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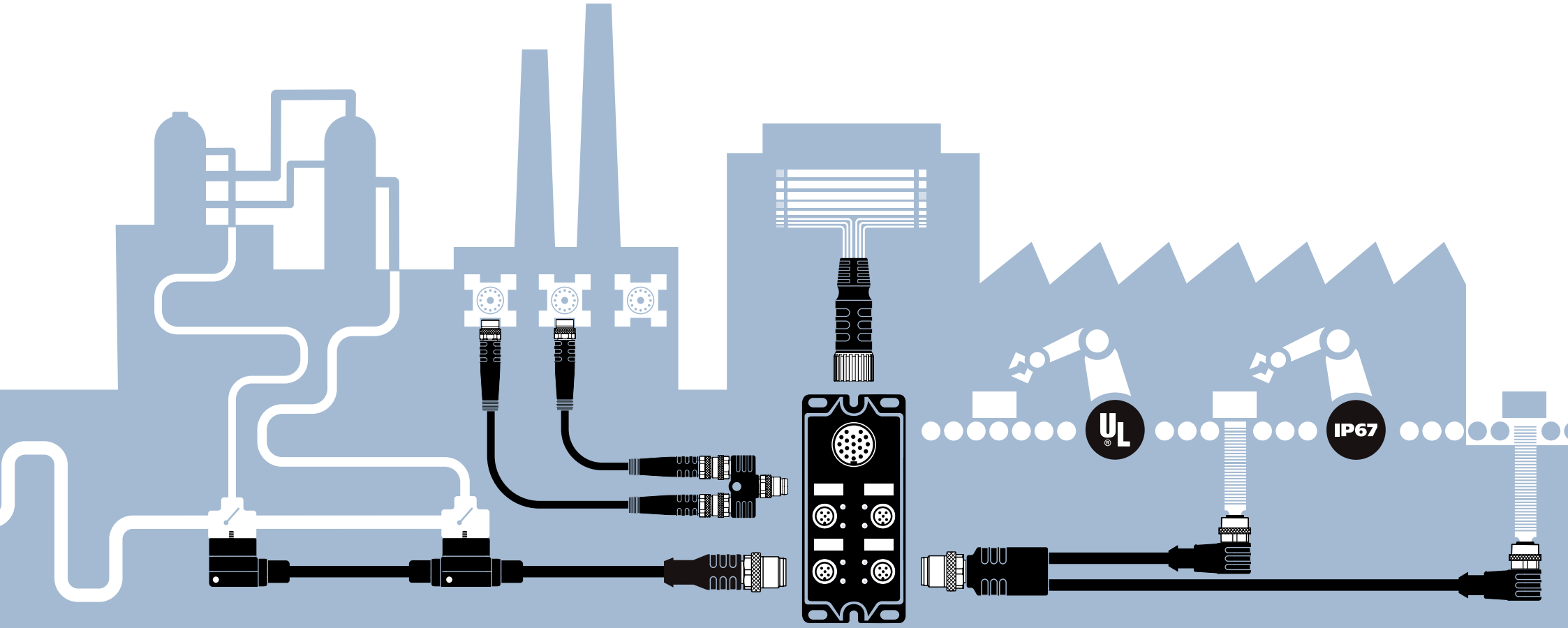

SENSOR/ACTUATOR Connectors for the automation industry

escha.net

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M8-connector

Cable qualities ↓		Available polarities ↘	female				male		female		male		female				male	
			screwable										snap					
			unshielded						shielded				unshielded					
				LED		LED								with locking mechanism		with locking mechanism		
			↑	↑	↱	↱	↑	↱	↑	↱	↑	↱	↑	↑	↱	↱	↑	↱
	P00 PVC/PVC	affordable standard cable	3, 4, 5, 8	3	3, 4, 5, 8	3, 4	3, 4, 5, 8	3, 4, 5, 8	3, 4, 5, 8	3, 4, 5, 8	3, 4, 5, 8	3, 4, 5, 8	3, 4, 5	3, 4	3, 4, 5	3, 4	3, 4, 5	3, 4, 5
	P01 PVC/PVC	affordable standard cable, UL	3, 4	3	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4
	P01BK PVC/PVC	affordable standard cable, UL	3, 4	3	3, 4	3, 4	3, 4	3, 4					3, 4	3, 4	3, 4	3, 4	3, 4	3, 4
	S370 PUR/PP	for torsion & drag chain, weldfield immune, UL	3, 4, 5, 8	3	3, 4, 5, 8	3, 4	3, 4, 5, 8	3, 4, 5, 8	3, 4, 5, 8	3, 4, 5, 8	3, 4, 5, 8	3, 4, 5, 8	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5
	S370GY PUR/PP	for torsion & drag chain, weldfield immune, UL	3, 4	3	3, 4	3, 4	3, 4	3, 4	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4
	S7400 PUR/PP robotic	for strong mechanical stress	3, 4	3	3, 4	3, 4	3, 4	3, 4					3, 4	3, 4	3, 4	3, 4	3, 4	3, 4
	S400 PUR/PP easystrip	manual stripping up to 1.5m	3, 4, 5		3, 4, 5	3, 4	3, 4, 5	3, 4, 5					3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5

M12-connector

female						male				female		male			
screwable															
unshielded										shielded					
	grip body with thread	LED		grip body with thread	LED		grip body with thread		grip body with thread					↙ Available polarities	Cable qualities ↓
↑	↑	↑	↱	↱	↱	↑	↑	↱	↱	↑	↱	↑	↱		
3, 4 4+PE 5, 8, 12	4	3, 4	3, 4 4+PE 5, 8, 12	4	3, 4, 5	3, 4 4+PE 5, 8, 12	4	3, 4 4+PE 5, 8, 12	4	3, 4, 5 8, 12	3, 4, 5 8, 12	3, 4, 5 8, 12	3, 4, 5 8, 12	affordable standard cable	P00 PVC/PVC
3, 4 4+PE 5, 8, 12	4	3, 4	3, 4 4+PE 5, 8, 12	4	3, 4, 5	3, 4 4+PE 5, 8, 12	4	3, 4 4+PE 5, 8, 12	4	3, 4, 5 8, 12	3, 4, 5 8, 12	3, 4, 5 8, 12	3, 4, 5 8, 12	affordable standard cable, UL	P01 PVC/PVC
3, 4 4+PE	4	3, 4	3, 4 4+PE	4	3, 4, 5	3, 4 4+PE	4	3, 4 4+PE	4					affordable standard cable, UL	P01BK PVC/PVC
3, 4 4+PE 5, 8, 12	4	3, 4	3, 4 4+PE 5, 8, 12	4	3, 4, 5	3, 4 4+PE 5, 8, 12	4	3, 4 4+PE 5, 8, 12	4	3, 4, 5 8, 12	3, 4, 5 8, 12	3, 4, 5 8, 12	3, 4, 5 8, 12	for torsion & drag chain, weldfield immune, UL	S370 PUR/PP
3, 4 4+PE 5, 8, 12	4	3, 4	3, 4 4+PE 5, 8, 12	4	3, 4, 5	3, 4 4+PE 5, 8, 12	4	3, 4 4+PE 5, 8, 12	4	3, 4, 5 8, 12	3, 4, 5 8, 12	3, 4, 5 8, 12	3, 4, 5 8, 12	for torsion & drag chain, weldfield immune, UL	S370GY PUR/PP
3, 4 4+PE 5	4	3, 4	3, 4 4+PE 5	4	3, 4, 5	3, 4 4+PE 5	4	3, 4 4+PE 5	4					for strong mechanical stress	S7400 PUR/PP robotic
3, 4 4+PE 5, 8, 12	4	3, 4	3, 4 4+PE 5, 8, 12	4	3, 4, 5	3, 4 4+PE 5, 8, 12	4	3, 4 4+PE 5, 8, 12	4					manual stripping up to 1.5m	S400 PUR/PP easystrip

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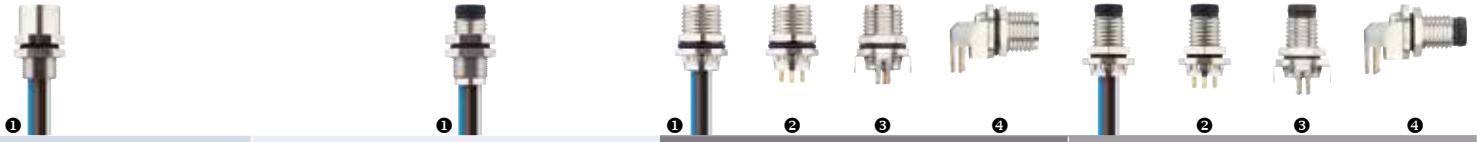
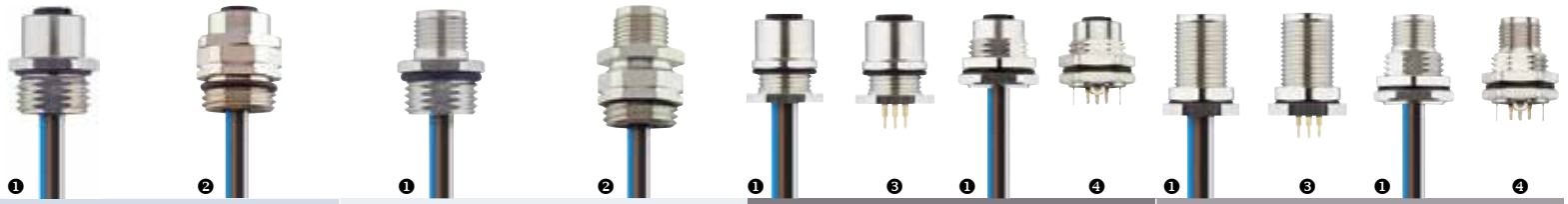
M8 Receptacle



Connecting type ↓ / Available polarities ↘		Mounting thread →	female M8x0,5		male M8x0,5		female M10x1		male M8x1	
		Mounting type →	Front wall mounting				Back wall mounting			
		Housing material →	Nickel-plated	Stainless steel	Nickel-plated	Stainless steel	Nickel-plated	Stainless steel	Nickel-plated	Stainless steel
❶ Wire connection	straight		3, 4, 5, 8	3, 4, 5	3, 4, 5, 8	3, 4, 5	3, 4, 5, 8	3, 4, 5	3, 4, 5, 8	3, 4, 5
❷ Print connection	straight						3, 4, 5, 8	3, 4, 5	3, 4, 5, 8	3, 4, 5
❸ Print contact shielded	straight						3, 4, 5, 8		3, 4, 5, 8	
❹ Print contact shielded	angled						3, 4, 5		3, 4, 5	

M12 Receptacle



Connecting type | Available polarities ↓		Mounting thread ↘	female		male		female		male	
		Mounting type →	Front wall mounting				Back wall mounting			
		Housing material →	Nickel-plated	Stainless steel	Nickel-plated	Stainless steel	Nickel-plated	Stainless steel	Nickel-plated	Stainless steel
❶ Wire connection	straight 3, 4, 4+PE, 5, 8, 12-poles A-coded		M12x1 M16x1.5 PG9	M16x1.5 PG9	M12x1 M16x1.5 PG9	M16x1.5 PG9	M12x1 M16x1.5 PG9	M16x1.5	M12x1 M16x1.5 PG9	M16x1.5
❷ Wire connection coding positio-nable	straight 3, 4, 4+PE, 5, 8, 12-poles A-coded		M16x1.5 PG9	M16x1.5	M16x1.5 PG9	M16x1.5				
❸ Print connection	straight 3, 4, 4+PE, 5, 8, 12-poles A-coded						M12x1 M16x1.5 PG9	M16x1.5	M12x1 M16x1.5 PG9	M16x1.5
❹ Print connection shielded	straight 3, 4, 4+PE, 5, 8, 12-poles A-coded						M16x1.5 PG9		M16x1.5 PG9	

Valve connector

All versions are available in cable qualities PVC (P00), PVC with UL, (P01) and PUR (S370).

U[max] | I[max] →	24VAC/DC | 4A								230VAC/DC | 4A								
Housing style →	A		AA		AAG		DA	B/BI		C/CI		A		AA	AAG	B/BI		C/CI
Contact assignment ↓ protection circuit ↘																		
2+PE								without	Transil-diode			without*		without	without	without*	Varistor	without*
2+PE | PE-jumpered	without	Transil-diode	without	Transil-diode	without	Transil-diode	Transildiode			without	Z-Diode	without	Varistor	Varistor	Varistor			
3+PE	Transildiode											without						
3+PE | wire-connection	without		without		without													

* optionally without LED

M12 Field-wireable

Housing style →	female							male						
	shielded	unshielded						shielded	unshielded					
↓Connecting type				Stainless steel							Stainless steel			
Available polarities ↘	↑	↑	↱	↑	↱	↑	↱	↑	↑	↱	↑	↱	↑	↱
Screw-/Clamp	4, 5, 8	4, 5, 8	4, 5, 8	5	5			4, 5, 8	4, 5, 8	4, 5, 8	5	5		
Soldering contact	12	12	12					12	12	12				
IDC-connection						3, 4	4						3, 4	4

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Y-Splitter with cable outlet

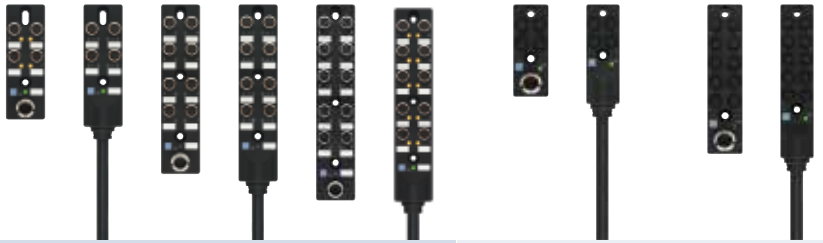
		OUT 1 + 2 →	M8				M12				Valve connector			Pigtails	M12 shielded	
			Female			Male	Female			Male	A	B | BI	C | CI		Male	Female
		Available polarities ↘			LED				LED							
IN 0 ↓	Cable qualities ↓		↑	↱	↱	↑	↑	↱	↱	↑	↑	↑	↑		↑	↑
	M8 female 4-poles	PVC | P00				3				3				4		
		PUR | S370				3				3				4		
		PUR | S7400				3				3				4		
	M8 male 4-poles	PVC | P00	3, 4	3, 4	3, 4		3, 4	3, 4	3, 4					4		
		PUR | S370	3, 4	3, 4	3, 4		3, 4	3, 4	3, 4					4		
		PUR | S7400	3, 4	3, 4	3, 4		3, 4	3, 4	3, 4					4		
	M12 female 4-poles	PVC | P00				3				3				4		
		PUR | S370				3				3				4		
		PUR | S7400				3				3				4		
	M12 male 4-poles	PVC | P00	3, 4	3, 4	3, 4		3, 4	3, 4	3, 4					4		
		PUR | S370	3, 4	3, 4	3, 4		3, 4	3, 4	3, 4					4		
		PUR | S7400	3, 4	3, 4	3, 4		3, 4	3, 4	3, 4					4		
	M12 male 5-poles	PVC | P00									2+PE PE jumpered	2+PE	2+PE PE jumpered			
		PUR | S370									2+PE PE jumpered	2+PE	2+PE PE jumpered			
	M12 female 5-poles	PUR | S370													5	5

Accessories

Splitter Y/T

Housing Style →	S89			MB			S55			Y			Y shielded			T			T shielded		
M: male / F:female + Polarity ↘	IN 0	OUT 1	OUT 2	IN 0	OUT 1	OUT 2	IN 0	OUT 1	OUT 2	IN 0	OUT 1	OUT 2	IN 0	OUT 1	OUT 2	IN 0	OUT 1	OUT 2	IN 0	OUT 1	OUT 2
M12	M4	F3	F3	M5	F5	F5	M5	F5	F5				M5	F5	F5	F4	F4	M4	F4	F4	M4
	F4	M3	M3	F5	M5	F5	M4	F3	F3				F5	M5	F5	F4	M4	M4	F5	F5	M5
	M5	F5	F5	M5	M5	F5							F5	M5	M5	F5	F5	M5	F5	M5	M5
				M8	F8	F8							M5	M5	F5	F5	M5	M5	F8	F8	M8
													M8	F8	F8	F8	F8	M8			
M12 | LED	M4	F3	F3	M5	F5	F5							M5	F5	F5						
M12 | AND				M5	F5	F5															
M12 > 2x M8	M4	F3	F3							M4	F3	F3									
M8 > 2x Ø8 snap										M4	F3	F3									
M8				M3	F3	F3															
				M4	F3	F3															
M8 | LED				M4	F3	F3															
M8 | AND				M3	F3	F3															

I/O-Modules



Design inputs →	M8						Ø8mm snap				M12								
Number of ports	4		8		10		4		10		4			6			8		
Poles count of ports	3	3, 4	3	3, 4	3		3, 4	3, 4	3		3+PE 4+PE			3+PE 4+PE			3+PE 4+PE		
Exit Version →	Top	Cable	Top	Cable	Top	Cable	Top	Cable	Top	Cable	Top	Front	Cable	Top	Front	Cable	Top	Front	Cable
Cable qualities → Connectors + Polarity	M12 8	PUR S370	M12 12	PUR S370	M12 12	PUR S370	M12 8 | 12	PUR S370	M12 12	PUR/S370 PVC/P01	M23 12 | 19	M23 12 | 19	PUR S370	M23 12 | 19	M23 12 | 19	PUR S370	M23 12 | 19	M23 12 | 19	PUR S370

ROUND CONNECTOR

- Single- | double-ended cordsets

M12 | A-coded
- Polarity: 3, 4, 4+PE, 5, 8, 12
- LED-version
- 360°-shielded: 3, 4, 5, 8, 12
- Grip body with thread for for protective hose
- Coupling nut: Nickel-plated, Plastic (4 Colors)

M8
- Polarity: 3, 4, 5, 8
- LED-Version, 360°-shielded

Ø8mm snap
- Polarity: 3, 4, 5
- With locking mechanism

- 7 cable qualities PUR/PVC

- Good media- and temperature resistance

- IP65 | IP67 | IP68

- UL-approved

- Protective caps, protective plugs, marking accessories

RECEPTACLES

- Back- | Front wall mounting

- Wire contact | Print contacts

- Housing: Nickel-plated

M12 | A-coded
- Polarity: 3, 4, 4+PE, 5, 8, 12
- Coding location positionable (Front wall installation)
- 360°-shielded (Print)
- Screw-in thread: M12x1 | M16x1.5 | PG9

M8
- Polarity: 3, 4, 5, 8
- Straight+ angled (Print)
- 360°-shielded (Print)
- Screw-in thread: M8x0.5 | M8x1

- Good media- and temperature resistance

- IP65 | IP67 | IP68

- Protective caps, protective plugs, separate counter nuts

Y- | T-SPLITTER

- Housing style: S89 | MB | S55 | T-Splitter | Y-Splitter | Y-Splitter with cable outlet LED-Versions

M12 | A-coded
- Polarity: 3, 4, 5, 8, 12
- LED-Versions
- AND-Circuit logic
- 360°-shielded

M8
- Polarity: 3, 4
- LED-Versions

- 3 Cable qualities PUR/PVC

- Good media- and temperature resistance

- IP65 | IP67 | IP68

- UL-approved

- Protective caps, protective plugs, marking accessories, assembly and fastening accessories

ADAPTER

M12 > M12
- A-coded | 5-poles female > female male > male

M8 > M12
- M8 female > M12 male 3-, 4-poles

M8 > M8
- 3-pol. female > 4-pol. male 4-pol. female > 3-pol. male

M12 > Valve connector
- A-coded, 5-poles > housing style A
- 24V/4A | 2+PE jumpered without protection circuit
- 24V/4A | 2+PE jumpered with suppressor diode
- 24V/4A | 3+PE Litze without protection circuit
- 60V/4A | 2+PE jumpered without protection circuit

- Good media- and temperature resistance

- IP65 | IP67 | IP68

I/O MODULE

M12 | A-Coded
- Ports/poles count: 4, 6, 8 / 3+PE, 4+PE-poles
- Exit/poles count: fixed cable connection (PUR), Top, Front: M23 /12-, 19-poles

M8
- Ports/poles count: 4, 8, 10 / 3-, 4-poles
- Exit/poles count: fixed cable connection (PUR), Top: M12 / 8-, 12-poles
- optional passive circuit logic 4xAND, 8xAND, 2x4 AND

Ø8mm snap
- Ports/poles count: 4, 10 / 3-, 4-poles
- Exit/poles count: Top, M12: 8-, 12-poles | Fixed cable connections two cable qualities

- Good media- and temperature resistance

- IP65 | IP67 | IP68

- Protective caps, protective plugs, marking accessories

VALVE CONNECTOR

- Single- | double-ended cordsets

- 24V/4A | 230V/4A with/without protection circuit
- Circuit: 2+PE | 2+PE jumpered | 3+PE | 3+PE wire-connection
- LED-Version

Housing style A
- Angled | straight | straight with grip body with thread for protective hose | double-valve connector

Housing style B/BI
- Angled

Housing style C/CI
- Angled

- 3 cable qualities PUR/PVC

- good media- and temperature resistance

- IP65 | IP67 | IP68

- Protective hoses, Color rings, Marking accessories

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