAK5-m-AL-WAS5/S370	8046055	8046040	8046041
			5	AL-WWAK4.5-m-AL-WAS4.5/S370	8050444	8044062	8044063
			8	AL-WWAK8-m-AL-WAS8/S370	8048889	8046941	8046942
			12	AL-WWAK12-m-AL-WAS12/S370	8051878	8046953	8046954
		PUR | S370GY ®	3	AL-WWAK3-m-AL-WAS3/S370GY	8058998	8058999	8059000
			4	AL-WWAK4-m-AL-WAS4/S370GY	8059001	8059002	8059003
			4+PE	AL-WWAK5-m-AL-WAS5/S370GY	8059004	8059005	8059006
		PUR | S7400 ® robotic	3	AL-WWAK3-m-AL-WAS3/S7400	8059007	8059008	8059009
			4	AL-WWAK4-m-AL-WAS4/S7400	8059010	8059011	8059012
			4+PE	AL-WWAK5-m-AL-WAS5/S7400	8059013	8059014	8059015
f | ↦__ *m* | ↦		PUR | S370 ®	3	AL-WWAK3-m-AL-WWAS3/S370	8049108	8044032	8044033
			4	AL-WWAK4-m-AL-WWAS4/S370	8051879	8044044	8044045
			4+PE	AL-WWAK5-m-AL-WWAS5/S370	8051881	8046034	8046035
			5	AL-WWAK4.5-m-AL-WWAS4.5/S370	8051880	8044056	8044057
			8	AL-WWAK8-m-AL-WWAS8/S370	8051882	8046935	8046936
			12	AL-WWAK12-m-AL-WWAS12/S370	8051883	8046947	8046948
		PUR | S370GY ®	3	AL-WWAK3-m-AL-WWAS3/S370GY	8059016	8059017	8059018
			4	AL-WWAK4-m-AL-WWAS4/S370GY	8059019	8059020	8059021
			4+PE	AL-WWAK5-m-AL-WWAS5/S370GY	8059022	8059023	8059024
		PUR | S7400 ® robotic	3	AL-WWAK3-m-AL-WWAS3/S7400	8059025	8059026	8059027
			4	AL-WWAK4-m-AL-WWAS4/S7400	8059028	8059029	8059030
			4+PE	AL-WWAK5-m-AL-WWAS5/S7400	8059031	8059032	8059033

Other versions and cable-lengths are available upon request.

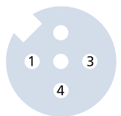
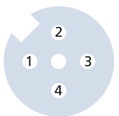
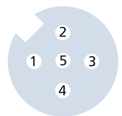
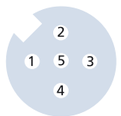
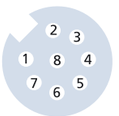
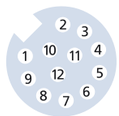




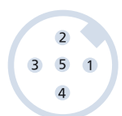
AUTOMATION LINE© PUR | M12x1 junction cable

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE, 5	60V
	8, 12	30V
Current load [Imax]	3, 4, 4+PE, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carriers	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A | *female*

3 poles	4 poles	4 poles+PE	5 poles	8 poles	12 poles
					
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GN/YE	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH 4GN | 5PK | 6YE | 7BK 8GY | 9RD | 10VT 11GY/PK | 12RD/BU

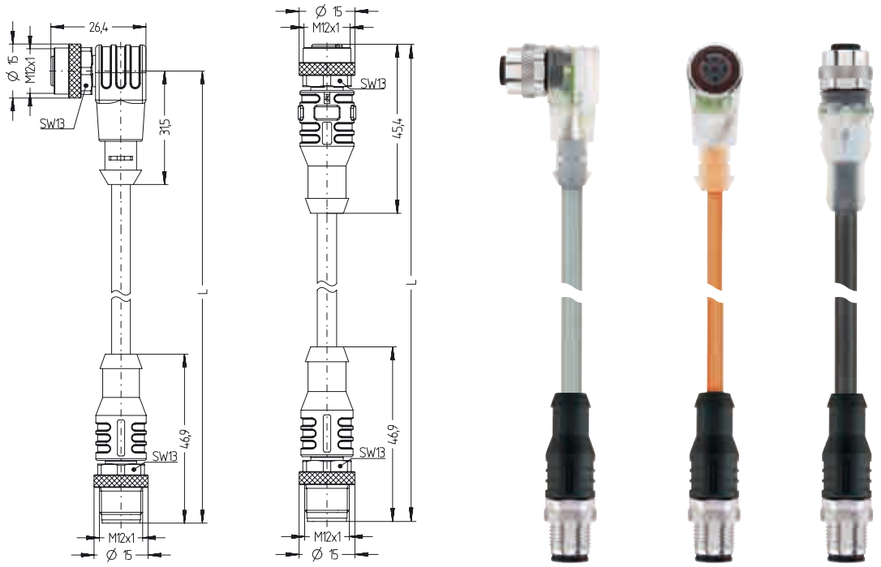
Coding A | *male*

3 poles	4 poles	4 poles+PE	5 poles	8 poles	12 poles
					

AL –	W	WAK	E*	3 –	P2 –	m –	AL –	WAS	E*	3 /	S370
											Cable quality
										Poles	
									*optional: V4A locking mechanism		
								Round connector M12x1 | WAS: *male*, straight ↑			
							Automation Line				
						Cable length [m]					
					PNP | Quantity LEDs + circuit						
				Poles							
			*optional: V4A locking mechanism								
		Round connector M12x1 | WAK: *female*									
	W: angled ↱ | without: straight ↑										
Automation Line											

Product line	Version		Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
AL_M12x1	*f* | ↑ |	LED 2 __ *m* | ↑	PUR | S370 ®	3	AL-WAK3P2-m-AL-WAS3/S370	8052751	8049895	8049896
		LED 2		4	AL-WAK4P2-m-AL-WAS4/S370	8049946	8052064	8052065
		LED 2	PUR | S370GY ®	3	AL-WAK3P2-m-AL-WAS3/S370GY	8059034	8059035	8059036
		LED 2		4	AL-WAK4P2-m-AL-WAS4/S370GY	8059037	8059038	8059039
		LED 2	PUR | S7400 ® robotic	3	AL-WAK3P2-m-AL-WAS3/S7400	8059040	8059041	8059042
		LED 2		4	AL-WAK4P2-m-AL-WAS4/S7400	8059043	8059044	8059045
	f | ↱ |	LED 2 __ *m* | ↑	PUR | S370 ®	3	AL-WWAK3P2-m-AL-WAS3/S370	8048160	8045579	8045503
		LED 2		4	AL-WWAK4P2-m-AL-WAS4/S370	8043925	8045920	8045921
		LED 3		4	AL-WWAK4P3-m-AL-WAS4/S370	8049739	8045923	8045924
		LED 3.1		4	AL-WWAK4P3.1-m-AL-WAS4/S370	8051884	8045926	8045927
		LED 3.2		4	AL-WWAK4P3.2-m-AL-WAS4/S370	8048140	8045929	8045930
		LED 3		4+PE	AL-WWAK5P3-m-AL-WAS5/S370	8051885	8045581	8045583
		LED 3.1		4+PE	AL-WWAK5P3.1-m-AL-WAS5/S370	8045017	8045661	8045662
		LED 2	PUR | S370GY ®	3	AL-WWAK3P2-m-AL-WAS3/S370GY	8059046	8059047	8059048
		LED 2		4	AL-WWAK4P2-m-AL-WAS4/S370GY	8059049	8059050	8059051
		LED 3		4	AL-WWAK4P3-m-AL-WAS4/S370GY	8059052	8059053	8059054
		LED 3.1		4	AL-WWAK4P3.1-m-AL-WAS4/S370GY	8059055	8059056	8059057
		LED 3.2		4	AL-WWAK4P3.2-m-AL-WAS4/S370GY	8059058	8059059	8059060
		LED 3		4+PE	AL-WWAK5P3-m-AL-WAS5/S370GY	8059061	8059062	8059063
		LED 3.1		4+PE	AL-WWAK5P3.1-m-AL-WAS5/S370GY	8059064	8059065	8059066
		LED 2	PUR | S7400 ® robotic	3	AL-WWAK3P2-m-AL-WAS3/S7400	8059067	8059068	8059069
		LED 2		4	AL-WWAK4P2-m-AL-WAS4/S7400	8059070	8059071	8059072
		LED 3		4	AL-WWAK4P3-m-AL-WAS4/S7400	8058054	8057297	8057321
		LED 3.1		4	AL-WWAK4P3.1-m-AL-WAS4/S7400	8059073	8059074	8059075
		LED 3.2		4	AL-WWAK4P3.2-m-AL-WAS4/S7400	8059076	8059077	8059078
		LED 3		4+PE	AL-WWAK5P3-m-AL-WAS5/S7400	8059079	8059080	8059081
		LED 3.1		4+PE	AL-WWAK5P3.1-m-AL-WAS5/S7400	8059082	8059083	8059084

Other versions and cable-lengths are available upon request.

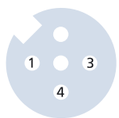


AUTOMATION LINE© PUR | M12x1 junction cable

Technical data	Poles	Value
Rated voltage [Umax]	3, 4, 4+PE	24 VDC
Current load [Imax]	3, 4, 4+PE	4 A
Insulation resistance		≥ 10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK | LED-version: TPU, transparent
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

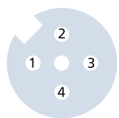
Coding A

3 poles | *female* — 1BN | 3BU | 4BK



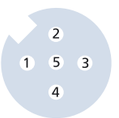
3 poles | *male* — 1BN | 3BU | 4BK

4 poles | *female* — 1BN | 2WH | 3BU | 4BK



4 poles | *male* — 1BN | 2WH | 3BU | 4BK

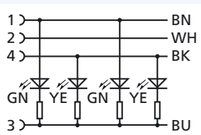
4 poles+PE | *female* — 1BN | 2WH | 3BU | 4BK | 5GN/YE



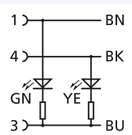
4 poles+PE | *male* — 1BN | 2WH | 3BU | 4BK | 5GN/YE

LED-versions

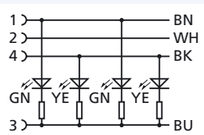
3P2 ↑



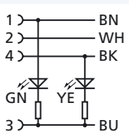
3P2↱



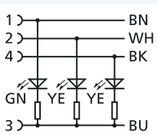
4P2 ↑



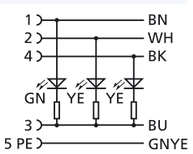
4P2 ↱



4P3



5P3



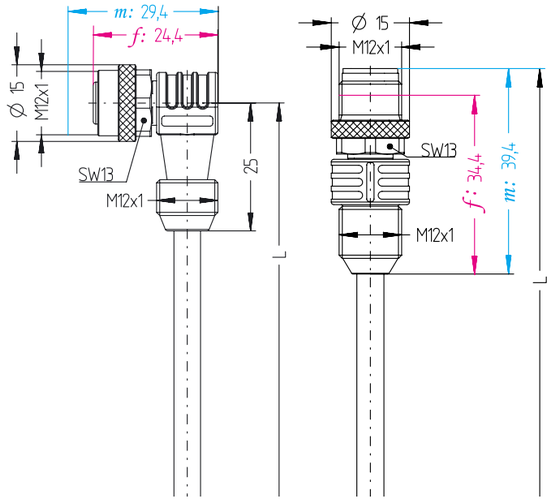
3.1 = GN/RD/YE | 3.2 = GN/WH/YE

AL –	W	WAK	E*	G	4–	m /	S370
							Cable quality
						Cable length [m]	
					Poles		
				Grip with thread for protective tubing			
			*optional: V4A locking mechanism				
		Round connector M12x1 | WAK: *female*					
			WAS: *male*				
	W: angled ↱ | without: straight ↑						
Automation Line							

RoHS

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_M12x1	*f* | ↑ | G	PUR | S370 ®	4	AL-WAKG4-m/S370	8052820	8052821	8052822
		PUR | S370GY ®	4	AL-WAKG4-m/S370GY	8059086	8059087	8059088
		PUR | S7400 ® robotic	4	AL-WAKG4-m/S7400	8059089	8059090	8059091
		PVC | P00	4	AL-WAKG4-m/P00	8052823	8052824	8052825
		PVC | P01 ®	4	AL-WAKG4-m/P01	8052826	8052827	8052828
	f | ↱ | G	PUR | S370 ®	4	AL-WWAKG4-m/S370	8052829	8052830	8052831
		PUR | S370GY ®	4	AL-WWAKG4-m/S370GY	8059092	8059093	8059094
		PUR | S7400 ® robotic	4	AL-WWAKG4-m/S7400	8059095	8059096	8059097
		PVC | P00	4	AL-WWAKG4-m/P00	8052832	8052833	8052834
		PVC | P01 ®	4	AL-WWAKG4-m/P01	8052835	8052836	8052837
	m | ↑ | G	PUR | S370 ®	4	AL-WASG4-m/S370	8052838	8052839	8052840
		PUR | S370GY ®	4	AL-WASG4-m/S370GY	8059098	8059099	8059100
		PUR | S7400 ® robotic	4	AL-WASG4-m/S7400	8059101	8059102	8059103
		PVC | P00	4	AL-WASG4-m/P00	8052841	8052842	8052843
		PVC | P01 ®	4	AL-WASG4-m/P01	8052844	8052845	8052846
	m | ↱ | G	PUR | S370 ®	4	AL-WWASG4-m/S370	8052847	8052848	8052849
		PUR | S370GY ®	4	AL-WWASG4-m/S370GY	8059104	8059105	8059106
		PUR | S7400 ® robotic	4	AL-WWASG4-m/S7400	8059107	8059108	8059109
		PVC | P00	4	AL-WWASG4-m/P00	8052850	8052851	8052852
		PVC | P01	4	AL-WWASG4-m/P01	8052853	8052854	8052855

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request



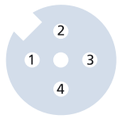
Protective tubings can be found under accessories page 192.

AUTOMATION LINE© M12x1 grip with thread

Technical data	Poles	Value
Rated voltage [Umax]	4	250V
Current load [Imax]	4	4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Material	Grip	TPU, BK
	Contact carriers	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A

4 poles | *female*



4 poles | *male*

1BN | 2WH | 3BU | 4BK

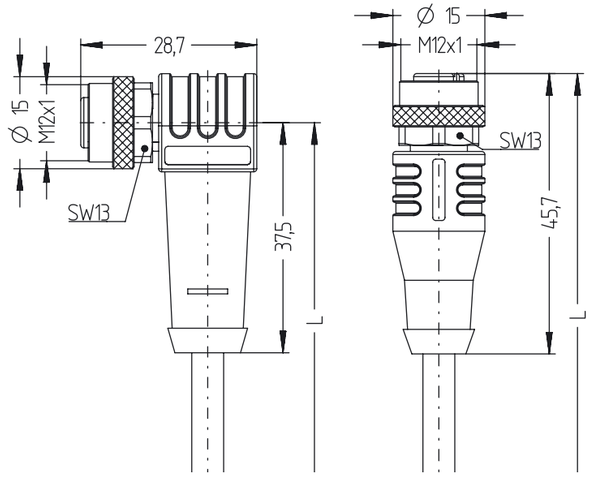
AL – | W | WAK | S | 3 – | m / | S370

- S370: Cable quality
- m /: Cable length [m]
- 3 –: Poles
- S: Shielded ⊙
- WAK: Round connector M12x1 | *female*
- W: angled ↱ | without: straight ↑
- AL: Automation Line

not for P00,12-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_M12x1 ⊙	*f* | ↑	PUR | S370 ®	3	AL-WAKS3-m/S370	8046217	8046218	8046219
			4	AL-WAKS4-m/S370	8046229	8046230	8046231
			5	AL-WAKS4.5-m/S370	8045557	8046239	8046240
			8	AL-WAKS8-m/S370	8046990	8046991	8046992
			12	AL-WAKS12-m/S370	8047001	8047002	8047003
		PVC | P00	3	AL-WAKS3-m/P00	8051164	8051165	8051166
			4	AL-WAKS4-m/P00	8051176	8051177	8051178
			5	AL-WAKS4.5-m/P00	8051188	8051189	8051190
			8	AL-WAKS8-m/P00	8051200	8051201	8051202
			12	AL-WAKS12-m/P00	8051212	8051213	8051214
		PVC | P01 ®	3	AL-WAKS3-m/P01	8051374	8051375	8051376
			4	AL-WAKS4-m/P01	8051386	8051387	8051388
			5	AL-WAKS4.5-m/P01	8051398	8051399	8051400
			8	AL-WAKS8-m/P01	8051410	8051411	8051412
			12	AL-WAKS12-m/P01	8051422	8051423	8051424
	f | ↱	PUR | S370 ®	3	AL-WWAKS3-m/S370	8046220	8046221	8046222
			4	AL-WWAKS4-m/S370	8046232	8045279	8045280
			5	AL-WWAKS4.5-m/S370	8045558	8046242	8046243
			8	AL-WWAKS8-m/S370	8046993	8046994	8046995
			12	AL-WWAKS12-m/S370	8047004	8047005	8047006
		PVC | P00	3	AL-WWAKS3-m/P00	8051167	8051168	8051169
			4	AL-WWAKS4-m/P00	8051179	8051180	8051181
			5	AL-WWAKS4.5-m/P00	8051191	8051192	8051193
			8	AL-WWAKS8-m/P00	8051203	8051204	8051205
			12	AL-WWAKS12-m/P00	8051216	8051217	8051218
		PVC | P01 ®	3	AL-WWAKS3-m/P01	8051377	8051378	8051379
			4	AL-WWAKS4-m/P01	8051389	8051390	8051391
			5	AL-WWAKS4.5-m/P01	8051401	8051402	8051403
			8	AL-WWAKS8-m/P01	8051413	8051414	8051415
			12	AL-WWAKS12-m/P01	8051425	8051426	8051427

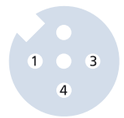
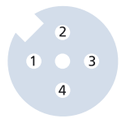
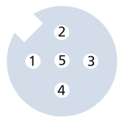
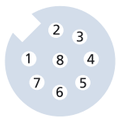
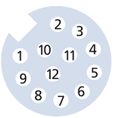
Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request



AUTOMATION LINE® M12x1 shielded ⊙ | *female*

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	5	60V
	8, 12	30V
Current load [Imax]	3, 4, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A | *female*

3 poles	4 poles	5 poles	8 poles	12 poles
				
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH | 4GN | 5PK | 6YE 7BK | 8GY | 9RD | 10VT | 11GY/PK | 12RD/BU

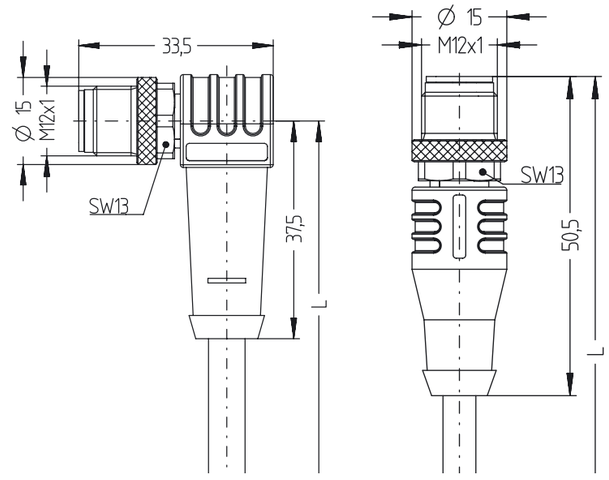
AL – | W | WAS | S | 3 – | m / | S370

- S370: Cable quality
- m /: Cable length [m]
- 3 –: Poles
- S: Shielded ⊙
- WAS: Round connector M12x1 | *male*
- W: angled ↱ | without: straight ↑
- AL: Automation Line

not for P00,12-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_M12x1 ⊙	*m* | ↑	PUR | S370 ®	3	AL-WASS3-m/S370	8046223	8046224	8046225
			4	AL-WASS4-m/S370	8046233	8046234	8046235
			5	AL-WASS4.5-m/S370	8045559	8046244	8046245
			8	AL-WASS8-m/S370	8046807	8046996	8046997
			12	AL-WASS12-m/S370	8047007	8047008	8047009
		PVC | P00	3	AL-WASS3-m/P00	8051170	8051171	8051172
			4	AL-WASS4-m/P00	8051182	8051183	8051184
			5	AL-WASS4.5-m/P00	8051194	8051195	8051196
			8	AL-WASS8-m/P00	8051206	8051207	8051208
			12	AL-WASS12-m/P00	8051219	8051220	8051221
		PVC | P01 ®	3	AL-WASS3-m/P01	8051380	8051381	8051382
			4	AL-WASS4-m/P01	8051392	8051393	8051394
			5	AL-WASS4.5-m/P01	8051404	8051405	8051406
			8	AL-WASS8-m/P01	8051416	8051417	8051418
			12	AL-WASS12-m/P01	8051428	8051429	8051430
	m | ↱	PUR | S370 ®	3	AL-WWASS3-m/S370	8046226	8046227	8046228
			4	AL-WWASS4-m/S370	8046236	8046237	8046238
			5	AL-WWASS4.5-m/S370	8045560	8044617	8044618
			8	AL-WWASS8-m/S370	8046998	8046999	8047000
			12	AL-WWASS12-m/S370	8047010	8047011	8047012
		PVC | P00	3	AL-WWASS3-m/P00	8051173	8051174	8051175
			4	AL-WWASS4-m/P00	8051185	8051186	8051187
			5	AL-WWASS4.5-m/P00	8051198	8051197	8051199
			8	AL-WWASS8-m/P00	8051209	8051210	8051211
			12	AL-WWASS12-m/P00	8051222	8051223	8051224
		PVC | P01 ®	3	AL-WWASS3-m/P01	8051383	8051384	8051385
			4	AL-WWASS4-m/P01	8051395	8051396	8051397
			5	AL-WWASS4.5-m/P01	8051407	8051408	8051409
			8	AL-WWASS8-m/P01	8051419	8051420	8051421
			12	AL-WWASS12-m/P01	8051431	8051432	8051433

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request



AUTOMATION LINE® M12x1 shielded ⊙ | *male*

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	5	60V
	8, 12	30V
Current load [Imax]	3, 4, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8Ω
Standards		IEC61076-2-101
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A | *male*

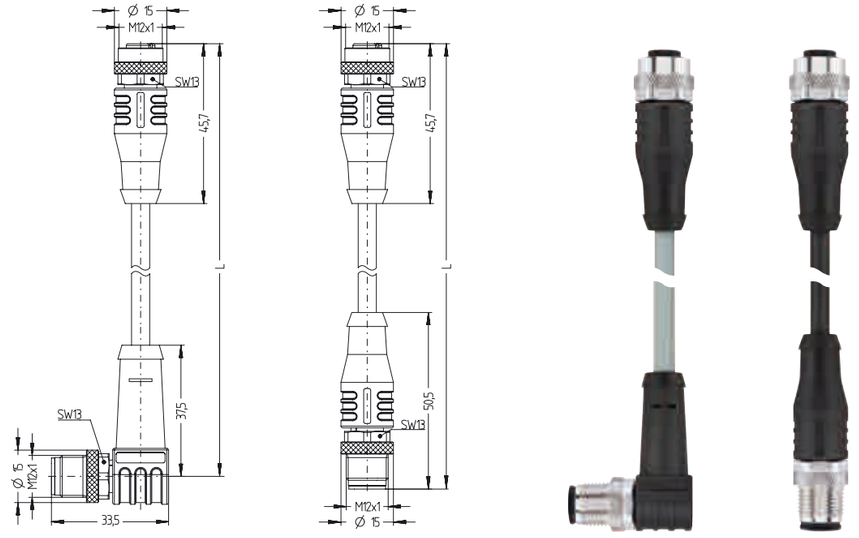
3 poles	4 poles	5 poles	8 poles	12 poles
				
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH | 4GN | 5PK | 6YE 7BK | 8GY | 9RD | 10VT | 11GY/PK | 12RD/BU

AL –	WAK	S	3 –	m –	AL –	W	WAS	S	3 /	S370
Automation Line										Cable quality
	Round connector M12x1 | WAK: *female*, straight ↑								Poles	
		Shielded ⊙						Shielded ⊙		
			Poles				Round connector M12x1 | WAS: *male*			
				Cable length [m]		W: angled ↱ | without: straight ↑				
					Automation Line					

not for P00,12-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
AL_M12x1 ⊙	*f* | ↑__ *m* | ↑	PUR | S370 ®	3	AL-WAKS3-m-AL-WASS3/S370	8051886	8046270	8046271
			4	AL-WAKS4-m-AL-WASS4/S370	8048241	8046282	8046283
			5	AL-WAKS4.5-m-AL-WASS4.5/S370	8047973	8046294	8046295
			8	AL-WAKS8-m-AL-WASS8/S370	8051887	8046968	8047013
			12	AL-WAKS12-m-AL-WASS12/S370	8051888	8047024	8047025
		PVC | P00	3	AL-WAKS3-m-AL-WASS3/P00	8051582	8051583	8051584
			4	AL-WAKS4-m-AL-WASS4/P00	8051594	8051595	8051596
			5	AL-WAKS4.5-m-AL-WASS4.5/P00	8051606	8051607	8051608
			8	AL-WAKS8-m-AL-WASS8/P00	8051618	8051619	8051620
			12	AL-WAKS12-m-AL-WASS12/P00	8051630	8051631	8051632
		PVC | P01 ®	3	AL-WAKS3-m-AL-WASS3/P01	8051790	8051791	8051792
			4	AL-WAKS4-m-AL-WASS4/P01	8051802	8051803	8051804
			5	AL-WAKS4.5-m-AL-WASS4.5/P01	8051814	8051815	8051816
			8	AL-WAKS8-m-AL-WASS8/P01	8051826	8051827	8051828
			12	AL-WAKS12-m-AL-WASS12/P01	8051838	8051839	8051840
	f | ↑__ *m* | ↱	PUR | S370 ®	3	AL-WAKS3-m-AL-WWASS3/S370	8051889	8046276	8046277
			4	AL-WAKS4-m-AL-WWASS4/S370	8048802	8046288	8046289
			5	AL-WAKS4.5-m-AL-WWASS4.5/S370	8051890	8046300	8046301
			8	AL-WAKS8-m-AL-WWASS8/S370	8051891	8047018	8047019
			12	AL-WAKS12-m-AL-WWASS12/S370	8051892	8047030	8047031
		PVC | P00	3	AL-WAKS3-m-AL-WWASS3/P00	8051588	8051589	8051590
			4	AL-WAKS4-m-AL-WWASS4/P00	8051600	8051601	8051602
			5	AL-WAKS4.5-m-AL-WWASS4.5/P00	8051612	8051613	8051614
			8	AL-WAKS8-m-AL-WWASS8/P00	8051624	8051625	8051626
			12	AL-WAKS12-m-AL-WWASS12/P00	8051636	8051637	8051638
		PVC | P01 ®	3	AL-WAKS3-m-AL-WWASS3/P01	8051796	8051797	8051798
			4	AL-WAKS4-m-AL-WWASS4/P01	8051808	8051809	8051810
			5	AL-WAKS4.5-m-AL-WWASS4.5/P01	8051820	8051821	8051822
			8	AL-WAKS8-m-AL-WWASS8/P01	8051832	8051833	8051834
			12	AL-WAKS12-m-AL-WWASS12/P01	8051844	8051845	8051846

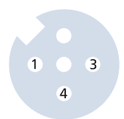
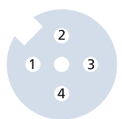
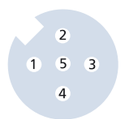
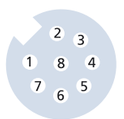
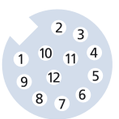
Other versions and cable-lengths are available upon request.



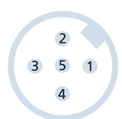
AUTOMATION LINE© M12x1 junction cable | shielded ⊙

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	5	60V
	8, 12	30V
Current load [Imax]	3, 4, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A | *female*

3 poles	4 poles	5 poles	8 poles	12 poles
				

Coding A | *male*

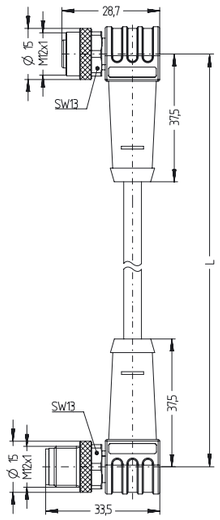
3 poles	4 poles	5 poles	8 poles	12 poles
				
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH | 4GN | 5PK | 6YE 7BK | 8GY | 9RD | 10VT | 11GY/PK | 12RD/BU

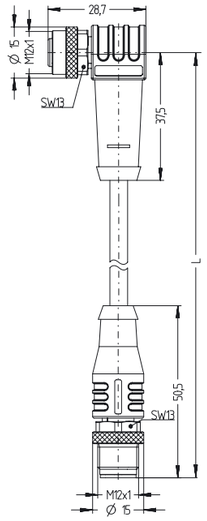
AL –	W	WAK	S	3 –	m –	AL –	W	WAS	S	3 /	S370
Automation Line											Cable quality
	W: angled ↦ | without: straight ↑									Poles	
		Round connector M12x1 | WAK: *female*							Shielded ⊙		
			Shielded ⊙					Round connector M12x1 | WAS: *male*			
				Poles			W: angled ↦ | without: straight ↑				
					Cable length [m]						
						Automation Line					

not for P00,12-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
AL_M12x1 ⊙	*f* | ↦ *m* | ↑	PUR | S370 ®	3	AL-WWAKS3-m-AL-WASS3/S370	8051904	8046279	8046280
			4	AL-WWAKS4-m-AL-WASS4/S370	8049426	8046291	8046292
			5	AL-WWAKS4.5-m-AL-WASS4.5/S370	8051897	8046303	8046304
			8	AL-WWAKS8-m-AL-WASS8/S370	8051898	8047021	8047022
			12	AL-WWAKS12-m-AL-WASS12/S370	8051899	8047033	8047034
		PVC | P00	3	AL-WWAKS3-m-AL-WASS3/P00	8051591	8051592	8051593
			4	AL-WWAKS4-m-AL-WASS4/P00	8051603	8051604	8051605
			5	AL-WWAKS4.5-m-AL-WASS4.5/P00	8051615	8051616	8051617
			8	AL-WWAKS8-m-AL-WASS8/P00	8051627	8051628	8051629
			12	AL-WWAKS12-m-AL-WASS12/P00	8051639	8051640	8051641
		PVC | P01 ®	3	AL-WWAKS3-m-AL-WASS3/P01	8051799	8051800	8051801
			4	AL-WWAKS4-m-AL-WASS4/P01	8051811	8051812	8051813
			5	AL-WWAKS4.5-m-AL-WASS4.5/P01	8051823	8051824	8051825
			8	AL-WWAKS8-m-AL-WASS8/P01	8051835	8051836	8051837
			12	AL-WWAKS12-m-AL-WASS12/P01	8051847	8051848	8051849
	f | ↦ *m* | ↦	PUR | S370 ®	3	AL-WWAKS3-m-AL-WWASS3/S370	8051900	8046273	8046274
			4	AL-WWAKS4-m-AL-WWASS4/S370	8051901	8046285	8046286
			5	AL-WWAKS4.5-m-AL-WWASS4.5/S370	8051902	8046297	8046298
			8	AL-WWAKS8-m-AL-WWASS8/S370	8048908	8047015	8047016
			12	AL-WWAKS12-m-AL-WWASS12/S370	8051903	8047027	8047028
		PVC | P00	3	AL-WWAKS3-m-AL-WWASS3/P00	8051585	8051586	8051587
			4	AL-WWAKS4-m-AL-WWASS4/P00	8051597	8051598	8051599
			5	AL-WWAKS4.5-m-AL-WWASS4.5/P00	8051609	8051610	8051611
			8	AL-WWAKS8-m-AL-WWASS8/P00	8051621	8051622	8051623
			12	AL-WWAKS12-m-AL-WWASS12/P00	8051633	8051634	8051635
		PVC | P01 ®	3	AL-WWAKS3-m-AL-WWASS3/P01	8051793	8051794	8051795
			4	AL-WWAKS4-m-AL-WWASS4/P01	8051805	8051806	8051807
			5	AL-WWAKS4.5-m-AL-WWASS4.5/P01	8051817	8051818	8051819
			8	AL-WWAKS8-m-AL-WWASS8/P01	8051829	8051830	8051831
			12	AL-WWAKS12-m-AL-WWASS12/P01	8051841	8051842	8051843

Other versions and cable-lengths are available upon request.

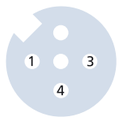
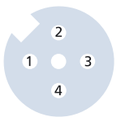
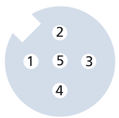
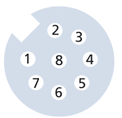
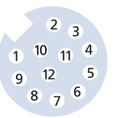




AUTOMATION LINE© M12x1 junction cable | shielded ⊙

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	5	60V
	8, 12	30V
Current load [Imax]	3, 4, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A | *female*

3 poles	4 poles	5 poles	8 poles	12 poles
				
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH | 4GN | 5PK | 6YE 7BK | 8GY | 9RD | 10VT | 11GY/PK | 12RD/BU

Coding A | *male*

W	WAK	C	E	3–	K

- K: Connection | K: Screw-clamp; S: Insulation displacement connector (IDC); L: Soldering
- Poles
- Locking mechanism stainless steel
- Field-wireable
- Round connector M12x1 | WAK: *female*; WAS: *male*
- W: angled ↱ | without: straight ↑

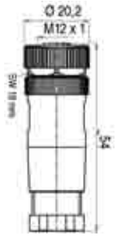


Fig.1

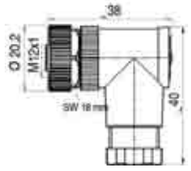


Fig.2

Fig.3

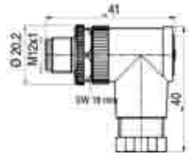


Fig.4

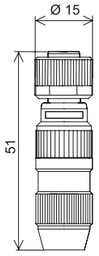


Fig.5

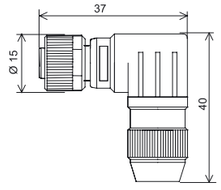


Fig.6

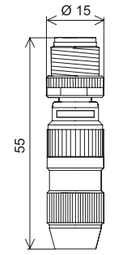


Fig.7

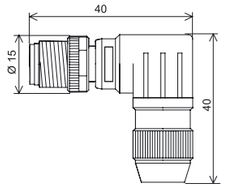


Fig.8

Product line	Version	Connection	Figure	Poles	A-coded	Type-designation	Order-No.
M12x1	Screw-clamp	*f* | ↑	Fig. 1	4		WAKC4K	8004811
				5		WAKC5K	8004815
				8		WAKC8K	8021862
		f | ↱	Fig.2	4		WWAKC4K	8004808
				5		WWAKC5K	8004809
				8		WWAKC8K	8041146
		m | ↑	Fig. 3	4		WASC4K	8004804
				5		WASC5K	8004805
				8		WASC8K	8021863
		m | ↱	Fig. 4	4		WWASC4K	8004806
				5		WWASC5K	8004807
				8		WWASC8K	8052219
	IDC	*f* | ↑	Fig. 5	3		WAKC3S	8019714
				4		WAKC4S	8019718
		f | ↱	Fig. 6	4		WWAKC4S	8019719
		m | ↑	Fig. 7	3		WASC3S	8019712
				4		WASC4S	8019716
		m | ↱	Fig. 8	4		WWASC4S	8019717
	Soldering	*f* | ↑	Fig. 1	12		WAKC12L	8031858
		f | ↱	Fig. 2	12		WWAKC12L	8031859
		m | ↑	Fig. 3	12		WASC12L	8031860
		m | ↱	Fig. 4	12		WWASC12L	8031861

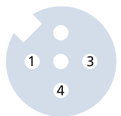
Other versions are available upon request.

M12x1 field-wireable

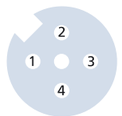
Technical data		Screw-clamp | **K** [Poles: Value]	**IDC** | **S** [Poles: Value]	Soldering | **L** [Poles: Value]
Rated voltage [Umax]		4: 250V | 5: 125V | 8: 60V	3, 4: 32V	12: 30V
Current load [Imax]		4, 5: 4A | 8: 2A	3, 4: 3A	12: 1,5A
Insulation resistance		≥10^8Ω	≥10^8Ω	≥10^8Ω
Standards		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Materials	Grip	PA, BK	PA, BK	PA, BK
	Contact carrier	PA, BK	PA, BK	PA, BK
	Contacts	CuZn, CuSnZn	CuZn, CuSnZn	CuZn, CuSnZn
Ambient temperature		-40°C...+85°C	-25°C...+85°C	-25°C...+85°C
Degree of pollution		3	3	3
Protection class (installed)		P67	IP67	P67
External diameter of the cable		3...6.5mm	4...5.1mm	6...8mm
Core cross-section/Clamping ability		max. 0.5mm²	max. 0.5mm²	max. 0.25mm²

Coding A | *female*

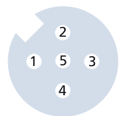
3 poles



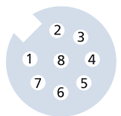
4 poles



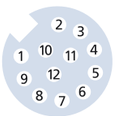
5 poles



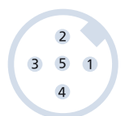
8 poles



12 poles



Coding A | *male*



PB–	W	WAK	C	S	W	4	K

- Connection | K: Screw-clamp; S: Insulation displacement connector (IDC); L: Soldering
- Poles
- Coding | without: A-coded; W: B-coded; Y: D-coded; X: X-coded
- Shielded ⊙
- Field-wireable
- Round connector M12x1: WAK: *female* | WAS: *male*
- W: angled ↱ | without: straight ↑
- Product line | without: Standard; PB: PROFIBUS; IE: Industrial Ethernet

suitable for: 4D | 8X; 4D; 5B

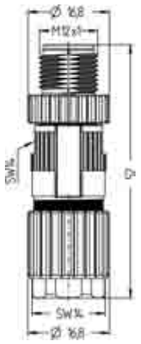


Fig.1

Fig.2

Fig.3

Fig.4

Fig.5

Fig.6

Product line	Version	Connection	Figure	Poles		Type-designation	Order-No.
M12x1	Screw-clamp	ƒ | ↑ | ⊙	Fig. 3	4	A	WAKCS4K	8035253
				5	A	WAKCS5K	8035254
				5	B	PB-WAKCSW4.5K	8031376
				8	A	WAKCS8K	8035193
		ƒ | ↱ | ⊙	Fig. 5	5	B	PB-WWAKCSW4.5K	8040235
		m | ↑ | ⊙	Fig. 4	4	A	WASCS4K	8035251
				5	A	WASCS5K	8035252
				5	B	PB-WASCSW4.5K	8031375
				8	A	WASCS8K	8035192
		m | ↱ | ⊙	Fig. 6	5	B	PB-WWASCSW4.5K	8040236
	IDC	*m* | ↑ | ⊙	Fig. 2	4	D	IE-WASCSY4S	8032913
		m | ↑ | ⊙	Fig. 1	8	X	IE-WASCSX8S	8050231
	Soldering	ƒ | ↑ | ⊙	Fig. 3	12	A	WAKCS12L	8052220
		m | ↑ | ⊙	Fig. 2	12	A	WASCS12L	8037435

Other versions are available upon request.

Coding | *male*

4 poles | A

4 poles | D

5 poles | A

5 poles | B

8 poles | A

8 poles | X

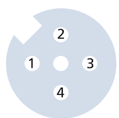
12 poles | A

M12x1 field-wireable

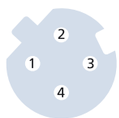
Technical data		Screw-clamp | K	IDC | S	Soldering | L
			[Poles: Value]	[Poles: Value]
Rated voltage [Umax]		4: 120V | 5: 60V | 8: 30V	4: 250V | 8: 50VAC/60VDC	12: 30V
Current load [Imax]		4, 5: 4A | 8: 2A	4: 4A | 8: 0,5A	12: 1,5A
Insulation resistance		≥10^8Ω	≥10^8Ω	≥10^8Ω
Standards		IEC 61076-2-101	4: IEC 61076-2-101	IEC 61076-2-101
			8: IEC 61076-2-109	
Materials	Grip	PA, BK	4: CuZn | 8: Ziinc diecasting, nickel-pl.	PA, BK
	Contact carrier	PA, BK	4: PA, BK | 8: PA, GN	PA, BK
	Contacts	CuZn, CuSnZn	CuSn, gold-plated	CuZn, CuSnZn
	Locking mechanism		CuZn, nickel-plated	
	Sealing		4: FPM/FKM | 8: NBR	
Ambient temperature		-25°C...+85°C	-25°C...+85°C | 8X: -40°C...+85°C	-25°C...+85°C
Degree of pollution		3	4: 3 | 8: 2	3
Protection class (installed)		IP67	IP67	P67
External diameter of the cable		4, 5: Ø 4...9mm	4: Ø 6...8mm	6...8mm
		8: Ø 4...6mm	8: Ø 5...9.7mm	
Core cross-section/Clamping ability		4,5: max. 0.75mm² |	4: AWG24/7, AWG22/7, AWG22/1	max. 0.14mm²
		8: max. 0.5mm²	8: AWG26/7 - AWG22/7, AWG24/1 - AWG22/1	

Coding | *female*

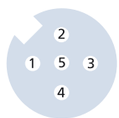
4 poles | A



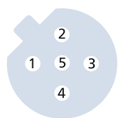
4 poles | D



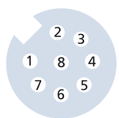
5 poles | A



5 poles | B

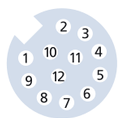


8 poles | A



8 poles | X

12 poles | A



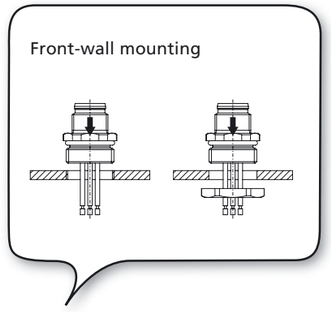
EC– | FK | D | E | 4 – | 0,5/ | 16

- 16: Screw in thread M16x1.5
- 0,5/: 0.5: Wire-length [m] | L: Soldering-contact
- 4 –: Poles
- E: stainless steel V4A | without: CuZn
- D: Adjustable ↻
- FK: Flange M12x1 | FK: *female* | FS: *male*
- EC–: Metrical screw in thread

not for 12-poles

Product line	Version	Poles	Soldering-contact Type-designation	Soldering-contact Order-No.	Wire-contact Type-designation	Wire-contact Order-No.
Front-wall mounting (optional	ƒ | ↑ | CuZn	3	EC-FK3-L/16	8027566	EC-FK3-0,5/16	8027515
threaded rear)		4	EC-FK4-L/16	8027569	EC-FK4-0,5/16	8027516
		4+PE	EC-FK5-L/16	8027570	EC-FK5-0,5/16	8027520
		5	EC-FK4.5-L/16	8052079	EC-FK4.5-0,5/16	8027519
		8	EC-FK8-L/16	8028122	EC-FK8-0,5/16	8028110
		12	EC-FK12-L/16	8028124	EC-FK12-0,5/16	8028116
	ƒ | ↑ | CuZn | ↻	3			EC-FKD3-0,5/16	8027526
		4			EC-FKD4-0,5/16	8027527
		4+PE			EC-FKD5-0,5/16	8027529
		5			EC-FKD4.5-0,5/16	8027528
		8			EC-FKD8-0,5/16	8028111
		12			EC-FKD12-0,5/16	8028117
	ƒ | ↑ | V4A	3	EC-FKE3-L/16	8029169	EC-FKE3-0,5/16	8028126
		4	EC-FKE4-L/16	8029170	EC-FKE4-0,5/16	8028127
		4+PE	EC-FKE5-L/16	8029171	EC-FKE5-0,5/16	8028131
		5	EC-FKE4.5-L/16	8052080	EC-FKE4.5-0,5/16	8028128
		8	EC-FKE8-L/16	8029016	EC-FKE8-0,5/16	8029015
		12	EC-FKE12-L/16	8029701	EC-FKE12-0,5/16	8029696
	m | ↑ | CuZn	3	EC-FS3-L/16	8029545	EC-FS3-0,5/16	8027382
		4	EC-FS4-L/16	8029546	EC-FS4-0,5/16	8027383
		4+PE	EC-FS5-L/16	8029548	EC-FS5-0,5/16	8027393
		5	EC-FS4.5-L/16	8029547	EC-FS4.5-0,5/16	8027394
		8	EC-FS8-L/16	8029551	EC-FS8-0,5/16	8028072
		12	EC-FS12-L/16	8029552	EC-FS12-0,5/16	8028073
	m | ↑ | CuZn | ↻	3			EC-FSD3-0,5/16	8027467
		4			EC-FSD4-0,5/16	8027469
		4+PE			EC-FSD5-0,5/16	8027471
		5			EC-FSD4.5-0,5/16	8027470
		8			EC-FSD8-0,5/16	8028074
		12			EC-FSD12-0,5/16	8028077
	m | ↑ | V4A	3	EC-FSE3-L/16	8029553	EC-FSE3-0,5/16	8028145
		4	EC-FSE4-L/16	8029554	EC-FSE4-0,5/16	8028147
		4+PE	EC-FSE5-L/16	8029556	EC-FSE5-0,5/16	8028149
		5	EC-FSE4.5-L/16	8029555	EC-FSE4.5-0,5/16	8028148
		8	EC-FSE8-L/16	8029557	EC-FSE8-0,5/16	8029083
		12	EC-FSE12-L/16	8029558	EC-FSE12-0,5/16	8029344

Other versions, wire-lengths and -colours are available upon request.



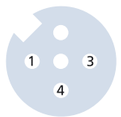
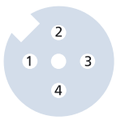
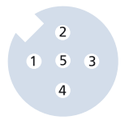
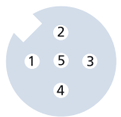
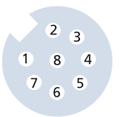
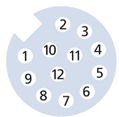
Dimensional drawings see page 58

EC-FS(E)_L | EC-FS(E)_0,5 | EC-FSD_0,5 | EC-FKD_0,5 | EC-FK(E)_L | EC-FK(E)_0,5

M12x1 flanges for front-wall mounting

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE, 5	60V
	8, 12	30V
Current load [Imax]	3, 4, 4+PE, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8Ω
Standards		IEC 61076-2-101
Materials	Flange housing	CuZn, nickel-plated | stainless steel 1.4404
	Contact carrier *(female)*	TPU, BK
	Contact carrier *(male)*	PA GF, BK
	Contacts	CuZn, gold-plated
	Sealing *(female)*	FPM/FKM
	Sealing (screw in thread)	NBR
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Coding A | *female*

3 poles	4 poles	4 poles+PE	5 poles	8 poles	12 poles
					

Coding A | *male*

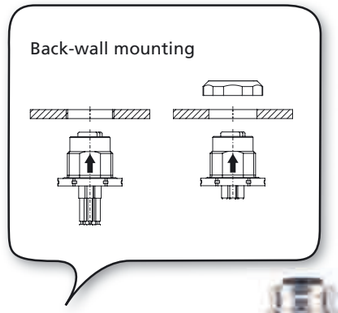
3 poles	4 poles	4 poles+PE	5 poles	8 poles	12 poles
					
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GN/YE	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH 4GN | 5PK | 6YE | 7BK 8GY | 9RD | 10VT 11GY/PK | 12RD/BU

EC –	W	FK	F	D	E	4 –	0,5/	16/	S3525
									Height-tolerance-balance Δh for different wall thickness
								Screw in thread 16: M16x1,5 | 12: M12x1	
							0,5: Wire-length [m] | P: Print-contact		
						Poles			
					E: stainless steel V4A | without: CuZn				
				Adjustable ↻					
			Threaded front						
		Flange M12x1 | FK: *female*, FS: *male*							
	W: angled ↱ | without: straight ↑								
Metrical screw in thread									

not for 12-poles | ↱

Product line	Version	Poles	Print-contact Type-designation	Print-contact Order-No.	Wire-contact Type-designation	Wire-contact Order-No.
Back-wall mounting	*f* | ↑ | CuZn | ↻	3	EC-FKFD3-P/16	8029476	EC-FKFD3-0,5/16	8027547
(threaded front)		4	EC-FKFD4-P/16	8029477	EC-FKFD4-0,5/16	8027548
		4+PE	EC-FKFD5-P/16	8029478	EC-FKFD5-0,5/16	8027550
		5			EC-FKFD4.5-0,5/16	8027549
		8	EC-FKFD8-P/16	8029479	EC-FKFD8-0,5/16	8028120
		12	EC-FKFD12-P/16	8029480	EC-FKFD12-0,5/16	8028121
	f | ↑ | V4A | ↻	3	EC-FKFDE3-P/16	8029695	EC-FKFDE3-0,5/16	8029175
		4	EC-FKFDE4-P/16	8029508	EC-FKFDE4-0,5/16	8029176
		4+PE	EC-FKFDE5-P/16	8029509	EC-FKFDE5-0,5/16	8029189
		5			EC-FKFDE4.5-0,5/16	8029752
		8	EC-FKFDE8-P/16	8029510	EC-FKFDE8-0,5/16	8029160
		12	EC-FKFDE12-P/16	8029512	EC-FKFDE12-0,5/16	8029700
	f | ↱ | CuZn | Δh<2,5mm	4	EC-WFKF4-P/12/S3525	8050275		
		5	EC-WFKF5-P/12/S3525	8050273		
	f | ↱ | CuZn | Δh<4,0mm	4	EC-WFKF4-P/12/S3540	8050274		
		5	EC-WFKF5-P/12/S3540	8050272		
	f | ↱ | CuZn | Δh<5,0mm	4	EC-WFKF4-P/12/S3550	8045188		
		5	EC-WFKF5-P/12/S3550	8050257		
	m | ↑ | CuZn | ↻	3	EC-FSFD3-P/16	8029495	EC-FSFD3-0,5/16	8027509
		4	EC-FSFD4-P/16	8029497	EC-FSFD4-0,5/16	8027508
		4+PE	EC-FSFD5-P/16	8029501	EC-FSFD5-0,5/16	8027505
		5	EC-FSFD4.5-P/16	8029499	EC-FSFD4.5-0,5/16	8027506
		8	EC-FSFD8-P/16	8029503	EC-FSFD8-0,5/16	8028080
		12	EC-FSFD12-P/16	8029505	EC-FSFD12-0,5/16	8028554
	m | ↑ | V4A | ↻	3	EC-FSFDE3-P/16	8029496	EC-FSFDE3-0,5/16	8029213
		4	EC-FSFDE4-P/16	8029498	EC-FSFDE4-0,5/16	8029214
		4+PE	EC-FSFDE5-P/16	8029502	EC-FSFDE5-0,5/16	8029216
		5			EC-FSFDE4.5-0,5/16	8029215
		8	EC-FSFDE8-P/16	8029504	EC-FSFDE8-0,5/16	8029158
		12	EC-FSFDE12-P/16	8029506	EC-FSFDE12-0,5/16	8029212
	m | ↱ | CuZn	4	EC-WFSF4-P/12	8046571		
		5	EC-WFSF5-P/12	8044960		

Other versions, wire-lengths and -colours are available upon request.



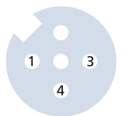
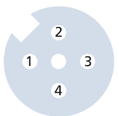
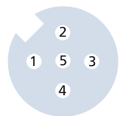
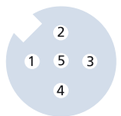
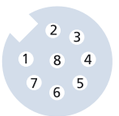
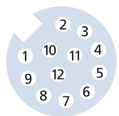
Dimensional drawings
see page 59

EC-FKFD_P | EC-WFSF | EC-WFKF | EC-FSFD_0,5 | EC-FSFD_P | EC-FKFD_0,5

M12x1 flanges for back-wall mounting

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE, 5	60V
	8, 12	30V
Current load [Imax]	3, 4, 4+PE, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8Ω
Standards		IEC 61076-2-101
Materials	Flange housing	CuZn, nickel-plated | stainless steel 1.4404
	Contact carrier *(female)*	TPU, BK
	Contact carrier (*male* + angled version)	PA GF, BK
	Contacts	CuZn, gold-plated
	Sealing	FPM/FKM
	Sealing (screw in thread)	NBR
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Coding A | *female*

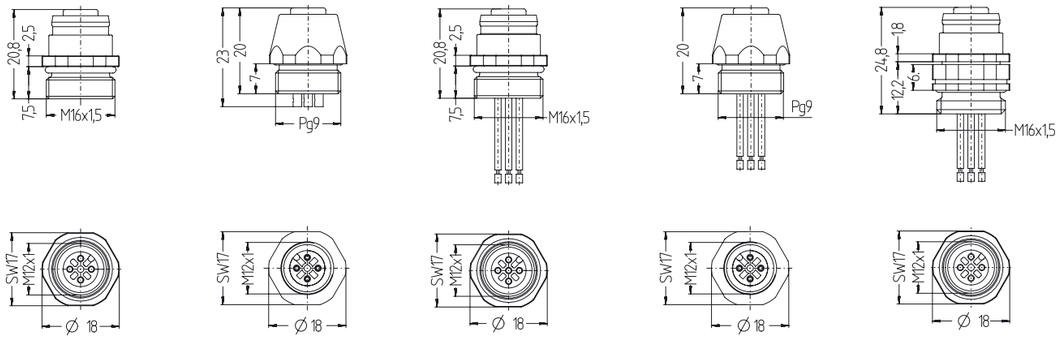
3 poles	4 poles	4 poles+PE	5 poles	8 poles	12 poles
					
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GN/YE	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH | 4GN | 5PK | 6YE | 7BK 8GY | 9RD | 10VT 11GY/PK | 12RD/BU

Coding A | *male*

Front-wall mounting

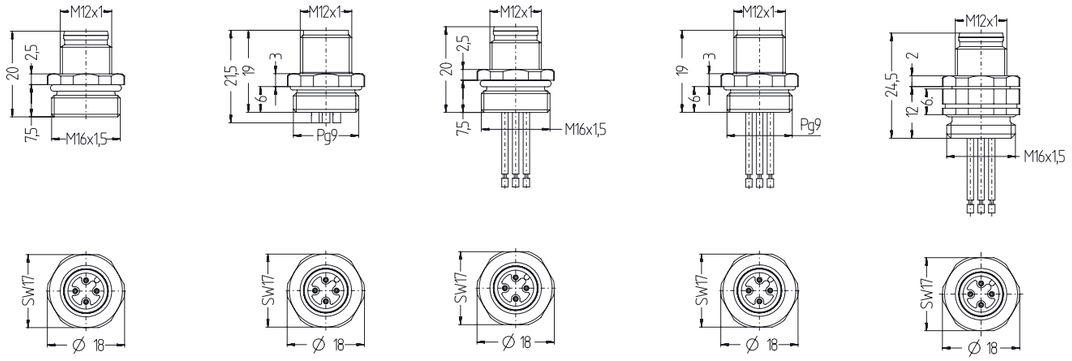
female

Soldering-contact		Wire-contact		Wire-contact ↻
FK(E)_-L/16	FB-FK_-L	FK(E)_-0,5/16	FB-FK_-0,5	FKD_-0,5/16



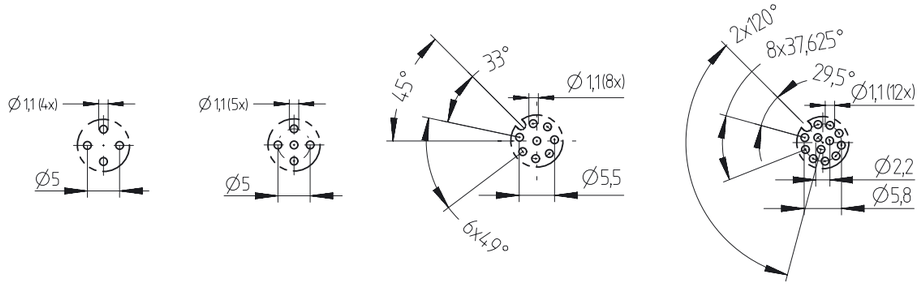
male

Soldering-contact		Wire-contact		Wire-contact ↻
FS(E)_-L/16	FB-FS_-L	FS(E)_-0,5/16	FB-FS_-0,5	FSD_-0,5/16



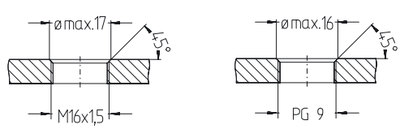
Hole pattern

4 poles	5 poles	8 poles | A	12 poles | A



Panel cut-out

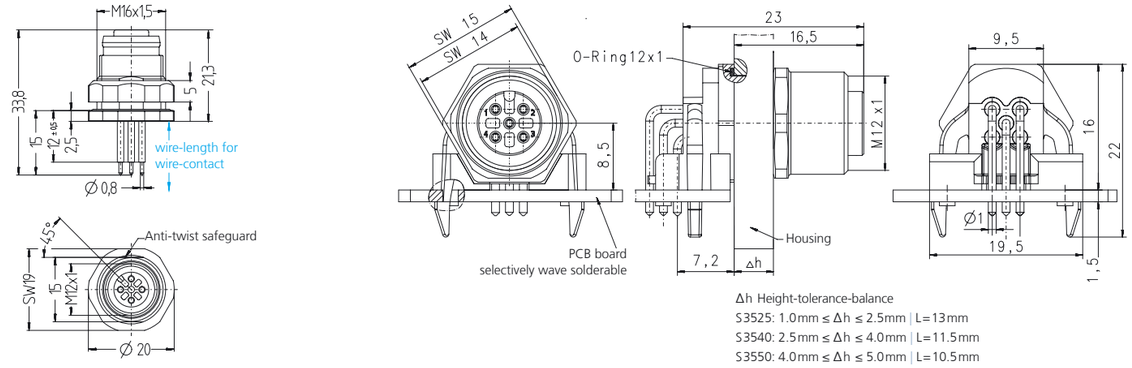
Screw n thread	Screw n thread
M16x1,5	Pg9



(threaded front) Back-wall mounting

female

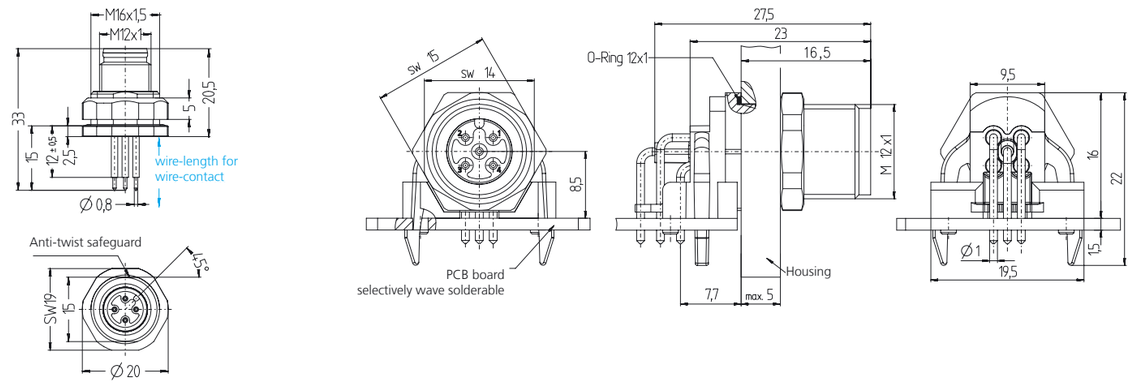
Print-contact | Wire-contact	Print-contact ↱
FKFD(E)_-P/16 | FKFD(E)_-0,5/16	WFKF_-P/12/S... | see Δh Height-tolerance-balance



Δh Height-tolerance-balance
S3525: 1.0mm ≤ Δh ≤ 2.5mm | L=13mm
S3540: 2.5mm ≤ Δh ≤ 4.0mm | L=11.5mm
S3550: 4.0mm ≤ Δh ≤ 5.0mm | L=10.5mm

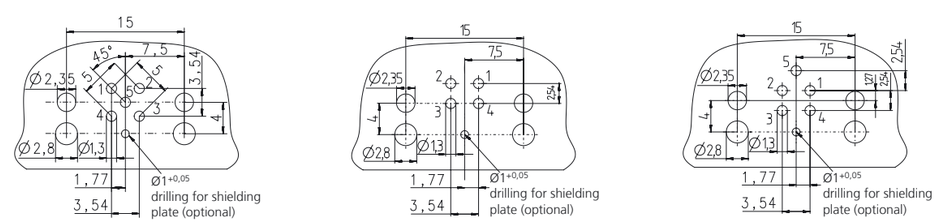
male

Print-contact | Wire-contact	Print-contact ↱
FSFD(E)_-P/16 | FSFD(E)_-0,5/16	WFSF_-P/12



Hole pattern

4 poles *female* ↱	4 poles *male* ↱	5 poles *male* ↱



Panel cut-out

	Print-contact ↑ Wire-contact	Print-contact ↱

For pinning see corresponding articel. | Spare nuts are not includes, see accessories on page 194.

E	WAS	4
		Poles
	M12x1 | WAS: *male*	
Built-in connector		

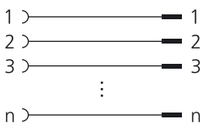
RoHS

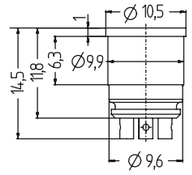
Product line	Version	Poles	Type-designation	Order-No.
M12x1_built-in connector	*m* | ↑	4	EWAS4	8008155
		4+PE	EWAS5	8017592
		5	EWAS4.5	8008156
		8	EWAS8	8009737
		12	EWAS12	8030496

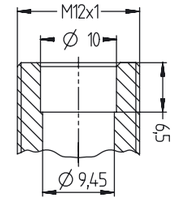
FK	FS	4 /	M12
			M12x1 Screw in thread
		Poles	
	M12x1 | FS: *male*		
M12x1 | FK: *female*			

RoHS

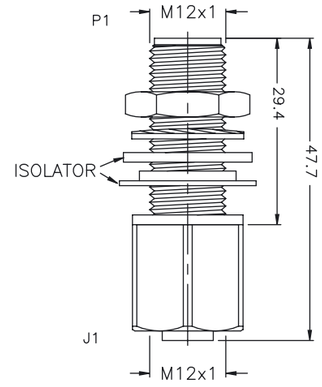
Product line	Version	Poles	Type-designation	Order-No.
M12x1_ Feed-through connection	*f_m*	4	FKFS4/M12	8018404
		5	FKFS4.5/M12	8018405
		8	FKFS8/M12	8018410

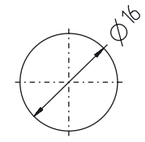






EWAS





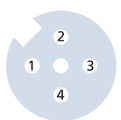
FKFS

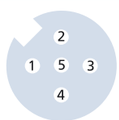
M12x1 built-in connector | Feed-through connection

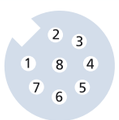
Technical data	Built-in connector		Feed-through connection	
	Poles	Value	Poles	Value
Rated voltage [Umax]	4	250V	4	250V
	4+PE, 5	60V	5	60V
	8, 12	30V	8	30V
Current load [Imax]	4, 4+PE, 5	4A	4, 4+PE	4A
	8	2A	8	2A
	12	1.5A		
Insulation resistance		$\geq 10^8\,\Omega$		$\geq 10^8\,\Omega$
Standards		IEC 61076-2-101		IEC 61076-2-101
Materials	Contact carrier 4-8-pol.	PA GF, BK	Flange housing	CuZn, nickel-plated
	Contact carrier 12-pol.	TPU, BK	Contact carrier	TPU, YE
	Contacts	CuZn, gold-plated	Contacts	CuZn, gold-plated
Ambient temperature		-30°C...+90°C		-30°C...+90°C
Degree of pollution		3		3
Protection class		IP67		IP67
Mechanical life cycle		>100 mating cycles		>100 mating cycles

Coding A | *female*

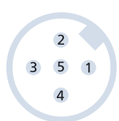
4 poles | 4 poles+PE | 5 poles | 8 poles | 12 poles







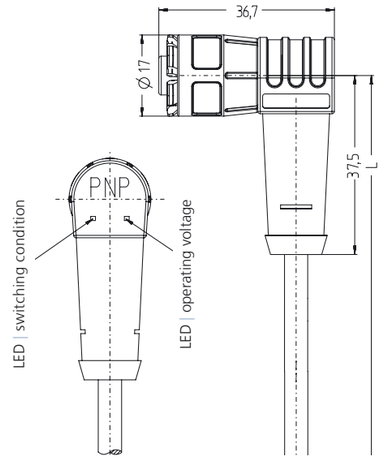
Coding A | *male*

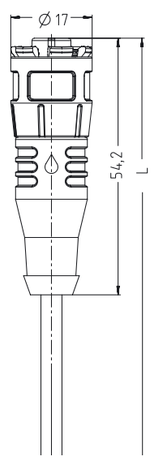


SV–	W	WAK	3–	P2–	m/	S370
						Cable quality
					Cable length [m] included wire-end sleeves	
				PNP | Quantity LEDs + circuit		
			Poles			
		Round connector M12x1 | WAK: *female*				
	W: angled ⌐ | without: straight ↑					
Quick-turn connection						

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
SV_M12x1	*f* | ↑	PUR | S370®	3	SV-WAK3-m/S370	8052092	8052093	8052094
			4	SV-WAK4-m/S370	8052095	8052097	8052098
			4+PE	SV-WAK5-m/S370	8052099	8052100	8045149
		PVC | P00	3	SV-WAK3-m/P00	8052152	8052153	8052154
			4	SV-WAK4-m/P00	8039816	8038584	8039896
			4+PE	SV-WAK5-m/P00	8052193	8052194	8041337
	f | ⌐	PUR | S370®	3	SV-WWAK3-m/S370	8052190	8050532	8052191
			4	SV-WWAK4-m/S370	8048009	8048010	8048011
			4+PE	SV-WWAK5-m/S370	8052105	8052106	8052107
		PVC | P00	3	SV-WWAK3-m/P00	8052196	8041334	8041335
			4	SV-WWAK4-m/P00	8039817	8039818	8039897
			4+PE	SV-WWAK5-m/P00	8052155	8052156	8052157
f | ⌐ | LED2		PUR | S370®	3	SV-WWAK3P2-m/S370	8052108	8052109	8052110
		PVC | P00	3	SV-WWAK3P2-m/P00	8052158	8052159	8052160

Other versions and cable-lengths are available upon request.

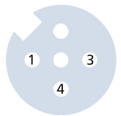
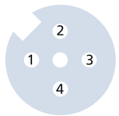
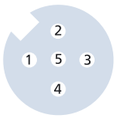




Quick-turn connection S12x1 *female* + *female* LED

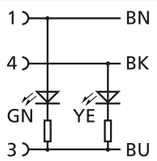
Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE	60V
	LED-version	24 V_{DC}
Current load [Imax]	3, 4, 4+PE	4A
Insulation resistance		≥10^8 Ω
Standards		according to IEC 61076-2-101
Materials	Grip	TPU, BU | LED-version: TPU, transparent
	Contact carriers	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	POM
Ambient temperature		-30°C…+80°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>50 mating cycles

Coding A | *female*

3 poles	4 poles	4 poles+PE
		
1BN | 3BU | 4BK	1BN | 2WH | 3BU | 4BK	1BN | 2WH | 3BU | 4BK | 5GN/YE

LED-version

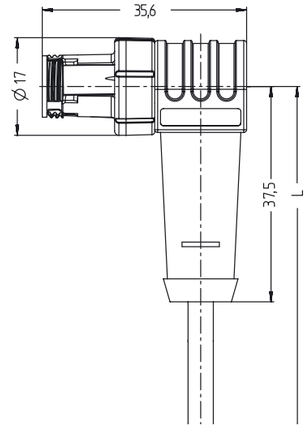
3P2

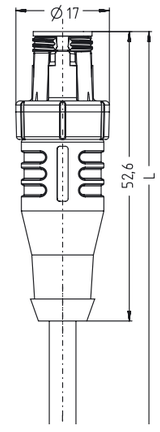


SV–	W	WAS	3 –	m /	S370
					Cable quality
				Cable length [m] included wire-end sleeves	
			Poles		
		Round connector M12x1 | WAS: *male*			
	W: angled ⮡ | without: straight ↑				
Quick-turn connection					

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
SV_M12x1	*m* | ↑	PUR | S370®	3	SV-WAS3-m/S370	8052111	8052112	8052113
			4	SV-WAS4-m/S370	8052114	8052115	8052116
			4+PE	SV-WAS5-m/S370	8052117	8052118	8052119
		PVC | P00	3	SV-WAS3-m/P00	8052161	8052162	8052163
			4	SV-WAS4-m/P00	8052164	8042592	8052165
			4+PE	SV-WAS5-m/P00	8052166	8052167	8052168
	m | ⮡	PUR | S370®	3	SV-WWAS3-m/S370	8052120	8052121	8052122
			4	SV-WWAS4-m/S370	8052123	8052124	8052125
			4+PE	SV-WWAS5-m/S370	8052126	8052127	8052128
		PVC | P00	3	SV-WWAS3-m/P00	8052169	8052170	8052171
			4	SV-WWAS4-m/P00	8052172	8052173	8052174
			4+PE	SV-WWAS5-m/P00	8052175	8052176	8052177

Other versions and cable-lengths are available upon request.





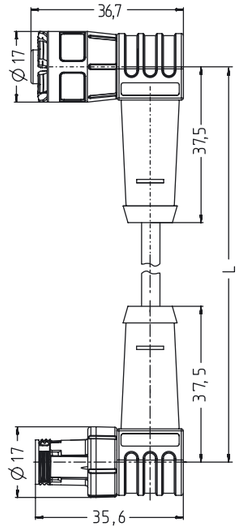
Quick-turn connection S12x1 *male*

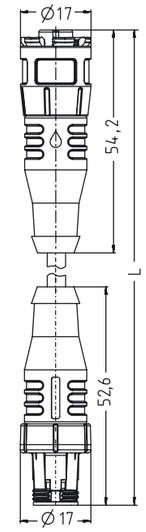
Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE	60V
Current load [Imax]	3, 4, 4+PE	4A
Insulation resistance		≥10^8 Ω
Standards		according to IEC 61076-2-101
Materials	Grip	TPU, BU
	Contact carrier	TPU, BK
	Contacts	CuZn, gold-plated
	Locking mechanism	POM
Ambient temperature		-30°C…+80°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>50 mating cycles

Coding A | *male*

3 poles	4 poles	4 poles+PE
		
1BN | 3BU | 4BK	1BN | 2WH | 3BU | 4BK	1BN | 2WH | 3BU | 4BK | 5GN/YE

SV–	W	WAK	3–	m–	SV–	W	WAS	3 /	S370
									Cable quality
								Poles	
							Round connector M12x1 | WAS: *male*		
						W: angled ↱ | without: straight ↑			
					Quick-turn connection				
				Cable length [m]					
			Poles						
		Round connector M12x1 | WAK: *female*							
	W: angled ↱ | without: straight ↑								
Quick-turn connection									





RoHS | PG

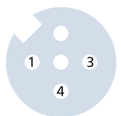
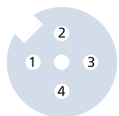
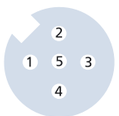
Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
SV_M12x1	*f* | ↑ __ *m* | ↑	PUR | S370®	3	SV-WAK3-m-SV-WAS3/S370	8052129	8052130	8052131
			4	SV-WAK4-m-SV-WAS4/S370	8052132	8052133	8052134
			4+PE	SV-WAK5-m-SV-WAS5/S370	8052135	8052136	8052137
		PVC | P00	3	SV-WAK3-m-SV-WAS3/P00	8041340	8041341	8041342
			4	SV-WAK4-m-SV-WAS4/P00	8046120	8047582	8040520
			4+PE	SV-WAK5-m-SV-WAS5/P00	8052178	8052179	8052180
	f | ↱ __ *m* | ↱	PUR | S370®	3	SV-WWAK3-m-SV-WWAS3/S370	8052138	8052139	8052140
			4	SV-WWAK4-m-SV-WWAS4/S370	8052141	8052142	8052143
			4+PE	SV-WWAK5-m-SV-WWAS5/S370	8052144	8052145	8052146
		PVC | P00	3	SV-WWAK3-m-SV-WWAS3/P00	8052181	8052182	8052183
			4	SV-WWAK4-m-SV-WWAS4/P00	8052184	8052185	8052186
			4+PE	SV-WWAK5-m-SV-WWAS5/P00	8052187	8052188	8052189

Other versions and cable-lengths are available upon request.

Quick-turn connection S12x1 | junction cable

Technical data	Poles	Value
Rated voltage [U_{max}]	3, 4	250V
	4+PE	60V
Current load [I_{max}]	3, 4, 4+PE	4A
Insulation resistance		≥10^8 Ω
Standards		according to IEC 61076-2-101
Materials	Grip	TPU, BU
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	POM
Ambient temperature		-30°C…+80°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>50 mating cycles

Coding A

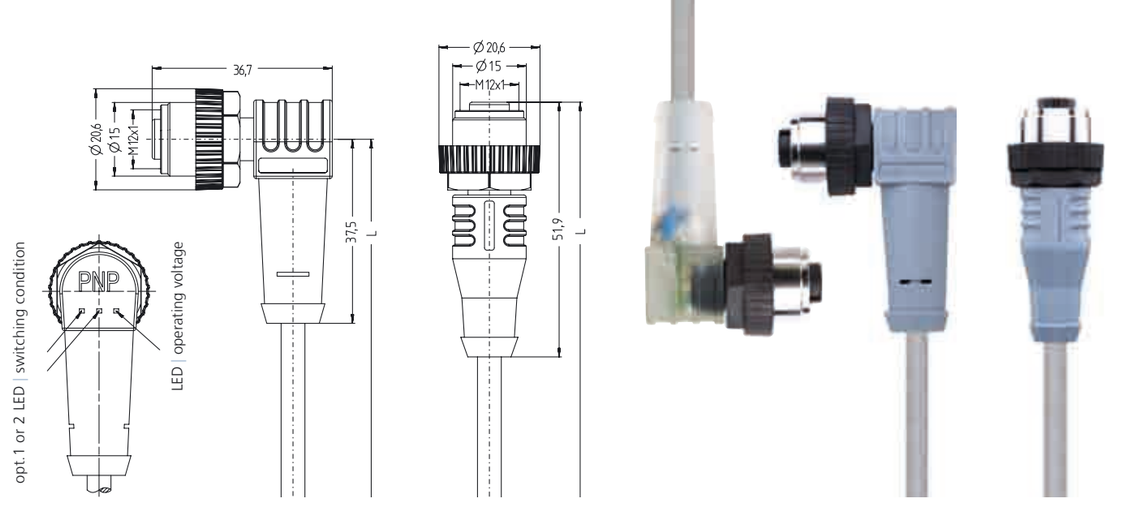
3 poles | *female*	3 poles | *male*	4 poles | *female*	4 poles | *male*	4 poles+PE | *female*	4 poles+PE | *male*
					
1BN | 3BU | 4BK		1BN | 2WH | 3BU | 4BK		1BN | 2WH | 3BU | 4BK | 5GN/YE	

NM– | W | WAK | 3– | P2 – | m / | S370

- S370: Cable quality
- m: Cable length [m] included wire-end sleeves
- P2: PNP | Quantity LEDs + circuit
- 3: Poles
- WAK: Kupplung *female* | Round connector M12x1
- W: angled ⮡ | without: straight ↑
- NM: With defined torque

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
NM_M12x1	*f* | ↑	PUR | S370 ®	3	NM-WAK3-m/S370	8052350	8052351	8052353
			4	NM-WAK4-m/S370	8052356	8052357	8045007
			4+PE	NM-WAK5-m/S370	8052358	8052359	8052360
		PVC | P00	3	NM-WAK3-m/P00	8052411	8052412	8052413
			4	NM-WAK4-m/P00	8052414	8052415	8052416
			4+PE	NM-WAK5-m/P00	8052417	8052418	8052419
	f | ⮡	PUR | S370 ®	3	NM-WWAK3-m/S370	8052361	8052362	8052363
			4	NM-WWAK4-m/S370	8052367	8052368	8052369
			4+PE	NM-WWAK5-m/S370	8052380	8052381	8052382
		PVC | P00	3	NM-WWAK3-m/P00	8052420	8052421	8052422
			4	NM-WWAK4-m/P00	8052426	8052427	8052428
			4+PE	NM-WWAK5-m/P00	8052438	8052439	8052440
	f | ⮡ | LED 2	PUR | S370 ®	3	NM-WWAK3P2-m/S370	8052364	8052365	8052366
	LED 2		4	NM-WWAK4P2-m/S370	8052370	8052371	8052373
	LED 3		4	NM-WWAK4P3-m/S370	8052374	8052375	8052376
	LED 3.1		4	NM-WWAK4P3.1-m/S370	8052377	8052378	8052379
	LED 2		4+PE	NM-WWAK5P2-m/S370	8052383	8052384	8052385
	LED 3		4+PE	NM-WWAK5P3-m/S370	8052386	8052387	8052388
	LED 3.1		4+PE	NM-WWAK5P3.1-m/S370	8052389	8052390	8052391
	f | ⮡ | LED 2	PVC | P00	3	NM-WWAK3P2-m/P00	8052423	8052424	8052425
	LED 2		4	NM-WWAK4P2-m/P00	8052429	8052430	8052431
	LED 3		4	NM-WWAK4P3-m/P00	8052432	8052433	8052434
	LED 3.1		4	NM-WWAK4P3.1-m/P00	8052435	8052436	8052437
	LED 2		4+PE	NM-WWAK5P2-m/P00	8052441	8052442	8052443
	LED 3		4+PE	NM-WWAK5P3-m/P00	8052444	8052447	8052446
	LED 3.1		4+PE	NM-WWAK5P3.1-m/P00	8052448	8052449	8052450

Other versions and cable-lengths are available upon request.

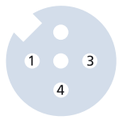


M12x1 with defined torque *female* + *female* LED

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE	60V
	LED-version	24 V_{DC}
Current load [Imax]	3, 4, 4+PE	4A
Insulation resistance		≥10^8 Ω
Standards		according to IEC 61076-2-101
Materials	Grip	TPU, BU| LED-version: TPU, transparent
	Contact carrier	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	POM
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

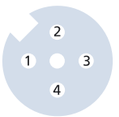
Coding A | *female*

3 poles



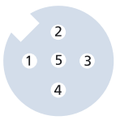
1BN | 3BU | 4BK

4 poles



1BN | 2WH | 3BU | 4BK

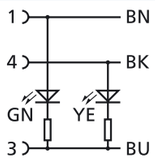
4 poles+PE



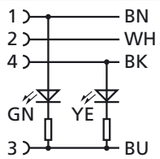
1BN | 2WH | 3BU | 4BK | 5GN/YE

LED-versions

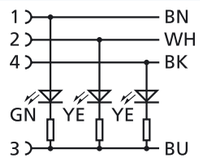
3P2



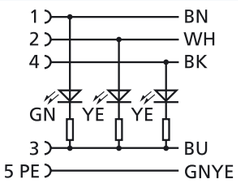
4P2



4P3



5P3



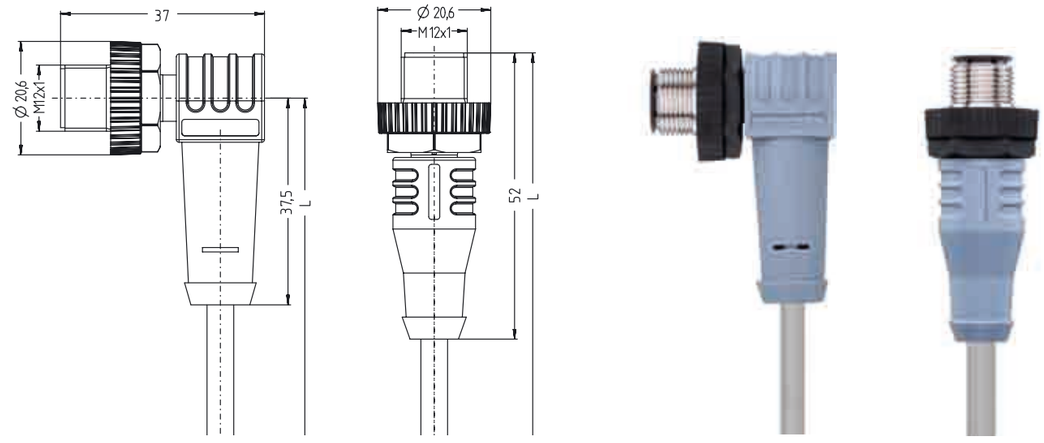
3.1 = GN/RD/YE

NM– | W | WAS | 3 – | m / | S370

- S370: Cable quality
- m: Cable length [m] included wire-end sleeves
- 3: Poles
- WAS: Round connector M12x1 | *male*
- W: angled ↱ | without: straight ↑
- NM: With defined torque

Product line	Version	Cable quality	Poles	Type-designation	2m	Cable length m 5m	10m
NM_M12x1	*m* | ↑	PUR | S370 ®	3	NM-WAS3-m/S370	8052392	8052393	8052394
			4	NM-WAS4-m/S370	8052395	8052397	8052396
			4+PE	NM-WAS5-m/S370	8052398	8052399	8052400
		PVC | P00	3	NM-WAS3-m/P00	8052452	8052451	8052453
			4	NM-WAS4-m/P00	8052454	8052455	8052456
			4+PE	NM-WAS5-m/P00	8052457	8052458	8052459
	m | ↱	PUR | S370 ®	3	NM-WWAS3-m/S370	8052401	8052402	8052403
			4	NM-WWAS4-m/S370	8052404	8052405	8052406
			4+PE	NM-WWAS5-m/S370	8052407	8052408	8052409
		PVC | P00	3	NM-WWAS3-m/P00	8052460	8052461	8052462
			4	NM-WWAS4-m/P00	8052463	8052464	8052465
			4+PE	NM-WWAS5-m/P00	8052466	8052467	8052468

Other versions and cable-lengths are available upon request.



M12x1 with defined torque *male*

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE	60V
Current load [Imax]	3, 4, 4+PE	4A
Insulation resistance		≥10^8Ω
Standards		according to IEC 61076-2-101
Materials	Grip	TPU, BU
	Contact carrier	TPU, BK
	Contacts	CuZn, gold-plated
	Locking mechanism	POM
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Coding A | *male*

3 poles	4 poles	4 poles+PE
		
1BN | 3BU | 4BK	1BN | 2WH | 3BU | 4BK	1BN | 2WH | 3BU | 4BK | 5GN/YE

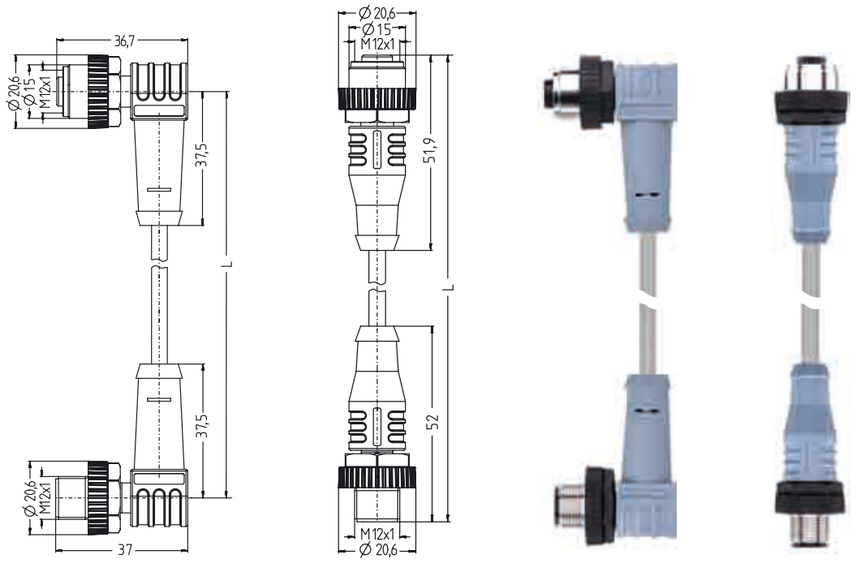
NM– | W | WAK | 3– | m– | NM– | W | WAS | 3 / | S370

- S370: Cable quality
- 3: Poles
- WAS: Round connector M12x1 | *male*
- W: angled ↱ | without: straight ↑
- NM: With defined torque
- m: Cable length [m]
- 3: Poles
- WAK: Round connector M12x1 | *female*
- W: angled ↱ | without: straight ↑
- NM: With defined torque

RoHS

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
NM_M12x1	*f* | ↑ __ *m* | ↑	PUR | S370	3	NM-WAK3-m-NM-WAS3/S370	8052560	8052561	8052562
			4	NM-WAK4-m-NM-WAS4/S370	8045377	8045009	8045010
			4+PE	NM-WAK5-m-NM-WAS5/S370	8052593	8052594	8052595
		PVC | P00	3	NM-WAK3-m-NM-WAS3/P00	8052572	8052573	8052574
			4	NM-WAK4-m-NM-WAS4/P00	8052575	8052576	8052577
			4+PE	NM-WAK5-m-NM-WAS5/P00	8052589	8052590	8052591
	f | ↱ __ *m* | ↱	PUR | S370	3	NM-WWAK3-m-NM-WWAS3/S370	8052563	8052564	8052565
			4	NM-WWAK4-m-NM-WWAS4/S370	8052566	8052567	8052568
			4+PE	NM-WWAK5-m-NM-WWAS5/S370	8052569	8052570	8052571
		PVC | P00	3	NM-WWAK3-m-NM-WWAS3/P00	8052578	8052579	8052587
			4	NM-WWAK4-m-NM-WWAS4/P00	8052581	8052582	8052588
			4+PE	NM-WWAK5-m-NM-WWAS5/P00	8052584	8052585	8052586

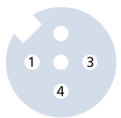
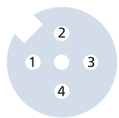
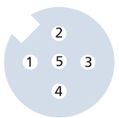
Other versions and cable-lengths are available upon request.



M12x1 with defined torque | junction cable

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	4+PE	60V
Current load [Imax]	3, 4, 4+PE	4A
Insulation resistance		≥10^8 Ω
Standards		according to IEC 61076-2-101
Materials	Grip	TPU, BU
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	POM
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Coding A

3 poles | *female*	3 poles | *male*	4 poles | *female*	4 poles | *male*	4 poles+PE | *female*	4 poles+PE | *male*
					
1BN | 3BU | 4BK		1BN | 2WH | 3BU | 4BK		1BN | 2WH | 3BU | 4BK | 5GN/YE	

FB – W WAK 3 – P2 – m / S3930

- FB – Food & Beverage
- W: angled ↱ | without: straight ↑
- WAK: Round connector M12x1 | female
- WAS: male
- 3 – Poles
- P2 – PNP | Quantity LEDs + circuit
- m / Cable length [m]
- S3930 Cable quality

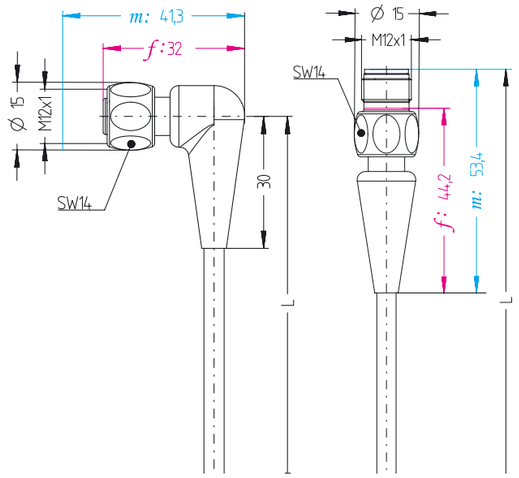
ECOLAB FDA RoHS

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
FB_M12x1	*f* | ↑	TPE | S3930	3	FB-WAK3-m/S3930	8050462	8058555	8058556
		TPE | S3930	4	FB-WAK4-m/S3930	8050464	8058557	8058558
	f | ↱	TPE | S3930	3	FB-WWAK3-m/S3930	8050463	8058559	8058560
		TPE | S3930	4	FB-WWAK4-m/S3930	8050465	8058561	5058562
	f | ↱ | LED 2	TPE | S3930	3	FB-WWAK3P2-m/S3930	8058611	8058612	8058613
		TPE | S3930	4	FB-WWAK4P2-m/S3930	8058614	8058615	8058616
	m | ↑	TPE | S3930	3	FB-WAS3-m/S3930	8050468	8058563	8058564
		TPE | S3930	4	FB-WAS4-m/S3930	8050470	8058565	8058566
	m | ↱	TPE | S3930	3	FB-WWAS3-m/S3930	8050469	8058567	8058568
		TPE | S3930	4	FB-WWAS4-m/S3930	8050471	8058569	8058570

Other versions and cable-lengths are available upon request.

Cable quality TPE | S3930

Flexible PVC-free polypropylene cable (light grey, similar RAL 7035) with great strength against highly effective detergents of the Food & Beverage industry. In addition, good microbes- and chemicals resistance and suitable for drag-chain applications. Well adapted for use in food industry, packaging-, bottling plants as well as industrial machinery- and plant construction.

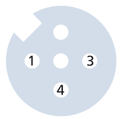


Food & Beverage hygienic _ M12x1

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	LED-Version	24 V_{DC}
Current load [Imax]	3, 4	4A
Insulation resistance		≥ 10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	PP, GY | LED-version: PP, transparent
	Contact carrier	PP, GY
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	V4A
Ambient temperature		-40°C…+105°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A

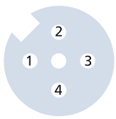
3 poles | *female*



1BN | 3BU | 4BK

3 poles | *male*

4 poles | *female*

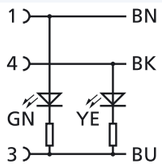


1BN | 2WH | 3BU | 4BK

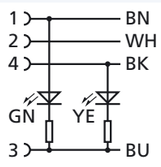
4 poles | *male*

LED-versions

3P2



4P2



FB– | W | WAK | 4– | m – | FB– | W | WAS | 4/ | S2300

- S2300: Cable quality
- 4/: Poles
- WAS: Round connector M12x1 | WAS: *male*
- W: W: angled ↱ | without: straight ↑
- FB–: Food & Beverage
- m –: Cable length [m]
- 4–: Poles
- WAK: Round connector M12x1 | WAK: *female*
- W: W: angled ↱ | without: straight ↑
- FB–: Food & Beverage

ECOLAB FDA RoHS PG

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
FB_M12x1	*f* | ↑ __ *m* | ↑	TPE | S3930	3	FB-WAK3-m-FB-WAS3/S3930	8058587	8058588	8058589
		TPE | S3930	4	FB-WWAK4-m-FB-WWAS4/S3930	8058590	8058591	8058592
	f | ↱ __ *m* | ↱	TPE | S3930	3	FB-WWAK3-m-FB-WWAS3/S3930	8058593	8058594	8058595
		TPE | S3930	4	FB-WWAK4-m-FB-WWAS4/S3930	8058596	8058597	8058598

Other versions and cable-lengths are available upon request.

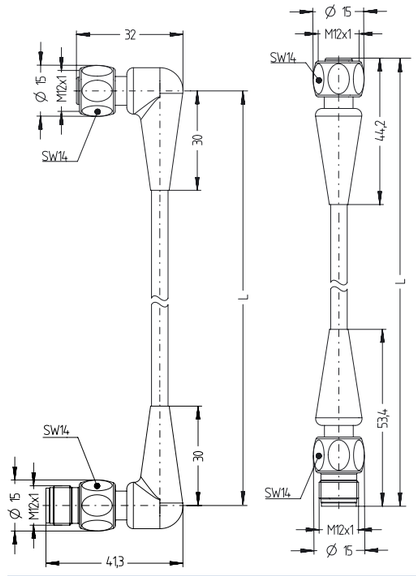
FB– | FK | 4 – | 0,5/ | S2300

- S2300: Food & Beverage plus | PVC-free
- 0,5/: 0,5: Wire-length [m] | L: Soldering-contact
- 4 –: Poles
- FK: Flange M12x1 | FK: *female* | FS: *male*
- FB–: Food & Beverage

ECOLAB RoHS PG

Product line	Version	Poles	Soldering-contact Type-designation	Order-No.	Wire-contact Type-designation	Order-No.
Front-wall mounting (optional	*f* | ↑ | V4A | Pg9	4	FB-FK4-L/S2300	8033633	FB-FK4-0,5/S2300	8033631
threaded rear)	*m* | ↑ | V4A | Pg9	4	FB-FS4-L/S2300	8033634	FB-FS4-0,5/S2300	8033632

Other versions and wire-lengths are available upon request.



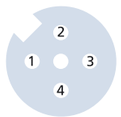
Dimensional drawings see page 58

Food & Beverage hygienic _ M12x1 junction cable + flanges

Technical data	Round connectors		Flanges	
	Poles	Value	Poles	Value
Rated voltage [Umax]	3, 4	250V	4	250V
Current load [Imax]	3, 4	4A	4	4A
Insulation resistance		≥10^8Ω		≥10^8Ω
Standards		IEC 61076-2-101		IEC 61076-2-101
Materials	Grip	PP, GY	Flange housing	V4A
	Grip LED-version	PP, transparent	Contact carrier	PP, BK
	Contact carrier	PP, GY	Sealing *(female)*	FPM/FKM
	Sealing *(female)*	FPM/FKM	Contacts	CuZn, gold-plated
	Contacts	CuZn, gold-plated	Sealing (screw in thread)	NBR
	Locking mechanism	V4A		
Ambient temperature		-40°C…+105°C		-40°C…+105°C
Degree of pollution		3		3
Protection class (installed)		IP67, IP69K		IP67
Mechanical life cycle		>100 mating cycles		>100 mating cycles

Coding A

4 poles | *female*



4 poles | *male*

1BN | 2WH | 3BU | 4BK

HT – | W | WAK | 3 – | m / | S2430

- S2430: Cable quality
- m /: Cable length [m] included wire-end sleeves
- 3 –: Poles
- WAK: Round connector M12x1 | WAS: WAK: *female* | WAS: *male*
- W: angled ⮡ | without: straight ↑
- HT –: High temperature-proof

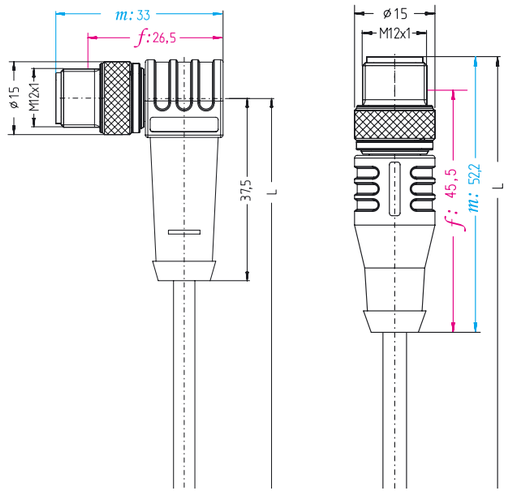
RoHS

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
HT_M12x1	ƒ | ↑	PTFE | S2430	3	HT-WAK3-m/S2430	8039210	8036085	8039211
			4	HT-WAK4-m/S2430	8036518	8036086	8036154
			5	HT-WAK4.5-m/S2430	8039212	8036087	8039213
			8	HT-WAK8-m/S2430	8039214	8039215	8039216
			12	HT-WAK12-m/S2430	8039711	8039712	8039713
	ƒ | ⮡	PTFE | S2430	3	HT-WWAK3-m/S2430	8039224	8036088	8039225
			4	HT-WWAK4-m/S2430	8039226	8036089	8037214
			5	HT-WWAK4.5-m/S2430	8039227	8036090	8039228
			8	HT-WWAK8-m/S2430	8039229	8037024	8039230
			12	HT-WWAK12-m/S2430	8039940	8039941	8039942
	m | ↑	PTFE | S2430	3	HT-WAS3-m/S2430	8039231	8036091	8039232
			4	HT-WAS4-m/S2430	8039233	8036092	8039234
			5	HT-WAS4.5-m/S2430	8039235	8036093	8038342
			8	HT-WAS8-m/S2430	8039236	8039237	8039238
			12	HT-WAS12-m/S2430	8039943	8039944	8039945
	m | ⮡	PTFE | S2430	3	HT-WWAS3-m/S2430	8039467	8036094	8039468
			4	HT-WWAS4-m/S2430	8039469	8036095	8039470
			5	HT-WWAS4.5-m/S2430	8039471	8036096	8039472
			8	HT-WWAS8-m/S2430	8039473	8039474	8039475
			12	HT-WWAS12-m/S2430	8039476	8039477	8039478

Other versions and cable-lengths are available upon request.

Cable quality PTFE | S2430

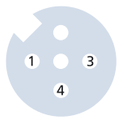
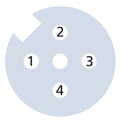
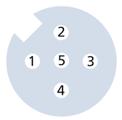
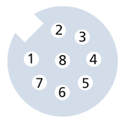
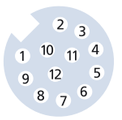
Flexible PTFE-cable with high temperature resistance (300°C/3000h), cold bending resistance down to -65°C. Excellent oil-, acids-, chemicals-, ozone- and weather resistance and flame retardant. It is low-smoke without corrosive fire gases. Applications in extended temperature-range of industrial machinery- and plant construction as well as the chemical- and automotive industries.



M12x1 High temperature-proof

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	250V
	5	60V
	8, 12	30V
Current load [Imax]	3, 4, 5	4A
	8	2A
	12	1.5A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	PBT GF, BK
	Contact carrier	PBT GF, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-20°C...+150°C
Degree of pollution		3
Protection class (installed)		IP65
Mechanical life cycle		>100 mating cycles

Coding A | *female*

3 poles	4 poles	5 poles	8 poles	12 poles
				

Coding A | *male*

3 poles	4 poles	5 poles	8 poles	12 poles
				
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN 4YE | 5GY | 6PK 7BU | 8RD	1BN | 2BU | 3WH | 4GN | 5PK | 6YE | 7BK 8GY | 9RD | 10VT | 11GY/PK | 12RD/BU

HT– | W | WAK | 3– | m – | HT– | W | WAS | 3 / | S2430

- S2430: Cable quality
- 3 /: Poles
- WAS: Round connector M12x1 | WAS: *male*
- W: W: angled ↱ | without: straight ↑
- HT–: High temperature-proof
- m –: Cable length [m]
- 3–: Poles
- WAK: Round connector M12x1 | WAK: *female*
- W: W: angled ↱ | without: straight ↑
- HT–: High temperature-proof

RoHS

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
HT_M12x1	*f* | ↑ __ *m* | ↑	PTFE | S2430	3	HT-WAK3-m-HT-WAS3/S2430	8036254	8051955	8039480
			4	HT-WAK4-m-HT-WAS4/S2430	8038667	8038668	8038669
			5	HT-WAK4.5-m-HT-WAS4.5/S2430	8051958	8039949	8039950
			8	HT-WAK8-m-HT-WAS8/S2430	8051960	8039952	8039953
			12	HT-WAK12-m-HT-WAS12/S2430	8051962	8039955	8039956
HT_M12x1	*f* | ↱ __ *m* | ↱	PTFE | S2430	3	HT-WWAK3-m-HT-WWAS3/S2430	8051956	8039958	8039959
			4	HT-WWAK4-m-HT-WWAS4/S2430	8051957	8039961	8039137
			5	HT-WWAK4.5-m-HT-WWAS4.5/S2430	8051959	8039963	8039964
			8	HT-WWAK8-m-HT-WWAS8/S2430	8051961	8039966	8039967
			12	HT-WWAK12-m-HT-WWAS12/S2430	8051963	8039969	8039970

Other versions and cable-lengths are available upon request.

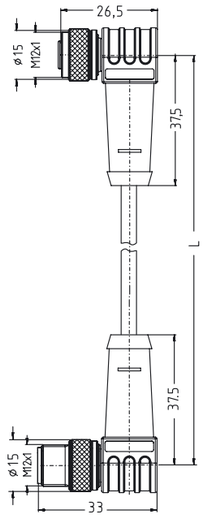
HT– | FK | 3– | 0,5/ | 16/ | S2470

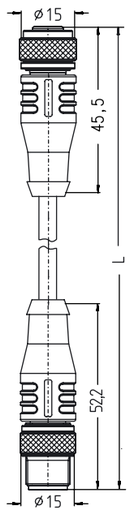
- S2470: High temperature-proofe materials
- 16/: Screw in thread M16x1,5
- 0,5/: 0,5: wire-length [m] | L: Soldering-contact
- 3–: Poles
- FK: Flange M12x1 | FK: *female*, FS: *male*
- HT–: High temperature-proof

RoHS

Product line	Version	Poles	Wire-contact Type-designation	Order-No.
Front-wall mounting (optional	*f* | ↑	3	HT-FK3-0,5/16/S2470	8037311
threaded rear)		4	HT-FK4-0,5/16/S2470	8037322
		5	HT-FK4.5-0,5/16/S2470	8037323
		8	HT-FK8-0,5/16/S2470	8037324
		12	HT-FK12-0,5/16/S2470	8037325
	m | ↑	3	HT-FS3-0,5/16/S2470	8037288
		4	HT-FS4-0,5/16/S2470	8037292
		5	HT-FS4.5-0,5/16/S2470	8037293
		8	HT-FS8-0,5/16/S2470	8037294
		12	HT-FS12-0,5/16/S2470	8037295

Other versions and wire-lengths are available upon request.



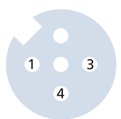
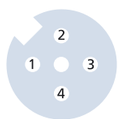
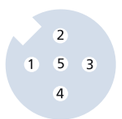
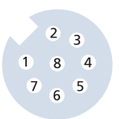
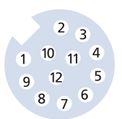


Dimensional drawings see page 58

M12x1 High temperature-proof | junction cable + flanges

Technical data	Round connectors		Flanges	
	Poles	Value	Poles	Value
Rated voltage [Umax]	3, 4	250V	3, 4	250V
	5	60V	5	60V
	8, 12	30V	8, 12	30V
Current load [Imax]	3, 4, 5	4A	3, 4, 5	4A
	8	2A	8	2A
	12	1.5A	12	1.5A
Insulation resistance		≥10^8 Ω		≥10^8 Ω
Standards		IEC 61076-2-101		IEC 61076-2-101
Materials	Grip	PBT GF, BK	Flange housing	CuZn, nickel-plated
	Contact carrier	PBT GF, BK	Contact carrier	PBT GF, BK
	Sealing *(female)*	FPM/FKM	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated	Sealing (screw in thread)	NBR
Ambient temperature		-20°C…+150°C		-20°C…+150°C
Degree of pollution		3		3
Protection class (installed)		IP65		IP67
Mechanical life cycle		>100 mating cycles		>100 mating cycles

Coding A | *female*

3 poles	4 poles	5 poles	8 poles	12 poles
				

Coding A | *male*

				
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GY	1WH | 2BN | 3GN | 4YE 5GY | 6PK | 7BU | 8RD	1BN | 2BU | 3WH | 4GN 5PK | 6YE | 7BK | 8GY | 9RD 10VT 11GY/PK | 12RD/BU

IE– | W | WAS | S | Y | 4.029– | m / | S2171

- Cable quality
- Cable length [m]
- Contacts.allocation code
- Y: D-coded | X: X-coded
- Shielded ⊙
- Round connector M12x1 | WAS: *male*
- WASC: *male* field-wireable ✋
- W: angled ↱ | without: straight ↑
- Industrial Ethernet

suitable for: PROFINET | ETHERNET POWERLINK | EtherNet/IP | EtherCAT
4D | 8X | 4D

c UL us | RoHS | not for X-coded | ✋

Product line	Version	Poles	Cable quality	Type-designation	✋	Cable length m 2m	5m	10m
IE_M12x1 ⊙	4 | D | Cat5e	*m* | ↑	PUR | S2171 ®	IE-WASSY4.029-m/S2171		8031449	8031450	8031451
		m | ↱	PUR | S2171 ®	IE-WWASSY4.029-m/S2171		8044087	8041940	8044088
		m | ↑ | ✋		IE-WASCSY4S	8032913			
	8 | X | Cat6A	*m* | ↑	PUR | S3500 ®	IE-WASSX8.066-m/S3500		8049457	8049458	8049459
			PUR | S3500 ®	IE-WWASSX8.066-m/S3500		8055441	8055442	8055443
			PUR | S3900 ®	IE-WASSX8.066-m/S3900		8055348	8055349	8055350
		m | ↑ | ✋		IE-WASCSX8S	8050231			
	100m buscable		PUR | S2171 ®		8036284			
			PUR | S3500 ®		8053361			
			PUR | S3900 ®		8055779			

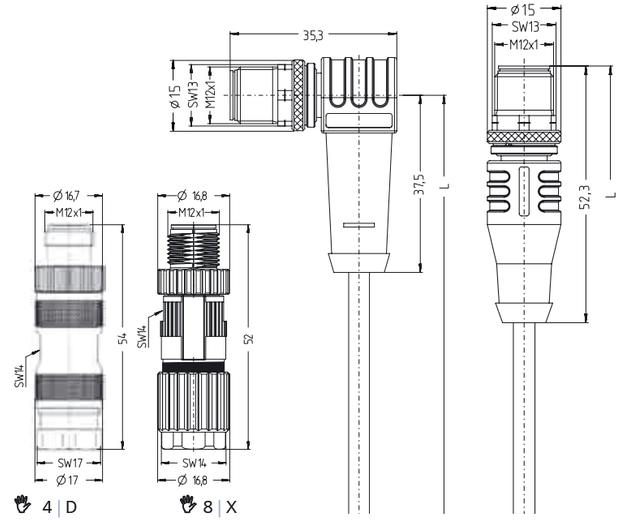
Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

Cable quality

S2171 | S3500: Flexible, PVC-, silicone-, and halogen free Ethernet cable with green PUR outer jacket (similar RAL 6018) and polyethylene wire isolation. This cable is oil resistant according to DIN EN 60811-2-1 and flame immune according to IEC 60332-1-2. Drag-chain application is possible. Cable admitted according to UL.

S3900: Shielded Ethernet-cable in PUR-quality for safe and industrial-suited data transmission in automation and fieldbus technology. The cable is UL-approved and meets the Cat6A requirements. Materials and constructive setup allow for a mechanical stress. The cable is flame-retardant according to IEC 60332-1-2.

ESCHA Nomenclatur		S2171 ® | PNO	S3500 ®	S3900 ® | PNO
Cable quality for		M12x1 | 4 | D	M12x1 | 8 | X	M12x1 | 8 | X
Transmission category		Cat5e	Cat7	Cat6A
Nominal diameter		Ø 6.5mm	Ø 6.4mm	Ø 8.6mm
Wire-structure data		4xAWG22/7	4x2xAWG26/7	4x2xAWG23/7
Wire colours		WH | YE | BU | OG	WH(BU) | BU; WH(OG) | OG; WH(GN) | GN; WH(BN) | BN	WH(BU) | BU; WH(OG) | OG; WH(GN) | GN; WH(BN) | BN
Bending radius	single	5xd	5xd	4xd
	repeated	7.5xd	7.5xd	8xd
	draig-chain	≥200mm (v_{max} = 4m/s | a_{max} = 4m/s²)	≥200mm (v_{max} = 4m/s | a_{max} = 4m/s²)	–
Temperature range		-40°C…+70°C	-40°C…+80°C	-40°C…+80°C



Industrial Ethernet _ M12x1 *male*

Technical data	Round connector 4 | D	Round connector 8 | X	Field-wireable ✋ 4 | D	Field-wireable ✋ 8 | X
Rated voltage [Umax]	250V	50VAC | 60VDC	250V	50VAC | 60VDC
Current load [Imax]	4A	0.5A	4A	0.5A
Insulation resistance	≥10^8Ω	≥10^8Ω	≥10^8Ω	≥10^8Ω
Standards	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Materials Grip	TPU, BK	TPU, BK	CuZn	Zinc diecasting, nickel-pl.
Contact carrier	TPU, BK	PA, transparent	PA, BU	PA, GN
Contacts	CuZn, gold-plated	CuZn, gold-plated	CuSn, gold-plated	CuSn, gold-plated
Locking mec. (M12x1)	CuZn, nickel-plated	CuZn, nickel-plated	CuZn, nickel-plated	CuZn
Sealing			FPM/FKM	FPM/FKM
Cut-contacts				Zn, nickel-plated
Locking mec. (M15x0,5)				Bronze, tin-plated
Stress-relief/Loader				PA
Shielding				Bronze, tin-plated
Ambient temperature	-30°C…+90°C	-30°C…+90°C	-25°C…+85°C	-25°C…+85°C
Degree of pollution	3	2	3	2
Protection class (installed)	IP67, IP69K	IP67, IP69K (not for S3900)	IP67	IP67
Mechanical life cycle	>100 mating cycles	>100 mating cycles	>100 mating cycles	>100 mating cycles
Core cross-section/Clamping ability			AWG24/7, AWG22/7, AWG22/1	AWG26/7 - AWG22/7 AWG24/1 - AWG22/1
External diameter of the cable			Ø 6...8mm	Ø 5...9,7mm
Connection			IDC	IDC

Coding | *male*

4 poles | D

1YE | 2WH | 3OG | 4BU

8 poles | X

1WH(OG) | 2OG; 3WH(GN) | 4GN; 5WH(BN) | 6BN; 7WH(BU) | 8BU

Feed-through connection M12x1 → RJ45

IE–	W	FK	F	D	S	Y	4–	RJ45	K
									K: *female*
								RJ45	
							Poles		
						X-coded			
					Shielded ⊙				
				Adjustable ↻					
			Threaded front						
		Flange M12x1 | FK: *female*							
	W: angled ↦ | without: straight ↑								
Industrial Ethernet									

Feed-through connection M12x1 → M12x1

IE–	WAK	S	Y4–	WAK	S	Y4
						4-poles | D-coded
					Shielded ⊙	
				Round connector M12x1 | WAK: *female*		
			4-poles | D-coded			
		Shielded ⊙				
	Round connector M12x1 | WAK: *female*					
Industrial Ethernet						

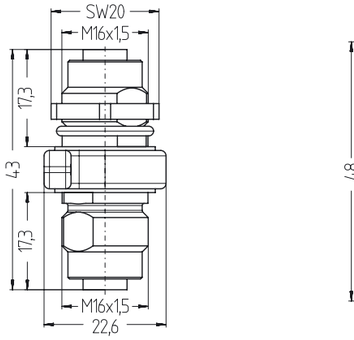


Fig. 1

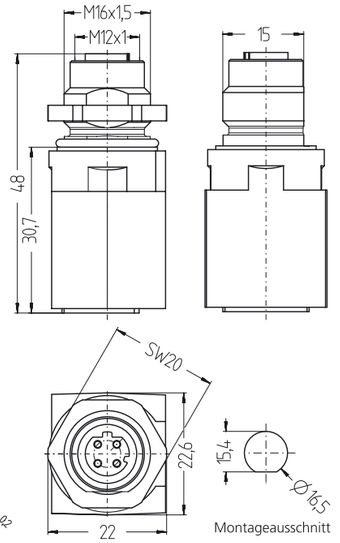


Fig. 2

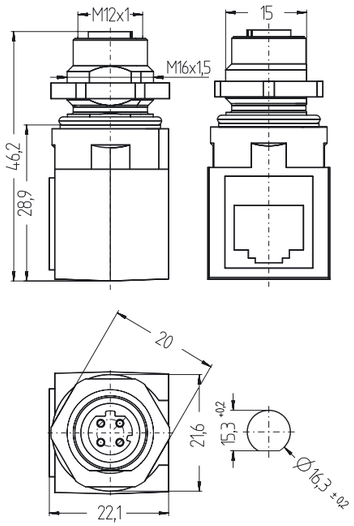
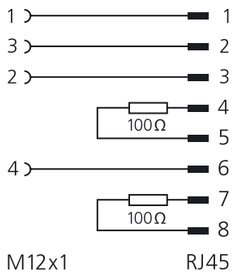


Fig. 3

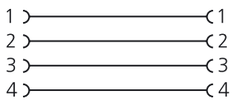
Product line		Version	Poles | Coding	Order-No.	Type-designation	Order-No.
Back-wall mounting	M12x1 > RJ45	*f* | ↑ | ↻ | ⊙ | Cat5e	4 | D	Fig. 3	IE-FKFDSY4-RJ45K	8057085
(threaded front)		*f* | ↦ | ↻ | ⊙ | Cat5e	4 | D	Fig. 2	IE-WFKFDSY4-RJ45K	8057086
	M12x1 > M12x1	*f* | ↑ | ⊙ | Cat5e	4 | D	Fig. 1	IE-WAKSY4-WAKSY4	8057084

Wiring

IE-(W)FKFDSY4-RJ45K



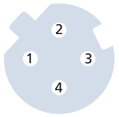
IE-WAKSY4-WAKSY4



Industrial Ethernet _ M12x1 Feed-through connection | 4 poles

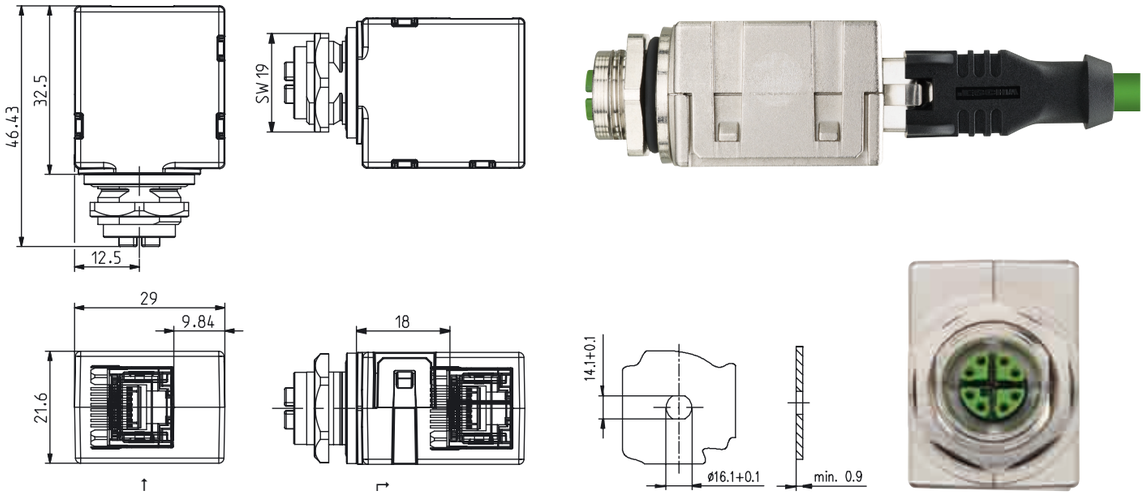
Technical data	M12x1 → RJ45	M12x1 → M12x1
Rated voltage [U_{max}]	50 V$_{AC/DC}$	50 V$_{AC/DC}$
Current load [I_{max}]	0,2 A	4 A
Standards	M12x1: IEC 61076-2-101	IEC 61076-2-101
	RJ45: IEC 60603-7-51	
Ambient temperature	-25°C…+85°C	-25°C…+85°C
Protection class (installed)	M12x1: IP67	IP67

Coding

	RJ45	M12x1 *female* 4 poles | D
		

Feed-through connection

IE–	W	FK	F	D	S	X	8–	RJ45	K
									K: *female*
								RJ45	
							Poles		
						X-coded			
					Shielded ⊙				
				Adjustable ↻					
			Threaded front						
		Flange M12x1 | FK: *female*							
	W: angled ↦ | without: straight ↑								
Industrial Ethernet									

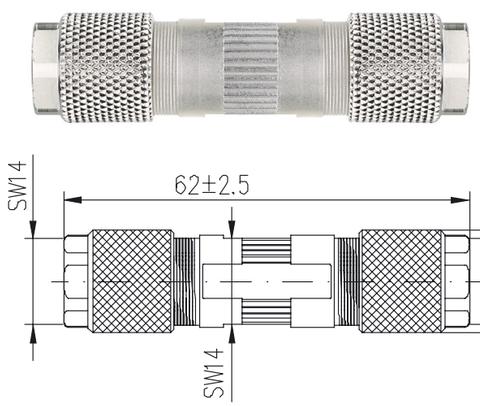


Product line	Version	Poles	Type-designation	Order-No.
Back-wall mounting (threaded front)	*f* | ↑ | ↻ | ⊙ | Cat6A	8 | X	IE-FKFDSX8-RJ45K	8055773
	f | ↦ | ↻ | ⊙ | Cat6A	8 | X	IE-WFKFDSX8-RJ45K	8055774

Cable-connection

IE	LV	C	S	8
				Poles
			Shielded ⊙	
		Field-wireable		
	Cable-connection			
Industrial Ethernet				

Product line	Version	Poles	Type-designation	Order-No.
IE Cable-connection		⊙ | Cat7 Class FA	8	IE-LVCS8	8055776



Industrial Ethernet _ M12x1 Feed-through connection + Cable-connection | 8 poles

Technical data		Feed-through connection	Cable-connection
Rated voltage [Umax]		50 VAC | 60 VDC	50 VAC | 60 VDC
Current load [Imax]		0.5A	0.5A
Insulation resistance		≥ 10^8 Ω	≥ 10^8 Ω
Standards		M12x1: IEC 61076-2-109	IEC 61076-2-101
		RJ45: IEC 60603-7-51	
Material	Housing	Zinc diecasting	Zinc diecasting
	Contact carrier/ Loader	PA, GN/BK	PA
	Contacts	M12x1: CuZn, gold-plated	CuSn
	Locking mec.	CuZn, nickel-plated	CuZn, nickel-plated
	O-Ring	M12x1: FPM/FKM	
	Contacts		CuSn
	Shielding	CuSn	CuSn
Ambient temperature		-25°C…+85°C	-25°C…+85°C
Degree of pollution		2	2/3
Protection class (installed)		M12x1: IP67	IP67
Mechanical life cycle		>100 mating cycles	10 re-connections
Core cross-section/Clamping ability			AWG24/1-AWG22/1
			AWG26/7-AWG22/7
External diameter of the cable			Ø 5.0…9.7 mm
Connection			IDC

Coding | *male*	
M12x1 *female* 8-poles | X	RJ45

IE– | RJ45 | S | C | S | 8.003– | m / | S3400

- S3400 – Cable quality
- m / – Cable length [m]
- 8.003 – Contacts.allocation code
- S – Shielded ⊙
- C – Field-wireable
- S – *male*
- RJ45
- IE – Industrial Ethernet

suitable for: PROFINET 4D | 8X; ETHERNET POWERLINK, EtherNet/IP, EtherCAT 4D

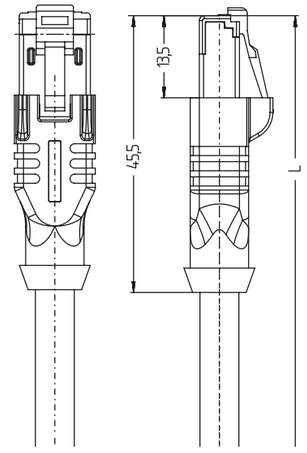
Product line	Poles	Version	Cable quality	Type-designation		Cable length m 2m	5m	10m
IE_RJ45 ⊙	4-poles | Cat5e	*m* | ↑	PUR | S3400 ®	IE-RJ45SS8.005-m/S3400		8056581	8056582	8056583
	8-poles | Cat6	*m* | ↑	PUR | S3500 ®	IE-RJ45SS8.002-m/S3500		8052214	8052215	8052216
		m | ↑ |		IE-RJ45SCS8	8048117			
	100m buscable		PUR | S3400 ®		8055896			
			PUR | S3500 ®		8053361			

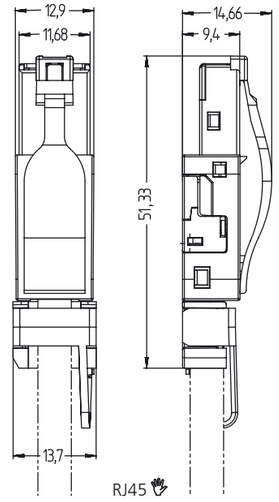
Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

Cable quality

Flexible, PVC-, silicone-, and halogen free Ethernet cable with green PUR outer jacket (similar RAL 6018) and polyethylene wire isolation. This cable is oil resistant according to DIN EN 60811-2-1 and flame immune according to IEC 60332-1-2. Drag-chain application is possible. Cable admitted according to UL.

ESCHA Nomenclatur		S3400 ®	S3500 ®
Cable quality for		PUR	RJ45 | 8-poles
Transmission category		according to Cat5e	Cat7
Nominal diameter		Ø 4.8mm	Ø 6.4mm
Wire-structure data		4xAWG26/19	4x2xAWG26/7
Wire colours		WH/OG | WH/BU | BU | OG	WH(BU) | BU; WH(OG) | OG; WH(GN) | GN; WH(BN) | BN
Bending radius	single	4xd	5xd
	repeated	7.5xd	10xd
	draig-chain	≥ 36mm (v_{max} = 3m/s | a_{max} = 5m/s²)	
Temperature range		-40°C…+80°C	-40°C…+80°C



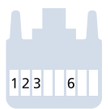


Industrial Ethernet_ RJ45 *male*

Technical data	Round connector		Field-wireable	
	Poles	Value	Poles	Value
Rated voltage [Umax]	4, 8-pole	50V	4, 8-pole	50V
Current load [Imax]	4, 8-pole	1A	4, 8-pole	1A
Insulation resistance		≥10^8Ω		≥5^8Ω
Standards		IEC 60603-7-5		IEC 60603-7-5
Materials	Grip	TPU, BK	Housing	Zinc diecasting
	Contact carrier/Loader	PC, transparent	Loader	PA, transparent
	Contacts	CuZn, gold-plated	Contacts	Phosphor Bronze, gold-plated
	Shielding	CuZn, nickel-plated	Shielding	CuZn, nickel-plated
Ambient temperature		-20°C…+75°C		-40°C…+70°C
Degree of pollution		1		1
Protection class (installed)		IP20		IP20
Mechanical life cycle		>750 mating cycles		>750 mating cycles
Core cross-section/Clamping ability			4, 8-pole	AWG26/7 - AWG22/7 AWG24/1 - AWG22/1
External diameter of the cable			4, 8-pole	Ø 5.5…8.5mm
Connection			IDC	

Pinning RJ45

Industrial \| 4-poles



1WH/OG \| 2OG \| 3WH/BU \| 6BU

T568B \| 8-poles

1WH(OG) \| 2OG; 3WH(GN) \| 4BU; 5WH(BU) \| 6GN; 7WH(BN) \| 8BN

IE–	W	WAS	S	Y	4.029–	m –	IE–	W	WAS	S	Y	4.029/	S2171
													Cable
												Contacts. allocation code	
											Y: D-coded | X: X-coded		
										Shielded ⊙			
									Round connector M12x1 | WAS: *male*				
									RJ45 | S: *male*				
								W: angled ↱ | without: straight ↑					
							Industrial Ethernet						
						Cable length [m]							
					Contacts.allocation code								
				Y: D-coded | X: X-coded									
			Shielded ⊙										
		Round connector M12x1 | WAS: *male*											
		RJ45 | S: *male*											
	W: angled ↱ | without: straight ↑												
Industrial Ethernet													

suitable for: 4D | 8X; 4D; not for X-cod. | RJ45

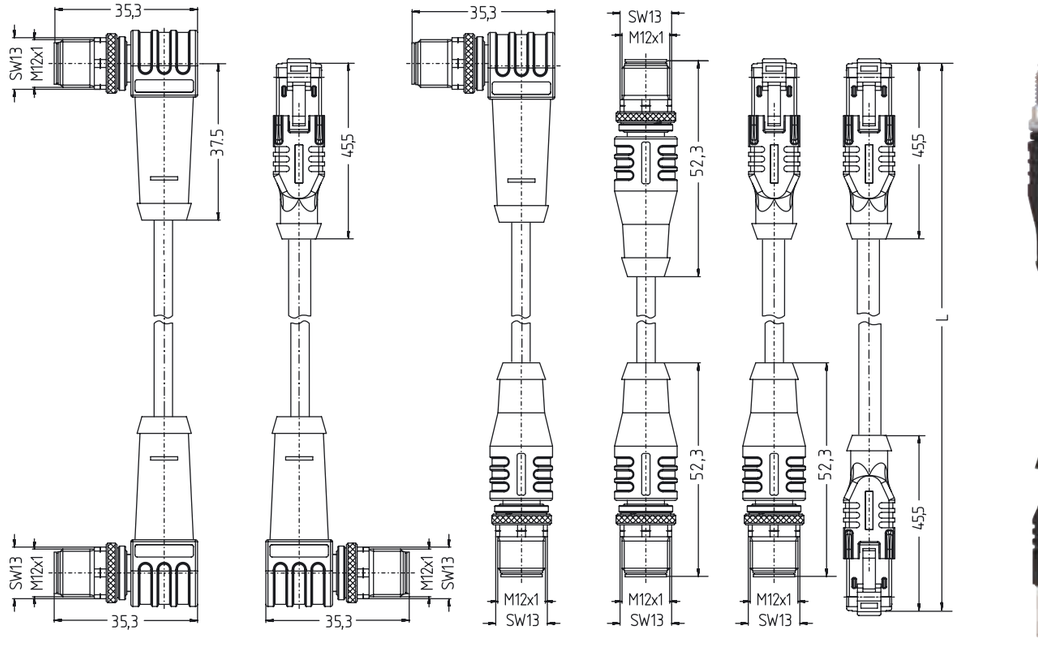
Product line	Version		Cable quality	Type-designation	1m	Cable length m 2m	5m
IE_M12x1 ⊙	4 | D | Cat5e	*m* | ↑ __ *m* | ↑	PUR | S2171 ®	IE-WASSY4.029-m-IE-WASSY4.029/S2171	8031558	8031560	8031561
		m | ↱ __ *m* | ↑	PUR | S2171 ®	IE-WWASSY4.029-m-IE-WASSY4.029/S2171	8046398	8044089	8044090
		m | ↱ __ *m* | ↱	PUR | S2171 ®	IE-WWASSY4.029-m-IE-WWASSY4.029/S2171	8046893	8036902	8036903
	8 | X | Cat6A	*m* | ↑ __ *m* | ↑	PUR | S3500 ®	IE-WASSX8.066-m-IE-WASSX8.066/S3500	8048865	8049460	8049461
			PUR | S3900 ®	IE-WASSX8.066-m-IE-WASSX8.066/S3900	8055351	8055352	8055353
		m | ↱ __ *m* | ↑	PUR | S3500 ®	IE-WWASSX8.066-m-IE-WASSX8.066/S3500	8055444	8055445	8055446
IE_RJ45 ⊙	4-pol. | Cat5e	RJ45 __ RJ45	PUR | S3400 ®	IE-RJ45SS8.005-m-IE-RJ45SS8.005/S3400	8056578	8056579	8056580
	8-pol. | Cat5e	RJ45 __ RJ45	PUR | S3500 ®	IE-RJ45SS8.002-m-IE-RJ45SS8.002/S3500	8052205	8048829	8048830
IE_M12x1_RJ45 ⊙	4-pol. | Cat5e	*m* | ↑ __ RJ45	PUR | S3400 ®	IE-WASSY4.082-m-IE-RJ45SS8.005/S3400	8056572	8056573	8056574
	8-pol. | Cat6	*m* | ↑ __ RJ45	PUR | S3500 ®	IE-WASSX8.066-m-IE-RJ45SS8.002/S3500	8053444	8053288	8053289
		m | ↱ __ RJ45	PUR | S3500 ®	IE-WWASSX8.066-m-IE-RJ45SS8.002/S3500	8055447	8055448	8055449

Other versions and cable-lengths are available upon request.

Cable quality

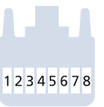
Detailed description of all cable qualities can be seen from page 208 on.

ESCHA Nomenclatur		S2171 ® | PNO	S3500 ®	S3900 ® | PNO	S3400 ®
Cable quality for		M12x1 | 4 | D	M12x1 | 8 | X RJ45 | 8-pole	M12x1 | 8 | X	PUR
Transmission category		Cat5e	Cat7	Cat6A	according to Cat5e
Nominal diameter		Ø 6.5mm	Ø 6.4mm	Ø 8.6mm	Ø 4.8mm
Wire-structure data		4xAWG22/7	4x2xAWG26/7	4x2xAWG23/7	4xAWG26/19
Wire colours		WH | YE | BU | OG	WH(BU) | BU; WH(OG) | OG; WH(GN) | GN; WH(BN) | BN	WH(BU) | BU; WH(OG) | OG; WH(GN) | GN; WH(BN) | BN	WH/OG | WH/BU | BU | OG
Bending radius	single	5xd	5xd	4xd	4xd
	repeated	7,5xd	10xd	8xd	7.5xd
	draig-chain	≥200mm (v_{max} = 4m/s | a_{max} = 4m/s²)	–	–	≥ 36m (m_{ax} = 3m/s | a_{max} = 5m/s²)
Temperature range		-40°C...+70°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C



Industrial Ethernet _ M12x1 | RJ45 junction cable

Technical data	M12x1		RJ45	
	Poles	Value	Poles	Value
Rated voltage [U_{max}]	4 | D	250V	4, 8-pole	50V
	8 | X	50VAC | 60VDC		
Current load [Imax]	4 | D	4A	4, 8-pole	1A
	8 | X	0.5A		
Insulation resistance		≥10^8Ω		
Standards	IEC 61076-2-101/-109			IEC 60603-7-5
Materials	Grip	TPU, BK	Grip	TPU, BK
	Contact carrier 4 | D	TPU, BK	Contact carrier/Loader	PC, transparent
	Contact carrier 8 | X	PA GF	Contacts	CuZn, gold-plated
	Contacts	CuZn, gold-plated	Shielding	CuZn, nickel-plated
	Locking mechanism	CuZn, nickel-plated		
Ambient temperature		-30°C...+90°C		-20°C...+75°C
Degree of pollution	4 | D	3		1
	8 | X	2		
Protection class	(in threaded condition)	IP67, IP69K	(in plugged condition)	IP20
Mechanical life cycle		>100 mating cycles		>750 mating cycles

Coding M12x1		Pinning RJ45	
4 poles *male* | D	8 poles *male* | X	Industrial | 4-poles	T568B | 8-poles
			
S2171: 1YE | 2WH | 3OG | 4BU S3400: 1WH/OG | 2OG | 3WH/BU | 6BU	1WH(OG) | 2OG; 3WH(GN) | 4GN 5WH(BN) | 6BN; 7WH(BU) | 8BU	1WH/OG | 2OG 3WH/BU | 6BU	1WH(OG) | 2OG; 3WH(GN) | 4BU 5WH(BU) | 6GN; 7WH(BN) | 8BN

IE-	W	FK	F	D	S	Y	5-	0,5/	16/	S3525	S2171	S3941

- S3941: Grip
  - S3941: Fig.1
  - without: Fig.2, Fig.3
- S2171: Cable quality
- S3525: Height-tolerance-balance Δh
  - for WFKFS..., colour GN
- 16/: Screw in thread: 16: M16x1.5 | 12: M12x1
- 0,5/: 0,5: Cable length [m] | P: Print-contact
- 5-: Contacts.allocation-code
- Y: Coding: Y: D-coded, X: X-coded
- S: Shielded ⊙
- D: Adjustable ↻
- F: Threaded front
- FK: Flange M12x1: FK: *female* | EK: Built-in connector *female*
- W: angled ↱ | without: straight ↑
- IE-: Industrial Ethernet

suitable for: PROFINET 4D | 8X; EtherNet/IP; EtherCAT 4D

not for X-cod.| ↱ | ⊙


Fig. 1

Fig. 2

Fig. 3

Fig. 4


Fig. 5


Fig. 6


Fig. 7


Fig. 8

Fig. 9

Fig. 10

Dimensional drawings see page 116/117

IE-M12x1-Flanges	Connection	Version	Poles		Type-designation	Order-No.
Front-wall mounting	Cable	*f* | ↑ | ⊙	4 | D	Fig. 1	IE-FKSY4.029-0,5/16/S2171/S3941	8058131
	Print-contact	*f* | ↑ | ↻	4 | D	Fig. 5	IE-FKDY4-P/16	8047944
		f | ↑ | ⊙ | ↻	8 | X	Fig. 6	IE-FKDSX8-P/12	8050232
		f | ↑ | ⊙ | ↻ | Δh	8 | X	Fig. 6	IE-FKDHSX8-P/12	8053483
Back-wall mounting	Cable	*f* | ↑ | ⊙	4 | D	Fig. 2	IE-FKFDSY4.029-0,5/16/S2171	8058698
		f | ↱ | ⊙	4 | D	Fig. 3	IE-WFKFDSY4.029-0,5/16/S2171	8058697
	Print-contact	*f* | ↑ | ↻	4 | D	Fig. 9	IE-FKFDY4-P/16	8047945
		f | ↑ | ⊙ | ↻	8 | X	Fig.10	IE-FKFDSX8-P	8053484
		f | ↑ | ⊙ | ↻ | Δh	8 | X	Fig.10	IE-FKFDHSX8-P	8053485
		f | ↱ | ⊙ | Δh<2.5mm	4 | D	Fig. 7	IE-WFKFSY4-P/12/S3525	8050282
		f | ↱ | ⊙ | Δh<4.0mm	4 | D	Fig. 7	IE-WFKFSY4-P/12/S3540	8050284
		f | ↱ | ⊙ | Δh<5.0mm	4 | D	Fig. 7	IE-WFKFSY4-P/12/S3550	8050285
		f | ↱ | ⊙ | Δh<2,5mm	8 | X	Fig. 8	IE-WFKFSX8-P/12/S3525	8059345
		f | ↱ | ⊙ | Δh<4,0mm	8 | X	Fig. 8	IE-WFKFSX8-P/12/S3540	8059346
		f | ↱ | ⊙ | Δh<5,0mm	8 | X	Fig. 8	IE-WFKFSX8-P/12/S3550	8059347
Insertion connector	Print-contact	*f* | ↑	8 | X	Fig. 4	IE-EKSX8-P	8050233

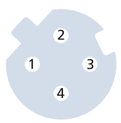
Other versions are available upon request.

Industrial Ethernet _ M12x1 flanges

Technical data	Poles	Value
Rated voltage [U_{max}]	4 | D	250V
	8 | X	50VAC | 60VDC
Current load [Imax]	4 | D	4A
	8 | X	0.5A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101/-109
Materials	Flange housing	CuZn, nickel-plated
	Contact carrier 4D	↑: TPU, GN | ↱: PA, GN
	Contact carrier 8X	↑: PA, GN | ↱: PBT, GN
	Grip	Hotmelt: transparent | TPU, BK
	Contacts	CuZn, gold-plated
	Sealing	FPM/FKM
	Sealing (screw in thread)	NBR
Ambient temperature		4D: -30°C...+90°C | 8X: -40°C...+85°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Coding

4 poles *female* | D



1YE | 2WH | 3OG | 4BU

8 poles *female* | X

1WH(OG) | 2OG, 3WH(GN) | 4GN, 5WH(BN) | 6BN, 7WH(BU) | 8BU

IE– | RJ45 | S | C | S | 8.003– | m / | S3800

- Cable quality
- Cable length [m]
- Contacts.allocation code
- Shielded ⊙
- Field-wireable ✋
- *male*
- RJ45
- Industrial Ethernet

sercos the automation bus | cULus not for ✋ | RoHS | PG

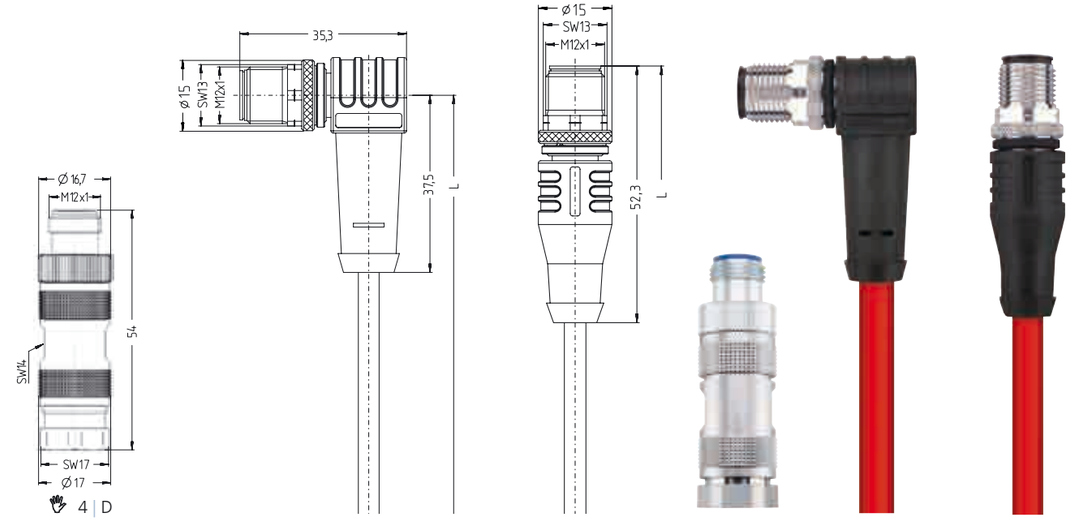
Product line	Poles	Version	Cable quality	Type-designation	✋	Cable length m 2m	5m	10m
IE_M12x1 ⊙	4 | D | Cat5e	*m* | ↑	PUR | S3800®	IE-WASSY4.029-m/S3800		8055493	8055494	8055495
		m | ↦	PUR | S3800®	IE-WWASSY4.029-m/S3800		8055499	8055500	8055501
		m | ↑ | ✋		IE-WASCSY4S	8032913			
	100m buscable		PUR | S3800®		8055782			

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

Cable quality

Flexible, PVC-, silicone-, and halogen free Ethernet cable with red PUR outer jacket (similar RAL 6018) and polyethylene wire isolation. This cable is oil resistant according to DIN EN 60811-2-1 and flame immune according to IEC 60332-1-2. Drag-chain application is possible. Cable admitted according to UL.

ESCHA Nomenclatur		S3800 ®
Cable quality for		M12x1 | 4 | D
Transmission category		Cat5e
Nominal diameter		Ø 6.5mm
Wire-structure data		4xAWG22/7
Wire colours		WH | YE | BU | OG
Bending radius	single	4xd
	repeated	8xd
	draig-chain	≥200mm (v_{max} = 4m/s | a_{max} = 4m/s²)
Temperature range		-40°C…+70°C



Industrial Ethernet | Sercos® _ M12x1 *male*

Technical data	Round connector	Field-wireable ✋
Rated voltage [Umax]	250V	250V
Current load [Imax]	4A	4A
Insulation resistance	≥10^8Ω	≥10^8Ω
Standards	IEC 61076-2-101	IEC 61076-2-101
Materials Grip	TPU, BK	CuZn
Contact carrier	TPU, BK	PA, BU
Contacts	CuZn, gold-plated	CuSn, gold-plated
Locking mec. (M12x1)	CuZn, nickel-plated	CuZn, nickel-plated
Sealing		FPM/FKM
Ambient temperature	-30°C…+90°C	-25°C…+85°C
Degree of pollution	3	3
Protection class (installed)	IP67, IP69K	IP67
Mechanical life cycle	>100 mating cycles	>100 mating cycles
Core cross-section/Clamping ability		AWG24/7, AWG22/7, AWG22/1
External diameter of the cable		Ø 6...8mm
Connection		IDC

Coding | *male*
4 poles | D

1YE | 2WH | 3OG | 4BU

IE- | RJ45 | S | C | S | 8.003- | m / | S3800

- Cable quality
- Cable length [m]
- Contacts.allocation code
- Shielded ⊙
- Field-wireable
- *male*
- RJ45
- Industrial Ethernet

sercos the automation bus

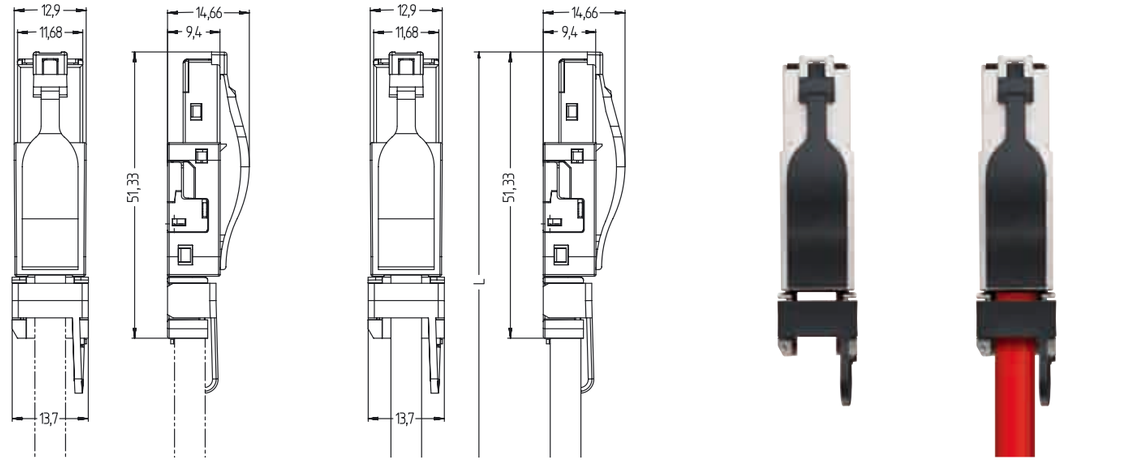
Product line	Poles	Version	Cable quality	Type-designation		Cable length m 2m	5m	10m
IE_RJ45 ⊙	4-adrig | Cat5e	*m* | ↑	PUR | S3800 ®	IE-RJ45SCS8.003-m/S3800		8055645	8055646	8055647
		m | ↑		IE-RJ45SCS8	8048117			
	100m buscable		PUR | S3800 ®		8055782			

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

Cable quality

Flexible, PVC-, silicone-, and halogen free Ethernet cable with red PUR outer jacket (similar RAL 6018) and polyethylene wire isolation. This cable is oil resistant according to DIN EN 60811-2-1 and flame immune according to IEC 60332-1-2. Drag-chain application is possible. Cable admitted according to UL.

ESCHA Nomenclatur		S3800 ®
Cable quality for		M12x1 | 4 | D
Transmission category		Cat5e
Nominal diameter		Ø 6.5mm
Wire-structure data		4xAWG22/7
Wire colours		WH | YE | BU | OG
Bending radius	single	4xd
	repeated	8xd
	draig-chain	≥200mm (v_{max} = 4m/s | a_{max} = 4m/s²)
Temperature range		-40°C...+70°C



Industrial Ethernet | Sercos®_ RJ45 *male*

Technical data	RJ45	
	Poles	Value
Rated voltage [Umax]	4	50V
Current load [Imax]	4	1A
Insulation resistance		≥5⁸Ω
Standards		IEC 60603-7-5
Materials	Housing	Zinc diecasting
	Loader	PA, transparent
	Contacts	Phosphor Bronze, gold-plated
	Shielding	CuZn, nickel-plated
Ambient temperature		-40°C...+70°C
Degree of pollution		1
Protection class (installed)		IP20
Mechanical life cycle		>750 mating cycles
Core cross-section/Clamping ability		AWG26/7 - AWG22/7
		AWG24/1 - AWG22/1
External diameter of the cable		Ø 5.5...8.5mm
Connection		IDC

Pinning RJ45

Industrial | 4-poles

1YE | 2OG | 3WH | 6BU

IE–	W	WAS	S	Y	4.029–	m–	IE–	W	WAS	S	Y	4.029/	S2171
													Cable
												Contacts. allocation code	
											D-coded		
										Shielded ⊙			
									Round connector M12x1 | WAS: *male*				
									RJ45 | S: *male*				
								W: angled ↱ | without: straight ↑					
							Industrial Ethernet						
						Cable length [m]							
					Contacts.allocation code								
				D-coded									
			Shielded ⊙										
		Round connector M12x1 | WAS: *male*											
		RJ45 | S: *male*											
	W: angled ↱ | without: straight ↑												
Industrial Ethernet													

not for RJ45

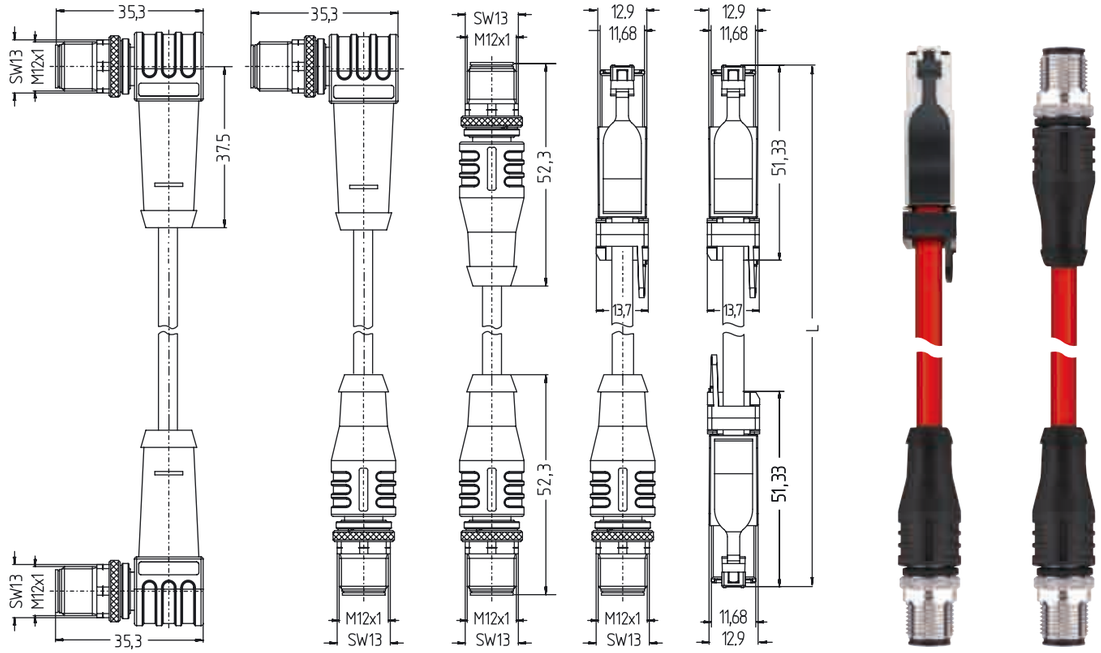
Product line	Poles	Version	Cable quality	Type-designation	Cable length m 1m	2m	5m
IE_M12x1 ⊙	4 | D | Cat5e	*m* | ↑ __ *m* | ↑	PUR | S3800®	IE-WASSY4.029-m-IE-WASSY4.029/S3800	8055496	8055497	8055498
		m | ↱ __ *m* | ↑	PUR | S3800®	IE-WWASSY4.029-m-IE-WWASSY4.029/S3800	8055502	8055503	8055504
		m | ↱ __ *m* | ↱	PUR | S3800®	IE-WWASSY4.029-m-IE-WWASSY4.029/S3800	8055505	8055506	8055507
IE_RJ45 ⊙	4-adr. | Cat5e	RJ45 __ RJ45	PUR | S3800®	IE-RJ45SCS8.003-m-IE-RJ45SCS8.003/S3800	8055511	8055512	8055513
IE_M12x1_RJ45 ⊙	4-adr. | Cat5e	*m* | ↑ __ RJ45	PUR | S3800®	IE-WASSY4.029-m-IE-RJ45SCS8.003/S3800	8055508	8055509	8055510

Other versions and cable-lengths are available upon request.

Cable quality

Flexible, PVC-, silicone-, and halogen free Ethernet cable with red PUR outer jacket (similar RAL 6018) and polyethylene wire isolation. This cable is oil resistant according to DIN EN 60811-2-1 and flame immune according to IEC 60332-1-2. Drag-chain application is possible. Cable admitted according to UL.

ESCHA Nomenclatur		S3800®
Cable quality for		RJ45 | 4-poles
		M12x1 | 4 | D
Transmission category		Cat5e
Nominal diameter		Ø 6.5mm
Wire-structure data		4xAWG22/7
Wire colours		WH | YE | BU | OG
Bending radius	single	4xd
	repeated	8xd
	draig-chain	≥200mm (v_{max} = 4m/s | a_{max} = 4m/s²)
Temperature range		-40°C…+70°C



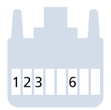
Industrial Ethernet | Sercos®_ M12x1 | RJ45 junction cable

Technical data	M12x1		RJ45	
	Poles	Value	Poles	Value
Rated voltage [U_{max}]	4 | D	250V	4	50V
Current load [I_{max}]	4 | D	4A	4	1A
Insulation resistance		≥10^8Ω		
Standards		IEC 61076-2-101/-109		IEC 60603-7-5
Materials	Grip	TPU, BK	Grip	Zinc diecasting
	Contact carrier	TPU, BK	Contact carrier/Loader	PA, BK
	Contacts	CuZn, gold-plated	Contacts	Bronze, gold-plated
	Locking mechanism	CuZn, nickel-plated	Shielding	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C		-40°C…+75°C
Degree of pollution	4 | D	3		1
Protection class	(in threaded condition)	IP67, IP69K	(in plugged condition)	IP20
Mechanical life cycle		>100 mating cycles		>750 mating cycles
Core cross-section/Clamping ability			4	AWG26/7 - AWG22/7
				AWG24/1 - AWG22/1
External diameter of the cable			4	Ø 5.5…8.5mm
Connection			IDC	

Coding M12x1
4 poles *male* \| D

1YE \| 2WH \| 3OG \| 4BU

Pinning RJ45
Industrial \| 4-poles



1YE \| 2OG \| 3WH \| 6BU

IE-	W	FK	F	D	S	Y	5-	0,5/	16/	S3825	S3800	S3941

- S3941: Grip
  - S3801: Fig.1
  - S38: Fig.2, Fig.3
- S3800: Cable quality
- S3825: Height-tolerance-balance Δh for WFKFS..., colour RD
- 16: Screw in thread M16x1.5 | 12: M12x1
- 0,5: Cable length [m] | P: Print-contact
- 5-: Contacts.allocation-code
- Y: Coding: Y: D-coded, X: X-coded
- S: Shielded ⊙
- D: Adjustable ↻
- F: Threaded front
- FK: Flange M12x1 | *female*
  - EK: Built-in connector *female*
- W: angled ↱ | without: straight ↑
- IE-: Industrial Ethernet

sercos the automation bus

cULus not for ↱ | ⊙

RoHS


Fig. 1


Fig. 2


Fig. 3


Fig. 4

Dimensional drawings see page 116/117


Fig. 5


Fig. 6

IE-M12x1-Flange	Connection	Version		Type-designation	Order-No.
Front-wall mounting	Cable	*f* | ↑ | ⊙	Fig. 1	IE-FKSY4.029-0,5/16/S3800/S3801	8058701
	Print-contact	*f* | ↑ | ↻	Fig. 5	IE-FKDY4-P/16/S38	8055848
Back-wall mounting	Cable	*f* | ↑ | ⊙	Fig. 2	IE-FKFDSY4.029-0,5/16/S3800/S38	8058700
		f | ↱ | ⊙	Fig. 3	IE-WFKFDSY4.029-0,5/16/S3800/S38	8058699
	Print-contact	*f* | ↑ | ↻	Fig. 6	IE-FKFDY4-P/16/S38	8055849
		f | ↱ | ⊙ | Δh<2,5mm	Fig. 4	IE-WFKFSY4-P/12/S3825	8055850
		f | ↱ | ⊙ | Δh<4,0mm	Fig. 4	IE-WFKFSY4-P/12/S3840	8055851
		f | ↱ | ⊙ | Δh<5,0mm	Fig. 4	IE-WFKFSY4-P/12/S3850	8055852

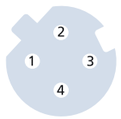
Other versions are available upon request.

Industrial Ethernet | Sercos® _ M12x1 flanges

Technical data	Poles	Value
Rated voltage [Umax]	4 | D	250V
Current load [Imax]	4 | D	4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Flange housing	CuZn, nickel-plated
	Contact carrier ↑	TPU, RD
	Contact carrier ↱	PA6, RD
	Grip	Hotmelt, transparent | TPU, BK
	Contacts	CuZn, gold-plated
	Sealing	FPM/FKM
	Sealing (screw in thread)	NBR
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Coding

4 poles *female* | D



1YE | 2WH | 3OG | 4BU

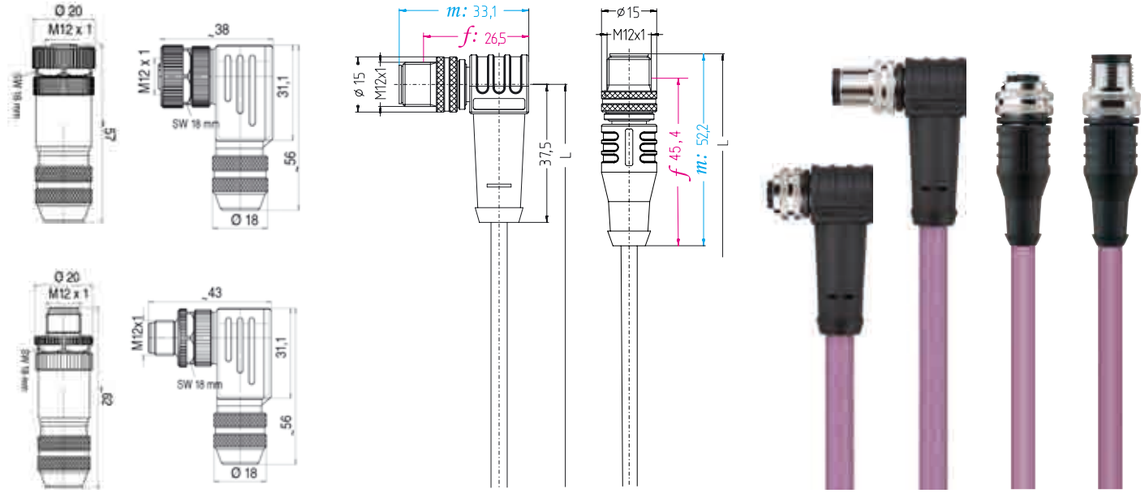
PB–	W	WAK	C	S	W	2.012–	m /	S1800		4.5	K
									Cable quality		
								Cable length [m]			
						Contacts allocation code				Poles	
					B-coded						K: Screw-clamp
				Shielded ⊙							AS: Termination plug
			Field-wireable								
		Round connector M12x1 | WAK: *female*									
	W: angled ↱ | without: straight ↑										
PROFIBUS						for Round connectors				Field-wireable + Termination plug	

Product line	Version	Cable quality	Type-designation		Cable length m 2m	5m	10m
PB_M12x1 ⊙	*f* | ↑	PUR | S1800 ®	PB-WAKSW2.012-m/S1800		8043866	8043868	8043869
	f | ↱	PUR | S1800 ®	PB-WWAKSW2.012-m/S1800		8043870	8043871	8043872
	m | ↑	PUR | S1800 ®	PB-WASSW2.012-m/S1800		8043873	8043874	8043875
	m | ↱	PUR | S1800 ®	PB-WWASSW2.012-m/S1800		8043876	8043877	8043878
	f | ↑ | ✋		PB-WAKCSW4.5K	8031376			
	m | ↑ | ✋		PB-WASCSW4.5K	8031375			
	f | ↱ | ✋		PB-WWAKCSW4.5K	8040235			
	m | ↱ | ✋		PB-WWASCSW4.5K	8040236			
100m buscable		PUR | S1800 ®		8043857			

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

Cable quality PUR | S1800 ®

Flexible PVC- silicon- and halogen-free bus cable with PUR outer jacket and wire insulation of Polyethylene. Shielded cable meets the transmission values for RSA485 (cable type A) of the PROFIBUS organization and is especially suitable for the high requirements of industrial machinery- and plant construction. Temperature range -25°C…+80°C. Drag-chain application with a bending radius of min.10xD as well as a travel speed of 200m/min related to a maximum acceleration of 5m/s² is possible. The cable is oil resistant and flame retardant according to DINEN60332-2-2 as well as chemicals-, hydrolysis-, and microbes resistant. UL and CSA approved.

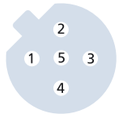


PROFIBUS _ M12x1

Technical data	Round connector		Field-wireable ✋	
	Poles	Value	Poles	Value
Rated voltage [Umax]	5	60V	5	125V
Current load [Imax]	5	4A	5	4A
Insulation resistance		≥10^8Ω		≥10^8Ω
Standards		IEC61076-2-101		IEC61076-2-101
Materials	Grip	TPU, BK	Grip	PA, Zinc diecasting, nickel-pl.
	Contact carrier	TPU, BK	Contact carrier	PA
	Sealing *(female)*	FPM/FKM	Contacts	CuZn, gold-plated
	Contacts	CuZn, gold-plated		
	Locking mechanism	CuZn, nickel-plated		
Ambient temperature		-30°C…+90°C		-25°C…+85°C
Degree of pollution		3		3
Protection class (installed)		IP67, IP69K		IP67
Mechanical life cycle		>100 mating cycles		>100 mating cycles
Core cross-section/Clamping ability				0.75mm² | AWG18
External diameter of the cable				Ø 6...8mm
Connection			Screw-clamp, shieldable	

Coding B

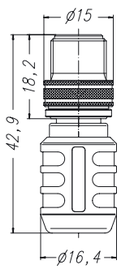
5 poles | *female*

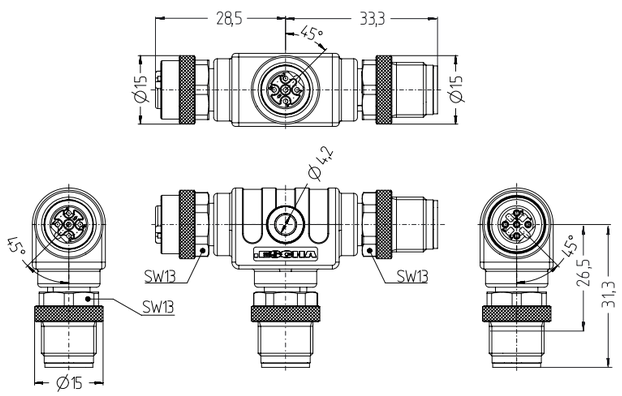


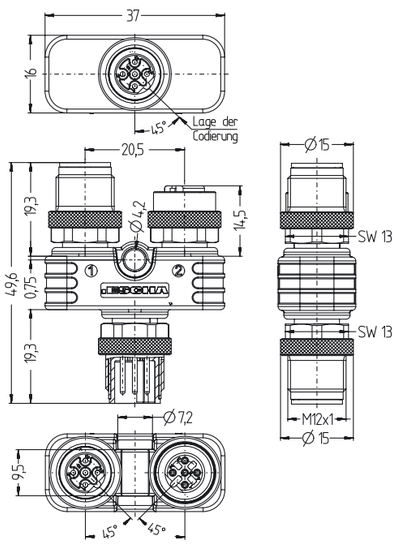
5 poles | *male*

1n.c. | 2GN | 3n.c. | 4RD | 5n.c.

PB-	T-	WAKS	W	5-	WASS	W	5-	WASS	W	5
										Poles
									B-coded	
								M12x1 ⊙ | WASS: *male*		
								WAKS: *female*		
							Poles			
						B-coded				
					M12x1 ⊙ | WASS: *male*					
					WAKS: *female*					
				Poles						
			B-coded							
		M12x1 ⊙ | WASS: *male*								
		WAKS: *female*								
	T: T-junction									
	Y: 2-way junction									
Product line (optional)										



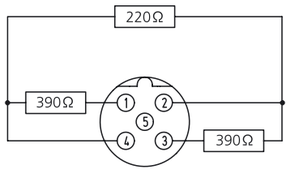




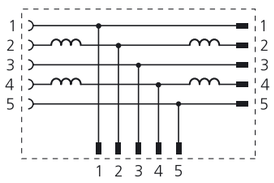
Type	Output 1	Output 2	Output 3	Type-designation	Order-No.
T-junction ⊙	M12x1 *f* | 5	M12x1 *f* | 5	M12x1 *m* | 5	PB-T-WAKSW5-WASSW5-WASSW5	8057719
2-way junction ⊙	*m* | 5	*m* | 5	*f* | 5	PB-Y-WASSW5-WASSW5-WAKSW5	8057724
Termination plug	*m* | ↑			PB-WASSW4.5-AS	8043520

Wiring

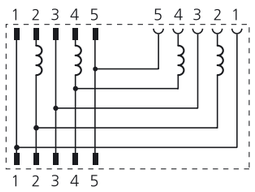
Termination plug



T-junction ⊙



2-way junction ⊙

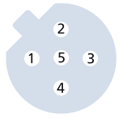


PROFIBUS _ M12x1 Termination plug | T-junction | 2-way junction

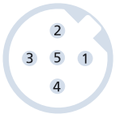
Technical data	Poles	Value
Rated voltage [Umax]	5	60V
Current load [Imax]	5	4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding B

5 poles | *female*



5 poles | *male*



1 n.c. | 2 GN | 3 n.c. | 4 RD | 5 n.c.

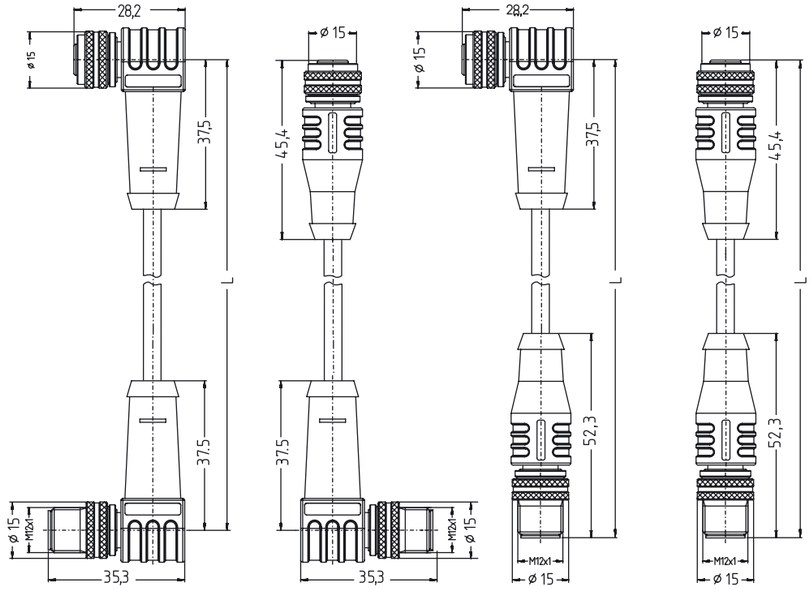
PB–	W	WAK	S	W	2.012–	m–	PB–	W	WAS	S	W	2.012/	S1800
PROFIBUS	W: angled ↱ | without: straight ↑	Round connector M12x1 | WAK: *female*	Shielded ⊙	B-coded	Contacts allocation code	Cable length [m]	PROFIBUS	W: angled ↱ | without: straight ↑	Round connector M12x1 | WAS: *male*	Shielded ⊙	B-coded	Contacts allocation code	Cable

Product line	Version	Cable quality	Type-designation	Cable length m 1m	2m	5m
PB_M12x1 ⊙	*f* | ↑ __ *m* | ↑	PUR | S2800 ®	PB-WAKSW2.012-m-PB-WASSW2.012/S1800	8045613	8043867	8043879
	f | ↱ __ *m* | ↑	PUR | S1800 ®	PB-WWAKSW2.012-m-PB-WASSW2.012/S1800	8046479	8043881	8043882
	f | ↑ __ *m* | ↱	PUR | S1800 ®	PB-WAKSW2.012-m-PB-WWASSW2.012/S1800	8051935	8043884	8043885
	f | ↱ __ *m* | ↱	PUR | S1800 ®	PB-WWAKSW2.012-m-PB-WWASSW2.012/S1800	8051936	8043887	8043888

Other cable lengths are available upon request.

Cable quality PUR | S1800 ®

Flexible PVC- silicon- and halogen-free bus cable with PUR outer jacket and wire insulation of Polyethylene. Shielded cable meets the transmission values for RSA485 (cable type A) of the PROFIBUS organization and is especially suitable for the high requirements of industrial machinery- and plant construction. Temperature range -25°C…+80°C. Drag-chain application with a bending radius of min.10xD as well as a travel speed of 200m/min related to a maximum acceleration of 5m/s² is possible. The cable is oil resistant and flame retardant according to DINEN60332-2-2 as well as chemicals-, hydrolysis-, and microbes resistant. UL and CSA approved.

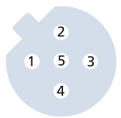


PROFIBUS _ M12x1 junction cable

Technical data	Poles	Value
Rated voltage [Umax]	5	60V
Current load [Imax]	5	4A
Insulation resistance		≥10^8 Ω
Standards		IEC61076-2-101
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding B

5 poles | *female*



5 poles | *male*

1n.c. | 2GN | 3n.c. | 4RD | 5n.c.

PB–	W	FK	F	S	D	W	5–	0,5/	16/	S3525	S3800	S3801

S3801: Grip
S3941: Fig.1
without: Fig.2, Fig.3

S3800: Cable quality

S3525: Height-tolerance-balance Δh
for WFKFS..., colour violet

16/: Screw in thread 16: M16x1,5 | 12: M12x1

0,5/: 0,5: Cable length [m] | P: Print-contact

5–: Contacts allocation code

W: B-Coding

D: Adjustable ↻

S: Shielded ⊙

F: Threaded front

FK: Flange M12x1: FK: *female* | FS: *male*

W: W: angled ↱ | without: straight ↑

PB–: PROFIBUS

not for ↱

PROFIBUS M12x1 flanges	Connection	Version		Type-designation	Order-No.
Front-wall mounting	Cable	*f* | ↑ | ⊙	Abb. 1	PB-FKSW2.012-0,5/16/S1800/S3941	8058705
Back-wall mounting	Cable	*f* | ↑ | ⊙	Abb. 2	PB-FKFDSW2.012-0,5/16/S1800	8058703
		f | | ↱ | ⊙	Abb. 3	PB-WFKFDSW2.012-0,5/16/S1800	8058702
	Print-contact	*m* | ↱ | ⊙	Abb. 4	PB-WFSFSW5-P/12	8045658
		f | ↱ | ⊙ | Δh<2,5mm	Abb. 5	PB-WFKFSW5-P/12/S3525	8050279
		f | ↱ | ⊙ | Δh<4,0mm	Abb. 5	PB-WFKFSW5-P/12/S3540	8050280
		f | ↱ | ⊙ | Δh<5,0mm	Abb. 5	PB-WFKFSW5-P/12/S3550	8050281

Other versions are available upon request.

Fig. 1 | Fig. 2 | Fig. 3 | Fig. 4 | Fig. 5

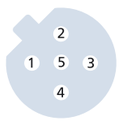
Dimensional drawings
see page 116/117.

PROFIBUS _ M12x1 Flanges

Technical data	Poles	Value
Rated voltage [Umax]	5	60V
Current load [Imax]	5	4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Flange housing	CuZn, nickel-plated
	Contact carrier	TPU, VT
	Grip	Hotmelt, transparent | TPU, BK
	Contacts	CuZn, gold-plated
	Sealing *(female)*	FPM/FKM
	Sealing (screw in thread)	NBR
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Coding B

5 poles | *female*



5 poles | *male*

1 n.c. | 2 GN | 3 n.c. | 4 RD | 5 n.c.

CD- | W | WAK | C | 5.022- | m / | S2800

- S2800: Cable quality
- m: Cable length [m]
- 5.022: Contacts allocation code
- C: Field-wireable (for Round connector)
- WAK: Round connector M12x1 | WAK: *female* | WAS: *male*
- W: angled ↱ | without: straight ↑
- CD: CANopen | DeviceNet

5 | K/ | S3234

- S3234: 120Ω between PIN4 and PIN5
- K: Screw-clamp
- AS: Termination plug
- 5: Poles

Field-wireable + Termination plug

CANopen | DeviceNet | RoHS

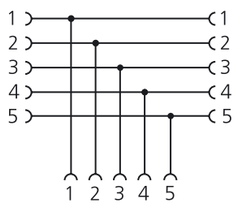
Product line	Version	Cable quality	Type-designation		Cable length m 2m	5m	10m
CD_M12x1	*f* | ↑	PUR | S2800 ®	CD-WAK5.022-m/S2800		8047517	8047518	8047519
	f | ↱	PUR | S2800 ®	CD-WWAK5.022-m/S2800		8047520	8047521	8047522
	m | ↑	PUR | S2800 ®	CD-WAS5.022-m/S2800		8047523	8047524	8047525
	m | ↱	PUR | S2800 ®	CD-WWAS5.022-m/S2800		8047526	8047527	8047528
	f | ↑ |		WAKC5K	8004815			
	f | ↱ |		WWAKC5K	8004809			
	m | ↑ |		WASC5K	8004805			
	m | ↱ |		WWASC5K	8004807			
	Termination plug *f* | ↑		CD-WAK2.010-AK/S3234	8047942			
	Termination plug *m* | ↑		CD-WAS2.010-AS/S3234	8047943			
	T-junction *f*_ *f*_ *m*		FKM5-FKM5-FSM5/S222	8035172			
	100m buscable	PUR | S2800 ®		8047939			

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

Wiring

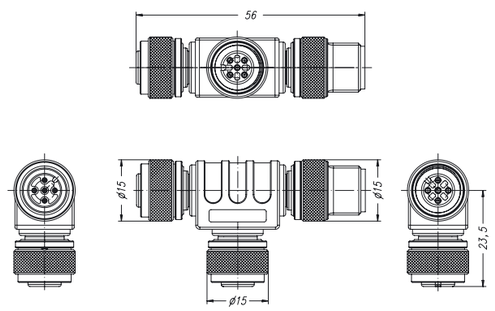
Termination plug | S3234

T-junction



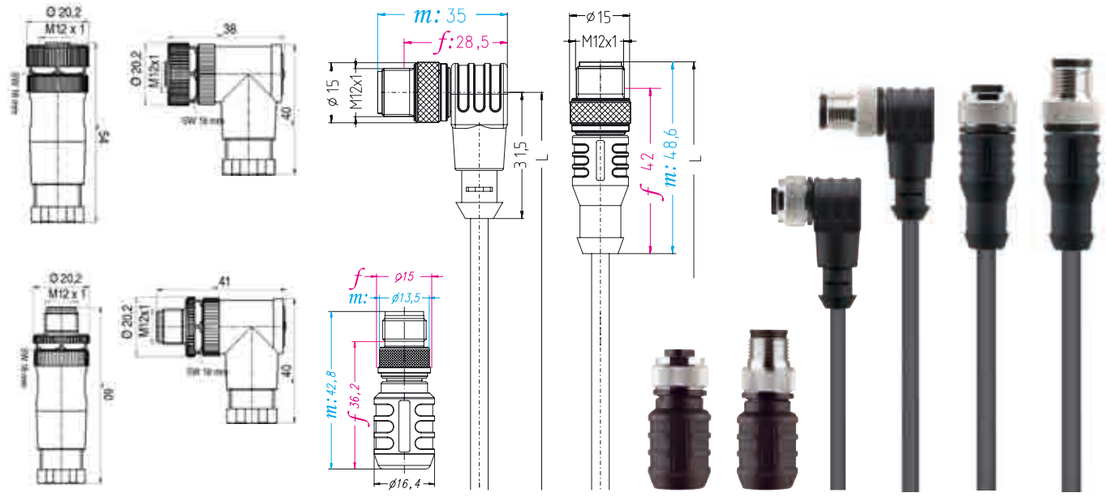
Dimensional drawing

T-junction



Cable quality PUR | S2800 ®

Flexible PVC-, silicon-, and halogen-free bus cable with PUR outer jacket and a wire insulation of polyethylene. Developed for CANopen- and DeviceNet-systems with excellent EMV features. Temperature range -50°C…+80°C in fixed condition and -25°C…+80°C in moving condition. Drag-chain application with a bending radius of min.10xD is possible and guarantees >1 million cycles. Very good chemicals- and oil-resistance.

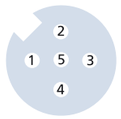


CANopen | DeviceNet _ M12x1

Technical data	Round connector		Field-wireable	
	Poles	Value	Poles	Value
Rated voltage [Umax]	4+GND	60V	4+GND	125V
Current load [Imax]	4+GND	4A	4+GND	4A
Insulation resistance		≥10⁸Ω		≥10⁸Ω
Standards		IEC 61076-2-101		IEC 61076-2-101
Materials	Grip	TPU, BK	Grip	PA, BK
	Contact carrier	TPU, BK	Contact carrier	PA, BK
	Sealing *(female)*	FPM/FKM	Contacts	CuZn, CuSnZn
	Contacts	CuZn, gold-plated		
	Locking mechanism	CuZn, nickel-plated		
Ambient temperature		-30°C…+90°C		-25°C…+85°C
Degree of pollution		3		3
Protection class (installed)		IP67, IP69K		IP67
Mechanical life cycle		>100 mating cycles		>100 mating cycles
Core cross-section/Clamping ability				0.75mm² | AWG18
External diameter of the cable				Ø 4...6mm
Connection			Screw-clamp	

Coding A

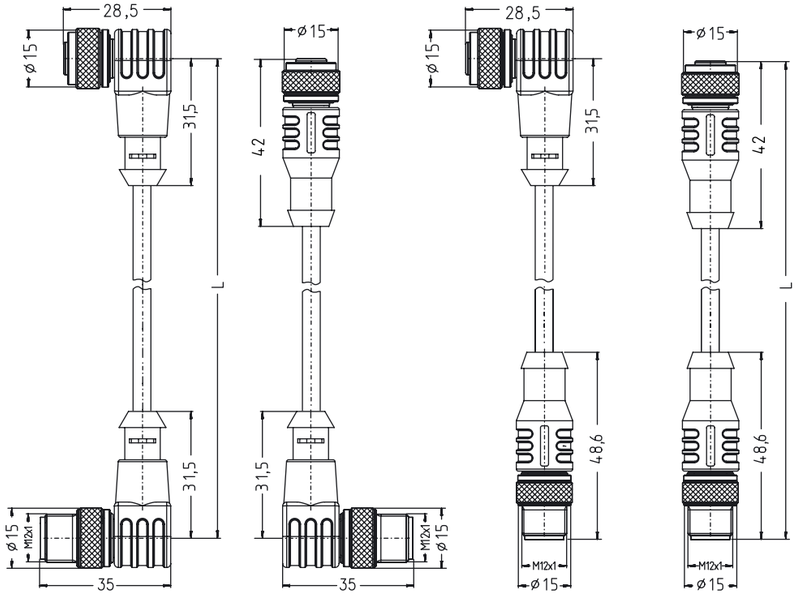
4+GND | *female*



4+GND | *male*

1 (GND) | 2RD (+) | 3BK (-) | 4WH (CAN_H) | 5BU (CAN_L)

CD-	W	WAK	5.022-	m-	CD-	W	WAS	5.022/	S2800
									Cable quality
								Contacts allocation code	
							Round connector M12x1 | WAS: *male*		
						W: angled ↱ | without: straight ↑			
					CANopen | DeviceNet				
				Cable length [m]					
			Contacts allocation code						
		Round connector M12x1 | WAK: *female*							
	W: angled ↱ | without: straight ↑								
CANopen | DeviceNet									



Product line	Version	Cable qualiy	Type-designation	Cable length m 1m	2m	5m
CD_M12x1	*f* | ↑ __ *m* | ↑	PUR | S2800®	CD-WAK5.022-m-CD-WAS5.022/S2800	8047491	8047492	8047494
	f | ↱ __ *m* | ↑		CD-WWAK5.022-m-CD-WAS5.022/S2800	8051937	8047529	8047530
	f | ↑ __ *m* | ↱		CD-WAK5.022-m-CD-WWAS5.022/S2800	8051938	8047532	8047533
	f | ↱ __ *m* | ↱		CD-WWAK5.022-m-CD-WWAS5.022/S2800	8051939	8047535	8047536

Other cable lengths are available upon request.

Cable quality PUR | S2800®

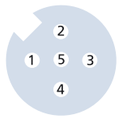
Flexible PVC-, silicon-, and halogen-free bus cable with PUR outer jacket and a wire insulation of polyethylene. Developed for CANopen- and DeviceNet-systems with excellent EMV features. Temperature range -50°C…+80°C in fixed condition and -25°C…+80°C in moving condition. Drag-chain application with a bending radius of min.10xD is possible and guarantees >1 million cycles. Very good chemicals- and oil-resistance.

CANopen | DeviceNet _ M12x1 junction cable

Technical data	Poles	Value
Rated voltage [Umax]	4+GND	60V
Current load [Imax]	4+GND	4A
Insulation resistance		≥10^8Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Coding A

4+GND | *female*



4+GND | *male*

1 (GND) | 2RD (+) | 3BK (-) | 4WH (CAN_H) | 5BU (CAN_L)

CD-	W	FK	F	D	5-	0,5/	16
							Screw in thread M16x1,5
						0,5: Wire-length [m]	
					Contacts allocation code		
				Adjustable ↻			
			Threaded front				
		Flange M12x1 | FK: *female*					
		FS: *male*					
	W: angled ↦ | without: straight ↑						
CANopen | DeviceNet							

Fig. 1 Fig. 2 Fig. 3 Fig. 4

Dimensional drawings see page 116/117.

CANopen | DeviceNet M12x1-Flanges	Connection	Version		Type-designation	Order-No.
Front-wall mounting (optional threaded rear)	Wire-contact	*f* | ↑	Fig. 4	CD-FK5.022-0,5/16	8047958
		m | ↑	Fig. 3	CD-FS5.022-0,5/16	8047960
Back-wall mounting (threaded front)	Wire-contact	*f* | ↑ | ↻	Fig. 2	CD-FKFD5.022-0,5/16	8047961
		m | ↑ | ↻	Fig. 1	CD-FSFD5.022-0,5/16	8047962

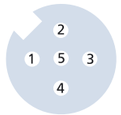
Other wire-lengths are available upon request.

CANopen | DeviceNet _ M12x1 Flanges

Technical data	Poles	Value
Rated voltage [Umax]	5	60V
Current load [Imax]	5	4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Flange housing	CuZn, nickel-plated
	Contact carrier	TPU, BK
	Contacts	CuZn, gold-plated
	Sealing *(female)*	FPM/FKM
	Sealing (screw in thread)	NBR
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Coding A

4+GND | *female*

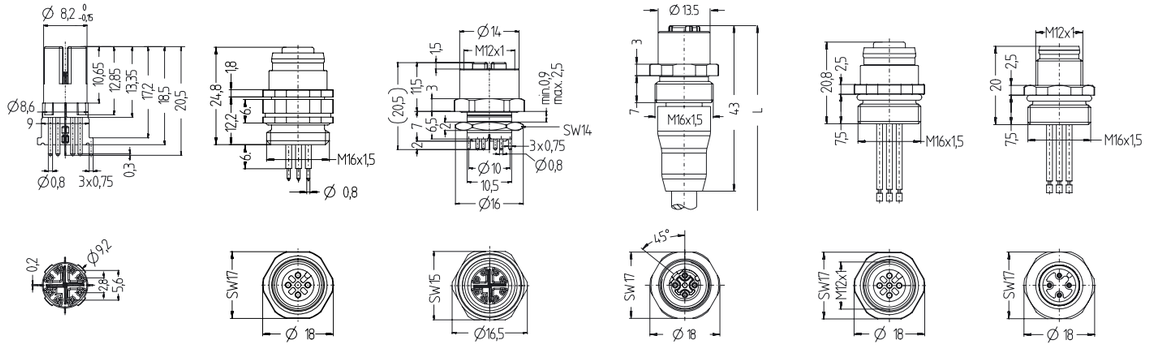


4+GND | *male*

1 (GY) | 2RD (+) | 3BK (-) | 4WH (CAN_H) | 5BU (CAN_L)

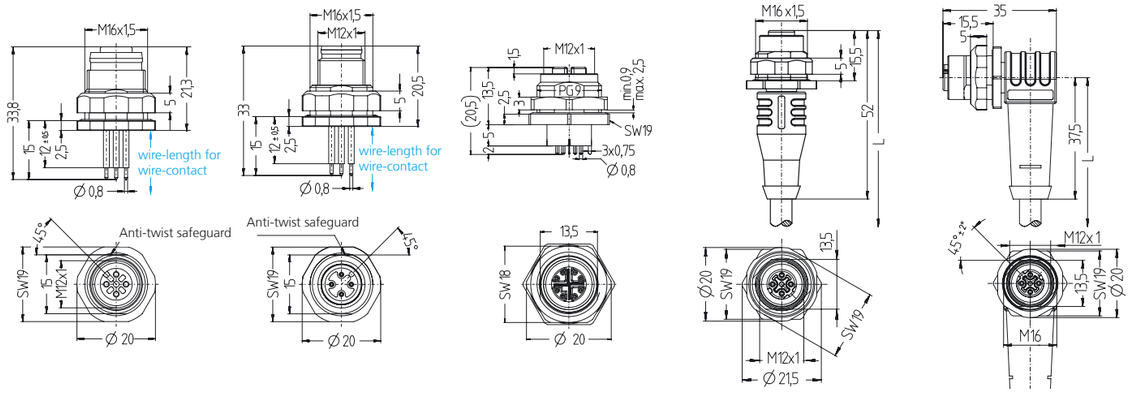
Front-wall mounting (optional threaded rear)

Print-contact	Print-contact ↻	Wire-contact ⊙	Wire-contact	
IE-EKSX8P	IE-FKD_-P/16	IE-FKD(H)SX8-P/12	(IE/PB)-FKFDS_-0,5/16	CD-FK_-0,5/16	CD-FS_-0,5/16



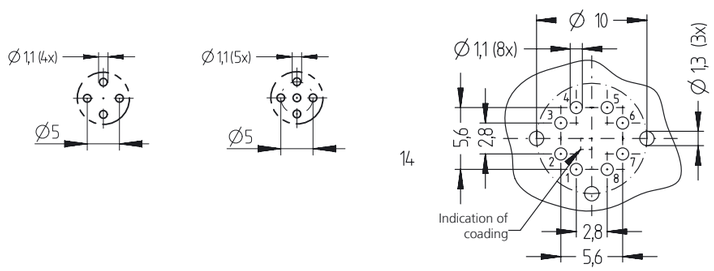
Back-wall mounting ↑ (threaded front)

Print-contact | Wire-contact			Wire-contact ⊙	
(IE/CD)-FKFD-(P/0,5)/16	(IE/CD)-FKFD-(P/0,5)/16	IE-FKFD(H)SX8-P	(IE/PB)-FKFDS_-0,5/16/S_	(IE/PB)-WFKFDS_-0,5/16/S_



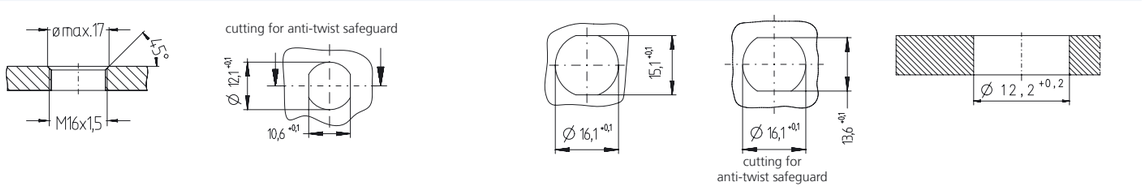
Hole pattern ↑

4-poles	5-poles	8-poles | X



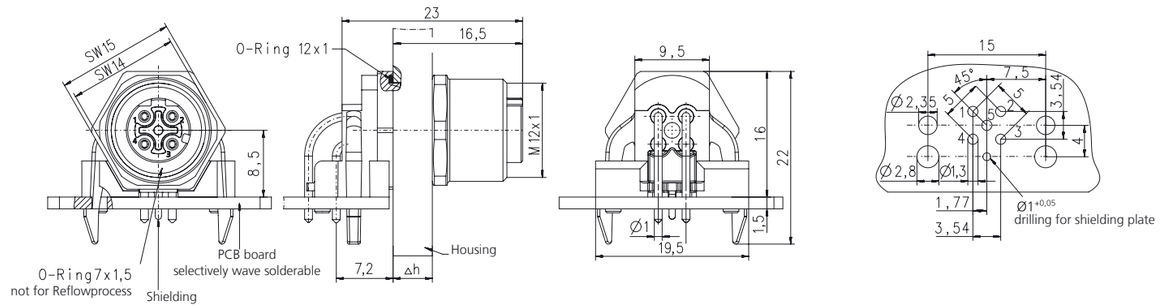
For pinning see corresponding articel.

Panel cut-out				
Front-wall mounting	Front+Back-wall mounting	Back-wall mounting		
Screw in thread M16x1,5	IE-FKD(H)SX8-P/12	↑	Cable ⊙	↱



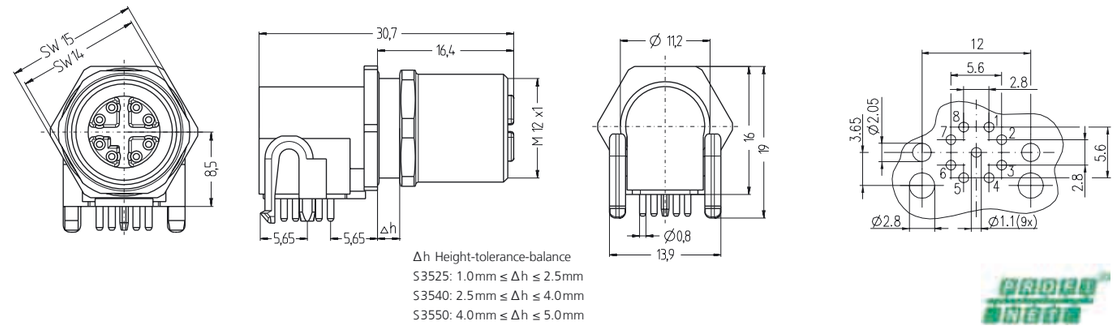
Back-wall mounting ↱ (threaded front)
Hole pattern

Industrial Ethernet | IE-WFKFSY4-P/12/... | see Δh Height-tolerance-balance



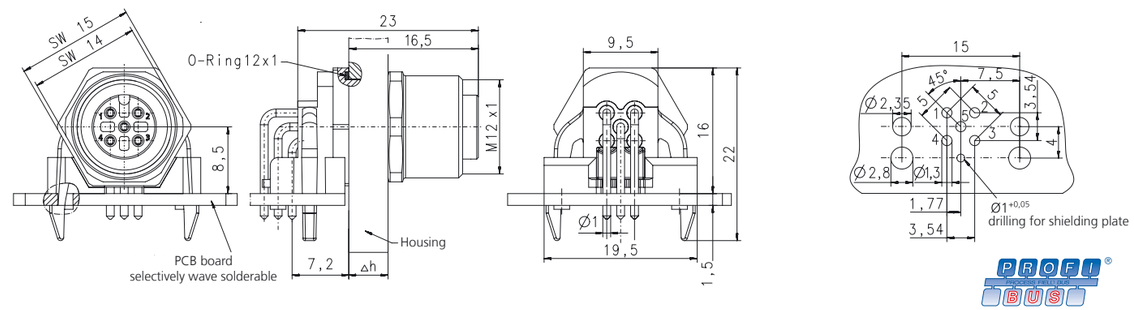
Δh Height-tolerance-balance
S3525: 1.0mm ≤ Δh ≤ 2.5mm
S3540: 2.5mm ≤ Δh ≤ 4.0mm
S3550: 4.0mm ≤ Δh ≤ 5.0mm

Industrial Ethernet | IE-WFKFSX8-P/12/... | see Δh Height-tolerance-balance

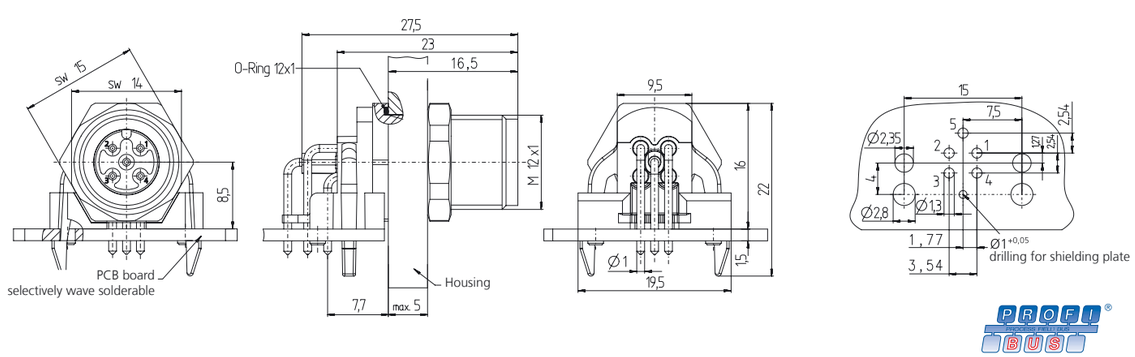


Δh Height-tolerance-balance
S3525: 1.0mm ≤ Δh ≤ 2.5mm
S3540: 2.5mm ≤ Δh ≤ 4.0mm
S3550: 4.0mm ≤ Δh ≤ 5.0mm

PROFIBUS | PB-WFKFSW5-P/12/... | see Δh Height-tolerance-balance



PROFIBUS | PB-WFSFSW5-P/12



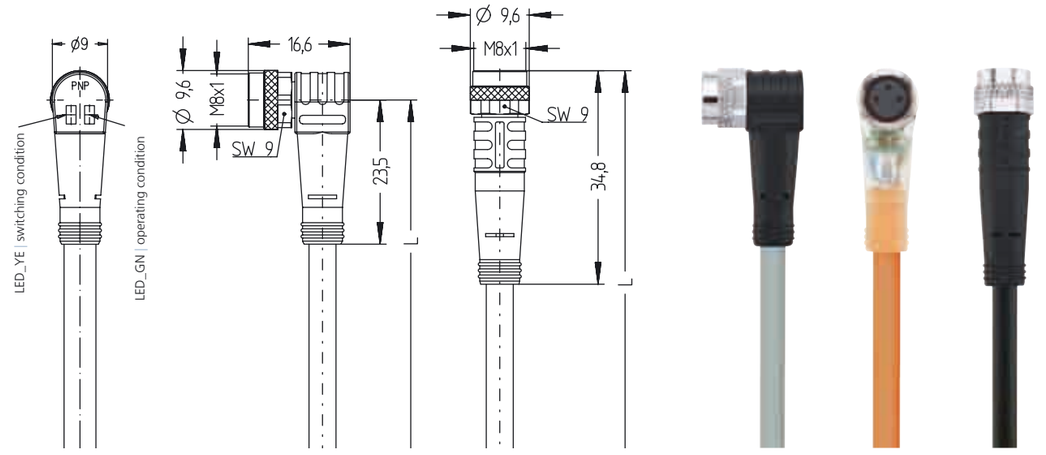
AL – S W KP 3 – P2 – m / S370

- S370: Cable quality
- m: Cable length [m]
- P2: PNP | Quantity LED + circuit
- 3: Poles
- KP: Round connector M8x1 | KP: *female* | SP: *male*
- W: W: angled ↱ | without: straight ↑
- S: Screwable
- AL: Automation Line

not for P00, 5-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_M8x1	*f* | ↑	PUR | S370®	3	AL-SKP3-m/S370	8043748	8043749	8043750
			4	AL-SKP4-m/S370	8043760	8043761	8043762
			5	AL-SKP4.5-m/S370	8051859	8051858	8051860
		PUR | S370GY®	3	AL-SKP3-m/S370GY	8059110	8059111	8059112
		PUR | S7400® robotic	3	AL-SKP3-m/S7400	8059113	8059114	8059115
		PVC | P00	3	AL-SKP3-m/P00	8048639	8048640	8048641
			4	AL-SKP4-m/P00	8048645	8048646	8048647
			5	AL-SKP4.5-m/P00	8047045	8051850	8051851
		PVC | P01®	3	AL-SKP3-m/P01	8051226	8051227	8051228
			4	AL-SKP4-m/P01	8051238	8051239	8051240
	f | ↱	PUR | S370®	3	AL-SWKP3-m/S370	8043751	8043752	8043753
			4	AL-SWKP4-m/S370	8043763	8043764	8043765
			5	AL-SWKP4.5-m/S370	8051861	8051862	8051863
		PUR | S370GY®	3	AL-SWKP3-m/S370GY	8059116	8059117	8059118
		PUR | S7400® robotic	3	AL-SWKP3-m/S7400	8059119	8059120	8059121
		PVC | P00	3	AL-SWKP3-m/P00	8048642	8048643	8048644
			4	AL-SWKP4-m/P00	8048648	8048649	8048650
			5	AL-SWKP4.5-m/P00	8047049	8051852	8051853
		PVC | P01®	3	AL-SWKP3-m/P01	8051229	8051230	8051231
			4	AL-SWKP4-m/P01	8051241	8051242	8051243
	f | ↱ | LED 2	PUR | S370®	3	AL-SWKP3P2-m/S370	8045344	8045419	8045420
			4	AL-SWKP4P2-m/S370	8045345	8045421	8045422
		PUR | S370GY®	3	AL-SWKP3P2-m/S370GY	8059122	8059123	8059124
		PUR | S7400® robotic	3	AL-SWKP3P2-m/S7400	8059125	8059126	8059127
		PVC | P00	3	AL-SWKP3P2-m/P00	8051113	8051114	8051115
			4	AL-SWKP4P2-m/P00	8051116	8051117	8051118
		PVC | P01®	3	AL-SWKP3P2-m/P01	8051322	8051323	8051324
			4	AL-SWKP4P2-m/P01	8051325	8051326	8051327

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request



Automation Line© M8x1 *female* + *female* LED

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4, 5	30V
	LED-version	24 V_{DC}
Current load [Imax]	3, 4	4A
	5, LED-version	3A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Grip	TPU, BK | LED: TPU, transparent
	Contact carrier	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Pinning | *female*

3 poles

1BN | 3BU | 4BK

4 poles

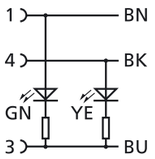
1BN | 2WH
3BU | 4BK

5 poles

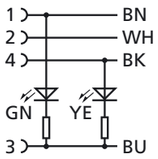
1BN | 2WH
3BU | 4BK | 5GY

LED-versions

3P2



4P2



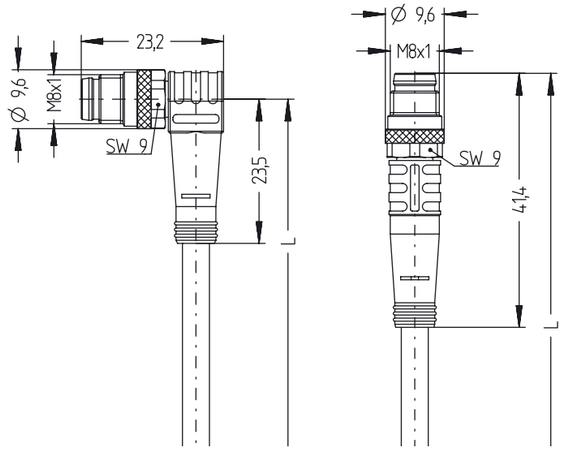
M8x1
Automation Line©

AL –	S	W	SP	3 –	m /	S370
						Cable quality
					Cable length [m]	
				Poles		
			Round connector M8x1 | SP: *male*			
		W: angled ↦ | without: straight ↑				
	Screwable					
Automation Line						

not for P00, 5-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_M8x1	*m* | ↑	PUR | S370®	3	AL-SSP3-m/S370	8043754	8043755	8043756
			4	AL-SSP4-m/S370	8043766	8043767	8043768
			5	AL-SSP4.5-m/S370	8050052	8050053	8050054
		PUR | S370GY®	3	AL-SSP3-m/S370GY	8059152	8059153	8059154
		PUR | S7400® robotic	3	AL-SSP3-m/S7400	8059155	8059156	8059157
		PVC | P00	3	AL-SSP3-m/P00	8051031	8051032	8051033
			4	AL-SSP4-m/P00	8051037	8051038	8051039
			5	AL-SSP4.5-m/P00	8047066	8050044	8050045
		PVC | P01®	3	AL-SSP3-m/P01	8051232	8051233	8051234
			4	AL-SSP4-m/P01	8051244	8051245	8051246
	m | ↦	PUR | S370®	3	AL-SWSP3-m/S370	8043757	8043758	8043759
			4	AL-SWSP4-m/S370	8043769	8043770	8043771
			5	AL-SWSP4.5-m/S370	8050055	8050056	8050057
		PUR | S370GY®	3	AL-SWSP3-m/S370GY	8059158	8059159	8059160
		PUR | S7400® robotic	3	AL-SWSP3-m/S7400	8059161	8059162	8059163
		PVC | P00	3	AL-SWSP3-m/P00	8051034	8051035	8051036
			4	AL-SWSP4-m/P00	8051040	8051041	8051042
			5	AL-SWSP4.5-m/P00	8047050	8050046	8050047
		PVC | P01®	3	AL-SWSP3-m/P01	8051235	8051236	8051237
			4	AL-SWSP4-m/P01	8051247	8051248	8051249

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request



Automation Line® M8x1 *male*

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4, 5	30V
Current load [Imax]	3, 4	4A
	5	3A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Pinning | *male*

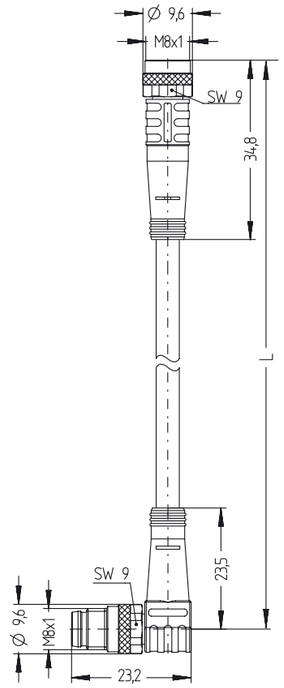
3 poles	4 poles	5 poles
		
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GY

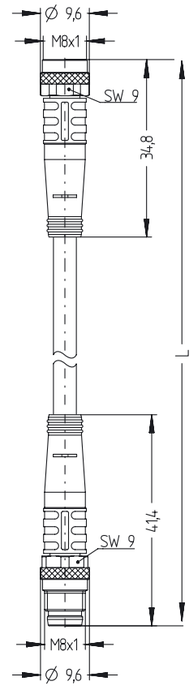
AL –	S	KP	3 –	m –	AL –	S	W	SP	3 /	S370
Automation Line	Screwable	Round connector M8x1 | KP: *female*, straight ↑	Poles	Cable length [m]	Automation Line	Screwable	W: angled ↦ | without: straight ↑	Round connector M8x1 | SP: *male*	Poles	Cable quality

not for P00, 5-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
AL_M8x1	*f* | ↑__ *m* | ↑	PUR | S370®	3	AL-SKP3-m-AL-SSP3/S370	8044811	8044002	8044003
			4	AL-SKP4-m-AL-SSP4/S370	8045944	8044017	8044018
			5	AL-SKP4.5-m-AL-SSP4.5/S370	8052755	8052756	8052757
		PUR | S370GY®	3	AL-SKP3-m-AL-SSP3/S370GY	8059176	8059177	8059178
		PUR | S7400® robotic	3	AL-SKP3-m-AL-SSP3/S7400	8059179	8059180	8059181
		PVC | P00	3	AL-SKP3-m-AL-SSP3/P00	8051434	8051435	8051436
			4	AL-SKP4-m-AL-SSP4/P00	8051447	8051448	8051449
			5	AL-SKP4.5-m-AL-SSP4.5/P00	8052860	8042846	8042848
		PVC | P01®	3	AL-SKP3-m-AL-SSP3/P01	8051642	8051643	8051644
			4	AL-SKP4-m-AL-SSP4/P01	8051655	8051656	8051657
	f | ↑__ *m* | ↦	PUR | S370®	3	AL-SKP3-m-AL-SWSP3/S370	8051913	8044011	8044012
			4	AL-SKP4-m-AL-SWSP4/S370	8046587	8044023	8044024
			5	AL-SKP4.5-m-AL-SWSP4.5/S370	8052764	8052765	8052766
		PUR | S370GY®	3	AL-SKP3-m-AL-SWSP3/S370GY	8059182	8059183	8059184
		PUR | S7400® robotic	3	AL-SKP3-m-AL-SWSP3/S7400	8059185	8059186	8059188
		PVC | P00	3	AL-SKP3-m-AL-SWSP3/P00	8051440	8051441	8051442
			4	AL-SKP4-m-AL-SWSP4/P00	8051453	8051454	8051455
			5	AL-SKP4.5-m-AL-SWSP4.5/P00	8042859	8042860	8042861
		PVC | P01®	3	AL-SKP3-m-AL-SWSP3/P01	8051649	8051650	8051651
			4	AL-SKP4-m-AL-SWSP4/P01	8051661	8051662	8051663

Other versions and cable-lengths are available upon request.





AUTOMATION LINE© M8x1 junction cable

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4, 5	30V
Current load [Imax]	3, 4	4A
	5	3A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Pinning

3 poles | *female*	3 poles | *male*	4 poles | *female*	4 poles | *male*	5 poles | *female*	5 poles | *male*
					
1BN | 3BU | 4BK		1BN | 2WH | 3BU | 4BK		1BN | 2WH | 3BU | 4BK | 5GY	

AL – S – W – KP – 3 – m – AL – S – W – SP – 3 / S370

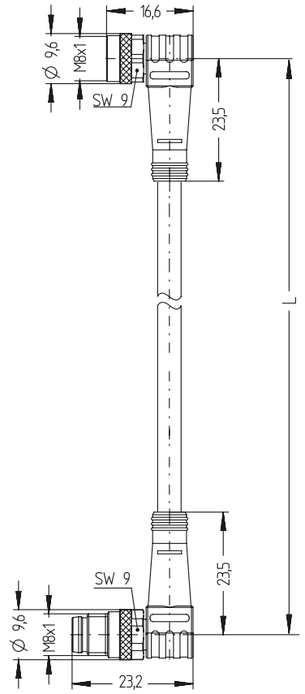
- AL – : Automation Line
- S : Screwable
- W : W: angled ↦ | without: straight ↑
- KP : Round connector M8x1 | KP: *female*, straight ↑
- 3 : Poles
- m : Cable length [m]
- AL : Automation Line
- S : Screwable
- W : W: angled ↦ | without: straight ↑
- SP : Round connector M8x1 | SP: *male*
- 3 : Poles
- S370 : Cable quality

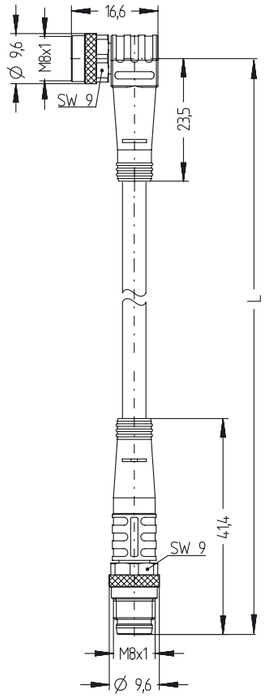
cULus RoHS

not for P00, 5-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
AL_M8x1	*f* | ↦ *m* | ↑	PUR | S370®	3	AL-SWKP3-m-AL-SSP3/S370	8044842	8044014	8044015
			4	AL-SWKP4-m-AL-SSP4/S370	8046576	8044026	8044027
			5	AL-SWKP4.5-m-AL-SSP4.5/S370	8052761	8052762	8052763
		PUR | S370GY®	3	AL-SWKP3-m-AL-SSP3/S370GY	8059189	8059190	8059191
		PUR | S7400® robotic	3	AL-SWKP3-m-AL-SSP3/S7400	8059192	8059193	8059194
		PVC | P00	3	AL-SWKP3-m-AL-SSP3/P00	8051444	8051445	8051446
			4	AL-SWKP4-m-AL-SSP4/P00	8051456	8051457	8051458
			5	AL-SWKP4.5-m-AL-SSP4.5/P00	8042855	8050039	8042857
		PVC | P01®	3	AL-SWKP3-m-AL-SSP3/P01	8051652	8051653	8051654
			4	AL-SWKP4-m-AL-SSP4/P01	8051664	8051665	8051666
	f | ↦ *m* | ↦	PUR | S370®	3	AL-SWKP3-m-AL-SWSP3/S370	8046572	8044008	8044009
			4	AL-SWKP4-m-AL-SWSP4/S370	8046573	8044020	8044021
			5	AL-SWKP4.5-m-AL-SWSP4.5/S370	8052758	8052759	8052760
		PUR | S370GY®	3	AL-SWKP3-m-AL-SWSP3/S370GY	8059195	8059196	8059197
		PUR | S7400® robotic	3	AL-SWKP3-m-AL-SWSP3/S7400	8059198	8059199	8059200
		PVC | P00	3	AL-SWKP3-m-AL-SWSP3/P00	8051437	8051438	8051439
			4	AL-SWKP4-m-AL-SWSP4/P00	8051450	8051451	8051452
			5	AL-SWKP4.5-m-AL-SWSP4.5/P00	8042850	8050038	8042852
		PVC | P01®	3	AL-SWKP3-m-AL-SWSP3/P01	8051646	8051647	8051648
			4	AL-SWKP4-m-AL-SWSP4/P01	8051658	8051659	8051660
	f | ↦ | LED 2 *m* | ↑	PUR | S370®	3	AL-SWKP3P2-m-AL-SSP3/S370	8047130	8045932	8045933
			4	AL-SWKP4P2-m-AL-SSP4/S370	8049863	8045935	8045936
		PUR | S370GY®	3	AL-SWKP3P2-m-AL-SSP3/S370GY	8059201	8059202	8059203
		PUR | S7400® robotic	3	AL-SWKP3P2-m-AL-SSP3/S7400	8059204	8059204	8059205
		PVC | P00	3	AL-SWKP3P2-m-AL-SSP3/P00	8051531	8051532	8051533
			4	AL-SWKP4P2-m-AL-SSP4/P00	8051534	8051535	8051536
		PVC | P01®	3	AL-SWKP3P2-m-AL-SSP3/P01	8051739	8051740	8051741
			4	AL-SWKP4P2-m-AL-SSP4/P01	8051742	8051743	8051744

Other versions and cable-lengths are available upon request.





Automation Line® M8x1 junction cable

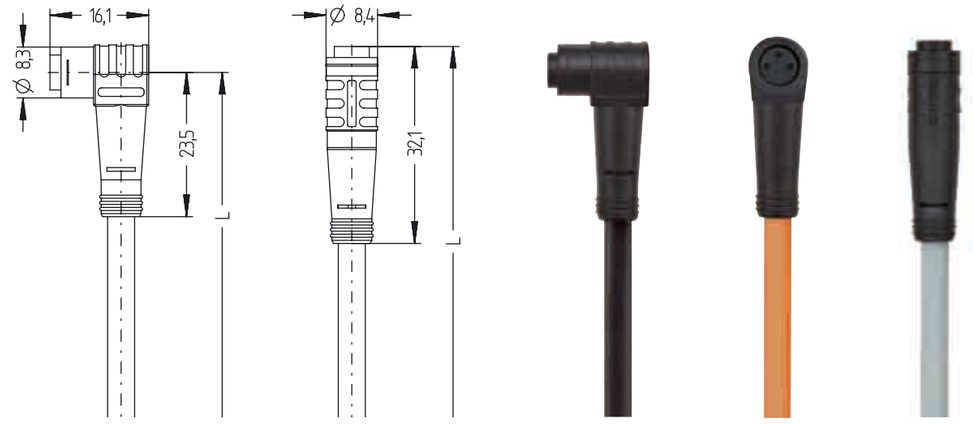
Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4, 5	30V
Current load [Imax]	3, 4	4A
	5,	3A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Pinning

3 poles | *female*	3 poles | *male*	4 poles | *female*	4 poles | *male*	5 poles | *female*	5 poles | *male*
					
1BN | 3BU | 4BK		1BN | 2WH | 3BU | 4BK		1BN | 2WH | 3BU | 4BK | 5GY	

AL – | W | KP | 3 – | m / | S370

- S370: Cable quality
- m: Cable length [m]
- 3: Poles
- KP: Round connector Ø8mm snap | *female*
- W: angled ↱ | without: straight ↑
- AL: Automation Line



Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_Ø8snap	*f* | ↑	PUR | S370 ®	3	AL-KP3-m/S370	8051894	8044517	8051895
			4	AL-KP4-m/S370	8043940	8045033	8052669
			5	AL-KP4.5-m/S370	8050016	8050017	8050018
		PUR | S370GY ®	3	AL-KP3-m/S370GY	8059128	8059129	8059130
		PUR | S7400 ® robotic	3	AL-KP3-m/S7400	8059131	8059132	8059133
		PVC | P00	3	AL-KP3-m/P00	8052490	8052491	8052492
			4	AL-KP4-m/P00	8052690	8052691	8052692
			5	AL-KP4.5-m/P00	8043847	8050005	8050006
		PVC | P01 ®	3	AL-KP3-m/P01	8052493	8052494	8052495
			4	AL-KP4-m/P01	8052717	8052718	8052719
	f | ↱	PUR | S370 ®	3	AL-WKP3-m/S370	8052670	8044518	8052671
			4	AL-WKP4-m/S370	8052672	8045620	8052673
			5	AL-WKP4.5-m/S370	8050022	8050023	8050024
		PUR | S370GY ®	3	AL-WKP3-m/S370GY	8059134	8059135	8059136
		PUR | S7400 ® robotic	3	AL-WKP3-m/S7400	8059137	8059138	8059139
		PVC | P00	3	AL-WKP3-m/P00	8052693	8052694	8052695
			4	AL-WKP4-m/P00	8052696	8052697	8052698
			5	AL-WKP4.5-m/P00	8049767	8050007	8050008
		PVC | P01 ®	3	AL-WKP3-m/P01	8052724	8052725	8052726
			4	AL-WKP4-m/P01	8052720	8052721	8052722

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

Automation Line® Ø8mm snap *female*

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4, 5	30V
Current load [Imax]	3, 4	4A
	5	3A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Pinning | *female*

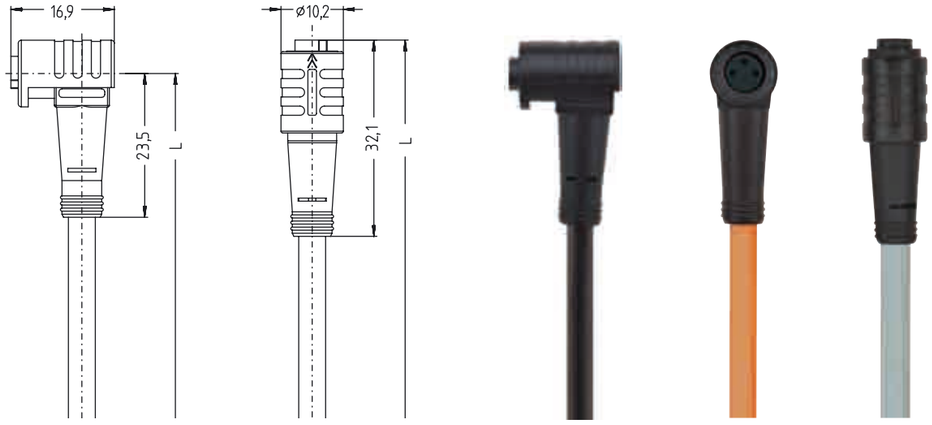
3 poles	4 poles	5 poles
		
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GY

AL –	Z	W	KP	3 –	m /	S370
						Cable quality
					Cable length [m]	
				Poles		
			Round connector Ø8mm snap | KP: *female*			
		W: angled ↦ | without: straight ↑				
	Locking-ring					
Automation Line						

RoHS

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_Ø8snap	*f* | ↑ | Locking-ring	PUR | S370 ®	3	AL-ZKP3-m/S370	8052680	8052681	8052682
			4	AL-ZKP4-m/S370	8046076	8051911	8051912
			5	AL-ZKP4.5-m/S370	8050025	8050026	8050027
		PUR | S370GY ®	3	AL-ZKP3-m/S370GY	8059140	8059141	8059142
		PUR | S7400 ® robotic	3	AL-ZKP3-m/S7400	8059143	8059144	8059145
		PVC | P00	3	AL-ZKP3-m/P00	8052705	8052706	8052707
			4	AL-ZKP4-m/P00	8052708	8052709	8052710
			5	AL-ZKP4.5-m/P00	8049768	8050009	8050010
		PVC | P01 ®	3	AL-ZKP3-m/P01	8052733	8052734	8052735
			4	AL-ZKP4-m/P01	8052736	8052737	8052738
	f | ↦ | Locking-ring	PUR | S370 ®	3	AL-ZWKP3-m/S370	8052683	8052684	8052685
			4	AL-ZWKP4-m/S370	8046075	8052686	8052687
			5	AL-ZWKP4.5-m/S370	8050028	8050029	8050030
		PUR | S370GY ®		AL-ZWKP3-m/S370GY	8059146	8059147	8059148
		PUR | S7400 ® robotic		AL-ZWKP3-m/S7400	8059149	8059150	8059151
		PVC | P00	3	AL-ZWKP3-m/P00	8052711	8052712	8052713
			4	AL-ZWKP4-m/P00	8052714	8052715	8052716
			5	AL-ZWKP4.5-m/P00	8049769	8050011	8050012
		PVC | P01 ®	3	AL-ZWKP3-m/P01	8052739	8052740	8052741
			4	AL-ZWKP4-m/P01	8052742	8052743	8052744

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request



AUTOMATION LINE© Ø8mm snap with locking-ring *female*

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4, 5	30V
Current load [Imax]	3, 4	4A
	5	3A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	POM
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Pinning | *female*

3 poles	4 poles	5 poles
		
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH 3BU | 4BK | 5GY

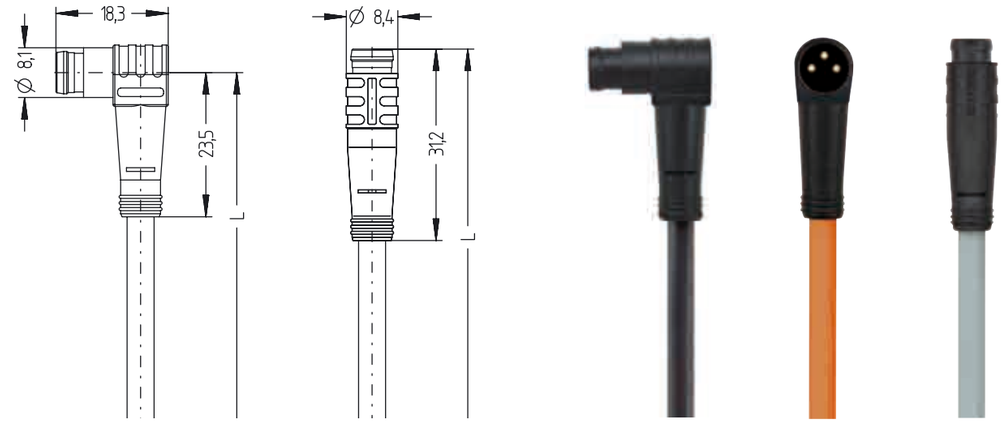
AL – | W | SP | 3 – | m / | S370

- S370: Cable quality
- m: Cable length [m]
- 3: Poles
- SP: Round connector Ø8mm snap | *male*
- W: angled ↱ | without: straight ↑
- AL: Automation Line

RoHS

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_Ø8snap	*m* | ↑	PUR | S370 ®	3	AL-SP3-m/S370	8051905	8051906	8051907
			4	AL-SP4-m/S370	8052674	8052675	8052676
			5	AL-SP4.5-m/S370	8050013	8050014	8050015
		PUR | S370GY ®	3	AL-SP3-m/S370GY	8059164	8059165	8059166
		PUR | S7400 ® robotic	3	AL-SP3-m/S7400	8059167	8059168	8059169
		PVC | P00	3	AL-SP3-m/P00	8052496	8052497	8052498
			4	AL-SP4-m/P00	8052699	8052700	8052701
			5	AL-SP4.5-m/P00	8050000	8050001	8050002
		PVC | P01 ®	3	AL-SP3-m/P01	8052499	8052500	8052501
			4	AL-SP4-m/P01	8052727	8052728	8052729
	m | ↱	PUR | S370 ®	3	AL-WSP3-m/S370	8051908	8051909	8051910
			4	AL-WSP4-m/S370	8052677	8052678	8052679
			5	AL-WSP4.5-m/S370	8050019	8050020	8050021
		PUR | S370GY ®	3	AL-WSP3-m/S370GY	8059170	8059171	8059172
		PUR | S7400 ® robotic	3	AL-WSP3-m/S7400	8059173	8059174	8059175
		PVC | P00	3	AL-WSP3-m/P00	8052502	8052503	8052504
			4	AL-WSP4-m/P00	8052702	8052703	8052704
			5	AL-WSP4.5-m/P00	8043900	8050003	8050004
		PVC | P01 ®	3	AL-WSP3-m/P01	8052505	8052506	8052507
			4	AL-WSP4-m/P01	8052730	8052731	8052732

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request



AUTOMATION LINE® Ø8mm snap *male*

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4, 5	30V
Current load [Imax]	3, 4	4A
	5	3A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Contacts	CuZn, gold-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Pinning | *male*

3 poles	4 poles	5 poles
		
1BN | 3BU | 4BK	1BN | 2WH 3BU | 4BK	1BN | 2WH | 3BU 4BK | 5GY

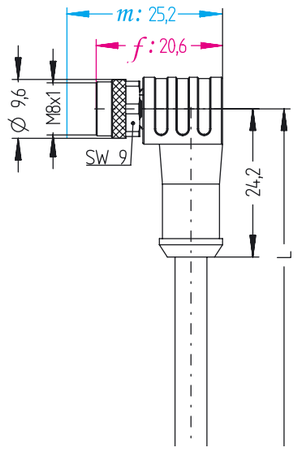
AL – | S | W | KP | S | 3 – | m / | S370

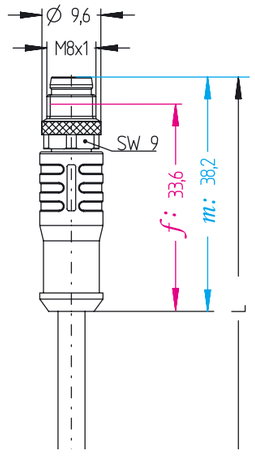
- S370: Cable quality
- m /: Cable length [m]
- 3 –: Poles
- S: Shielded ⊙
- KP: Round connector M8x1 | KP: *female* | SP: *male*
- W: angled ↱ | without: straight ↑
- S: Screwable
- AL: Automation Line

not for P00, 5-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
AL_M8x1 ⊙	*f* | ↑	PUR | S370 ®	3	AL-SKPS3-m/S370	8046192	8046193	8046194
			4	AL-SKPS4-m/S370	8046204	8046205	8046206
			5	AL-SKPS4.5-m/S370	8047058	8051864	8051865
		PVC | P00	3	AL-SKPS3-m/P00	8051140	8051141	8051142
			4	AL-SKPS4-m/P00	8051152	8051153	8051154
			5	AL-SKPS4.5-m/P00	8047046	8051854	8051855
		PVC | P01 ®	3	AL-SKPS3-m/P01	8051349	8051350	8051351
			4	AL-SKPS4-m/P01	8051362	8051363	8051364
	f | ↱	PUR | S370 ®	3	AL-SWKPS3-m/S370	8046195	8046196	8046197
			4	AL-SWKPS4-m/S370	8046207	8046208	8046209
			5	AL-SWKPS4.5-m/S370	8047060	8051866	8051867
		PVC | P00	3	AL-SWKPS3-m/P00	8051143	8051144	8051145
			4	AL-SWKPS4-m/P00	8051155	8051156	8051157
			5	AL-SWKPS4.5-m/P00	8047051	8051856	8051857
		PVC | P01 ®	3	AL-SWKPS3-m/P01	8051353	8051354	8051355
			4	AL-SWKPS4-m/P01	8051365	8051366	8051367
	m | ↑	PUR | S370 ®	3	AL-SSPS3-m/S370	8046198	8046199	8046200
			4	AL-SSPS4-m/S370	8046210	8046211	8046212
			5	AL-SSPS4.5-m/S370	8047061	8050058	8050059
		PVC | P00	3	AL-SSPS3-m/P00	8051146	8051147	8051148
			4	AL-SSPS4-m/P00	8051158	8051159	8051160
			5	AL-SSPS4.5-m/P00	8047048	8050048	8050049
		PVC | P01 ®	3	AL-SSPS3-m/P01	8051356	8051357	8051358
			4	AL-SSPS4-m/P01	8051368	8051369	8051370
	m | ↱	PUR | S370 ®	3	AL-SWSPS3-m/S370	8046201	8046202	8046203
			4	AL-SWSPS4-m/S370	8046214	8046215	8046216
			5	AL-SWSPS4.5-m/S370	8047062	8050060	8050061
		PVC | P00	3	AL-SWSPS3-m/P00	8051149	8051150	8051151
			4	AL-SWSPS4-m/P00	8051161	8051162	8051163
			5	AL-SWSPS4.5-m/P00	8047052	8050050	8050051
		PVC | P01 ®	3	AL-SWSPS3-m/P01	8051359	8051360	8051361
			4	AL-SWSPS4-m/P01	8051371	8051372	8051373

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request





AUTOMATION LINE® M8x1 shielded ⊙

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4, 5	30V
Current load [Imax]	3, 4	4A
	5	3A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Pinning

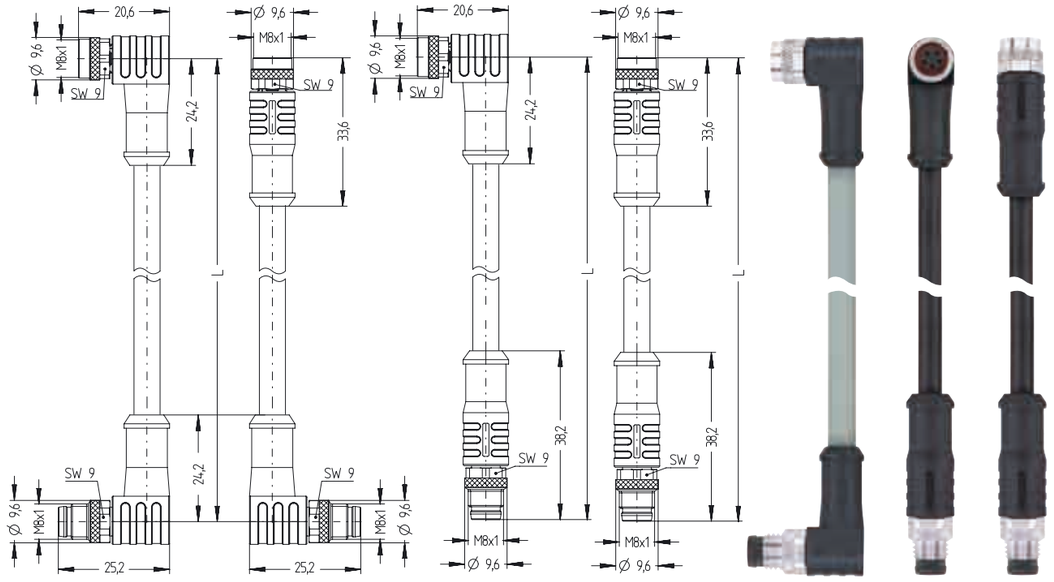
3 poles | *female*	3 poles | *male*	4 poles | *female*	4 poles | *male*	5 poles | *female*	5 poles | *male*
					
1BN | 3BU | 4BK		1BN | 2WH | 3BU | 4BK		1BN | 2WH | 3BU | 4BK | 5GY	

AL –	S	W	KP	S	3 –	m –	AL –	S	W	SP	S	3 /	S370
Automation Line	Screwable	W: angled ↦ | without: straight ↑	Round connector M8x1 | KP: *female*	Shielded ⊙	Poles	Cable length [m]	Automation Line	Screwable	W: angled ↦ | without: straight ↑	Round connector M8x1 SP: *male*	Shielded ⊙	Poles	Cable

not for P00, 5-poles

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
AL_M8x1 ⊙	*f* | ↑ *m* | ↑	PUR | S370	3	AL-SKPS3-m-AL-SSPS3/S370	8051896	8046246	8046247
			4	AL-SKPS4-m-AL-SSPS4/S370	8051914	8046258	8046259
			5	AL-SKPS4.5-m-AL-SSPS4.5/S370	8052768	8052769	8052770
		PVC | P00	3	AL-SKPS3-m-AL-SSPS3/P00	8051558	8051559	8051560
			4	AL-SKPS4-m-AL-SSPS4/P00	8051570	8051571	8051572
			5	AL-SKPS4.5-m-AL-SSPS4.5/P00	8042863	8042864	8042865
		PVC | P01	3	AL-SKPS3-m-AL-SSPS3/P01	8051766	8051767	8051768
			4	AL-SKPS4-m-AL-SSPS4/P01	8051778	8051779	8051780
	f | ↑ *m* | ↦	PUR | S370	3	AL-SKPS3-m-AL-SWSPS3/S370	8051915	8046252	8046253
			4	AL-SKPS4-m-AL-SWSPS4/S370	8051916	8046264	8046265
			5	AL-SKPS4.5-m-AL-SWSPS4.5/S370	8052777	8052778	8052779
		PVC | P00	3	AL-SKPS3-m-AL-SWSPS3/P00	8051564	8051565	8051566
			4	AL-SKPS4-m-AL-SWSPS4/P00	8051576	8051577	8051578
			5	AL-SKPS4.5-m-AL-SWSPS4.5/P00	8042876	8042877	8042878
		PVC | P01	3	AL-SKPS3-m-AL-SWSPS3/P01	8051772	8051773	8051774
			4	AL-SKPS4-m-AL-SWSPS4/P01	8051784	8051785	8051786
	f | ↦ *m* | ↑	PUR | S370	3	AL-SWKPS3-m-AL-SSPS3/S370	8051917	8046255	8046256
			4	AL-SWKPS4-m-AL-SSPS4/S370	8051918	8046267	8046268
			5	AL-SWKPS4.5-m-AL-SSPS4.5/S370	8052774	8052775	8052776
		PVC | P00	3	AL-SWKPS3-m-AL-SSPS3/P00	8051567	8051568	8051569
			4	AL-SWKPS4-m-AL-SSPS4/P00	8051579	8051580	8051581
			5	AL-SWKPS4.5-m-AL-SSPS4.5/P00	8042872	8042873	8042874
		PVC | P01	3	AL-SWKPS3-m-AL-SSPS3/P01	8051775	8051776	8051777
			4	AL-SWKPS4-m-AL-SSPS4/P01	8051787	8051788	8051789
	f | ↦ *m* | ↦	PUR | S370	3	AL-SWKPS3-m-AL-SWSPS3/S370	8051919	8046249	8046250
			4	AL-SWKPS4-m-AL-SWSPS4/S370	8051920	8046261	8046262
			5	AL-SWKPS4.5-m-AL-SWSPS4.5/S370	8052771	8052772	8052773
		PVC | P00	3	AL-SWKPS3-m-AL-SWSPS3/P00	8051561	8051562	8051563
			4	AL-SWKPS4-m-AL-SWSPS4/P00	8051573	8051574	8051575
			5	AL-SWKPS4.5-m-AL-SWSPS4.5/P00	8042868	8042869	8042870
		PVC | P01	3	AL-SWKPS3-m-AL-SWSPS3/P01	8051769	8051770	8051771
			4	AL-SWKPS4-m-AL-SWSPS4/P01	8051781	8051782	8051783

Other versions and cable-lengths are available upon request.



AUTOMATION LINE© M8x1 junction cable shielded ⊙

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4, 5	30V
Current load [Imax]	3, 4	4A
	5	3A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Grip	TPU, BK
	Contact carrier	TPU, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Pinning

3 poles | *female*	3 poles | *male*	4 poles | *female*	4 poles | *male*	5 poles | *female*	5 poles | *male*
1BN | 3BU | 4BK		1BN | 2WH | 3BU | 4BK		1BN | 2WH | 3BU | 4BK | 5GY	

S	W	KP	C	3–	K

- K: Connection | K: Screw-clamp; S: Insulation displacement connector (IDC); L: Soldering
- 3–: Poles
- C: Field-wireable
- KP: Round connector M8x1 | KP: *female*; SP: *male*
- W: W: angled ↱ | without: straight ↑
- S: Screwable


Fig.1

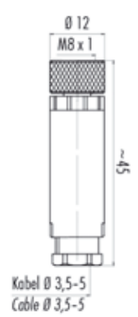

Fig.2

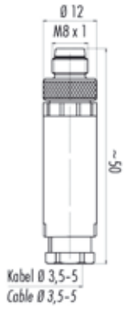

Fig.3

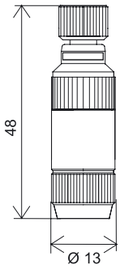

Fig.4

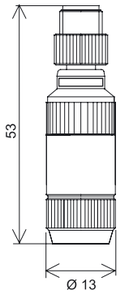

Fig.5

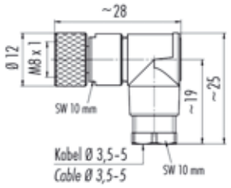

Fig.6

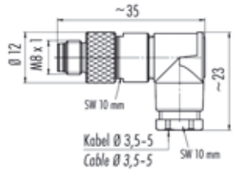












Product line	Version	Connection	Figure	Poles	Type-designation Order-No.	Order-No.
M8x1	Screw-clamp	*f* | ↑	Fig. 1	3	SKPC3K	8004833
				4	SKPC4K	8004834
		m | ↑	Fig.2	3	SSPC3K	8004831
				4	SSPC4K	8004832
	IDC	*f* | ↑	Fig. 3	3	SKPC3S	8019721
				4	SKPC4S	8019723
		m | ↑	Fig. 4	3	SSPC3S	8019720
				4	SSPC4S	8019722
	Soldering	*f* | ↱	Fig. 5	3	SWKPC3L	8017351
				4	SWKPC4L	8017364
		m | ↱	Fig. 6	3	SWSPC3L	8017365
				4	SWSPC4L	8017366

M8x1 field-wireable

Technical data	Poles	Value		
		Screw-clamp	IDC	Soldering
Rated voltage [U_{max}]	3, 4	60 V	32 V	60 V
Current load [I_{max}]	3, 4	4 A	3 A	4 A
Insulation resistance		≥10^8 Ω	≥10^8 Ω	≥10^8 Ω
Standards		IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104
Materials	Grip	PBT/PA, BK	PBT/PA, BK	PBT/PA, BK
	Contact carrier	PA, BK	PA, BK	PA, BK
	Contacts	CuZn, gold-plated	CuZn, gold-plated	CuZn, gold-plated
Ambient temperature		-40°C…+85°C	-40°C…+85°C	-40°C…+85°C
Degree of pollution		3	3	3
Protection class (installed)		IP67	IP67	IP67
External diameter of the cable		3.5…5 mm	4…5.1 mm	3.5…5 mm
Core cross-section/Clamping ability		0.14…0.5 mm²	0.14…0.34 mm²	0.25 mm²
		AWG 26…20	AWG 26…22	AWG 24

Pinning

3 poles | *female*

3 poles | *male*

4 poles | *female*

4 poles | *male*

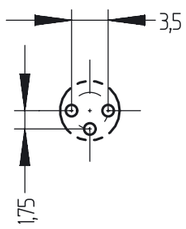
P	FK	S	4 –	F –	0,2
					Wire-length [m]
				without: Front-wall mounting (optional threaded rear)	
				F: Back-wall mounting (threaded front)	
			Poles		
		Screwable			
	FK: *female*				
	FS: *male*				
M8x1/Ø8mm snap					

M8x1-Flanges	Version	Poles		Type-designation.	Order-No.
Front-wall mounting (optional threaded rear)	*f* | ↑ | CuZn	3	Fig. 3	PFKS3-0,2	8008169
		4		PFKS4-0,2	8008170
		5		PFKS4.5-0,2	8044266
	m | ↑ | CuZn	3	Fig. 2	PFS3-0,2	8008165
		4		PFS4-0,2	8008166
		5		PFS4.5-0,2	8044347
Back-wall mounting (threaded front)	*m* | ↑ | CuZn	3	Fig. 1	PFS3F-0,2	8008167
		4		PFS4F-0,2	8008168

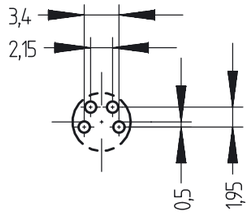
Other versions, wire-lengths and -colours are available upon request.

Hole pattern

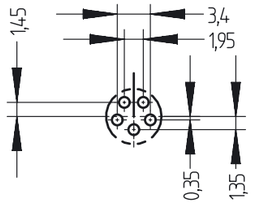
3-poles

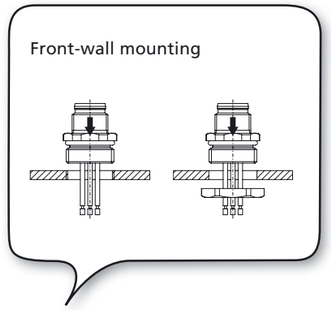


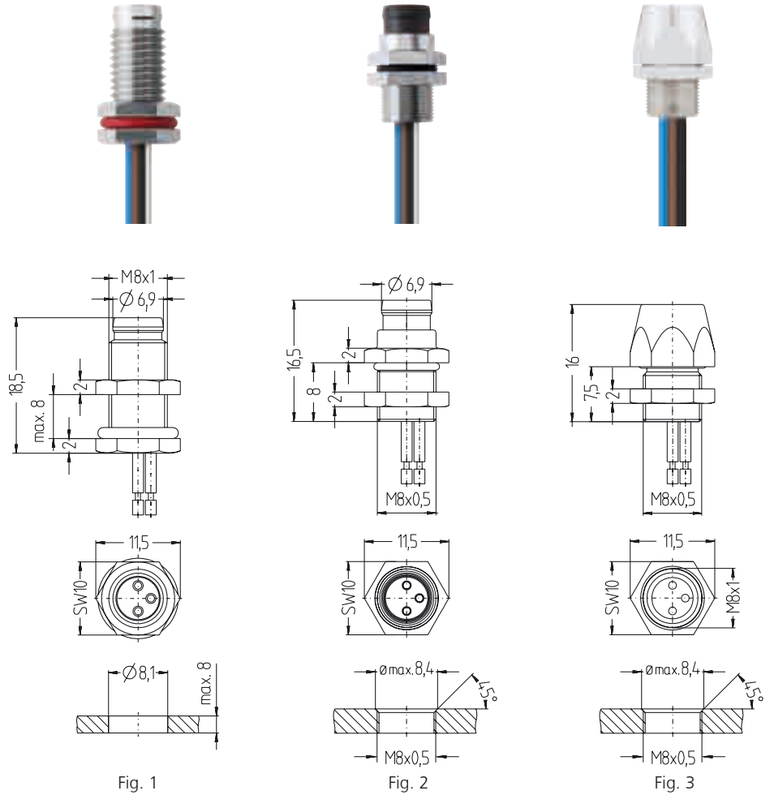
4-poles



5-poles





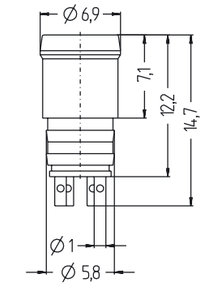


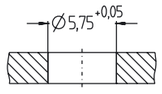
M8x1 Flanges

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4, 5	30V
Current load [Imax]	3, 4	4A
	5	3A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Contact carrier	PA, BK
	Sealing *(female)*	NBR
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles
Accessories		Spare nuts are not included | see accessories on page 194

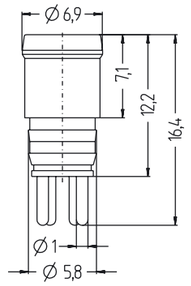
Pinning

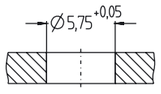
3 poles | *female*	3 poles | *male*	4 poles | *female*	4 poles | *male*	5 poles | *female*	5 poles | *male*
					
1BN | 3BU | 4BK		1BN | 2WH | 3BU | 4BK		1BN | 2WH | 3BU | 4BK | 5GY	



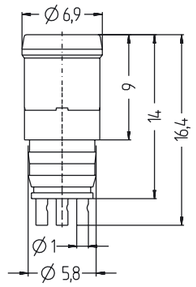


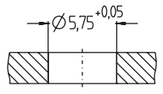
ESP_soldering-contact



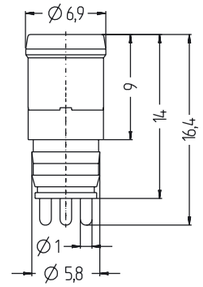


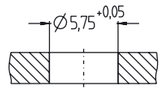
ESP_print-contact





ESHP_soldering-contact





ESHP_print-contact

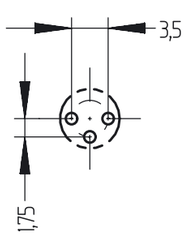
Built-in connector	Version	Poles	Soldering-contact Type-designation	Order-No.	Print-contact Type-designation	Order-No.
Ø8mm snap	*m* | plastics BK	3	ESP3SL	8008163		
		4	ESP4SL	8008164	ESP4SP	8036657
		5	ESP5SL	8044283	ESP5SP	8044285
	f | plastics BK	3			EKP3SP	8009728
		4			EKP4SP	8009729
		5			EKP4.5SP	8043797
	m | metal/plastics transparent	3	ESHP3L	8008161	ESHP3P	8008159
		4	ESHP4L	8008162	ESHP4P	8008160
	m | metal	3	ESGP3L	8008744	ESGP3P	8008742
		4	ESGP4L	8008745	ESGP4P	8008743
M8x1	*m* | plastics BK	3	SESP3SL	8008157		
		4	SESP4SL	8037479		

Other versions are available upon request.

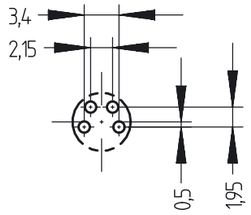
only for ESP 3-, 4-poles

Hole pattern

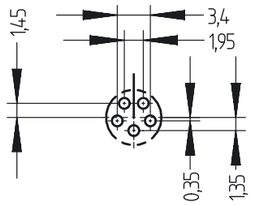
3-poles

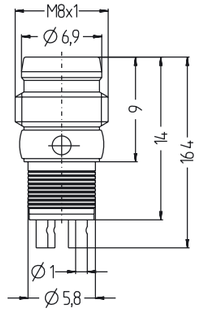


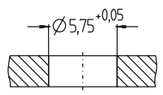
4-poles



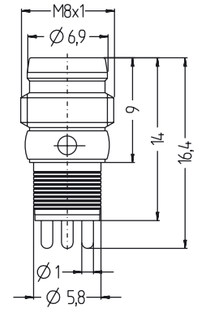
5-poles

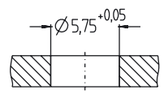




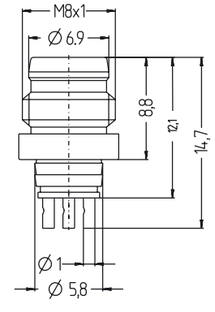


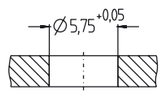
ESGP_soldering-contact



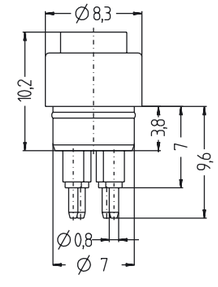


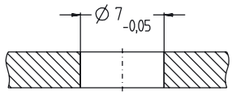
ESGP_print-contact





SESP_soldering-contact





EKP_print-contact

M8x1 Build-in connector

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4, 5	30V
Current load [Imax]	3, 4	4A
	5	3A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Contact carrier	PA, BK | PA, transparent
	Metal housing	CuZn, nickel-plated
	Contacts	CuZn, gold-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Pinning

3 poles | *female*

3 poles | *male*

1BN | 3BU | 4BK

4 poles | *female*

4 poles | *male*

1BN | 2WH | 3BU | 4BK

5 poles | *female*

5 poles | *male*

1BN | 2WH | 3BU | 4BK | 5GY

FB– | S | W | KP | 3– | P2– | m/ | S3930

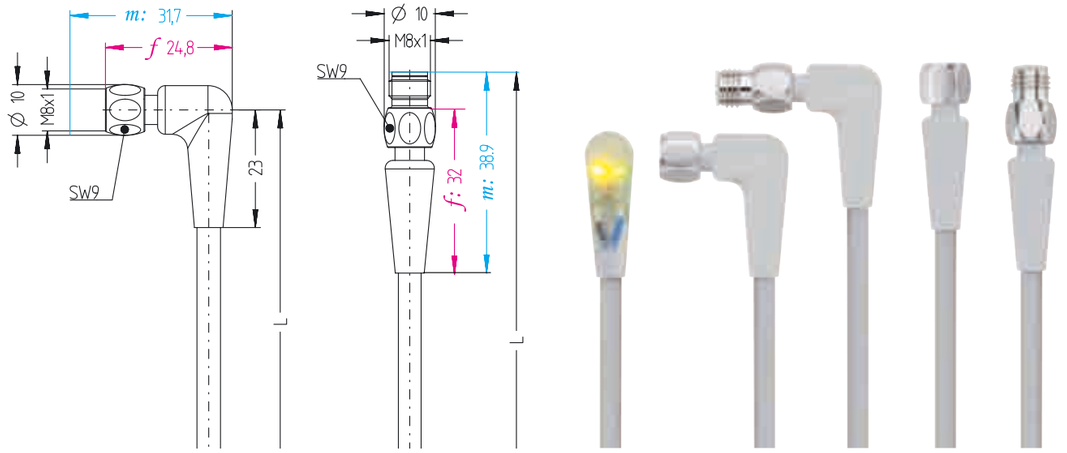
- FB– Food&Beverage
- S Screwable
- W: angled ↱ | without: straight ↑
- KP: Round connector M8x1 | KP: *female* | SP: *male*
- 3– Poles
- P2– PNP | Quantity LED + circuit
- m/ Cable length [m]
- S3930 Cable quality

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 2m	5m	10m
FB_M8x1	*f* | ↑	TPE | S3930	3	FB-SKP3-m/S3930	8050454	8058571	8058572
			4	FB-SKP4-m/S3930	8050455	8058573	8058574
	f | ↱	TPE | S3930	3	FB-SWKP3-m/S3930	8050456	8058575	8058576
			4	FB-SWKP4-m/S3930	8050457	8058577	8058578
	f | ↱ | LED2	TPE | S3930	3	FB-SWKP3P2-m/S3930	8058619	8058620	8058621
			4	FB-SWKP4P2-m/S3930	8058622	8058623	8058624
	m | ↑	TPE | S3930	3	FB-SSP3-m/S3930	8050458	8058579	8058580
			4	FB-SSP4-m/S3930	8050459	8058581	8058582
	m | ↱	TPE | S3930	3	FB-SWSP3-m/S3930	8050460	8058583	8058584
			4	FB-SWSP4-m/S3930	8050461	8058585	8058586

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

Cable quality TPE | S3930

Flexible PVC-free polypropylene cable (light grey, similar RAL7035) with great strength against highly effective detergents of the Food&Beverage industry. In addition, good microbes- and chemicals resistance and suitable for drag-chain applications. Well adapted for use in food industry, packaging-, bottling plants as well as industrial machinery- and plant construction.



Food&Beverage hygienic _ M8x1

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4	30V
	LED-version	24V$_{DC}$
Current load [Imax]	3, 4	4A
	LED-version	3A
Insulation resistance		≥10^8 Ω
Standards		IEC61076-2-104
Materials	Grip	PP, GY | TPU, transparent
	Contact carrier	PP, GY
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	V4A
Ambient temperature		-40°C…+105°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Pinning

3 poles | *female*

1BN | 3BU | 4BK

3 poles | *male*

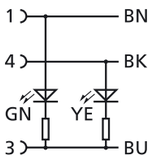
4 poles | *female*

1BN | 2WH | 3BU | 4BK

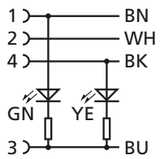
4 poles | *male*

LED-versions

3P2



4P2



FB– | S | W | KP | 3– | m– | FB– | S | W | SP | 3/ | S3930

- S3930: Cable quality
- 3/: Poles
- SP: Round connector. M8x1 | SP: *male*
- W: W: angled ↦ | without: straight ↑
- S: Screwable
- FB–: Food&Beverage
- m–: Cable length [m]
- 3–: Poles
- KP: Round connector M8x1 | KP: *female*
- W: W: angled ↦ | without: straight ↑
- S: Screwable
- FB–: Food&Beverage

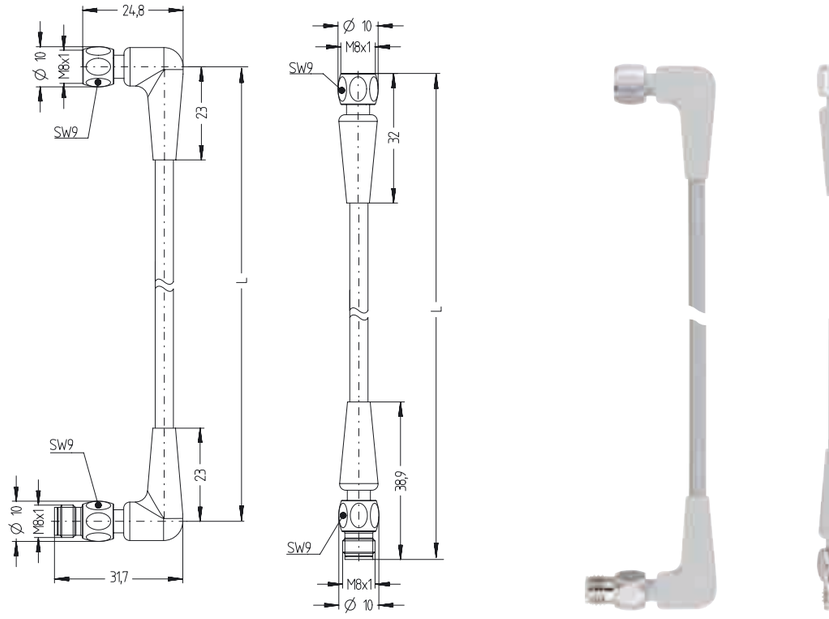
ECOLAB FDA RoHS

Product line	Version	Cable quality	Poles	Type-designation	Cable length m 1m	2m	5m
FB_M8x1	*f* | ↑__ *m* | ↑	TPE | S3930	3	FB-SKP3-m-FB-SSP3/S3930	8058599	8058600	5058601
			4	FB-SKP4-m-FB-SSP4/S3930	8058602	8058603	8058604
	f | ↦__ *m* | ↦	TPE | S3930	3	FB-SWKP3-m-FB-SWSP3/S3930	8058605	8058606	8058607
			4	FB-SWKP4-m-FB-SWSP4/S3930	8058608	8058609	8058610

Other versions and cable-lengths are available upon request.

Cable quality TPE | S3930

Flexible PVC-free polypropylene cable (light grey, similar RAL7035) with great strength against highly effective detergents of the Food&Beverage industry. In addition, good microbes- and chemicals resistance and suitable for drag-chain applications. Well adapted for use in food industry, packaging-, bottling plants as well as industrial machinery- and plant construction.



Food&Beverage hygienic_ M8x1 junction cable

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4	30V
Current load [Imax]	3, 4	4A
Insulation resistance		≥10^8 Ω
Standards		IEC61076-2-104
Materials	Grip	PP, GY
	Contact carrier	PP, GY
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	V4A
Ambient temperature		-40°C...+105°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Pinning

3 poles | *female*	3 poles | *male*	4 poles | *female*	4 poles | *male*
			
1BN | 3BU | 4BK		1BN | 2WH | 3BU | 4BK	

HT- | S | W | KP | 3- | m / | S2430

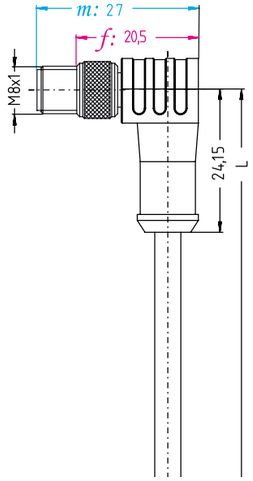
- S2430: Cable quality
- m: Cable length [m] included wire-end sleeves
- 3: Poles
- KP: Round connector M8x1 | KP: *female* | SP: *male*
- W: W: angled ↱ | without: straight ↑
- S: Screwable
- HT: High temperature-proof

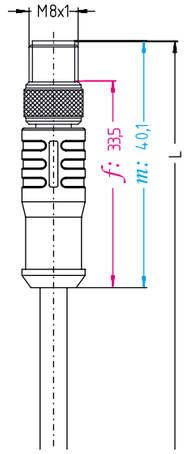
Product line	Version	Cable-quality	Poles	Type-designation	2m	Cable length m 5m	10m
HT_M8x1	*f* | ↑	PTFE | S2430	3	HT-SKP3-m/S2430	8036605	8036097	8039482
			4	HT-SKP4-m/S2430	8039483	8036098	8037215
	f | ↱	PTFE | S2430	3	HT-SWKP3-m/S2430	8039484	8036099	8039485
			4	HT-SWKP4-m/S2430	8039486	8036100	8037216
	m | ↑	PTFE | S2430	3	HT-SSP3-m/S2430	8039487	8036101	8039488
			4	HT-SSP4-m/S2430	8039489	8036102	8039490
	m | ↱	PTFE | S2430	3	HT-SWSP3-m/S2430	8039491	8036103	8039492
			4	HT-SWSP4-m/S2430	8039493	8036104	8039494

Other versions and cable-lengths are available upon request.

Cable quality PTFE | S2430

Flexible PTFE-cable with high temperature resistance (300°C/3000 h), cold bending resistance down to -65°C. Excellent oil-, acids-, chemicals-, ozone- and weather resistance and flame retardant. It is low-smoke without corrosive fire gases. Applications in extended temperature-range of industrial machinery- and plant construction as well as the chemical- and automotive industries.





M8x1 High temperature-proof

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4	30V
Current load [Imax]	3, 4	4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Grip	PBT GF, BK
	Contact carrier	PBT GF, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-20°C...+150°C
Degree of pollution		3
Protection class (installed)		IP65
Mechanical life cycle		>100 mating cycles

Pinning

3 poles | *female*	3 poles | *male*	4 poles | *female*	4 poles | *male*
			
1BN | 3BU | 4BK		1BN | 2WH | 3BU | 4BK	

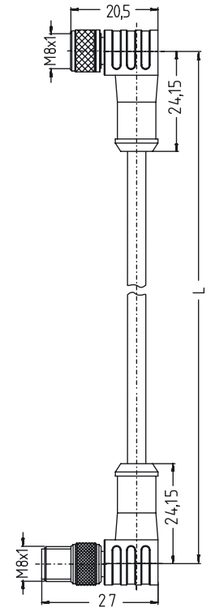
HT-	S	W	KP	3-	m-	HT-	S	W	SP	3/	S2430
											Cable quality
										Poles	
									Round connector M8x1 | SP: *male*		
								W: angled ↦ | without: straight ↑			
							Screwable				
						High temperature-proof					
					Cable length [m]						
				Poles							
			Round connector M8x1 | KP: K *female*								
		W: angled ↦ | without: straight ↑									
	Screwable										
High temperature-proof											

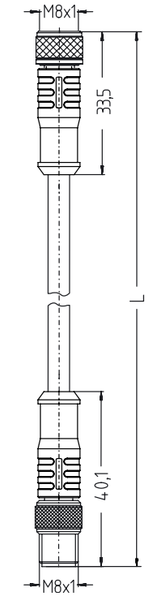
Product line	Version	Cable-quality	Poles	Type-designation	Cable length m 1m	2m	5m
HT_M8x1	*f* | ↑ *m* | ↑	PTFE | S2430	3	HT-SKP3-m-HT-SSP3/S2430	8043355	8039972	8039973
			4	HT-SKP4-m-HT-SSP4/S2430	8051990	8039975	8039976
HT_M8x1	*f* | ↦ *m* | ↦	PTFE | S2430	3	HT-SWKP3-m-HT-SWSP3/S2430	8051991	8039978	8039979
			4	HT-SWKP4-m-HT-SWSP4/S2430	8051992	8039981	8039982

Other versions and cable-lengths are available upon request.

Cable quality PTFE | S2430

Flexible PTFE-cable with high temperature resistance (300°C/3000 h), cold bending resistance down to -65°C. Excellent oil-, acids-, chemicals-, ozone- and weather resistance and flame retardant. It is low-smoke without corrosive fire gases. Applications in extended temperature-range of industrial machinery- and plant construction as well as the chemical- and automotive industries.





M8x1 High temperature-proof | junction cable

Technical data	Poles	Value
Rated voltage [Umax]	3	60V
	4	30V
Current load [Imax]	3, 4	4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Grip	PBT GF, BK
	Contact carrier	PBT GF, BK
	Sealing *(female)*	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-20°C...+150°C
Degree of pollution		3
Protection class (installed)		IP65
Mechanical life cycle		>100 mating cycles

Pinning

3 poles | *female*	3 poles | *male*	4 poles | *female*	4 poles | *male*
			
1BN | 3BU | 4BK		1BN | 2WH | 3BU | 4BK	

IE-	S	W	SP	S	4.027-	m /	S3400

- Cable quality
- Cable length [m]
- Contacts.allocation code
- Shielded ⊙
- Round connector M8x1 | SP: *male*
- W: angled ↦ | without: straight ↑
- Screwable
- Industrial Ethernet

EtherCAT · cULus · RoHS · PG

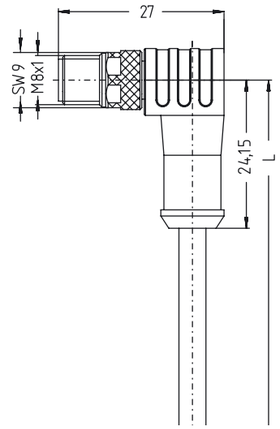
Product line	Poles	Version	Cable-quality		Type-designation	Cable length m 2m	5m	10m
IE_M8x1⊙	4 | Cat5e	*m* | ↑	PUR | S3400®		IE-SSPS4.027-m/S3400	8055529	8055530	8055531
			PVC | S3242®		IE-SSPS4.027-m/S3242	8055463	8055514	8055515
	4 | Cat5e	*m* | ↦	PUR | S3400®		IE-SWSPS4.027-m/S3400	8055789	8055790	8055791
			PVC | S3242®		IE-SWSPS4.027-m/S3242	8055786	8055787	8055788
	100m buscable		PUR | S3400®	8055896				
			PVC | S3242®	8055780				

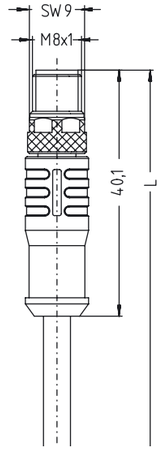
Other cable-lengths or cable terminals converted with wire-end sleeves are available upon request.

Cable-quality

Shielded Ethernet-cables in PUR-quality for safe and industrial-suited data transmission in automation- and fieldbus technology. Realtime requirements based on IEC 61158 are viable. The cables are UL-approved and meet the Cat 5e requirements. Oil-resistance is according to DIN EN 60811-2-1 and flame retardancy according to IEC 60332-1-2. Materials and constructive setup allow for the mechanical stresses mentioned below.

ESCHA Nomenclatur		S3400®	S3242®
Cable quality for		PUR	PVC
Transmission category		according to Cat 5e	Cat 5e
Nominal diameter		Ø 4.8mm	Ø 4.7mm
Wire-structure data		4xAWG 26/19	4xAWG 26/7
Wire colours		WH/OG | WH/BU | BU | OG	WH/OG | WH/BU | BU | OG
Bending radius	single	4xd	5xd
	repeated	7.5xd	7xd
	draig-chain	≥ 36mm (v_{max} = 3m/s | a_{max} = 5m/s²)	–
Temperature range		-40°C...+80°C	-40°C...+70°C





Industrial Ethernet | EtherCAT_M8x1 shielded ⊙

Technical data	Poles	Value
Rated voltage [Umax]	4	30V
Current load [Imax]	4	4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-104
Materials	Grip	TPU, BK
	Contact carrier	PA, sBK
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Pinning

4-poles | *male*

1WH/OG | 2WH/BU | 3BU | 4OG

IE–	S	W	SP	S	4.027–	m –	IE–	S	W	SP	S	4.027/	S3400
													Cable
												Contacts.alloc. code	
											Shielded ⊙		
										M8x1 | SP: *male*			
										M12x1 | WAS: *male*			
									W: angled ↦ | without: straight ↑				
								Screwable					
							Industrial Ethernet						
						Cable length [m]							
					Contacts.allocation code								
				Shielded ⊙									
			M8x1 | SP: *male*										
			M8x1 | KP: *female*										
			RJ45 | S: *male*										
		W: angled ↦ | without: straight ↑											
	Screwable												
Industrial Ethernet													

EtherCAT · cULus · RoHS · PG

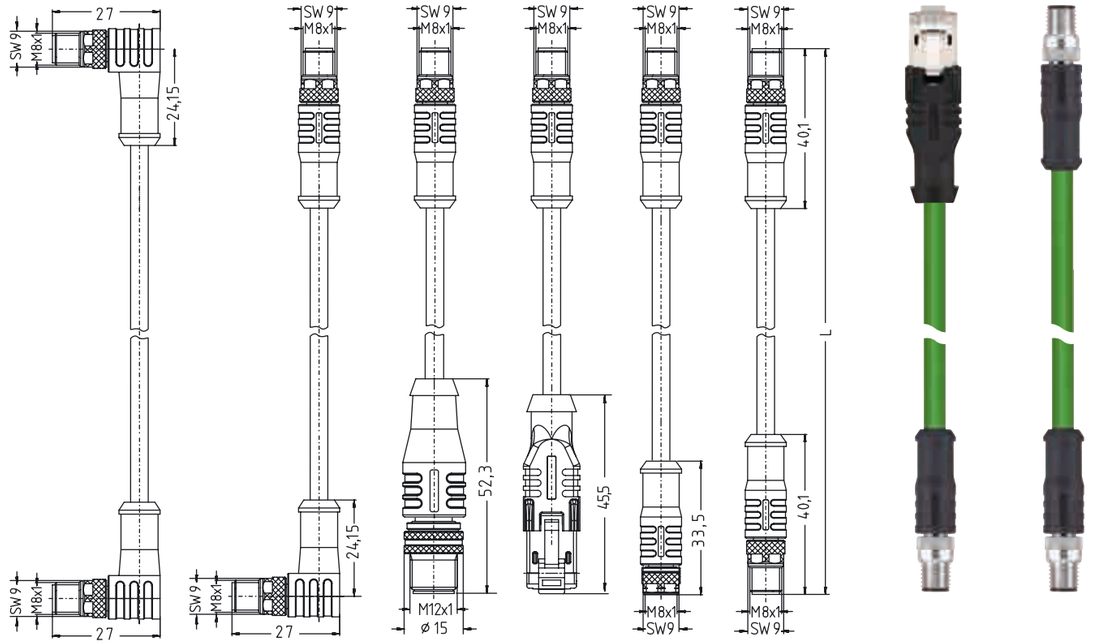
Product line	Poles	Version	Cable-quality	Type-designation	1 m	Cable length m 2 m	5 m
IE_M8x1 ⊙	4 | Cat5e	*m* | ↑__ *m* | ↑	PUR | S3400®	IE-SSPS4.027-m-IE-SSPS4.027/S3400	8055532	8055533	8055534
			PVC | S3242®	IE-SSPS4.027-m-IE-SSPS4.027/S3242	8055516	8055517	8055518
	4 | Cat5e	*m* | ↑__ *m* | ↦	PUR | S3400®	IE-SWSPS4.027-m-IE-SSPS4.027/S3400	8055795	8055796	8055797
			PVC | S3242®	IE-SWSPS4.027-m-IE-SSPS4.027/S3242	8055792	8055793	8055794
	4 | Cat5e	*m* | ↦__ *m* | ↦	PUR | S3400®	IE-SWSPS4.027-m-IE-SSPS4.027/S3400	8055801	8055802	8055804
			PVC | S3242®	IE-SWSPS4.027-m-IE-SSPS4.027/S3242	8055798	8055799	8055800
	4 | Cat5e	*m* | ↑__ *f* | ↑	PUR | S3400®	IE-SKPS4.027-m-IE-SSPS4.027/S3400	8055535	8055537	8055538
			PVC | S3242®	IE-SKPS4.027-m-IE-SSPS4.027/S3242	8055519	8055520	8055521
	4 | Cat5e	*m* | ↑__ RJ45	PUR | S3400®	IE-SSPS4.027-m-IE-RJ45SS8.005/S3400	8055536	8055539	8055540
			PVC | S3242®	IE-SSPS4.027-m-IE-RJ45SS8.005/S3242	8055522	8055523	8055525
IE_M8x1_M12x1 ⊙	4 | Cat5e	*m* | ↑__ *m* | ↑	PUR | S3400®	IE-WASSY4.082-m-IE-SSPS4.027/S3400	8055552	8055553	8055554
			PVC | S3242®	IE-WASSY4.082-m-IE-SSPS4.027/S3242	8055549	8055550	8055551

Other versions and cable-lengths are available upon request.

Cable-quality

Shielded Ethernet-cables in PUR-quality for safe and industrial-suited data transmission in automation- and fieldbus technology. Realtime requirements based on IEC 61158 are viable. The cables are UL-approved and meet the Cat 5e requirements. Oil-resistance is according to DIN EN 60811-2-1 and flame retardancy according to IEC 60332-1-2. Materials and constructive setup allow for the mechanical stresses mentioned below.

ESCHA Nomenclatur		S3400®	S3242®
Cable quality for		PUR	PVC
Transmission category		according to Cat 5e	Cat 5e
Nominal diameter		Ø 4.8 mm	Ø 4.7 mm
Wire-structure data		4 x AWG 26/19	4 x AWG 26/7
Wire colours		WH/OG | WH/BU | BU | OG	WH/OG | WH/BU | BU | OG
Bending radius	single	4 x d	5 x d
	repeated	7.5 x d	7 x d
	draig-chain	≥ 36 mm (v_{max} = 3 m/s | a_{max} = 5 m/s²)	–
Temperature range		-40°C…+80°C	-40°C…+70°C



Industrial Ethernet | EtherCAT_M8x1 junction cable shielded ⊙

Technical data		M8x1	M12x1	RJ45	
	Poles	Value	Value	Poles	Value
Rated voltage [U_{max}]	4	30 V	250 V	4-adrig	50 V
Current load [I_{max}]	4	4 A	4 A	4-adrig	1 A
Insulation resistance		≥ 10^8 Ω	≥ 10^8 Ω		≥ 10^8 Ω
Standards		IEC 61076-2-104	IEC 61076-2-101		IEC 60603-7-5
Materials	Grip	TPU, BK	TPU, BK	Grip	TPU, BK
	Contact carrier *m*	TPU, BK	TPU, BK	Contact carrier/Loader	PC, transparent
	Contact carrier *f*	PA, BK		Contacts	CuZn, gold-plated
	Sealing *(female)*	FPM/FKM		Shielding	CuZn, nickel-plated
	Contacts	CuZn, gold-plated	CuZn, gold-plated		
	Locking mec.	CuZn, nickel-plated	CuZn, nickel-plated		
Ambient temperature		-30°C…+90°C	-30°C…+90°C		-20°C…+75°C
Degree of pollution		3	3		1
Protection class (installed)		IP 67, IP 69K	IP 67, IP 69K		IP 20
Mechanical life cycle		>100 mating cycles	>100 mating cycles		>750 mating cycles

Pinning M8x1

4-poles \| *female* — 4-poles \| *male*

1 WH/OG \| 2 WH/BU \| 3 BU \| 4 OG

Pinning M12x1

4-poles *male* \| D

1 WH/OG \| 2 OG \| 3 WH/BU \| 4 BU

Pinning RJ45

Industrial \| 4-poles

1 WH/OG \| 2 OG \| 3 WH/BU \| 6 BU

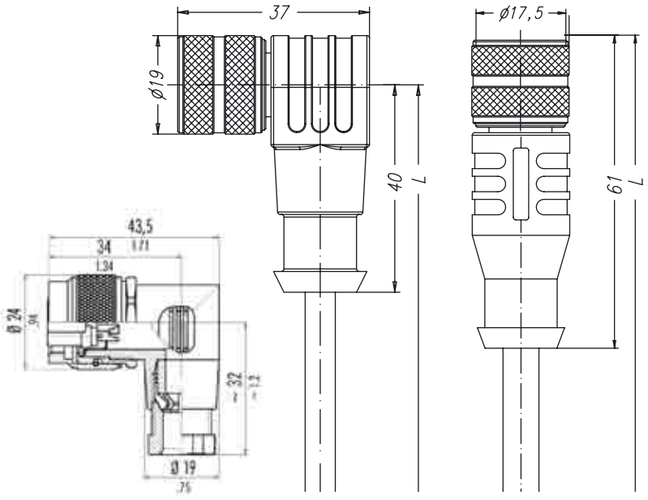
W | MK | C | A | U | 14- | L | .001- | 3 / | S1117

- S1117 — Cable quality
- 3 / — Cable length [m] included wire-end sleeves
- .001- — Allocation-code
- L — Soldering-contacts
- 14- — Poles
- U — Molded
- A — Round connector M16x0.75
- C — Field-wireable
- MK — *female*
- W: angled ↱ | without: straight ↑

RoHS

Product line	Version	Poles. allcocation	Cable quality	Type-designation		Cable length m 2m	5m	10m
M16x0.75	*f* | ↑	14.001	PUR | S1117	MKAU14.001-m/S1117		8029796	8029865	8029866
		14.003		MKAU14.003-m/S1117		8029798	8029869	8029870
		19.001		MKAU19.001-m/S1117		8029813	8029873	8029874
		14.001	PVC | S1118	MKAU14.001-m/S1118		8029797	8029867	8029868
		14.003		MKAU14.003-m/S1118		8029799	8029871	8029872
		19.001		MKAU19.001-m/S1118		8029814	8029875	8029876
	f | ↱	14.001	PUR | S1117	WMKAU14.001-m/S1117		8019431	8019432	8019443
		14.003		WMKAU14.003-m/S1117		8026802	8027231	8027232
		19.001		WMKAU19.001-m/S1117		8022166	8027235	8027236
		14.001	PVC | S1118	WMKAU14.001-m/S1118		8018508	8019444	8019445
		14.003		WMKAU14.003-m/S1118		8026801	8027233	8027234
		19.001		WMKAU19.001-m/S1118		8022167	8027237	8027238
	f | ↱	14	Soldering-c.	WMKCA14L	8017607			

Other versions and cable-lengths are available upon request.

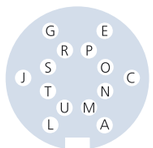


M16x0.75 *female*

Technical data	Molded		Field-wireable	
	Poles	Value	Poles	Value
Rated voltage [Umax]	14, 19	32V	14	60V
Current load [Imax]	14, 19	6A contacts A, L, M, U	14	3A
		2A other contacts		
Insulation resistance		≥10^8Ω		≥10^8Ω
Standards		IEC 61076-2-106		IEC 61076-2-106
Materials	Grip	TPU, BU	Grip	PA, BK
	Contact carrier	TPU, BK	Contact carrier	PBT, BK
	Sealing	NBR	Sealing	NBR
	Contacts	CuZn, gold-plated	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated	Locking mechanism	CuZn, chrome-plated
Ambient temperature		-30°C...+90°C		-30°C...+90°C
Degree of pollution		3		3
Protection class (installed)		IP67		IP67
Mechanical life cycle		>100 mating cycles		>100 mating cycles
Core cross-section/Clamping ability		0.5mm² | A, L, M, U		0.25...0.5mm²
		0.25mm² | others		
External diameter of the cable				6...8mm

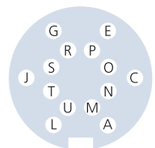
Pinning | *female*

14.001



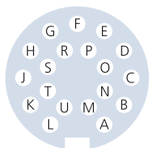
A:BN | C: n.c. | E:BK | G:PK | J:GN | **L:BU** | M: n.c. | N: n.c. | O:VT | P:WH | R:RD | S:GY | T:YE | U: n.c.

14.003



A: n.c. | C:GN | E:PK | G:RD | J:VT | L: n.c. | **M:BN** | N:YE | O:GY | P:BK | R:WH | S: n.c. | T: n.c. | **U:BU**

19.001



A:WH/GY | B:WH/YE | C:GN | D:RD | E:GY/PK | F:PK | G:RD/BU | H:BK | J:BN/GN | K:YE/BN | L:GY/BN | **M:BN** | N:YE | O:GY | P:WH/GN | R:WH | S:VT | T: n.c. | **U:BU**

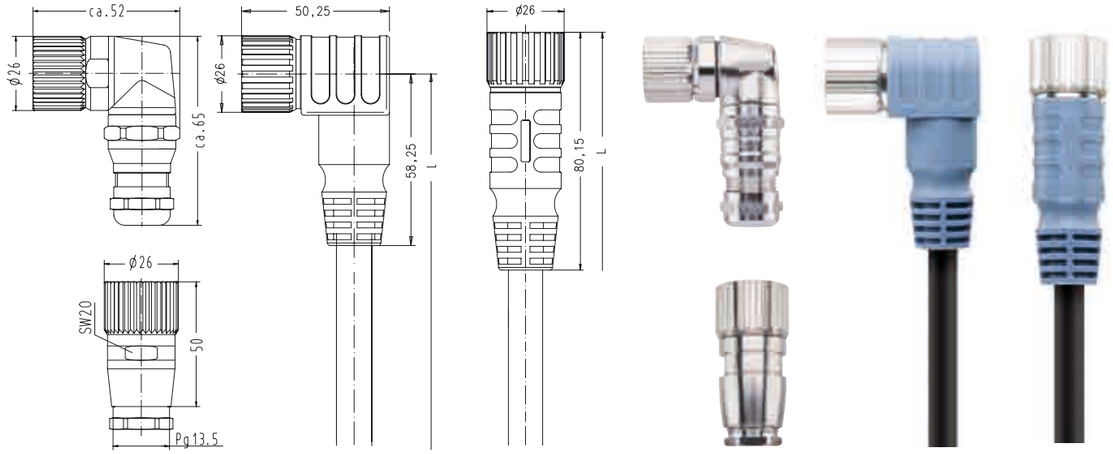
W	MK	C	E	C	U	19-	L	.001-	3 /	S370

- S370: Cable quality
- 3 /: Cable length [m] included wire-end sleeves
- .001-: Allocation-code
- L: Connection | L: Soldering-contacts, C: Crimp-contacts
- 19-: Poles
- U: Molded
- C: Round connector M23x1
- E: Locking mechanism stainless steel
- C: Field-wireable
- MK: *female*
- W: angled ⮡ | without: straight ↑

RoHS

Product line	Version	Poles. allocation	Cable quality	Type-designation		Cable length m 2m	5m	10m
M23x1	*f* | ↑	12.001	PUR | S370 ®	MKCU12.001-m/S370		8027363	8026032	8026033
		12.003		MKCU12.003-m/S370		8026243	8026039	8026041
		19.001		MKCU19.001-m/S370		8027364	8026036	8026037
		19.003		MKCU19.003-m/S370		8027365	8017221	8017222
	f | ⮡	12.001		WMKCU12.001-m/S370		8027366	8026043	8026044
		12.003		WMKCU12.003-m/S370		8026244	8026049	8026050
		19.001		WMKCU19.001-m/S370		8027368	8026046	8026047
		19.003		WMKCU19.003-m/S370		8027370	8017111	8017112
	f | ↑ |	12	Soldering-contacts	MKCC12L	8013694			
		19		MKCC19L	8013696			
	f | ⮡ |	12	Soldering-contacts	WMKCC12L	8017153			
		19		WMKCC19L	8017151			

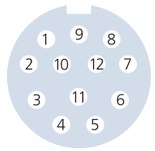
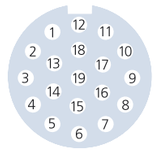
Other versions and cable-lengths are available upon request.



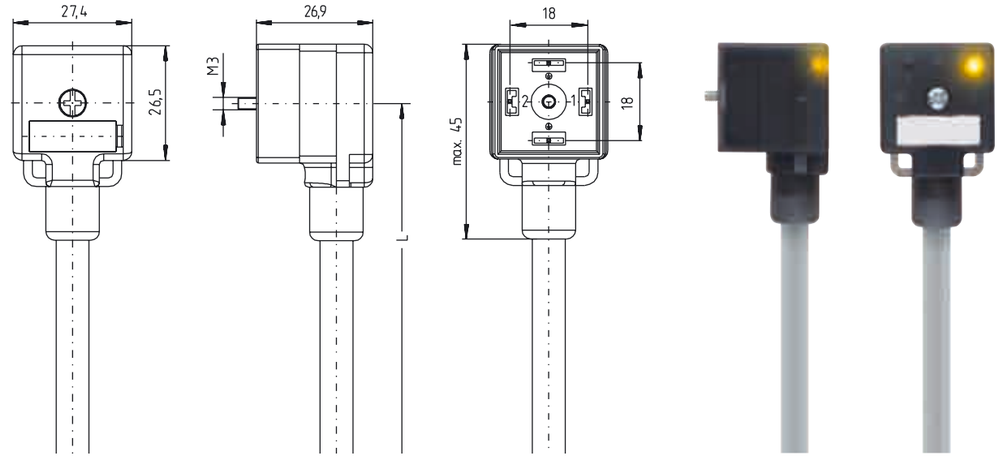
M23x1 *female*

Technical data	Round connector		Field-wireable	
	Poles	Value	Poles	Value
Rated voltage [Umax]	12, 19	125V	12, 19	125V
Current load [Imax]	12	8A contacts 10,11,12	12	8A contacts 10,11,12
	19	10A contacts 10,11,12	19	10A contacts 10,11,12
	12, 19	4A other contacts	12, 19	4A other contacts
Insulation resistance		$\geq 10^8 \Omega$		$\geq 10^8 \Omega$
Standards		IEC 61076-2-101		IEC 61076-2-101
Materials	Grip	TPU, BU	Grip	CuZn, nickel-, silver-plated
	Contact carrier	PBT, WH	Contact carrier	PBT, GY
	Sealing	NBR	Sealing	NBR
	Contacts	CuZn, gold-plated	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C		-40°C...+125°C
Degree of pollution		3		3
Protection class (installed)		IP67		IP67
Mechanical life cycle		>100 mating cycles		>100 mating cycles
Core cross-section/Clamping ability	12 poles: 10,11,12	1mm²	12 poles: 10,11,12	0.75...1.0mm²
	19-poles: 6,12,19	1mm²	19-poles: 6,12,19	0.75...1.0mm²
	others	0.34mm²	others	0.5...0.75mm²
External diameter of the cable				6...12mm

Pinning | *female*

	12-poles	19-poles
		
.001	1:WH | 2:GN | 3:YE | 4:GY | 5, 6, 7, 8, 9: n.c. **10:BU** | **11:BN** | **12:GN/YE**	1, 2, 9, 10, 11,13, 17, 18: n.c. | 3:GY | 4:RD/BU | 5:GN | **6:BU** | 7:GY/PK | 8:WH/GN 12:GN/YE | 14:BN/GN | 15:WH | 16:YE | **19:BN**
.003	1:WH | 2:GN | 3:YE | 4:GY | 5:PK | 6:RD | 7:BK 8:VT | 9: n.c. | **10:BU** | **11:BN** | **12:GN/YE**	1:VT | 2: RD | 3:GY | 4:RD/BU | 5:GN | **6:BU** | 7:GY/PK | 8:WH/GN | 9:WH/YE | 10:WH/GY |11:BK | 12:GN/YE | 13:YE/BN | 4:BN/GN | 15:WH | 16:YE | 17:PK | 18:GYBN | **19:BN**

V	A	21-	24.	0-	m /	S370
						Cable quality
					Cable length [m]	
				Protective circuit (0 | 1 | 2 | 3 | 5)		
			Disposal of working voltage: 24 VDC | 24 VAC/DC | 230 VAC/DC			
		21: 2 contacts + PE | 22: 2 contacts + PE jumpered | 31: 3 contacts + PE | 41: 3 contacts + PE + Wire-connection (pressure switch)				
	Type A					
Valve connector V: PE across from cable dispatch (0°)						



Valve connector type A

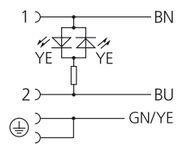
Type	Voltage	Circuit	Contacts	Cable quality	Type-designation	Cable length m 2m	5m	10m
A	24 VAC/DC	1	2+PE jumpered	PUR | S370®	VA22-24.1-m/S370	8050501	8047803	8048240
		3	2+PE jumpered		VA22-24.3-m/S370	8050293	8047804	8048527
	24 VDC	2	3+PE wire		VA41-24.2-m/S370	8050500	8047805	8049933
	230 VAC/DC	0	2+PE		VA21-230.0-m/S370	8050753	8047806	8050754
		0	2+PE jumpered		VA22-230.0-m/S370	8052299	8052300	8052301
		5	2+PE jumpered		VA22-230.5-m/S370	8050755	8046704	8050756
	24 VAC/DC	1	2+PE jumpered	PVC | P00	VA22-24.1-m/P00	8050819	8048818	8050820
		3	2+PE jumpered		VA22-24.3-m/P00	8048840	8048839	8049537
	24 VDC	2	3+PE wire		VA41-24.2-m/P00	8050822	8049310	8050540
	230 VAC/DC	0	2+PE		VA21-230.0-m/P00	8048838	8048841	8050824
		0	2+PE jumpered		VA22-230.0-m/P00	8052302	8052303	8052304
		5	2+PE jumpered		VA22-230.5-m/P00	8050827	8048819	8050828
	24 VAC/DC	1	2+PE jumpered	PVC | P01®	VA22-24.1-m/P01	8050861	8046613	8050862
		3	2+PE jumpered		VA22-24.3-m/P01	8049306	8047821	8050863
	24 VDC	2	3+PE wire		VA41-24.2-m/P01	8050865	8047822	8050866
	230 VAC/DC	0	2+PE		VA21-230.0-m/P01	8050873	8047823	8050874
		0	2+PE jumpered		VA22-230.0-m/P01	8052305	8052306	8052307
		5	2+PE jumpered		VA22-230.5-m/P01	8050875	8047824	8050876

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

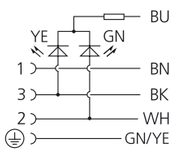
Technical data		
Current load [Imax]		4 A
Standards		DIN EN 175301-803
Materials	Grip	TPU, BK translucent
	Contact carrier	PA, BK
	Sealing	TPU
	Contacts	CuSn, silver-plated
	Fastening screw	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Circuit 0

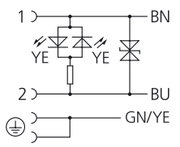
Circuit 1



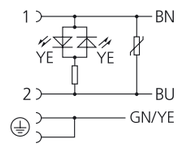
Circuit 2



Circuit 3



Circuit 5



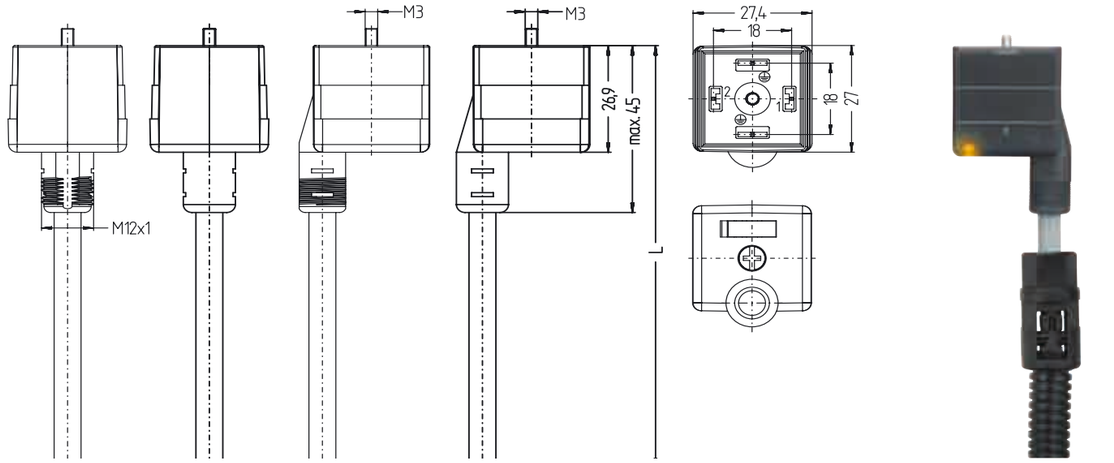
V	A	A	G	21-	24.	0-	m/	S370

- Cable quality
- Cable length [m]
- Protective circuit (0 | 1 | 2 | 3 | 5)
- Disposal of working voltage: 24 VDC | 24 VAC/DC | 230 VAC/DC
- **21:** 2 contacts + PE | **22:** 2 contacts + PE jumpered | **31:** 3 contacts + PE
- **41:** 3 contacts + PE + Wire-connection (pressure switch)
- Grip with thread for protective tubing
- Straight
- Type A
- Valve connector V: PE across from cable dispatch (0°)

Type	Voltage	Circuit	Contacts	Cable quality	Type-designation	Cable length m 2m	5m	10m
AA	24 VAC/DC	1	2+PE jumpered	PUR | S370 ®	VAA22-24.1-m/S370	8055648	8055649	8055650
		3	2+PE jumpered		VAA22-24.3-m/S370	8055654	8055655	8055656
	24 VDC	2	3+PE wire		VAA41-24.2-m/S370	8055660	8055661	8055662
	230 VAC/DC	0	2+PE		VAA21-230.0-m/S370	8055720	8055721	8055722
		5	2+PE jumpered		VAA22-230.5-m/S370	8055666	8055671	8055667
	24 VAC/DC	1	2+PE jumpered	PVC | P00	VAA22-24.1-m/P00	8055672	8055673	8055674
		3	2+PE jumpered		VAA22-24.3-m/P00	8055679	8055680	8055678
	24 VDC	2	3+PE wire		VAA41-24.2-m/P00	8055685	8055686	8055684
	230 VAC/DC	0	2+PE		VAA21-230.0-m/P00	8055726	8055727	8055728
		5	2+PE jumpered		VAA22-230.5-m/P00	8055690	8055691	8055692
	24 VAC/DC	1	2+PE jumpered	PVC | P01 ®	VAA22-24.1-m/P01	8055696	8055697	8055698
		3	2+PE jumpered		VAA22-24.3-m/P01	8055701	8055702	8055703
	24 VDC	2	3+PE wire		VAA41-24.2-m/P01	8055707	8055708	8055709
	230 VAC/DC	0	2+PE		VAA21-230.0-m/P01	8055732	8055733	8055734
		5	2+PE jumpered		VAA22-230.5-m/P01	8055712	8055713	8055714
AAG	24 VAC/DC	1	2+PE jumpered	PUR | S370 ®	VAAG22-24.1-m/S370	8055651	8055652	8055653
		3	2+PE jumpered		VAAG22-24.3-m/S370	8055657	8055658	8055659
	24 VDC	2	3+PE wire		VAAG41-24.2-m/S370	8055663	8055664	8055665
	230 VAC/DC	0	2+PE		VAAG21-230.0-m/S370	8055723	8055724	8055725
		5	2+PE jumpered		VAAG22-230.5-m/S370	8055668	8055669	8055670
	24 VAC/DC	1	2+PE jumpered	PVC | P00	VAAG22-24.1-m/P00	8055677	8055675	8055676
		3	2+PE jumpered		VAAG22-24.3-m/P00	8055682	8055683	8055681
	24 VDC	2	3+PE wire		VAAG41-24.2-m/P00	8055688	8055689	8055687
	230 VAC/DC	0	2+PE		VAAG21-230.0-m/P00	8055729	8055730	8055731
		5	2+PE jumpered		VAAG22-230.5-m/P00	8055693	8055694	8055695
	24 VAC/DC	1	2+PE jumpered	PVC | P01 ®	VAAG22-24.1-m/P01	8055699	8055700	8055718
		3	2+PE jumpered		VAAG22-24.3-m/P01	8055704	8055705	8055706
	24 VDC	2	3+PE wire		VAAG41-24.2-m/P01	8055719	8055710	8055711
	230 VAC/DC	0	2+PE		VAAG21-230.0-m/P01	8055735	8055736	8055737
		5	2+PE jumpered		VAAG22-230.5-m/P01	8055715	8055716	8055717

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

Protective tubings can be found under accessories page 192.

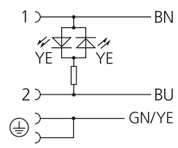


Valve connector type A straight

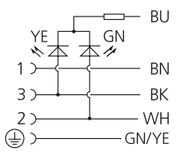
Technical data		
Current load [Imax]		4 A
Standards		DIN EN 175301-803
Materials	Grip	TPU, BK translucent
	Contact carrier	PA, BK
	Sealing	TPU
	Contacts	CuSn, silver-plated
	Fastening screw	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Circuit 0

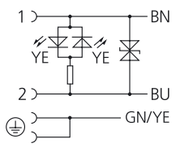
Circuit 1



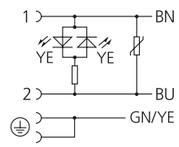
Circuit 2



Circuit 3



Circuit 5



V	A	22-	24.	3-	m1 /	D	A	22-	24.	3-	m2 /	S370

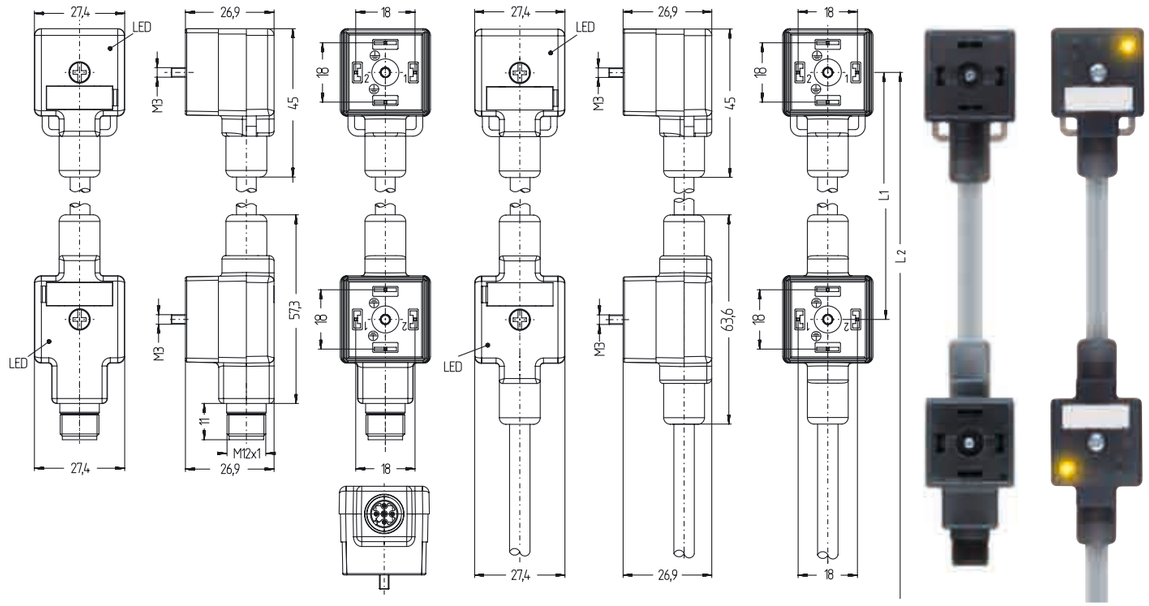
- S370: Cable quality
- m2: Cable length m2 [m]
- WAS5.132: M12x1-connection
- 3-: Protective circuit
- 24.: Disposal of working voltage: 24 VAC/DC
- 22-: 22: 2 contacts + PE jumpered
- A: Type A
- D: Double-Valve connector
- m1 /: m1: Cable length m1 [m]
- 3-: Protective circuit
- 24.: Disposal of working voltage: 24 VAC/DC
- 22-: 22: 2 contacts + PE jumpered
- A: Type A
- V: Valve connector V: PE across from cable dispatch (0°)

RoHS

Type | m1	Voltage	Circuit	Contacts	Cable quality	Type-designation	2m	Cable length m2 5m	10m
A..D | 0.15 m	24 VAC/DC	3	2+PE jumpered	PUR | S370	VA22-24.3-0,15-DA22-24.3-m/S370	8055743	8055744	8055745
				PVC | P00	VA22-24.3-0,15-DA22-24.3-m/P00	8055749	8055750	8055751
				PVC | P01	VA22-24.3-0,15-DA22-24.3-m/P01	8055755	8055756	8055757
A..D | 0.40 m	24 VAC/DC	3	2+PE jumpered	PUR | S370	VA22-24.3-0,4-DA22-24.3-m/S370	8055746	8055747	8055748
				PVC | P00	VA22-24.3-0,4-DA22-24.3-m/P00	8055752	8055753	8055754
				PVC | P01	VA22-24.3-0,4-DA22-24.3-m/P01	8055758	8055759	8055760

Type | m1	Voltage	Circuit	Contacts	Cable quality	Type-designation	M12x1
A..D | 0.15 m	24 VAC/DC	3	2+PE jumpered	PUR | S370	VA22-24.3-0,15-DA22-24.3-WAS5.132/S370	8055761
				PVC | P00	VA22-24.3-0,15-DA22-24.3-WAS5.132/P00	8055763
				PVC | P01	VA22-24.3-0,15-DA22-24.3-WAS5.132/P01	8055765
A..D | 0.40 m	24 VAC/DC	3	2+PE jumpered	PUR | S370	VA22-24.3-0,4-DA22-24.3-WAS5.132/S370	8055762
				PVC | P00	VA22-24.3-0,4-DA22-24.3-WAS5.132/P00	8055764
				PVC | P01	VA22-24.3-0,4-DA22-24.3-WAS5.132/P01	8055766

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

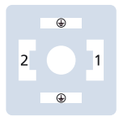


Double-Valve connector

Technical data		Valve connector
Current load [Imax]		4 A
Standards		DIN EN 175301-803
Materials	Grip	TPU, BK translucent
	Contact carrier	PA, BK
	Sealing	TPU
	Contacts	CuSn, silver-plated
	Fastening screw	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Pinning | Valve connector

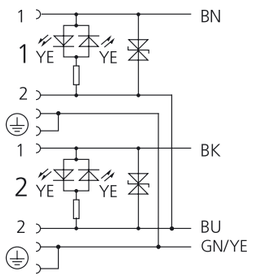
2 contacts + PE jumpered



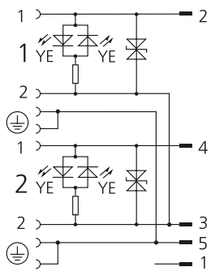
Pinning M12x1 | *male*

5.162

Protective circuit | Wire-connection



M12x1-connection



V	A	22-	24.	0-	WAS	5.002

5.002 Contacts.Allocation-code

WAS Round connector M12x1 | WAS: *male*

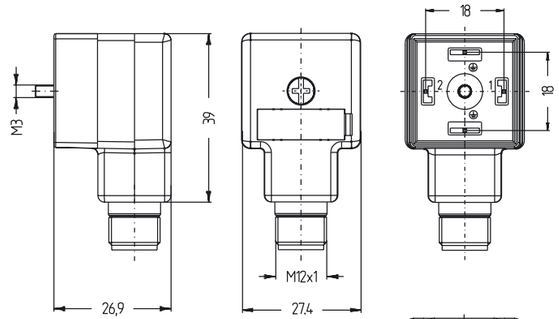
0- Protective circuit (0 | 1 | 2 | 3)

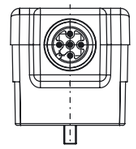
24. Disposal of working voltage: 24 VDC | 24 VAC/DC | 60 VAC/DC

22- **22:** 2 contacts + PE jumpered | **41:** 3 contacts + PE + Wire-connection (pressure switch)

A Type A

V Valve connector V: PE across from cable dispatch (0°)





Type	Voltage	Circuit	Contacts	Type-designation	Order-No.
A_M12x1	24 VAC/DC	1	2+PE jumpered	VA22-24.1-WAS5.002	8055767
		3	2+PE jumpered	VA22-24.3-WAS5.002	8055768
	24 VDC	2	3+PE wire	VA41-24.2-WAS5	8055769
	60 VAC/DC	0	2+PE jumpered	VA22-60.0-WAS5.002	8055770

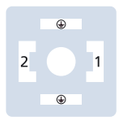
Other versions are available upon request.

Adapter Valve connector_M12x1

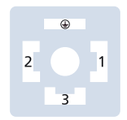
Technical data		
Current load [Imax]		4 A
Standards		DIN EN 175301-803
Materials	Grip	TPU, BK translucent
	Contact carrier	PA, BK
	Sealing	TPU
	Contacts	CuSn, silver-plated
	Fastening screw	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Pinning | Valve connector

2 contacts + PE jumpered



3 contacts + PE + wire

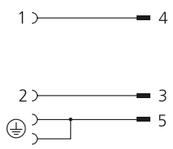


Pinning M12x1 | *male*

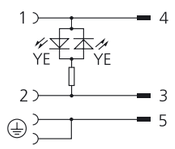
5

5.002

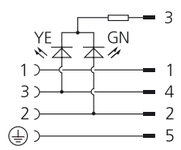
Circuit 0



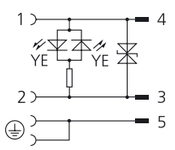
Circuit 1



Circuit 2



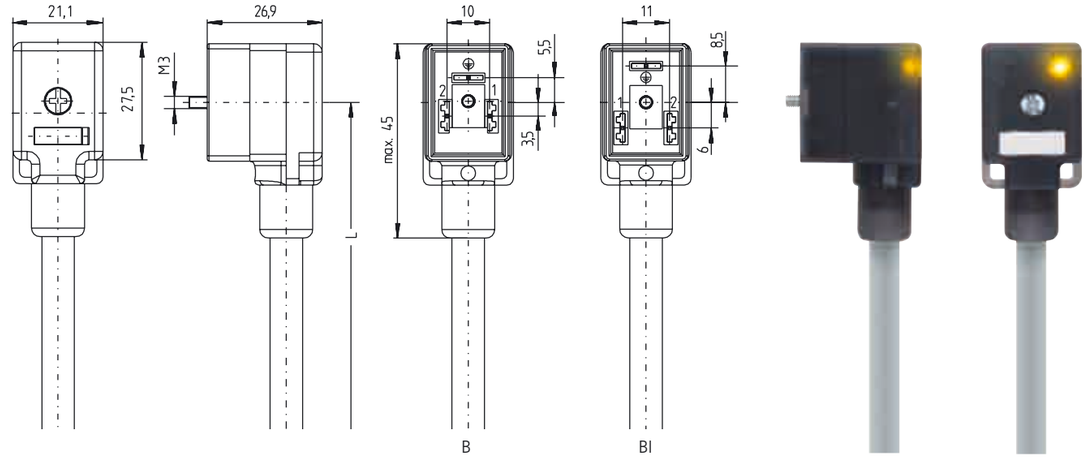
Circuit 3



V	B	21–	24.	0–	m /	S370
						Cable quality
					Cable length [m]	
				Protective circuit (0 | 1 | 3 | 5)		
			Disposal of working voltage: 24 VDC | 24 VAC/DC | 230 VAC/DC			
		21: 2 contacts + PE				
	Type B/BI					
Valve connector V: PE across from cable dispatch (0°)						

Type	Voltage	Circuit	Contacts	Cable quality	Type-designation	2m	Cable length m 5m	10m
B	24 VAC/DC	1	2+PE	PUR | S370®	VB21-24.1-m/S370	8049246	8047807	8050757
		3	2+PE		VB21-24.3-m/S370	8050758	8047808	8050759
	230 VAC/DC	0	2+PE		VB21-230.0-m/S370	8050760	8047809	8050761
		5	2+PE		VB21-230.5-m/S370	8050762	8047810	8050763
	24 VAC/DC	1	2+PE	PVC | P00	VB21-24.1-m/P00	8050829	8049311	8050830
		3	2+PE		VB21-24.3-m/P00	8048844	8048845	8050832
	230 VAC/DC	0	2+PE		VB21-230.0-m/P00	8048842	8048843	8050834
		5	2+PE		VB21-230.5-m/P00	8050835	8049312	8050836
	24 VAC/DC	1	2+PE	PVC | P01®	VB21-24.1-m/P01	8050877	8047825	8050878
		3	2+PE		VB21-24.3-m/P01	8050879	8047826	8050880
	230 VAC/DC	0	2+PE		VB21-230.0-m/P01	8050881	8047827	8050882
		5	2+PE		VB21-230.5-m/P01	8050883	8047828	8050884
BI	24 VAC/DC	1	2+PE	PUR | S370®	VBI21-24.1-m/S370	8050764	8047811	8050539
		3	2+PE		VBI21-24.3-m/S370	8049884	8047812	8050765
	230 VAC/DC	0	2+PE		VBI21-230.0-m/S370	8050766	8047813	8049931
		5	2+PE		VBI21-230.5-m/S370	8050767	8047814	8050768
	24 VAC/DC	1	2+PE	PVC | P00	VBI21-24.1-m/P00	8050838	8049313	8050538
		3	2+PE		VBI21-24.3-m/P00	8050855	8048820	8050856
	230 VAC/DC	0	2+PE		VBI21-230.0-m/P00	8050857	8049314	8050858
		5	2+PE		VBI21-230.5-m/P00	8050859	8048821	8050860
	24 VAC/DC	1	2+PE	PVC | P01®	VBI21-24.1-m/P01	8050899	8047829	8050900
		3	2+PE		VBI21-24.3-m/P01	8050901	8047830	8050902
	230 VAC/DC	0	2+PE		VBI21-230.0-m/P01	8050904	8047831	8050905
		5	2+PE		VBI21-230.5-m/P01	8050906	8047832	8050907

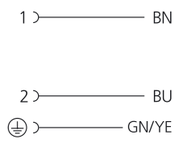
Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request



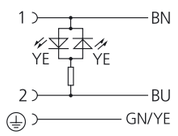
Valve connector type B | BI

Technical data		
Current load [Imax]		4 A
Standards		DIN EN 175301-803
Materials	Grip	TPU, BK translucent
	Contact carrier	PA, BK
	Sealing	TPU
	Contacts	CuSn, silver-plated
	Fastening screw	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

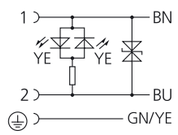
Circuit 0



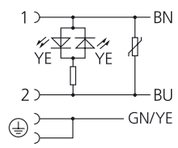
Circuit 1



Circuit 3



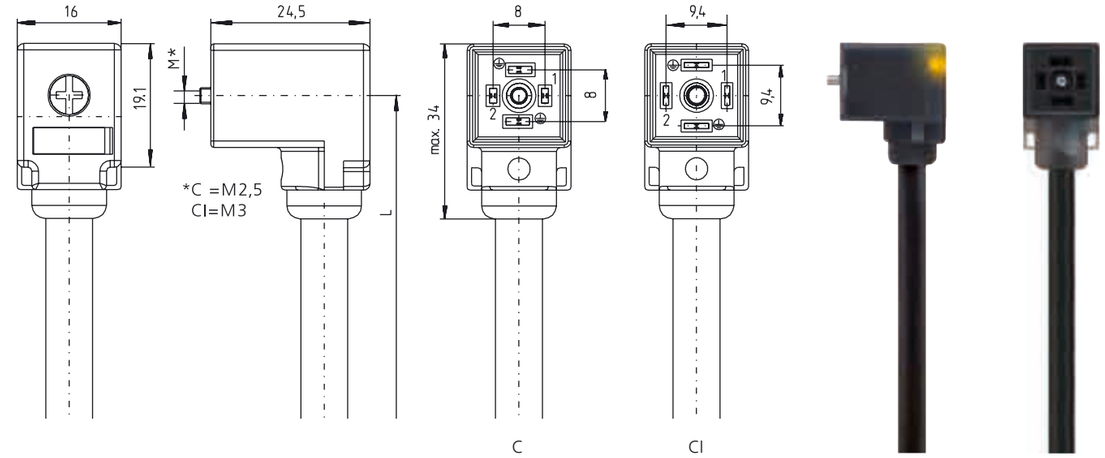
Circuit 5



V	C	21-	24.	0-	m /	S370
						Cable quality
					Cable length [m]	
				Protective circuit (0 | 1 | 4)		
			Disposal of working voltage: 24 VDC | 24 VAC/DC | 230 VAC/DC			
		21: 2 contacts + PE | **22:** 2 contacts + PE jumpered | **31:** 3 contacts + PE				
	Type C / CI					
Valve connector V: PE across from cable dispatch (0°)						

Type	Voltage	Circuit	Contacts	Cable-quality	Type-designation	2m	Cable length m 5m	10m
C	24 VAC/DC	1	2+PE jumpered	PUR | S370®	VC22-24.1-m/S370	8050769	8047815	8050770
		4	2+PE jumpered		VC22-24.4-m/S370	8049873	8047816	8050771
	230 VAC/DC	0	2+PE		VC21-230.0-m/S370	8050772	8047817	8050773
	24 VAC/DC	1	2+PE jumpered	PVC | P00	VC22-24.1-m/P00	8050842	8049315	8050843
		4	2+PE jumpered		VC22-24.4-m/P00	8050844	8049316	8050845
	230 VAC/DC	0	2+PE		VC21-230.0-m/P00	8050846	8049317	8050848
	24 VAC/DC	1	2+PE jumpered	PVC | P01®	VC22-24.1-m/P01	8050909	8047833	8050910
		4	2+PE jumpered		VC22-24.4-m/P01	8050912	8047834	8050913
	230 VAC/DC	0	2+PE		VC21-230.0-m/P01	8050914	8047835	8050916
CI	24 VAC/DC	1	2+PE jumpered	PUR | S370®	VCI22-24.1-m/S370	8050774	8047818	8050775
		4	2+PE jumpered		VCI22-24.4-m/S370	8050776	8047819	8050777
	230 VAC/DC	0	2+PE		VCI21-230.0-m/S370	8050778	8047820	8050779
	24 VAC/DC	1	2+PE jumpered	PVC | P00	VCI22-24.1-m/P00	8050849	8049318	8050850
		4	2+PE jumpered		VCI22-24.4-m/P00	8050851	8049319	8050852
	230 VAC/DC	0	2+PE		VCI21-230.0-m/P00	8050853	8049320	8050854
	24 VAC/DC	1	2+PE jumpered	PVC | P01®	VCI22-24.1-m/P01	8050917	8047836	8050918
		4	2+PE jumpered		VCI22-24.4-m/P01	8050919	8047837	8050920
	230 VAC/DC	0	2+PE		VCI21-230.0-m/P01	8050921	8047838	8050922

Other versions, cable-lengths or cable terminals converted with wire-end sleeves are available upon request

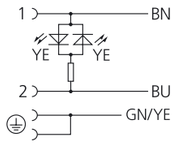


Valve connector type C | CI

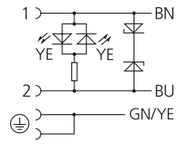
Technical data		
Current load [Imax]		4 A
Standards		DIN EN 175301-803
Materials	Grip	TPU, BK translucent
	Contact carrier	PA, BK
	Sealing	TPU
	Contacts	CuSn, silver-plated
	Fastening screw	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67, IP69K
Mechanical life cycle		>100 mating cycles

Circuit 0

Circuit 1



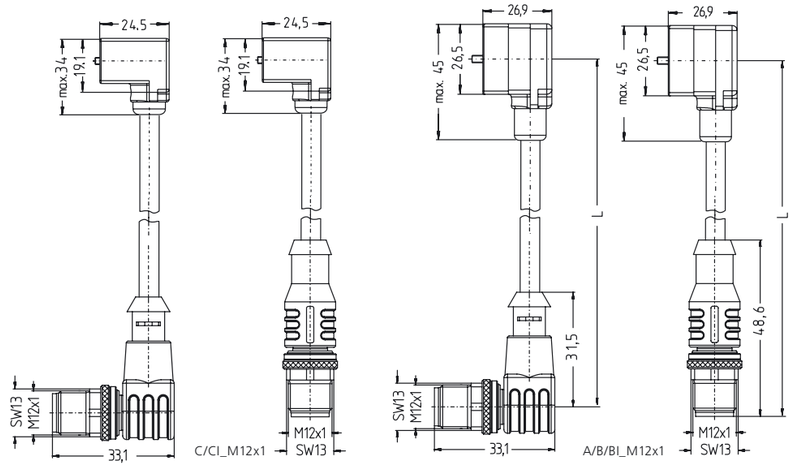
Circuit 4



V	A	21 –	24.	0 –	m –	AL –	W	WAS	5.002/	S370
Valve connector	Type A | B | BI | C | CI	**21:** 2 contacts+PE | **22:** 2 contacts+PE jumpered | **31:** 3 contacts+PE | **41:** 3 contacts+PE+Wire-connection (pressure switch)	Disposal of working voltage: 24VDC | 24VAC/DC | 230VAC/DC	Protective circuit (2 | 3 | 4)	Cable length [m]	Automation Line	W: angled ↦ | without: straight ↑	Round connector M12x1 | WAS: *male*	Contacts.Allocation-code	Cable quality

Side A		Side B		Cable-quality	Type-designation	Cable length m 1m	2m	5m
	UB | contacts | protective cir.							
A	24VAC/DC | 2+PE jumpered | 3	AL_M12x1	*m* | ↑	PUR | S370 ®	VA22-24.3-m-AL-WAS5.002/S370	8052049	8050782	8050783
			m | ↦		VA22-24.3-m-AL-WWAS5.002/S370	8052050	8050780	8050186
	24VAC/DC | 3+PE wire | 2	AL_M12x1	*m* | ↑		VA41-24.2-m-AL-WAS5/S370	8052051	8050785	8050786
			m | ↦		VA41-24.2-m-AL-WWAS5/S370	8052052	8050788	8050188
	24VAC/DC | 2+PE jumpered | 3	AL_M12x1	*m* | ↑	PVC | P00	VA22-24.3-m-AL-WAS5.002/P00	8052209	8052225	8052226
			m | ↦		VA22-24.3-m-AL-WWAS5.002/P00	8052227	8052228	8052229
	24VAC/DC | 3+PE wire | 2	AL_M12x1	*m* | ↑		VA41-24.2-m-AL-WAS5/P00	8052230	8052231	8052232
			m | ↦		VA41-24.2-m-AL-WWAS5/P00	8052233	8052234	8052235
	24VAC/DC | 2+PE jumpered | 3	AL_M12x1	*m* | ↑	PVC | P01®	VA22-24.3-m-AL-WAS5.002/P01	8052260	8052261	8052262
			m | ↦		VA22-24.3-m-AL-WWAS5.002/P01	8052263	8052264	8052265
	24VAC/DC | 3+PE wire | 2	AL_M12x1	*m* | ↑		VA41-24.2-m-AL-WAS5/P01	8052266	8052267	8052268
			m | ↦		VA41-24.2-m-AL-WWAS5/P01	8052269	8052270	8052271
B	24VAC/DC | 2+PE | 3	AL_M12x1	*m* | ↑	PUR | S370 ®	VB21-24.3-m-AL-WAS5.002/S370	8052053	8050790	8050791
			m | ↦		VB21-24.3-m-AL-WWAS5.002/S370	8052054	8050797	8050189
			m | ↑	PVC | P00	VB21-24.3-m-AL-WAS5.002/P00	8052236	8052237	8052238
			m | ↦		VB21-24.3-m-AL-WWAS5.002/P00	8052239	8052240	8052241
			m | ↑	PVC | P01®	VB21-24.3-m-AL-WAS5.002/P01	8052272	8052273	8052274
			m | ↦		VB21-24.3-m-AL-WWAS5.002/P01	8052275	8052276	8052277
BI	24VAC/DC | 2+PE | 3	AL_M12x1	*m* | ↑	PUR | S370 ®	VBI21-24.3-m-AL-WAS5.002/S370	8049278	8050800	8050801
			m | ↦		VBI21-24.3-m-AL-WWAS5.002/S370	8049279	8050804	8050805
			m | ↑	PVC | P00	VBI21-24.3-m-AL-WAS5.002/P00	8052242	8052243	8052244
			m | ↦		VBI21-24.3-m-AL-WWAS5.002/P00	8052245	8052246	8052247
			m | ↑	PVC | P01®	VBI21-24.3-m-AL-WAS5.002/P01	8052278	8052279	8052280
			m | ↦		VBI21-24.3-m-AL-WWAS5.002/P01	8052281	8052282	8052283
C	24VAC/DC | 2+PE jumpered | 4	AL_M12x1	*m* | ↑	PUR | S370 ®	VC22-24.4-m-AL-WAS5.002/S370	8052055	8050807	8050190
			m | ↦		VC22-24.4-m-AL-WWAS5.002/S370	8052056	8050813	8050191
			m | ↑	PVC | P00	VC22-24.4-m-AL-WAS5.002/P00	8052248	8052249	8052250
			m | ↦		VC22-24.4-m-AL-WWAS5.002/P00	8052251	8052252	8052253
			m | ↑	PVC | P01®	VC22-24.4-m-AL-WAS5.002/P01	8052284	8052285	8052286
			m | ↦		VC22-24.4-m-AL-WWAS5.002/P01	8052287	8052288	8052289
CI	24VAC/DC | 2+PE jumpered | 4	AL_M12x1	*m* | ↑	PUR | S370 ®	VCI22-24.4-m-AL-WAS5.002/S370	8052057	8050810	8050192
			m | ↦		VCI22-24.4-m-AL-WWAS5.002/S370	8052058	8050816	8050193
			m | ↑	PVC | P00	VCI22-24.4-m-AL-WAS5.002/P00	8052254	8052255	8052256
			m | ↦		VCI22-24.4-m-AL-WWAS5.002/P00	8052257	8052258	8052259
			m | ↑	PVC | P01®	VCI22-24.4-m-AL-WAS5.002/P01	8052290	8052291	8052292
			m | ↦		VCI22-24.4-m-AL-WWAS5.002/P01	8052293	8052294	8052296

Other versions and cable-lengths are available upon request.

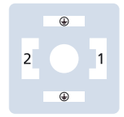


Valve connector | M12x1 junction cable

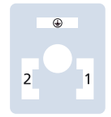
Technical data	Valve connector		Round connector M12x1	
Current load [Imax]		4A		4A
Insulation resistance		≥10^8 Ω		≥10^8 Ω
Standards		DIN EN 175301-803		IEC 61076-2-101
Materials	Grip	TPU, BK translucent	Grip	TPU, BK translucent
	Contact carrier	PA, BK	Contact carrier	TPU, BK
	Sealing	TPU	Sealing	FPM/FKM
	Contacts	CuSn, silver-plated	Contacts	CuZn, gold-plated
	Fastening screw	CuZn, nickel-plated	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C		-30°C...+90°C
Degree of pollution		3		3
Protection class (installed)		IP67, IP69K		IP67, IP69K
Mechanical life cycle		>100 mating cycles		>100 mating cycles

Pinning | Valve connector

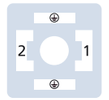
A



B/BI



C/CI



Pinning M12x1 | *male*

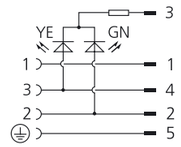
5

1BN | 2WH
3BU | 4BK | 5GN/YE

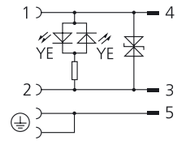
5.002

3BU | 4BN | 5GN/YE

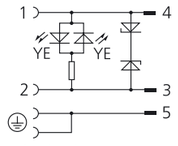
Circuit 2



Circuit 3



Circuit 4

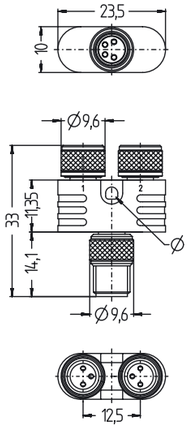


MB– | SSP | 4– | 2 | SKP | 3 | P3/ | S00

- S00: Different locking nut to marking an output
- P3/: PNP | Quantity LEDs + circuit
- 3: Poles
- SKP: M8x1 screwable | *female*
- 2: 2-way junction
- 4–: Poles
- SSP: M8x1 screwable | *male*
- MB–: Junction type MB

Type	Output 0	Output 1	Output 2	Type-designation	Order-No.
MB_M8x1	M8x1 *m* | 4	M8x1 *f* | 3	M8x1 *f* | 3	MB-SSP4-2SKP3/S56	8052222
MB_M8x1 | LED	*m* | 4	*f* | 3	*f* | 3	MB-SSP4-2SKP3P3/S56	8052223

Other versions are available upon request.



2-way junction | Type MB_M8x1

Technical data	Poles	Value
Rated voltage [Umax]	3, 4	30V
	LED-version	24 V_{DC}
Current load [Imax]	3, 4	4A
Insulation resistance		≥ 10^8 Ω
Standards		IEC 61076-2-104
Materials	Grip	TPU, BU | LED-version: TPU, transparent
	Contact carrier	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
		(optional black-coated locking nut marking an output)
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Pinning | *male*

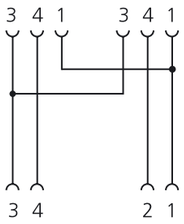
4 poles

Pinning | *female*

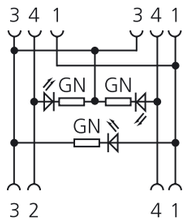
3 poles

Wiring

4/3 poles



4/3 poles LED



2-way junction unshielded

MB–	FSM	5–	2	FKM	5	P3/	S00
							Coated locking nut for marking an output
						PNP | Quantity LEDs + wiring	
					Poles		
				M12x1: FSM: *male* | FKM: *female*			
			2-way junction				
		Poles					
	M12x1: FSM: *male* | FKM: *female*						
Junctions type MB							

2-way junction shielded ⊙

PB–	Y–	WAKS	W	5–	WASS	W	5–	WASS	W	5
										Poles
									Coding: W: B | without: A	
								M12x1: WAKS: *female* ⊙ | WASS: *male* ⊙		
							Poles			
						Coding: W: B | without: A				
					M12x1: WAKS: *female* ⊙ | WASS: *male* ⊙					
				Poles						
			Coding: W: B | without: A							
		M12x1: WAKS: *female* ⊙ | WASS: *male* ⊙								
	2-way junction									
Product line (optional)										

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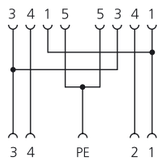
Type	Output 0	Output 1	Output 2	Type-designation	Order-No.
MB_ M12x1	M12x1 *f* | 4+PE	M12x1 *m* | 4+PE	M12x1 *f* | 4+PE	MB-FKM5-FSM5-FKM5	8024976
	m | 4+PE	*m* | 4+PE	*f* | 4+PE	MB-FSM5-FSM5-FKM5	8044611
	m | 8	*f* | 8	*f* | 8	MB-FSM8-2FKM8	8028876
	m | 4+PE	*f* | 4	*f* | 4	MB-FSM5-2FKM5.4	8024643
MB_M12x1 | LED	M12x1 *m* | 4+PE	M12x1 *f* | 4	M12x1 *f* | 4	MB-FSM5-2FKM5.4P3	8024644
Y ⊙	M12x1⊙ *m* | 5	M12x1⊙ *m* | 5	M12x1⊙ *f* | 5	Y-WASS5-WASS5-WAKS5	8057721
	f | 5	*m* | 5	*m* | 5	Y-WAKS5-2WASS5	8057722
	f | 5	*m* | 5	*f* | 5	Y-WAKS5-WASS5-WAKS5	8057723
	m | 5	*f* | 5	*f* | 5	Y-WASS5-2WAKS5	8056694
	m | 8	*f* | 8	*f* | 8	Y-WASS8-2WAKS8	8057725
Y⊙ PROFIBUS | B-coded	*m* | 5B	*m* | 5B	*f* | 5B	PB-Y-WASSW5-WASSW5-WAKSW5	8057724

Other versions are available upon request.

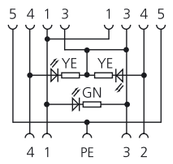
Wiring

shielded ⊙

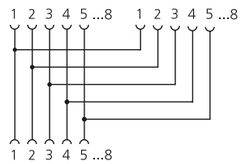
4+PE/4 poles



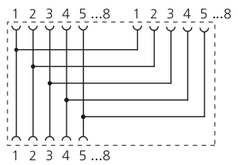
4+PE/4-poles LED



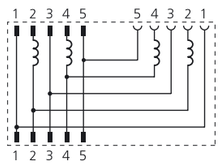
4+PE/4+PE poles | 8/8-poles

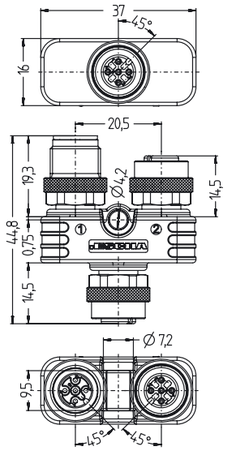


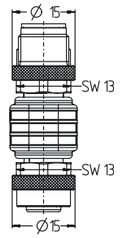
5/5 poles | 8/8 poles

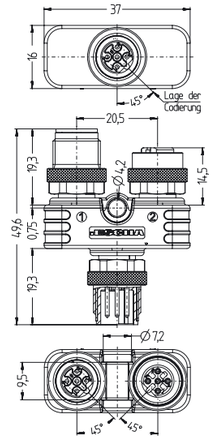


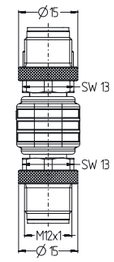
PB: 5 poles, B-coded





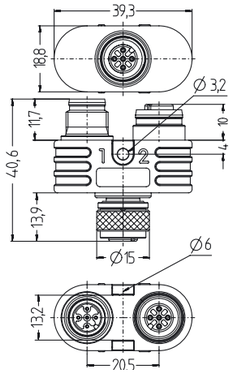


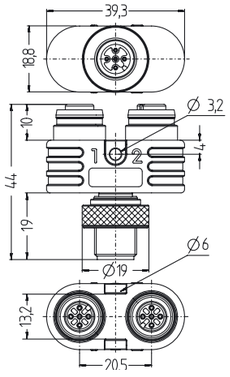




PB

⊙





2-way junction type MB_M12x1 | 2-way junction shielded ⊙

Technical data	Poles	Value
Rated voltage [Umax]	4, 4+PE, 5	60V
	8	30V
	LED-version	24 V_{DC}
Current load [Imax]	4, 4+PE, 5	4A
	8	2A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BU | LED-version: TPU, transparent | ⊙ TPU, BK
	Contact carrier	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Coding | *male*

4 poles | A

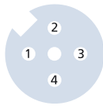
4 poles+PE | A

8 poles | A

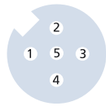
5 poles | B

Coding | *female*

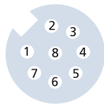
4 poles | A



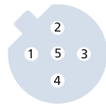
4 poles+PE | A



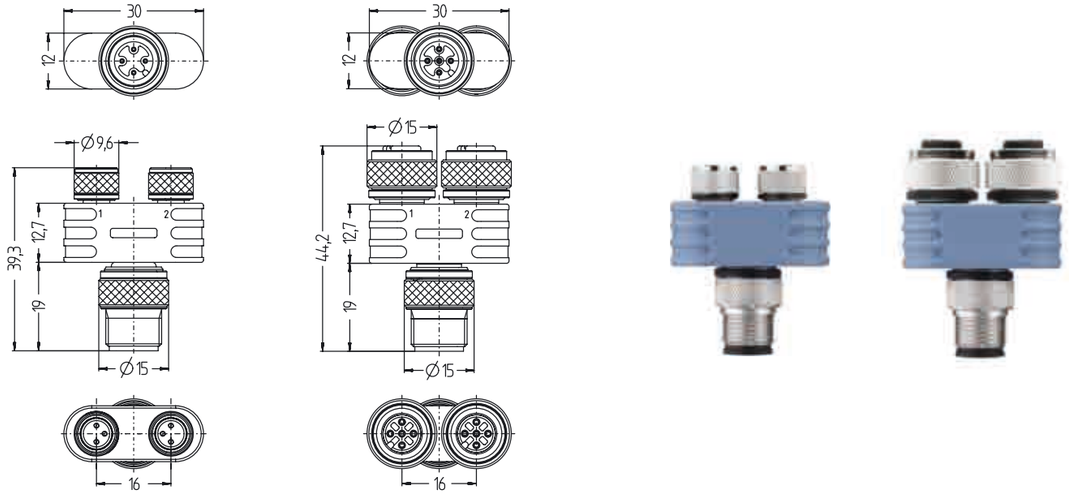
8 poles | A



5 poles | B



FSM	5–	2	FKM	5.4	S55
					2-way junction type S55
				Poles + wiring	
			M12x1 | FKM: *female*		
			M8x1 | SKP: *female*		
		2-way juncion			
	Poles				
M12x1 | FSM: *male*					



Type	Output 0	Output 1	Output 2	Type-designation	Order-No.
S55	M12x1 *m* | 4+PE	M12x1 *f* | 4	M12x1 *f* | 4	FSM5-2FKM5.4/S55	8018720
	M12x1 *m* | 4	M8x1 *f* | 3	M8x1 *f* | 3	FSM4-2SKP3/S55/S56	8052224

Other versions are available upon request.

2-way junction | Type S55

Technical data		
Rated voltage [U_{max}]		60V
Current load [I_{max}]		4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101/-104
Materials	Grip	TPU, BU
	Contact carrier	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

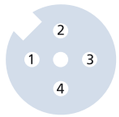
Pinning | *male*

M12x1 | 4 poles, A

M12x1 | 4 poles+PE, A

Pinning | *female*

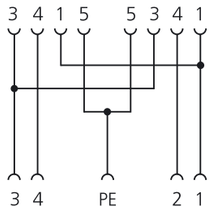
M12x1 | 4 poles, A



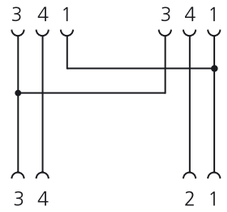
M8x1 | 3 poles

Wiring

4 poles+PE/4 poles

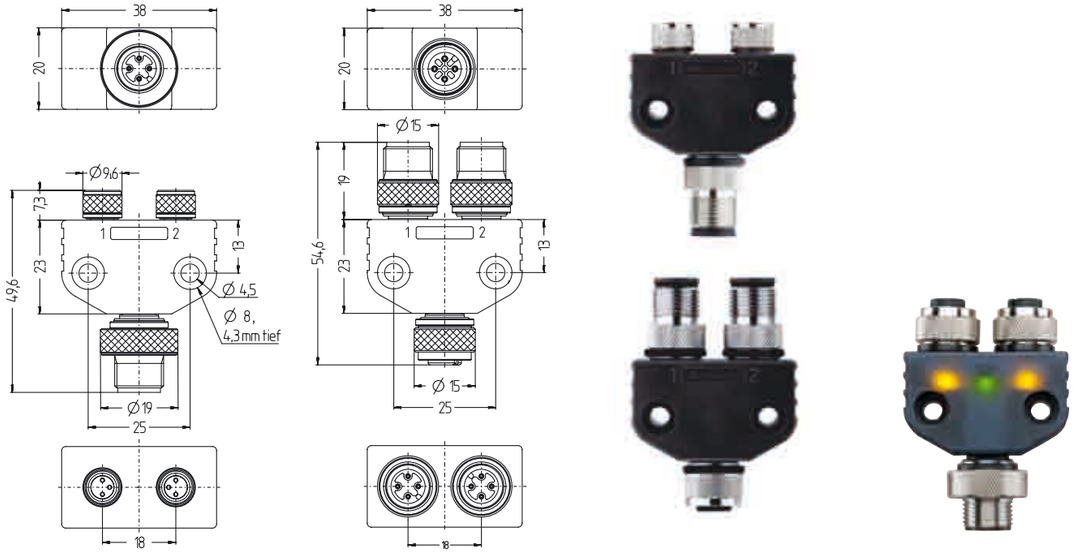


4/3 poles



2-way junctions

FSM	4–	2	FKM	3	P3/	S89
						2-way junction type S89
					PNP | Quantity LEDs + wiring	
				Poles		
			M12x1 | FSM: *male*			
			FKM: *female*			
			M8x1 | SKP: *female*			
		2-way junction				
	Poles					
M12x1 | FSM: *male*						
FKM: *female*						



Type	Output 0	Output 1	Output 2	Type-designation	Order-No.
S89	M12x1 *f* | 4	M12x1 *m* | 3	M12x1 *m* | 3	FKM4-2FSM3/S89	8012651
	m | 4	*f* | 3	*f* | 3	FSM4-2FKM3/S89	8010464
	m | 4+PE	*f* | 4	*f* | 4	FSM5-2FKM5.4/S89	8010471
	M12x1 *m* | 4	M8x1 *f* | 3	M8x1 *f* | 3	FSM4-2SKP3/S89	8013058
S89 | LED	M12x1 *m* | 4	M12x1 *f* | 3	M12x1 *f* | 3	FSM4-2FKM3P3/S89	8012652

Other versions are available upon request.

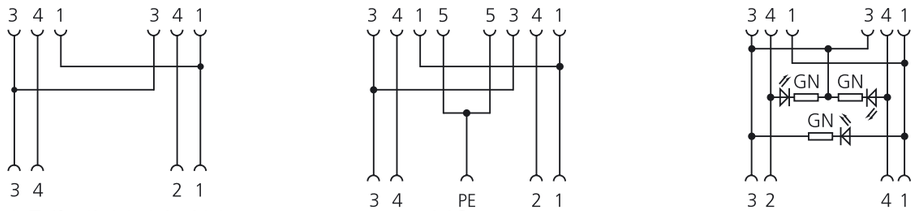
2-way junction | Type S89

Technical data	Poles	Value
Rated voltage [Umax]	M12x1 | 3, 4	250V
	M12x1 | 4+PE	60V
	M8x1 | 3	60V
	LED-version	24 V_{DC}
Current load [Imax]		4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101/-104
Materials	Grip	TPU, BU | LED-version: TPU, translucent
	Contact carrier	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Pinning | *male*			Pinning | *female*		
M12x1 | 3 poles, A	M12x1 | 4 poles, A	M12x1 | 4 poles+PE, A	M12x1 | 3 poles, A	M12x1 | 4 poles, A	M8x1 | 3 poles

Wiring

4/3 poles	4 poles+PE/4 poles	4/3 poles LED



T-junction unshielded

FKM	4-	FKM	4-	FSM	4
					Poles Output 3
				M12x1: FSM: *male* | FKM: *female*	
			Poles Output 2		
		M12x1: FSM: *male* | FKM: *female*			
	Poles Output 1				
M12x1: FSM: *male* | FKM: *female*					

T-junction shielded ⊙

PB-	T-	WAKS	W	5-	WASS	W	5-	WASS	W	5
										Poles
									Coding: W: B | without: A	
								M12x1: WAKS: *female* ⊙ | WASS: *male* ⊙		
							Poles			
						Coding: W: B | without: A				
					M12x1: WAKS: *female* ⊙ | WASS: *male* ⊙					
				Poles						
			Coding: W: B | without: A							
		M12x1: WAKS: *female* ⊙ | WASS: *male* ⊙								
	T-junction									
Product line (optional)										

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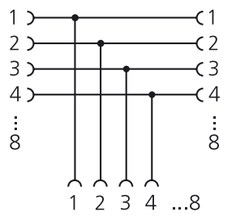
Type	Output 1	Output 2	Output 3	Type-designation	Order-No.
T	M12x1 *f* | 4	M12x1 *f* | 4	M12x1 *m* | 4	FKM4-FKM4-FSM4	8009675
	f | 4	*m* | 4	*m* | 4	FKM4-FSM4-FSM4	8008139
	f | 5	*f* | 5	*m* | 5	FKM5-FKM5-FSM5	8011661
	f | 5	*m* | 5	*m* | 5	FKM5-FSM5-FSM5	8017792
	f | 8	*f* | 8	*m* | 8	FKM8-FKM8-FSM8	8038856
T ⊙	M12x1 ⊙ *f* | 5	M12x1 ⊙ *f* | 5	M12x1 ⊙ *m* | 5	T-WAKS5-WAKS5-WASS5	8056693
	f | 5	*m* | 5	*m* | 5	T-WAKS5-WASS5-WASS5	8057718
	f | 8	*f* | 8	*m* | 8	T-WAKS8-WAKS8-WASS8	8057720
T ⊙ PROFIBUS | B-coded	*f* | 5B	*m* | 5B	*m* | 5B	PB-T-WAKSW5-WASSW5-WASSW5	8057719

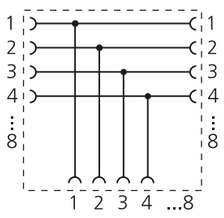
Other versions are available upon request.

Wiring

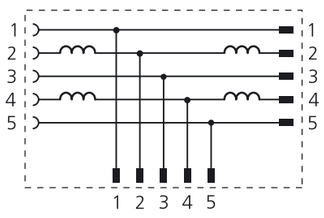
unshielded

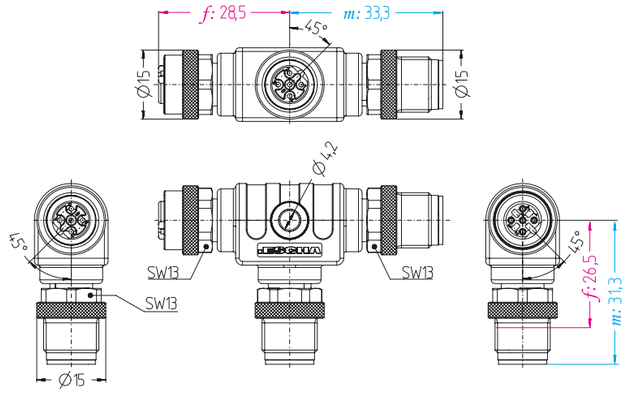


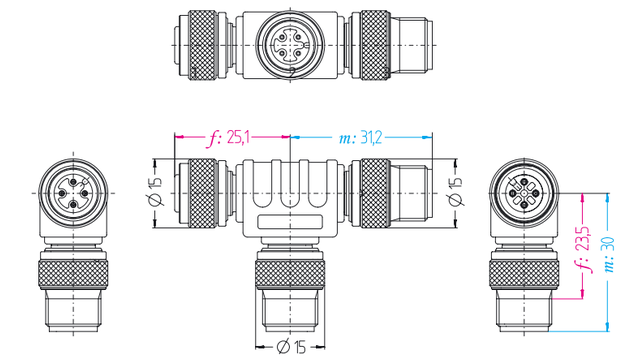
shielded ⊙



PROFIBUS ⊙







⊙

Technical data	Poles	Value
Rated voltage [Umax]	4	250V
	5	60V
	8	30V
Current load [Imax]	4, 5	4A
	8	2A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101
Materials	Grip	TPU, BU
	Contact carrier	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C...+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Coding | *male*

4 poles | A

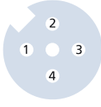
4 poles+PE | A

8 poles | A

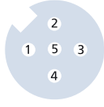
5 poles | B

Coding | *female*

4 poles | A

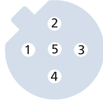


4 poles+PE | A

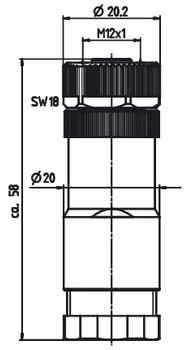


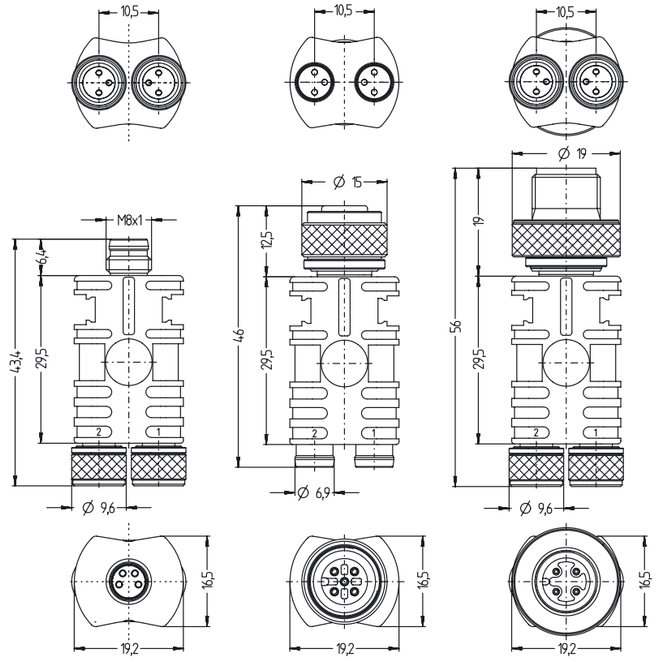
8 poles | A

5 poles | B



FKM	4–	2	SKP	3
				Poles
			M8x1 | SKP: *female*	
			Ø8mm snap | ESP: *male*	
		Y-splitter		
	Poles			
M12x1 |	FKM: *female*			
	FSM: *male*			
	FSMC: *male*, field-wireable			
Ø8 snap |	SESP: *male*			

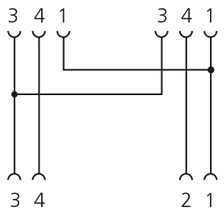




Type	Output 0	Output 1	Output 2	Type-designation	Order-No.
Y	M12x1 *f* | 4	Ø8 snap *m* | 3	Ø8 snap *m* | 3	FKM4-2ESP3S	8008080
	M12x1 *m* | 4	M8x1 *f* | 3	M8x1 *f* | 3	FSM4-2SKP3	8008081
	Ø8 snap *m* | 4	M8x1 *f* | 3	M8x1 *f* | 3	SESP4S-2SKP3	8008082
Y	M12x1 *m* | 4	Screw-clamp		FSMC4K	8017231
	M12x1 *m* | 5	Screw-clamp		FSMC5K	8032825

Other versions are available upon request.

Wiring 4/3



Y-splitter

Technical data	Molded		Field-wireable	
	Poles	Value	Poles	Value
Rated voltage [U_{max}]	M12x1 | M8x1	60V	4	125V
	Ø8 snap | M8x1	30V	5	125V
Current load [I_{max}]	all	4A	4, 5	4A
Insulation resistance		≥10^8Ω		≥10^8Ω
Standards		IEC 61076-2-101/-104		IEC 61076-2-101
Materials	Grip	TPU, BU	Grip	PA, BK
	Contact carrier	TPU, BK	Contact carrier	PA, BK
	Sealing	FPM/FKM	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated	Contacts	CuZn, CuSnZn
	Locking mechanism	CuZn, nickel-plated	Locking mechanism	GD-Zn, nickel-plated
Ambient temperature		-30°C…+90°C		-40°C…+85°C
Degree of pollution		3		3
Protection class (installed)		IP67		IP67
Mechanical life cycle		>100 mating cycles		>100 mating cycles
External diameter of the cable				3.5…5mm
Core cross-section/Clamping ability				max. 0.5mm²

Pinning | *male*

M12x1 | 4 poles, A

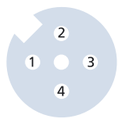
M12x1 | 5 poles, A

M8x1 | 3 poles

M8x1 | 4 poles

Pinning | *female*

M12x1 | 4 poles, A



M8x1 | 3 poles

WAK | 4.5– | WAK | 4.5

Poles

M12x1 | WAK: *female*
WAS: *male*
M8x1 | SKP: *female*

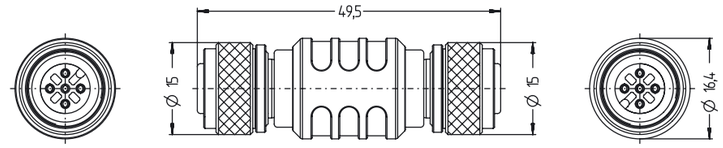
Poles

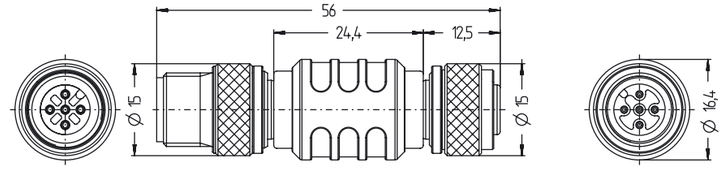
M12x1 | WAK: *female*
WAS: *male*
FSM: *male*

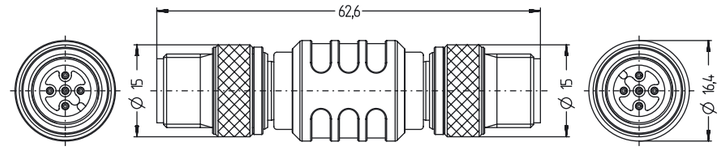
RoHS

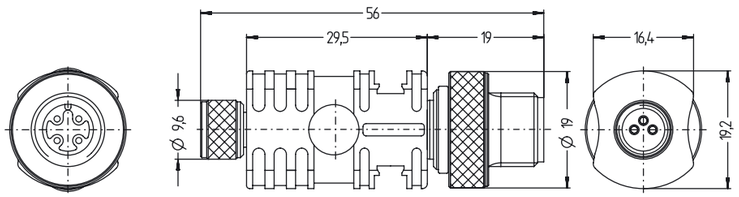
Adapter	Output 1	Output 2	Coding | wiring	Type-designation	Order-No.
	M12x1 *f* | 5	M12x1 *f* | 5	A-A | 1:1	WAK4.5-WAK4.5	8041351
	M12x1 *m* | 5	M12x1 *m* | 5	A-A | 1:1	WAS4.5-WAS4.5	8041352
	M12x1 *f* | 5	M12x1 *m* | 5	A-A | 1:1	WAK4.5-WAS4.5	8041349
	M12x1 *m* | 3	M8x1 *f* | 3	A | 1:1	FSM3-SKP3	8008079
	M12x1 *m* | 4	M8x1 *f* | 4	A | 1:1	FSM4-SKP4	8008138

Other versions, poles, codings and wirings are available upon request.







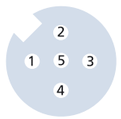


Adapters

Technical data	Poles	Value
Rated voltage [Umax]	M12x1 | M8x1	60V
	Ø8 snap | M8x1	30V
Current load [Imax]	all	4A
Insulation resistance		≥10^8 Ω
Standards		IEC 61076-2-101/-104
Materials	Grip	TPU, BU
	Contact carrier	TPU, BK
	Sealing	FPM/FKM
	Contacts	CuZn, gold-plated
	Locking mechanism	CuZn, nickel-plated
Ambient temperature		-30°C…+90°C
Degree of pollution		3
Protection class (installed)		IP67
Mechanical life cycle		>100 mating cycles

Pinning | *female*

M12x1 | 5 poles, A



M8x1 | 3 poles

M8x1 | 4 poles

Pinning | *male*

M12x1 | 5 poles, A

M8x1 | 3 poles

M8x1 | 4 poles

8	I/O	M12–	5.4	P2	T	m/	S370
Quantity of I/O-ports	I/O-junction box	I/O port M12x1	Contacts.allocation code	PNP | Quantity LEDs + circuit	Connection M23x1 | T: top, F: front, C: Cable	Cable length [m]	Cable quality

Dimensional drawings see page 191

Product line	Quant. I/O	Poles I/O | Coding	LED-display U_B | signal per I/O	Connection		Type-designation	Order-No.
M12x1	4	3+PE | A	1x GN | 4x1 YE	top	M23x1_12 poles	4I/OM12-5.4P2T	8048790
				front	M23x1_12 poles	4I/OM12-5.4P2F	8048791
				cable	PUR | S370 ®	4I/OM12-5.4P2C-2/S370	8048792
		4+PE | A	1x GN | 4x2 YE	top	M23x1_19-poles	4I/OM12-5P3T	8045895
				front	M23x1_19-poles	4I/OM12-5P3F	8045891
				cable	PUR | S370 ®	4I/OM12-5P3C-2/S370	8045894
	6	3+PE | A	1x GN | 6x1 YE	top	M23x1_12 poles	6I/OM12-5.4P2T	8048787
				front	M23x1_12 poles	6I/OM12-5.4P2F	8048788
				cable	PUR | S370 ®	6I/OM12-5.4P2C-2/S370	8048789
		4+PE | A	1x GN | 6x2 YE	top	M23x1_19-poles	6I/OM12-5P3T	8045896
				front	M23x1_19-poles	6I/OM12-5P3F	8045892
				cable	PUR | S370 ®	6I/OM12-5P3C-2/S370	8045893
	8	3+PE | A	1x GN | 8x1 YE	top	M23x1_12 poles	8I/OM12-5.4P2T	8048784
				front	M23x1_12 poles	8I/OM12-5.4P2F	8048785
				cable	PUR | S370 ®	8I/OM12-5.4P2C-2/S370	8048786
		4+PE | A	1x GN | 8x2 YE	top	M23x1_19-poles	8I/OM12-5P3T	8045647
				front	M23x1_19-poles	8I/OM12-5P3F	8045649
				cable	PUR | S370 ®	8I/OM12-5P3C-2/S370	8045648

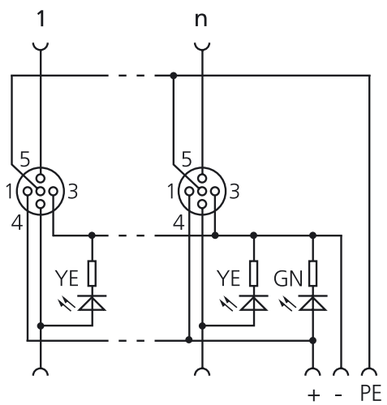
Other versions, poles, codings and cable-lengths are available upon request.

I/O-junction boxes M12x1

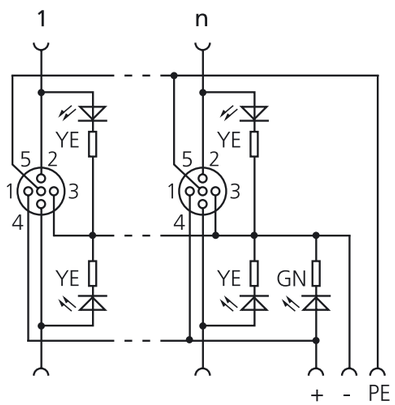
Technical data			
Rated voltage [Umax]	10…30V		
Current load [Imax]	2A per signal contact | 12A total current		
Switching function	PNP		
Insulation resistance	≥10^8Ω		
Standards	IEC61076-2-101		
Materials	Housing		PA, BK
	M12x1 | M23x1	Thread insert | Flange housing	GD-Zn,nickel-plated
		Contact carrier	PBT
		Contacts	CuZn, gold-plated
		Sealing	FPM/FKM
Ambient temperature	-30°C…+90°C		
Degree of pollution	3		
Protection class (installed)	IP67		
Mechanical life cycle	>100 mating cycles		
Accessories	safety-stopper (2 pieces included in scope of supply) (page 192)		
	For labels see accessories on page194.		
	M23x1 connecting cable (page 156-157)		

Wiring

3+PE

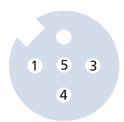


4+PE

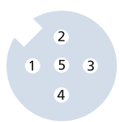


Pinning | *female*

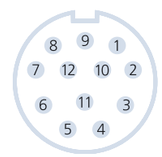
M12x1 | 3+PE-poles, A



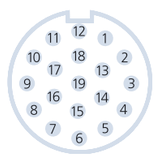
M12x1 | 4 poles+PE, A



M23x1 | 12 poles



M23x1 | 19-poles



I/O_M12x1	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	all	all	all
M12_contacts	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	1	3	5
M23_12 poles	–	1	–	2	–	3	–	4	–	5	–	6	–	7	–	8	11	9+10	12
M23_19-poles	7	15	4	5	8	16	14	3	9	17	13	2	10	11	18	1	19	6	12
Wire-colours	GY/PK	WH	RD/BU	GN	WH/GN	YE	BN/GN	GY	WH/YE	PK	YE/BN	RD	WH/GY	BK	GY/BN	VT	BN (+)	BU (-)	GN/YE

8	MB	M8–	3	P2	2/	S1117
						Cable quality
					Cable length [m]	
				PNP | Quantity LEDs + circuit		
			Contacts			
		I/O port | M8: M8x1				
			S8: Ø8mm snap			
	I/O-junction box					
Quantity of I/O-ports						

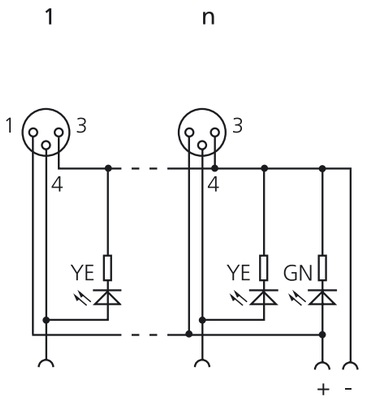
RoHS

Product line	Quant. I/O	Poles I/O	LED-display U_B | signal per I/O	Connection		Type-designation	Order-No.
M8x1	4	3	1x GN | 1x YE	front	M12x1_8 poles	4MBM8-3P2	8017726
				cable	PUR | S1117 ®	4MBM8-3P2-2/S1117	8018119
				cable	PVC | S1118	4MBM8-3P2-2/S1118	8018131
		4	1x GN | 2x YE	front	M16x0,75_14 poles	4MBM8-4P3	8025641
				cable	PUR | S1117 ®	4MBM8-4P3-2/S1117	8025656
				cable	PVC | S1118	4MBM8-4P3-2/S1118	8025657
	8	3	1x GN | 1x YE	front	M16x0,75_14 poles	8MBM8-3P2	8017721
				cable	PUR | S1117 ®	8MBM8-3P2-2/S1117	8018113
				cable	PVC | S1118	8MBM8-3P2-2/S1118	8018125
		4	1x GN | 2x YE	front	M16x0,75_19-poles	8MBM8-4P3	8025630
				cable	PUR | S1117 ®	8MBM8-4P3-2/S1117	8025648
				cable	PVC | S1118	8MBM8-4P3-2/S1118	8025650
Ø8 snap	4	3	1x GN | 1x YE	front	M12x1_8 poles	4MBS8-3P2	8017725
				cable	PUR | S1117 ®	4MBS8-3P2-2/S1117	8018122
				cable	PVC | S1118	4MBS8-3P2-2/S1118	8018134
	8	3	1x GN | 1x YE	front	M16x0,75_14 poles	8MBS8-3P2	8017724
				cable	PUR | S1117 ®	8MBS8-3P2-2/S1117	8018116
				cable	PVC | S1118	8MBS8-3P2-2/S1118	8018128

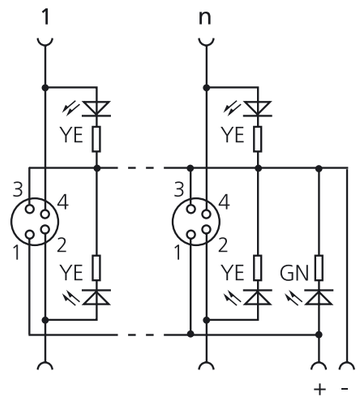
Other versions, poles, codings and cable-lengths are available upon request.

Wiring

3 poles



4 poles



Dimensional drawings see page190

I/O-junction boxes M8x1

Technical data			
Rated voltage [Umax]	10...30V		
Current load [Imax]	2A per signal contact | 6A total current		
Switching function	PNP		
Insulation resistance	≥10^8Ω		
Standards	IEC 61076-2-104		
Materials	Housing		PA, BU
	M12x1	Contact carrier	PA
	M16x0,75	Contact carrier	TPU
	M12x1 | M16x0,75	Thread insert | Flange housing	GD-Zn,nickel-plated
		Contacts	CuZn, gold-plated
		Sealing	FPM/FKM
Ambient temperature	-30°C...+90°C		
Degree of pollution	3		
Protection class (installed)	IP67		
Mechanical life cycle	>100 mating cycles		
Accessories	safety-stopper (2 pieces included in scope of supply) (page 192)		
	For labels see accessories on page194.		
	M12x1 | M16x0,75 connecting cable		

Pinning | *female*

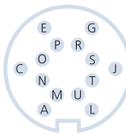
M8x1/Ø8 snap | 3 poles

M8x1/Ø8 snap | 4 poles

Pinning | *male*

M12x1 | 8 poles, A

M16x0,75 | 14 poles

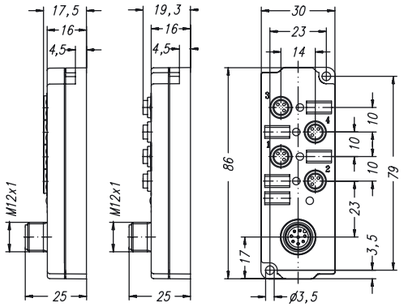


M16x0,75 | 19-poles

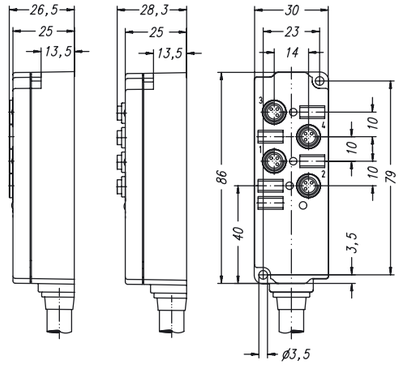
I/O_M8x1/Ø8 snap	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	all	all
M8x1/Ø8 snap_contacts	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2	1	3
M12_8 poles	1	–	2	–	3	–	4	–	–	–	–	–	–	–	–	–	5	7
M16_14 poles	P	–	J	–	T	–	S	–	G	–	R	–	E	–	O	–	A/M	L/U
M16_19-poles	R	E	C	G	N	P	O	J	F	B	D	K	H	A	S	L	M	U
Wire-colours	WH	GY/PK	GN	RD/BU	YE	WH/GN	GY	BN/GN	PK	WH/YE	RD	YE/BN	BK	WH/GY	VT	GY/BN	BN (+)	BU (-)

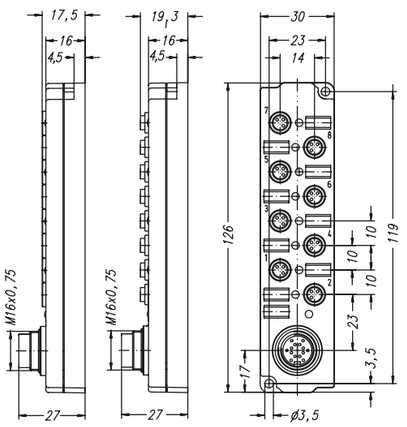
I/O-junction boxes M8x1

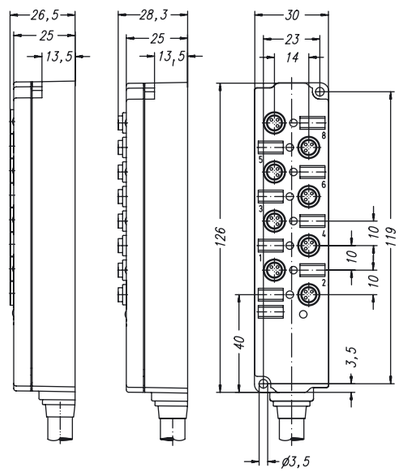
▲▼M8x1 ▲▼Ø8mm snap



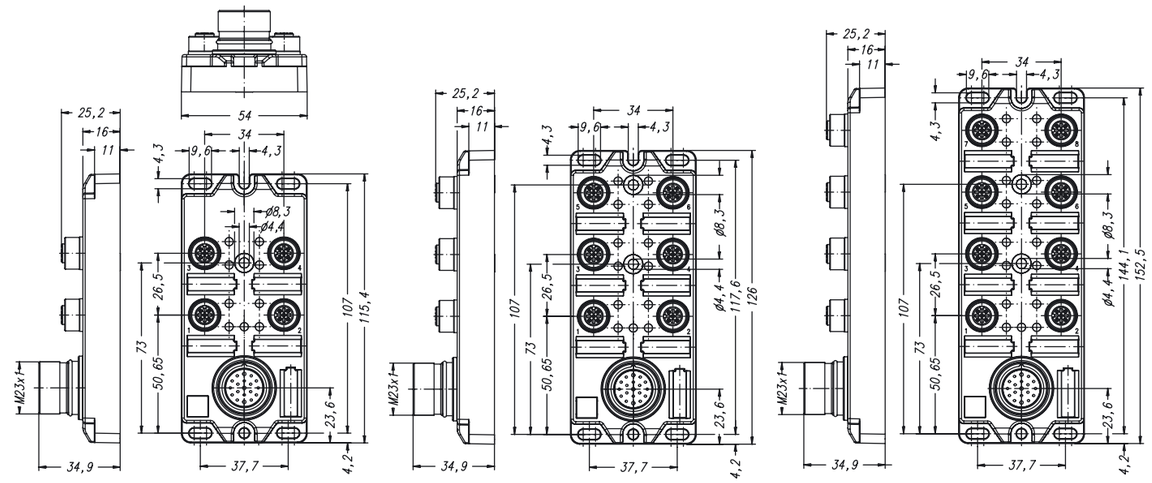
▼M8x1 ▼Ø8mm snap

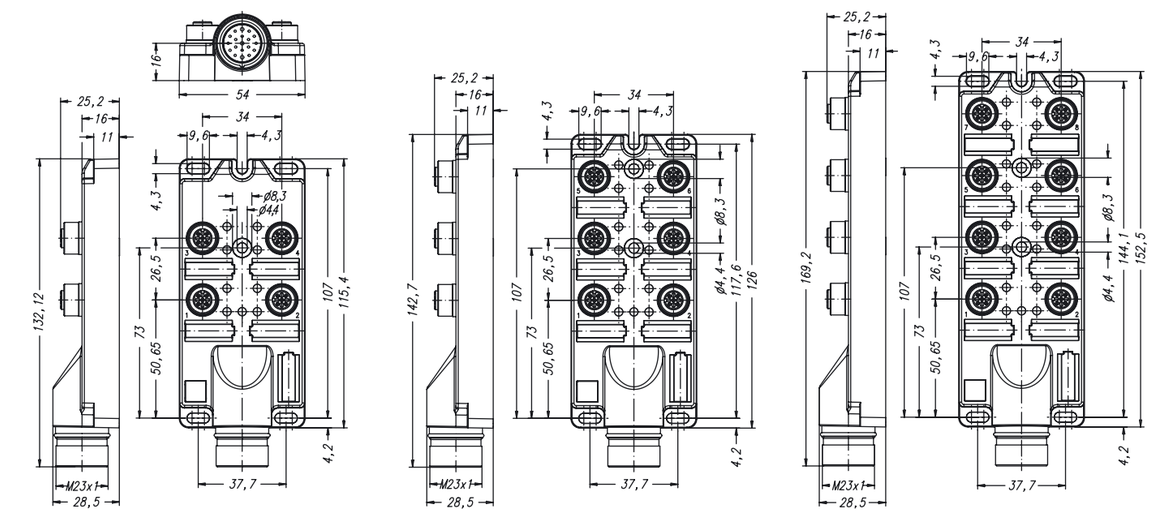


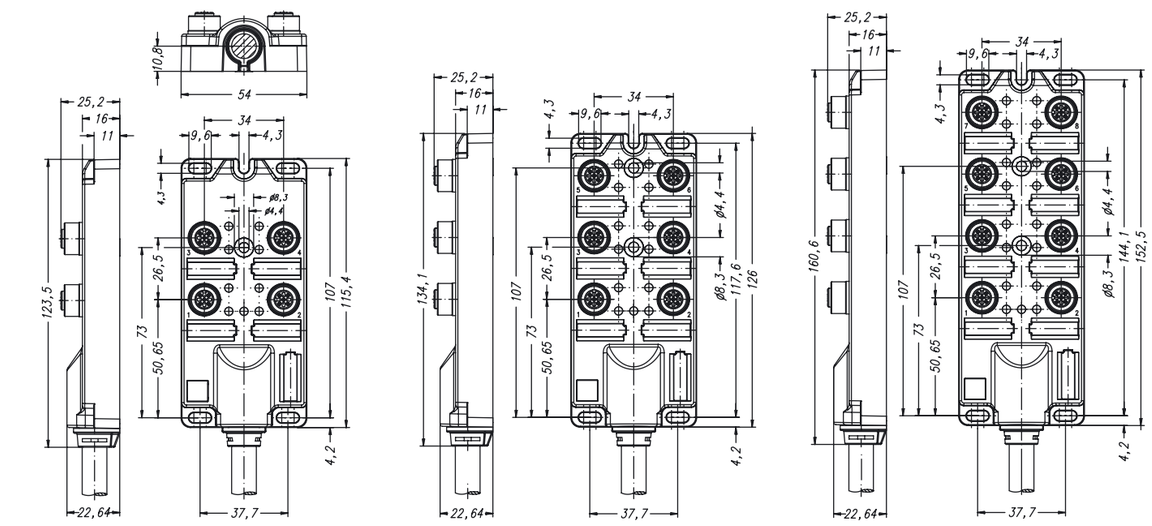




I/O-junction boxes M12x1







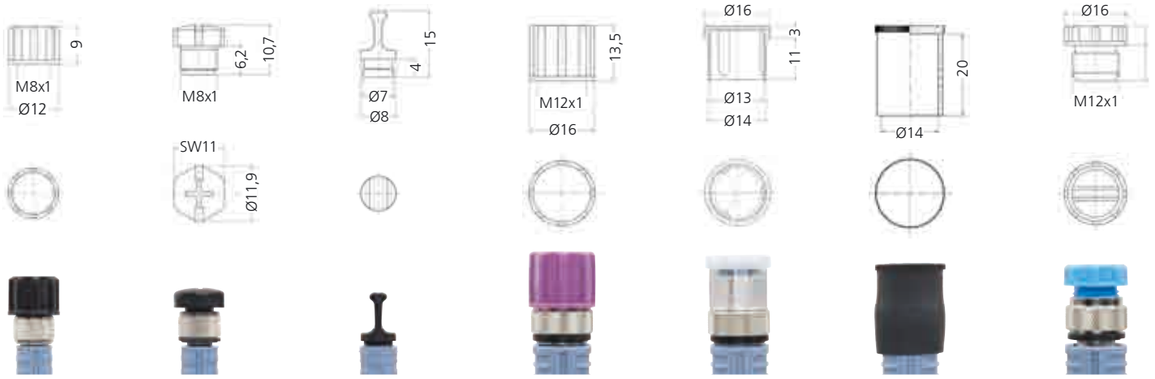
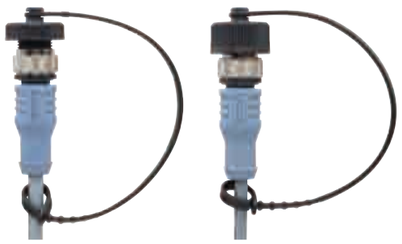
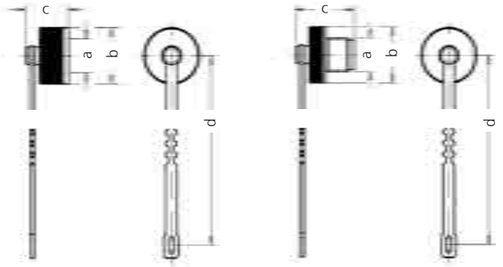


Fig.1 Fig.2 Fig.3 Fig.4 Fig.5 Fig.6 Fig.7

Product line	for	Protection class	colour (according to RAL)	Fig.	Order-No.
Safety-stopper	M8x1 | *f*	IP67	BK | RAL9005	2	8015075
	Ø8 snap | *f*	IP67	BK | RAL9005	3	8036742
	M12x1 | *f*	IP67	BK | RAL9005	7	8000004
		IP67	VT | RAL4001	7	8041992
		IP67	BU | RAL5012	7	8041993
		IP67	GN | RAL6018	7	8059233
Safety-cap	M8x1 | *m*	IP67	BK | RAL9005	1	8041582
	M12x1 | *m*	IP67	BK | RAL9005	4	8036742
		IP67	VT | RAL4001	4	8041995
		IP67	BU | RAL5012	4	8041996
		IP67	GY | RAL7053	4	8041994
		IP67	YE | RAL1021	4	8000031
Dustproof-cap	M12x1 | *m*		transparent	5	8009778
	M12x1 | *m* + *f*		BK | RAL9005	6	8043617

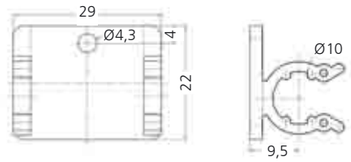


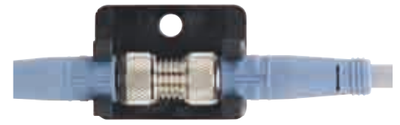


Product line	for	Protection class	a	b	c	d	Order-No.
Safety-stopper captiv	M8x1 | *f*	IP67	M8x1	Ø 12 mm	16.0 mm	160 mm	8048567
	M12x1 | *f*	IP67	M12x1	Ø 20 mm	21.0 mm	160 mm	8048568
Safety-cap captiv	M8x1 | *m*	IP67	M8x1	Ø 12 mm	13.3 mm	160 mm	8048566
	M12x1 | *m*	IP67	M12x1	Ø 20 mm	15.5 mm	160 mm	8048569

Type-designation	Length protective tubing	2 m	5 m	10 m
Adapter with M12x1 protective tubing		8055809	8055810	8055811

Mounting-clip
for M8x1 Round connector

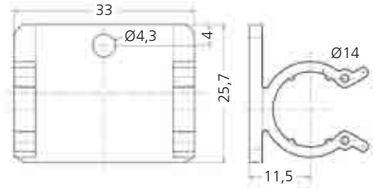


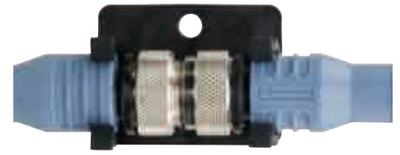


POM BK

Mounting-clip M8x1	1x Clip	8047658
Mounting-clip set M8x1	10x Clip + 10x screws M4x8	8047663

Mounting-clip
for M12x1 Round connector

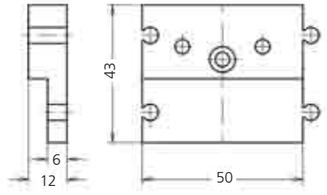




POM BK

Mounting-clip M12x1	1x Clip	8047660
Mounting-clip set M12x1	10x Clip + 10x screws M4x8	8047664

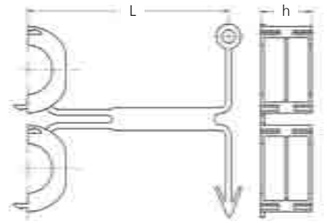
Mounting-set
for S89 2-way junction



PA BK

Mounting-set S89	2x carrier plates + 4x screws M4x25 + 4x nuts M4	8036078

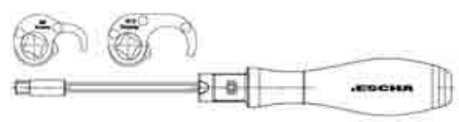
Safety-clip
M8x1 | M12x1
Against accidental disconnection under pressure

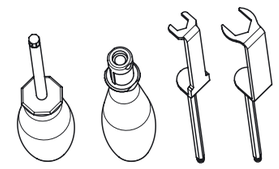


PA BK

Type-designation		L [mm]	h [mm]	Order-No.
Safety-clip	M8x1	53	9.4	8040691
Safety-clip	M12x1	53	13.5	8040501

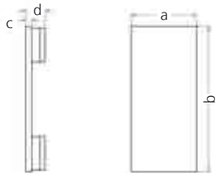
Torque-wrench set
M8x1 | M12x1





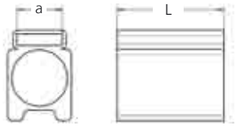
Type-designation	Order-No.
Torque-wrench-set in wallet fully fitted for M8x1 | M12x1 (knurl, hexagon-nut)	8055431

Labels
for passive junctions
and valve connectors



Label for	Type	a [mm]	b [mm]	c [mm]	d [mm]	Order-No.
I/O-junction box	M8x1	5.0	10.0	1.0	2.5	8011349
	M12x1	9.0	20.0	0.8	2.6	8015002
Valve connector	A	7.0	20.0	1.0	–	8047110
	VAA, B/BI, C/CI	4.0	11.0	1.0	–	8047109

Label-carrier
transparent



Label-carrier	Materials	a [mm]	L [mm]	Cable [mm]	Order-No.
3/18	PVC	3.0	18.0	Ø 3.5…6.0	8000052
4/18	PVC	4.0	18.0	Ø 6.0…10.0	8000060
3/30	thermopl. ESC (halogen-free)	3.0	30.0	Ø 3.5…6.0	8000091
4/30	thermopl. ESC (halogen-free)	4.0	30.0	Ø 6.0…9.0	8000092

Spare nuts
for flanges
CuZn nickel-plated

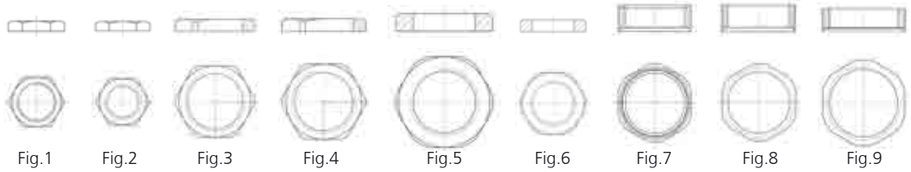
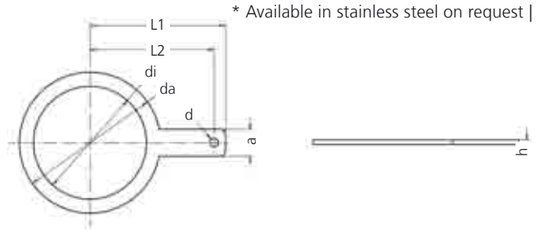


Fig.1 Fig.2 Fig.3 Fig.4 Fig.5 Fig.6 Fig.7 Fig.8 Fig.9

Thread	Fig.	for Flange	Materials	SW	h [mm]	Order-No.
M8x0,5	1	M8x1 | PFKS, PFS	CuZn	10	2.0	8004923
M8x1	2	M8x1 | PFSF	CuZn	10	2.0	8004971
Pg9	3	M12x1 | PG9	CuZn | VA*	18	3.0	8004913
M16x1.5	4	M12x1 | M16x1,5	CuZn | VA*	19	2.8	8029359
M20x1.5	5	M12x1 | M20x1,5	CuZn	24	3.0	8029360
M12x1	6	M12x1 | FSF	CuZn | VA*	16	3.0	8004930
Pg9	7	M12x1 | FKD, FSD PG9	CuZn	17	6.0	8004874
M16x1.5	8	M12x1 | FKD, FSD M16	CuZn | VA*	17	6.0	8027491
M20x1.5	9	M12x1 | FKD, FSD M20	CuZn | VA*	22	6.0	8027492

* Available in stainless steel on request | A/F (across flats) may different

Solder tags
for grounding of flange housings
CuZn nickel-plated



Solder-tag	L1 [mm]	L2 [mm]	di [mm]	da [mm]	d [mm]	a [mm]	h [mm]	Order-No.
M16x1.5	22.0	20.0	Ø16.0	Ø21.0	Ø1.5	4.8	0.8	8036043
M20x1.5	24.0	22.0	Ø20.0	Ø25.0	Ø1.5	4.8	0.8	8036044

Comprehensive Information on Connectors

The respective requirements of machinery specifications are binding for the user with connector applications. The relevant standards and specifications according to which our products are made and tested are explained in the following.

- **DIN VDE 0627; 2012-03 | Connectors and Connecting Devices**

  This standard has been under revision for a long time and will soon be internationally valid. The standard is valid for connectors and connecting devices with rated voltages up to 1000V ~ or 1500V – and rated currents up to 125A per contact intended for connecting assemblies or components in or on machinery or measuring-, instrumentation- or control ciruits considering safety aspects. It is also valid for connectors and connecting devices on household appliances as well as information-processing units.

- **IEC 60664-1; 2008-01 | Coordination of Isolation**

  This international standard, which complies with the German standard DIN VDE 0110 -1, April 97 edition, is a basic safety standard for achieving the coordination of isolation. It contains the required data to determine air distances, creep distances and solid insulations for electrical devices (e.g. connectors). This is realised considering the micro-ambient conditions and other loads they are exposed to in the course of the expected service life. Processes for the voltage test related to the coordination of isolation are included.

- **IEC 60512; May1994 | Measuring- and Testing-Process**

  This international standard corresponds to the European standard DIN EN 60512 and has replaced the previous German standard DIN 41640. It determines the measuring- and testing-processes for electromechanical components (e.g. connectors). The standard is very comprehensive and consists of 9 sections in total in which all electrical, mechanical and climatic tests are described. In addition, the standard contains tests on soldering ability, density, shielding and cable pull-out support.

- **IEC 60529; 2009-09 | Degrees of Protection by Housing (IP-Code)**

  This international standard corresponds to the European standard DIN EN 60529 and complies with the German standard DIN VDE 0470 -1, November 92 edition. It determines the designation, requirements and tests for the classification of protection degrees by housings for electrical devices (e.g. connectors). Thereby, protection against access to dangerous parts, protection against solid foreign bodies and protection against water are evaluated. The degree of protection is designated by an IP-code.

- **IEC 60068-1; March1995, Environmental Tests**

  This international standard which complies with the European standard DIN EN 60068 -1, contains basic determinations on environmental tests and degree of test-precision. This testing process serves to trace the resistivity of components to expected environmental influences under operating conditions. Typical tests are: coldness, dry and humid heat, shock, vibration, temperature fluctuation and others.

Changes in design are subject to further notice for reasons of quality improvements, refinement or production optimisation. The technical data stated in the catalogue refer to connectors, i.e. components which must not be plugged or unplugged under voltage. In order to secure the correct use of the products, the technical data are listed. It is possible to select the right products using these data. The products are described as well, however the properties are not assured. All ESCHA connectors have been developed and designed for applications in plant-, control and electric device version. It is up to the user to verify the possibility of using the connectors in other application areas as well. Data on properties and Sealinging refer to torques of 1.0Nm for M12x1-Round Connectors or 0.6Nm for M8x1-Round Connectors. All data concerning the IP-degrees of protection are only guaranteed for the connections of ESCHA components.

Supplementary information to the technical data stated in the catalogue

Characteristic	Standard [1]	Note
Protection class housing	IEC 60529	Data in plugged condition.
Mechanical life cycle	IEC 60512-5/9a	Test is done without electrical load
Rated voltage	IEC 60664-1	The stated value is defined in connection with degree of pollution and overvoltage category
Degree of pollution	IEC 60664-1	
Current load	IEC 60512-3/5b	
Contact resistance	IEC 60512-2/2a	Contact resistance contact-pin/contact-bush in plugged condition throughout adefined range
Insulation resistance	IEC 60512-2/3a	Insulation between two conducting parts (dependent on material)

[1] The technical data represent initial values which can change depending on load. The housings have to be included in the device protective-measures when mounting electrically conductive flange housings. The cables to be connected should be insulated in such a way that the distances to electrically conductive parts are not reduced. When soldering the cables, care must be taken that none of the single wires is projecting which can cause short circuits.

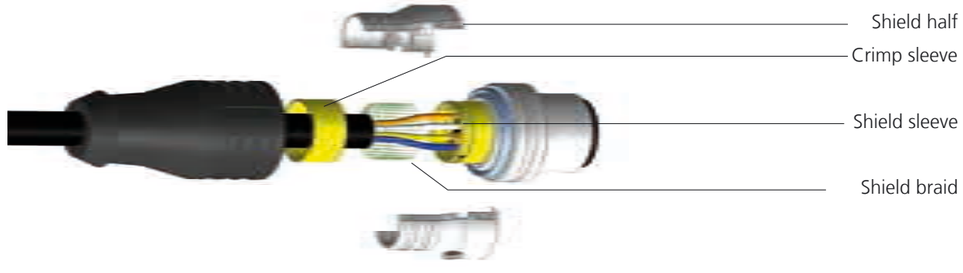
Degrees of Protection | IP: International Protection

For reasons of safety, connectors must be protected against environmental influences, e.g. dust, foreign bodies, touch, humidity and water. In case of industrial connectors, this protection must be provided for by the housing and its locking as well as the insulation on cable outlet. The degrees of protection are indicated by an abbreviation consisting of two constant characteristic letters IP (International Protection) and two following digits for the protection degree. The first digit indicates the protection degree against touch and foreign bodies. The second digit indicates the protection against damaging ingress of water. All data are only valid in locked condition. Awarding degrees of protection is subject to a standardised testing procedure.

	Digit 1	Digit 2
0	Unprotected	Unprotected
1	Protected against access to dangerous parts by hand pressure. Protected against solid foreign bodies Ø50mm.	Protected against dripping water
2	Protected against access to dangerous parts by fingers. Protected against solid foreign bodies Ø12.5mm.	Protected against dripping water when housing is inclined up to 15°
3	Protected against access to dangerous parts by a tool. Protected solid foreign bodies Ø2.5mm.	Protected against spraying water
4	Protected against access to dangerous parts by a wire. Protected against solid foreign bodies Ø1mm.	Protected against sprinkling water
5	Protected against access to dangerous parts by a wire. Protected against dust.	Protected against water-jet
6	Protected against access to dangerous parts by wire. Dustproof.	Protected against a strong water-jet
7		Protected against effects due to temporary immersion in water.
8		Protected against effects due to permanent immersion in water. (Conditions to be agreed upon between manufacturer and user. However, conditions must be more difficult than with IP_7.)
9 K		Protected against water by high-pressure steam-jet cleaning

Shielding | ESCHA two-component overmould shielding

EMC of devices has gained more significance since the publication of the law on electromagnetic compatibility.
The devices have to be made in such a way that:
The generation of electromagnetic interferences is limited to the extent that a proper operation of these devices is possible.
The devices have an adequate stability against electromagnetic interferences in order that a proper operation is possible.
The ESCHA two-shell-shielding concept comprises an equipotential surface through two interconnected metal shells encapsulating the round connector at 360°. The shield braid of the molded cable is crimped all around on the shield sleeve. A twofold-overmold provides for 360°-shielding even at high mechanical stresses, dust- and waterproof at high pressure- and steam jet cleaning according to IP67 and IP69K.



Certifictations

UL (Underwriter Laboratories Inc.)

The certification of products, components or materials by the Underwriter Laboratories Inc. is the verified proof that it meets the specific safety requirements. UL-approvals are, above all, required for the American and Canadian markets.
For relevant ESCHA products, component approvals (UL Recognized Component) apply, qualifying them as UL-approved components for installation into UL-approved systems. This component approval also holds for relevantly used cable qualities. Single cable qualities (see Standard Cable qualities table) carry the UL-Listing-certification mark (device approval), which guarantees compliance with the valid UL-safety standards.

GOST-R (ГОСТ - Государственный Стандарт)

Importing goods into the Russian Federation requires the certification by the Federal Agency for Technical Regulation and Metrology which verifies product compliance with the Russian requirements, standards and quality standards.

Guideline 2002/95/EG (RoHS - Restriction of [the use of certain] hazardous substances)

The EU-guideline restricting the use of certain hazardous substances in electrical- and electronic devices does not allow hazardous substances in devices and components above defined limits. Lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl (PBDE) are among the hazardous substances. For ESCHA products, this means lead-free soldering and no use of flame retardants in plastics and cables.

ESCHA connectors are electronic components and are not subject to CE-designation. This is confirmed by the European Commission directives for low-voltage- and EMC-guidelines.

Rated voltage

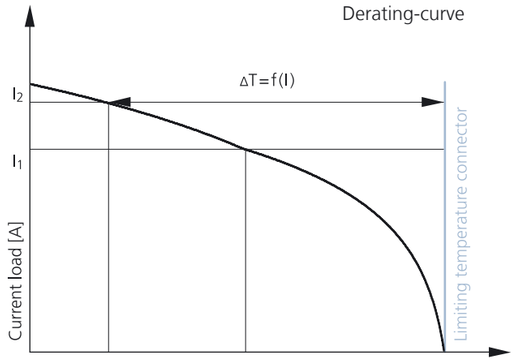
Specifies the maximum electrical voltage during standard operation. Operating properties of round connectors are related to rated voltage.

Insulation resistance

The insulating capacity of a material is defined as separating adjacent contacts or a contact against ground at a high-impedance as possible according to IEC 60512-2, 3a and DIN EN 60512-2.

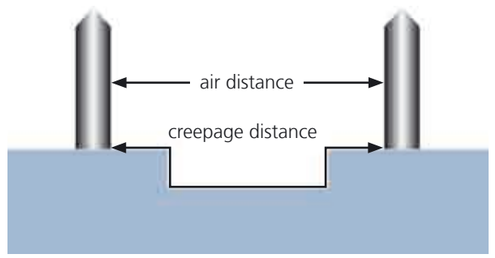
Current load

According to DIN ISO 60512-3, the current load of a round connector defines the maximum permissible current permanently and concurrently flowing through all contacts at an ambient temperature of – 40°C. The total current-related self-heating and ambient temperature must not exceed the maximum limit temperature of a round connector – defined by the thermal properties of the material used. The so called Derating-curve illustrates the relation between the current load of a round connector and its ambient temperature. In practice, possibly higher currents per contact are permissible as not all contacts are permanently energized at a maximum rate. Exact values are to be individually determined by testing.



Isolation coordination (air- and creepage distance)

For electrical equipment in low-voltage installations (<1kV), DIN EN 60664 (DIN VDE 0110) describes the process of measuring the isolating air- and creepage distance. It defines minimum air distances (minimum distances between voltage carrying parts in the air) and minimum creepage distances (minimum distance between voltage carrying parts along an isolating surface) to avoid an electrical flashover. Minimum creepage distances depend on isolating material and degree of pollution.



Degree of pollution

The degree of pollution (1-4) defines the quantity of pollution (solid, liquid or gaseous impurities), at which the dielectric strength and/or surface resistance are reduced. For industrial applications, a degree of pollution 3 is typical: conductive or dry, non-conductive pollution occurs. The latter can become conductive through the expected thawing.

Mechanical life cycle

Defines the number of mating cycles (a mechanical connect- and disconnect process of a round connector), during which no abrasion of contact surfaces occurs and thus increasing contact resistance.

Conversion of American Wire Gauge, AWG in mm²

In some industrial areas, the American Wire Gauge is also used for cables.
The following table serves the conversion from AWG in mm². It should be taken into consideration that wires with the same AWG-number but different structures show slightly different cross sections.

AWG	Wire structure [mm]	Wire diameter [mm]	Wire cross-section [mm²]
30	1 x 0.25	0.25	0.05
	7 x 0.10	0.36	0.06
28	1 x 0.32	0.32	0.08
	7 x 0.13	0.38	0.09
26	1 x 0.4	0.40	0.13
	7 x 1.16	0.48	0.14
	19 x 0.10	0.51	0.15
24	1 x 0.51	0.51	0.21
	17 x 0.20	0.61	0.22
	19 x 0.13	0.64	0.25
22	1 x 0.64	0.64	0.33
	7 x 0.25	0.76	0.34
	19 x 0.16	0.81	0.38
20	1 x 0.81	0.81	0.52
	7 x 0.32	0.97	0.56
	19 x 0.20	1.02	0.60
18	1 x 1.02	1.02	0.82
	19 x 0.25	1.27	0.93
16	19 x 0.29	1.44	1.25
14	19 x 0.36	1.80	1.93
12	19 x 0.46	2.29	3.16
10	37 x 0.40	3.10	4.65

Colour guide

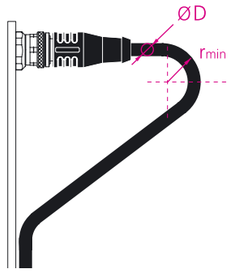
WH	BN	GN	YE	GY	PK	BU	RD	BK	VT	GY/PK	RD/BU	WH/GN	BN/GN	WH/YE	YE/BN	WH/GY	GY/BN	GN/YE
white	brown	green	yellow	grey	pink	blue	red	black	violet	grey/pink	red/blue	white/green	brown/green	white/yellow	yellow/brown	white/grey	grey/brown	green/yellow

Overview Pg-thread vs. metric thread

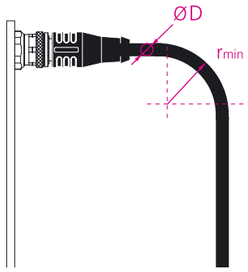
The interim period for DIN 46320 "screwing for cables and conductinglines with Pg-thread" expired on 31.12.1999. Since then, screwing for cables and conductinglines had to comply with the national standard 46319 before this was replaced by EN 50262 on 01.03.2001.

Comparison Pg-thread vs. metric thread, wrench width for cable screwing according to EN 50262

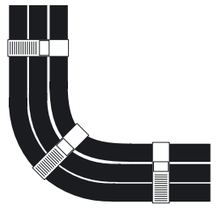
Pg	Metric thread	max. Wrench width [mm]	max. Corner length [mm]
Pg7	M10x1.5 | M12x1.5	16	18
Pg9 | Pg11	M16x1.5	21	23
Pg13.5	M20x1.5	25	28



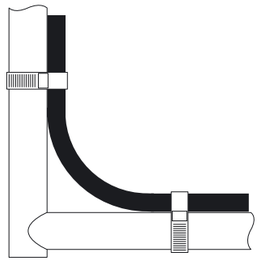
Fixed wiring
r_{min} = 5xD



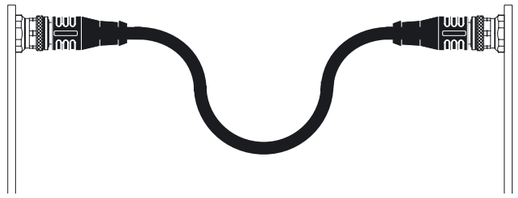
r_{min} = 10xD



Bundling of several cables

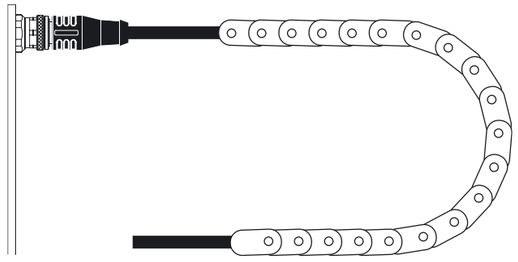


Fixing of cables



Cable loops

Cable with spiral lines



Draig chain application

Wiring instructions

The correct installation of the round connector and a professional wiring are the precondition for properties of a relevantly tight and reliable electrical connection guaranteed by the manufacturer.

The use of a torque application tool is recommended for tightening and loosening of round connectors (accessories page 193).

Recommended tightening torque
according to IEC 61076-2 test requirements:
0.6Nm for M8x1 round connectors
1.0Nm for M12x1 round connectors

Recommended tightening torque for flanges
according to IEC 61076-2 test requirements:
1.5Nm for M8x1 round connectors
2.0Nm for M12x1 round connectors

The recommendations base on internal tests and cover a majority of applications and product combinations. Due to the design variety of products available on the market, specifications have to be checked in individual cases.

In order to avoid damage to a round connector and cable, the minimum bending radius of the cable (rmin) is to be observed during the wiring.

When using cable ties for cable bundling or permanent wiring, the ties must not cut into or deform the cable to avoid short circuits, cable interruptions or a reduction of the dielectric strength.

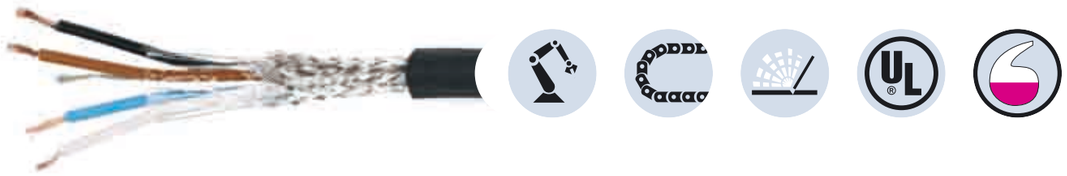
In case of junction cables, sufficient cable length between the connections should be observed in order to absorb the generated energy during movement. The use of cable loops, spiral lines or cable chains guarantees a high life cycle of the round connector system.

S7400® robotic | Control line | PUR

Flexible, silicone- and halogen free control cable with high mechanical strength. Due to its outstanding properties in drag-chain adaption, torsion-resistance and weld-field immunity, it is very well suited for the flexible applications in robotics, handling- and assembly technology as well as machine tools. The cable meets the UL and CSA (UL10493/20549; cULus) requirements.

Features	■ flame-retardant | VDE 0482-332-2-2, DIN EN/IEC 60332-2-2, UL/CSA FT 2	
	■ seawater-resistant	
	■ recyclable	
	■ LABS-free	
	■ RoHs-conform	
	■ acids- and alkali resistance	
	■ good ozone- and UV-resistance	
	■ hydrolysis strength	
	■ drag-chain- and torsion capability	
	■ good weld-field immunity	
	■ halogen-free | DIN EN 50267-2-1, IEC 60754-1, VDE 0482-267-2-1	
	■ silicone-free	
	■ oil restistance	
Temperature range	operation	-30°C...+90°C
	installation	-40°C...+90°C
	drag-chain	-25°C...+60°C
Bending radius	repeated	10 x Ø-cable
	single	5 x Ø-cable
Rated voltage		≤ 300V
Color outer-jacket		orange | similar RAL 2003
Wire-structure		VDE 0295 | EN/IEC 60228, Class 5
	conductor	Cu-ETP1, bare | DIN EN 13602
	insulation	PP, halogen-free
	stranding	for drag-chain and torsion-application
	jacket	PUR, halogen-free

	Wire	Type	Wire-structure	Wire color	Ø - Jacket	S7400® 100m cable Order-No.
M8x1	3	LiF9Y11YFHY 3x0.25mm²	32 x Ø 0.10mm	BN | BU | BK	4.6mm	8058484
M12x1	3	LiF9Y11YFHY 3x0.34mm²	42 x Ø 0.10mm	BN | BU | BK	4.8mm	8058485
	4	LiF9Y11YFHY 4x0.34mm²	42 x Ø 0.10mm	BN | WH | BU | BK	5.2mm	8057309
	4+PE	LiF9Y11YFHY 5x0.34mm²	42 x Ø 0.10mm	BN | WH | BU | BK | GY	5.6mm	8058487

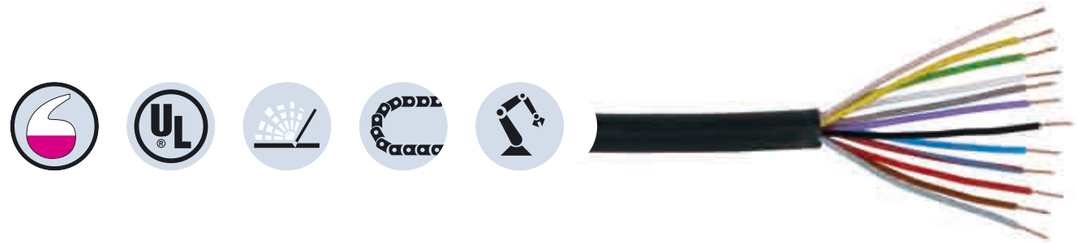


PUR shielded ⊙ | Control line | S370®

Flexible, silicone- and halogen-free control cable with high mechanical strength. The cable is chemicals, hydrolysis-, and microbes-resistant. The drag-chain application is possible at a bending radius of minimum10xd. Due to its weld-field immunity, the cable is very well suited for the flexible application in robotics, machine-tool, and metal-cutting production. The cables meet the UL and CSA (UL 10493/20549; cULus) requirements. Very good EMC-features with shielded versions.

Features	■ flame-retardant | VDE 0482-332-2-2, DIN EN/IEC 60332-2-2, UL/CSA FT 2	
	■ seawater-resistant	
	■ recyclable	
	■ LABS-free	
	■ RoHs-conform	
	■ acids- and alkali resistance	
	■ good ozone- and UV-resistance	
	■ hydrolysis strength	
	■ drag-chain- and torsion capability	
	■ good weld-field immunity	
	■ halogen-free | DIN EN 50267-2-1, IEC 60754-1, VDE 0482-267-2-1	
	■ silicone-free	
	■ oil restistance	
Temperature range	operation	-30°C…+90°C
	installation	-40°C…+90°C
	drag-chain	-25°C…+60°C
Bending radius	repeated	10 x Ø-cable
	single	5 x Ø-cable
Rated voltage		≤ 300V
Color outer-jacket		black | similar RAL 9005
Wire-structure		VDE 0295 | EN/IEC 60228, Class 5
	conductor	Cu-ETP1, bare | DIN EN 13602
	insulation	PP, halogen-free
	stranding	for drag-chain and torsion-application
	jacket	PUR, halogen-free

	Wire	Type	Wire-structure	Wire color	Ø - Jacket	S370 ⊙ 100m cable Order-No.
M8x1	3	LiF9YH11YH 3x0.34mm²	42 x Ø 0.10mm	BN | BU | BK	4.8mm	8058488
	4	LiF9YH11YH 4x0.34mm²	42 x Ø 0.10mm	BN | WH | BU | BK	5.1mm	8047431
M12x1	3	LiF9YH11YH 3x0.34mm²	42 x Ø 0.10mm	BN | BU | BK	4.8mm	8058488
	4	LiF9YH11YH 4x0.34mm²	42 x Ø 0.10mm	BN | WH | BU | BK	5.1mm	8047431
	5	LiF9YH11YH 5x0.34mm²	42 x Ø 0.10mm	BN | WH | BU | BK | GY	5.6mm	8046513
	8	LiF9YH11YH 8x0.25mm²	32 x Ø 0.10mm	WH | BN | GN | YE | GY | PK | BU | RD	6.3mm	8048963
	12	LiF9YH11YH 12x0.14mm²	18 x Ø 0.10mm	BN | BU | WH | GN | PK | YE | BK | GY RD | VT | GY/PK | RD/BU	6.0mm	8058489

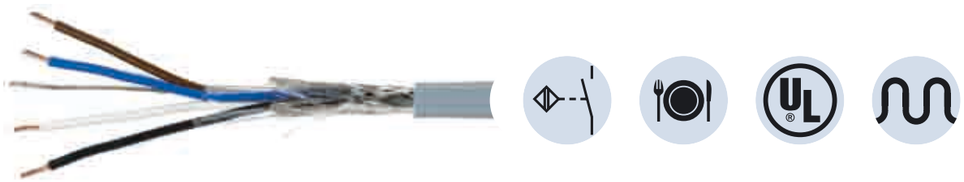


S370®/S370GY® | Control line | PUR

Flexible, silicone- and halogen-free control line with high mechanical strength. The cable is chemicals, hydrolysis-, and microbes-resistant. The drag-chain application is possible at a bending radius of minimum 10xd. Due to its weld-field immunity, the cable is very well suited for the flexible application in robotics, machine-tool, and metal-cutting production. The cables meet the UL and CSA (UL 10493/20549; cULus) requirements.

Features	■ flame-retardant | VDE 0482-332-2-2, DIN EN/IEC 60332-2-2, UL/CSA FT 2	
	■ seawater-resistant	
	■ recyclable	
	■ LABS-free	
	■ RoHs-conform	
	■ acids- and alkali resistance	
	■ good ozone- and UV-resistance	
	■ hydrolysis strength	
	■ drag-chain- and torsion capability	
	■ good weld-field immunity	
	■ halogen-free | DIN EN 50267-2-1, IEC 60754-1, VDE 0482-267-2-1	
	■ silicone-free	
	■ oil restistance	
Temperature range	operation	-30°C…+90°C
	installation	-40°C…+90°C
	drag-chain	-25°C…+60°C
Bending radius	repeated	10 x Ø-cable
	single	5 x Ø-cable
Rated voltage		≤ 300V
Color outer-jacket		S370: black, similar RAL 9005 | S370GY: grey, similar RAL 7040
Wire-structure		VDE 0295 | EN/IEC 60228, Class 5
	conductor	Cu-ETP1, bare | DIN EN 13602
	insulation	PP, halogen-free
	stranding	for drag-chain and torsion-application
	jacket	PUR, halogen-free

	Wire	Type	Wire-structure	Wire color	Ø - Jacket	S370 ® 100m cable Order-No.	S370GY ® 100m cable Order-No.
M8x1	3	LiF9YH11YH 3x0.34mm²	42 x Ø 0.10mm	BN | BU | BK	4.3mm	8058490	8058493
	4	LiF9YH11YH 4x0.34mm²	42 x Ø 0.10mm	BN | WH | BU | BK	4.7mm	8058491	–
	5	LiF9YH11YH 5x0.25mm²	14 x Ø 0.15mm	BN | WH | BU | BK | GY	4.5mm	8058492	–
M12x1	3	LiF9YH11YH 3x0.34mm²	42 x Ø 0.10mm	BN | BU | BK	4.3mm	8046603	8058494
	4	LiF9YH11YH 4x0.34mm²	42 x Ø 0.10mm	BN | WH | BU | BK	4.7mm	8045519	8058495
	4+PE	LiF9YH11YH 5x0.34mm²	42 x Ø 0.10mm	BN | WH | BU | BK | GN/YE	5.2mm	8048725	8058496
	5	LiF9YH11YH 5x0.34mm²	42 x Ø 0.10mm	BN | WH | BU | BK | GY	5.2mm	8047757	–
	8	LiF9YH11YH 8x0.25mm²	32 x Ø 0.10mm	WH | BN | GN | YE | GY | PK | BU | RD	5.9mm	8055605	–
	12	LiF9YH11YH 12x0.14mm²	18 x Ø 0.10mm	BN | BU | WH | GN | PK | YE | BK | GY RD | VT | GY/PK | RD/BU	5.6mm	8052916	–

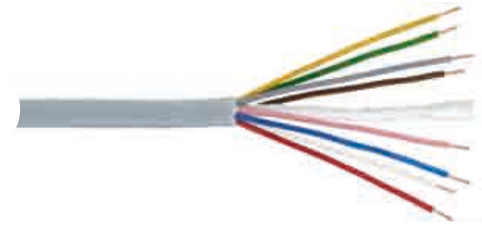


PVC shielded ⊙ | Control line | P00/P01®

PVC-cable for measurement and control-, and sensor technology. Suitable for applications in dry areas on packaging machines, assembly- and conveyor technology. High flexibility with unstressed movement (conditional drag-chain application possible). Predestined for applications in food- and beverage industry. P01-cables meet the UL and CSA (UL1729/2464; cULus) requirements. Very good EMC-features with shielded versions.

Features	■ seawater-resistant ■ recyclable ■ LABS-free ■ RoHs-conform ■ acids- and alkali resistance ■ ozone- and UV-resistance ■ hydrolysis strength	
Temperature range	operation	0°C…+80°C
	installation	-25°C…+80°C
Bending radius	repeated	10 x Ø-cable
	single	5 x Ø-cable
Rated voltage		≤ 300V
Color outer-jacket		window gray | similar RAL 7040
Wire-structure		VDE 0295 | EN/IEC 60228, Class 5
	conductor	Cu-ETP1, bare | DIN EN 13602
	insulation	PVC | VDE 0207-363, Section 3
	stranding	tight layer stranding for a flexible application
	jacket	PVC | VDE 0207-363, Section 4-1

					P00 ⊙		P01 ⊙ ®	
	Wire	Type	Wire-structure	Wire color	Ø - Jacket	100m cable Order-No.	Ø - Mantel	100m cable Order-No.
M8x1	3	LiYY-0B 3x0.25 mm²	14 x Ø0.15 mm	BN | BU | BK	4.6 mm	8058497	4.8 mm	8058506
	4	LiYY-0B 4x0.25 mm²	14 x Ø0.15 mm	BN | WH | BU | BK	4.9 mm	8058498	5.1 mm	8058507
M12x1	3	LiYY-0B 3x0.34 mm²	19 x Ø0.15 mm	BN | BU | BK	4.8 mm	8058502	5.0 mm	8058508
	4	LiYY-0B 4x0.34 mm²	19 x Ø0.15 mm	BN | WH | BU | BK	5.1 mm	8058503	5.3 mm	8058509
	5	LiYY-0B 5x0.34 mm²	19 x Ø0.15 mm	BN | WH | BU | BK | GY	5.5 mm	8058504	5.9 mm	8058510
	8	LiYY-0B 8x0.25 mm²	14 x Ø0.15 mm	WH | BN | GN | YE | GY | PK | BU | RD	6.7 mm	8042487	6.7 mm	8058511
	12	LiYY-0B 12x0.14 mm²	18 x Ø0.10 mm	BN | BU | WH | GN | PK | YE | BK | G Y RD | VT | GY/PK | RD/BU	6.6 mm	8058505	6.6 mm	8058512



P00/P01® | Control line | PVC

PVC-cable for measurement and control-, and sensor technology. Suitable for applications in dry areas on packaging machines, assembly- and conveyor technology. High flexibility with unstressed movement (conditional drag-chain application possible). Predestined for applications in food- and beverage industry. P01-cables meet the UL and CSA (UL1729/2464; cULus) requirements.

Features	■ seawater-resistant ■ recyclable ■ LABS-free ■ RoHs-conform ■ acids- and alkali resistance ■ ozone- and UV-resistance	
Temperature range	operation	0°C…+80°C
	installation	-25°C…+80°C
Bending radius	repeated	10 x Ø-cable
	single	5 x Ø-cable
Rated voltage		≤ 300V
Color outer-jacket		window gray | similar RAL 7040
Wire-structure		VDE 0295 | EN/IEC 60228, Class 5
	conductor	Cu-ETP1 bare | DIN EN 13602
	insulation	PVC | VDE 0207-363, Section 3
	stranding	tight layer stranding for a flexible application
	jacket	PVC | VDE 0207-363, Section 4-1

					P00		P01 ®	
	Wire	Type	Wire-structure	Wire color	Ø - Jacket	100m cable Order-No.	Ø - Mantel	100m cable Order-No.
M8x1	3	LiYY-0B 3x0.25 mm²	14 x Ø0.15 mm	BN | BU | BK	4.0 mm	8058513	4.3 mm	8058521
	4	LiYY-0B 4x0.25 mm²	14 x Ø0.15 mm	BN | WH | BU | BK	4.2 mm	8056855	4.7 mm	8058522
	5	LiYY-0B 5x0.25 mm²	14 x Ø0.15 mm	BN | WH | BU | BK | GY	4.5 mm	8058514	–	–
M12x1	3	LiYY-0B 3x0.34 mm²	19 x Ø0.15 mm	BN | BU | BK	4.2 mm	8058515	4.6 mm	8058523
	4	LiYY-0B 4x0.34 mm²	19 x Ø0.15 mm	BN | WH | BU | BK	4.5 mm	8057030	4.9 mm	8058524
	4+PE	LiYY-0B 4+1x0.34 mm²	19 x Ø0.15 mm	BN | WH | BU | BK | GN/YE	4.9 mm	8058516	5.3 mm	8058525
	5	LiYY-0B 5x0.34 mm²	19 x Ø0.15 mm	BN | WH | BU | BK | GY	4.9 mm	8058517	5.3 mm	8058526
	8	LiYY-0B 8x0.25 mm²	14 x Ø0.15 mm	WH | BN | GN | YE | GY | PK | BU | RD	5.7 mm	8058519	6.2 mm	8058527
	12	LiYY-0B 12x0.14 mm²	18 x Ø0.10 mm	BN | BU | WH | GN | PK | YE | BK | G Y RD | VT | GY/PK | RD/BU	5.6 mm	8058520	6.1 mm	8058528

TPE | F&B-Control line_detergent-resistant | S3930

TPE jacketed cable with elevated position-proof wires with an insulation of special polyester. Resistant to all common acidic- and alkaline cleaning- and disinfection agents. PVC-free plastics prevent discoloration and hardening by detergents. Predestined for applications in the food- and beverage industry. Due to the materials used, it is also suitable for applications in machine- and plant construction. High stability, good drag-chain- and torsion capability.

Features	■ seawater-resistant	
	■ recyclable	
	■ LABS-free	
	■ RoHs-conform	
	■ excellent acids- and alkali resistance	
	■ verified resistance against »P3-topactive | P3-topax« cleaning- and disinfection agents	
	■ good ozone- and UV-resistance	
	■ hydrolysis strength | DIN EN 60068-2-78	
	■ drag-chain capable ≥ 4 million cycles	
	■ torsion capable up to ±180°/m	
	■ halogen-free | DIN EN 50267-2-1, IEC 60754-1, VDE 0482-267-2-1	
	■ cold flexible	
	■ enhanced thermal stability	
Temperature range	operation	-25°C…+105°C
	installation	-40°C…+105°C
	drag-chain	-25°C…+60°C
Bending radius	repeated	10 x Ø-cable
	single	5 x Ø-cable
Rated voltage		≤ 240V AC
Color outer-jacket		light grey | similar RAL 7035
Wire-structure		VDE 0295 | EN/IEC 60228, Class 5
	conductor	Cu-ETP1 blank | DIN EN 13602
	linsulation	TPE, halogen-free
	stranding	tight stranding
	jacket	TPE, halogen-free

	Wire	Type	Wire-structure	Wire color	Ø - Jacket	S3930 100m cable Order-No.
M8x1 | M12x1	4	LiF12Y14Y-OB 4x0,34mm²	42 x Ø0,10mm	BN | WH | BU | BK	4.6mm	8058694

S2430 | Control line_high temperature-proof | PTFE

The thermal resistance of this high-temperature cable extends from -190°C to +260°C. Due to its fully fluorinated jacket and wire insulation, the cable is perfectly suited for applications in high-frequency cables, as control cable in critical temperature areas, and in the computer-, and aviation industry. In addition, it stands out through a very good chemical strength, as well as its ozone- and weather resistance.

Features	■ non flammable	
	■ low smoke	
	■ seawater-resistant	
	■ LABS-free	
	■ RoHs-conform	
	■ excellent chemicals resistance	
	■ very good ozone- and UV-resistance	
	■ hydrolysis strength	
	■ drag-chain capability	
	■ flexible at high and low temperatures	
Temperature range		-190°C…+260°C
Bending radius	repeated	10 x Ø-cable
	single	5 x Ø-cable
Rated voltage		≤ 250V
Color outer-jacket		signal white | similar RAL 9003
Wire-structure	conductor	Cu-ET, nickel-plated
	insulation	PTFE (5Y)
	jacket	PTFE (5Y)

	Wire	Type	Wire-structure	Wire color	Ø - Jacket	S2430 100m cable Order-No.:
M8x1 | M12x1	5	Li5Y5Y-OB AWG22	7x0.254mm	BN | WH | BU | BK | GY	3.8mm	8037921
	8	Li5Y5Y-OB AWG24	19x0.127mm	WH | BN | GN | YE | GY | PK | BU | RD	4.7mm	8047617
	12	Li5Y5Y-OB AWG26	19x0.102mm	BN | BU | WH | GN | PK | YE | BK | GY RD | VT | GY/PK | RD/BU	4.3mm	8058529

PUR | Bus cable_Industrial Ethernet | S3500 Ⓤ

Shielded PUR-cable for safe and industrial-suited data transmission in automation- and fieldbus technology. The cable meets the UL-Style 20963 and the Cat7 (electrical properties according to EN 50288-4-2) requirements. Materials and a constructive setup allow for increased mechanical stresses (abrasion, bending, vibrations etc.) of the cable.

Features		■ flame-retardant | DIN EN/IEC 60332-1-2 ■ no flame propagation ■ no corrosiveness of combustion gases ■ smoke visibility | IEC 61034 ■ seawater-resistant ■ recyclable ■ LABS-free ■ RoHs-conform ■ good acids- and alkali resistance ■ good microbes- and hydrolysis strength ■ good UV-resistant ■ high flexibility ■ halogen-free | IEC 60754-1 ■ oil resistance | EN 60811-2-1
Temperature range	operating temp..	-40°C…+80°C
	installation temp..	-20°C…+60°C
Bending radius	repeated	10 x Ø-cable
	single	5 x Ø-cable
Rated voltage		30 V UL rating
Color outer-jacket		green | similar RAL 6018
Wire-structure	conductor	Cu, bare soft
	insulation	PE 02Y, foamed
	shielding	Cu, tinned | ~70% optical coverage
	jacket	PUR 11 Y

	Wire	Type	Wire-structure	Wire color	Ø - Jacket	S3500 Ⓤ 100m cable Order-No.
M12x1 | RJ45	8	Li02YSC11Y 4x2x0.14mm²	7 x Ø 0.16 mm 26 AWG	WH(OG) | OG; WH(GN) | GN WH(BN) | BN; WH(BU) | BU	6.4 mm	8053361

S2171 Ⓤ | Bus cable_Industrial Ethernet | PUR

Shielded PUR-cable for safe and industrial-suited data transmission in automation- and fieldbus technology. The cable is CMX-verified or meets the Cat5e (electrical properties of EN 50288-2-1) requirements. Materials and a constructive setup allow for increased mechanical stresses (abrasion, bending, vibrations etc.) of the cable. A drag-chain application with up to 3 million bending cycles is possible and risk-free.

Features		■ flame-retardant | DIN EN/IEC 60332-1-2 ■ seawater-resistant ■ recyclable ■ LABS-free ■ RoHs-conform ■ good acids- and alkali resistance ■ good microbes- and hydrolysis strength ■ good ozone- and UV-resistance ■ high flexibility, drag-chain capable ≤ 3 million cycles ■ halogen-free | IEC 60754-1 ■ oil resistance | EN 60811-2-1
Temperature range	operating temp..	-40°C…+70°C
	installation temp..	-20°C…+60°C
	storage temp.	-50°C…+70°C
Bending radius	repeated	7,5 x Ø-cable
	single	5 x Ø-cable
Rated voltage		600 V UL rating
Color outer-jacket		green | similar RAL 6018
Wire-structure	conductor	Cu-ETP-A…-B | DIN EN 13602
	insulation	PE 2Y, halogen-free | DIN EN 50290-2-23
	stranding	Tight layer stranding for a flexible application
	shielding	Cu, tinned | ~85% optical coverage| Polyester foil, alu-laminated (100% coverage)
	jacket	inside: thermoplastisches Copolymer (FRNC) | outside: PUR 11 Y

	Wire	Type	Wire-structure	Wire color	Ø - Jacket	S2171 Ⓤ 100m cable Order-No.
M12x1	4	Li2YH(St)C11Y 4x0.34mm²	7x0.25mm AWG 22	YE | OG | WH | BU	6.5 mm	8036284

PUR | Industrial Ethernet
Cable qualities

PVC | Bus cable_Industrial Ethernet | S3900 ®

Shielded PVC-cable for safe and industrial-suited data transmission in automation- and fieldbus technology. The cable meets UL-Style 2461 (80°C/300V)- and the Cat6A requirements for fieldbuses. Electrical values are according to IEC 61156-5. Materials and a constructive setup allow for mechanical stresses (abrasion, bending, vibrations etc.) of the cable.

Features		■ flame-retardant | IEC 60332-1-2 ■ seawater-resistant ■ recyclable ■ LABS-free ■ RoHs-conform ■ acids- and alkali resistance ■ microbes- and hydrolysis strength ■ UV-resistant ■ limited oil resistance
Temperature range		-40°C…+80°C
Bending radius	repeated	8x Ø-cable
	single	4x Ø-cable
Rated voltage		300V UL rating
Color outer-jacket		green | similar RAL 6018
Wire-structure	conductor	Cu, tinned
	insulation	PE 02Y, foamed
	shielding	Cu tinned | ~85% optical coverage| Polyester foil, alu-laminated (100% coverage)
	jacket	PVC Y

	Wire	Type	Wire-structure	Wire color	Ø - Jacket	S3900 ® 100m cable Order-No.
M12x1	8	Li02Y(St)CY 4x2xAWG23	AWG23	WH(OG) | OG; WH(GN) | GN WH(BN) | BN; WH(BU) | BU	8.6mm	8055779

S3800 ® | Bus cable_Industrial Ethernet | PUR

Shielded PUR-cable for safe and industrial-suited data transmission in automation- and fieldbus technology. The cable is CMX-verified or meets the Cat5e (electrical properties of EN 50288-2-1) requirements. Materials and a constructive setup allow for increased mechanical stresses (abrasion, bending, vibrations etc.) of the cable. A drag-chain application with up to 3 million bending cycles is possible and risk-free.

Features		■ flame-retardant | IEC 60332-1-2 ■ seawater-resistant ■ recyclable ■ LABS-free ■ RoHs-conform ■ good acids- and alkali resistance ■ good microbes- and hydrolysis strength ■ good ozone- and UV-resistance ■ high flexibility, drag-chain capable ≤ 3 million cycles ■ halogen-free ■ oil resistance | EN 60811-2-1
Temperature range	operating temp..	-40°C…+80°C
	installation temp..	-40°C…+80°C
	storage temp.	-40°C…+80°C
Bending radius	repeated	8x Ø-cable
	single	4x Ø-cable
Rated voltage		300V UL rating
Color outer-jacket		red | similar RAL 3020
Wire-structure	conductor	Cu, tinned
	insulation	PE 2Y, halogen-free
	stranding	Tight layer stranding for a flexible application
	shielding	Cu tinned, ~85% optical coverage
	jacket	inside: FRNC-compound | outside: PUR11Y

	Wire	Type	Wire-structure	Wire color	Ø - Jacket	S3800 ® 100m cable Order-No.
M12x1 | RJ45	4	2YH(ST)C11Y 2x2xAWG22	AWG22	OG | WH | BU | YE	6.5mm	8055782

PUR | Industrial Ethernet
Cable qualities

PVC | Bus cable_Industrial Ethernet | S3242®

Shielded PVC Ethernet-cable for safe and industrial-suited data transmission in automation- and fieldbus technology. Real-time requirements based on IEC 61158 are viable. The cable meets the UL-Style 2464 (80°/300V) and the Cat5e (electrical properties according to EN 50288-2-2) requirements. Materials and a constructive setup are suitable for average mechanical stresses (abrasion, bending, vibrations etc.).

Features		■ flame-retardant | IEC 60332-1-2
		■ seawater-resistant
		■ recyclable
		■ LABS-free
		■ RoHs-conform
		■ good acids- and alkali resistance
		■ good ozone- and UV-resistance
		■ high flexibility
		■ oil resistance
Temperature range		-40°C…+70°C
Bending radius	repeated	7 x Ø-cable
	single	5 x Ø-cable
Rated voltage		300 V UL rating
Color outer-jacket		green | similar RAL 6018
Wire-structure	conductor	Cu, bare soft
	insulation	PE 2Y, halogen-free | DIN EN 50290-2-23 (VDE 0819)
	shielding	Cu, tinned | ~80 % optical coverage| Polyester foil, alu-laminated (100% coverage)
	jacket	PVC

	Wire	Type	Wire-structure	Wire color	Ø - Jacket	S3242® 100m cable Order-No.
M8x1	4	Li2Y-(ST)CY 2x2x0.14mm²	7 x Ø0.16mm AWG26	BU | OG | WH/BU | WH/OG	4.7 mm	8055780

S3400® | Bus cable_Industrial Ethernet | PUR

Shielded PUR Ethernet-cable for safe and industrial-suited data transmission in automation- and fieldbus technology. Real-time requirements according to IEC 61158 are viable. The cable meets the UL-Style 20963 (80°/30V)- and the Cat5 (electrical properties according to EN 50288-2-2) requirements. Materials and a constructive setup for increased mechanical stresses (abrasion, bending, vibrations etc.) of the cable. Drag-chain operations/with torsion are possible. High tensile strength through incorporated Kevlar-strands.

Features		■ seawater-resistant
		■ recyclable
		■ LABS-free
		■ RoHs-conform
		■ good acids- and alkali resistance
		■ good microbes- and hydrolysis strength
		■ good ozone- and UV-resistance
		■ high flexibility, drag-chain capable
		■ halogen-free
		■ oil resistance
Temperature range		-40°C…+80°C
Bending radius	repeated	7,5 x Ø-cable
	single	4 x Ø-cable
Rated voltage		30 V UL rating
Color outer-jacket		green | similar RAL 6018
Wire-structure	conductor	Cu-ETP-A | DIN EN 13602
	insulation	PP | DIN EN 50290-2-25 (HD 624.5)
	stranding	Tight layer stranding for a flexible application
	shielding	Cu tinned | ~85 % optical coverage| Polyester foil, alu-laminated (100% coverage)
	jacket	PUR | F45052-F5100 (similar DIN VDE 0282)

	Wire	Type	Wire-structure	Wire color	Ø - Jacket	S3400® 100m cable Order-No.
M8x1 | RJ45	4	Li9YC(ST)11Y 4x1x0.15mm²	19 x Ø0.10mm AWG26	BU | OG | WH/BU | WH/OG	4.8 mm	8055896

PUR | Bus cable_PROFIBUS | S1800 ®

UL- and CSA-listed shielded PUR-cable for automation technology (control of sensors and actuators). Suited for common variants of PROFIBUS DP and PROFIBUS PA. Setup and materials used allow for applications under harsh ambient conditions (abrasion, bending, vibrations etc.). Drag-chain application is possible and trouble-free (>1 million bending cycles).

Features		■ flame-retardant | DIN EN 60332-2-2, IEC 60332-2-2, CSA FT-2, VDE 0482-332-2-2
		■ halogen-free | DIN EN 50267-2-1, IEC 60754-1, VDE 0482-267-2-1
		■ life cycle >20.000 h
		■ seawater-resistant
		■ recyclable
		■ LABS-free
		■ RoHs-conform
		■ good acids- and alkali resistance
		■ good microbes- and hydrolysis strength
		■ good ozone- and UV-resistance
		■ high flexibility, drag-chain capable >1 million cycles
		■ good oil resistance
		■ 100% shielding because of Polyester foil
Temperature range	operation	-25°C…+80°C
	installation	-50°C…+80°C
	drag-chain	-25°C…+60°C
Bending radius	repeated	10 x Ø-cable
	single	5 x Ø-cable
Rated voltage		300 V
Color outer-jacket		violet | similar RAL 4001
Wire-structure		VDE 0295 | EN/IEC 60228, Class5
	conductor	Cu-ETP1 | DIN EN 13602
	insulation	PE, foamed
	shielding foil	Al-PT, 100% optical coverage
	shielding braid	Cu-ETP1, tinned | DIN EN 13602
	jacket	PUR

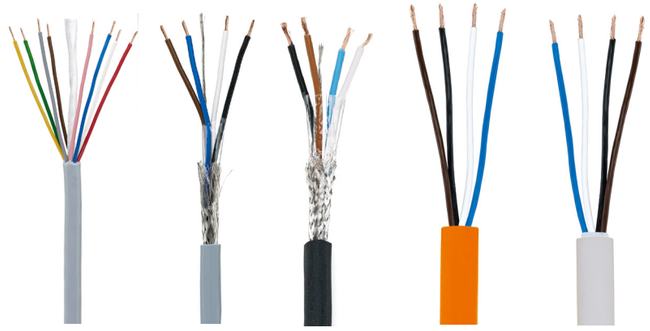
	Wire	Type	Wire-structure	Wire color	Ø - Jacket	S1800® 100m cable Order-No:
M12x1	2	Li02YS-(ST)CB11Y 1x(2x0.34mm²)	19x Ø0.15mm	BRD | GN	7.6mm	8043857

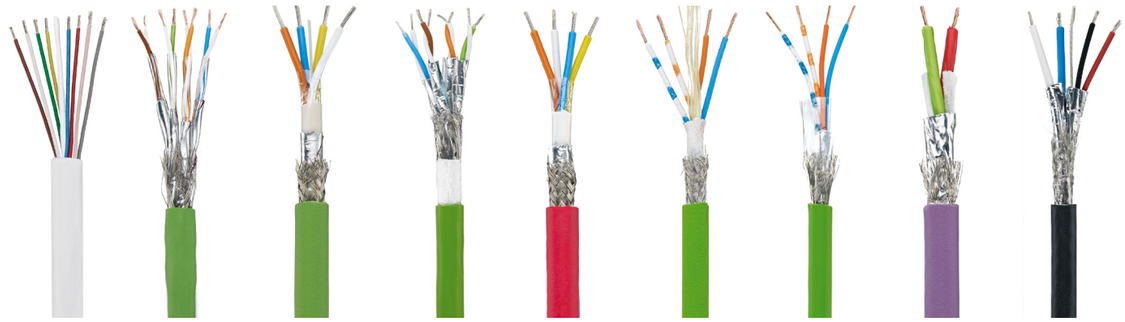
S2800® | Bus cable_CANopen/DeviceNet | PUR

UL- and CSA-listed shielded PUR-cable for automation technology. As a data transmitter, it supports CANopen as well as DeviceNet-based fieldbuses. High transmission rates enable transport of real-time data. Due to the constructive setup and the materials used, increased mechanical stresses (abrasion, bending, vibrations etc.) do not pose any restrictions to the application. Drag-chain application is possible (>1 million bending cycles) and trouble-free.

Features		■ flame-retardant | DIN EN 60332-1-2, IEC 60332-1-2, UL VW-1, CSA FT-1
		■ halogen-free | DIN EN 50267-2-1, IEC 60754-1, VDE 0482-267-2-1
		■ life cycle >20.000 h
		■ seawater-resistant
		■ recyclable
		■ LABS-free
		■ RoHs-conform
		■ good acids- and alkali resistance
		■ good microbes- and hydrolysis strength
		■ good ozone- and UV-resistance
		■ high flexibility, drag-chain capable >1 million cycles
		■ good oil resistance
Temperature range	operation	-25°C…+80°C
	installation	-50°C…+80°C
	drag-chain	-25°C…+60°C
Bending radius	repeated	10 x Ø-cable
	single	5 x Ø-cable
Rated voltage		≤ 300 V
Color outer-jacket		black | similar RAL 9005
Wire-structure	conductor	Cu-ETP1, tinned | DIN EN 13602
	insulation	Signal-pair PE02Y, foamed | Power-pair PE2Y
	stranding	Tight layer stranding for a flexible application
	jacket	PUR

	Wire	Type	Wire-structure	Wire color	Ø - Jacket	S2800® 100m cable Order-No:
M12x1	4	LiV02YS(St)-CB-11Y (2x0.25mm²)+(2x0.34mm²)	19x Ø0.13mm (0.25mm²) 19x Ø0.15mm (0.34mm²)	RD | BK | WH | BU	6.7mm	8047939





		PVC P00	PVC P01®	PUR S370® S370GY	PUR S7400 robotic	TPE S3930 F&B	PTFE S2430® HT	PUR | Cat7 S3500® Ind. Ethernet	PUR | Cat5e S2171® Profinet	PVC | Cat6A S3900® Profinet	PUR | Cat5e S3800® Sercos®	PVC | Cat5e S3242® EtherCAT	PUR | Cat5 S3400® EtherCAT	PUR S1800® PROFIBUS	PUR S2800® DeviceNet
Applications	Machinery and equipment manufacturing	★★★★	★★★★	★★★★	★★★★	★	★	★	★★	★	★	★	★	★★	★★
	Automotive industry	★★	★★	★★★★	★★★★	★★★★	★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★	★★★★
	Robotics	★	★	★★★★	★★★★	★★★★	★★	★★	★★	★★	★★	★	★★	★★	★★
	Food and beverage industry	★★★★	★★★★	★	★	★★★★	★★	★	★	★	★	★	★	★	★
	Packaging and filling systems	★★★★	★★★★	★	★	★★★★	★★	★	★	★	★	★	★	★	★
	Building installations	★★	★★	★★	★★	★★	★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
	Wind power plants	★★	★★	★★★★	★★★★	★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★	★★★★	★★★★	★★★★
Resistance	flame-retardant	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★	★★★★	★★★★
	oil resistance	★★	★★	★★★★	★★★★	★★	★★★★	★★★★	★★★★	★★	★★★★	★★	★★★★	★★	★★
	weldfield immunity	★	★	★★★★	★★★★	★	★★	★	★	★	★	★	★	★	★
	drag-chain capability	★	★	★★★★	★★★★	★★	★★	★	★★	★	★★★★	★	★★★★	★★	★★
	acids- and alkali resistance	★	★	★	★	★★	★★★★	★	★	★	★	★	★	★	★
	seawater-resistant	★★	★★	★★	★★	★★★★	★★★★	★★	★★	★★	★★	★★	★★	★★	★★
	ozone- and UV-resistance	★	★	★★★★	★★★★	★★	★★★★	★★	★★	★★	★★	★	★★	★★	★★★★
	hydrolysis strength	★★	★★	★★	★★	★★★★	★★★★	★★	★★	★★	★★	★★	★★	★★	★★
	microbes strength	★★	★★	★★	★★	★★★★	★★★★	★★	★★	★★	★★	★★	★★	★★	★★
Features	Bending strength (repeated)	10xØ	10xØ	10xØ	10xØ	10xØ	10xØ	10xØ	7,5xØ	8xØ	8xØ	7xØ	7.5xØ	10xØ	10xØ
	Bending strength (single)	5xØ	5xØ	5xØ	5xØ	5xØ	5xØ	5xØ	5xØ	4xØ	4xØ	5xØ	4xØ	5xØ	5xØ
	Temperature range (repeated)	0°C...+80°C	0°C...+80°C	-30°C...+90°C	-30°C...+90°C	-25°C...+105°C	k. A.	-40°C...+80°C	-40°C...+70°C	-40°C...+80°C	-40°C...+80°C	-40°C...+70°C	-40°C...+80°C	-25°C...+80°C	-25°C...+80°C
	Temperature range (single)	-25°C...+80°C	-25°C...+80°C	-40°C...+90°C	-40°C...+90°C	-40°C...+105°C	-190°C...+260°C							-50°C...+80°C	-50°C...+80°C
	Shielding	optional	optional	optional	no	optional	optional	yes	yes	yes	yes	yes	yes	yes	yes
Approvals	ROHS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UL and/or CSA		✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓
	GOST	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ECOLAB	✓				✓						✓			
	ESCHA Product line	AL BL SV FB NM Ventil	AL BL SV NM Ventil	AL BL SV NM Ventil	AL	FB	HT	IE	IE	IE	IE	IE	IE	PB	CD
	Catalogue page	204 | 205	204 | 205	202 | 203	201	206	207	208	209	210	211	212	213	214	215

All data in this matrix serve basic orientation. Our specialists will readily advise you on your specific application.

The cables listed here only describe the ESCHA Standard product range. Ask us if your requested cable quality is not included.

Representatives abroad

AUMECON S.A.
Acassuso 4768
1605 Munro/Buenos Aires
Argentina
Phone: +54 11 47561251
Fax: +54 11 47626331
aumeco@aumecon.com.ar
www.aumecon.com.ar

Micromax Sensors
and Automation Pty Ltd
Unit 2, 106 Beaconsfield Street
Silverwater NSW 2128
Australia
Phone: +61 2 8748 2800
Fax: +61 2 9648 3245
info@micromaxsa.com.au
www.micromaxsa.com.au

ESCHA Bauelemente GmbH
Office Vienna
Gumpoldskirchner Str. 14 /8
2340 Mödling
Austria
Phone: +43 664 3072340
Fax: +49 2353 708-89487
info.austria@escha.de
www.escha.de

ESCHA Automation Connectivity
(Shanghai) Co., Ltd.
2060 Duhui Road, Building F,
2nd Floor, Minhang District,
201108 Shanghai
P. R. China
Phone: +86 21 52968180
Fax: +86 21 52968190
info.china@escha.net

Hans Følsgaard A/S
Theilgaards Torv 1
4600 Køge
Denmark
Phone: +45 43 208600
Fax: +45 43 968855
hf@hf.net
www.hf.net

SARLIN Oy Ab
Kaivokselantie 3-5
01610 Vantaa
Finland
Phone: +358 10550 4000
Fax: +358 10550 4201
info@sarlin.com
www.sarlin.com

ESCHA SAS
60 Avenue Charles de Gaulle–CS 60016
92573 Neuilly Sur Seine Cédex
France
Phone: +33 1 73 02 89 45
Fax: +33 1 73 02 89 46
info.france@escha.net
www.escha.net

R.E.D. srl
Via Mappano 30
10071 Borgaro T.se TO
Italy
Phone: +39 011 45 01 373
Fax: +39 011 45 100 69
g.tonello@redto.it
www.redto.it

HF DANYKO AS
Bark Silas Vei 8
4876 Grimstad
Norway
Phone: +47 37 090 940
Fax: +47 37 090 941
danyko@hf.net
www.danyko.no

ENMATEK spółka z o.o.
ul. Wrocławska 31
30-011 Kraków
Poland
Phone: +48 608 69 07 05
sales@enmatek.eu
www.enmatek.eu

BRESIMAR Automacao, S.A.
Quinta do Simao
EN109 - Esgueira
Apartado 3080
3801-101 Aveiro
Portugal
Phone: +351 234 303 320
Fax: +351 234 303 328/9
bresimar@bresimar.pt
www.bresimar.pt

MARPEX s.r.o.
Sportovcov 672
01841 Dubnica nad Váhom
Slovakia
Phone: +421 42 4426986-87
Fax: +421 42 44400 10-11
marpex@marpex.sk
www.marpex.sk

RET Automation Controls
PO 8378
Edenglen, 1613
South Africa
Phone: +27 11 4532468
Fax: +27 11 4532406
info@retauto.co.za
www.retauto.co.za

ELION S.A.
Farell, 5
08014 Barcelona
Spain
Phone: +34 9 32982000
Fax: +34 9 34311800
elion@elion.es
www.elion.es

Tufvasson Tesch AB
Märstavägen 20
193 40 Sigtuna
Sweden
Phone: +46 8-594 809 00
reception@tufvassons.se
www.tufvassons.se

Dietrich & Blum AG
Hertistr. 31
8304 Wallisellen
Switzerland
Phone: +41 848 300700
Fax: +41 848 300701
dbnet@dietrichundblum.ch
www.dietrichundblum.ch

Gökhan Elektrik
Malzemeleri Sanayi ve Ticaret LTD SIT.
Perpa Elektrokent is Merkezi A Blok K.8
No.692-694
34385 Okmeydani / Istanbul
Turkey
Phone: +90 2122213236
Fax: +90 2122213240
gokhan@gokhanelektrik.com.tr
www.gokhanelektrik.com.tr

Representatives | Germany

Endres + Seidl GmbH
Marie-Curie-Str. 2
35510 Butzbach
Phone: +49 6033 960901
Fax: +49 6033 960919
info@endres-seidl.de
www.endres-seidl.de

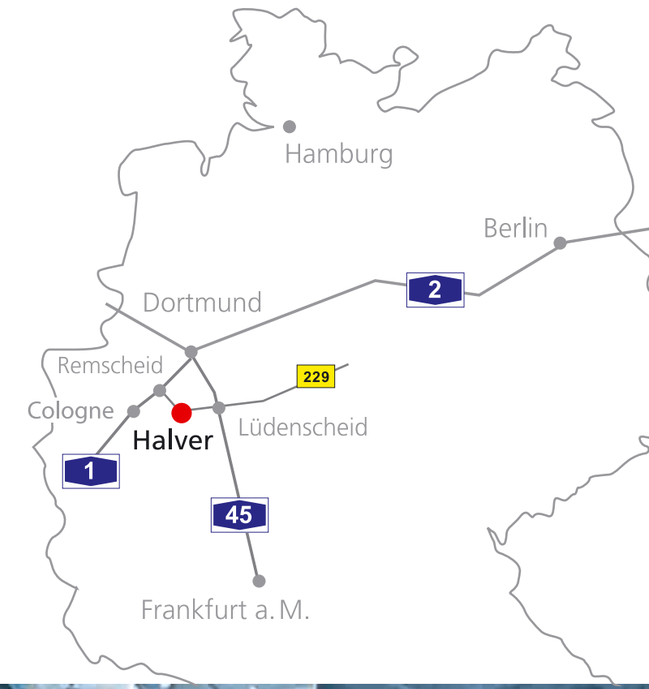
Fritsche
Industrievertretungen GmbH
Großhorst 15
30916 Isernhagen
Phone: +49 5136 8893-0
Fax: +49 5136 8893-20
info@fritschegmbh.de
www.fritschegmbh.de

Hopf
Vertriebsgesellschaft mbH
Katharina-Paulus-Str. 8
65824 Schwalbach
Phone: +49 6196 4930
Fax: +49 6196 493288
info@hopf-onProduct line.de
www.hopf-onProduct line.de

Peres GmbH
Köhlstr. 14
50827 Köln
Phone: +49 221 956403-0
Fax: +49 221 594048
info@peres.de
www.peres.de

Werner Sauter GmbH
Eichwiesenring 4b
70567 Stuttgart
Phone: +49 711 132630
Fax: +49 711 7156541
info@werner-sauter.de

Hermann Seidel GmbH
Rahlstedter Str. 16
22149 Hamburg
Phone: +49 40 675085-0
Fax: +49 40 675085-85
info@seidel-gmbh.de
www.seidel-gmbh.de



Headquarters

ESCHA Bauelemente GmbH
Elberfelder Str. 32
58553 Halver | Germany
Phone: +49 2353 708-800
Fax: +49 2353 708-8410
www.escha.net

1000046 | 02.2014