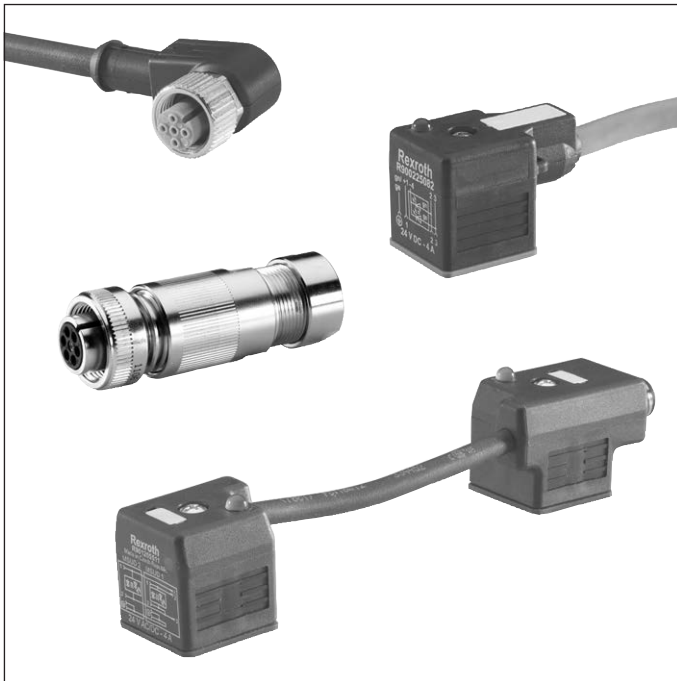


# Mating connectors and cable sets for valves and sensors in hydraulics










## 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	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)

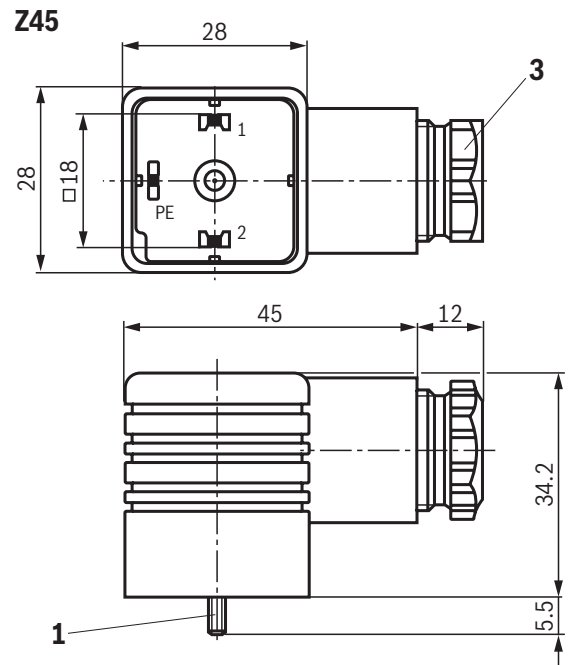
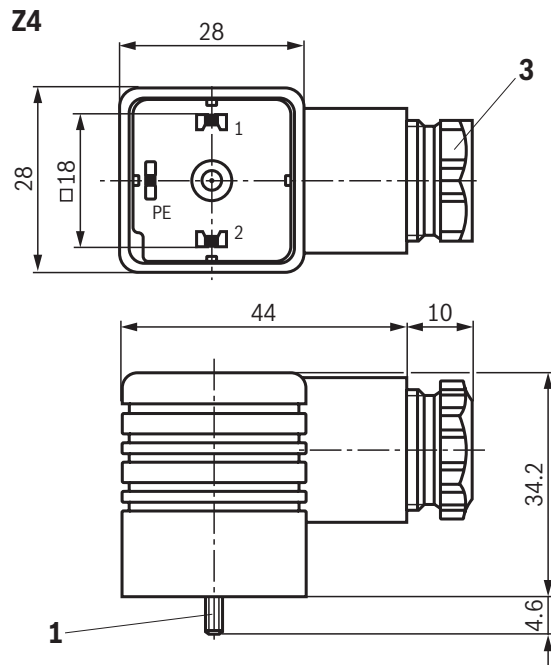
# Technical data (For applications outside these parameters, please consult us!)

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)

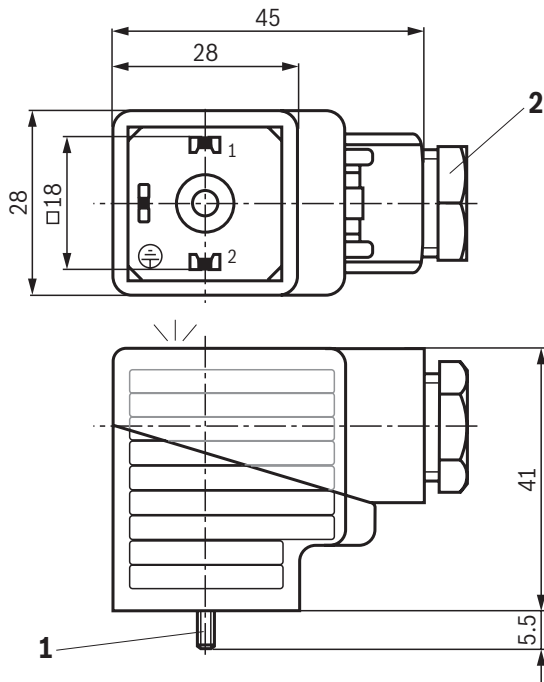


- 1 M3 mounting screw, tightening torque  $M_A = 0.5 \text{ Nm}$
- 2 Line fitting M16 x 1.5, Tightening torque  $M_A = 1.5 \dots 2.5 \text{ Nm}$  (4.5 ... 10 mm)
- 3 Line fitting NPT 1/2", Tightening torque  $M_A = 2.5 \dots 3.75 \text{ Nm}$  (4 ... 11 mm)

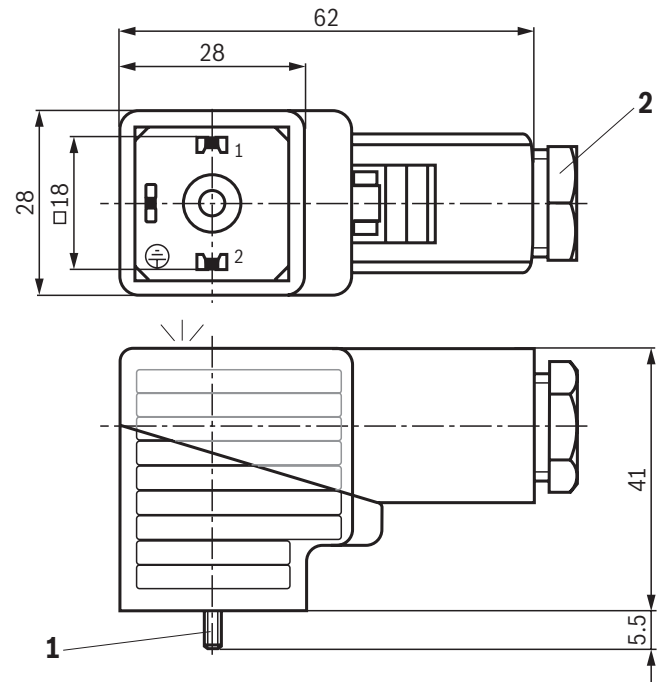
## Dimensions

(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	

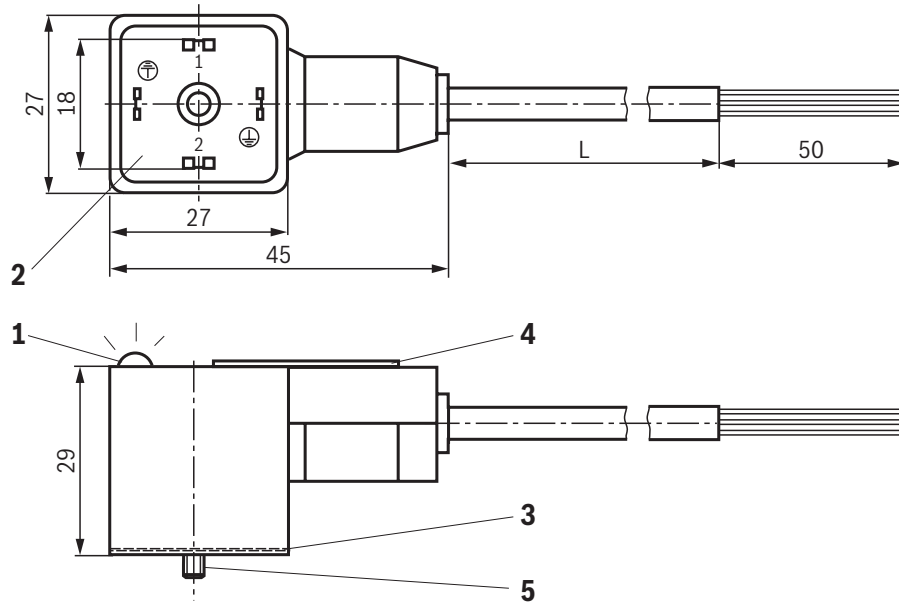
<sup>1)</sup> Switch-off voltage peak limitation to 55 V

### 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		mm²	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:

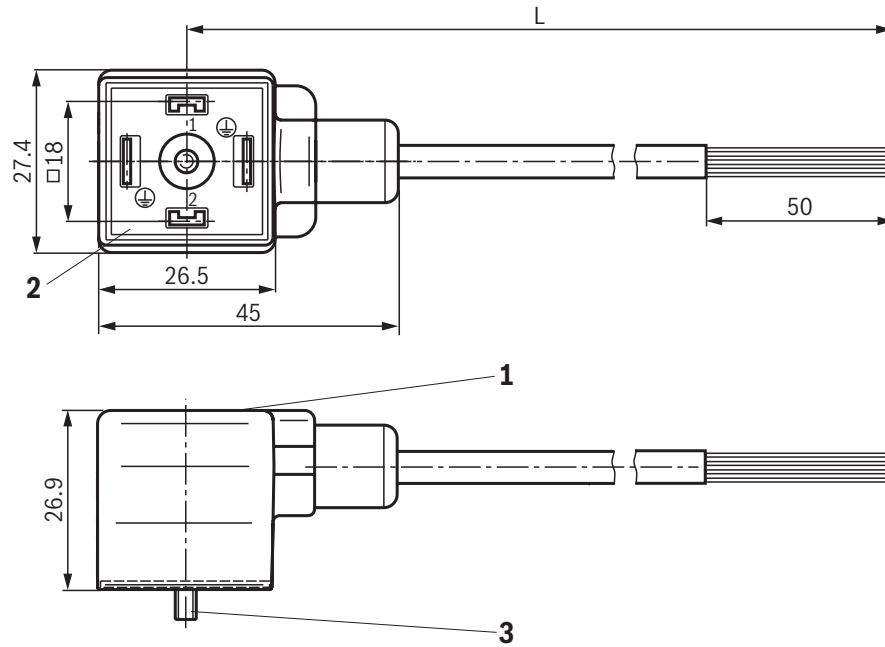
The enclosed NBR seal must be used in connection with Rexroth valves.

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 <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	–	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	
<b>With indicator light, shielded</b>					
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 U	Current (A) I <sub>max</sub>	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 <sup>2)</sup>	–	R901207824	
Cable sets with free line end					
With connector M12 x 1, indicator light and Z-diode-suppressor					
Z60L8	24 V <sup>1)</sup> DC only	4 A <sup>2)</sup>	–	R901207823	
With free line end					
Z61	230 V ±10%	4 A	3 m	R901207826	
	230 V ±10%	4 A	5 m	R901207892	

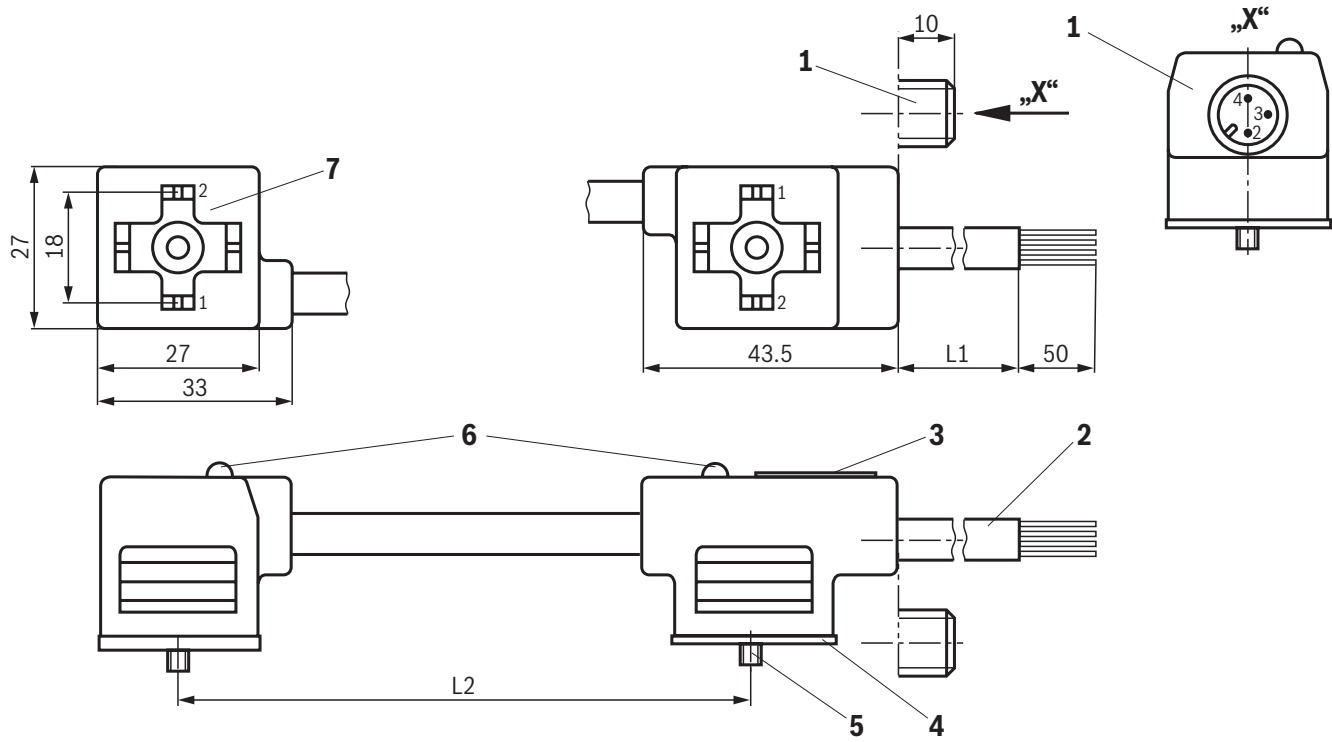
<sup>1)</sup> Switch-off voltage peak limitation to ≤50 V  
<sup>2)</sup> Please observe the temperature range and/or derating (see technical data)

**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)



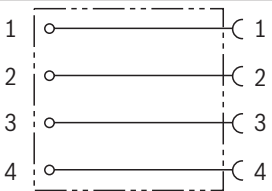
- 1** Version "Z60..."
- 2** Version "Z61..."
- 3** Name plate
- 4** Flat seal (not detachable)
- 5** M3 mounting screw (not detachable), tightening torque  
 **$M_A = 0.4 \text{ Nm}$**
- 6** LED (versions "Z60L" and "Z61L" only)
- 7** Contacting 0° (PE bridged)
- L1** Cable length 3 or 5 m (see "Ordering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

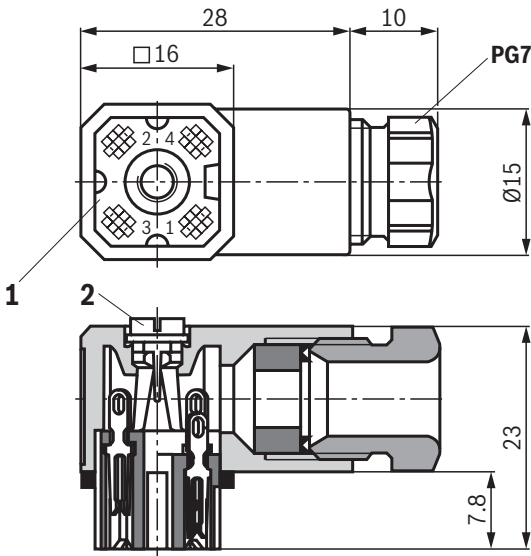
Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I</i> <sub>max</sub>	Color	Line fitting	Material number	Circuit diagram
G4W1F	50 V	6 A	black	PG 7	R900023126	

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<sub>A</sub>** = 0.5 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	

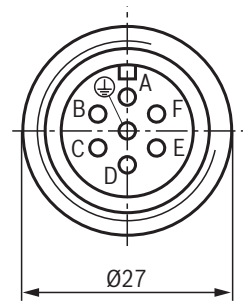
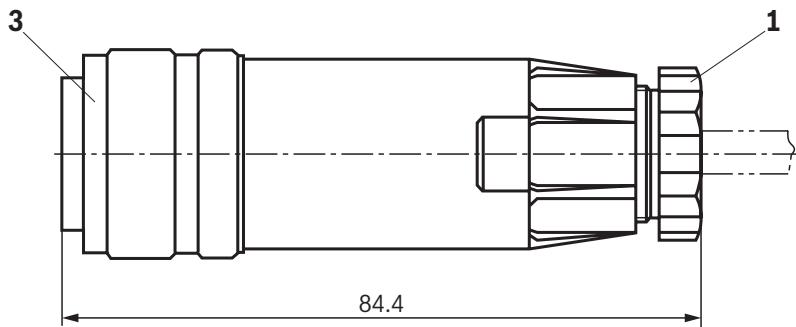
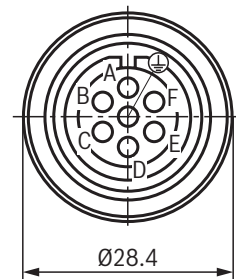
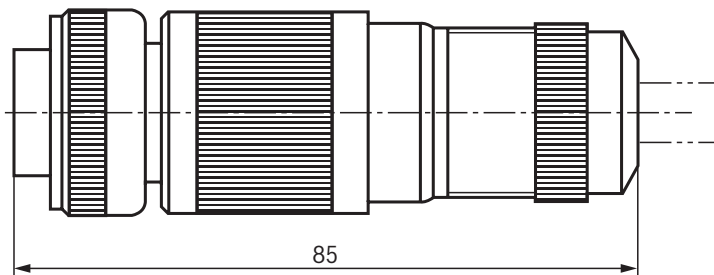
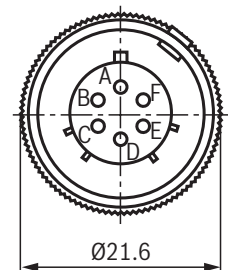
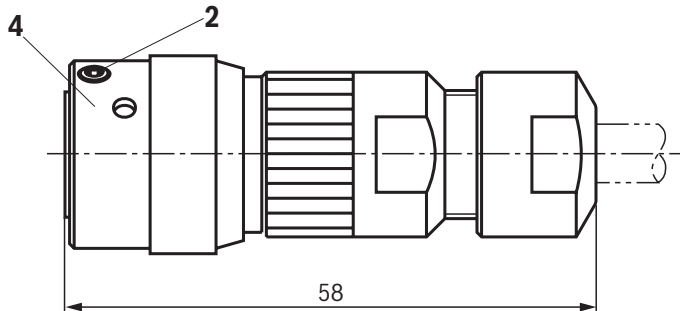
<sup>1)</sup> Please observe the temperature range and/or derating (see "Technical data").

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

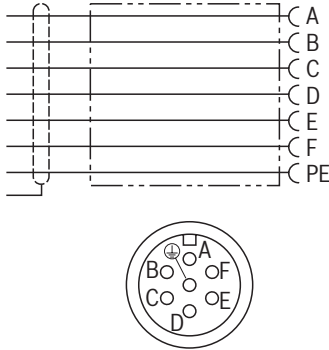
**Accessories** for "6P KPTC6" (not included in scope of delivery)

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	

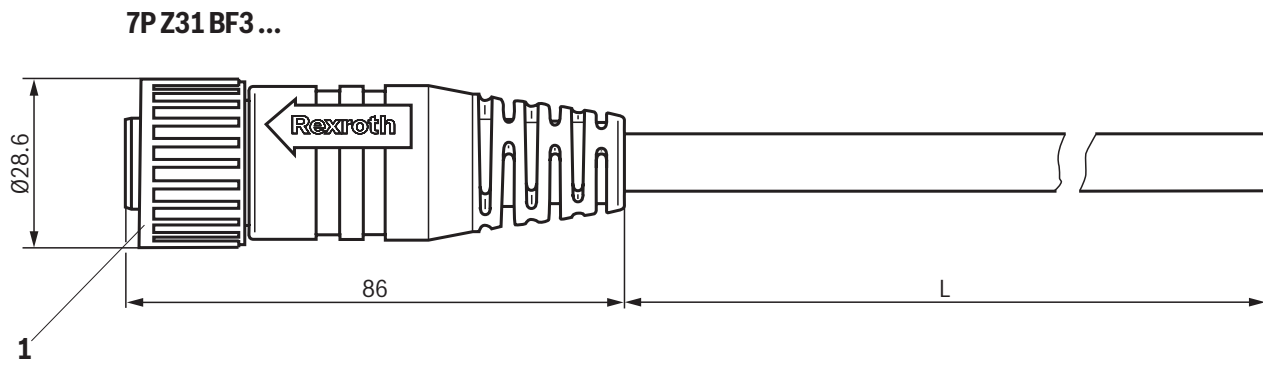
### Technical data (For applications outside these parameters, please consult us!)

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

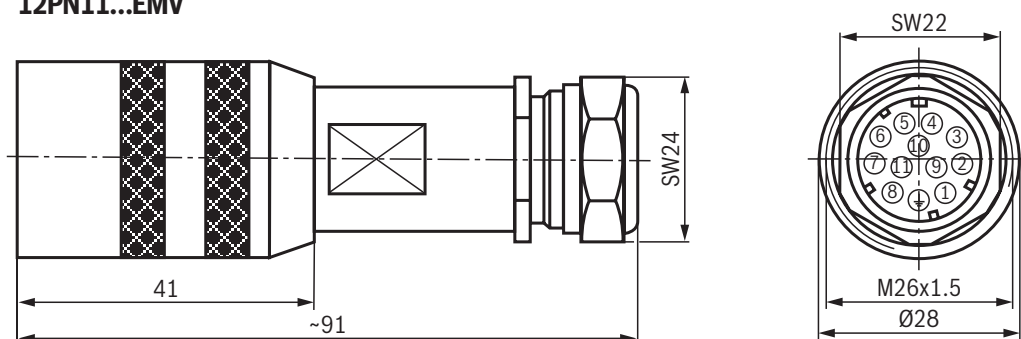
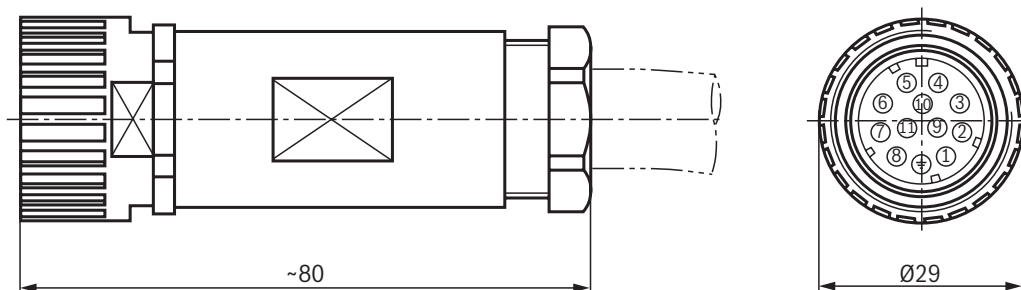
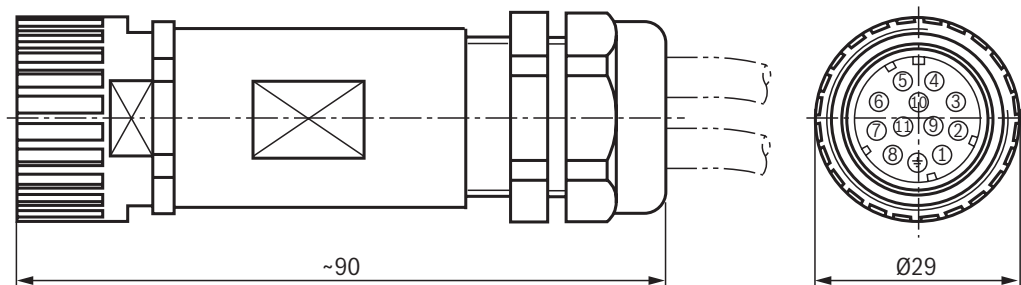
Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I</i> <sub>max</sub>	Line fitting	Material number	Circuit diagram
11-pole + PE, metal version, shielded					
12PN11 ... EMC	24 V	3 A	PG 13.5	R901268000	
11-pole + PE, plastic version					
12PN11	24 V	3 A	PG 16	R900752278	
11-pole + PE, plastic 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	▶ 12PN11, 12PN11... EMC	mm <sup>2</sup>	0.5 ... 1.5
Wire cross-section	▶ 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	
11-pole + PE, metal version, shielded						
12PN11REFS EMC...BG	25 VAC 50 VDC	5 A	gray	R901272854	R901272852	

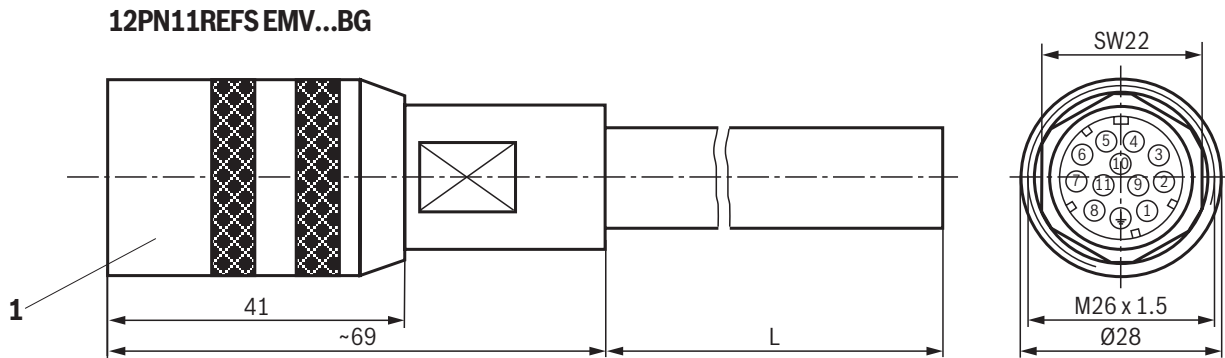
**Technical data** (For applications outside these parameters, please consult us!)

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		mm²	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)

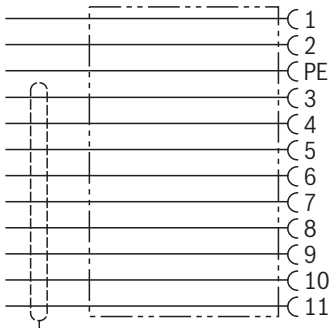
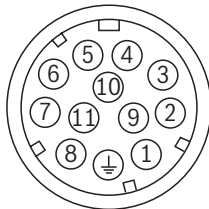


- 1 Coupling nut, tightening torque  $M_A=1 \dots 1.5 \text{ Nm}$

**Cable sets**

For valves with round connector, 11-pole + PE

**Ordering code**

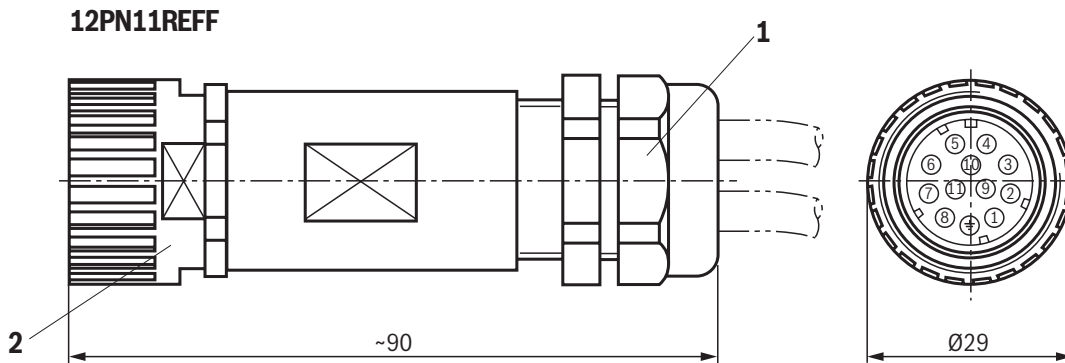
Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I</i> <sub>max</sub>	Color	Material number for cable length		Shield	Circuit diagram
				5 m	20 m		
11-pole + PE, plastic version, shielded							
12PN11REFF 2X...	< 50 V	5 A	black	R900032356	R900860399	only data line 10 x 0.14 mm <sup>2</sup>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

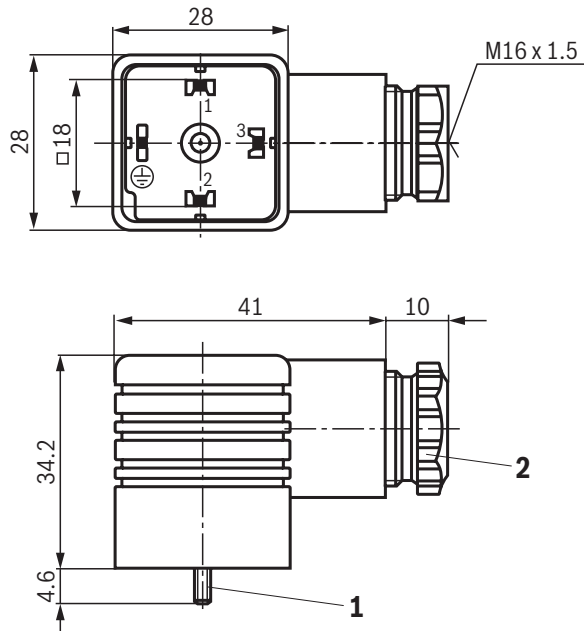
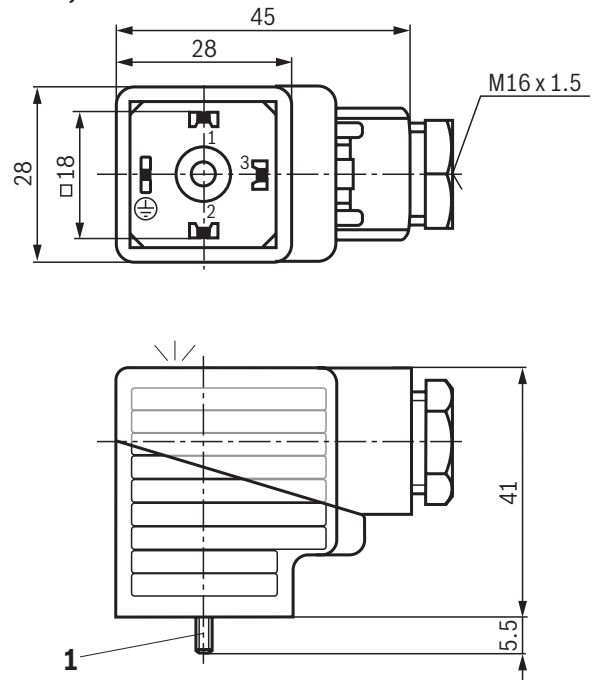
<sup>1)</sup> Please observe the temperature range and/or derating (see "Technical data").

## 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

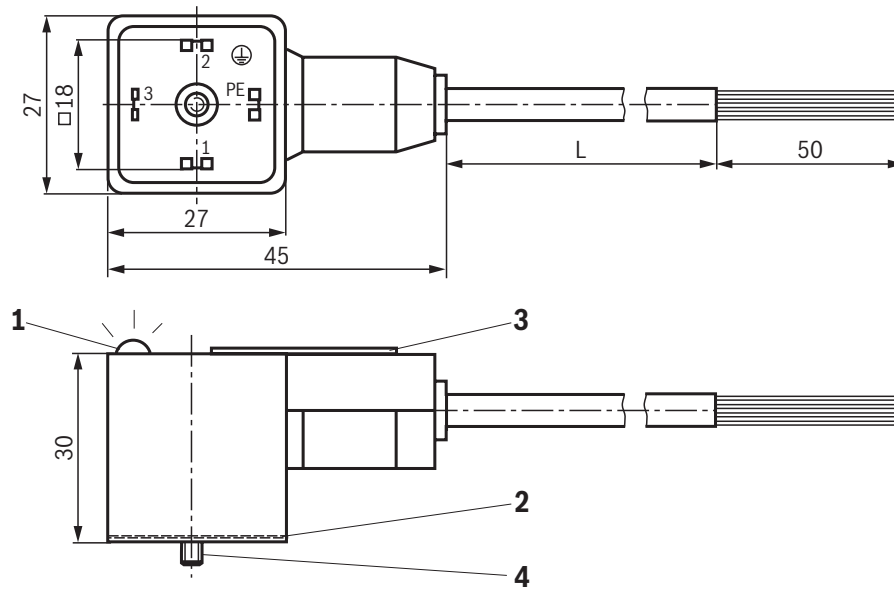
Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I</i> <sub>max</sub>	Color	Material number for cable length		Circuit diagram
				5 m	10 m	
Without circuitry, standard						
Z14	12 ... 240 V	10 A	black	R900058528	R900217139	
With indicator light						
Z14L	24 VDC	4 A	black	R900210635	R900217140	

## 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</i> <sub>max</sub>	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!)

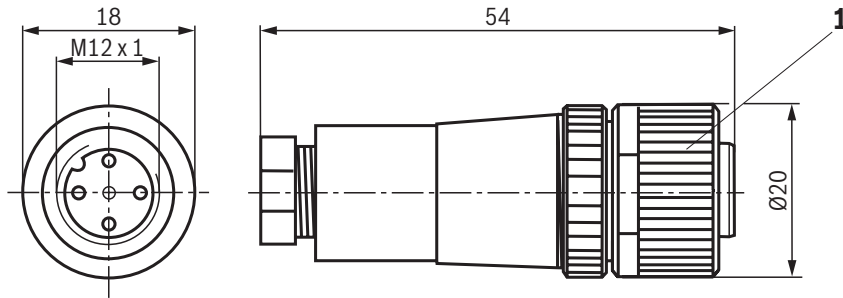
Mating connector			
Design			M12, coding A
Ambient temperature		°C	−25 ... +85
Protection class according to EN 60529 ▶ 4PZ24			IP67 (with mating connector mounted and fitted)
Number of poles			4
Terminal area for line diameter	▶ 4PZ24, PG 7	mm	4 ... 6
	▶ 4PZ24, PG 9	mm	6 ... 8
Maximum wire cross-section		mm <sup>2</sup>	4 x 0.75
Type of connection			Screw connection
Standard			–
Certification/conformity		▶ 4PZ24, straight	UL, CSA
Derating			–



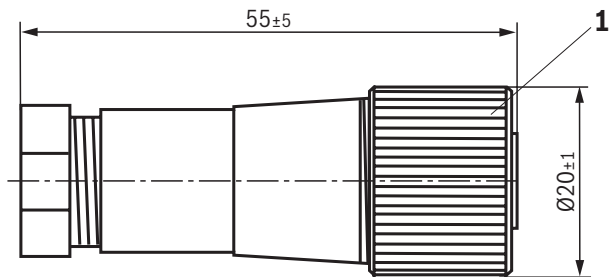
## Dimensions

(dimensions in mm)

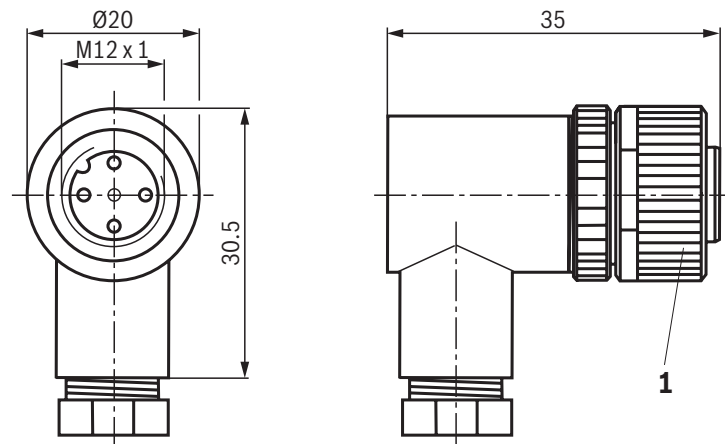
### M12 x 1, straight, 4PZ24, PG 7



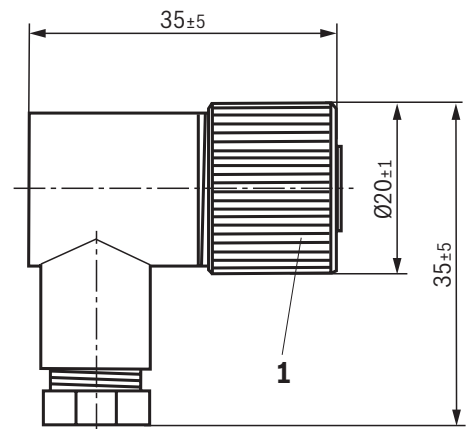
### M12 x 1, straight, 4PZ24, PG 9



### M12 x 1, angled, 4PZ24, PG 7



### M12 x 1, angled, 4PZ24, PG 9

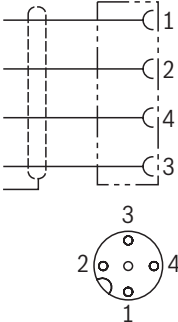


1 Coupling nut, tightening torque  $M_A = 0.6 \text{ Nm}$

## 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</i> <sub>max</sub>	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.

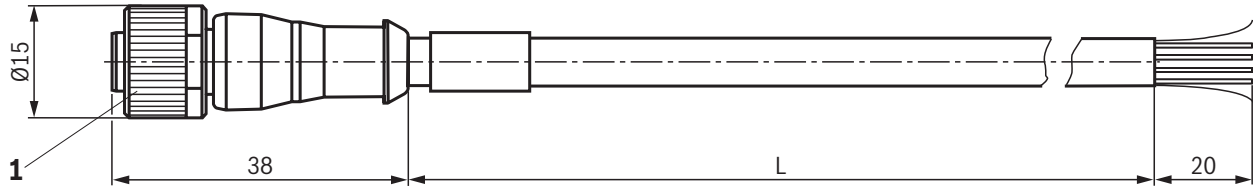
## Technical data (For applications outside these parameters, please consult us!)

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

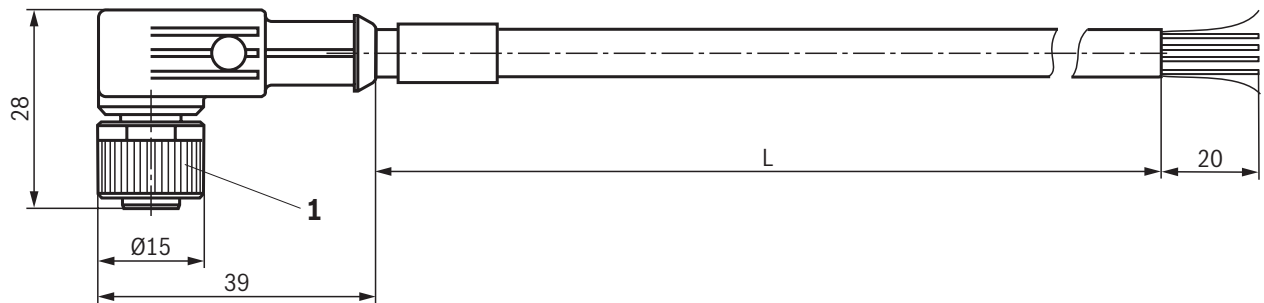
(dimensions in mm)

### 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



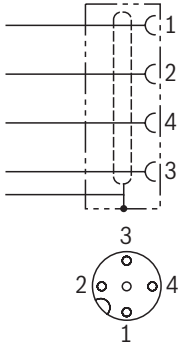
L in m	Material number
2	R900779504
5	R900779503
10	R913005668

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

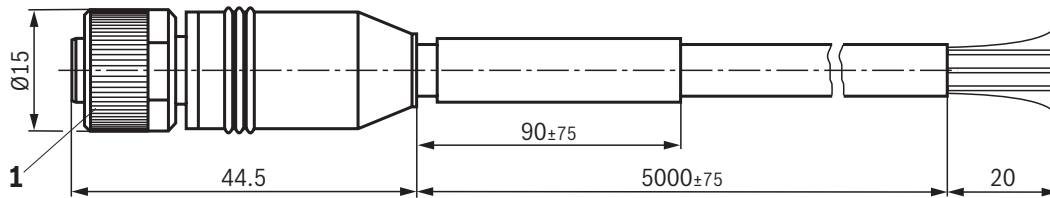
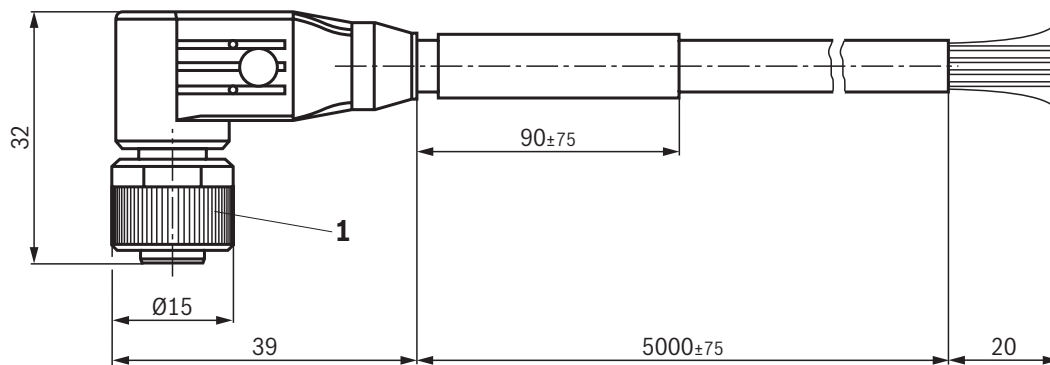
Designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I<sub>max</sub></i>	Color	Material number	Shield	Circuit diagram
M12 x 1, straight						
CABLE SET VT-SSPA1-1X/M12/1/V00	60 V	4 A	black	R901241656	Cable and mating connector shielded	
M12 x 1, angled						
CABLE SET VT-SSPA1-1X/M12/2/V00	60 V	4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

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

Mating connector			
Design		M12	
Ambient temperature	► 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		mm²	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)

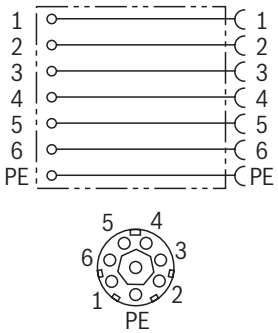
**M12 x 1, straight, CABLE SET VT-SSPA1-1X/M12/1/V00****M12 x 1, angled, CABLE SET VT-SSPA1-1X/M12/2/V00**

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

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	

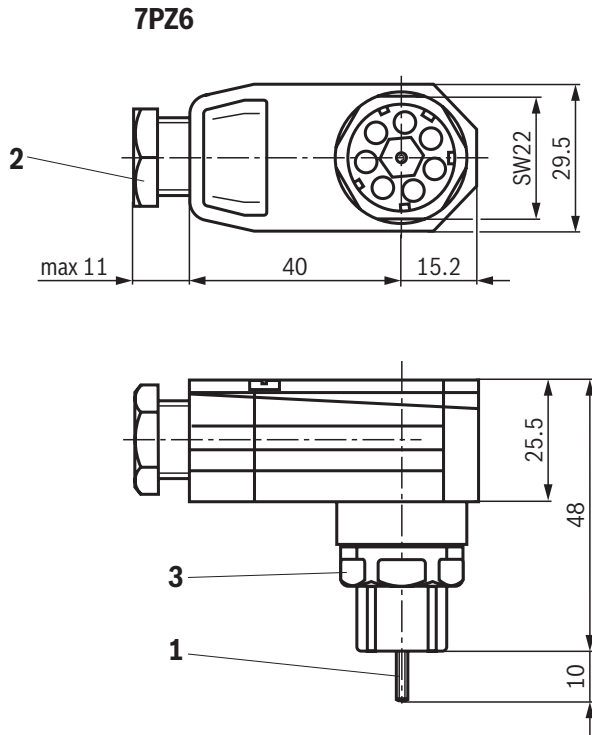
Technical data (For applications outside these parameters, please consult us!)

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  $M_A = 0.5 \dots 0.6 \text{ Nm}$
- 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> <sub>max</sub>	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	

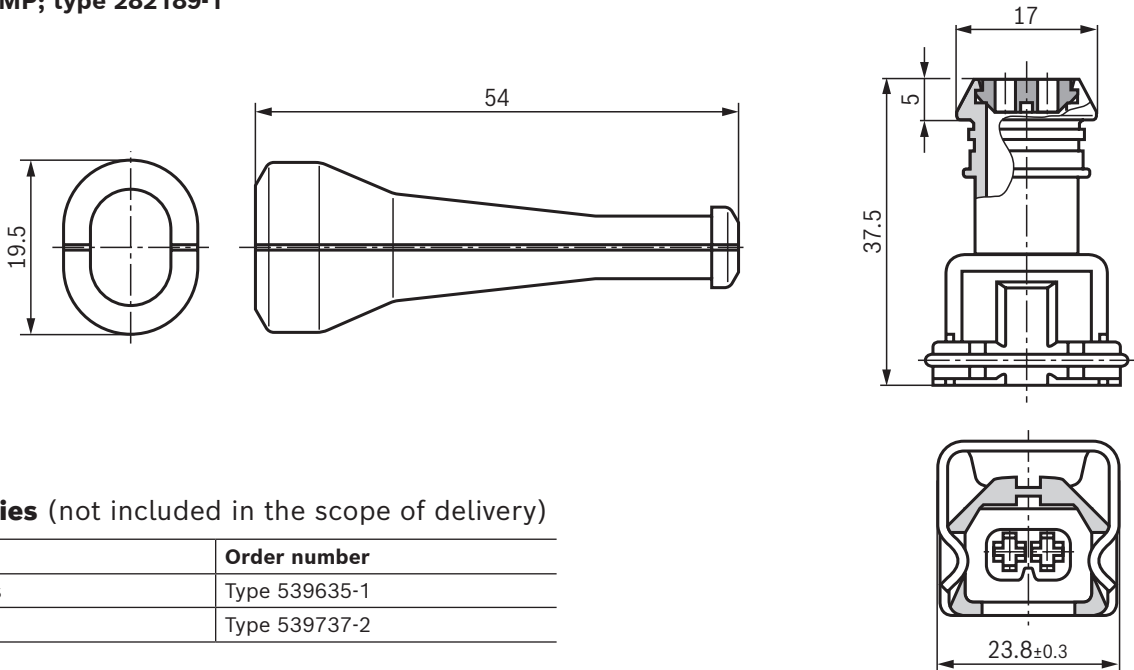
Technical data (For applications outside these parameters, please consult us!)

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 <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)

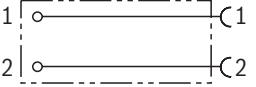
TYCO	Order number
Basic pliers	Type 539635-1
Die	Type 539737-2



Mating connectors

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

Ordering code

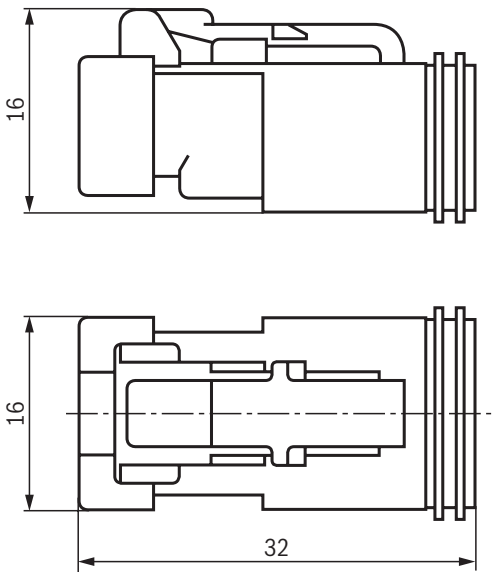
Short designation	Voltage (V) DC / AC <i>U</i>	Current (A) <i>I</i> <sub>max</sub>	Color	Wire cross-section	Material number	Circuit diagram
2P DT06 K40AWG14	10 ... 32 V	5 A	gray	AWG 14-16	R900733451	
2P DT06 K40AWG16	10 ... 32 V	5 A	gray	AWG 16-18	R901017847	

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