

Mating connectors and cable sets for valves and sensors in hydraulics

RE 08006

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Replaces: 10.12










Features

- ▶ Mating connectors and cable sets for electrical connection of:
 - Valve solenoids
 - Valves with integrated electronics
 - Position and pressure sensors
- ▶ Various designs and standards
- ▶ Plastic and metal versions

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Connector switching amplifier with pulse width modulation (PWM) for on/off valve control Type VT-SSBA1	Switching amplifier for fast switching, energy saving and coil temperature reduction:		see data sheet 30362
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Notice:

Plug-in connectors must not be disconnected and connected under load

Mating connectors

For valves with "K4" connector, 2-pole + PE, design A (large cubic connector)

Ordering code

Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I</i> _{max}	Color	Line fitting	Material number	Circuit diagram
Without circuitry, standard						
Z4	12 ... 240 V	16 A ⁴⁾	gray	M16 x 1.5	R901017010	
	12 ... 240 V	16 A ⁴⁾	black	M16 x 1.5	R901017011	
Z45	12 ... 240 V	16 A ⁴⁾	brown	NPT 1/2"	R900004823	
	12 ... 240 V	16 A ⁴⁾	black	NPT 1/2"	R900011039	
With indicator light						
Z5L	12 ... 240 V	4 A ⁴⁾	black	M16 x 1.5	R901017022	
Z55L	12 ... 240 V	4 A ⁴⁾	black	NPT 1/2"	R900057453	
With indicator light and Zener diode suppression circuit						
Z5L1	24 V ± 10% ¹⁾	4 A ⁴⁾	black	M16 x 1.5	R901017026	
With indicator light and protective diode						
Z5L2	24 V ± 10% ²⁾ DC only	3 A ⁴⁾	black	M16 x 1.5	R901017027	
With rectifier						
RZ5	80...240 V ³⁾	1.5 A ⁴⁾	black	M16 x 1.5	R901017025	
RZ55	80...240 V ³⁾	1.5 A ⁴⁾	black	NPT 1/2"	R900842566	
With indicator light and rectifier						
RZ5L	80...240 V ³⁾	1.5 A ⁴⁾	black	M16 x 1.5	R901017029	
RZ55L	80...240 V ³⁾	1.5 A ⁴⁾	black	NPT 1/2"	R900057455	

1) Switch-off voltage peak limitation to 55 V

2) Switch-off voltage peak limitation to 1 V

3) Switch-off voltage peak limitation to 2 V

4) Please observe temperature range and/or derating (see technical data)

Technical data

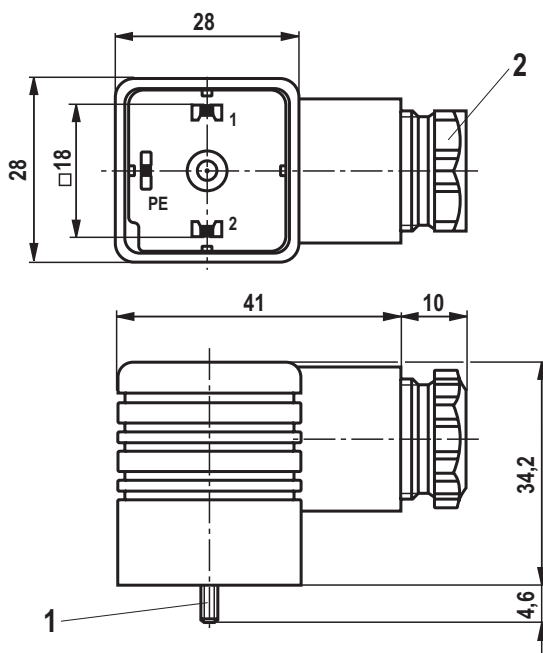
Mating connector				
Design			A	
Ambient temperature	Standard (Z4, Z45)	°C	-30 ... +90	
	with indicator light/rectifier (Z5L, Z55L, Z5L1, Z5L2, RZ5, RZ55, RZ5L, Z55L)	°C	-20 ... +60	
Protection class according to EN 60529	IP 65 with mating connector mounted and fitted			
Indicator light (Z5L, Z55L, Z5L1, Z5L2, RZ5L, Z55L)	LED yellow			
Number of poles	2 + PE			
Terminal area for lines with external diameter	mm	5 ... 10		
Maximum wire cross-section	mm ²	1.5 ¹⁾		
Type of connection	Screw connection			
Standard	EN 175301-803			
Certification/conformity	Z4	VDE, SEV, RoHS		
	Z45	VDE, SEV, UL, CSA, RoHS		
Derating	Z4, Z45	16 A	°C	max. 40 °C
		9.5 A	°C	max. 60 °C
	Z5L, Z55L, Z5L1, Z5L2	-		
	RZ5, RZ55,	1.5 A	°C	max. 25 °C
	RZ5L, Z55L	1 A	°C	max. 60 °C

¹⁾ 2.5 mm² with special wire end ferrule clamp (e.g. Knipex 975314 or Weidmüller PZ 6/5)

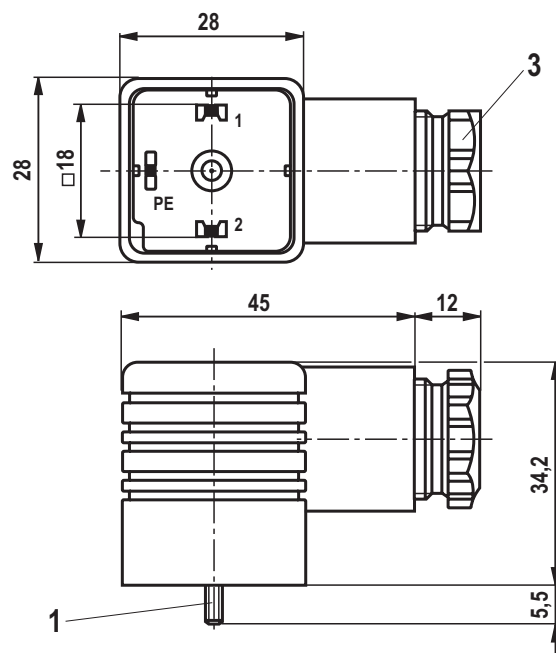
Unit dimensions

(dimensions in mm)

Z4



Z45

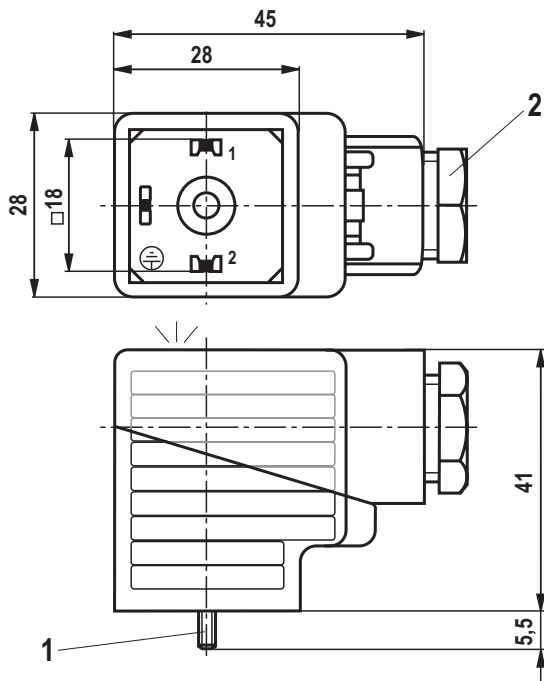


- 1 M3 mounting screw, tightening torque $M_A = 0.5 \text{ Nm}$
- 2 M16 x 1.5 line fitting, tightening torque $M_A = 1.5 \dots 2.5 \text{ Nm}$ (4.5 ... 10 mm)
- 3 NPT 1/2" line fitting, tightening torque $M_A = 2.5 \dots 3.75 \text{ Nm}$ (4 ... 11 mm)

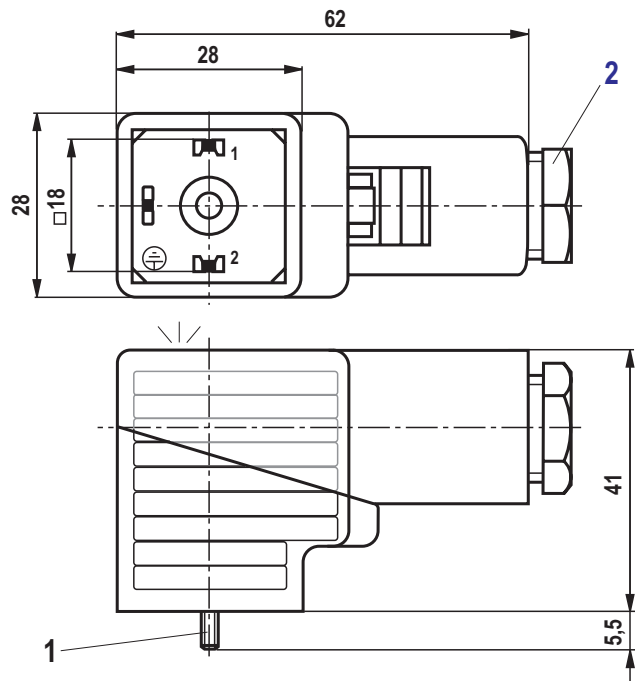
Unit dimensions

(dimensions in mm)

Z5L, Z5L1, Z5L2, RZ5, RZ5L



Z55L, RZ55L, RZ55



- 1** M3 mounting screw, tightening torque $M_A = 0.5 \text{ Nm}$
- 2** M16 x 1.5 line fitting, tightening torque $M_A = 1.5 \dots 2.5 \text{ Nm}$ (5 ... 10 mm)
NPT 1/2" line fitting, tightening torque $M_A = 2.5 \dots 3.75 \text{ Nm}$ (4.5 ... 10 mm)
(see table on page 6)

Cable sets

For valves with "K4" connector, 2-pole + PE, design A (large cubic connector)

Ordering code

Short designation	Voltage (V) DC / AC U	Current (A) I_{max}	Color	Material number for cable length			Circuit diagram
				3 m	5 m	10 m	
Without circuitry, standard							
Z4	12 ... 240 V	10 A	black	R900032020	R900032014	R900217134	
With indicator light							
Z4L	24 V	4 A	black	R900032050	R900032018	R900217135	
	90 ... 130 V	1 A	black	R900032023	R900032012	R900217136	
	230 V	0.5 A	black	R900032024	R900032010	R900217137	
With indicator light and Zener diode suppression circuit							
Z4L1	24 V ¹⁾	4 A	black	R900032021	R900032015	R900217138	

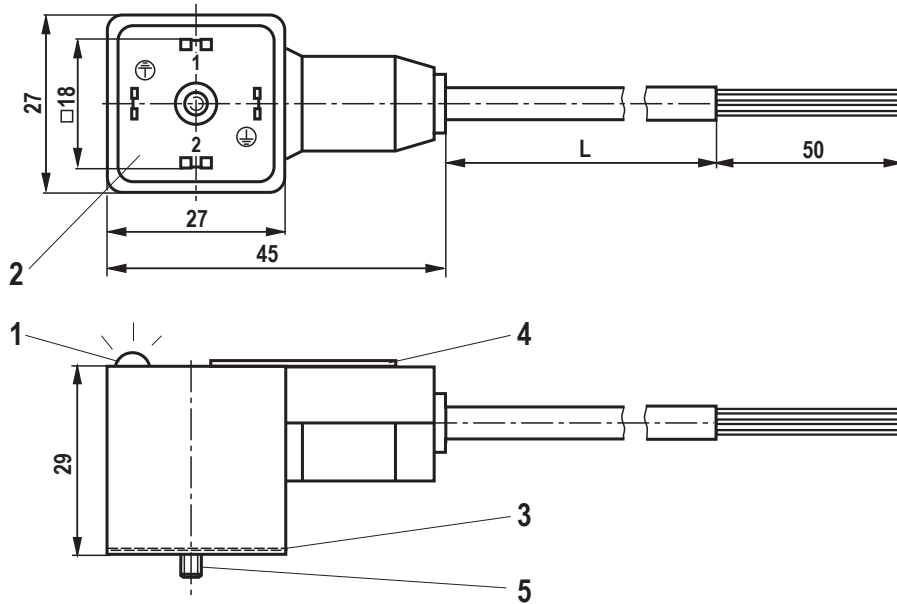
¹⁾ Switch-off voltage peak limitation to 55 V

Technical data

Mating connector	
Design	A
Ambient temperature	Fixed line installation °C -20 ... +80
	Flexible line °C -5 ... +70
Protection class according to EN 60529	IP 67 with mating connector mounted and fitted
Indicator light	Z4L... LED yellow
Number of poles	2 + PE
Standard	EN 175301-803
Certification/conformity	RoHS
Derating	-
Connection line	
Type	Oilflex 150 PVC, gray
Wire cross-section	mm ² 3 x 1.0
Core marking	PE Green/yellow
	other wires Black with numbers
Line diameter	mm Approx. 7
Bending radius	Fixed line installation Min. 4 x line diameter
	Flexible line Min. 12.5 x line diameter

Unit dimensions

(dimensions in mm)



- 1 LED
- 2 Contacting 0 + 180° rotatable
- 3 Flat seal (not detachable)
- 4 Name plate
- 5 M3 mounting screw (not detachable), tightening torque $M_A = 0.5 \text{ Nm}$
- L Cable length 3, 5 or 10 m (see "Ordering code")

Cable sets

For **ATEX** valves with "K4" connector, 2-pole + PE, design A (large cubic connector)

Ordering code

Short designation	Voltage DC / AC <i>U</i>	Current <i>I</i> _{max}	Color	Material number for cable length			Circuit diagram pole pattern
				3 m	5 m	12 m	
Without circuitry, standard							
DS2513...ATEX	0 ... 230 V	4 A	black	R901200418	R901200460	R901200582	

Technical data

Mating connector			
Design	A		
Ambient temperature	°C -30 ... +90		
Protection class according to EN 60529	IP 65 with mating connector mounted and fitted		
Number of poles	2 + PE		
Standard	DIN EN 175301-803		
Certification/conformity	ATEX cat. 3 GD, EN 60079-0, EN 60079-15, EN 60079-31		
Derating	-		
Connection line			
Type	LiF9YH-11YH, PUR		
Wire cross-section	mm ² 3 x 0.75		
Shielding braid overlap	% Approx. 85		
Core marking	PE	Color	Green-yellow
	others	Color	Brown, blue
Line diameter	mm 5.5 ... 6.5		
Bending radius	Flexible	Min. 10 x line diameter	

Notice:

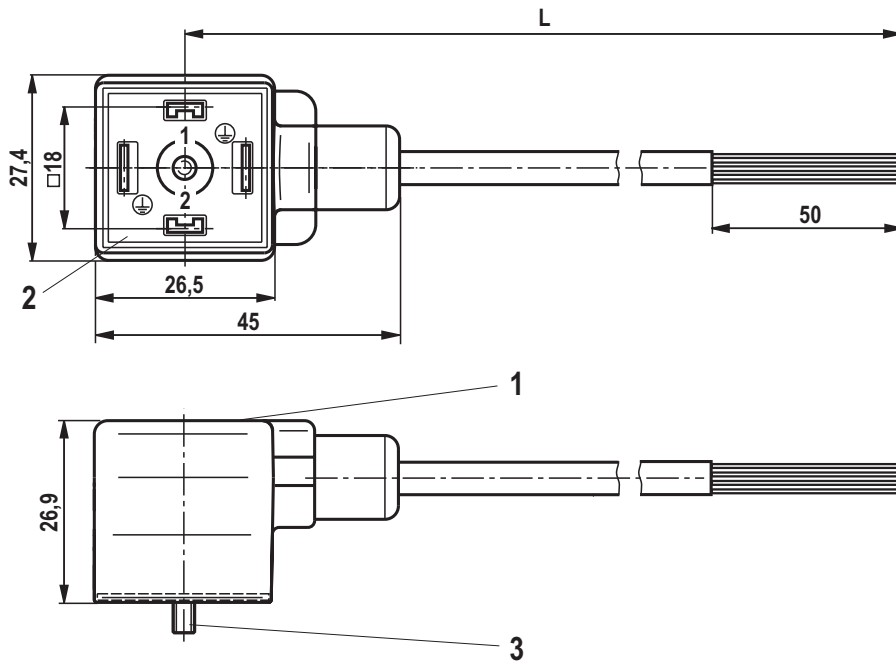
The enclosed NBR seal must be used in connection with Rexroth valves.

Enclosed:

- ▶ Labeling plate
- ▶ Additional NBR seal for use with Rexroth valves

Unit dimensions

(dimensions in mm)



- 1 Name plate
- 2 Contacting 0 + 180° rotatable
- 3 M3 mounting screw (not detachable), tightening torque $M_A = 1 \text{ Nm}$
- L Cable length 3, 5 or 12 m (see "Ordering code")

Cable sets

For valves with two solenoids (double mating connectors) and "K4" connector, 2-pole + PE, design A (large cubic connector)

Ordering code: for directional valves type WE **Size 6**, SEC and pilot-operated on/off valves

Short designation	Voltage DC / AC U	Current I_{max}	Cable length	Material number	Circuit diagram
Cable sets with M12 x 1 connector					
Z60	24 V ± 10%	4 A	–	R901207820	
With indicator light					
Z60L	24 V ± 10%	4 A	–	R901207819	
With indicator light and Zener diode suppression circuit					
Z60L8	24 V ± 10% ¹⁾	4 A	–	R901205511	
Cable sets with free line end					
Z61	12 ... 240 V	4 A	3 m	R901207821	
	12 ... 240 V	4 A	5 m	R901207822	
With indicator light, shielded					
Z61L	24 V	4 A	3 m	R901286065	

¹⁾ Switch-off voltage peak limitation to ≤ 50 V

Ordering code: for directional valves type WE NG10

Short designation	Voltage DC / AC <i>U</i>	Current <i>I</i> _{max}	Cable length	Material number	Circuit diagram
Cable sets with M12 x 1 connector					
Z60	24 V ± 10%	4 A	–	R901207825	
With indicator light					
Z60L	24 V DC only	4 A ²⁾	–	R901207824	
Cable sets with free line end					
With M12 x 1 connector, indicator light and Zener diode suppression circuit					
Z60L8	24 V ¹⁾ DC only	4 A ²⁾	–	R901207823	
With free line end					
Z61	230 V ± 10%	4 A	3 m	R901207826	
	230 V ± 10%	4 A	5 m	R901207892	

¹⁾ Switch-off voltage peak limitation to ≤ 50 V

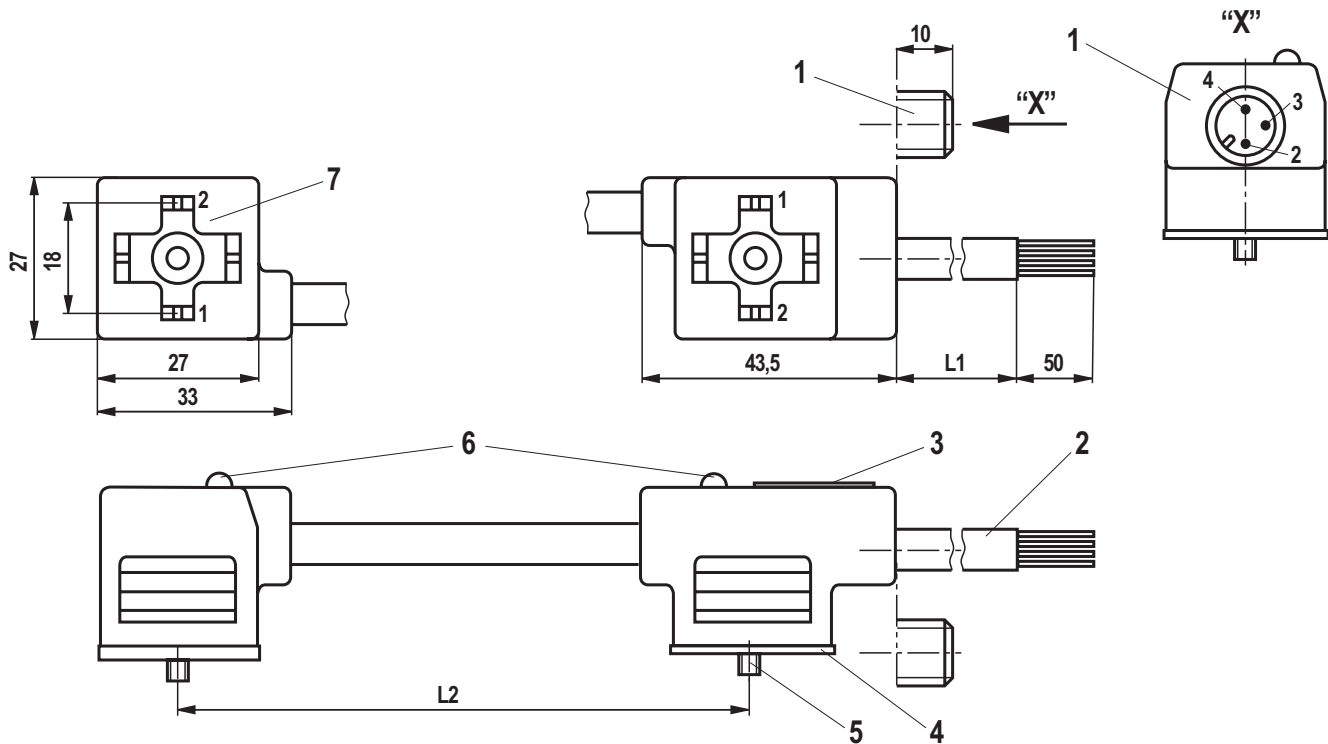
²⁾ Please observe temperature range and/or derating (see technical data)

Technical data

Mating connector				
Design	A			
Connector	M12 metal thread, A coding, version according to 61076-2-101			
Ambient temperature	Fixed line installation	°C	-25 ... +80	
	Flexible line	°C	-20 ... +80	
Protection class according to EN 60529	IP 67 with mating connector mounted and fitted			
Indicator light	Z60L..., Z61L...	LED yellow		
Number of poles	2 + PE			
Standard	EN 175301-803A/ISO4400			
Certification/conformity	RoHS, CSA			
Derating	Z60L, Z60L8	4 A	°C	Max. +40
		2 A	°C	Max. +95
Connection line				
Type	PUR-JZ black			
Connection line wire cross-section		mm ²	3 x 0.75	
Breakout cable wire cross-section	Z61	mm ²	4 x 0.75	
	Z61L	mm ²	3 x 0.75	
Shielding braid overlap at "Z61L"	Min. 85%			
Core marking at "Z61"	PE	Green/yellow		
	other wires	Black with numbers		
Line diameter	Z61	mm	5.9 ± 0.2	
	Z61L	mm	6.5 ± 0.2	
Bending radius	Fixed line installation	Min. 4 x line diameter		
	Flexible line	Min. 10 x line diameter		

Unit dimensions

(dimensions in mm)



- 1 Version "Z60..."
- 2 Version "Z61..."
- 3 Name plate
- 4 Flat seal (not detachable)
- 5 M3 mounting screw (not detachable), tightening torque $M_A = 0.4 \text{ Nm}$
- 6 LED (versions "Z60L" and Z61L only)
- 7 0° contacting (PE bridged)
- L1 Cable length 3 or 5 m (see "Ordering code")
- L2 113 mm (for NG6 valves), 135 mm (for NG10 valves)

Mating connectors

For valves with connector, 4-pole (small cubic connector)

Ordering code

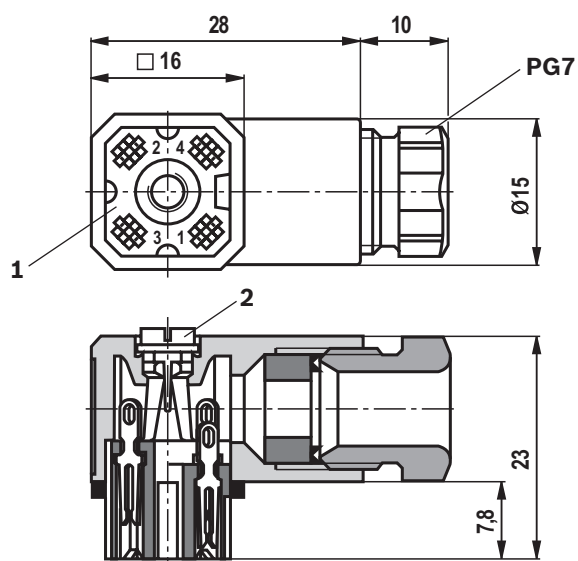
Short designation	Voltage DC / AC U_{max}	Current I_{max}	Color	Line fitting	Material number	Circuit diagram
G4W1F	50 V	6 A	black	PG 7	R900023126	

Technical data

Mating connector	
Design	Without designation (see unit dimensions)
Ambient temperature	°C -40 ... +90
Protection class according to EN 60529	IP 65 with mating connector mounted and fitted
Number of poles	4
Terminal area for line diameter	mm 4 ... 7.5
Maximum wire cross-section	mm ² 0.14 ... 0.5
Type of connection	Soldered joint
Standard	DIN VDE0627/IEC61984
Certification/conformity	VDE
Derating	-

Unit dimensions

(dimensions in mm)

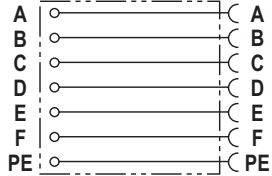
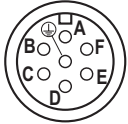
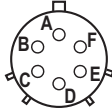


- 1 Contacting (rotatable)
- 2 M3 x 20 mounting screw, tightening torque $M_A = 0.5 \text{ Nm}$

Mating connectors

For valves with round connector, 6-pole + PE and 6-pole

Ordering code

Short designation	Voltage DC / AC U	Current I_{max}	Line fitting	Material number	Circuit diagram pole pattern
6-pole + PE, plastic version					
7PZ31...K	24 V	3 A ¹⁾	PG 11	R900021267	
6-pole + PE, metal version					
7PZ31...M	24 V	3 A	PG 11	R900223890	
6-pole, metal version, connection compatible with VG 95328 (for servo valves)					
6P KPTC6	24 V	3 A	SW16 clamping nut	R901043330	

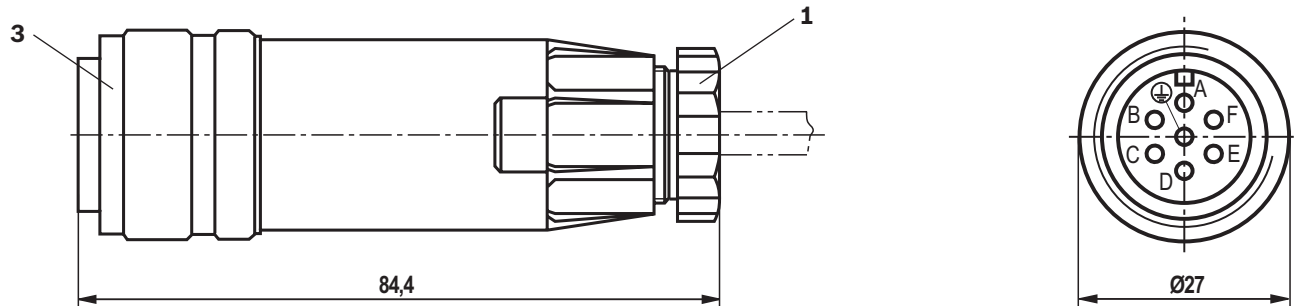
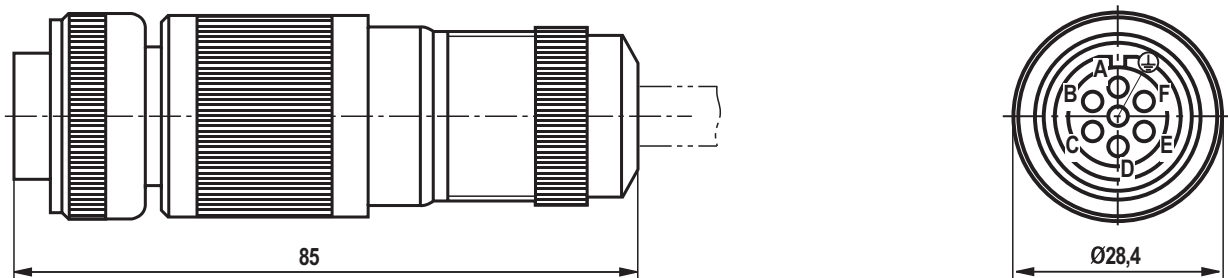
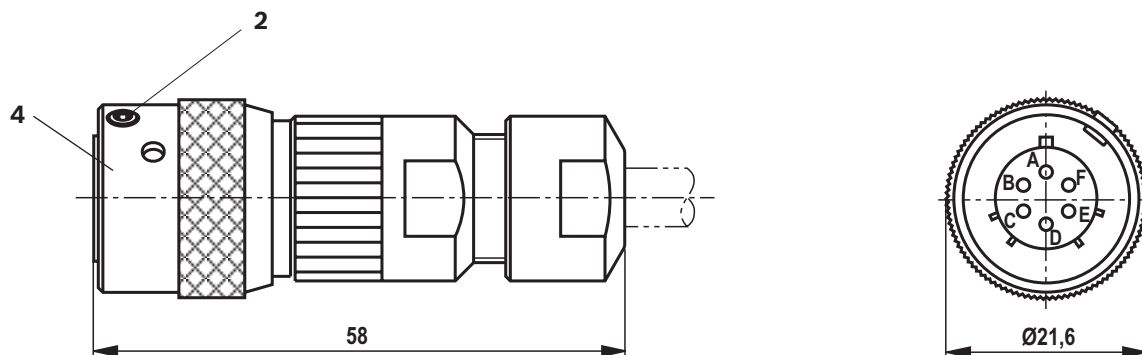
¹⁾ Please observe temperature range and/or derating (see technical data)

Technical data

Mating connector				
Design	without designation (see "Unit dimensions")			
Ambient temperature	7PZ31...	°C	-40 ... +100	
	6P KPTC6	°C	-55 ... +125	
Protection class according to EN 60529	7PZ31...K	IP 67 with mating connector mounted and fitted		
	7PZ31...M, 6P KPTC6	IP 65 with mating connector mounted and fitted		
Number of poles	6 + PE			
Terminal area for line diameter	7PZ31...K	mm	6.5 ... 11 mm	
	7PZ31...M	mm	9.0 ... 12.5 mm	
	6P KPTC6	mm	4.5 ... 7 mm	
Maximum wire cross-section	7PZ31...	mm ²	0.5 ... 1.5 mm ²	
	6P KPTC6	mm ²	0.4 ... 0.75 mm ²	
Type of connection	7PZ31...	Soldered joint		
	6P KPTC6	Crimping connection (crimping contact included in the scope of delivery)		
Standard	7PZ31..., 6P KPTC6	EN175201-804		
	7PZ31...	DIN43563		
Certification/conformity	7PZ31...	DIN 43563		
	6P KPTC6	RoHS		
Derating	7PZ31...K	6 A at 0.5 mm ²	°C	Max. +70
		9 A at 1.5 mm ²	°C	Max. +70

Unit dimensions

(dimensions in mm)

7PZ31...K**7PZ31...M****6P KPTC6**

- 1 PG11 line fitting
- 2 Fuse: M3 grub screw, tightening torque $M_A = 0.3 \text{ Nm}$
- 3 7/8" - 20 UNEF 2B
- 4 9/16" - 24 UNEF 2B

Accessories for "6P KPTC6" (not included in scope of delivery)

	Order number
ITT Cannon	
Crimping pliers	M22520/1-01
Crimping insert	M22520/1-02
Installation tool	CiTG-20A
Installation pliers	CIT-KPTC-20

Cable sets

For valves with round connector, 6-pole + PE

Ordering code

Short designation	Voltage DC / AC <i>U</i>	Current <i>I</i> _{max}	Color	Material number for cable length			Circuit diagram pole pattern
				3 m	5 m	10 m	
6-pole + PE, plastic version, shielded							
7P Z31 BF6 ...	< 50 V	8.5 A	black	R901420483	R901420491	R901420496	

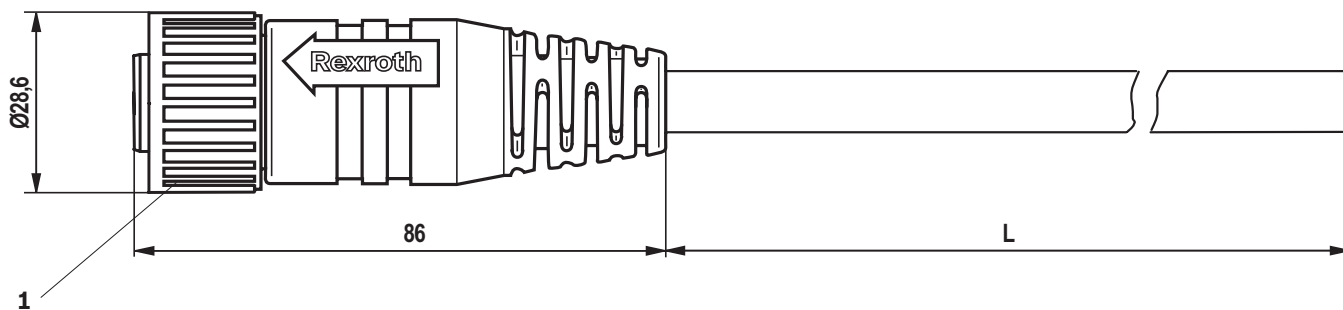
Technical data

Mating connector			
Design	Without designation (see "Unit dimensions")		
Ambient temperature	Fixed installation	°C	-40 ... +80
	Flexible	°C	-25 ... +80
Protection class according to EN 60529	IP 65 with mating connector mounted and fitted IP 67 with mating connector mounted and fitted		
Number of poles	6 + PE		
Standard	MIL-C 5015, VG 95 342		
Certification/conformity	RoHS, cULus (UL2238)		
Derating ¹⁾	8.5 A	°C	Max. +40
	4 A	°C	Max. +65
Connection line			
Type	Li9Y11CVY, black, halogen-free, flame-resistant, shielded, drag chain-compatible		
Wire cross-section	mm ²	7 x 0.75	
Shielding braid overlap	%	85 ± 5%	
Core marking	PE	Color	Green-yellow
	others	Color	A: brown, B: yellow, C: green, D: blue, E: gray, F: white
Line diameter	mm	9 ± 0.2	
Bending radius	Fixed installation	Min. 5 x line diameter	
	Flexible	Min. 10 x line diameter	

¹⁾ Maximum admissible current dependent on ambient temperature; with rising ambient temperature, the admissible current declines linearly.

Unit dimensions

(dimensions in mm)

7P Z31 BF3 ...

1 Coupling nut, tightening torque $M_A = 1 \dots 1.5$ Nm

Mating connectors

For valves with round connector, 11-pole + PE

Ordering code

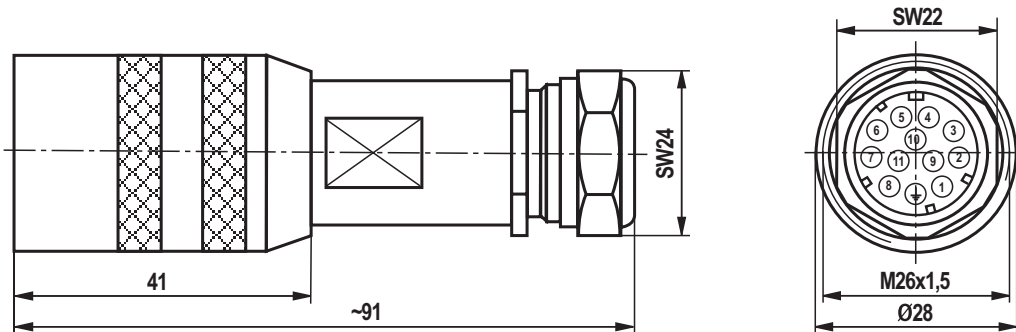
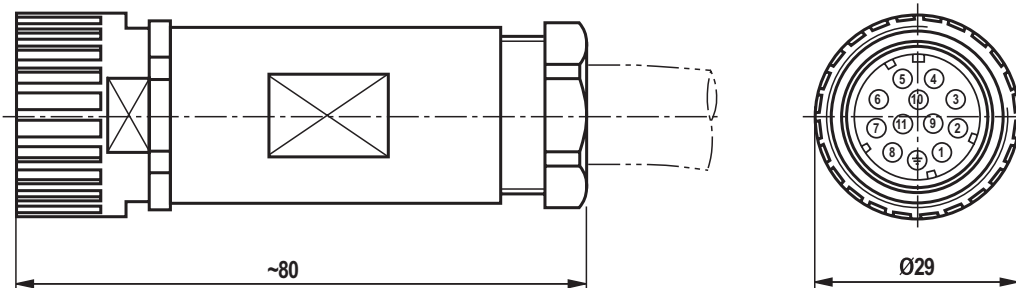
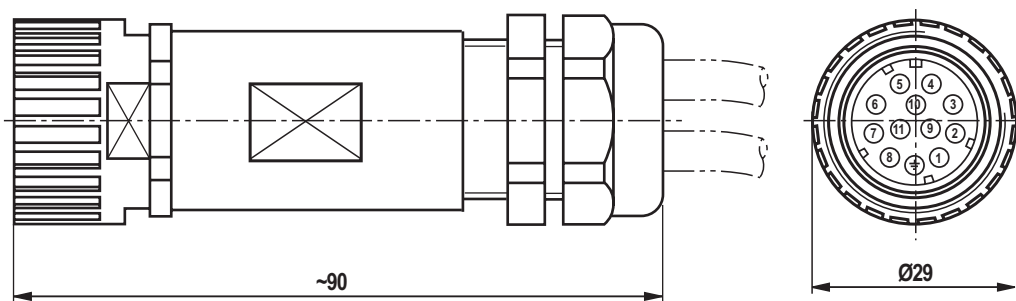
Short designation	Voltage DC / AC <i>U</i>	Current <i>I</i> _{max}	Line fitting	Material number	Circuit diagram pole pattern
11-pole + PE, metal version, shielded					
12PN11... EMC	24 V	3 A	PG 13.5	R901268000	
11-pole + PE, plastic version					
12PN11	24 V	3 A	PG 16	R900752278	
11-pole + PE, plastic version, two cable outlets					
12PN11...2XD8	24 V	3 A	PG 16	R900884671	

Technical data

Mating connector			
Design			without designation (see "Unit dimensions")
Ambient temperature		°C	-40 ... +90
Protection class according to EN 60529			IP 65 with mating connector mounted and fitted
Number of poles			11 + PE
Terminal area for line diameter	12PN11... EMC		12 ... 15 mm
	12PN11		12 ... 14 mm
	12PN11...2XD8		2 x 6 ... 8 mm
Maximum wire cross-section	12PN11, 12PN11... EMC		0.5 ... 1.5 mm ²
	12PN11...2XD8		3 x 0.5 ... 1.5 mm ²
Type of connection			Crimping connection
► Crimping contact:	12PN11	mm	12 x 0.5...1.5 (included within the scope of delivery)
	12PN11...2XD8	mm	3 x 0.5...1.5 (included within the scope of delivery)
		mm	9 x 0.14...0.5 (included within the scope of delivery)
Standard			DIN 43651
Certification/conformity			-
Derating			-

Unit dimensions

(dimensions in mm)

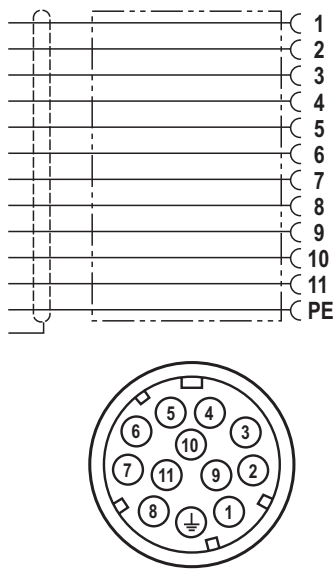
12PN11... EMC**12PN11****12PN11...2XD8****Accessories** (not included in the scope of delivery)

Hirschmann	Order number
Crimping pliers	XCZ 0701
Ejection tool	XWA 164

Cable sets

For valves with round connector, 11-pole + PE

Ordering code

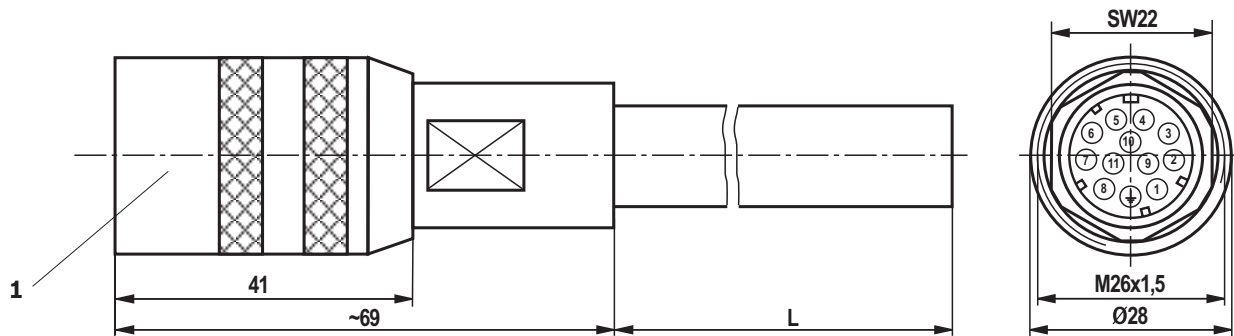
Short designation	Voltage DC / AC <i>U</i>	Current <i>I</i> _{max}	Color	Material number for cable length		Circuit diagram pole pattern
				5 m	20 m	
11-pole + PE, metal version, shielded						
12PN11REFS EMV...BG	25 VAC, 50 VDC	5 A	gray	R901272854	R901272852	

Technical data

Mating connector			
Design	Without designation (see "Unit dimensions")		
Ambient temperature	Fixed installation	°C	-40 ... +80
	Flexible	°C	-20 ... +80
Protection class according to EN 60529	IP 65 with mating connector mounted and fitted		
Number of poles	11 + PE		
Standard	DIN 43651		
Certification/conformity	RoHS		
Derating	-		
Connection line			
Type	F-C-PURö-JZ, coolant-resistant, Cu-shielded, increased oil resistance		
Wire cross-section	mm ²	12 x 0.75	
Shielding braid overlap	%	85	
Core marking	PE	Color	Green-yellow
	others	Color	Black wires with serial white numbers
Line diameter	mm	Approx. 10.5	
Bending radius	Fixed installation	Min. 5 x line diameter	
	Flexible	Min. 10 x line diameter	

Unit dimensions
(dimensions in mm)

12PN11REFS EMV...BG



1 Coupling nut, tightening torque $M_A = 1 \dots 1.5 \text{ Nm}$

Cable sets

For valves with round connector, 11-pole + PE

Ordering code

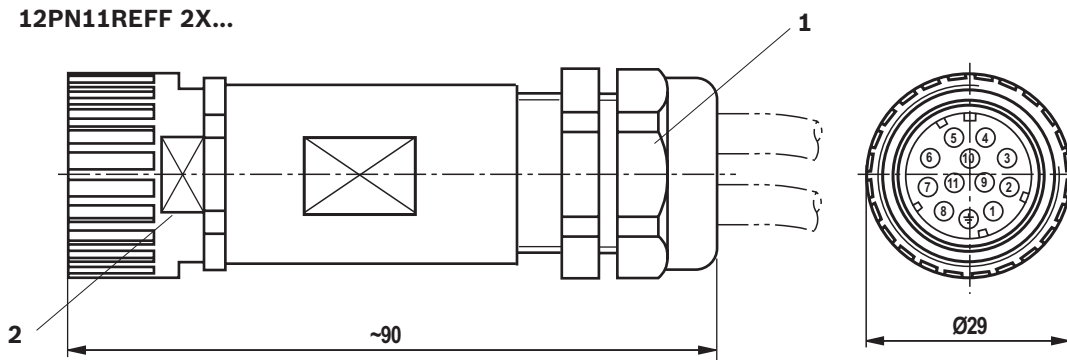
Short designation	Voltage DC / AC <i>U</i>	Current <i>I</i> _{max}	Color	Material number for cable length		Shield	Circuit diagram pole pattern
				5 m	20 m		
11-pole + PE, plastic version, shielded							
12PN11REFF 2X...	< 50 V	5 A	black	R900032356	R900860399	data line 10 x 0.14 mm ² shielded only	

Technical data

Mating connector			
Design	Without designation (see "Unit dimensions")		
Ambient temperature	Fixed installation	°C	-40 ... +80
	Flexible	°C	-5 ... +70
Protection class according to EN 60529	IP 65 with mating connector mounted and fitted		
Number of poles	11 + PE		
Standard	DIN 43651		
Certification/conformity	-		
Derating	-		
Connection line			
Type	Data line:	PVC, Unित्रonic LiYCY, shielded, flame-resistant according to IEC 60332-1-2	
	Control line	PVC, classic 110, flame-resistant according to IEC 60332-1-2	
Wire cross-section	Data line:	mm ²	10 x 0.14
	Control line	mm ²	3 x 1.0
Core marking	PE	Color	Green-yellow
	others	Color	Black wires with serial white numbers 1: 1; 2: 2; 3: white; 4: yellow; 5: green; 6: violet; 7: pink; 8: red; 9: brown; 10: black; 11: blue; n.c.: gray
Line diameter	Data line:	mm	Approx. 6.1
	Control line	mm	Approx. 6
Bending radius	Fixed installation	Min. 6 x line diameter	
	Flexible	Min. 15 x line diameter	

Unit dimensions

(dimensions in mm)



- 1** Line fitting, tightening torque $M_A = 1 \text{ Nm}, 1.5 \text{ Nm}$
2 Coupling nut, tightening torque $M_A = 0.8 \dots 1.0 \text{ Nm}$

Mating connector

For mechanical pressure switches with "K14" connector, 3-pole + PE, design A (large cubic connector)

Ordering code

Short designation	Voltage DC / AC <i>U</i>	Current <i>I</i> _{max}	Color	Line fitting	Material number	Circuit diagram
Without circuitry, standard						
Z14	250 V	16 A ¹⁾	black	M16 x 1.5	R901017012	
With indicator lights at connections 2 and 3						
Z15L	6 ... 14 V	4 A	black	M16 x 1.5	R901017030	
	16 ... 36 V	4 A	black	M16 x 1.5	R901017048	
	36 ... 60 V	4 A	black	M16 x 1.5	R901017032	
	90 ... 130 V	4 A	black	M16 x 1.5	R901017035	
	180 ... 240 V	4 A	black	M16 x 1.5	R901017037	
With indicator lights at connections 1 and 3						
Z15L6	16...36 V	4 A	black	M16 x 1.5	R901017040	

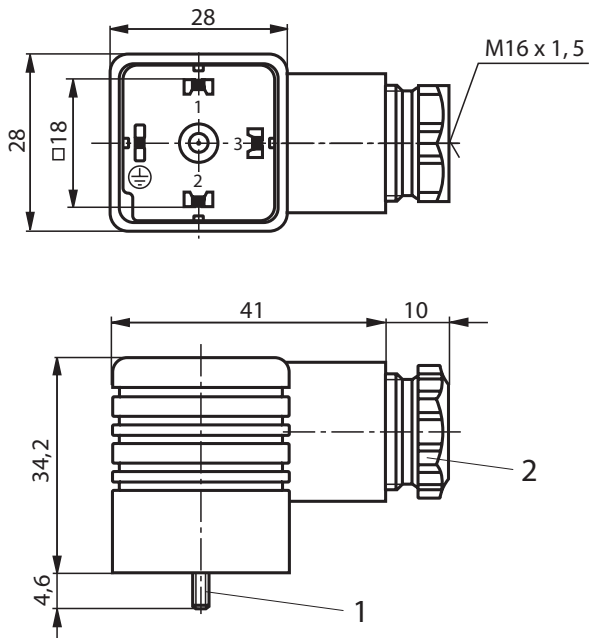
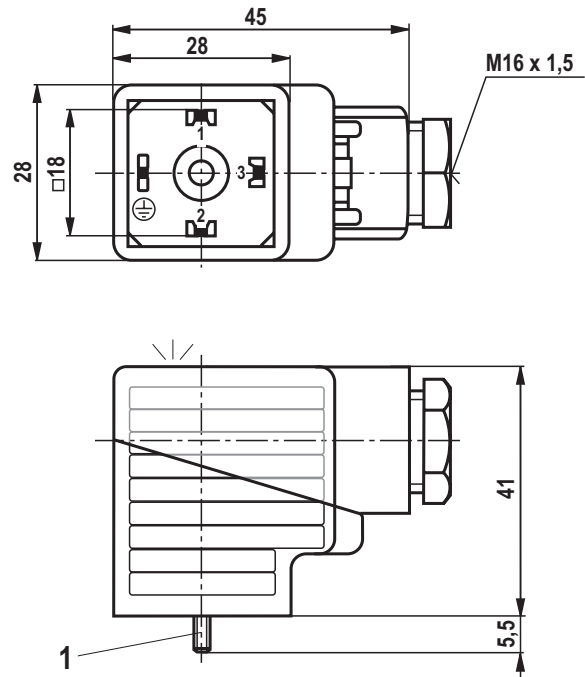
¹⁾ Please observe temperature range and/or derating (see technical data).

Technical data

Mating connector			
Design	A		
Ambient temperature	Standard	°C	-40 ... +90
	with indicator light	°C	-20 ... +60
Protection class according to EN 60529	IP 65 with mating connector mounted and fitted		
Indicator light	Z15L	Connection 2 LED green, connection 3 LED yellow	
	Z15L6	Connection 1 LED green, connection 3 LED yellow	
Number of poles	3 + PE		
Terminal area for line diameter	mm	5 ... 10	
Maximum wire cross-section	mm ²	1.5 with wire end ferrule	
Type of connection	Screw connection		
Standard	DIN EN175301-803A		
Certification/conformity	Z14	RoHS, VDE, SEV	
	Z15..	RoHS	
Derating	Z14	16 A	°C Max. +40
		9.5 A	°C Max. +60

Unit dimensions

(dimensions in mm)

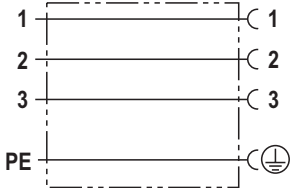
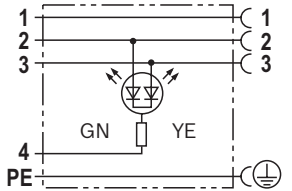
Z14**Z15L, Z15L6**

- 1 M3 mounting screw, tightening torque $M_A = 0.5 \text{ Nm}$
- 2 M16 x 1.5 line fitting, tightening torque $M_A = 0.15 \dots 0.25 \text{ Nm}$

Cable sets

For mechanical pressure switches with "K14" connector, 3-pole + PE, design A (large cubic connector)

Ordering code

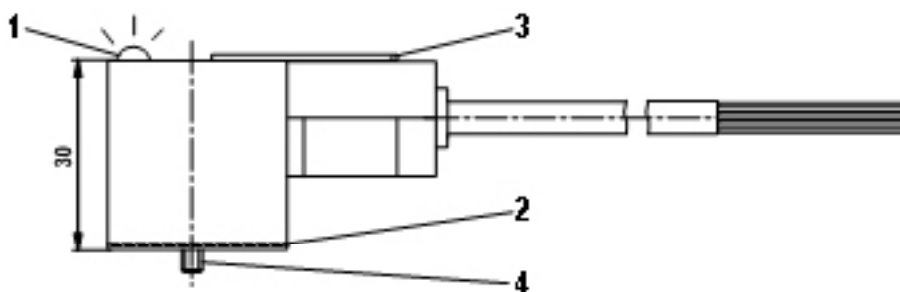
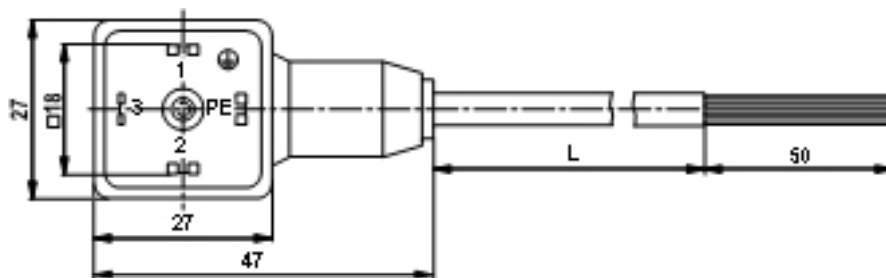
Short designation	Voltage DC / AC <i>U</i>	Current <i>I</i> _{max}	Color	Material number for cable length		Circuit diagram
				5 m	10 m	
Without circuitry, standard						
Z14	12 – 240 V	10 A	black	R900058528	R900217139	
With indicator light						
Z14L	24 VDC	4 A	black	R900210635	R900217140	

Technical data

Mating connector			
Design	A		
Ambient temperature	°C	-5 ... +70	
Protection class according to EN 60529	IP 67 with mating connector mounted and fitted		
Indicator light	Z14L	Connection 2 LED green, connection 3 LED yellow	
Number of poles	3 + PE		
Standard	EN 175301-803/ISO4400		
Certification/conformity	-		
Derating	-		
Connection line			
Type	PUR-JZ, gray		
Wire cross-section	Z14	mm ²	4 x 0.75
	Z14L	mm ²	5 x 0.5
Core marking	PE	Green/yellow	
	other wires	Black with numbers	
Line diameter	mm	Approx. 7	
Bending radius	Z14	Fixed line installation	Min. 15 x line diameter
		Flexible line	Min. 20 x line diameter
	Z14L	Fixed line installation	Min. 12.5 x line diameter
		Flexible line	Min. 17.5 x line diameter

Unit dimensions

(dimensions in mm)



- 1 LED
- 2 Flat seal (not detachable)
- 3 Name plate
- 4 M3 mounting screw (not detachable), tightening torque $M_A = 0.5 \text{ Nm}$
- L Cable length 5 or 10 m (see "Ordering code")

Mating connectors

For sensors and valves with "K24", "K35" and "K72" connectors, 4-pole

Ordering code

Short designation	Voltage AC/DC U_{max}	Current I_{max}	Color	Line fitting	Material number	Circuit diagram pole pattern	
M12 x 1, straight							
4PZ24	250 V	4 A	black	PG 7	R900773042		
	250 V	4 A	black	PG 9	R900031155		
M12 x 1, angled							
4PZ24	250 V	4 A	black	PG 7	R900779509		
	250 V	3 A	black	PG 9	R900082899		

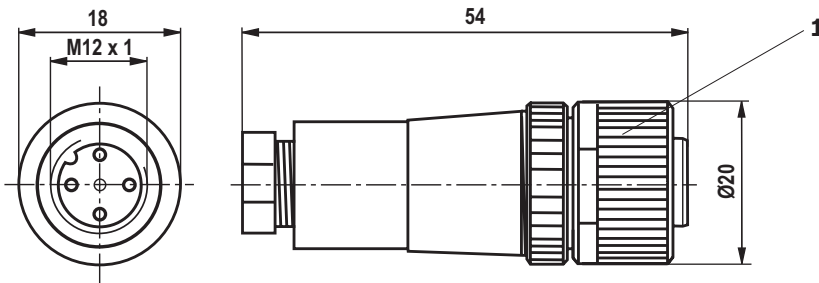
Technical data

Mating connector	
Design	M12, coding A
Ambient temperature	°C -25 ... +85
Protection class according to EN 60529	4PZ24 IP 67 with mating connector mounted and fitted
Number of poles	4
Terminal area for line diameter	4PZ24, PG 7 mm 4 ... 6
	4PZ24, PG 9 mm 6 ... 8
Maximum wire cross-section	mm ² 4 x 0.75
Type of connection	Screw connection
Standard	-
Certification/conformity	4PZ24, straight UL, CSA
Derating	-

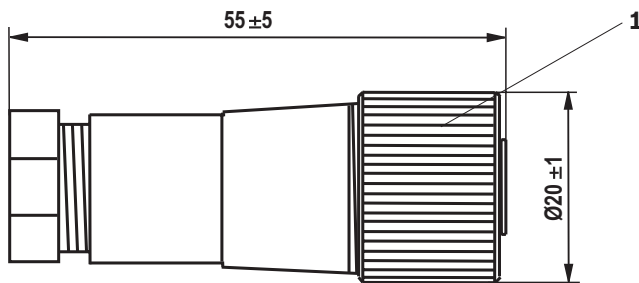
Unit dimensions

(dimensions in mm)

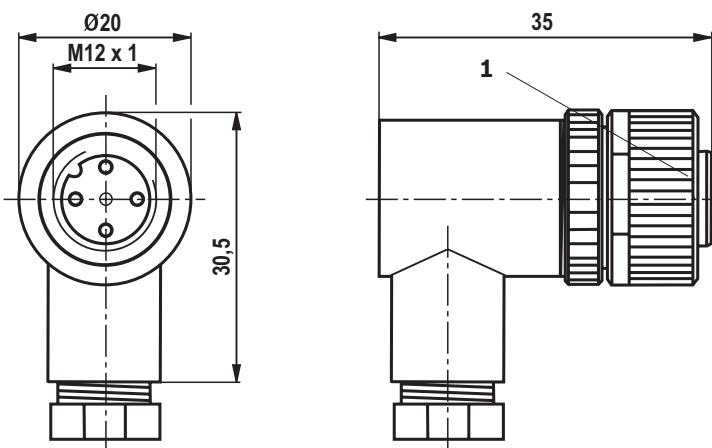
M12 x 1, straight, 4PZ24, PG 7



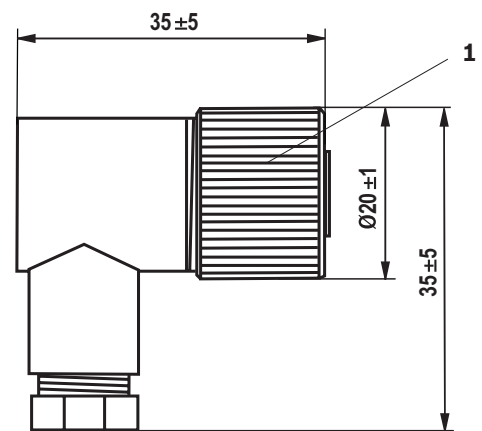
M12 x 1, straight, 4PZ24, PG 9



M12 x 1, angled, 4PZ24, PG 7



M12 x 1, angled, 4PZ24, PG 9



1 Coupling nut, tightening torque $M_A = 0.6 \text{ Nm}$

Cable sets

For sensors and valves with "K24", "K35" and "K72" connectors, 4-pole

Ordering code

Short designation	Voltage DC / AC <i>U</i>	Current <i>I</i> _{max}	Color	Material number for cable length				Shield	Circuit diagram pole pattern	
				2m	3 m	5 m	10 m			
M12 x 1, straight										
4PM12	250	4	black	R900773031	-	R900779498		Cable shielded		
4PZ24 ¹⁾	250	40	black	-	R900064381	-	R913005668	Not shielded		
M12 x 1, angled										
4PM12	250	4	black	R900779504	-	R900779503		Cable shielded		
4PZ24 ¹⁾	250	40	black	-	-	-	R913011722	Not shielded		

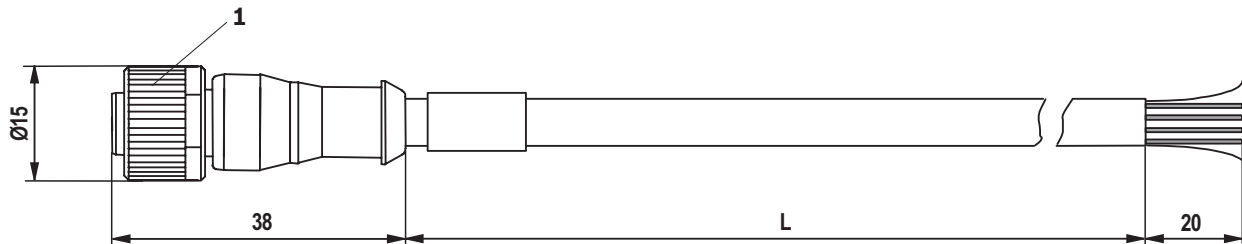
1) For version with UL certification up to 30 V.

Technical data

Mating connector		
Design	M12, coding A	
Ambient temperature	°C -25 ... +85	
Protection class according to EN 60529	IP 67 with mating connector mounted and fitted	
Number of poles	4	
Standard	-	
Certification/conformity	UL, CSA	
Derating	-	
Connection line		
Type	PUR-OB, black with approval: UL, CSA	
Wire cross-section	mm ² 4 x 0.34	
Core marking	1: brown; 2: white; 3: blue; 4: black	
Line diameter	4PM12	mm 5.9
	4PZ24	mm 5.2
Bending radius	Fixed line installation	Min. 10 x line diameter
	Flexible line	Min. 15 x line diameter

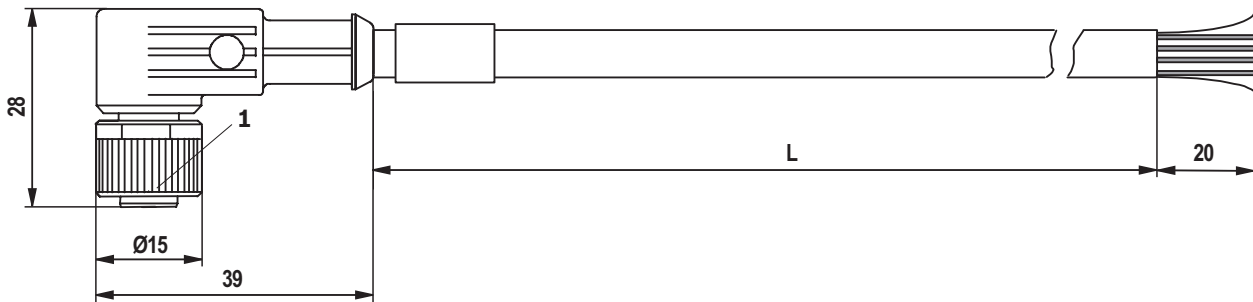
Unit dimensions:
(dimensions in mm)

M12 x 1, straight, 4PM12 and 4PZ24



R900773031	L = 2 m
R900064381	L = 3 m
R900779498	L = 5 m
R913005668	L = 10 m

M12 x 1, angled, 4PM12 and 4PZ24



R900779504	L = 2 m
R900779503	L = 5 m
R913011722	L = 10 m

1 Coupling nut, tightening torque $M_A = 0.6 \text{ Nm}$

Cable sets

For sensors and valves with "K24", "K35" and "K72" connectors, 4-pole

Ordering code

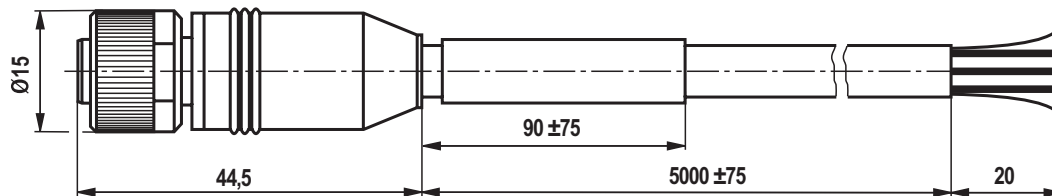
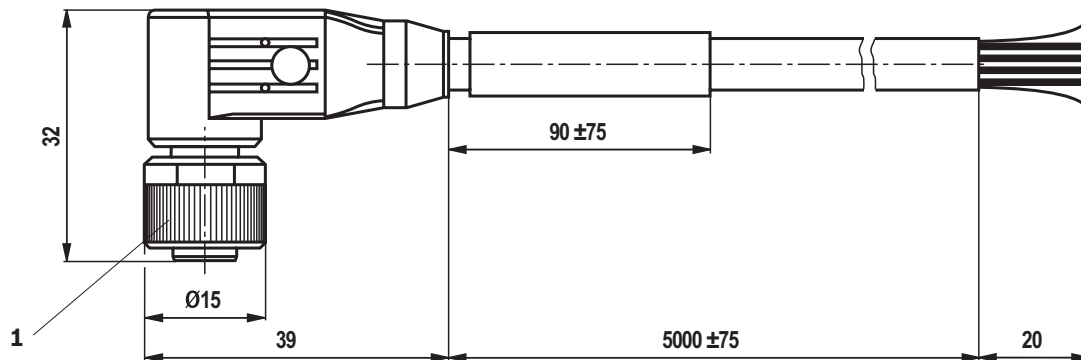
Designation	Voltage DC / AC U	Current I_{max}	Color	Material number	Shield	Circuit diagram pole pattern
M12 x 1, straight						
KABELSATZ VT-SSPA1-1X/M12/1/V00	60 V	4 A	black	R901241656	Cable and mating connector shielded	
M12 x 1, angled						
KABELSATZ VT-SSPA1-1X/M12/2/V00	60 V	4 A	black	R901241651		

Technical data (For applications outside these values, please consult us!)

Mating connector		
Design	M12	
Ambient temperature	Fixed installation	°C -25 ... +80
	Flexible	°C -5 ... +80
Protection class according to EN 60529	IP 67 with mating connector mounted and fitted	
Number of poles	4	
Standard	-	
Certification/conformity	CSA, RoHS	
Derating	-	
Connection line		
Type	PVC, black	
Wire cross-section	mm ² 4 x 0.75	
Line diameter	mm 5.9 ± 5%	
Bending radius	Fixed installation	Min. 5 x line diameter
	Flexible	Min. 10 x line diameter

Unit dimensions

(dimensions in mm)

M12 x 1, straight, KABELSATZ VT-SSPA1-1X/M12/1/V00**M12 x 1, angled, KABELSATZ VT-SSPA1-1X/M12/2/V00**

1 Coupling nut, tightening torque $M_A = 0.6 \text{ Nm}$

Mating connectors

For mechanical position switches, mechanical pressure switches and valves with central connection with "K6" and "DK6L" connectors

Ordering code

Short designation	Voltage DC / AC <i>U</i>	Current <i>I</i> _{max}	Color	Line fitting	Material number	Circuit diagram pole pattern
6-pole + PE						
7PZ6	250 V	10 A	gray	PG 11	R900002803	

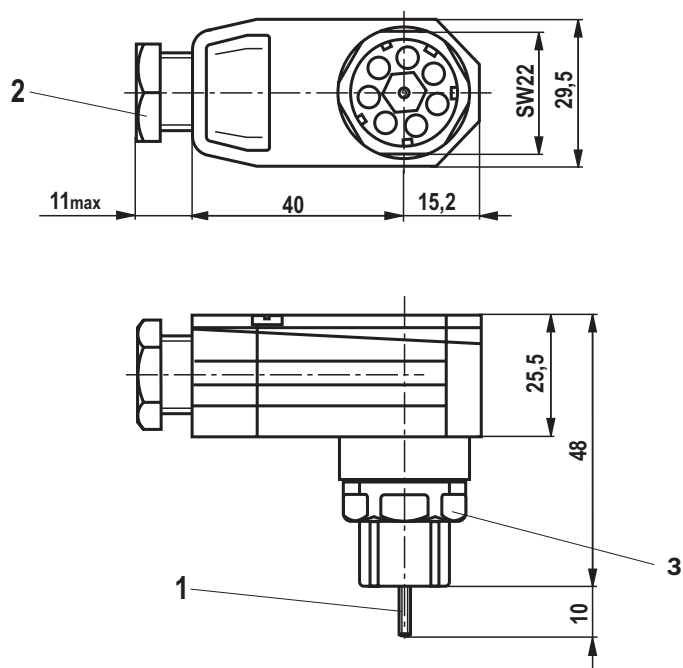
Technical data

Mating connector			
Design	Without designation (see "Unit dimensions")		
Ambient temperature	°C	-40 ... +90	
Protection class according to EN 60529	IP 65 with mating connector mounted and fitted		
Number of poles	6 + PE		
Terminal area for line diameter	mm	7 ... 9	
Maximum wire cross-section	mm ²	1.5	
Type of connection	Crimping connection (crimping contact included in the scope of delivery)		
Standard	DIN EN175201-804		
Certification/conformity	-		
Derating ¹⁾	10 A	°C	Max. +40
	4 A	°C	Max. +65

¹⁾ Maximum admissible current dependent on ambient temperature; with rising ambient temperature, the admissible current declines linearly.

Unit dimensions

(dimensions in mm)

7PZ6

- 1 M3 mounting screw, tightening torque $M_A = 0.5 \dots 0.6 \text{ Nm}$
- 2 PG11 line fitting, tightening torque $M_A = 2.5 \dots 3.8 \text{ Nm}$
- 3 SW22 coupling nut, tightening torque $M_A = 1.0 \dots 1.5 \text{ Nm}$

Accessories (not included in the scope of delivery)

HIRSCHMANN	Order number
Crimping pliers	XCZ 0701
Ejection tool	XWA 164

Mating connectors

For directional valves with "C4" and "C4Z" connectors (AMP Junior-Timer)

Ordering code

Short designation	Voltage DC / AC U	Current I_{max}	Color	Litz wire external diameter	Material number	Circuit diagram pole pattern
2P JUNIOR D2 2	10 ... 32 V	5 A	black	2.2 ... 3.0 mm	R901022127	
2P D1.2 JUNIOR	10 ... 32 V	5 A	black	1.2 ... 2.1 mm	R900313533	

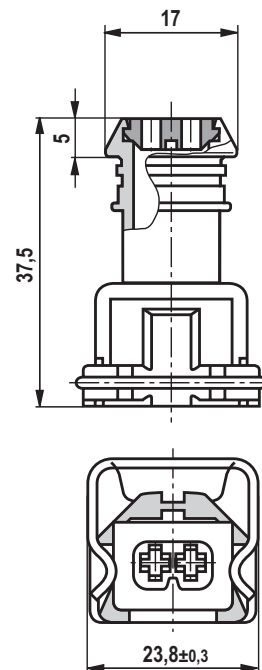
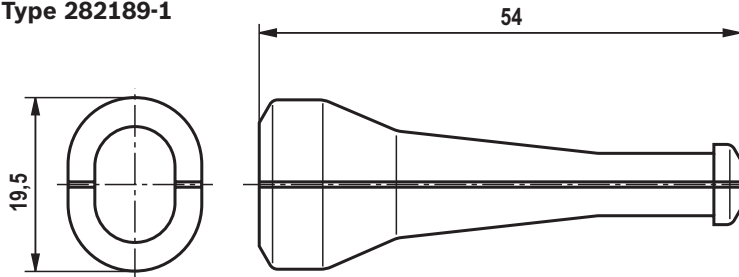
Technical data

Mating connector	
Design	Without designation (see "Unit dimensions")
Ambient temperature range	°C -20 ... +125
Protection class according to EN 60529	IP 66A with mating connector mounted and fitted
Number of poles	2
Terminal area for line diameter	mm 5.2 ... 7
Maximum wire cross-section	mm ² 0.5 ... 1
Type of connection	Crimping connection
Standard	-
Certification/conformity	-
Derating	-
As-delivered state	1 connector housing, 2 contacts, 2 individual conductor sealings, 1 rubber bushing in package, not mounted

Unit dimensions

(dimensions in mm)

AMP housing Type 282189-1



Accessories (not included in the scope of delivery)

Crimping tool	
Basic pliers	Type 539635-1, TYCO
Die	Type 539737-2, TYCO

Mating connectors

For directional valves with "K40" connector (Deutsch plug)

Ordering code

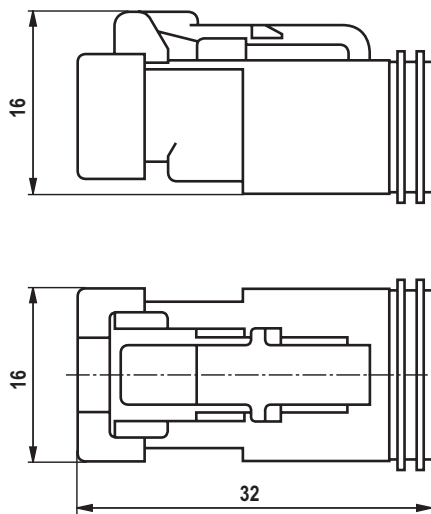
Short designation	Voltage DC / AC U	Current I_{max}	Color	Wire cross-section	Material number	Circuit diagram pole pattern
2P DT06 K40AWG14	10 ... 32 V	5 A	gray	AWG 14-16	R900733451	
2P DT06 K40AWG16	10 ... 32 V	5 A	gray	AWG 16-18	R901017847	

Technical data

Mating connector	
Design	Without designation (see "Unit dimensions")
Connector housing	DT06-2S-CE01
Ambient temperature range	°C -20 ... +125
Protection class according to EN 60529	IP 69K with mating connector mounted and fitted
Number of poles	2
Terminal area for line diameter	mm 1.35 ... 3,05
Maximum wire cross-section	AWG 14-16 mm ² 1.3 ... 2.08
	AWG 16-18 mm ² 0.83 ... 1.3
Type of connection	Crimping connection
Standard	-
Certification/conformity	-
Derating	-
As-delivered state	1 connector housing, 2 contacts, 1 locking wedge in package, not mounted

Unit dimensions


(dimensions in mm)



Accessories (not included in the scope of delivery)

Crimping tool	Type HDT-4800, Deutsch
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Further information

 **Notice:**

For general information on safety, installation or commissioning, see operating instructions:

07602-B Electronics for industrial applications

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