RE 08006
Edition: 2025-07
Replaces: 2025-01

rexroth
A Bosch Company

Mating connectors and cable sets for valves, cylinders and sensors in hydraulics

Features

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

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Mating connectors
For valves with "K4" connector, 2-pole + PE, design A

Short designation	Material number	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Derating [2] in °C	Ambient temperature range [1] in °C	Rated surge voltage in V	Protection class according to EN 60529 (when assembled)	Housing color	Seal	Cable gland	Terminal area fitting	Maximum line cross-section in mm²	Conformity	Tightening torque range mounting screw M3 in Nm	Maximum tightening torque contact screw in Nm	Tightening torque cable gland in Nm	
Without circuitry, standard																		
Z4	R901017010	0 ... 250		10	>+80	-30 ... +90	–	IP65	gray	NBR	M16 x 1.5	4 ... 10	1.5	CE [3; 4] VDE SEV	0.5 ... 0.6	0.5	1.5 ... 2.5	◇
	R901017011	0 ... 250		10	>+80	-30 ... +90	–	IP65	black	NBR	M16 x 1.5	4 ... 10	1.5	CE [3; 4] VDE SEV	0.5 ... 0.6	0.5	1.5 ... 2.5	◇
Z45	R900004823	0 ... 250		10	>+80	-30 ... +90	–	IP65	brown	NBR	NPT 1/2"	6 ... 8	1.5	CE [3; 4] VDE SEV UR	0.5 ... 0.6	0.5	1.5 ... 2.5	
	R900011039	0 ... 250		10	>+80	-30 ... +90	–	IP65	black	NBR	NPT 1/2"	6 ... 8	1.5	CE [3; 4] VDE SEV UR	0.5 ... 0.6	0.5	1.5 ... 2.5	
Without circuitry, with silicone seal																		
Z4	R901572528	0 ... 250		10	>+80	-40 ... +125	4	IP65	gray	VMQ	M16 x 1.5	4 ... 10	1.5	CE [3; 4] VDE SEV	0.5 ... 0.6	0.5	1.5 ... 2.5	
	R901572529	0 ... 250		10	>+80	-40 ... +125	4	IP65	black	VMQ	M16 x 1.5	4 ... 10	1.5	CE [3; 4] VDE SEV	0.5 ... 0.6	0.5	1.5 ... 2.5	
Z45	R901572517	0 ... 250		10	>+80	-40 ... +125	4	IP65	brown	VMQ	NPT 1/2"	6 ... 8	1.5	CE [3; 4] VDE SEV UR	0.5 ... 0.6	0.5	1.5 ... 2.5	
	R901572526	0 ... 250		10	>+80	-40 ... +125	4	IP65	black	VMQ	NPT 1/2"	6 ... 8	1.5	CE [3; 4] VDE SEV UR	0.5 ... 0.6	0.5	1.5 ... 2.5	

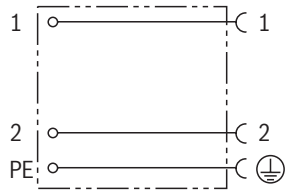
Footnotes see page 10.

Note: ◇ = Preferred type

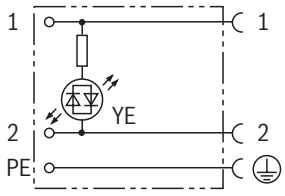
Mating connectors
For valves with "K4" connector, 2-pole + PE, design A

Circuit diagrams

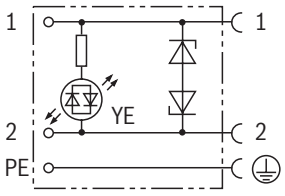
Z4, Z45



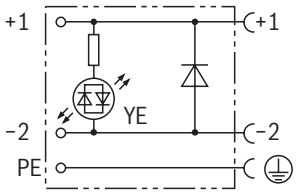
Z5L, Z55L



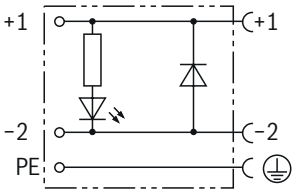
Z5L1



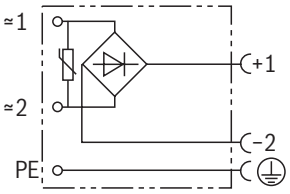
Z5L2 (M16 x 1.5)



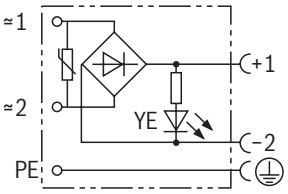
Z5L2 (PG11)



RZ5, RZ55

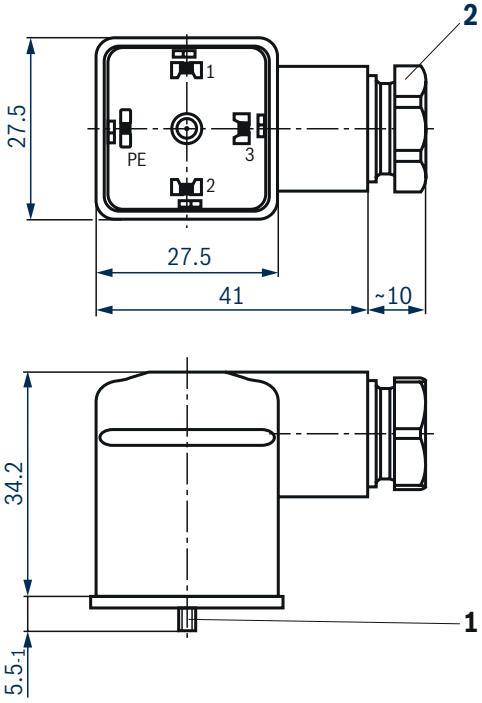


RZ5L, RZ55L

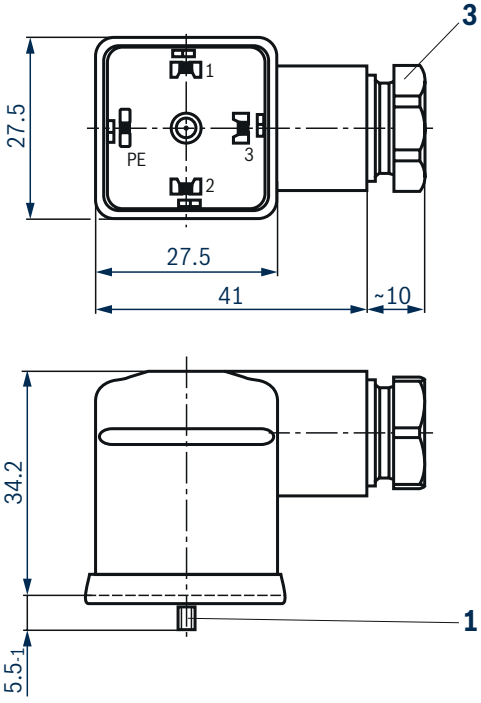


Dimensions
(Dimensions in mm)

Z4



Z45



1 Mounting screw M3
2 Cable gland M16 x 1.5
3 Cable gland NPT 1/2"

Mating connectors

For valves with "K4" connector, 2-pole + PE, design A

Short designation	Material number	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Derating [2] in °C	Ambient temperature range [1] in °C	Rated surge voltage in V	Protection class according to EN 60529 (when assembled)	Housing color	Seal	Indicator light	Circuitry	Cable gland	Terminal area fitting	Maximum line cross-section in mm²	Conformity	Tightening torque range mounting screw M3 in Nm	Maximum tightening torque contact screw in Nm	Tightening torque cable gland in Nm	◇
With indicator light, standard																				
Z5L	R901560501	12 ... 48		4	+60	-20 ... +60	0.8	IP65	black/ transparent	NBR	LED yellow	Z-diode	M16 x 1.5	5 ... 10	1.5	CE [4]	0.5	0.4	1.5 ... 2.5	
Z55L	R901560512	12 ... 48		4	+60	-20 ... +60	0.8	IP65	black/ transparent	NBR	LED yellow	Z-diode	NPT 1/2"	5 ... 10	1.5	CE [4]	0.5	0.4	2.5 ... 3.75	
With indicator light and Z-diode-suppressor																				
Z5L1	R901017026	24±10 % [5]		4	+60	-20 ... +60	0.8	IP65	black/ transparent	NBR	LED yellow	Z-diode	M16 x 1.5	5 ... 10	1.5	CE [4]	0.5	0.4	1.5 ... 2.5	
With indicator light and protective diode																				
Z5L2	R901017027	24 ±10 % [6]	–	3	+60	-20 ... +60	0.8	IP65	black/ transparent	NBR	LED yellow	Free-wheeling diode"	M16 x 1.5	5 ... 10	1.5	CE [4]	0.5	0.4	1.5 ... 2.5	
	1834484138	20 ... 30	–	8	+60	-30 ... +80	2	IP65	transparent	NBR	LED red	Free-wheeling diode"	PG11	6 ... 9	1.5	CE [4] VDE SEV	0.5 ... 0.6	0.5	2.5 ... 3.75	
With rectifier																				
RZ5	R901563568		24 ... 240 [7]	1	+60	-20 ... +60	2.5	IP65	black/ transparent	NBR	–	Rectifier	M16 x 1.5	5 ... 10	1.5	CE [3; 4]	0.5	0.4	1.5 ... 2.5	
RZ55	R901563573		24 ... 240 [7]	1	+60	-20 ... +60	2.5	IP65	black/ transparent	NBR	–	Rectifier	NPT 1/2"	5 ... 10	1.5	CE [3; 4]	0.5	0.4	1.5 ... 2.5	
With indicator light and rectifier																				
RZ5L	R901563566		24 ... 240 [7]	1	+60	-20 ... +60	2.5	IP65	black/ transparent	NBR	LED yellow	Rectifier	M16 x 1.5	5 ... 10	1.5	CE [3; 4]	0.5	0.4	1.5 ... 2.5	
RZ55L	R901563569		24 ... 240 [7]	1	+60	-20 ... +60	2.5	IP65	black/ transparent	NBR	LED yellow	Rectifier	NPT 1/2"	5 ... 10	1.5	CE [3; 4]	0.5	0.4	2.5 ... 3.75	

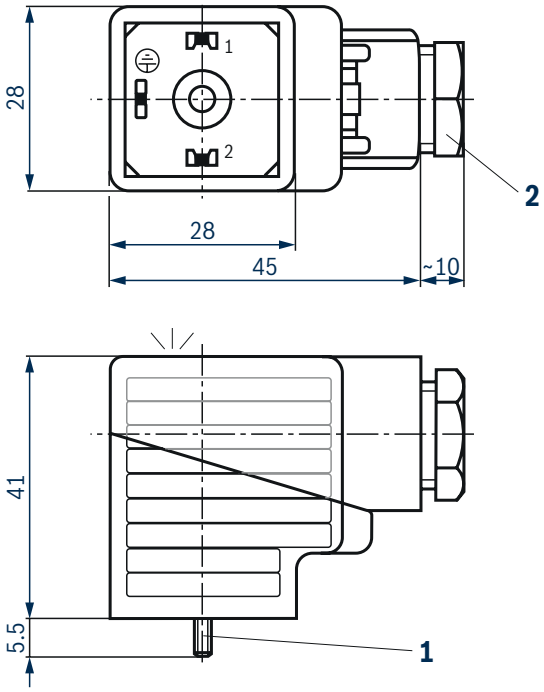
Note: ◇ = Preferred type

1) Take into account the temperature increase caused by the self-heating of the connected operating equipment.
2) In the event of an overshoot, the current carrying capacity is reduced dependent on the temperature.
3) Low-Voltage Directive
4) ROHS
5) Switch-off voltage peak limitation to 55 V
6) Switch-off voltage peak limitation to 1 V
7) Switch-off voltage peak limitation to 2 V

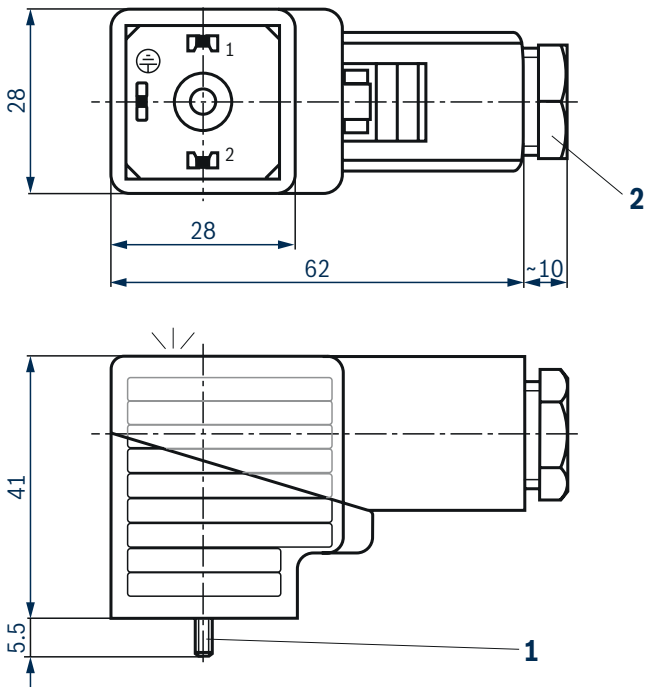
Mating connectors
For valves with "K4" connector, 2-pole + PE, design A

Dimensions
(Dimensions in mm)

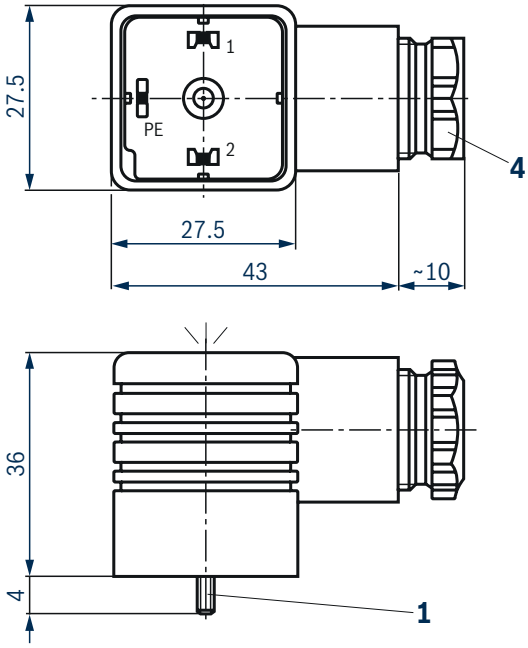
Z5L, Z5L1, Z5L2 , RZ5, RZ5L



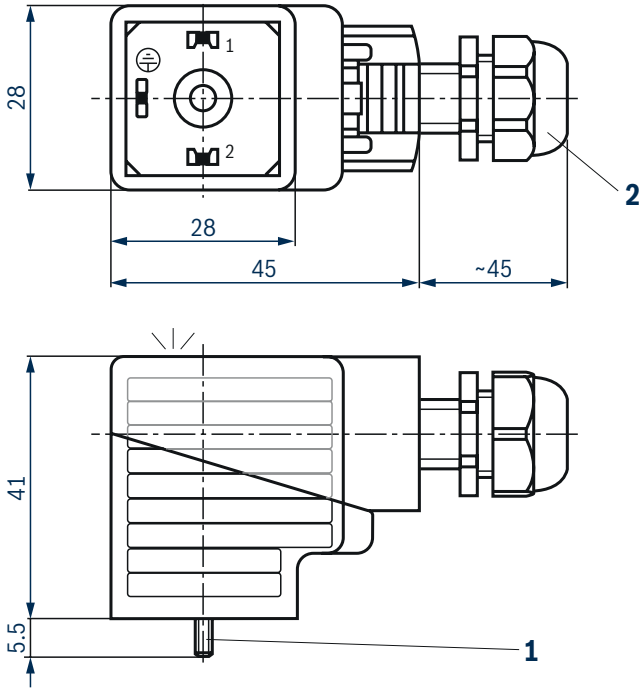
Z55L



Z5L2



RZ55L, RZ55



1 Mounting screw M3
2 Cable gland M16 x 1.5
3 Cable gland NPT 1/2"
4 Cable gland PG11

Cable sets

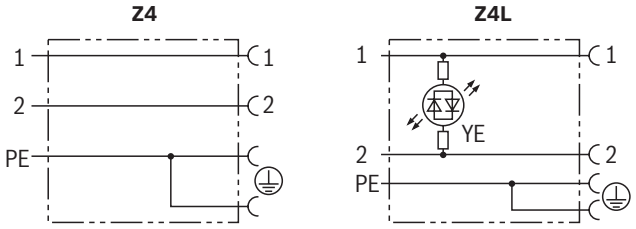
For valves with "K4" connector, 2-pole + PE, design A

Short designation	Material number	Cable length in m	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Derating [2] in °C	Ambient temperature range [1] (fixed cable) in °C	Ambient temperature range [1] (flexible cable) in °C	Rated surge voltage in V	Protection class according to EN 60529 (when assembled)	Housing color	Indicator light	Line cross-section in mm²	Conformity	Tightening torque range mounting screw M3 in Nm	Cable diameter in mm	Bending radius (fixed cable) in x cable diameter in mm	Bending radius (flexible cable) in x cable diameter in mm
Without circuitry, standard																		
Z4	R900032020	3	0 ... 230		10	+85	-25 ... +85	-5 ... +85	4	IP67	black	–	3 x 1	CE [3; 4]	0.4	approx. 7.1	4 x	12.5 x
	R900032014	5	0 ... 230		10	+85	-25 ... +85	-5 ... +85	4	IP67	black	–	3 x 1	CE [3; 4]	0.4	approx. 7.1	4 x	12.5 x
	R900217134	10	0 ... 230		10	+85	-25 ... +85	-5 ... +85	4	IP67	black	–	3 x 1	CE [3; 4]	0.4	approx. 7.1	4 x	12.5 x
With indicator light																		
Z4L	R900032050	3	18 ... 30		4	+85	-25 ... +85	-5 ... +85	0.8	IP67	black	LED yellow	3x1	CE [4]	0.4	approx. 7.1	4 x	12.5 x
	R900032018	5	18 ... 30		4	+85	-25 ... +85	-5 ... +85	0.8	IP67	black	LED yellow	3x1	CE [4]	0.4	approx. 7.1	4 x	12.5 x
	R900217135	10	18 ... 30		4	+85	-25 ... +85	-5 ... +85	0.8	IP67	black	LED yellow	3x1	CE [4]	0.4	approx. 7.1	4 x	12.5 x
	R900032023	3	90 ... 130		1	+85	-25 ... +85	-5 ... +85	2.5	IP67	black	LED yellow	3x1	CE [3; 4]	0.4	approx. 7.1	4 x	12.5 x
	R900032012	5	90 ... 130		1	+85	-25 ... +85	-5 ... +85	2.5	IP67	black	LED yellow	3x1	CE [3; 4]	0.4	approx. 7.1	4 x	12.5 x
	R900217136	10	90 ... 130		1	+85	-25 ... +85	-5 ... +85	2.5	IP67	black	LED yellow	3x1	CE [3; 4]	0.4	approx. 7.1	4 x	12.5 x
	R900032024	3	230±10 %		0.5	+85	-25 ... +85	-5 ... +85	4	IP67	black	LED yellow	3x1	CE [3; 4]	0.4	approx. 7.1	4 x	12.5 x
	R900032010	5	190 ... 240		0.5	+85	-25 ... +85	-5 ... +85	4	IP67	black	LED yellow	3x1	CE [3; 4]	0.4	approx. 7.1	4 x	12.5 x

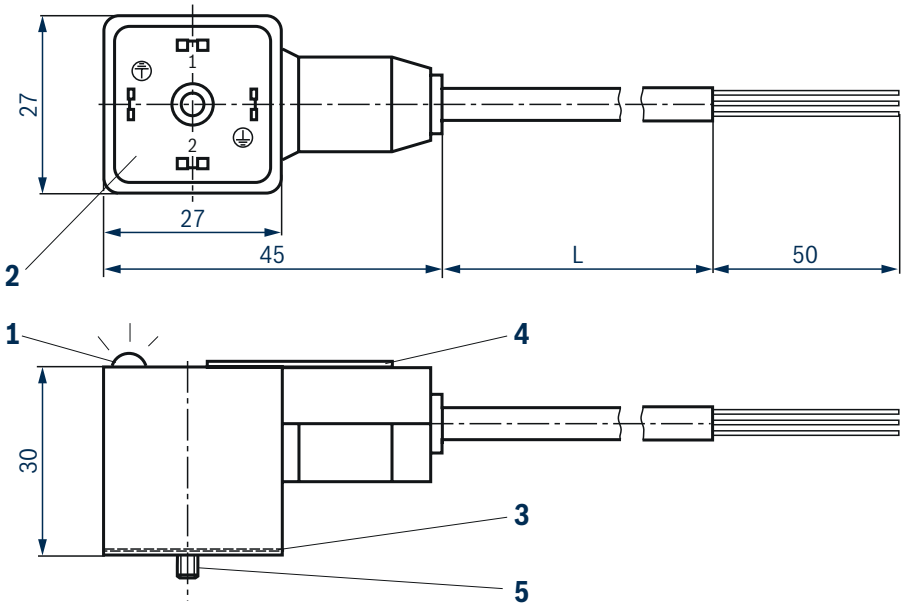
1) Take into account the temperature increase caused by the self-heating of the connected operating equipment.
2) In the event of an overshoot, the current carrying capacity is reduced dependent on the temperature.
3) Low-Voltage Directive
4) ROHS

Cable sets
For valves with "K4" connector, 2-pole + PE, design A

Circuit diagrams



Dimensions
(Dimensions in mm)



1 LED
2 Contacting 0 + 180° rotatable
3 Flat seal (not detachable)
4 Marking plate
5 Mounting screw M3 (not detachable)
L Cable length 3, 5 or 10 m (see table page 12.)

Cable sets

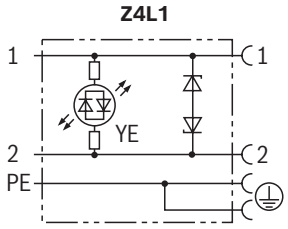
For valves with "K4" connector, 2-pole + PE, design A

Short designation	Material number	Cable length in m	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Derating [2] in °C	Ambient temperature range [1] (fixed cable) in °C	Ambient temperature range [1] (flexible cable) in °C	Rated surge voltage in V	Protection class according to EN 60529 (when assembled)	Housing color	Indicator light	Circuitry [5]	Line cross-section in mm²	Conformity	Tightening torque range mounting screw M3 in Nm	Cable diameter in mm	Bending radius (fixed cable) in x cable diameter in mm	Bending radius (flexible cable) in x cable diameter in mm
With indicator light and Z-diode-suppressor																			
Z4L1	R900032021	3	19.2 … 28.8 [5]	–	4	+85	-25 … +90	-5 … +85	0.8	IP67	black	LED yellow	Z-diode	3x1	CE [4]	0.4	approx. 7.1	4 x	12.5 x
	R900032015	5	19.2 … 28.8 [5]	–	4	+85	-25 … +85	-5 … +85	0.8	IP67	black	LED yellow	Z-diode	3x1	CE [4]	0.4	approx. 7.1	4 x	12.5 x
	R900217138	10	19.2 … 28.8 [5]	–	4	+85	-25 … +85	-5 … +85	0.8	IP67	black	LED yellow	Z-diode	3x1	CE [4]	0.4	approx. 7.1	4 x	12.5 x

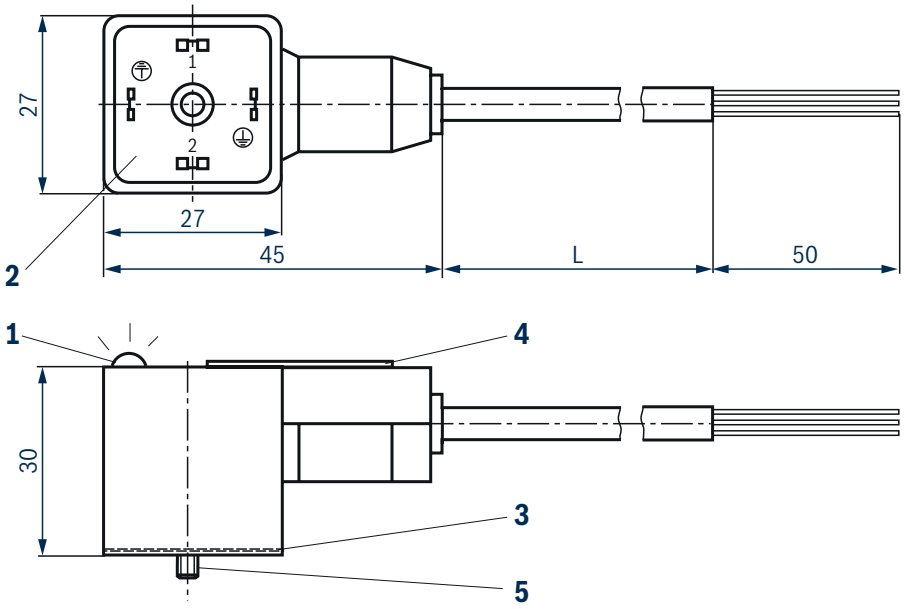
1) Take into account the temperature increase caused by the self-heating of the connected operating equipment.
2) In the event of an overshoot, the current carrying capacity is reduced dependent on the temperature.
4) ROHS
5) Switch-off voltage peak limitation to 55 V

Cable sets
For valves with "K4" connector, 2-pole + PE, design A

Circuit diagrams



Dimensions
(Dimensions in mm)



1 LED
2 Contacting 0 + 180° rotatable
3 Flat seal (not detachable)
4 Marking plate
5 Mounting screw M3 (not detachable)
L Cable length 3, 5 or 10 m (see table page 14.)

Cable sets

For valves with two solenoids (double mating connectors) and connector "K4", 2-pole + PE, design A – for directional valves type WE 6, type SEC and pilot-operated on/off valves

Short designation	Material number	Cable length in m	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Derating [2] in °C	Ambient temperature range [1] (fixed cable) in °C	Ambient temperature range [1] (flexible cable) in °C	Rated surge voltage in V	Protection class according to EN 60529 (when assembled)	Housing color	Seal	Indicator light	Circuitry	Line cross-section in mm²	Conformity	Tightening torque range mounting screw M3 in Nm	Cable diameter in mm	Cable diameter connection cable in mm	Bending radius (fixed cable) in x cable diameter in mm	Bending radius (flexible cable) in x cable diameter in mm
With indicator light; device connector M12 x 1																					
Z60L	R901207819	–	24±10 %		4	–	-40 ... +80	-25 ... +80	0.8	IP67	black	VMQ	LED yellow	–	0.75	CE [4] CSA	0.4	–	approx. 5.9	4 x	10 x
With indicator light and Z-diode-suppressor; connector M12 x1																					
Z60L8	R901205511	–	24±10 % [8]		4	–	-40 ... +80	-25 ... +80	0.8	IP67	black	VMQ	LED yellow	Z-diode	0.75	CE [4] CSA	0.4	–	approx. 5.9	4 x	10 x
With free cable end																					
Z61	R901207821	3	0 ... 250		4	+85	-40 ... +80	-25 ... +80	4	IP67	black	VMQ	–	–	0.75	CE [3; 4]	0.4	approx. 6.5	approx. 5.9	4 x	10 x
Z61	R901207822	5	0 ... 250		4	+85	-40 ... +80	-25 ... +80	4	IP67	black	VMQ	–	–	0.75	CE [3; 4]	0.4	approx. 6.5	approx. 5.9	4 x	10 x

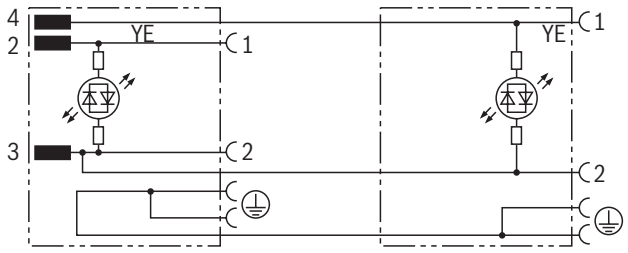
1) Take into account the temperature increase caused by the self-heating of the connected operating equipment.
2) In the event of an overshoot, the current carrying capacity is reduced dependent on the temperature.
3) Low-Voltage Directive
4) ROHS
8) Switch-off voltage peak limitation to 50 V

Cable sets

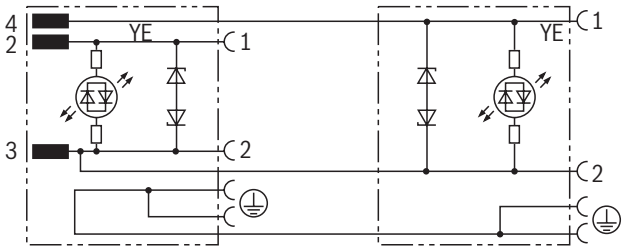
For valves with two solenoids (double mating connectors) and connector "K4", 2-pole + PE, design A – for directional valves type WE 6, type SEC and pilot-operated on/off valves

Circuit diagrams

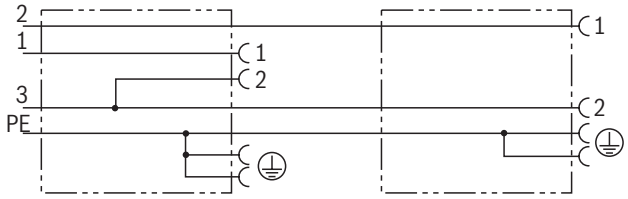
Z60L (NG6)



Z60L8 (NG6)

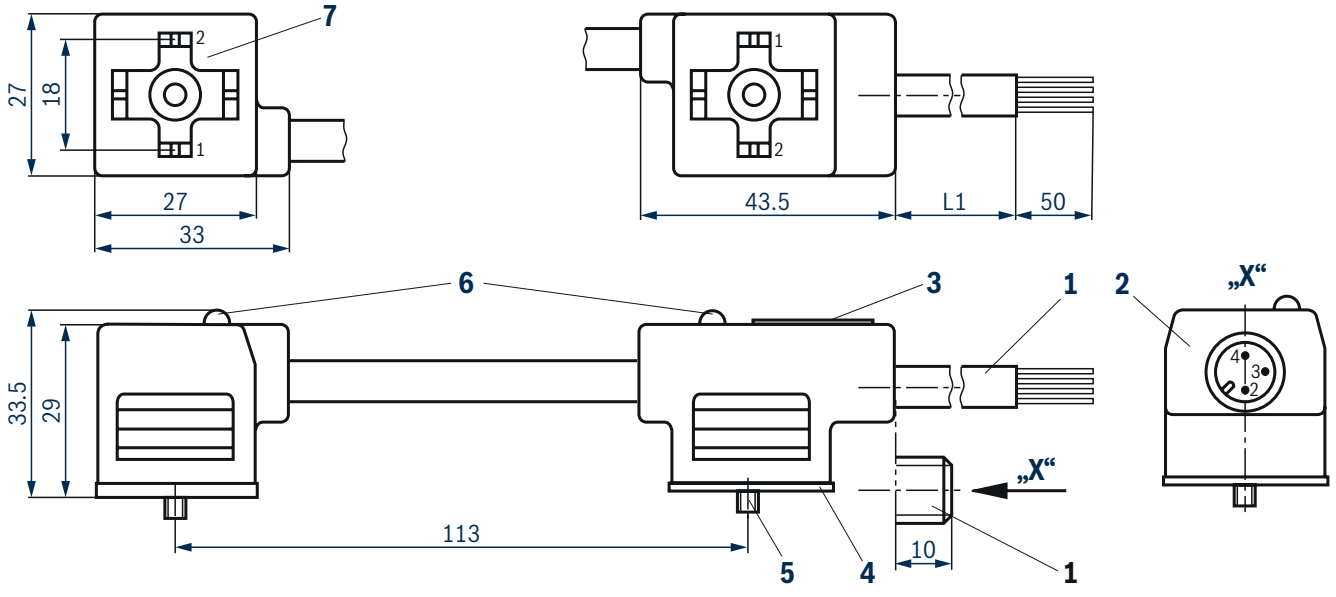


Z61 (NG6)



Dimensions

(Dimensions in mm)



1 Version "Z60L" and "Z60L8"
2 Version "Z61"
3 Marking plate
4 Flat seal (not detachable)
5 Mounting screw M3 (not detachable)
6 LED (versions "Z60L" and "Z60L8" only)
7 Contacting 0° (PE bridged)

L1 Cable length 3 or 5 m (see table page 16)

Cable sets

For valves with two solenoids (double mating connectors) and connector "K4", 2-pole + PE, design A – for directional valves type WE 10

Short designation	Material number	Cable length in m	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Derating [2] in °C	Ambient temperature range [1] (fixed cable) in °C	Ambient temperature range [1] (flexible cable) in °C	Rated surge voltage in V	Protection class according to EN 60529 (when assembled)	Housing color	Seal	Indicator light	Circuitry	Line cross-section in mm²	Conformity	Tightening torque range mounting screw M3 in Nm	Cable diameter in mm	Cable diameter connection cable in mm	Bending radius (fixed cable) in x cable diameter in mm	Bending radius (flexible cable) in x cable diameter in mm
With indicator light; device connector M12 x 1																					
Z60L	R901207824	–	24±10 %	4	–	-40 ... +80	-25 ... +80	0.8	IP67	black	VMQ	LED yellow	–	0.75	CE [4] CSA	0.4	–	approx. 5.9	4 x	10 x
With indicator light and Z-diode-suppressor; connector M12 x1																					
Z60L8	R901207823	–	24±10 % [8]	4	–	-40 ... +80	-25 ... +80	0.8	IP67	black	VMQ	LED yellow	Z-diode	0.75	CE [4] CSA	0.4	–	approx. 5.9	4 x	10 x
With free cable end																					
Z61	R901207892	5	0 ... 250	4	+85	-40 ... +80	-25 ... +80	4	IP67	black	VMQ	–	–	0.75	CE [3; 4]	0.4	approx. 6.5	approx. 5.9	4 x	10 x

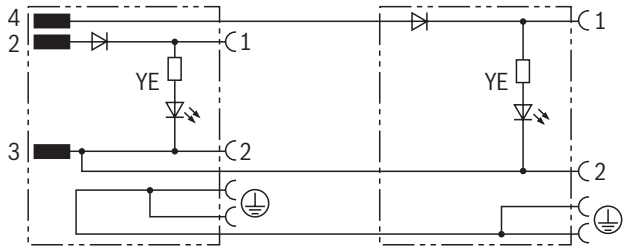
1) Take into account the temperature increase caused by the self-heating of the connected operating equipment.
2) In the event of an overshoot, the current carrying capacity is reduced dependent on the temperature.
3) Low-Voltage Directive
4) ROHS
8) Switch-off voltage peak limitation to 50 V

Cable sets

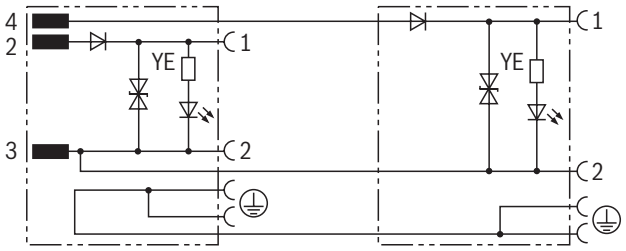
For valves with two solenoids (double mating connectors) and connector "K4", 2-pole + PE, design A – for directional valves type WE 10

Circuit diagrams

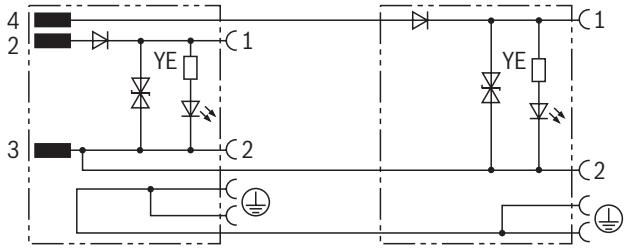
Z60L (NG10)



Z60L8 (NG10)

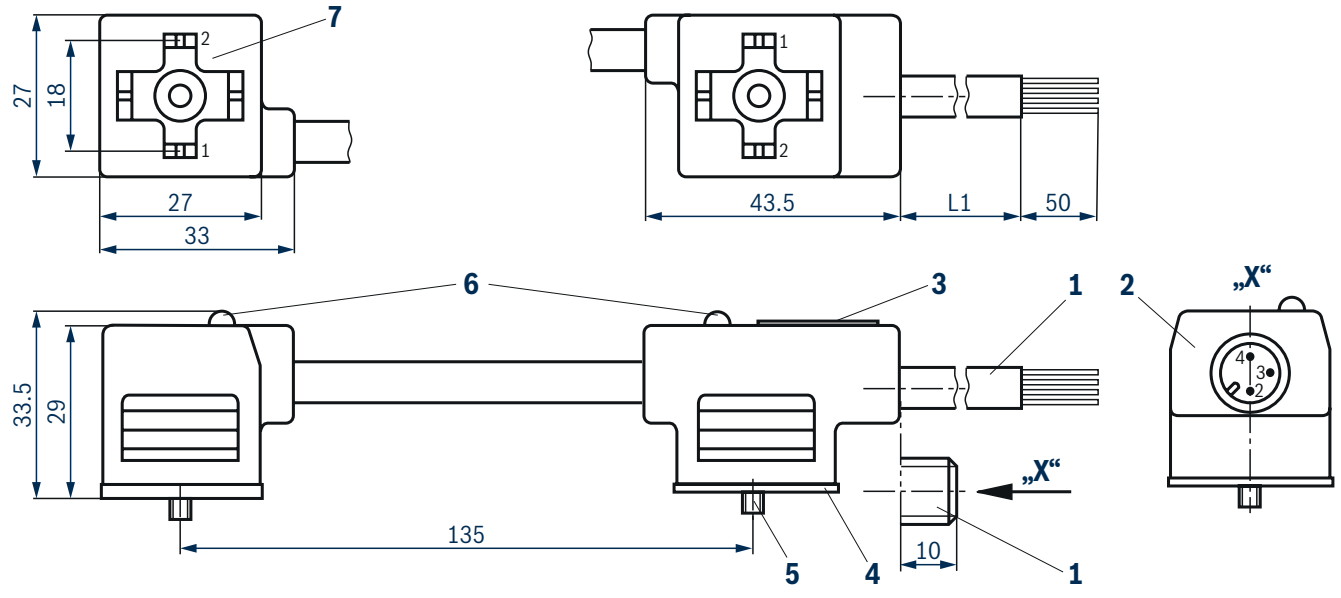


Z61 (NG10)



Dimensions

(Dimensions in mm)



1 Version "Z60L" and "Z60L8"
2 Version "Z61"
3 Marking plate
4 Flat seal (not detachable)
5 Mounting screw M3 (not detachable)
6 LED (versions "Z60L" and "Z60L8" only)
7 Contacting 0° (PE bridged)
L1 Cable length 3 or 5 m (see table page 18)

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

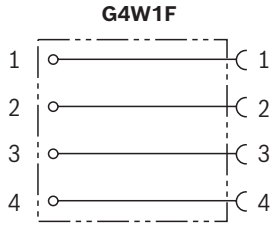
Short designation	Material number	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Derating [2] in °C	Ambient temperature range [1] in °C	Rated surge voltage in V	Protection class according to EN 60529 (when assembled)	Housing color	Seal	Cable gland	Terminal area fitting	Line cross-section in mm²	Conformity	Tightening torque range mounting screw M3 in Nm	Tightening torque cable gland in Nm
G4W1	R900023126	0 ... 50	0 ... 50	6	+45	-25 ... +90	–	IP65	black	NBR	PG7	4 ... 7.5	0.5	VDE	0.5 ... 0.6	1.5 ... 2.5
				0	+90											
	1834484063	0 ... 50	0 ... 50	6	+45	-25 ... +90	0.8	IP65	black	NBR	PG7	4.5 ... 6	0.5	VDE	0.5 ... 0.6	1.5 ... 2.5
				0	+90											
	1834484061	0 ... 50	0 ... 50	6	+45	-25 ... +90	0.8	IP65	gray	NBR	PG7	4.5 ... 6	0.5	VDE	0.5 ... 0.6	1.5 ... 2.5
				0	+90											

1) Take into account the temperature increase caused by the self-heating of the connected operating equipment.

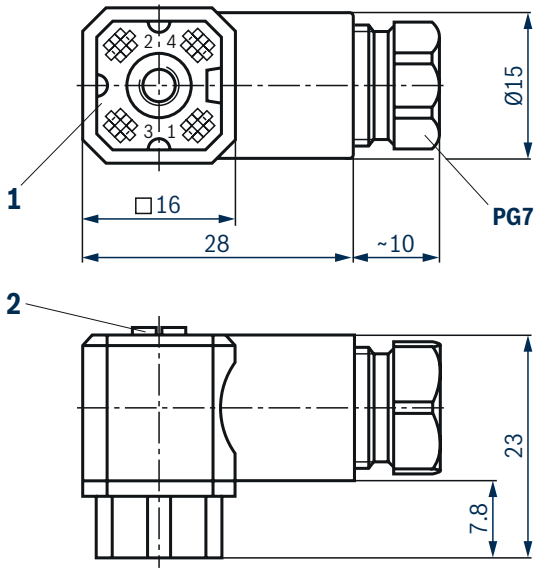
2) In the event of an overshoot, the current carrying capacity is reduced dependent on the temperature.

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

Circuit diagrams



Dimensions
(Dimensions in mm)



1 Contacting (rotatable)
2 Mounting screw M3

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

Short designation	Material number	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Derating [2] in °C	Ambient temperature range [1] in °C	Protection class according to EN 60529 (when assembled)	Housing material	Cable gland	Terminal area fitting	Line cross-section area in mm²	Conformity	Tightening torque grub screw M3 in Nm	
6-pole + PE; straight														
7PZ31...K	R900021267	24	–	3	+70	-40 ... +100	IP67	Plastic	PG11	6.5 ... 11	0.5 ... 1.5	DIN 43563	0.3	
	1834482022	50	50	10	–	-40 ... +90	IP67	Plastic	PG11	8 ... 10	1	–	–	◇
6-pole + PE; angled														
7PZ31...K	R900217845	75	60	12	+70	-40 ... +100	IP65	Plastic	PG11	12	0.5 ... 1.5	RoHS, UL	0.3	
	1834484252	75	60	–	–	–	IP65	Plastic	PG11	7 ... 10	0.5 ... 1.5	DIN 43563	–	
6-pole + PE; straight														
7PZ31...M	R900223890	24	–	3	–	-40 ... +100	IP67	Metal	PG11	9 ... 12.5	0.5 ... 1.5	DIN 43563	0.3	
6-pole; connection compatible with VG 95328 (for servo valves)														
6P KPTC6	R901043330	24	–	3	–	-55 ... +125	IP65	Metal	SW16 clamping nut	4.5 ... 7	0.4 ... 0.75	RoHS	0.3	

[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

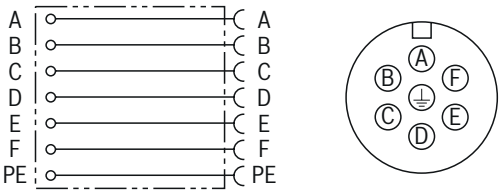
[2] In the event of an overshoot, the current carrying capacity is reduced dependent on the temperature.

☞ **Note:** ◇ = Preferred type

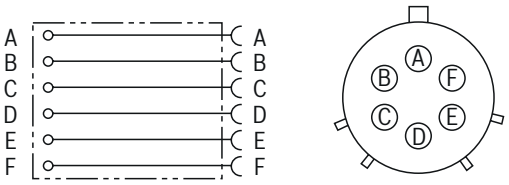
Mating connectors
For valves with round connector, 6-pole + PE and 6-pole

Circuit diagrams

7PZ31...K; 7PZ31...M

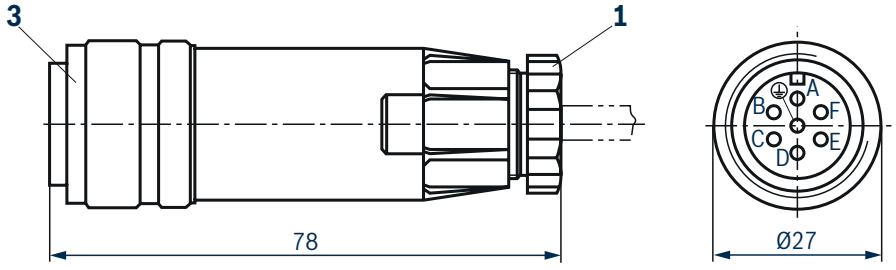


6P KPTC6

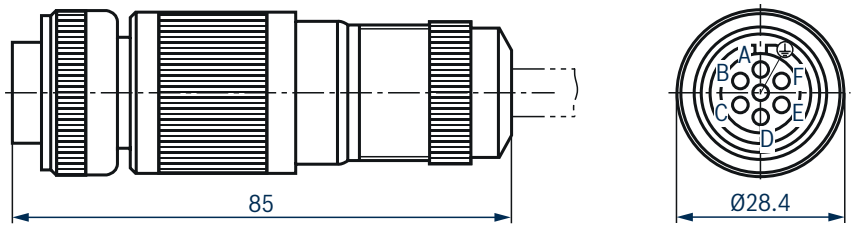


Dimensions
(Dimensions in mm)

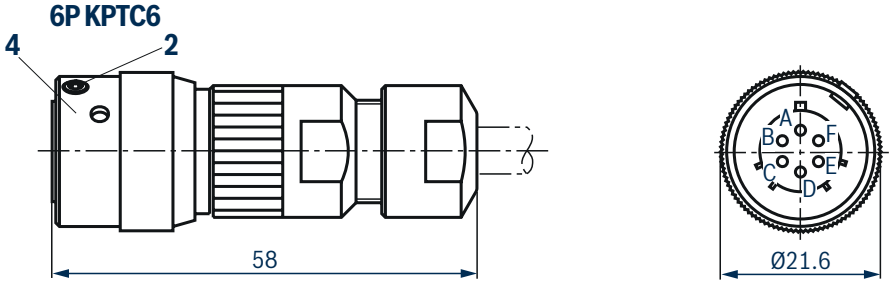
7PZ31...K



7PZ31...M



6P KPTC6



1 Cable gland PG11
2 Locking device: grub screw M3
3 7/8" - 20 UNEF 2B
4 9/16" - 24 UNEF 2B

Accessories see page 62.

Cable sets

For valves with round connector, 6-pole + PE

Short designation	6-pole + PE; shielded	Material number	Cable length in m	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Derating [2] in °C	Ambient temperature range [1] (fixed cable) in °C	Ambient temperature range [1] (flexible cable) in °C	Protection class according to EN 60529 (when assembled)	Housing color	Housing material	Line cross-section in mm²	Conformity	Cable diameter in mm	Bending radius (fixed cable) in x cable diameter in mm	Bending radius (flexible cable) in x cable diameter in mm	
7PZ31 BF6		R901420483	3	<50	8.5	+40	-40 ... +80	-25 ... +80	IP67	black	Plastic	7 x 0.75	RoHS, cULus (UL2238)	9±0.2	5 x	10 x	◇
		R901420491	5	<50	8.5	+40	-40 ... +80	-25 ... +80	IP67	black	Plastic	7 x 0.75		9±0.2	5 x	10 x	◇
		R901420496	10	<50	8.5	+40	-40 ... +80	-25 ... +80	IP67	black	Plastic	7 x 0.75		9±0.2	5 x	10 x	◇
		R901448068	20	<50	8.5	+40	-40 ... +80	-25 ... +80	IP67	black	Plastic	7 x 0.75		9±0.2	5 x	10 x	
7PZ31 BF6-948		R901530888	10	24	3	–	-40 ... +100	-25 ... +80	–	silver/ black	Metal	7 x 0.75	IACS – UR E10 Rev8	9.9	5 x	10 x	

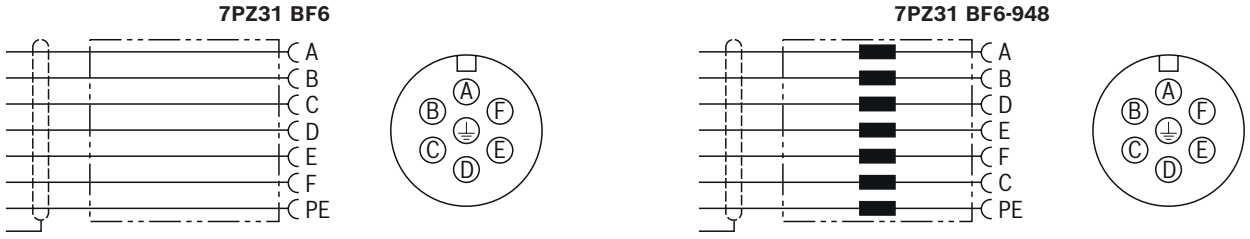
Note: ◇ = Preferred type

1) Take into account the temperature increase caused by the self-heating of the connected operating equipment.

2) In the event of an overshoot, the current carrying capacity is reduced dependent on the temperature.

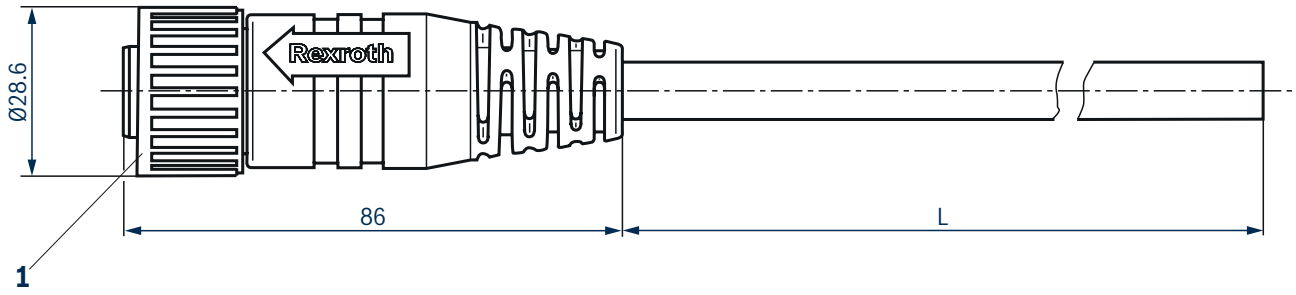
Cable sets
For valves with round connector, 6-pole + PE

Circuit diagrams

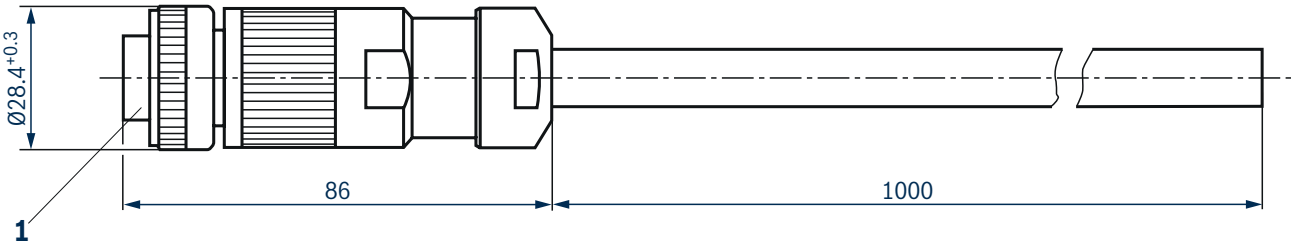


Dimensions
(Dimensions in mm)

7PZ31 BF3



7PZ31 BF6-948



1 Coupling nut, tightening torque M_A =1 ... 1.5 Nm

L Cable length 3, 5 or 10 m (see table page 24)

Mating connectors
For valves with round connector, 11-pole + PE

Short designation	Material number	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Ambient temperature range [1] in °C	Protection class according to EN 60529 (when assembled)	Housing material	Cable gland	Terminal area fitting	Line cross-section area in mm²	
11-pole + PE; two cable outlets											
12PN11...2XD8	R900884671	24	–	3	-40 ... +90	IP65	Plastic	PG16	2 x 6 ... 8	9 x 0.14 ... 0.5	
11-pole + PE; shielded											
12PN11... EMC	R901268000	24	–	3	-40 ... +90	IP65	Metal	PG13.5	12 ... 15	0.5	
	1834484142	24	–	3	-40 ... +90	IP65	Metal	PG16	12 ... 15	0.5 ... 1.5	◊

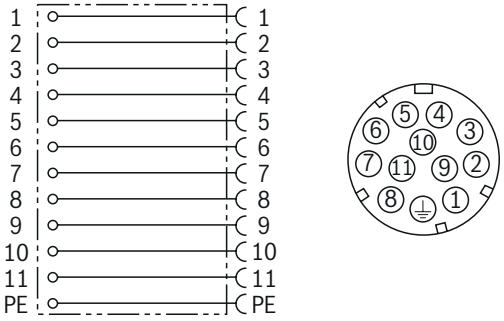
[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

☞ **Note:** ◊ = Preferred type

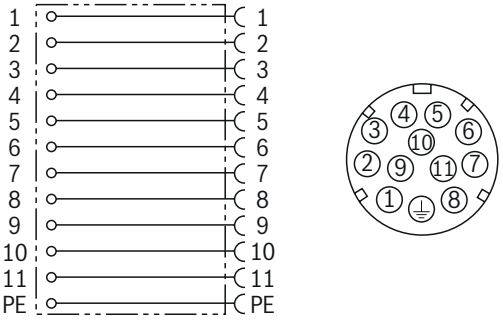
Mating connectors
For valves with round connector, 11-pole + PE

Circuit diagrams

12PN11...2XD8; 12PN11... EMC (PG13.5)

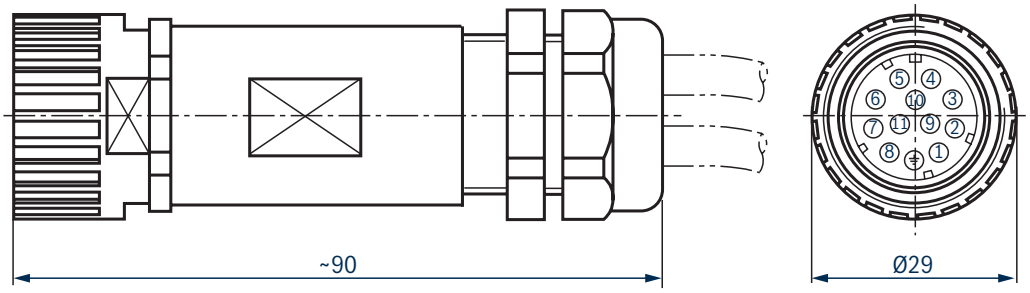


12PN11... EMC (PG16)

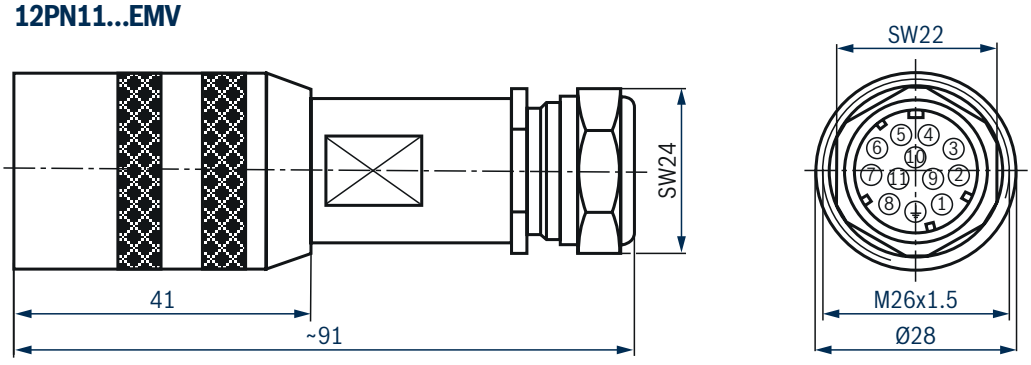


Dimensions
(Dimensions in mm)

12PN11...2XD8



12PN11...EMV



Accessories see page 62.

Cable sets
For valves with round connector, 11-pole + PE

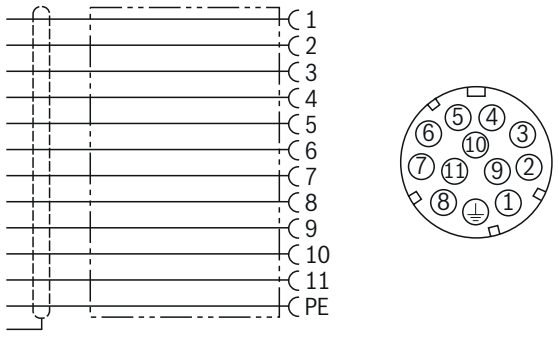
Short designation	11-pole + PE; shielded	Material number	Cable length in m	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Ambient temperature range [1] (fixed cable) in °C	Ambient temperature range [1] (flexible cable) in °C	Protection class according to EN 60529 (when assembled)	Housing color	Housing material	Line cross-section in mm²	Conformity	Cable diameter in mm	Bending radius (fixed cable) in x cable diameter in mm	Bending radius (flexible cable) in x cable diameter in mm
12PN11REFS EMC...BG		R901272854	5	50	25	5	-40 ... +80	-5 ... +80	IP65	gray	Metal	12 x 0.75	RoHS	10.5	5 x	10 x
		R901272852	20	50	25	5	-40 ... +80	-5 ... +80	IP65	gray	Metal	12 x 0.75	RoHS	10.5	5 x	10 x
12PN11REFF 2X		R900032356	5	<50	–	5	-40 ... +80	-5 ... +70	IP65	black	Plastic	10 x 0.14	–	6.1	6 x	15 x
		R900860399	20	<50	–	5	-40 ... +80	-5 ... +70	IP65	black	Plastic	10 x 0.14	–	6.1	6 x	15 x

[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

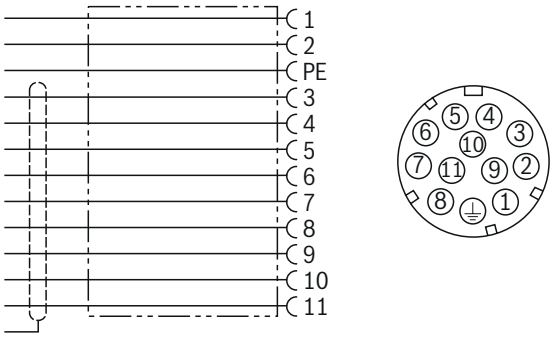
Cable sets
For valves with round connector, 11-pole + PE

Circuit diagrams

12PN11REFS EMC...BG

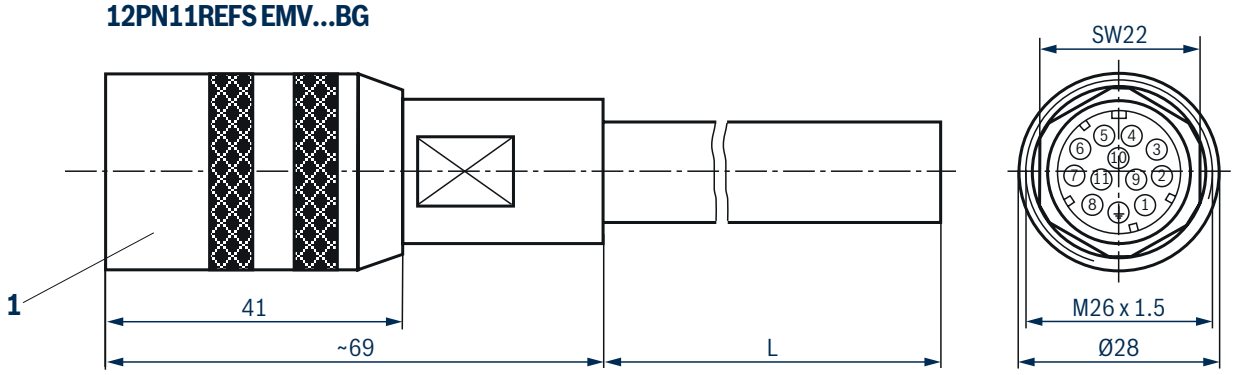


12PN11REFF 2X

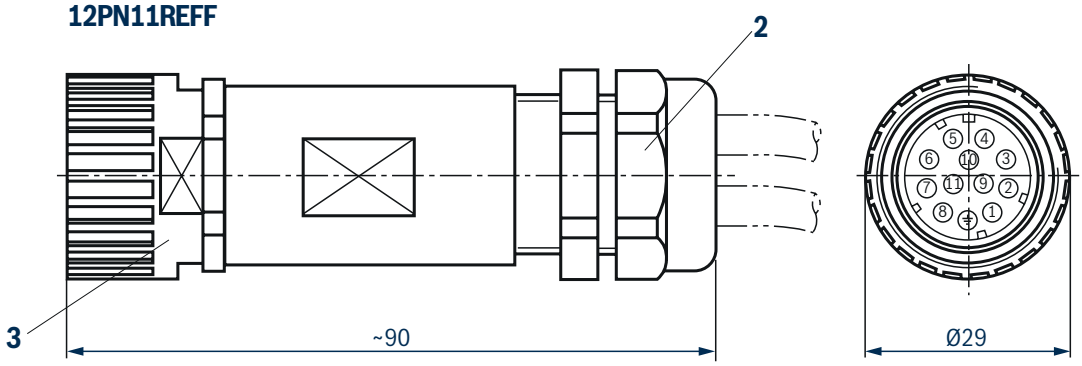


Dimensions
(Dimensions in mm)

12PN11REFS EMV...BG



12PN11REFF



1 Coupling nut, tightening torque M_A =1 ... 1.5 Nm
2 Cable gland, tightening torque M_A =1 ... 1.5 Nm
3 Coupling nut, tightening torque M_A =0.8 ... 1.0 Nm
L Cable length 5 or 20 m (see table page 28)

Mating connectors

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

Short designation	Material number	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Derating [2] in °C	Ambient temperature range [1] in °C	Rated surge voltage in V	Protection class according to EN 60529 (when assembled)	Housing color	Seal	Indicator light	Cable gland	Terminal area fitting	Maximum line cross-section in mm²	Conformity	Tightening torque range mounting screw M3 in Nm	Maximum tightening torque contact screw in Nm	Tightening torque cable gland in Nm
Without circuitry, standard																		◇
Z14	R901017012	0 ... 250		10	>+80	-30 ... +90	4	IP65	black	NBR	–	M16 x 1.5	4 ... 10	1.5	CE [3; 4] VDE SEV	0.5 ... 0.6	0.5	1.5 ... 2.5
Without circuitry; with silicone seal																		
Z14	R901572530	0 ... 250		10	>+80	-40 ... +125	4	IP65	black	VMQ	–	M16 x 1.5	4 ... 9	1.5	CE [3; 4] VDE SEV	0.5 ... 0.6	0.5	1.5 ... 2.5
With indicator light																		
Z15L	R901017030	6 ... 14		4	–	-20 ... +60	–	IP65	black/ transparent	NBR	LED yellow+green	M16 x 1.5	5 ... 10	1.5	CE [4]	0.5	0.4	1.5 ... 2.5
	R901017048	16 ... 36		4	–	-20 ... +60	–	IP65	black/ transparent	NBR	LED yellow+green	M16 x 1.5	5 ... 10	1.5	CE [4]	0.5	0.4	1.5 ... 2.5
	R901017032	36 ... 60		4	–	-20 ... +60	–	IP65	black/ transparent	NBR	LED yellow+green	M16 x 1.5	5 ... 10	1.5	CE [4]	0.5	0.4	1.5 ... 2.5
Z15L6	R901017040	16 ... 36		4	–	-20 ... +60	0.8	–	black/ transparent	NBR	LED yellow+green	M16 x 1.5	5 ... 10	1.5	CE [4]	0.5	0.4	1.5 ... 2.5

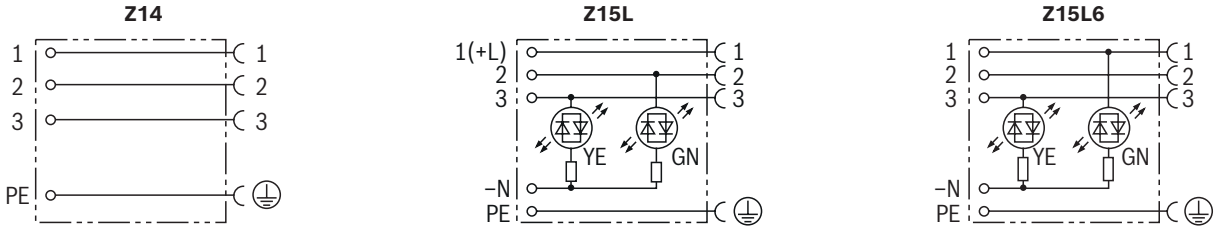
Note: ◇ = Preferred type

1) Take into account the temperature increase caused by the self-heating of the connected operating equipment.
2) In the event of an overshoot, the current carrying capacity is reduced dependent on the temperature.
3) Low-Voltage Directive
4) ROHS

Mating connectors

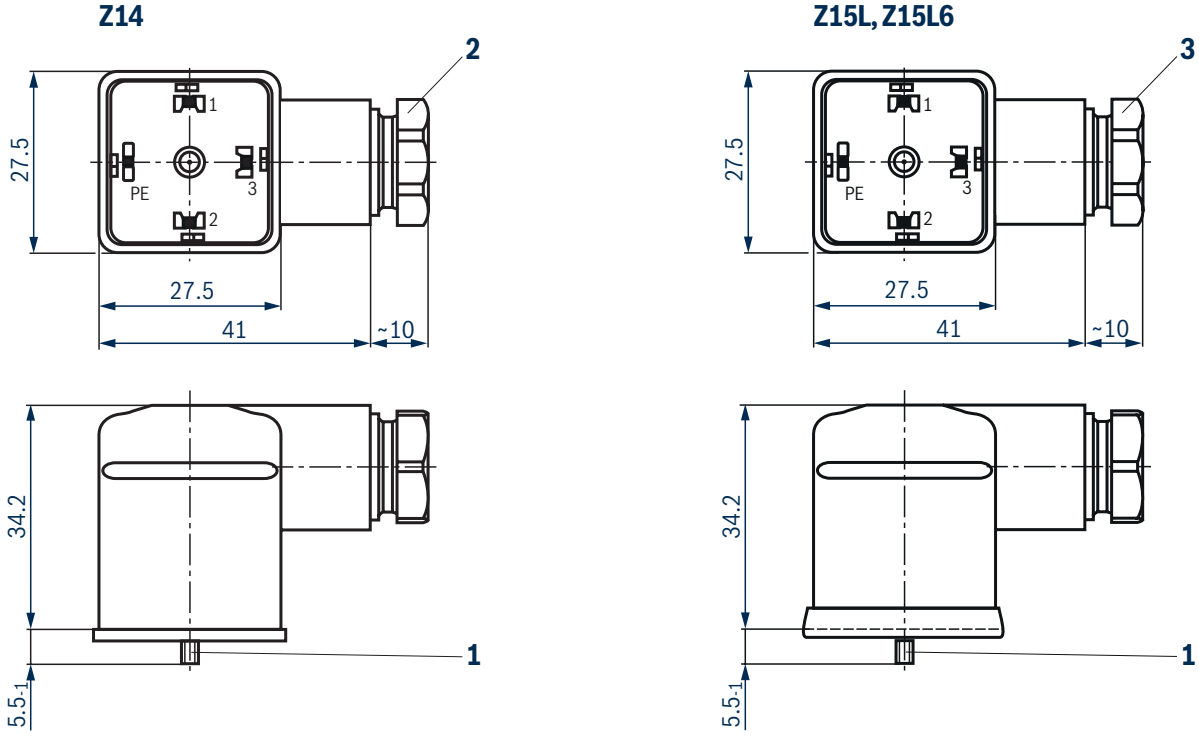
For mechanical pressure switches with "K14" connector, 3-pole + PE, design A

Circuit diagrams



Dimensions

(Dimensions in mm)



1 Mounting screw M3

2 Cable gland M16 x 1.5

Cable sets

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

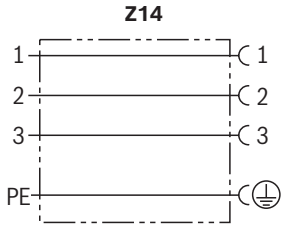
Short designation	Material number	Cable length in m	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Ambient temperature range [1] (fixed cable) in °C	Ambient temperature range [1] (flexible cable) in °C	Rated surge voltage in V	Protection class according to EN 60529 (when assembled)	Housing color	Indicator light	Line cross-section in mm²	Conformity	Tightening torque range mounting screw M3 in Nm	Cable diameter in mm	Bending radius (fixed cable) in x cable diameter in mm	Bending radius (flexible cable) in x cable diameter in mm
Without circuitry, standard																	
Z14	R900058528	5	0 ... 230		10	-25 ... +70	-5 ... +70	4	IP67	black	–	4 x 0.75	CE [3; 4]	0.4	approx. 7	15 x	20 x
Z14	R900217139	10	0 ... 230		10	-25 ... +70	-5 ... +70	4	IP67	black	–	4 x 0.75	CE [3; 4]	0.4	approx. 7	15 x	20 x
With indicator light																	
Z14L	R900210635	5	18 ... 30		4	-25 ... +70	-5 ... +70	0.8	IP67	black	LED green+yellow	5 x 0.5	CE [4]	0.4	approx. 7.3	12.5 x	17.5 x
Z14L	R900217140	10	18 ... 30		4	-25 ... +70	-5 ... +70	0.8	IP67	black	LED green+yellow	5 x 0.5	CE [4]	0.4	approx. 7.3	12.5 x	17.5 x

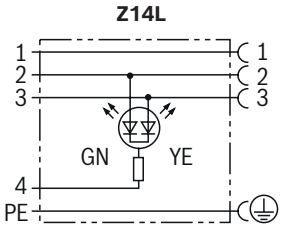
1) Take into account the temperature increase caused by the self-heating of the connected operating equipment.
3) Low-Voltage Directive
4) ROHS

Cable sets

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

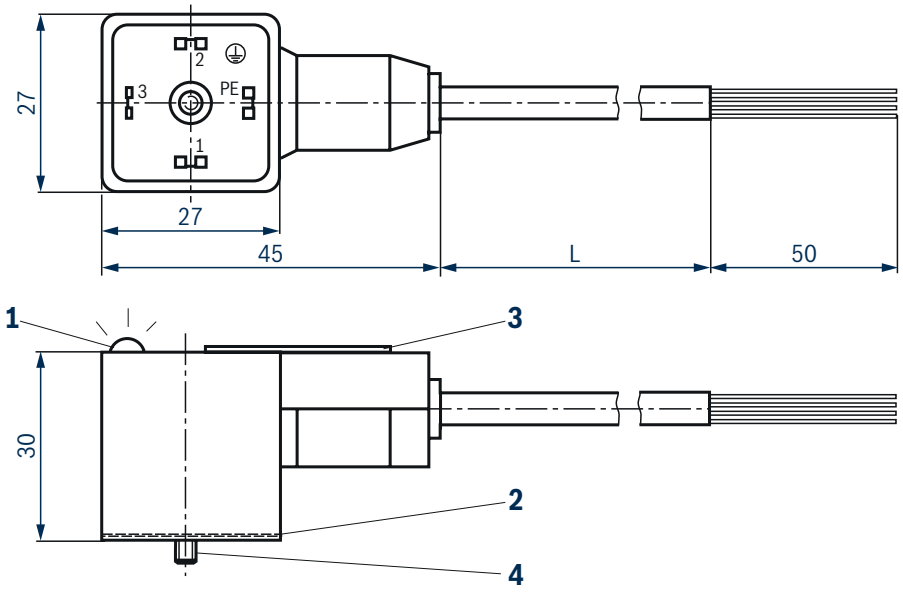
Circuit diagrams





Dimensions

(Dimensions in mm)



1 LED
2 Flat seal (not detachable)
3 Name plate
4 Mounting screw M3 (not detachable)
L Cable length 5 or 10 m (see table page 32)

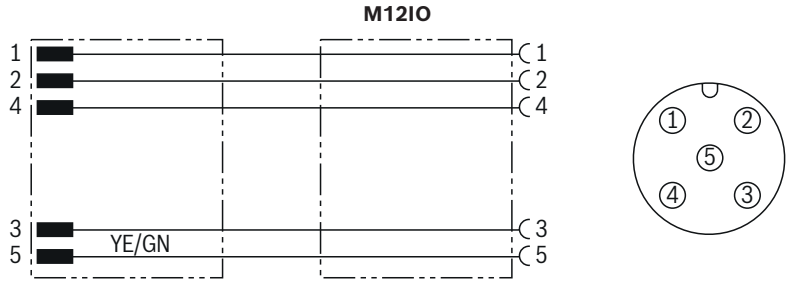
Cable sets
For sensors and valves with IO-Link interface, 5-pole

Short designation	Material number	Cable length in m	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Ambient temperature range [1] (fixed cable) in °C	Ambient temperature range [1] (flexible cable) in °C	Rated surge voltage in V	Protection class according to EN 60529 (when assembled)	Housing color	Line cross-section in mm²	Conformity	Tightening torque range M3 mounting screw in Nm	Cable diameter in mm	Bending radius (fixed cable) in x cable diameter in mm	Bending radius (flexible cable) in x cable diameter in mm
M12IO	R901508849	1.5	0 ... 125 [9]		4	-40 ... +80	-25 ... +80	1.5	IP65 IP66K IP67	black/ green	0.34	CE [3; 4] CSA UL UR (cable)	0.6	approx. 4.8	5 x	10 x
M12IO	R901554223	3	0 ... 125 [9]		4	-40 ... +80	-25 ... +80	1.5	IP65 IP66K IP67	black/ green	0.34	CE [3; 4] CSA UL UR (cable)	0.6	approx. 4.8	5 x	10 x
M12IO	R901415747	5	0 ... 125 [9]		4	-40 ... +80	-25 ... +80	1.5	IP65 IP66K IP67	black/ green	0.34	CE [3; 4] CSA UL UR (cable)	0.6	approx. 4.8	5 x	10 x
M12IO	R901554225	10	0 ... 125 [9]		4	-40 ... +80	-25 ... +80	1.5	IP65 IP66K IP67	black/ green	0.34	CE [3; 4] CSA UL UR (cable)	0.6	approx. 4.8	5 x	10 x

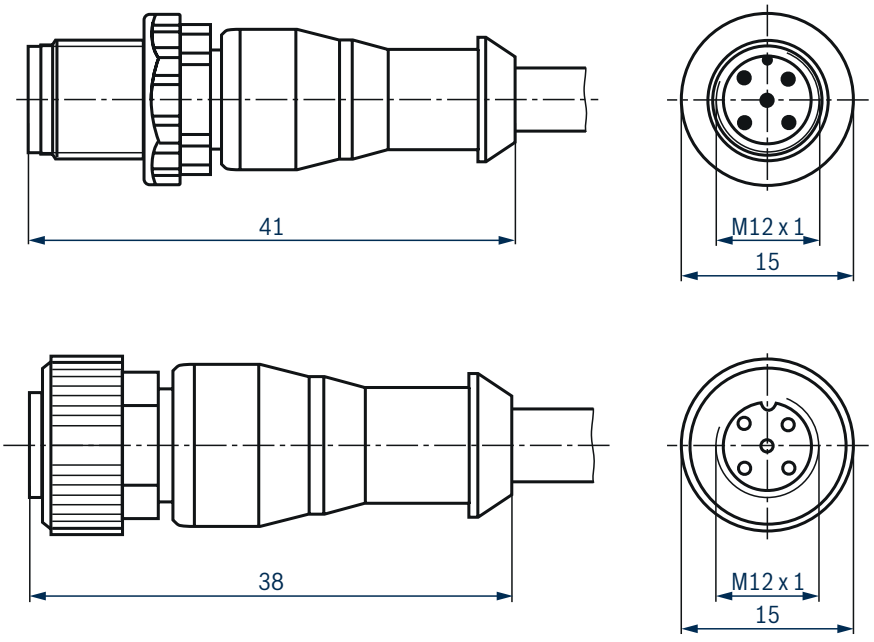
1) Take into account the temperature increase caused by the self-heating of the connected operating equipment.
3) Low-Voltage Directive
4) ROHS
9) UL certification 0 ... 30 V.

Cable sets
For sensors and valves with IO-Link interface, 5-pole

Circuit diagrams



Dimensions
(Dimensions in mm)



Mating connectors

For sensors and valves with "K24", "K35", "K72" and "K73" connectors, 4-pole

Short designation	Material number	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Ambient temperature range [1] in °C	Protection class according to EN 60529 (when assembled)	Housing color	Cable gland	Terminal area fitting	Maximum line cross-section in mm²	Conformity	Tightening torque range mounting nut M12 in Nm	
Straight													
4PZ24	R900773042	0 ... 50		4	-25 ... +85	IP67	black	PG7	4 ... 6	0.75	cURus, CSA	0.6	◇
4PZ24	R900031155	0 ... 50		3	-40 ... +85	IP67	black	PG9	6 ... 8	0.75	–	0.6	
Angled													
4PZ24	R900779509	0 ... 50		4	-25 ... +85	IP67	black	PG7	4 ... 6	0.75	cURus CSA	0.6	◇
4PZ24	R900082899	0 ... 50		3	-40 ... +85	IP67	black	PG9	6 ... 8	0.75	–	0.6	

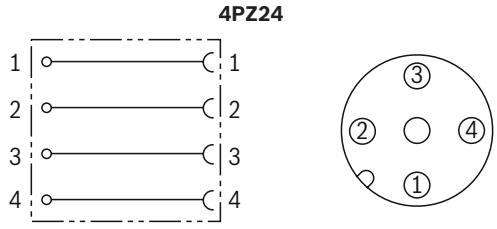
[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

☞ **Note:** ◇ = Preferred type

Mating connectors

For sensors and valves with "K24", "K35", "K72" and "K73" connectors, 4-pole

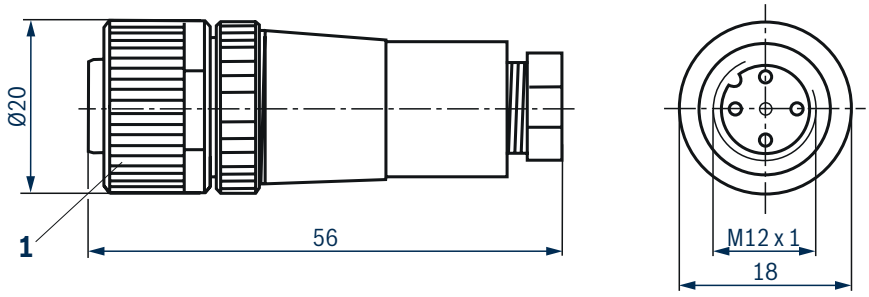
Circuit diagrams



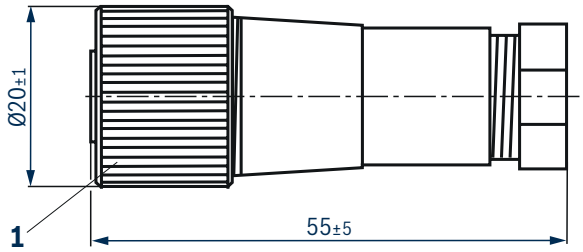
Dimensions

(Dimensions in mm)

4PZ24 (PG7)

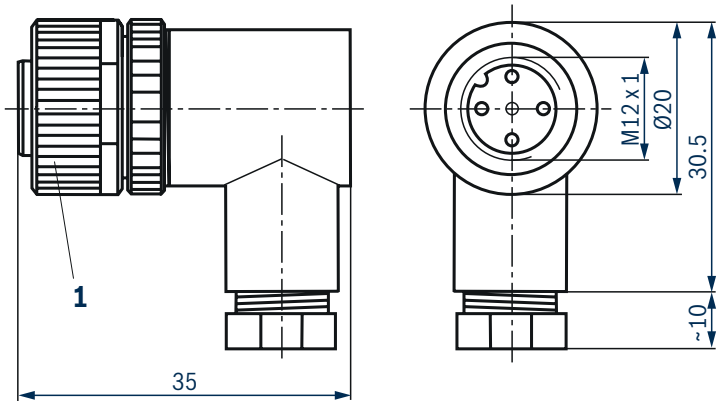


4PZ24 (PG9)

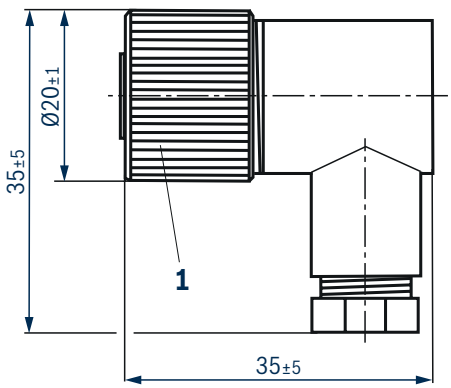


1 Coupling nut, tightening torque M_A = 0.6 Nm

4PZ24 (PG7)



4PZ24 (PG9)



Cable sets

For sensors and valves with "K24", "K35", "K72" and "K73" connectors, 4-pole

Short designation	Material number	Cable length in m	Supply voltage range (DC) in V	Supply voltage range (AC) in V	Maximum current in A	Ambient temperature range [1] (fixed cable) in °C	Ambient temperature range [1] (flexible cable) in °C	Rated surge voltage in V	Protection class according to EN 60529 (when assembled)	Housing color	Line cross-section in mm²	Conformity	Tightening torque range mounting screw M3 in Nm	Cable diameter in mm	Bending radius (fixed cable) in x cable diameter in mm	Bending radius (flexible cable) in x cable diameter in mm	Shield	
Straight																		
4PZ224	R900064381	3	0 ... 50 [9]		3	-25 ... +80	-20 ...+80	–	IP67	black	0.34	CSA UL	0.6	approx. 5.7	10 x	15 x	–	
4PM12	R900779498	5	0 ... 50		4	-25 ... +80	-20 ...+80	2.5	IP65 IP66K IP67	black	0.34	CSA UL CE [3; 4]	0.6	approx. 5.9	10 x	15 x	✓ ◇	
4PZ224	R913005668	10	0 ... 50 [9]		4	-25 ... +80	-20 ...+80	–	IP67	black	0.34	CSA UL CE [3; 4]	0.6	approx. 5.2	10 x	15 x	–	
Angled																		
4PM12	R900779503	5	0 ... 50		4	-25 ... +80	-20 ...+80	2.5	IP65 IP66K IP67	black	0.34	CSA UL CE [3; 4]	0.6	approx. 5.9	10 x	15 x	✓	
4PZ224	R913011722	10	0 ... 50 [9]		4	-25 ... +80	-20 ...+80	–	IP67	black	0.34	CSA UL	0.6	approx. 5.2	10 x	15 x	–	

Note: ◇ = Preferred type

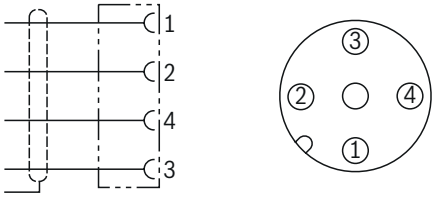
1) Take into account the temperature increase caused by the self-heating of the connected operating equipment.
3) Low-Voltage Directive
4) ROHS
9) UL certification 0 ... 30 V.

Cable sets

For sensors and valves with "K24", "K35", "K72" and "K73" connectors, 4-pole

Circuit diagrams

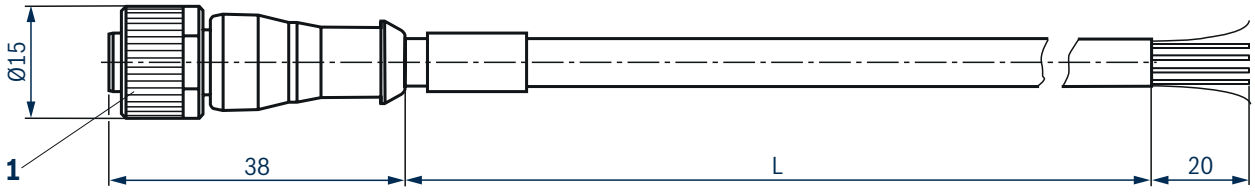
4PM12; 4PZ24



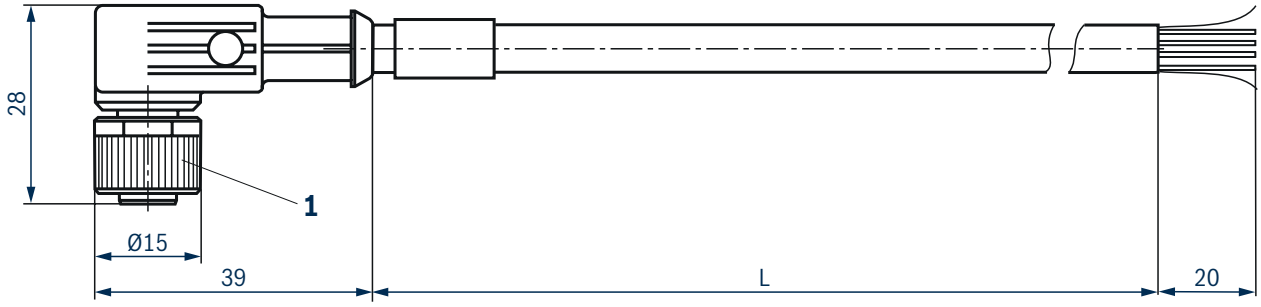
Dimensions

(Dimensions in mm)

4PM12; 4PZ24



4PM12; 4PZ24



1 Coupling nut, tightening torque M_A = 0.6 Nm

Cable sets

For sensors and valves with "K24", "K35", "K72" and "K73" connectors, 4-pole

Short designation	**Material number**	**Supply voltage range (AC)** in V	**Maximum current** in A	**Ambient temperature range** [1] (fixed cable) in °C	**Ambient temperature range** [1] (flexible cable) in °C	**Protection class according to EN 60529** (when assembled)	**Housing color**	**Line cross-section** in mm²	**Conformity**	**Cable diameter** in mm	**Bending radius** (fixed cable) in x cable diameter in mm	**Bending radius** (flexible cable) in x cable diameter in mm	**Shield**
Straight													
CABLE SET VT-SSPA1-1X/ M12/1/V00	R901241656	60	4	-25 ... +80	-5 ... +80	IP67	black	4 x 0.75	CSA, RoHS	7±5 %	5 x	10 x	Cable and mating connector
Angled													
CABLE SET VT-SSPA1-1X/ M12/2/V00	R901241651	60	4	-25 ... +80	-5 ... +80	IP67	black	4 x 0.75	CSA, RoHS	7±5 %	5 x	10 x	Cable and mating connector

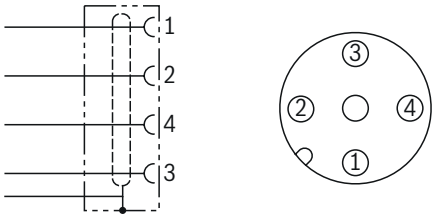
[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

Cable sets

For sensors and valves with "K24", "K35", "K72" and "K73" connectors, 4-pole

Circuit diagrams

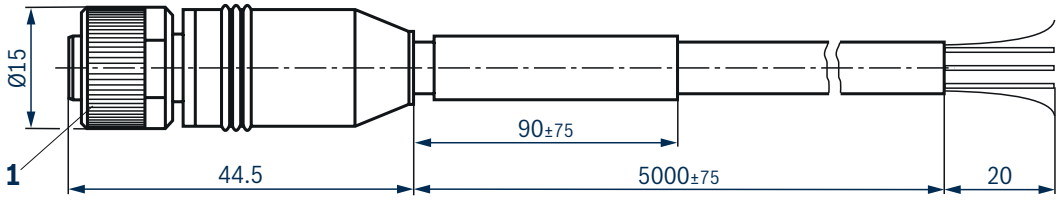
CABLE SET VT-SSPA1-1X/M12/1/V00
CABLE SET VT-SSPA1-1X/M12/2/V00



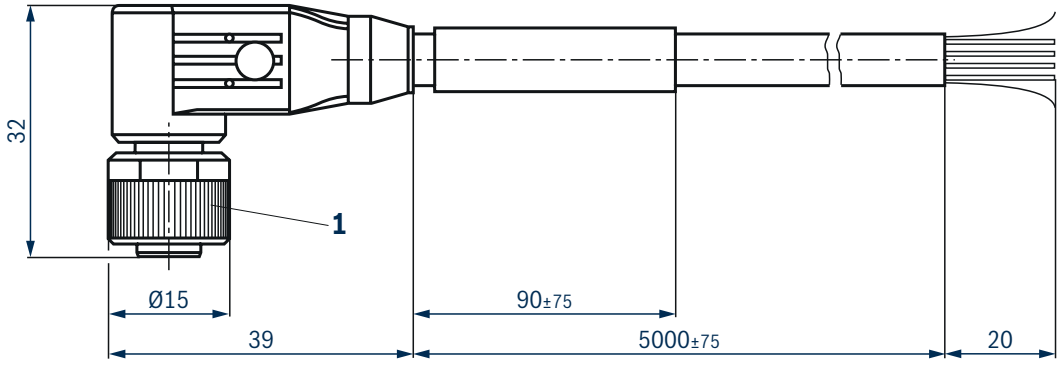
Dimensions

(Dimensions in mm)

KABELSATZ VT-SSPA1-1X/M12/1/V00



KABELSATZ VT-SSPA1-1X/M12/2/V00



1 Coupling nut, tightening torque M_A = 0.6 Nm

Mating connectors

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

Short designation	**Material number**	**Supply voltage range (DC)** in V	**Supply voltage range (AC)** in V	**Maximum current** in A	**Derating** [2] in °C	**Ambient temperature range** [1] in °C	**Rated surge voltage** in V	**Protection class according to EN 60529** (when assembled)	**Housing color**	**Cable gland**	**Terminal area fitting**	**Line cross-section** in mm²	**Tightening torque range mounting screw M3** in Nm	**Tightening torque cable gland** in Nm
7PZ6	R900002803	0 ... 250		10	+40	-40 ... +90	4	IP65	gray	PG11	7 ... 9	1.5	0.5 ... 0.6	2.5 ... 3.75
				4	+65									
				0	+90									

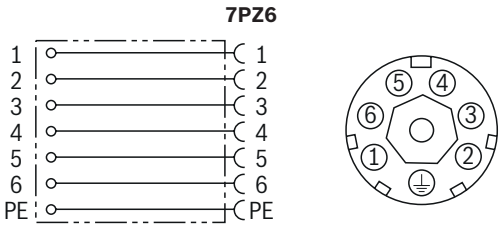
[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

[2] In the event of an overshoot, the current carrying capacity is reduced dependent on the temperature.

Mating connectors

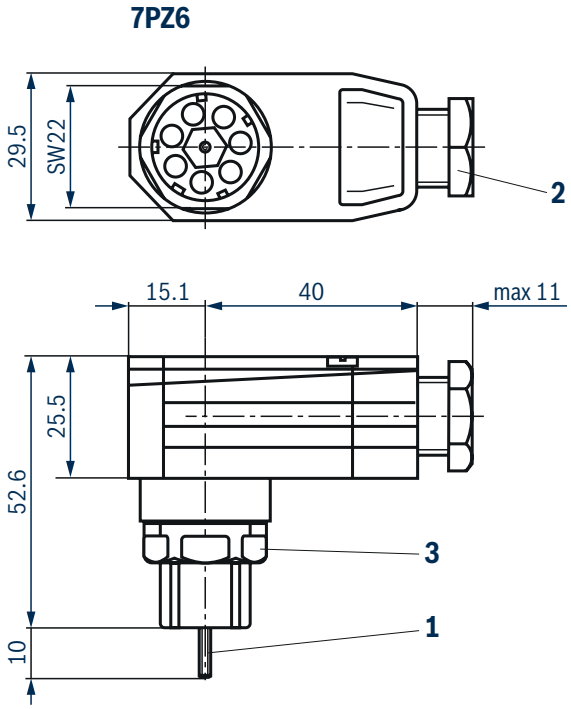
For mechanical position switches, mechanical pressure switches and valves with central connection with "K6" and "DK6L" connectors

Circuit diagrams



Dimensions

(Dimensions in mm)



1 Mounting screw M3

2 Cable gland PG11

3 Coupling nut SW22, tightening torque M_A = 1.0 ... 1.5 Nm

Accessories see page 62.

Mating connectors

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

Short designation	**Material number**	**Supply voltage range (DC)** in V	**Supply voltage range (AC)** in V	**Maximum current** in A	**Ambient temperature range** [1] in °C	**Protection class according to EN 60529** (when assembled)	**Housing color**	**Terminal area fitting**	**Line cross-section area** in mm^2	**External diameter** in mm
2P JUNIOR D2 2	R901022127	10 ... 32		5	-20 ... +125	IP66A	black	5.2 ... 7	0.5 ... 1	2.2 ... 3.0
2P D1.2 JUNIOR	R900313533	10 ... 32		5	-20 ... +125	IP66A	black	5.2 ... 7	0.5 ... 1	1.2 ... 2.1

[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

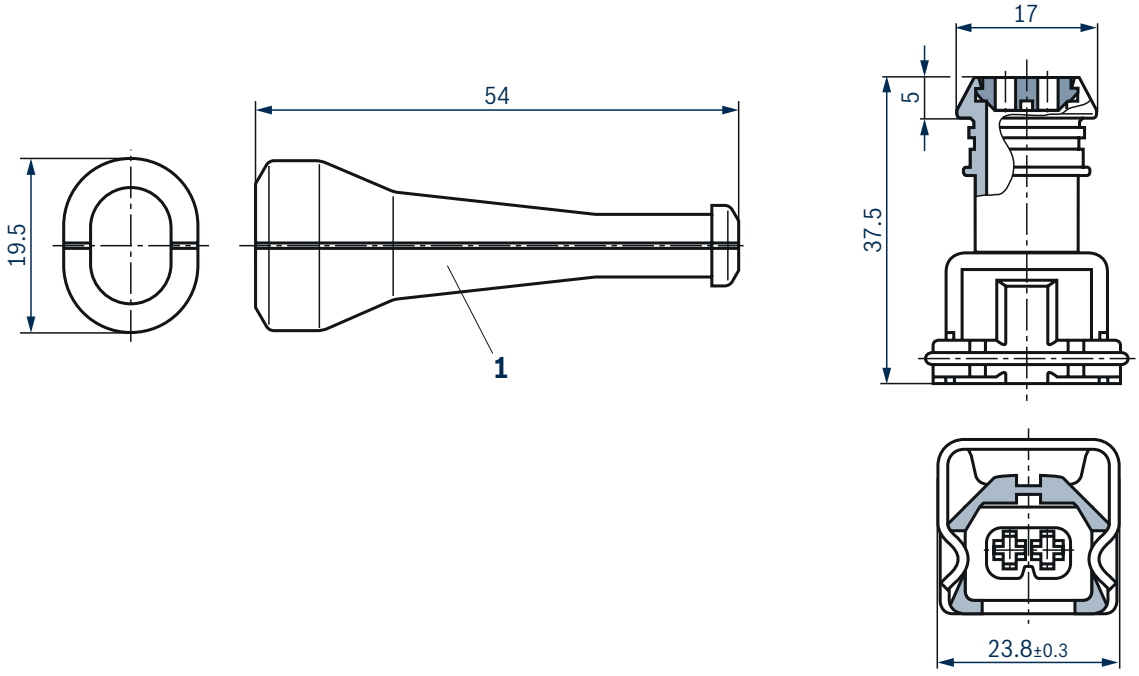
Mating connectors

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

Circuit diagrams

Dimensions

(Dimensions in mm)



1 Housing AMP; type 282189-1

Accessories see page 62.

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

Short designation	**Material number**	**Supply voltage range (DC)** in V	**Supply voltage range (AC)** in V	**Maximum current** in A	**Ambient temperature range** [1] in °C	**Protection class according to EN 60529** (when assembled)	**Housing color**	**Terminal area for line diameter**	**Line cross-section area** in mm^2
2P DT06 K40AWG14	R900733451	10 ... 32		5	-20 ... +125	IP69K	gray	1.35 ... 3.05	1.3 ... 2.08
2P DT06 K40AWG16	R901017847	10 ... 32		5	-20 ... +125	IP69K	gray	1.35 ... 3.05	0.83 ... 1.3

[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

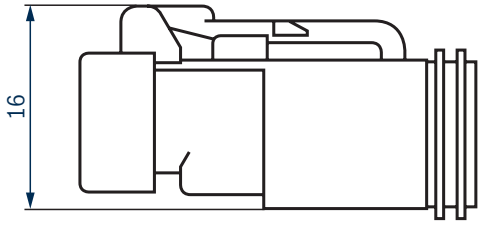
Mating connectors

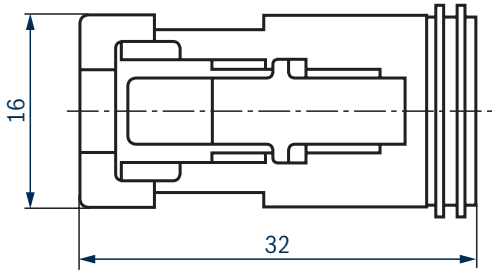
For directional valves with "K40" connector (Deutsch plug)

Circuit diagrams

Dimensions

(Dimensions in mm)





Accessories see page 62.

Cable sets
For cylinders with proximity switch, 5-pole

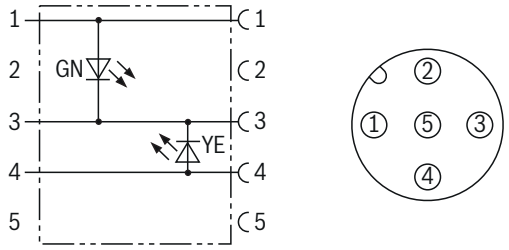
Short designation	Material number	Cable length in m	Supply voltage (DC) in V	Maximum current in A	Ambient temperature range [1] (fixed cable) in °C	Ambient temperature range [1] (flexible cable) in °C	Protection class according to EN 60529 (when assembled)	Housing color	Indicator light	Line cross-section in mm²	Conformity	Tightening torque mounting screw M3 in Nm	Cable diameter in mm	Bending radius (fixed cable) in x cable diameter in mm	Bending radius (flexible cable) in x cable diameter in mm	Shield
Straight																
M12 x 1, A-coded	R913016852	5	30	4	-25 ... +80		IP67 IP68 IP69K	black	LED green+yellow	3 x 0.34	CE, UKCA, cULus, WEEE	0.6	4.3±0.2	5 x	10 x	–
Angled																
M12 x 1, A-coded	R988064311	5	30	4	-25 ... +80		IP67 IP68 IP69K	black	LED green+yellow	3 x 0.34	CE, UKCA, cULus, WEEE	0.6	4.3±0.2	5 x	10 x	–

[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

Cable sets
For cylinders with proximity switch, 5-pole

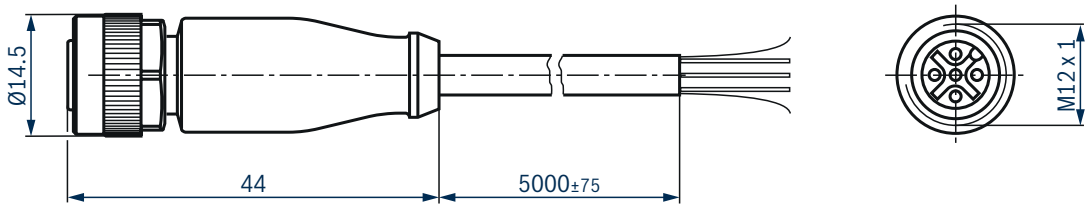
Circuit diagrams

R913016852
R988064311

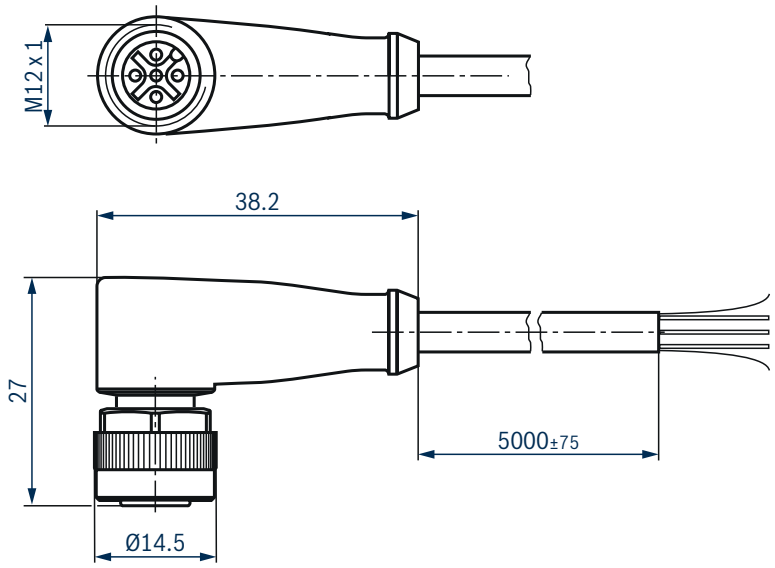


Dimensions
(Dimensions in mm)

R913016852



R988064311



Mating connectors

For cylinders with position measurement system – analog output "F" and "C" or digital output "D" and "S"

Short designation	**Material number**	**Supply voltage (DC)** in V	**Supply voltage (AC)** in V	**Maximum current** in A	**Ambient temperature range** [1] in °C	**Rated surge voltage** in V	**Protection class according to EN 60529** (when assembled)	**Housing material**	**Cable gland**	**Terminal area fitting**	**Line cross-section** in mm²	**Conformity**	**Tightening torque cable gland** in Nm
Straight													
6-pole	R901511626	300	300	7	-40 ... +100	1500	IP65 IP67 IP69K	Brass and/or die-cast zinc, nickel-plated	PG7	4 ... 6	≤0.5	CE UL	1 ... +1.5
7-pole	R900079551	300	300	7	-40 ... +100	1500	IP65 IP67 IP69K	Brass and/or die-cast zinc, nickel-plated	PG7	4 ... 6	≤0.5	CE UL	0.7 ... +1.5

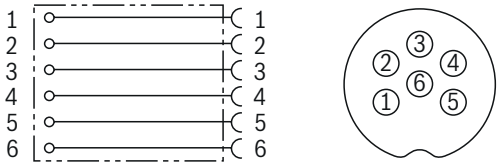
[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

Mating connectors

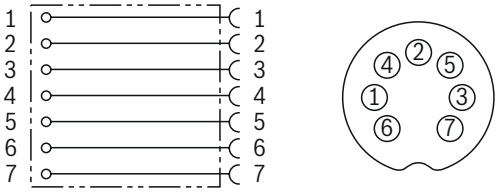
For cylinders with position measurement system – analog output "F" and "C" or digital output "D" and "S"

Circuit diagrams

R901511626



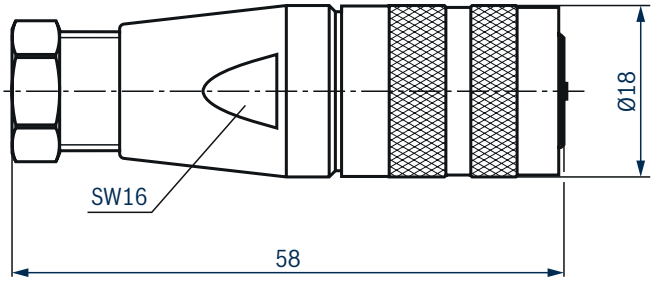
R900079551



Dimensions

(Dimensions in mm)

R901511626; R900079551



Mating connectors
For cylinders with position measurement system – IO-Link interface, 5-pole

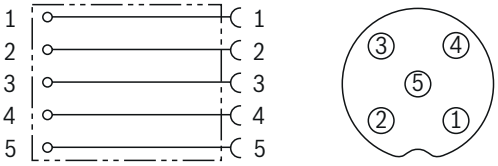
Short designation	**Material number**	**Supply voltage (DC)** in V	**Supply voltage (AC)** in V	**Maximum current** in A	**Ambient temperature range** [1] in °C	**Protection class according to EN 60529** (when assembled)	**Housing material**	**Terminal area fitting**	**Line cross-section** in mm²	**Tightening torque cable gland** in Nm
Straight										
M12, A-coded	R913045873	60	60	4	-30 ... +85	IP65 IP67	Die-cast zinc, nickel-plated	4 ... 8	1.5	0.6
Angled										
M12, A-coded	R901500328	125	125	4	-25 ... +85	IP67	Die-cast zinc, nickel-plated	5 ... 8	0.75	0.4

[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

Mating connectors
For cylinders with position measurement system – IO-Link interface, 5-pole

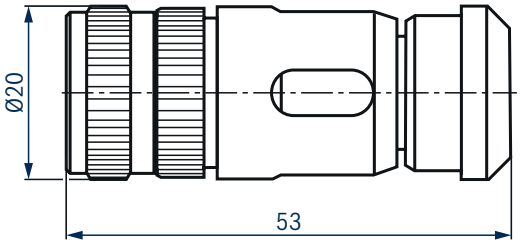
Circuit diagrams

R913045873; R901500328

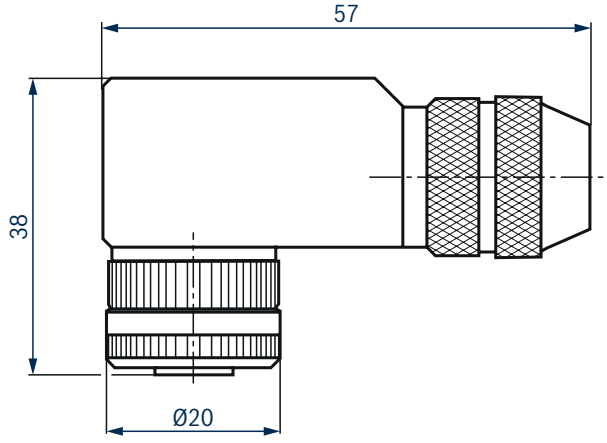


Dimensions
(Dimensions in mm)

R913045873



R901500328



Mating connectors
For cylinders with position measurement system – Profibus "D53"

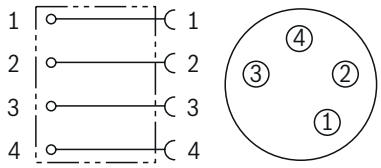
Short designation	**Material number**	**Supply voltage (DC)** in V	**Supply voltage (AC)** in V	**Maximum current** in A	**Ambient temperature range** [1] in °C	**Protection class according to EN 60529** (when assembled)	**Housing material**	**Terminal area fitting**	**Line cross-section** in mm²	**Tightening torque cable gland** in Nm
Straight										
M8, 4-pole	R901132799	60	60	4	-40 ... +85	IP67	Die-cast zinc, nickel-plated	3.5 ... +5	0.5	0.5
M12, 2-pole, B-coded	R900773386	32	32	4	-40 ... +85	IP65 IP67	Zinc, nickel-plated	4.5 ... 8.8	0.34	0.6
M12, 2-pole, B-coded	R901091655	32	32	4	-40 ... +85	IP65 IP67	Zinc, nickel-plated	4.5 ... 8.8	0.34	0.6
M12, 4-pole, B-coded	R901070126	60	60	4	-30 ... +90	IP65 IP67 IP68	PUR	–	–	–

[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

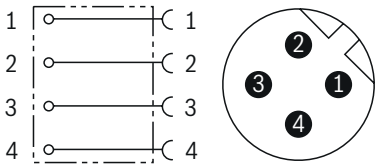
Mating connectors
For cylinders with position measurement system – Profibus "D53"

Circuit diagrams

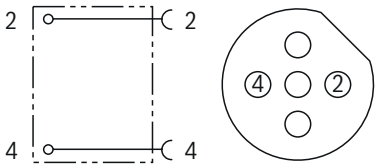
R901132799



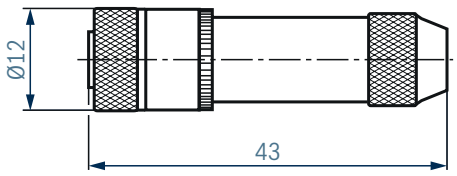
R901091655; R901070126



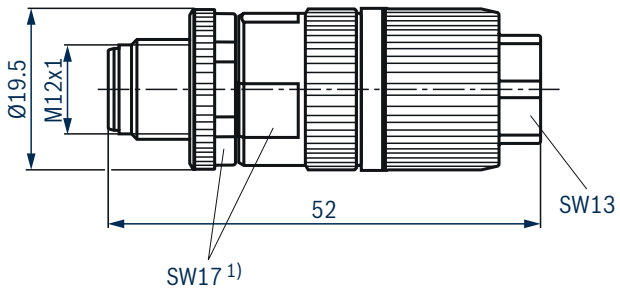
R900773386



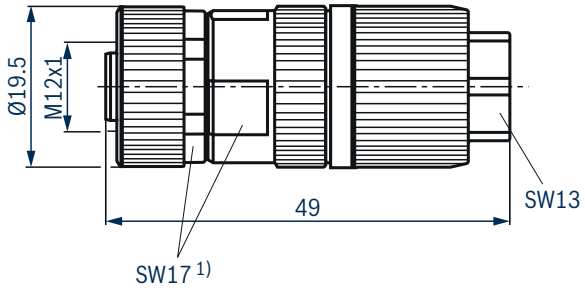
R901132799



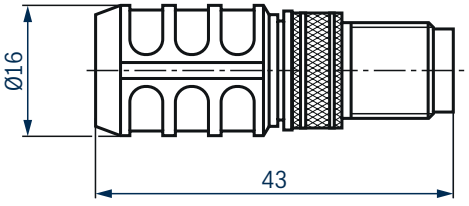
R901091655



R900773386



R901070126



1) Tightening torque see page 54.

Mating connectors
For cylinders with position measurement system – Profibus "D63", 6-pole

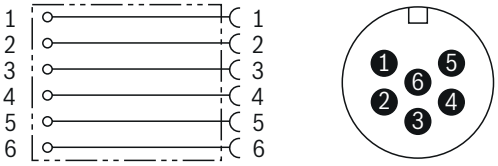
Short designation	**Material number**	**Supply voltage (DC)** in V	**Supply voltage (AC)** in V	**Maximum current** in A	**Ambient temperature range** [1] in °C	**Protection class according to EN 60529** (when assembled)	**Housing material**	**Cable gland**	**Terminal area fitting**	**Line cross-section** in mm²	**Tightening torque cable gland** in Nm
Straight											
M16, signal input	R900705950	63	300	7	-40 ... +100	IP65 IP67 IP69K	Zinc, nickel-plated	PG9	6 ... 8	0.5	0.7
M16, end plug	R900722518	63	300	7	-40 ... +100	IP65 IP67 IP69K	Zinc, nickel-plated	PG9	6 ... 8	0.5	0.7
M16, signal output	R900705951	63	300	7	-40 ... +100	IP65 IP67 IP69K	Zinc, nickel-plated	PG9	6 ... 8	0.5	0.7

[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

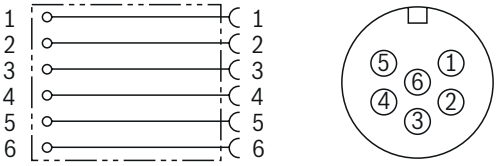
Mating connectors
For cylinders with position measurement system – Profibus "D63", 6-pole

Circuit diagrams

R900722518; R900705951

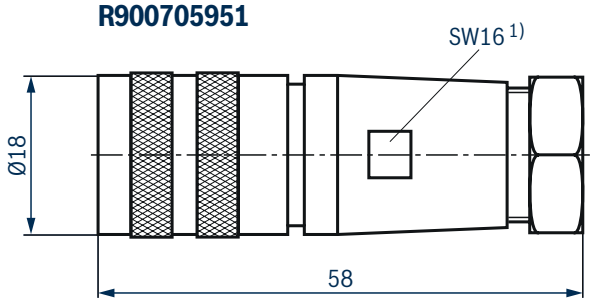


R900705950

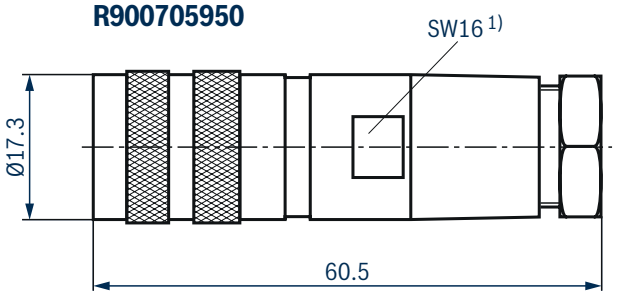


Dimensions
(Dimensions in mm)

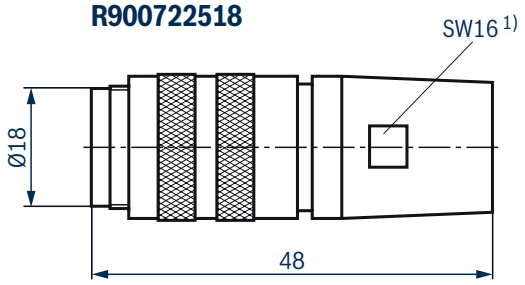
R900705951



R900705950



R900722518



1) Tightening torque see page 56.

Cable sets

For cylinders with position measurement system – Profibus "D53", 4-pole

Short designation	**Material number**	**Cable length** in m	**Supply voltage range (DC)** in V	**Supply voltage range (AC)** in V	**Maximum current** in A	**Ambient temperature range** [1] (fixed cable) in °C	**Ambient temperature range** [1] (flexible cable) in °C	**Protection class according to EN 60529** (when assembled)	**Housing material**	**Line cross-section** in mm²	**Cable diameter** in mm	**Shield**
Straight												
M8 x 1	R901213191	5	60	60	4	-30 ... +90	-30 ... +90	IP65 IP67 IP68	PUR	4 x 0.25	4.7	✔
M8 x 1	R913008737	10	60	60	4	-30 ... +90	-30 ... +90	IP65 IP67 IP68	PUR	4 x 0.25	4.7	✔
M8 x 1	R913008738	15	60	60	4	-30 ... +90	-30 ... +90	IP65 IP67 IP68	PUR	4 x 0.25	4.7	✔

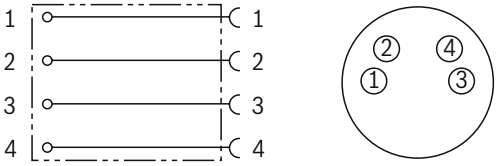
[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

Cable sets

For cylinders with position measurement system – Profibus "D53", 4-pole

Circuit diagrams

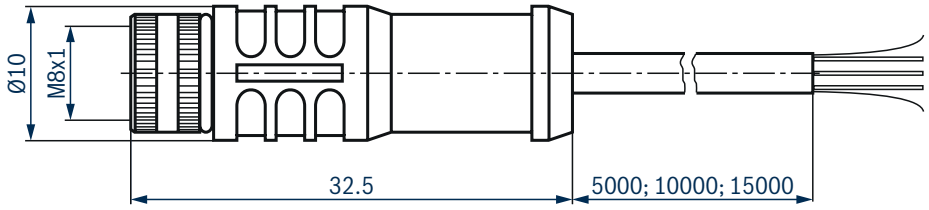
R901213191; R913008737; R913008738



Dimensions

(Dimensions in mm)

R901213191; R913008737; R913008738



Mating connectors
For cylinders with position measurement system – Profinet

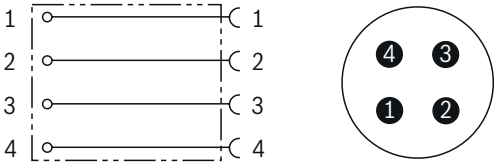
Short designation	**Material number**	**Supply voltage (DC)** in V	**Supply voltage (AC)** in V	**Maximum current** in A	**Ambient temperature range** [1] in °C	**Protection class according to EN 60529** (when assembled)	**Housing material**	**Terminal area fitting**	**Line cross-section** in mm²	**Line cross-section area** in mm²	**Tightening torque cable gland** in Nm
Straight											
M12; 4-pole, D-coded	R913045872	50	50	4	-40 ... +85	IP65 IP67	Zinc, nickel-plated	4.5 ... 8.8	–	1.2 ... +2.0	0.6
M12; 5-pole, A-coded	R913045873	60	60	4	-30 ... +85	IP65 IP67	Die-cast zinc, nickel-plated	4 ... 8	1.5	–	0.6

[1] Take into account the temperature increase caused by the self-heating of the connected operating equipment.

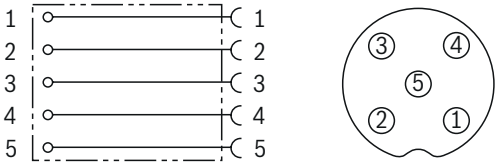
Mating connectors
For cylinders with position measurement system – Profinet

Circuit diagrams

R913045872

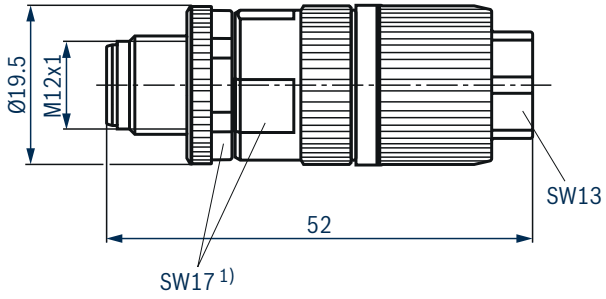


R913045873

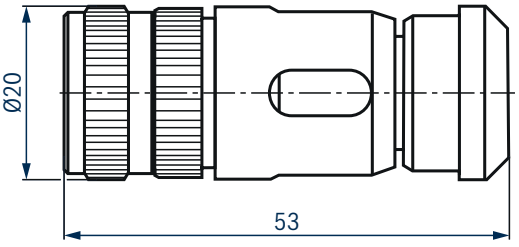


Dimensions
(Dimensions in mm)

R913045872



R913045873



1) Tightening torque see page 60.

Accessories (separate order)

Mating connectors	Company	Designation	Order number
For valves with round connector, 6-pole + PE and 6-pole "6P KPTC6"	ITT Cannon	Crimping pliers	M22520/1-01
		Crimping insert	M22520/1-02
		Installation tool	CiTG-20A
		Installation pliers	CIT-KPTC-20
For valves with round connector, 11-pole + PE	Hirschmann	Crimping pliers	XCZ 0701
		Ejection tool	XWA 164
		Installation tool	CiTG-20A
		Installation pliers	CIT-KPTC-20
For mechanical position switches, mechanical pressure switches and valves with central connection with "K6" and "DK6L" connectors	Hirschmann	Crimping pliers	XCZ 0701
		Ejection tool	XWA 164
For directional valves with connector "C4" and "C4Z" (AMP Junior-Timer)	TYCO	Basic pliers	Type 539635-1
		Die	Type 539737-2
For directional valves with "K40" connector (Deutsch plug)	Deutsch	Crimping tool	TE information 114-151004

Plug-in switching amplifier

With pulse width modulation (PWM) for control of on/off valves type VT-SSBA1	Switching amplifier for fast switching, energy saving and coil temperature reduction:		Data sheet 30362

Project planning information

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

Further information

- Electronics for industrial applications — Operating instructions 07602-B
- Information on available spare parts — www.boschrexroth.com/spc

Notes

Notes

Bosch Rexroth AG
Industrial Hydraulics
Zum Eisengießer 1
97816 Lohr am Main, Germany
Phone +49 (0) 93 52 / 40 30 20
my.support@boschrexroth.com
www.boschrexroth.com

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