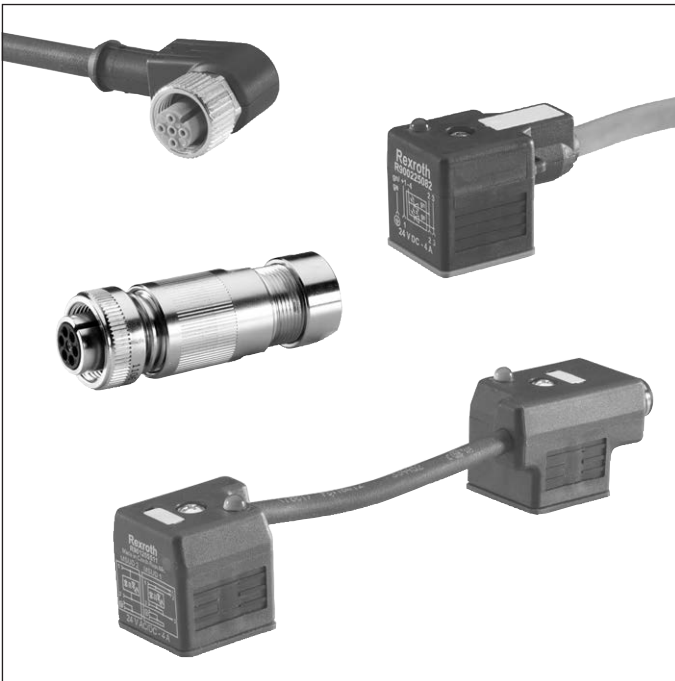


## Mating connectors and cable sets for valves and sensors in hydraulics










### 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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<b>Cable sets</b> 2-pole + PE	Without circuitry: Z4		9 ... 10
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<b>Cable sets</b> 2-pole + PE	ATEX version DS2513...ATEX		11 ... 12
<b>Connector switching amplifier</b> with pulse width modulation (PWM) for controlling on/off valves  Type VT-SSBA1	Switching amplifier for fast switching, energy saving and reduction of the coil temperature:		see data sheet 30362
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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> <sub>max</sub>	Color	Line fitting	Material number	Circuit diagram
Without circuitry, standard						
Z4	12 ... 240 V	16 A <sup>4)</sup>	gray	M16 x 1.5	R901017010	
	12 ... 240 V	16 A <sup>4)</sup>	black	M16 x 1.5	R901017011	
Z45	12 ... 240 V	16 A <sup>4)</sup>	brown	NPT 1/2"	R900004823	
	12 ... 240 V	16 A <sup>4)</sup>	black	NPT 1/2"	R900011039	
With indicator light						
Z5L	12 ... 240 V	4 A <sup>4)</sup>	black	M16 x 1.5	R901017022	
Z55L	12 ... 240 V	4 A <sup>4)</sup>	black	NPT 1/2"	R900057453	
With indicator light and Z-diode-suppressor						
Z5L1	24 V ±10% <sup>1)</sup>	4 A <sup>4)</sup>	black	M16 x 1.5	R901017026	
With indicator light and protective diode						
Z5L2	24 V ±10% <sup>2)</sup> DC only	3 A <sup>4)</sup>	black	M16 x 1.5	R901017027	
With rectifier						
RZ5	80...240 V <sup>3)</sup>	1.5 A <sup>4)</sup>	black	M16 x 1.5	R901017025	
RZ55	80...240 V <sup>3)</sup>	1.5 A <sup>4)</sup>	black	NPT 1/2"	R900842566	
With indicator light and rectifier						
RZ5L	80...240 V <sup>3)</sup>	1.5 A <sup>4)</sup>	black	M16 x 1.5	R901017029	
RZ55L	80...240 V <sup>3)</sup>	1.5 A <sup>4)</sup>	black	NPT 1/2"	R900057455	

<sup>1)</sup> Switch-off voltage peak limitation to 55 V

<sup>2)</sup> Switch-off voltage peak limitation to 1 V

<sup>3)</sup> Switch-off voltage peak limitation to 2 V

<sup>4)</sup> Please observe the temperature range and/or derating (see technical data)

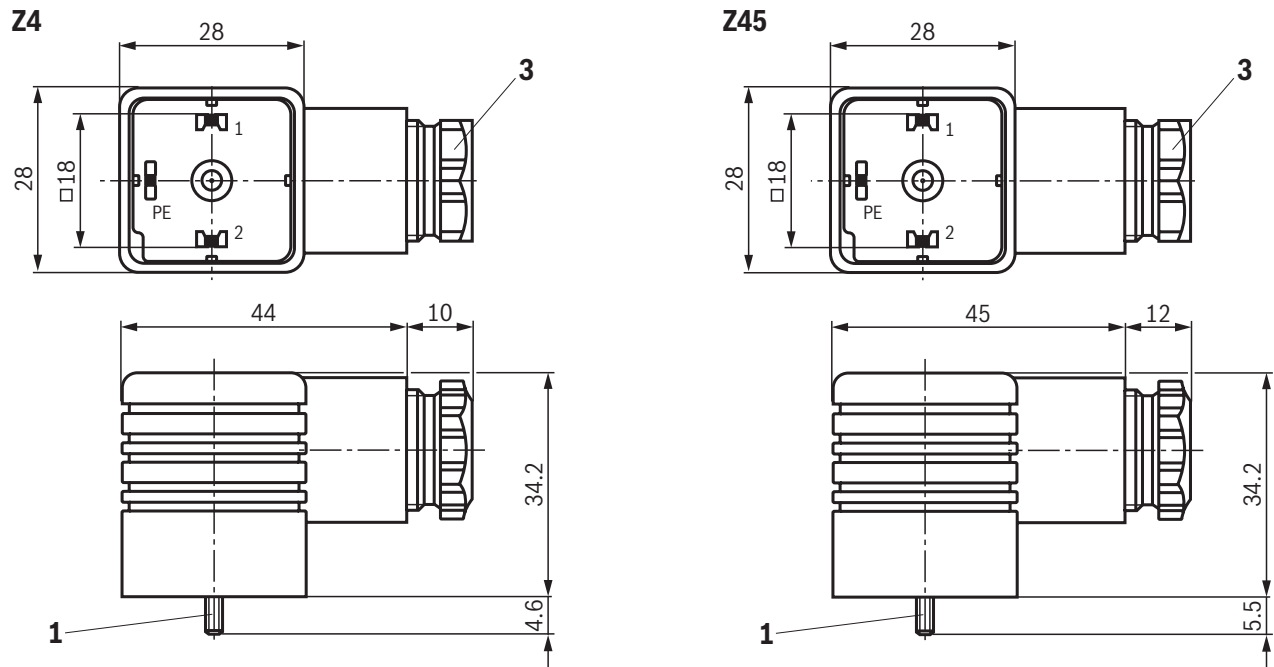
**Technical data** (For applications outside these parameters, please consult us!)

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 <sup>2</sup>		1.5 <sup>1)</sup>	
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	

<sup>1)</sup> 2.5 mm<sup>2</sup> with special wire end ferrule clamp (e.g. Knipex 975314 or Weidmüller PZ 6/5)

**Dimensions**

(dimensions in mm)

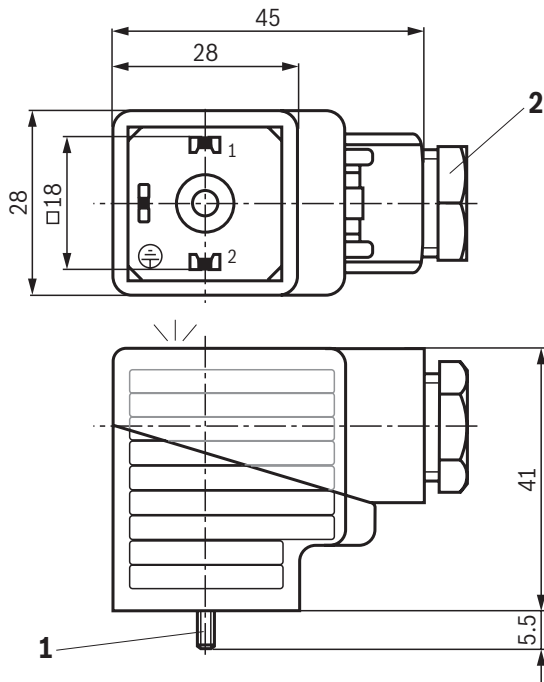


- 1 M3 mounting screw, tightening torque  $M_A = 0.5 \text{ Nm}$
- 2 Line fitting M16 x 1.5,  
Tightening torque  $M_A = 1.5 \dots 2.5 \text{ Nm}$  (4.5 ... 10 mm)
- 3 Line fitting NPT 1/2",  
Tightening torque  $M_A = 2.5 \dots 3.75 \text{ Nm}$  (4 ... 11 mm)

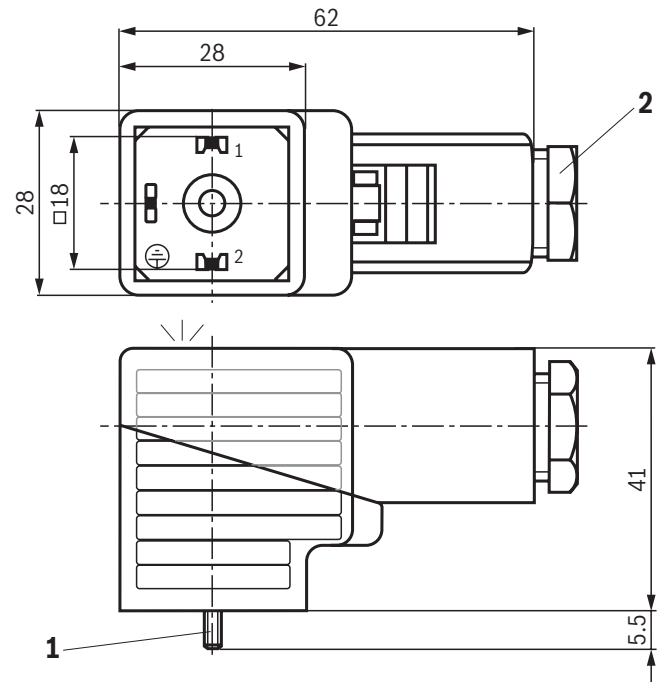
## Dimensions

(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> <sub>max</sub>	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 <sup>1)</sup>	4 A	black	R900032021	R900032015	R900217138	

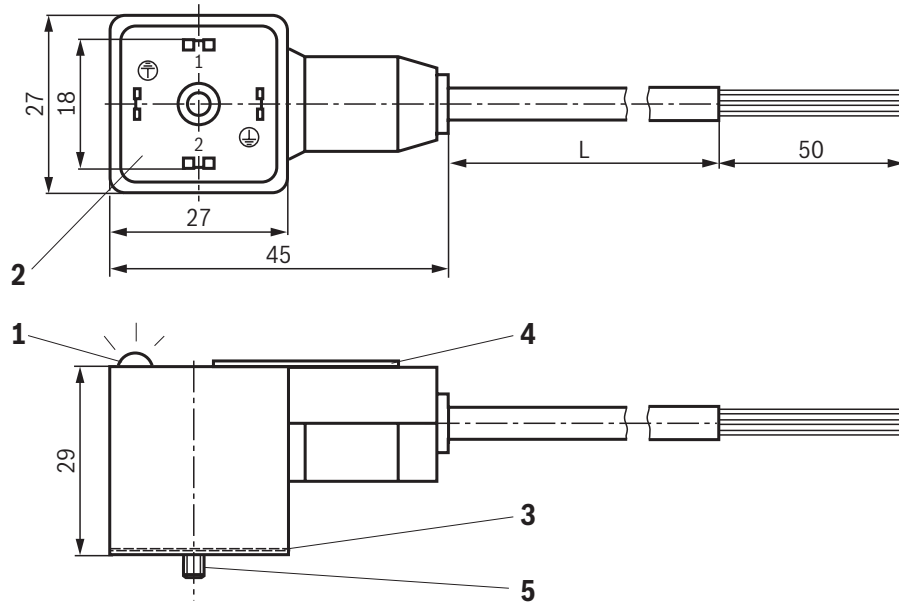
<sup>1)</sup> Switch-off voltage peak limitation to 55 V

### 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 <sup>2</sup> 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

## 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> <sub>max</sub>	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 <sup>2</sup> 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:

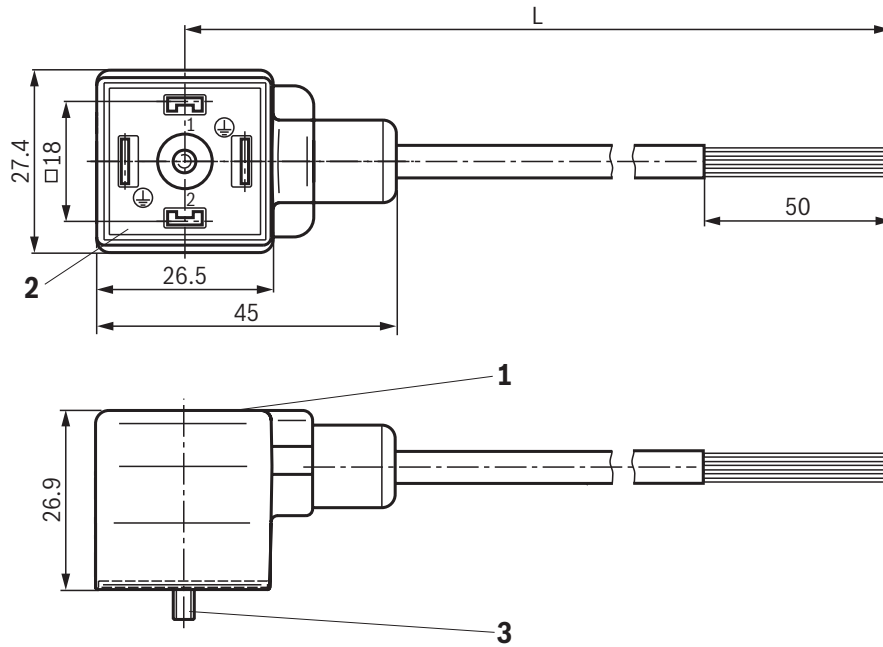
The enclosed NBR seal must be used in connection with Rexroth valves.

Enclosed:

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

## 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 <sub>max</sub>	Cable length	Material number	Circuit diagram
<b>Cable sets with M12 x 1 connector</b>					
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% <sup>1)</sup>	4 A	-	R901205511	
<b>Cable sets with free line end</b>					
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	

<sup>1)</sup> Switch-off voltage peak limitation to ≤50 V

**Ordering code:** for directional valves type WE, NG10

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

<sup>1)</sup> Switch-off voltage peak limitation to ≤50 V

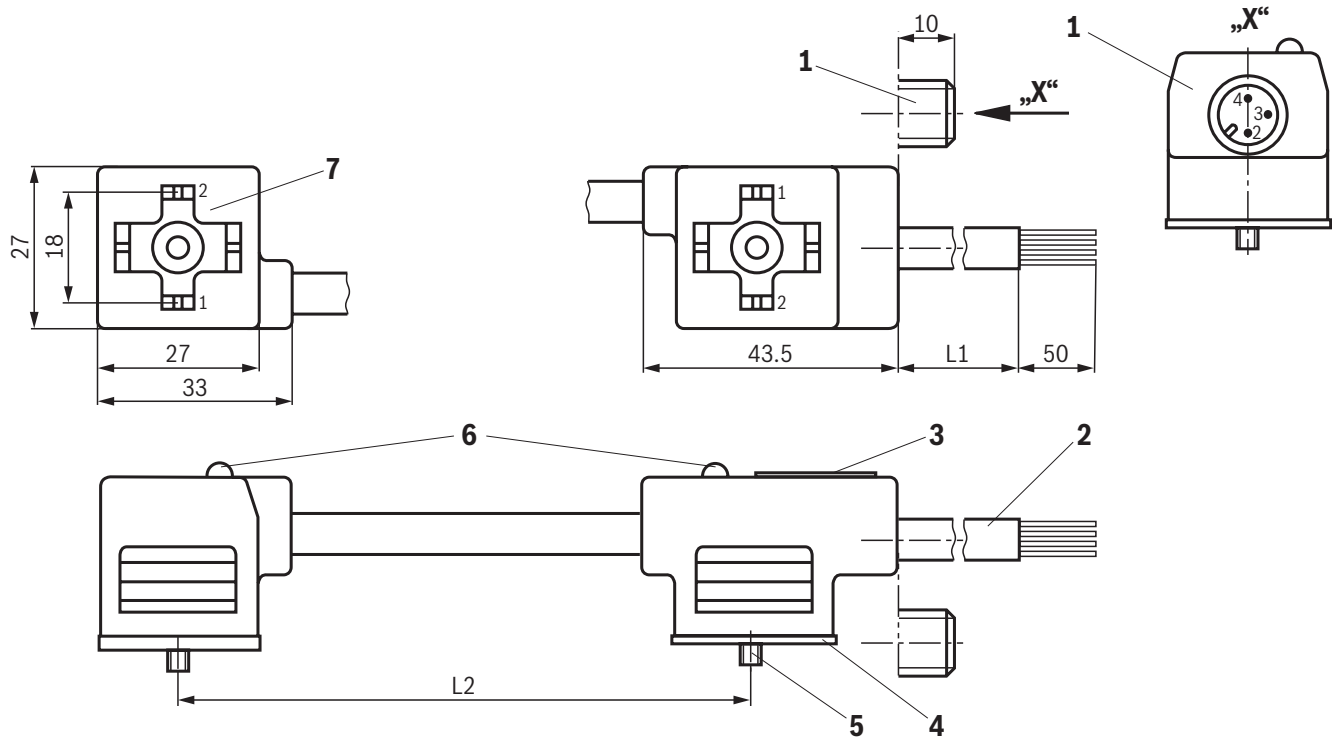
<sup>2)</sup> Please observe the temperature range and/or derating (see technical data)

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

<b>Mating connector</b>			
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
<b>Connection line</b>			
Type			PUR-JZ black
Connection line wire cross-section		mm <sup>2</sup>	3 x 0.75
Wire cross-section of the breakout cable	▶ Z61	mm <sup>2</sup>	4 x 0.75
	▶ Z61L	mm <sup>2</sup>	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

## 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 Contacting 0° (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

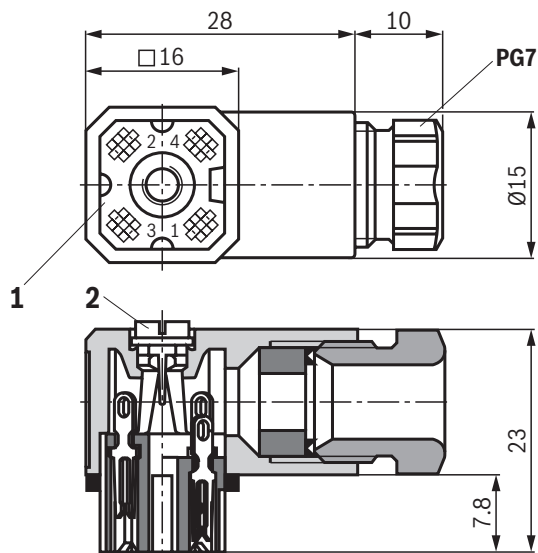
Short designation	Voltage (V) DC / AC $U$	Current (A) $I_{max}$	Color	Line fitting	Material number	Circuit diagram
G4W1F	50 V	6 A	black	PG 7	R900023126	

### 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	4
Terminal area for line diameter	mm 4 ... 7.5
Maximum wire cross-section	mm <sup>2</sup> 0.14 ... 0.5
Type of connection	Soldered joint
Standard	DIN VDE0627/IEC61984
Certification/conformity	VDE
Derating	-

### 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 (V) DC / AC <i>U</i>	Current (A) <i>I</i> <sub>max</sub>	Line fitting	Material number	Circuit diagram
6-pole + PE, plastic version					
7PZ31...K	24 V	3 A <sup>1)</sup>	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	

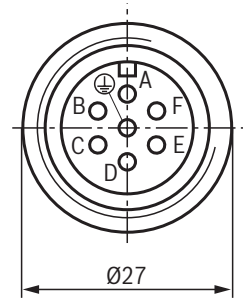
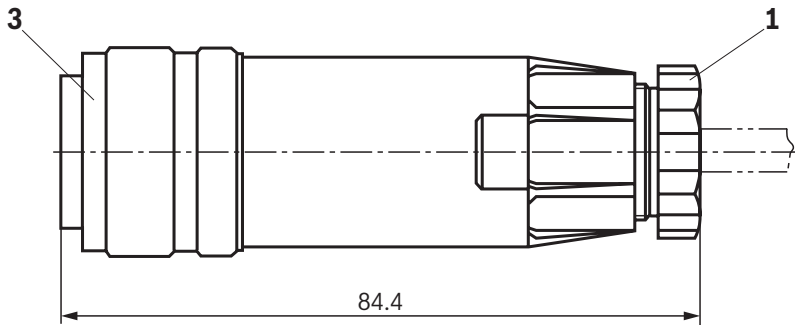
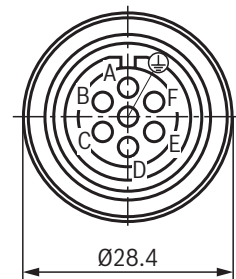
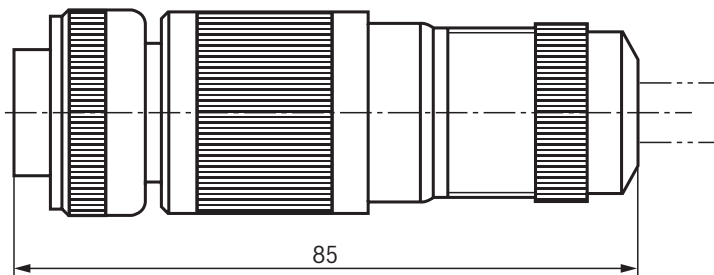
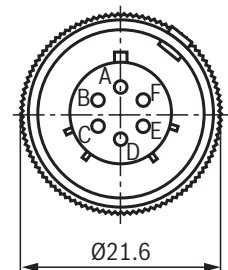
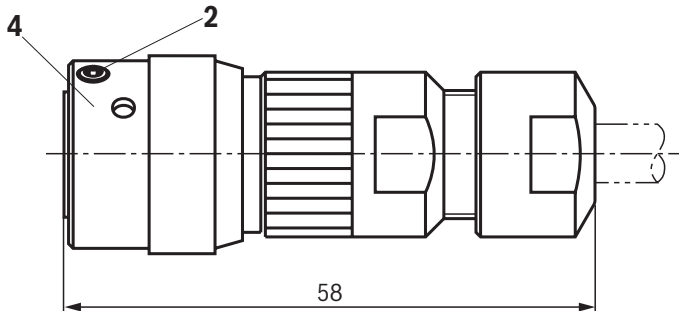
<sup>1)</sup> Please observe the temperature range and/or derating (see "Technical data").

### 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 <sup>2</sup>	0.5 ... 1.5 mm <sup>2</sup>
	▶ 6P KPTC6	mm <sup>2</sup>	0.4 ... 0.75 mm <sup>2</sup>
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 <sup>2</sup>	°C max. +70
		9 A at 1.5 mm <sup>2</sup>	°C max. +70

**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)

ITT Cannon	Order number
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 (V) DC / AC <i>U</i>	Current (A) <i>I</i> <sub>max</sub>	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	

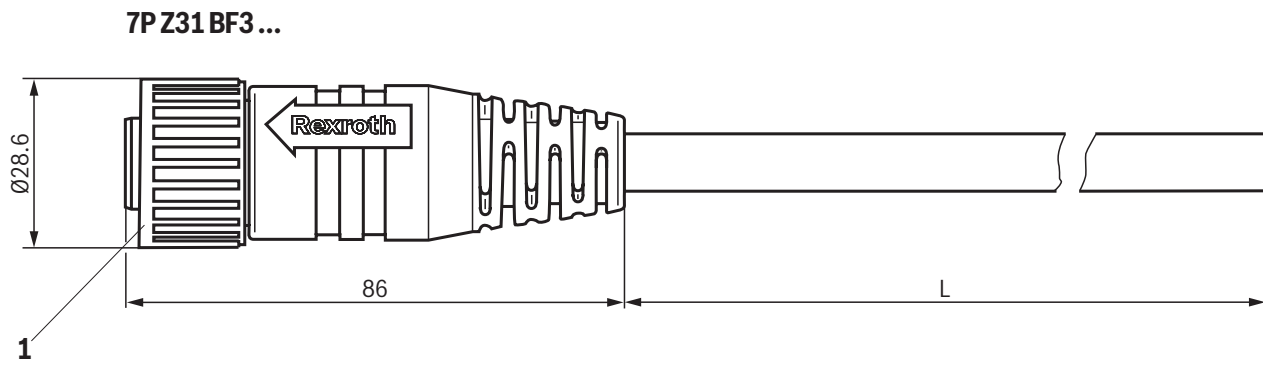
**Technical data** (For applications outside these parameters, please consult us!)

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 <sup>1)</sup>	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 <sup>2</sup>	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	

<sup>1)</sup> 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  $M_A=1 \dots 1.5 \text{ Nm}$

## 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> <sub>max</sub>	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		

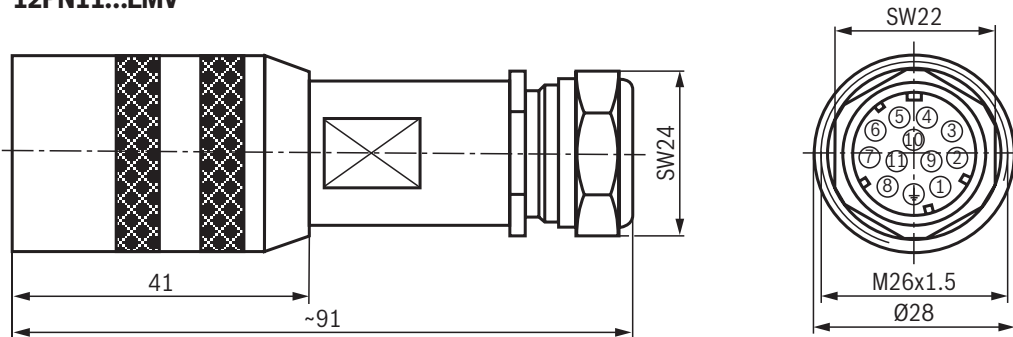
### Technical data (For applications outside these parameters, please consult us!)

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 <sup>2</sup>	0.5 ... 1.5
	▶ 12PN11...2XD8	mm <sup>2</sup>	3 x 0.5 ... 1.5
		mm <sup>2</sup>	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	-		

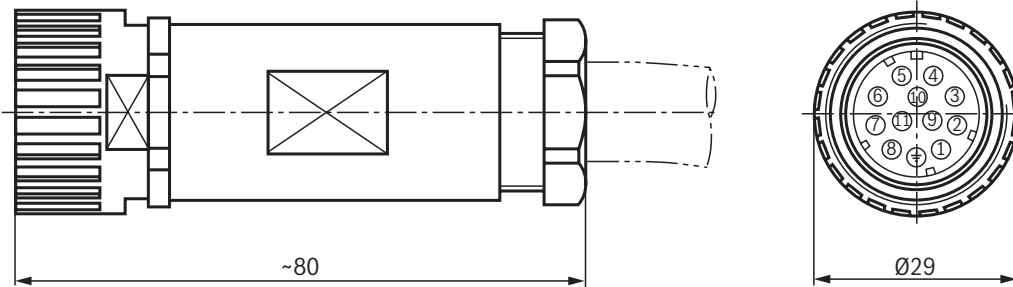
**Dimensions**

(dimensions in mm)

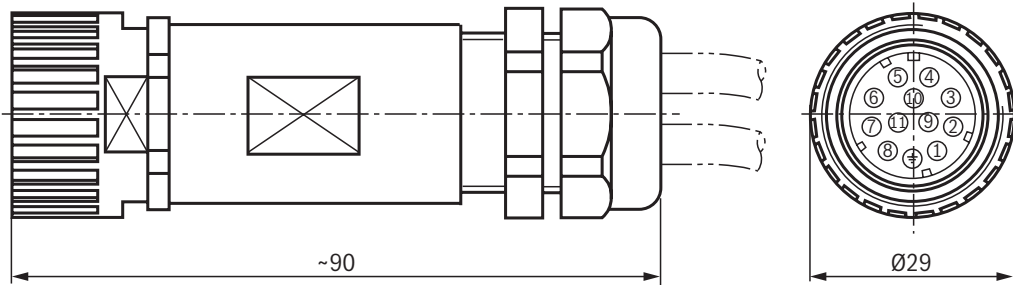
**12PN11...EMV**



**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

**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> <sub>max</sub>	Color	Material number for cable length		Circuit diagram
				5 m	20 m	
12PN11REFS EMC...BG	25 VAC 50 VDC	5 A	gray	R901272854	R901272852	

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

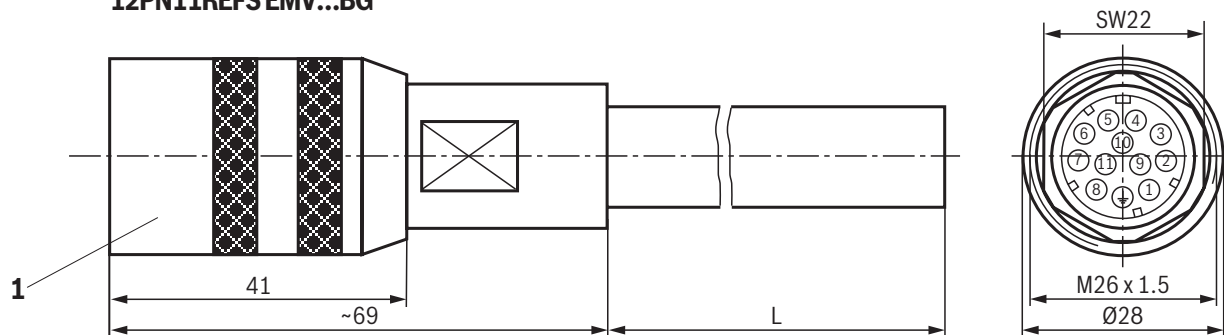
Mating connector		
Design		without designation (see "Dimensions")
Ambient temperature	► Fixed installation	°C -40 ... +80
	► Flexible	°C -20 ... +80
Protection class according to EN 60529		IP65 (with mating connector mounted and fitted)
Number of poles		11 + PE
Standard		DIN 43651
Certification/conformity		RoHS
Derating		-
Connection line		
Type		F-C-PURö-JZ, coolant-resistant, Cu-shielded, increased oil resistance
Wire cross-section	mm <sup>2</sup>	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)

**12PN11REFSEMVBG**



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**

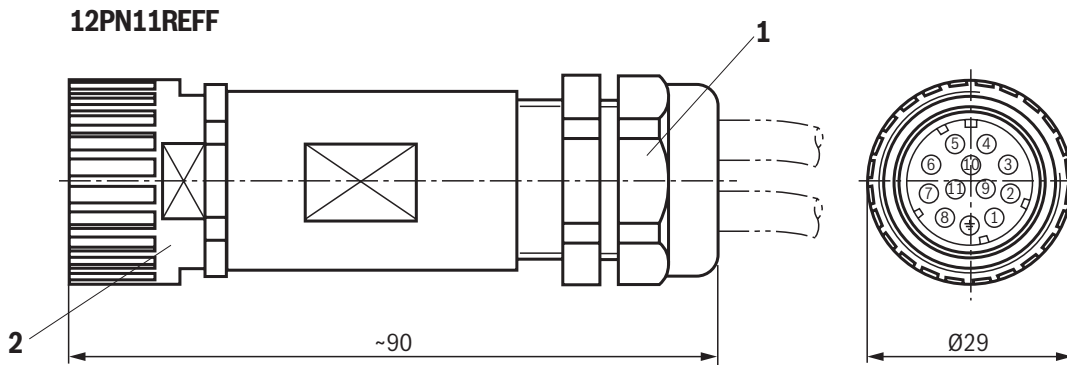
Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I<sub>max</sub></i>	Color	Material number for cable length		Shield	Circuit diagram
				5 m	20 m		
11-pole + PE, plastic version, shielded							
12PN11REFF 2X...	< 50 V	5 A	black	R900032356	R900860399	only data line 10 x 0.14 mm <sup>2</sup>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

**Dimensions**

(dimensions in mm)



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

## 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> <sub>max</sub>	Color	Line fitting	Material number	Circuit diagram
Without circuitry, standard						
Z14	250 V	16 A <sup>1)</sup>	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	

<sup>1)</sup> Please observe the temperature range and/or derating (see "Technical data").

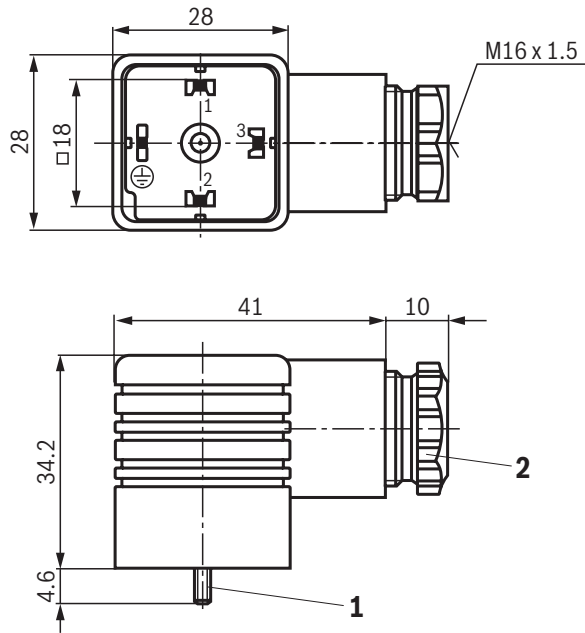
## Technical data (For applications outside these parameters, please consult us!)

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 <sup>2</sup>	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

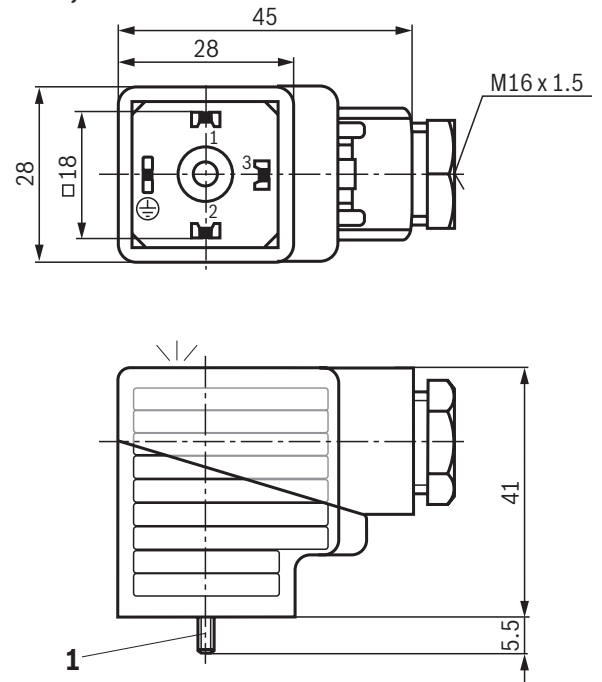
**Dimensions**

(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

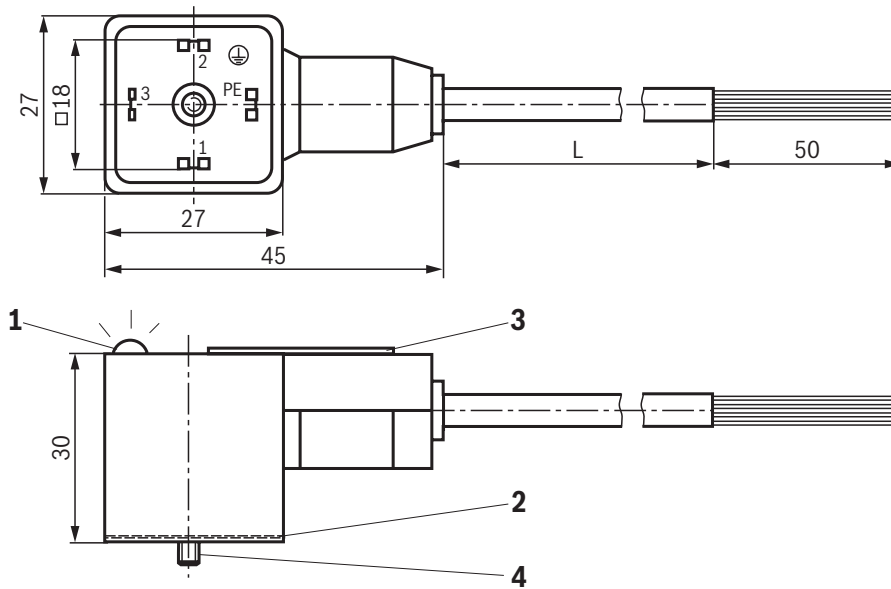
Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I</i> <sub>max</sub>	Color	Material number for cable length		Circuit diagram
				5 m	10 m	
Without circuitry, standard						
Z14	12 ... 240 V	10 A	black	R900058528	R900217139	
With indicator light						
Z14L	24 VDC	4 A	black	R900210635	R900217140	

### 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 mm <sup>2</sup> 4 x 0.75
	▶ Z14L mm <sup>2</sup> 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

**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")

**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<sub>max</sub></i>	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	

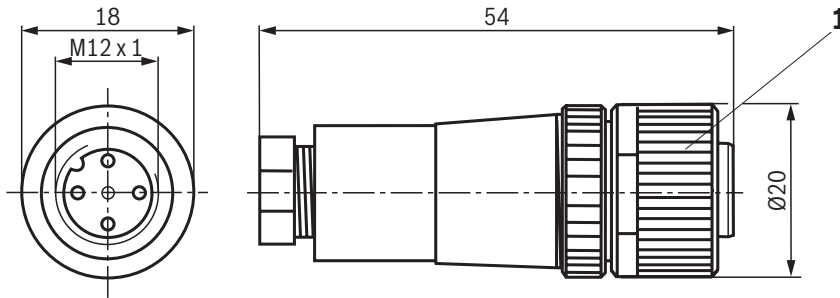
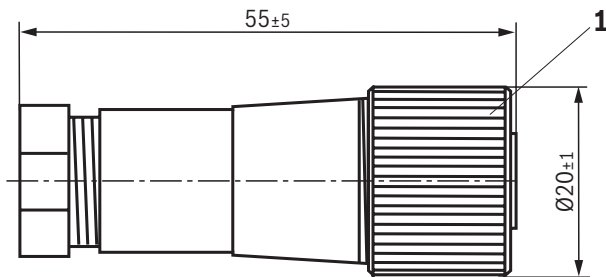
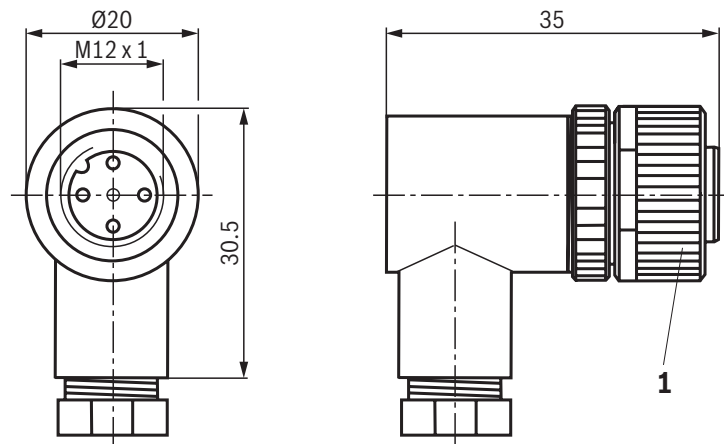
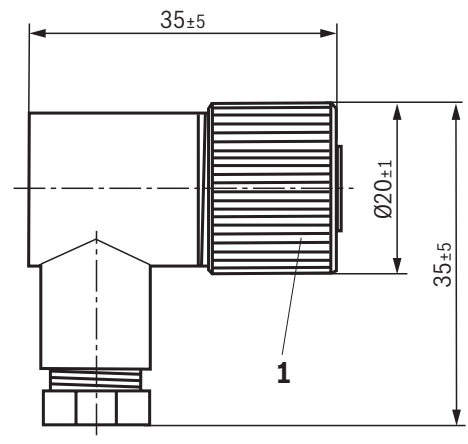
**Technical data** (For applications outside these parameters, please consult us!)

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 <sup>2</sup> 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  $M_A = 0.6 \text{ Nm}$

## 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<sub>max</sub></i>	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 <sup>1)</sup>	250	40	black	–	R900064381	–	R913005668	shielded		
M12 x 1, angled										
4PM12	250	4	black	R900779504	–	R900779503		Cable shielded		
4PZ24 <sup>1)</sup>	250	40	black	–	–	–	R913011722	shielded		

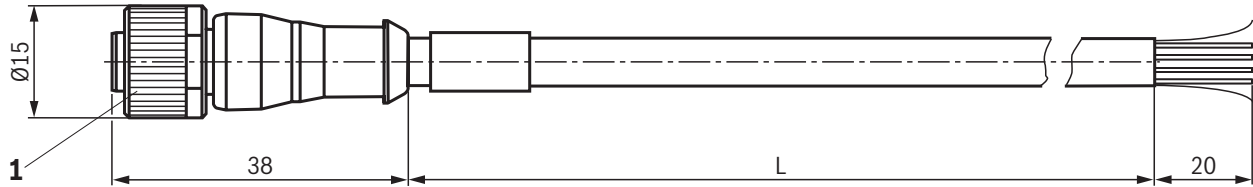
<sup>1)</sup> For version with UL certification up to 30 V.

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

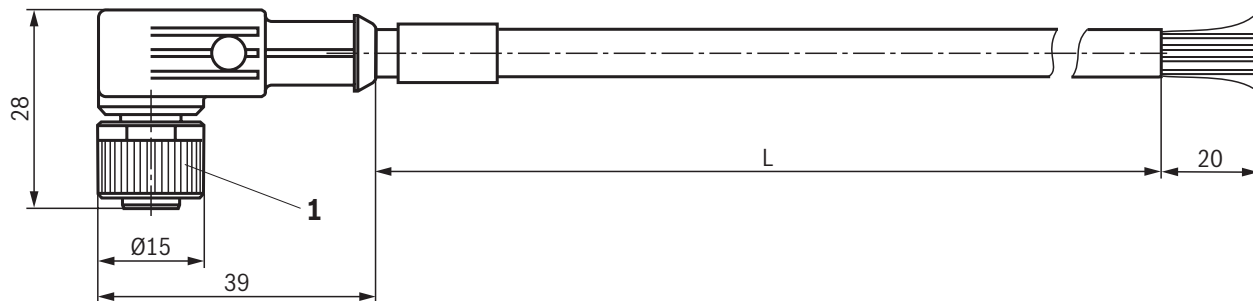
Mating connector	
Design	M12, coding A
Ambient temperature	°C -25 ... +85
Protection class according to EN 60529	IP67 (with mating connector mounted and fitted)
Number of poles	4
Standard	–
Certification/conformity	UL, CSA
Derating	–
Connection line	
Type	PUR-OB, black with approval: UL, CSA
Wire cross-section	mm <sup>2</sup> 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  $M_A = 0.6 \text{ Nm}$

**Cable sets**

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

**Ordering code**

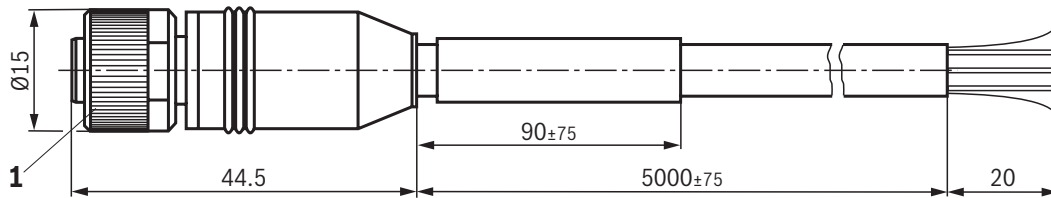
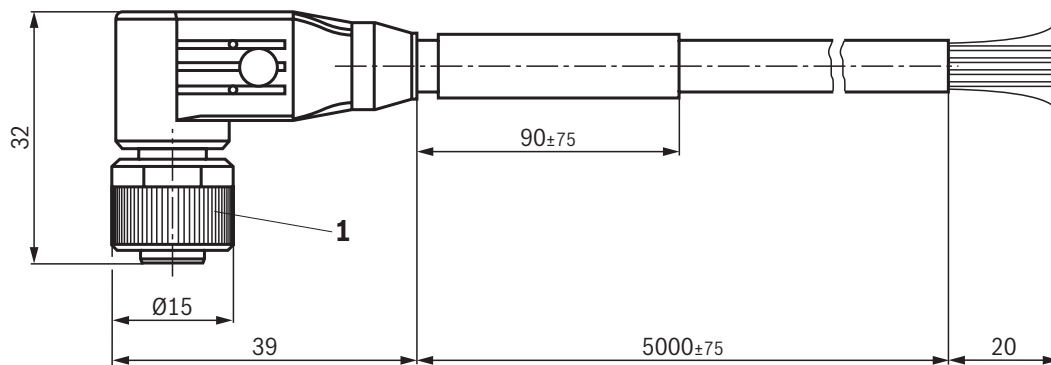
Designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I<sub>max</sub></i>	Color	Material number	Shield	Circuit diagram
M12 x 1, straight  CABLE SET VT-SSPA1-1X/M12/1/V00	60 V	4 A	black	R901241656	Cable and mating connector shielded	
M12 x 1, angled  CABLE SET VT-SSPA1-1X/M12/2/V00	60 V	4 A	black	R901241651		

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

Mating connector	
Design	M12
Ambient temperature	<ul style="list-style-type: none"> <li>▶ Fixed installation °C -25 ... +80</li> <li>▶ Flexible °C -5 ... +80</li> </ul>
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 <sup>2</sup> 4 x 0.75
Line diameter	mm 5.9 ±5%
Bending radius	<ul style="list-style-type: none"> <li>▶ Fixed installation min. 5 x line diameter</li> <li>▶ Flexible min. 10 x line diameter</li> </ul>

**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  $M_A = 0.6 \text{ Nm}$

## 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 <i>U</i>	Current (A) <i>I</i> <sub>max</sub>	Color	Line fitting	Material number	Circuit diagram
6-pole + PE						
7PZ6	250 V	10 A	gray	PG 11	R900002803	

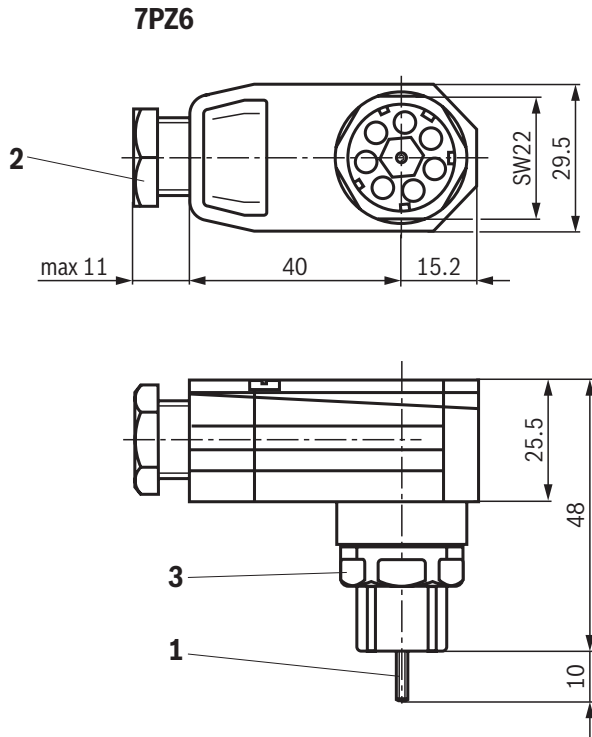
### Technical data (For applications outside these parameters, please consult us!)

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 <sup>2</sup> 1.5
Type of connection	Crimping connection (crimping contact included in the scope of delivery)
Standard	DIN EN175201-804
Certification/conformity	-
Derating <sup>1)</sup>	▶ 10 A                      °C max. +40
	▶ 4 A                         °C max. +65

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

**Dimensions**

(dimensions in mm)



- 1** Mounting screw M3,  
Tightening torque  $M_A = 0.5 \dots 0.6$  Nm
- 2** PG11 line fitting,  
Tightening torque  $M_A = 2.5 \dots 3.8$  Nm
- 3** Coupling nut SW22,  
Tightening torque  $M_A = 1.0 \dots 1.5$  Nm

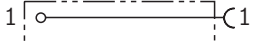
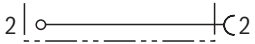
**Accessories** (not included in the scope of delivery)

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<sub>max</sub></i>	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	1 
2P D1.2 JUNIOR	10 ... 32 V	5 A	black	1.2 ... 2.1 mm	R900313533	2 

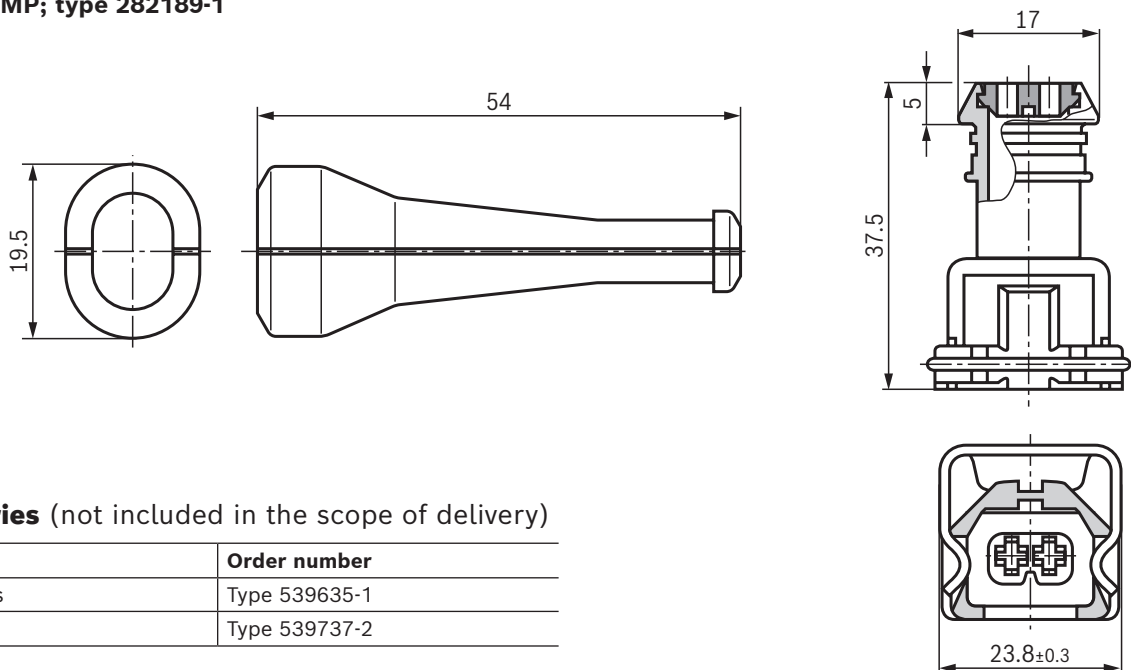
### Technical data (For applications outside these parameters, please consult us!)

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 <sup>2</sup> 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

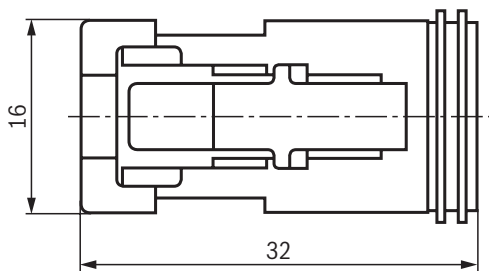
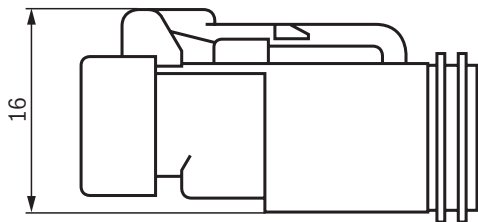
Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I<sub>max</sub></i>	Color	Wire cross-section	Material number	Circuit diagram
2P DT06 K40AWG14	10 ... 32 V	5 A	gray	AWG 14-16	R900733451	
2P DT06 K40AWG16	10 ... 32 V	5 A	gray	AWG 16-18	R901017847	

### 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 <sup>2</sup> 1.3 ... 2.08
	▶ AWG 16-18 mm <sup>2</sup> 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

## Further information

- ▶ Electronics for industrial applications
- ▶ Selection of filters
- ▶ Information on available spare parts

Operating instructions 07602-B  
[www.boschrexroth.com/filter](http://www.boschrexroth.com/filter)  
[www.boschrexroth.com/spc](http://www.boschrexroth.com/spc)

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It must be remembered that our products are subject to a natural process of wear and aging.

## Notes

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