

RE 08006

Edition: 2021-05

Replaces: 2016-04

rexroth
A Bosch Company

Mating connectors and cable sets for valves and sensors in hydraulics



Features

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

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RE 08006, edition: 2021-05, **Bosch Rexroth AG**

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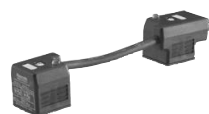

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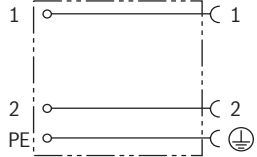
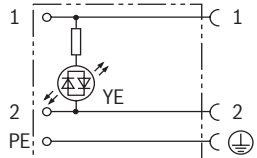
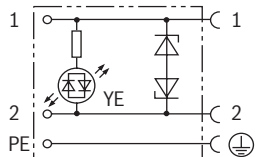
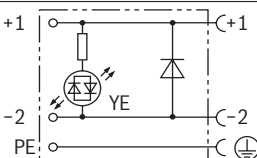
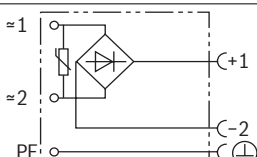
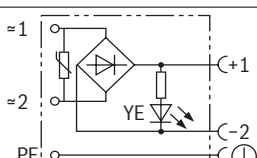
Notice:

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

Mating connectors

For valves with "K4" device 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 Z-diode-suppressor						
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 the temperature range and/or derating
(see technical data)

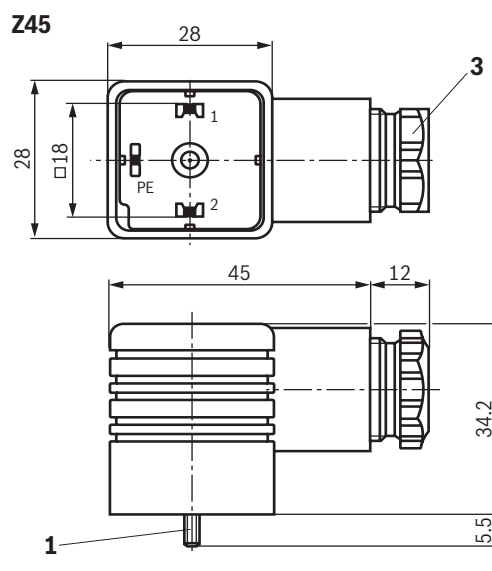
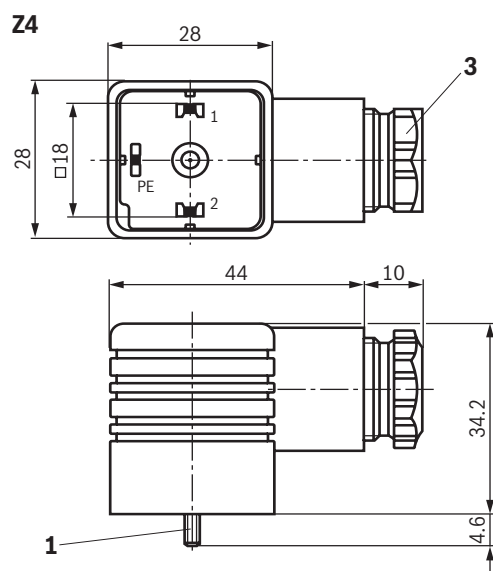
Technical data (For applications outside these parameters, please consult us!)

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			IP65 (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, RZ5L, Z55L	1.5 A	°C max. 25°C
		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)

Dimensions

(dimensions in mm)



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

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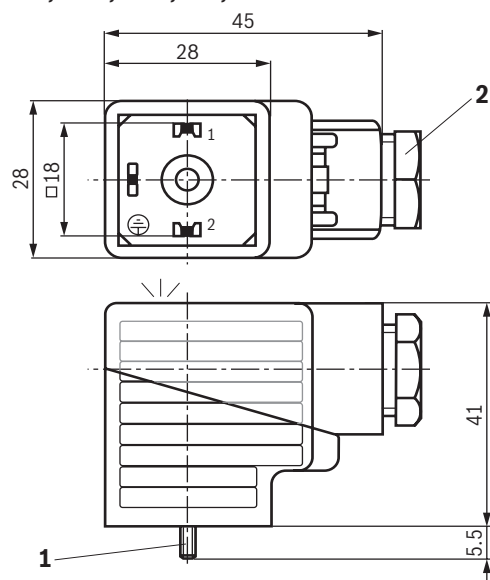
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8/44 Mating connectors and cable sets

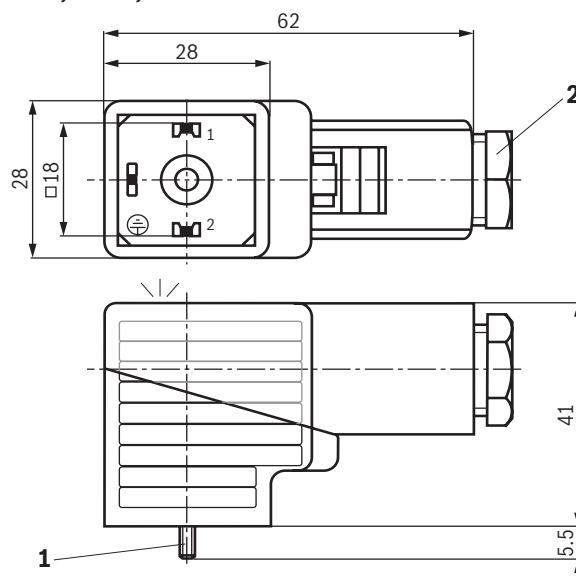
Dimensions

(dimensions in mm)

Z5L, Z5L1, Z5L2, RZ5, RZ5L



Z55L, RZ55L, RZ55



- 1 M3 mounting screw, tightening torque $M_A = 0.5 \text{ Nm}$
- 2 Line fitting M16 x 1.5,
Tightening torque $M_A = 1.5 \dots 2.5 \text{ Nm}$ (5 ... 10 mm)
- 3 Line fitting NPT 1/2",
Tightening torque $M_A = 2.5 \dots 3.75 \text{ Nm}$ (4.5 ... 10 mm)

Cable sets

For valves with "K4" device 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	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 Z-diode-suppressor							
Z4L1	24 V ¹⁾	4 A	black	R900032021	R900032015	R900217138	

¹⁾ Switch-off voltage peak limitation to 55 V

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

Mating connector			
Design			A
Ambient temperature	► Fixed line installation	°C	-20 ... +80
	► Flexible line	°C	-5 ... +70
Protection class according to EN 60529			IP67 (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

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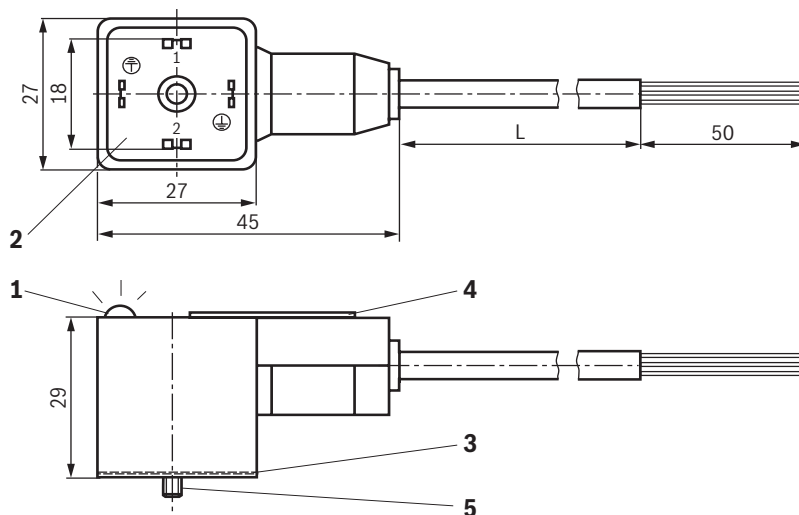
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10/44 Mating connectors and cable sets

Dimensions

(dimensions in mm)



- 1 LED
- 2 Contacting 0 + 180° rotatable
- 3 Flat seal (not detachable)
- 4 Name plate
- 5 Mounting screw M3 (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 (V) DC / AC <i>U</i>	Current (A) <i>I</i> _{max}	Color	Material number for cable length			Circuit diagram
				3 m	5 m	12 m	
Without circuitry, standard							
DS2513...ATEX	0 ... 230 V	4 A	black	R901200418	R901200460	R901200582	

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

Mating connector	
Design	A
Ambient temperature	°C -30 ... +90
Protection class according to EN 60529	IP65 (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	–
Impact resistance	Joule 4
Connection line	
Type	LiF9YH-11YH, PUR
Wire cross-section	mm ² 3 x 0.75
Shielding braid overlap	% approx. 85
Core marking	<div>► PE Color green-yellow</div> <div>► others Color brown, blue</div>
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.

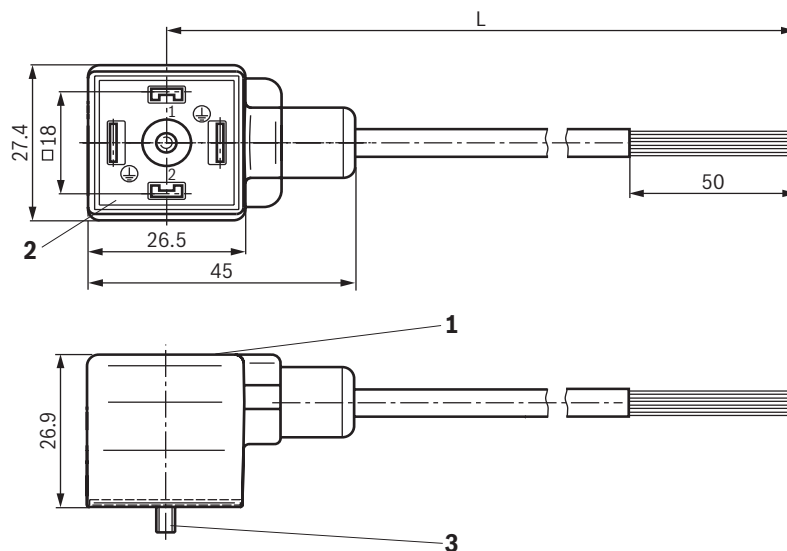
Enclosed:

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

12/44 Mating connectors and cable sets

Dimensions

(dimensions in mm)



- 1 Name plate
- 2 Contacting 0 + 180° rotatable
- 3 Mounting screw M3 (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" device connector, 2-pole + PE, design A (large cubic connector)

Ordering code: for directional valves type WE NG6, type SEC and pilot-operated on/off valves

Short designation	Voltage (V) DC / AC U	Current (A) 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 Z-diode-suppressor					
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

14/44 Mating connectors and cable sets

Ordering code: for directional valves type WE, NG10

Short designation	Voltage (V) DC / AC U	Current (A) 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 connector M12 x 1, indicator light and Z-diode-suppressor					
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 the temperature range and/or derating (see technical data)

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

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			IP67 (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
Wire cross-section of the breakout cable	► Z61	mm ²	4 x 0.75
	► Z61L	mm ²	3 x 0.75
Shielding braid overlap at "Z61L"			min. 85%
Core marking with "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

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

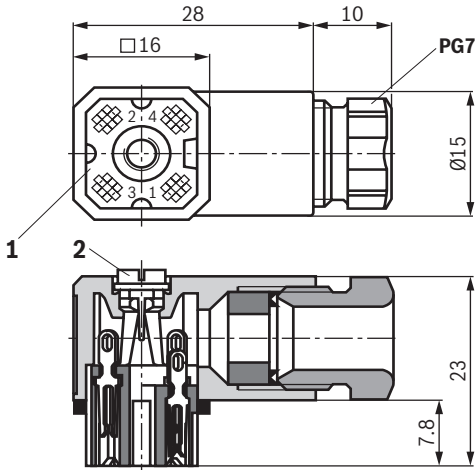
Ordering code

Table with 7 columns: Short designation, Voltage (V) DC / AC U, Current (A) I_max, Color, Line fitting, Material number, Circuit diagram. Row 1: G4W1F, 50 V, 6 A, black, PG 7, R900023126, Circuit diagram showing 4 poles.

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

Table with 2 columns: Mating connector, Design, Ambient temperature, Protection class according to EN 60529, Number of poles, Terminal area for line diameter, Maximum wire cross-section, Type of connection, Standard, Certification/conformity, Derating.

Dimensions
(dimensions in mm)



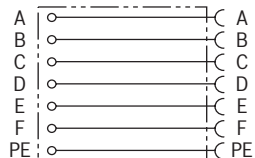
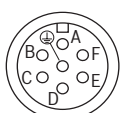
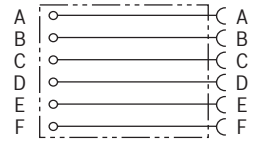
- 1 Contacting (rotatable)
- 2 M3 x 20 mounting screw, tightening torque M_A = 0.5 Nm

18/44 **Mating connectors and cable sets**

Mating connectors

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

Ordering code

Short designation	Voltage (V) DC / AC U	Current (A) I _{max}	Line fitting	Material number	Circuit diagram
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 the temperature range and/or derating (see "Technical data").

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

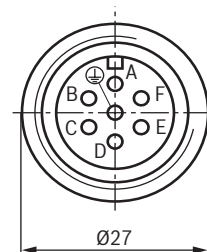
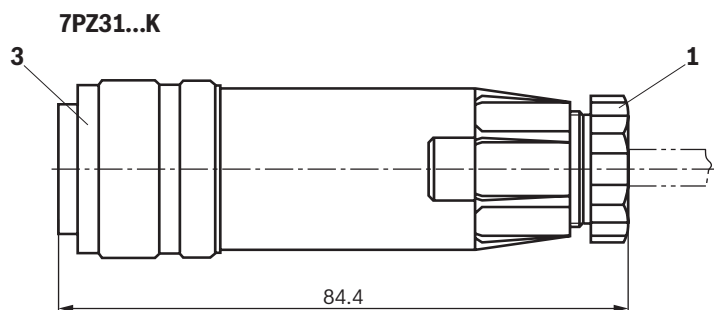
Mating connector			
Design		without designation (see "Dimensions")	
Ambient temperature	► 7PZ31...	°C	−40 ... +100
	► 6P KPTC6	°C	−55 ... +125
Protection class according to EN 60529	► 7PZ31...K	IP67 (with mating connector mounted and fitted)	
	► 7PZ31...M, 6P KPTC6	IP65 (with mating connector mounted 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

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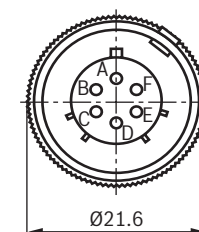
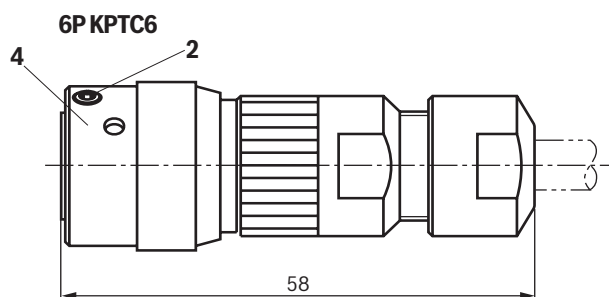
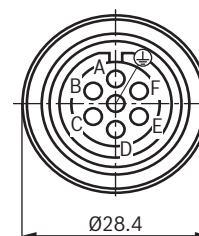
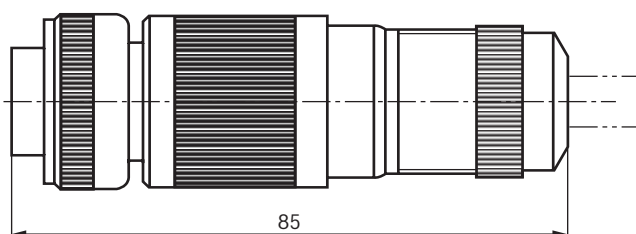
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Dimensions (dimensions in mm)



7PZ31...M



- 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)

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

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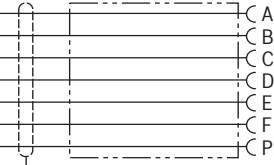
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20/44 Mating connectors and cable sets

Cable sets

For valves with round connector, 6-pole + PE

Ordering code

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



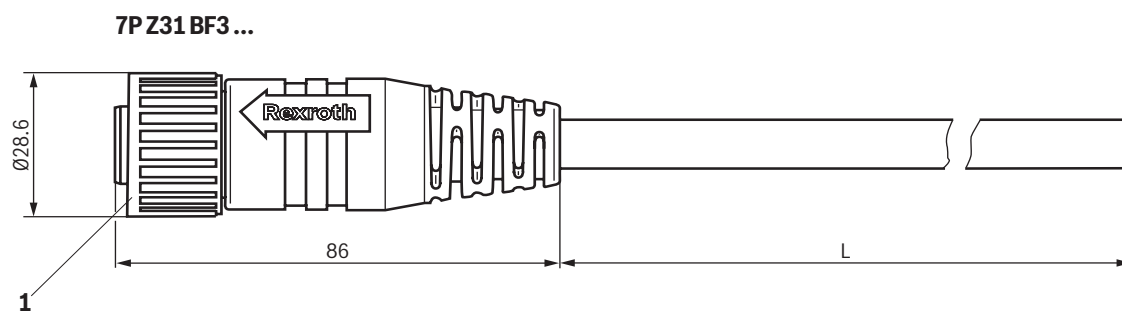
Technical data (For applications outside these parameters, please consult us!)

Mating connector			
Design		without designation (see "Dimensions")	
Ambient temperature	► Fixed installation	°C	−40 ... +80
	► Flexible	°C	−25 ... +80
Protection class according to EN 60529		IP65 (with mating connector mounted and fitted) IP67 (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.

Dimensions

(dimensions in mm)



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

22/44 **Mating connectors and cable sets**

Mating connectors

For valves with round connector, 11-pole + PE

Ordering code

Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I</i> _{max}	Line fitting	Material number	Circuit diagram
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 (For applications outside these parameters, please consult us!)

Mating connector			
Design			without designation (see "Dimensions")
Ambient temperature	°C		−40 ... +90
Protection class according to EN 60529			IP65 (with mating connector mounted and fitted)
Number of poles			11 + PE
Terminal area for line diameter	► 12PN11 ... EMC	mm	12 ... 15
	► 12PN11	mm	12 ... 14
	► 12PN11...2XD8	mm	2 x 6 ... 8
Maximum Wire cross-section	► 12PN11, 12PN11... EMC	mm ²	0.5 ... 1.5
	► 12PN11...2XD8	mm ²	3 x 0.5 ... 1.5
		mm ²	9 x 0.14 ... 0.5
Type of connection			Crimping connection
Crimping contacts	► 12PN11	mm	12 x 0.5 ... 1.5 (included in the scope of delivery)
	► 12PN11...2XD8	mm	3 x 0.5 ... 1.5 (included in the scope of delivery)
		mm	9 x 0.14 ... 0.5 (included in the scope of delivery)
Standard			DIN 43651
Certification/conformity			–
Derating			–

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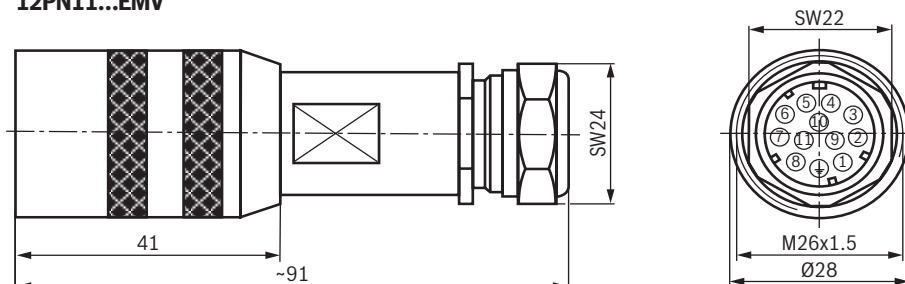
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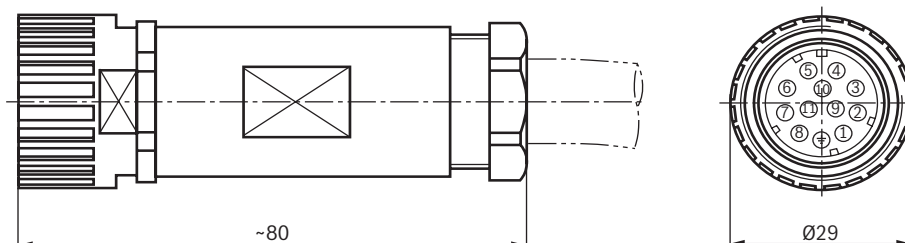
Dimensions

(dimensions in mm)

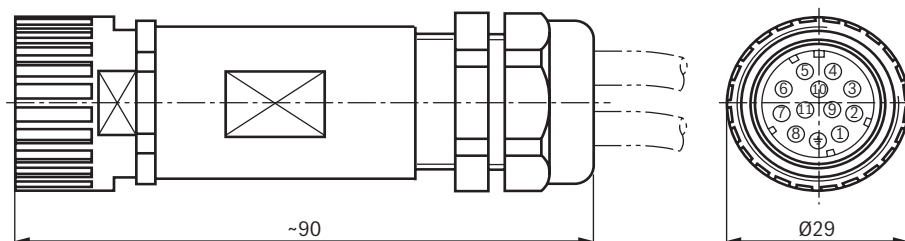
12PN11...EMV



12PN11



12PN11



Accessories (not included in the scope of delivery)

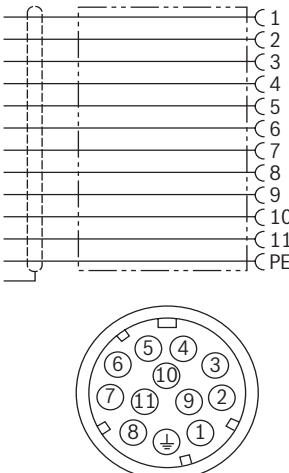
Hirschmann	Order number
Crimping pliers	XCZ 0701
Ejection tool	XWA 164
Installation tool	CiTG-20A
Installation pliers	CIT-KPTC-20

24/44 Mating connectors and cable sets

Cable sets

For valves with round connector, 11-pole + PE

Ordering code

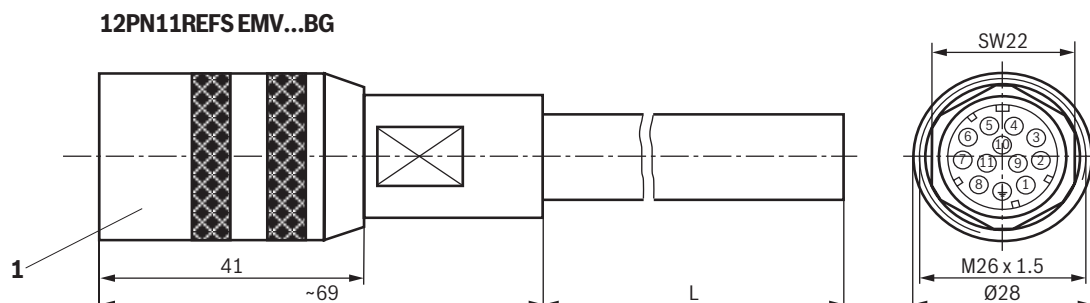
Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I</i> _{max}	Color	Material number for cable length		Circuit diagram
				5 m	20 m	
11-pole + PE, metal version, shielded						
12PN11REFS EMC...BG	25 VAC 50 VDC	5 A	gray	R901272854	R901272852	

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

Mating connector			
Design			without designation (see "Dimensions")
Ambient temperature	► Fixed installation	°C	−40 ... +80
	► Flexible	°C	−20 ... +80
Protection class according to EN 60529			IP65 (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

Dimensions

(dimensions in mm)



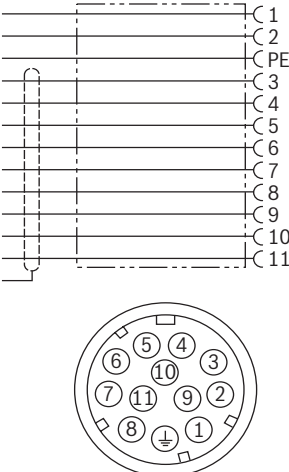
1 Coupling nut, tightening torque $M_A=1 \dots 1.5 \text{ Nm}$

26/44 Mating connectors and cable sets

Cable sets

For valves with round connector, 11-pole + PE

Ordering code

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

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

Mating connector			
Design			without designation (see "Dimensions")
Ambient temperature	► Fixed installation	°C	-40 ... +80
	► Flexible	°C	-5 ... +70
Protection class according to EN 60529			IP65 (with mating connector mounted and fitted)
Number of poles			11 + PE
Standard			DIN 43651
Certification/conformity			-
Derating			-
Connection line			
Type	► Data line:		PVC, Unifronic 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

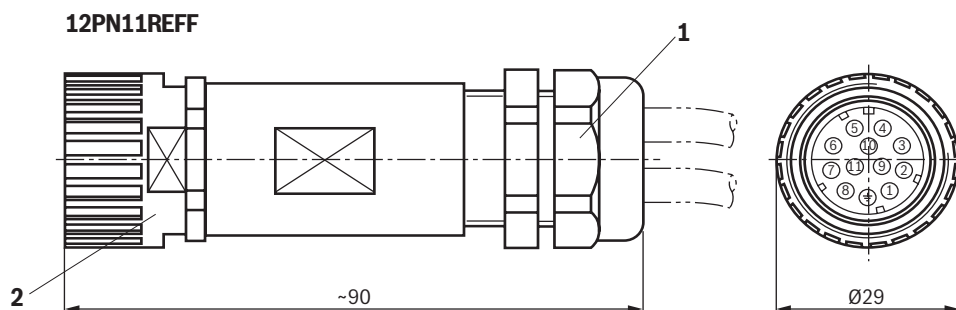
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Dimensions

(dimensions in mm)



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

28/44 Mating connectors and cable sets

Mating connectors

For mechanical pressure switches with "K14" connector, 3-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						
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 the temperature range and/or derating (see "Technical data").

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

Mating connector				
Design			A	
Ambient temperature	► Standard		°C	−40 ... +90
	► with indicator light		°C	−20 ... +60
Protection class according to EN 60529			IP65 (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

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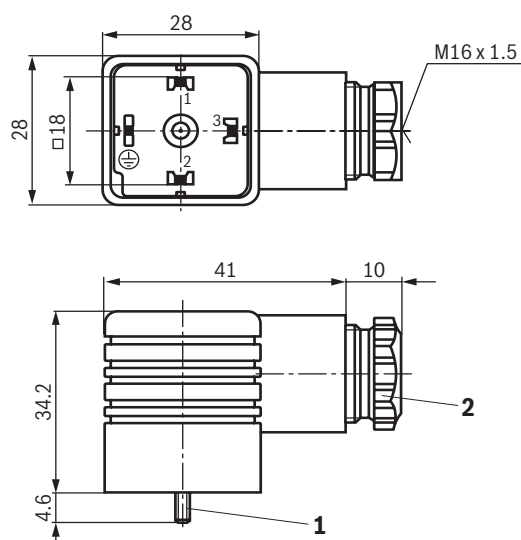
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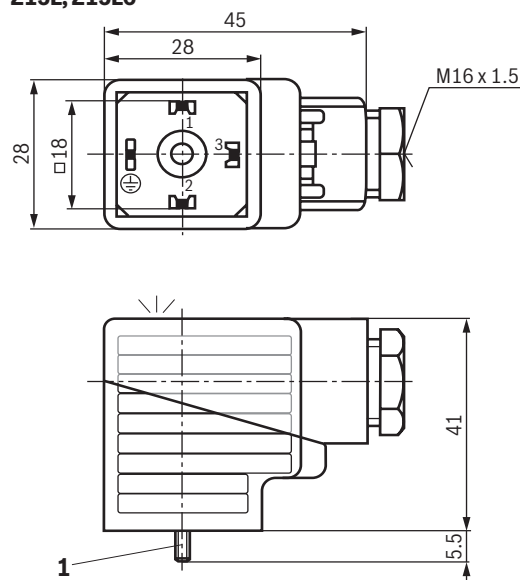
Dimensions

(dimensions in mm)

Z14



Z15L, Z15L6



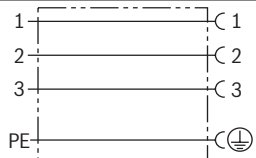
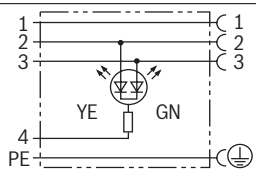
- 1 M3 mounting screw, tightening torque $M_A = 0.5 \text{ Nm}$
- 2 M16 x 1.5 line fitting, tightening torque $M_A = 0.15 \dots 0.25 \text{ Nm}$

30/44 **Mating connectors and cable sets**

Cable sets

For mechanical pressure switches with "K14" connector, 3-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	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 (For applications outside these parameters, please consult us!)

Mating connector			
Design		A	
Ambient temperature		°C	−5 ... +70
Protection class according to EN 60529		IP67 (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	mm²	4 x 0.75
	▶ Z14L	mm²	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

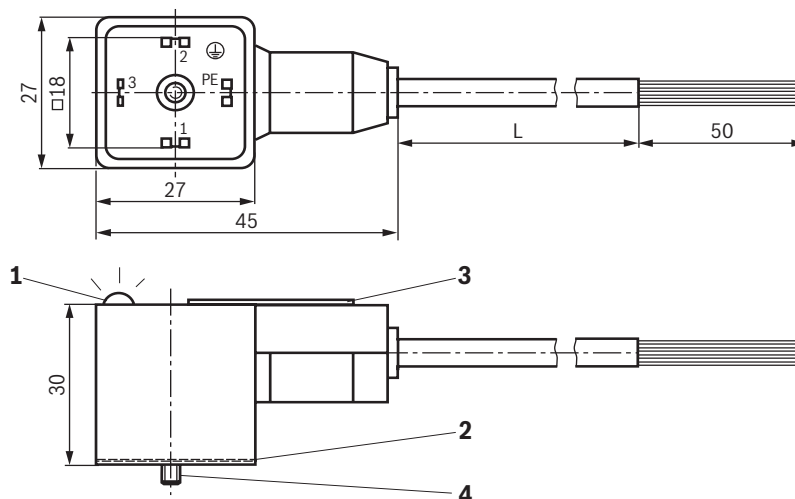
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Dimensions

(dimensions in mm)



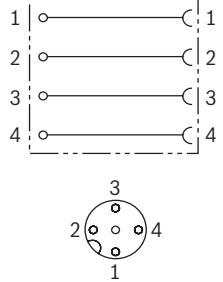
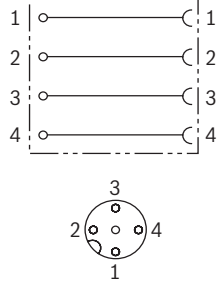
- 1 LED
- 2 Flat seal (not detachable)
- 3 Name plate
- 4 Mounting screw M3 (not detachable)
Tightening torque $M_A = 0.5 \text{ Nm}$
- L Cable length 5 or 10 m (see "Ordering code")

32/44 Mating connectors and cable sets

Mating connectors

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

Ordering code

Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I</i> _{max}	Color	Line fitting	Material number	Circuit diagram
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	

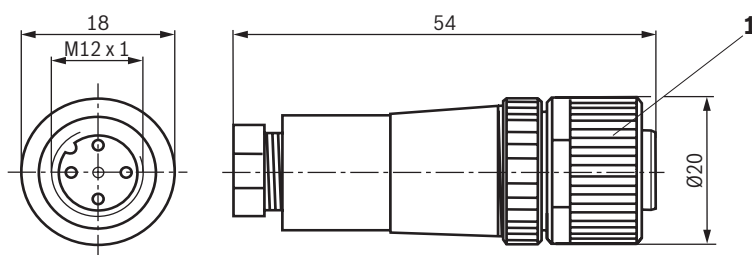
Technical data (For applications outside these parameters, please consult us!)

Mating connector	
Design	M12, coding A
Ambient temperature	°C -25 ... +85
Protection class according to EN 60529 ▶ 4PZ24	IP67 (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	–

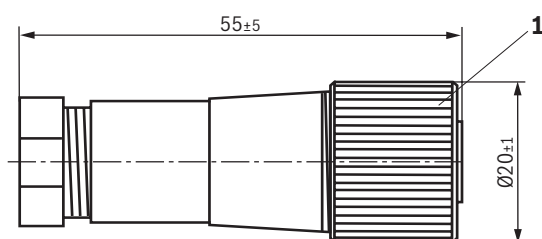
Dimensions

(dimensions in mm)

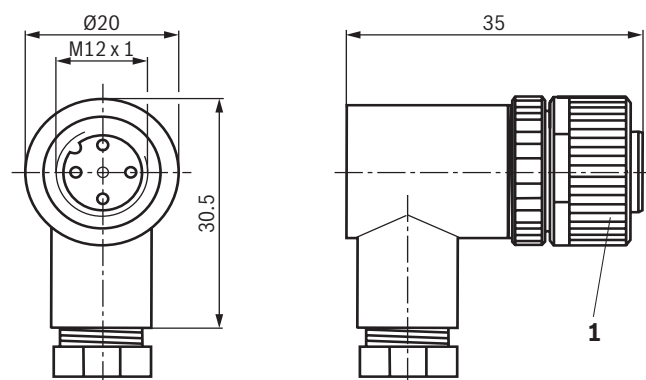
M12 x 1, straight, 4PZ24, PG 7



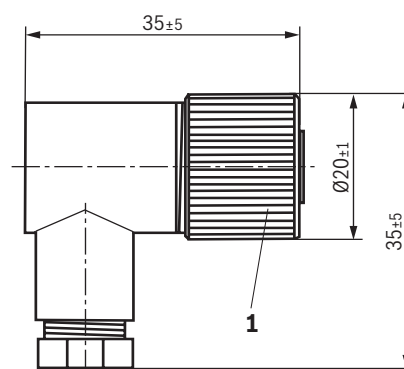
M12 x 1, straight, 4PZ24, PG 9



M12 x 1, angled, 4PZ24, PG 7



M12 x 1, angled, 4PZ24, PG 9



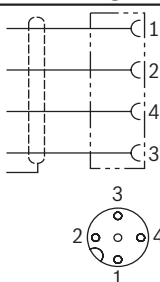
1 Coupling nut, tightening torque $M_A = 0.6 \text{ Nm}$

34/44 Mating connectors and cable sets

Cable sets

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

Ordering code

Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I</i> _{max}	Color	Material number for cable length				Shield	Circuit diagram	
				2 m	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	shielded		
M12 x 1, angled										
4PM12	250	4	black	R900779504	–	R900779503		Cable shielded		
4PZ24 ¹⁾	250	40	black	–	–	–	R913011722	shielded		

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

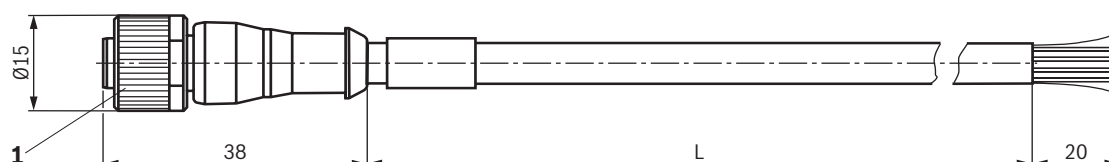
Technical data (For applications outside these parameters, please consult us!)

Mating connector	
Design	M12, coding A
Ambient temperature	°C -25 ... +85
Protection class according to EN 60529	IP67 (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

Dimensions

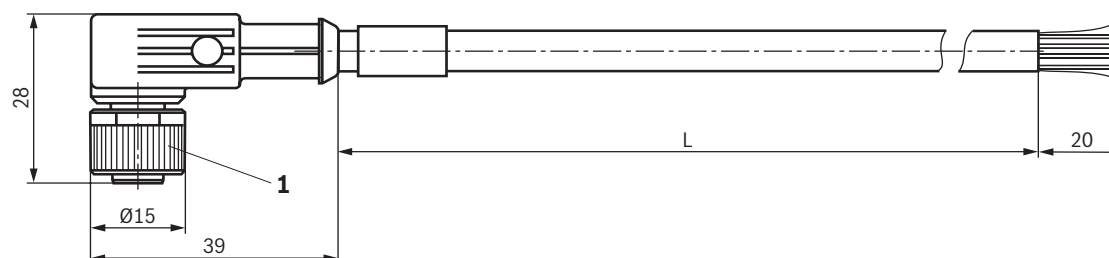
(dimensions in mm)

M12 x 1, straight, 4PM12 and 4PZ24



L in m	Material number
2	R900773031
3	R900064381
5	R900779498
10	R913005668

M12 x 1, angled, 4PM12 and 4PZ24



L in m	Material number
2	R900779504
5	R900779503
10	R913005668

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

36/44 Mating connectors and cable sets

Cable sets

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

Ordering code

Designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I</i> _{max}	Color	Material number	Shield	Circuit diagram
M12 x 1, straight						
CABLE SET VT-SSPA1-1X/M12/1/V00	60 V	4 A	black	R901241656	Cable and mating connector shielded	
M12 x 1, angled						
CABLE SET VT-SSPA1-1X/M12/2/V00	60 V	4 A	black	R901241651		

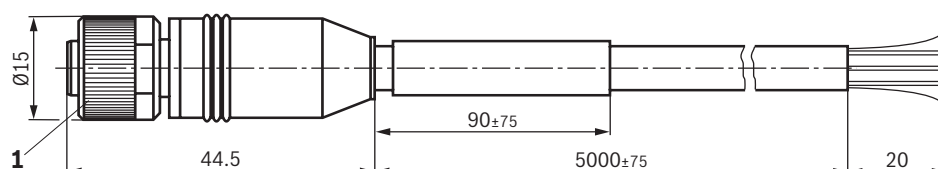
Technical data (For applications outside these parameters, please consult us!)

Mating connector	
Design	M12
Ambient temperature	▶ Fixed installation °C -25 ... +80 ▶ Flexible °C -5 ... +80
Protection class according to EN 60529	IP67 (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

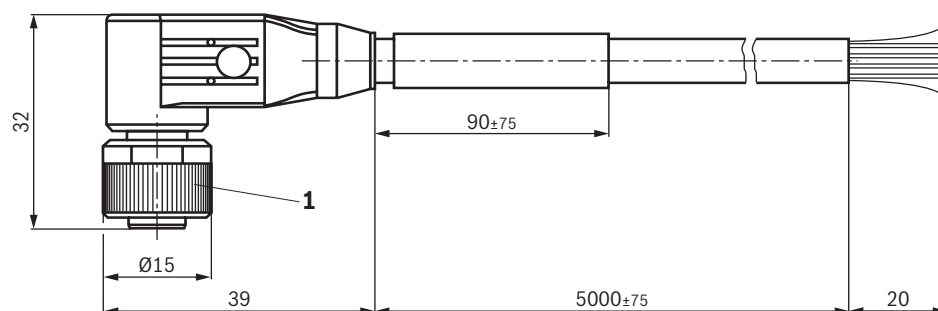
Dimensions

(dimensions in mm)

M12 x 1, straight, CABLE SET VT-SSPA1-1X/M12/1/V00



M12 x 1, angled, CABLE SET VT-SSPA1-1X/M12/2/V00



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

38/44 Mating connectors and cable sets

Mating connectors

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

Ordering code

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

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

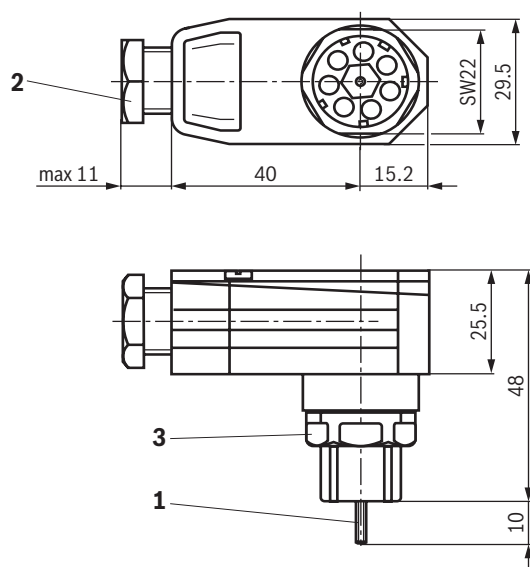
Mating connector	
Design	without designation (see "Dimensions")
Ambient temperature	°C -40 ... +90
Protection class according to EN 60529	IP65 (with mating connector mounted and fitted)
Number of poles	6 + PE
Terminal area for line diameter	mm 7 ... 9
Maximum wire cross-section	mm ² 1.5
Type of connection	Crimping connection (crimping contact included in the scope of delivery)
Standard	DIN EN175201-804
Certification/conformity	-
Derating ¹⁾	<div>▶ 10 A °C max. +40</div> <div>▶ 4 A °C max. +65</div>

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

Dimensions

(dimensions in mm)

7PZ6



- 1 Mounting screw M3,
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 Coupling nut SW22,
Tightening torque $M_A = 1.0 \dots 1.5 \text{ Nm}$

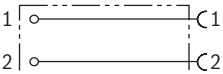
Accessories (not included in the scope of delivery)

Hirschmann	Order number
Crimping pliers	XCZ 0701
Ejection tool	XWA 164

Mating connectors

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

Ordering code

Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I</i> _{max}	Color	Braided wire external diameter	Material number	Circuit diagram
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	

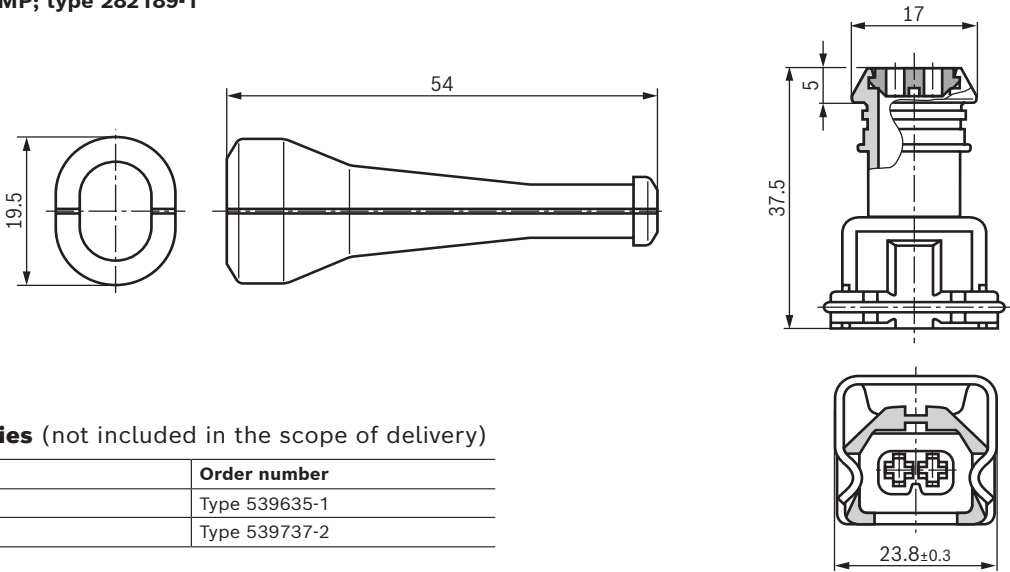
Technical data (For applications outside these parameters, please consult us!)

Mating connector	
Design	without designation (see "Dimensions")
Ambient temperature range	°C -20 ... +125
Protection class according to EN 60529	IP66A (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

Dimensions

(dimensions in mm)

Housing AMP; type 282189-1



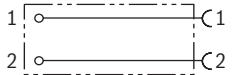
Accessories (not included in the scope of delivery)

TYCO	Order number
Basic pliers	Type 539635-1
Die	Type 539737-2

Mating connectors

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

Ordering code

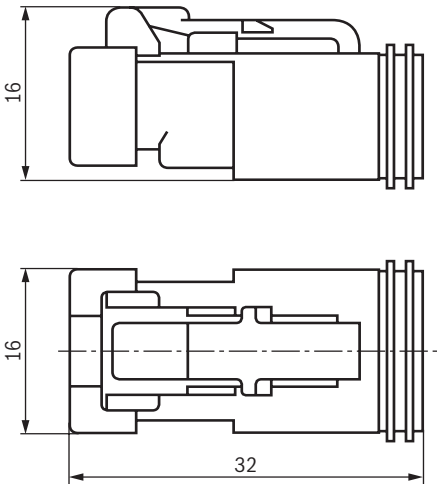
Short designation	Voltage (V) DC / AC U	Current (A) I _{max}	Color	Wire cross-section	Material number	Circuit diagram
2P DT06 K40AWG14	10 ... 32 V	5 A	gray	AWG 14-16	R900733451	
2P DT06 K40AWG16	10 ... 32 V	5 A	gray	AWG 16-18	R901017847	

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

Mating connector	
Design	without designation (see "Dimensions")
Connector housing	DT06-2S-CE01
Ambient temperature range	°C -20 ... +125
Protection class according to EN 60529	IP69K (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

Dimensions

(dimensions in mm)



Accessories (not included in the scope of delivery)

Deutsch	Order number
Crimping tool	Type HDT-4800