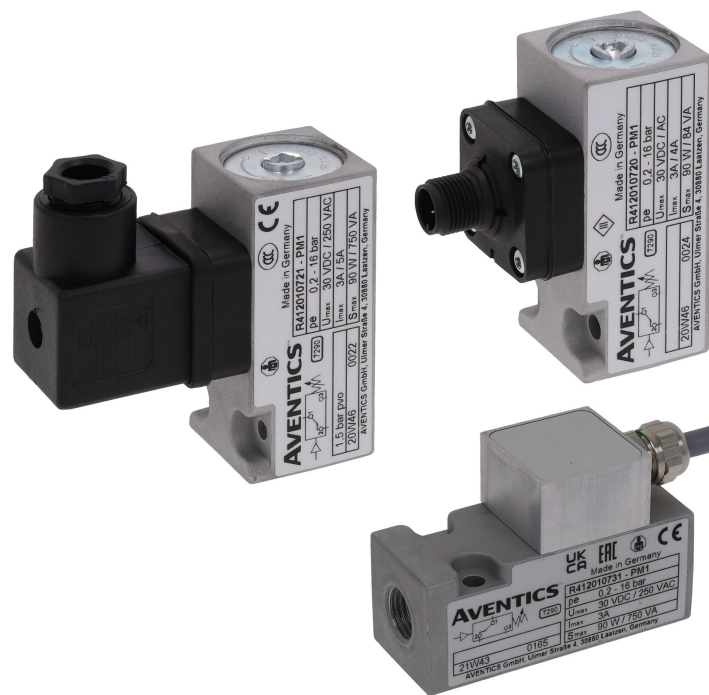


Series PM1



AVENTICS™

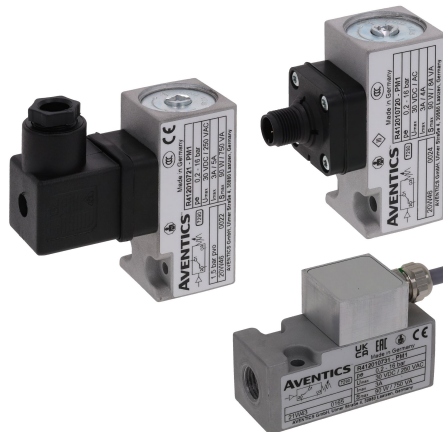
AVENTICS Series PM1 Pressure switches



Series PM1

The AVENTICS Series PM1 is a compact pressure switch for measuring compressed air and hydraulic oil. The Series PM1 allows users to select between different pressure ranges from -0.9 to 16 bar.

- Robust housing
- Available with the pressure ranges -0.9 to 0 bar, -0.9 to 1 bar, -0.9 to 3 bar or 0.2 to 16 bar
- Various process connections
- ATEX version available



Product overview

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Pressure Switches, Series PM1, G1/4, form A, With valve plug connector

Electrical connection 2, type: Plug

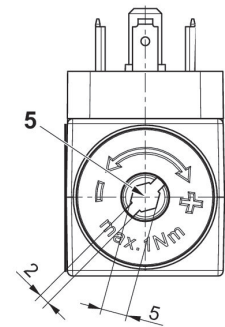
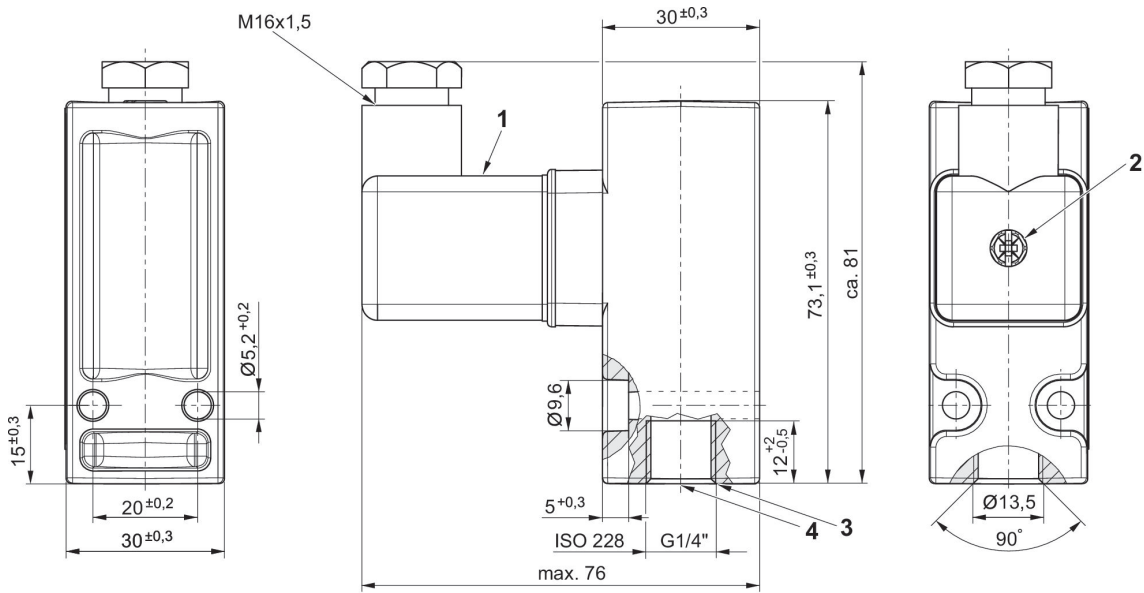
Electrical connection 2, thread size: EN 175301-803, form A

Compressed air connection type: Internal thread



Thread connection	Operating pressure min [bar]	Operating pressure max [bar]	Protection against overpressure	Hysteresis	Mounting orientation	Part No.
G 1/4	-0.9	0	80 bar	max. switching pressure difference	Any	R412010711
G 1/4	0.2	16	80 bar	max. switching pressure difference	Any	R412010713
G 1/4	-0.9	3	80 bar	max. switching pressure difference	Any	R412022752

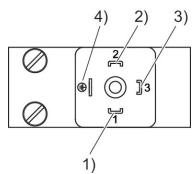
Dimensions in mm



- 1) Valve plug connector
- 2) Mounting screw
- 3) sealing surface
- 4) Tightening torque MA = 12 + 1 Nm
- 5) Adjustment screw, self-holding

R412010711, R412010713, R412022752

PIN assignment for valve plug connectors



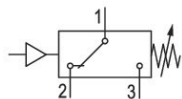
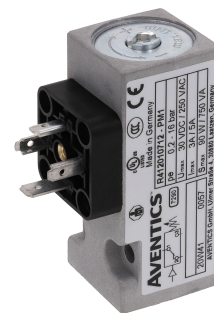
Pin	Allocation
1	+UB
2	break contact
3	NO (make contact)
4	GND

Pressure Switches, Series PM1, G1/4, form A, without valve plug connector

Electrical connection 2, type: Plug

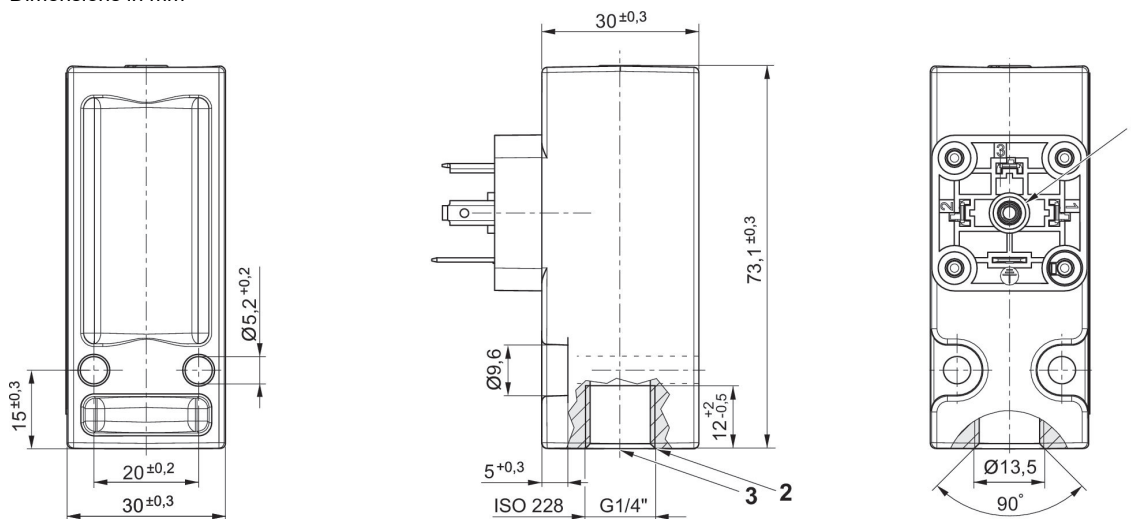
Electrical connection 2, thread size: EN 175301-803, form A

Compressed air connection type: Internal thread



Thread connection	Operating pressure min [bar]	Operating pressure max [bar]	Protection against overpressure	Hysteresis	Mounting orientation	Part No.
G 1/4	0.2	16	80 bar	max. switching pressure difference	Any	R412010712

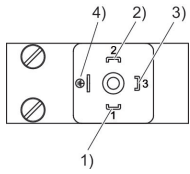
Dimensions in mm



- 1) Mounting screw
- 2) sealing surface
- 3) Tightening torque MA = 12 + 1 Nm
- 4) adjustment screw

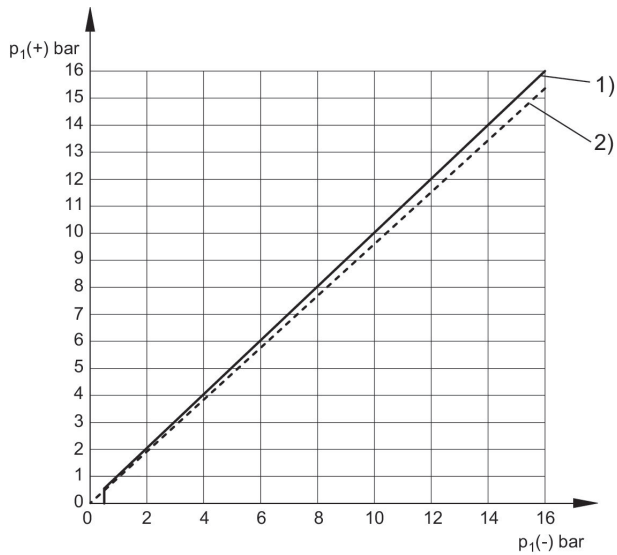
R412010712

PIN assignment for valve plug connectors



Pin	Allocation
1	+UB
2	break contact
3	NO (make contact)
4	GND

Differential switching pressure characteristic curve (0,2 - 16 bar)



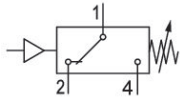
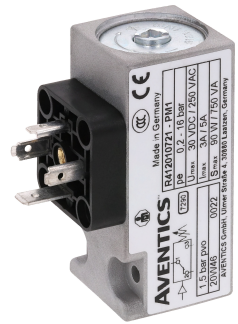
$p_1(+)$ = upper switching pressure with increasing pressure
 $p_1(-)$ = lower switching pressure with decreasing pressure
 1) Rising
 2) Falling

Pressure Switches, Series PM1, M12, 0,2 - 16 bar

Electrical connection 2, type: Plug

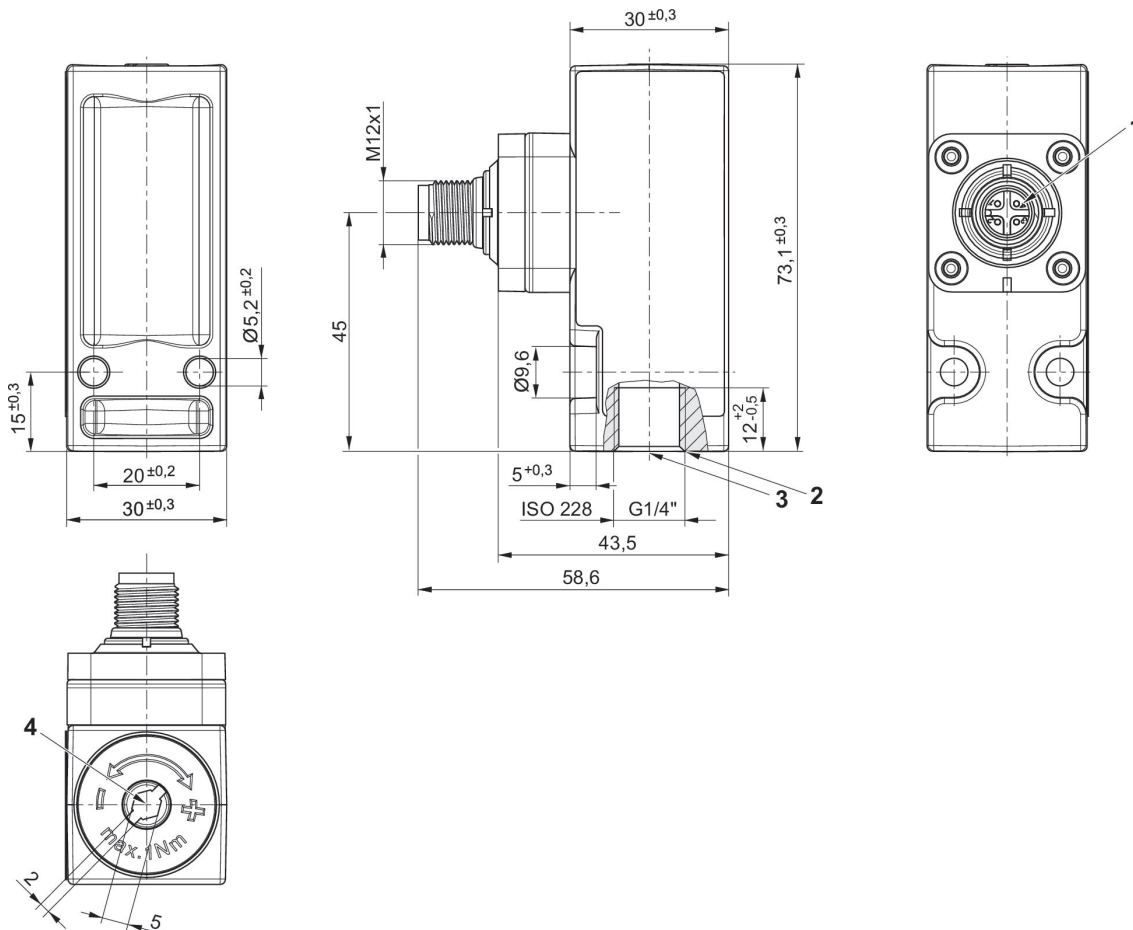
Electrical connection 2, thread size: M12x1

Compressed air connection type: Internal thread



Thread connection	Operating pressure min [bar]	Operating pressure max [bar]	Protection against overpressure	Hysteresis	Mounting orientation	Part No.
G 1/4	0.2	16	80 bar	max. switching pressure difference	Any	R412010717

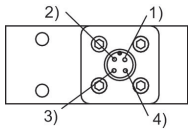
Dimensions in mm



- 1) M12 connection rotatable by 90° and 30° with detent
- 2) sealing surface
- 3) Tightening torque MA = 12 + 1 Nm
- 4) adjustment screw

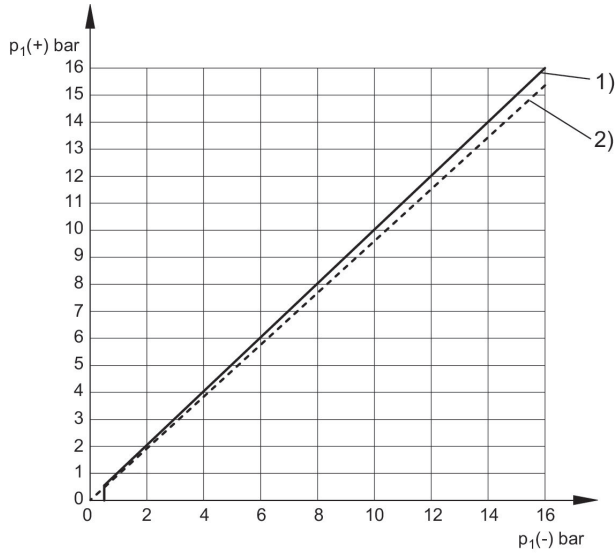
R412010717

Pin assignments



Pin	Allocation
1	+UB
2	break contact
3	No function
4	NO (make contact)

Differential switching pressure characteristic curve (0,2 - 16 bar)



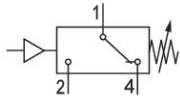
$p_{1 (+)}$ = upper switching pressure with increasing pressure
 $p_{1 (-)}$ = lower switching pressure with decreasing pressure
 1) Rising
 2) Falling

Pressure Switches, Series PM1, M12, -0,9 - 0 bar

Electrical connection 2, type: Plug

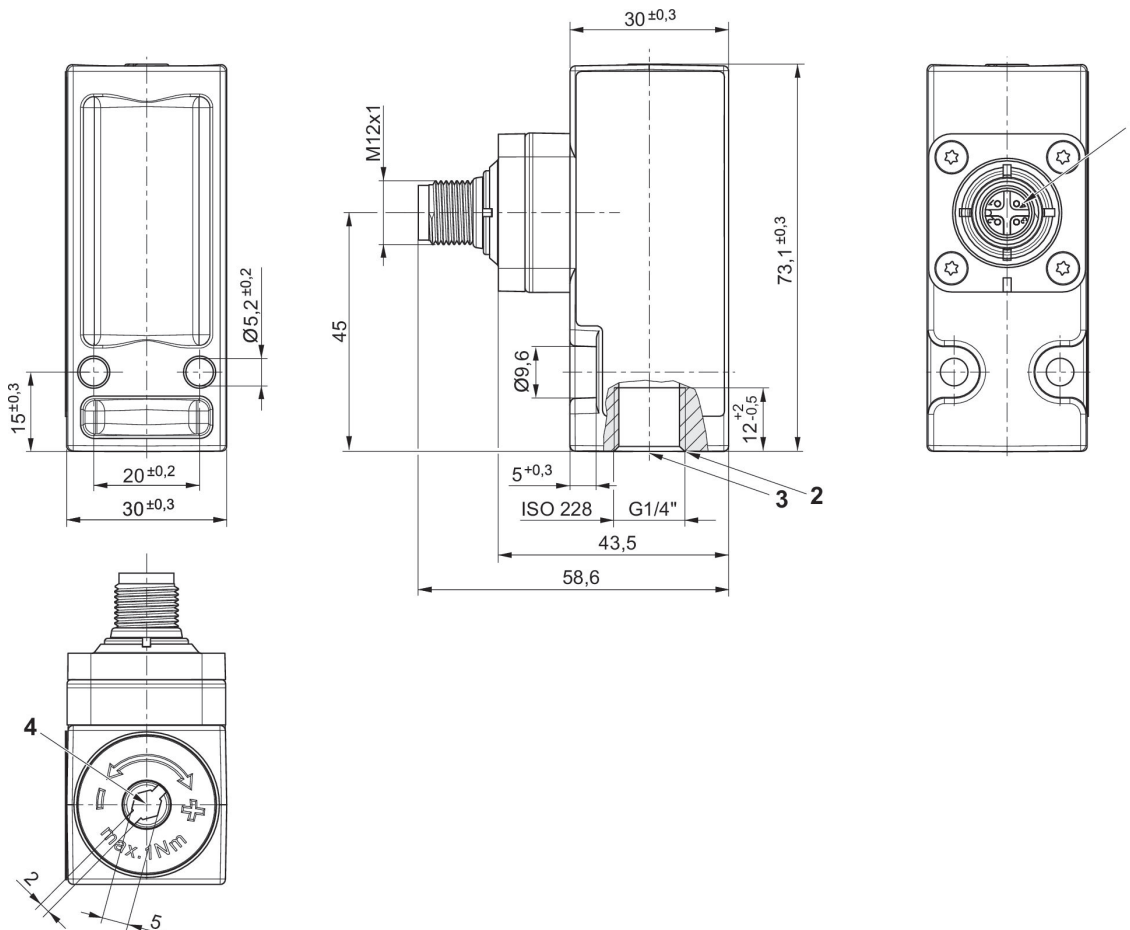
Electrical connection 2, thread size: M12x1

Compressed air connection type: Internal thread



Thread connection	Operating pressure min [bar]	Operating pressure max [bar]	Protection against overpressure	Hysteresis	Mounting orientation	Part No.
G 1/4	-0.9	0	80 bar	max. switching pressure difference	Any	R412010716

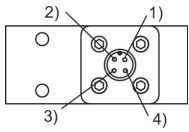
Dimensions in mm



- 1) M12 connection rotatable by 90° and 30° with detent
- 2) sealing surface
- 3) Mounting screw
- 4) Adjustment screw, self-holding

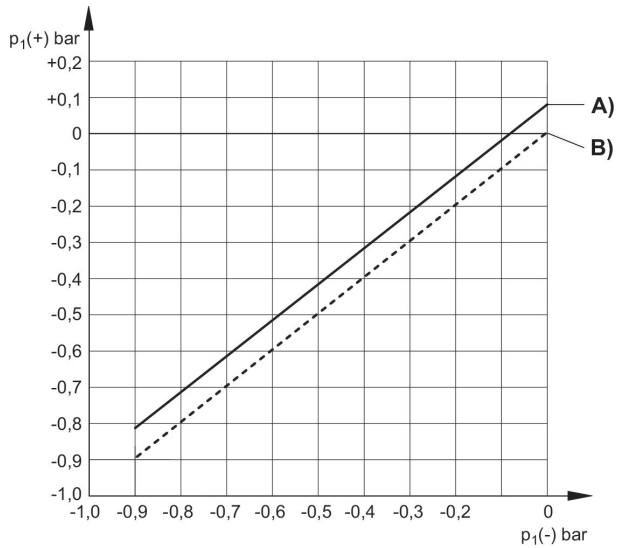
R412010716

Pin assignments



Pin	Allocation
1	+UB
2	break contact
3	No function
4	NO (make contact)

Differential switching pressure characteristic curve (-0,9 – 0 bar)



A) $p_1(-)$, min.
 B) $p_1(-)$, max.
 $p_1(+)$ = upper switching pressure with increasing pressure
 $p_1(-)$ = lower switching pressure with decreasing pressure

Pressure Switches, Series PM1, flange, form A, With valve plug connector

Electrical connection 2, type: Plug

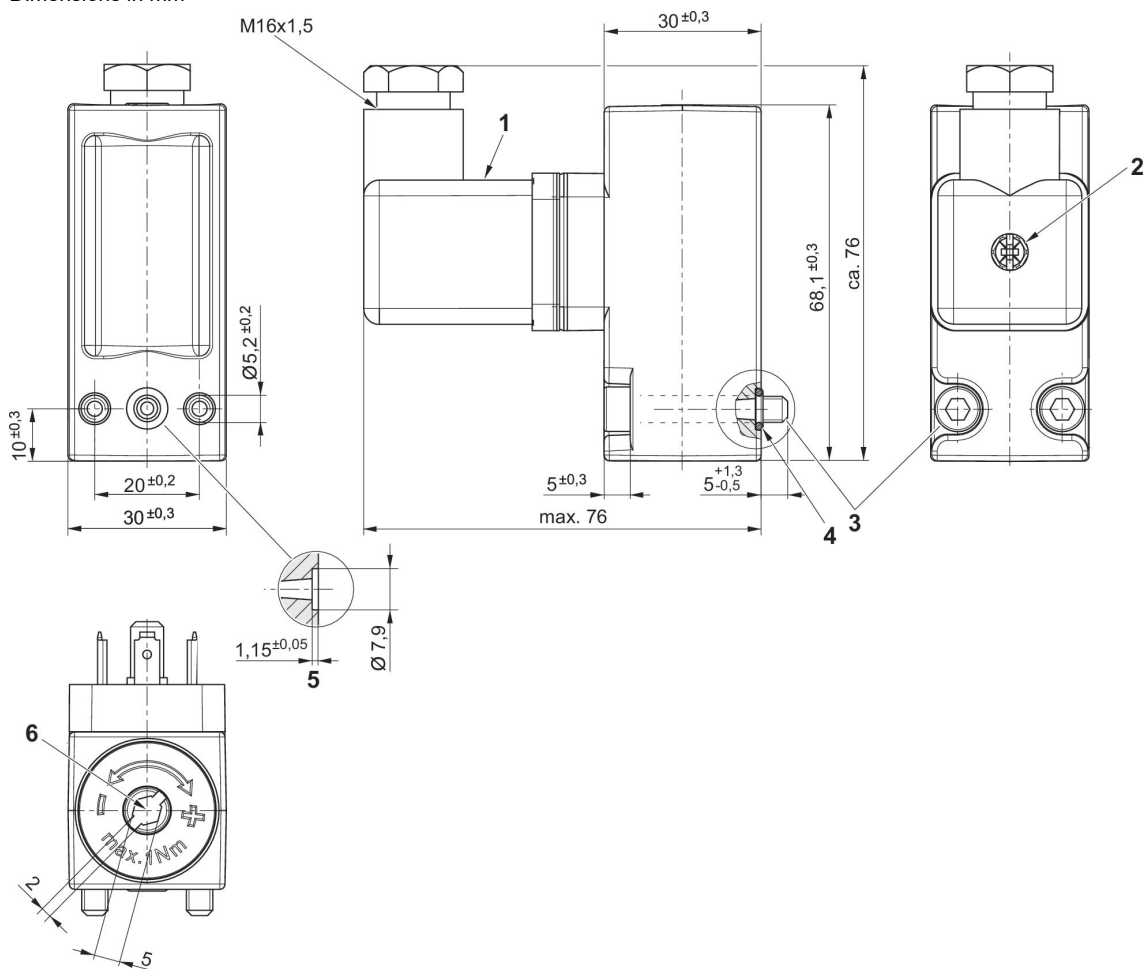
Electrical connection 2, thread size: EN 175301-803, form A

Compressed air connection type: Flange with O-ring



Thread connection	Operating pressure min [bar]	Operating pressure max [bar]	Protection against overpressure	Hysteresis	Mounting orientation	Part No.
Ø 5x1,5	-0.9	0	80 bar	max. switching pressure difference	Any	R412010714
Ø 5x1,5	0.2	16	80 bar	max. switching pressure difference	Any	R412010718

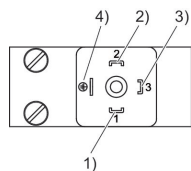
Dimensions in mm



- 1) Valve plug connector
- 2) Mounting screw
- 3) cylinder screw M5x30 (included in scope of delivery)
- 4) O-ring Ø5x1,5 (included)
- 5) O-ring countersink
- 6) Adjustment screw, self-holding

R412010714, R412010718

PIN assignment for valve plug connectors



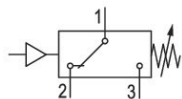
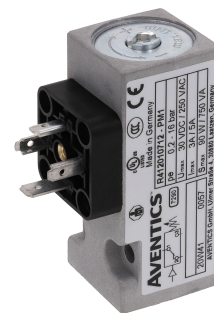
Pin	Allocation
1	+UB
2	break contact
3	NO (make contact)
4	GND

Pressure Switches, Series PM1, flange, form A, without valve plug connector

Electrical connection 2, type: Plug

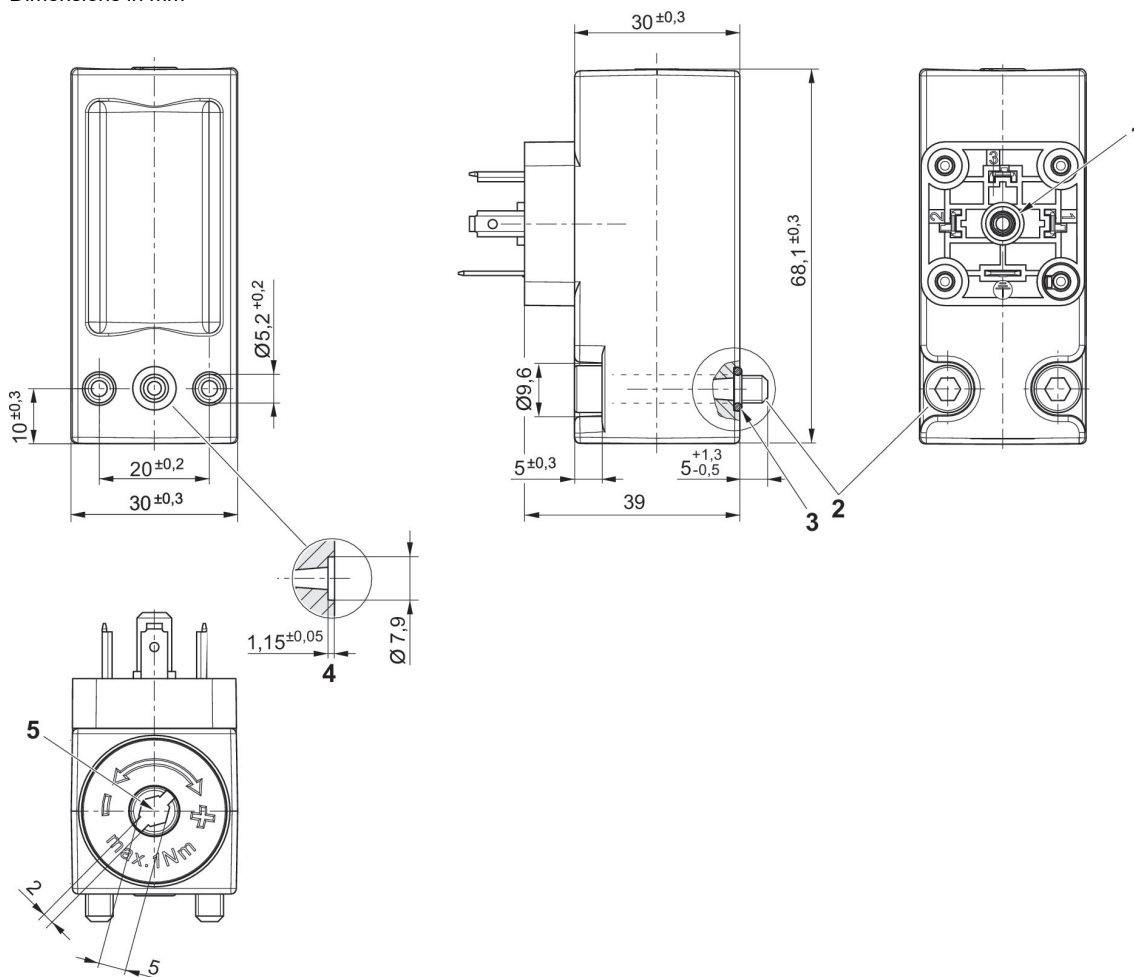
Electrical connection 2, thread size: EN 175301-803, form A

Compressed air connection type: Flange with O-ring



Thread connection	Operating pressure min [bar]	Operating pressure max [bar]	Protection against overpressure	Hysteresis	Mounting orientation	Part No.
Ø 5x1,5	0.2	16	80 bar	max. switching pressure difference	Any	R412010715

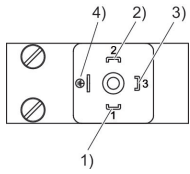
Dimensions in mm



- 1) Mounting screw
- 2) cylinder screw M5x30 (included in scope of delivery)
- 3) O-ring Ø5x1,5 (included)
- 4) O-ring countersink
- 5) Adjustment screw, self-holding

R412010715

PIN assignment for valve plug connectors

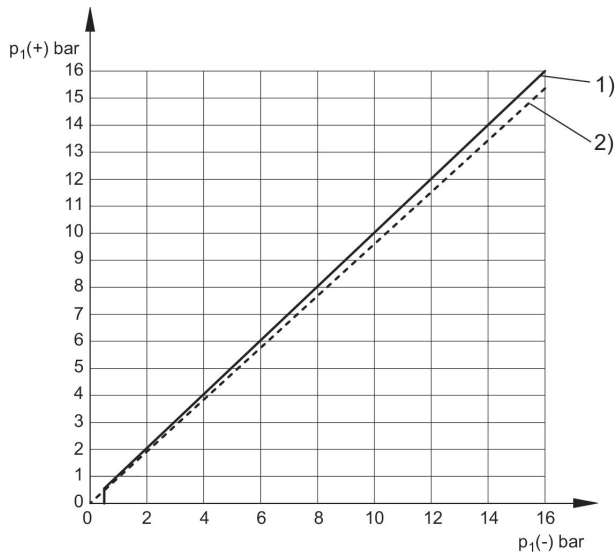


U [V]	I [A] 1) 3)	I [A] 2) 4)
30-250	3	-
30 / 48 / 60 / 125	-	2 / 0,55 / 0,4 / 0,15

reference cycle: 30/min., reference temperature: +30 °C

- 1) AC
- 2) DC
- 3) $\cos \approx 0,7^\circ$
- 4) L/R ≈ 10 ms

Differential switching pressure characteristic curve (0,2 - 16 bar)



p1 (+) = upper switching pressure with increasing pressure
p1 (-) = lower switching pressure with decreasing pressure

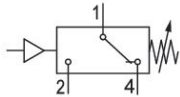
- 1) Rising
- 2) Falling

Pressure Switches, Series PM1, flange, M12, -0,9 - 0 bar

Electrical connection 2, type: Plug

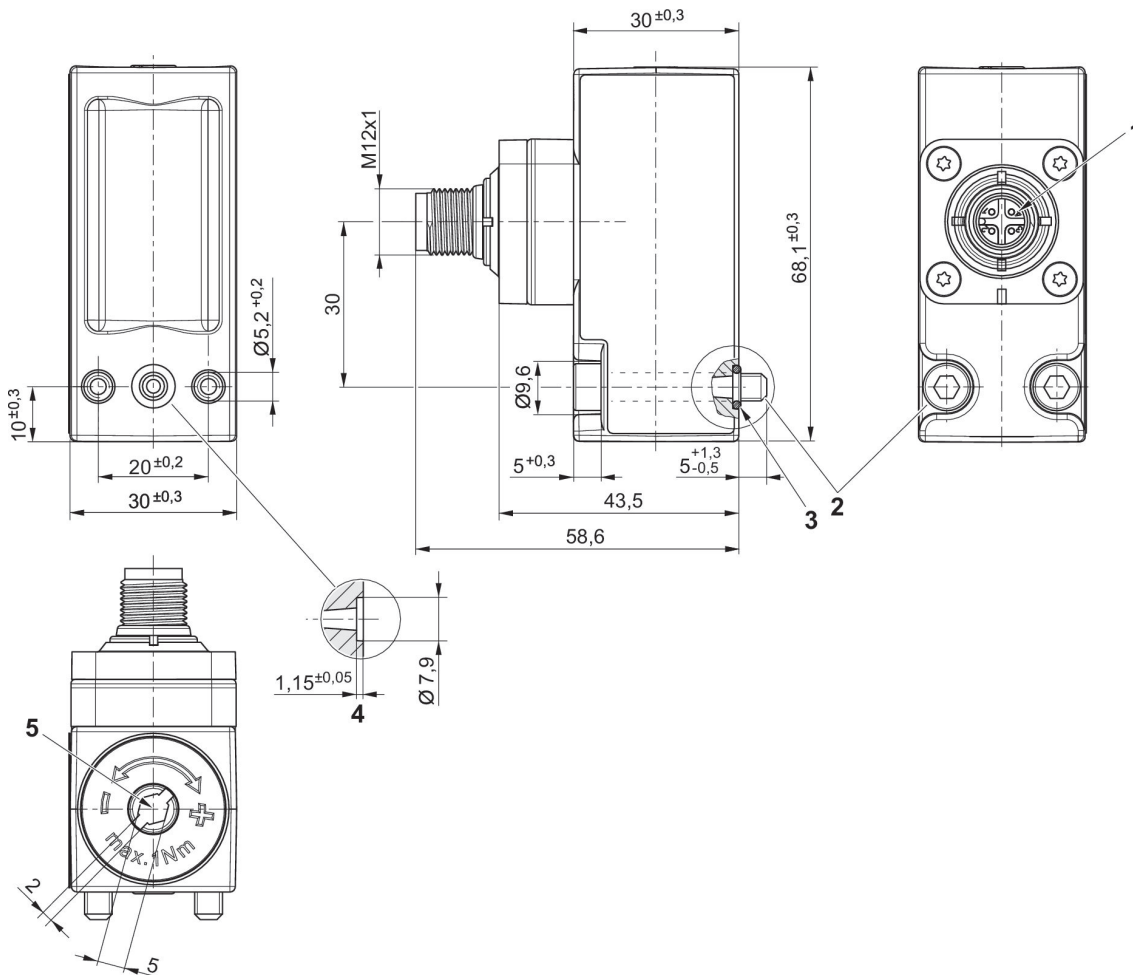
Electrical connection 2, thread size: M12x1

Compressed air connection type: Flange with O-ring



Thread connection	Operating pressure min [bar]	Operating pressure max [bar]	Protection against overpressure	Hysteresis	Mounting orientation	Part No.
Ø 5x1,5	-0.9	0	80 bar	max. switching pressure difference	Any	R412010719

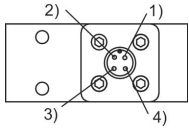
Dimensions in mm



- 1) M12 connection rotatable by 90° and 30° with detent
- 2) cylinder screw M5x30 (included in scope of delivery)
- 3) O-ring Ø5x1,5 (included)
- 4) O-ring countersink
- 5) Adjustment screw, self-holding

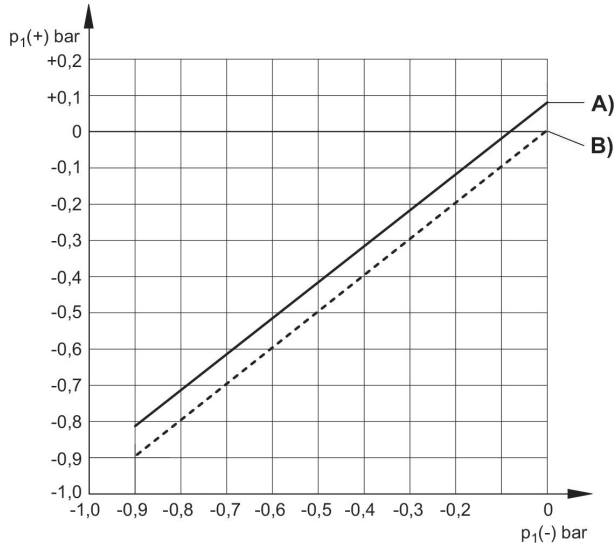
R412010719

Pin assignments



Pin	Allocation
1	+UB
2	break contact
3	No function
4	NO (make contact)

Differential switching pressure characteristic curve (-0,9 – 0 bar)



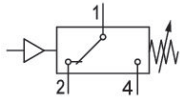
A) $p_1(-)$, min.
 B) $p_1(-)$, max.
 $p_1(+)$ = upper switching pressure with increasing pressure
 $p_1(-)$ = lower switching pressure with decreasing pressure

Pressure Switches, Series PM1, flange, M12, 0,2 - 16 bar

Electrical connection 2, type: Plug

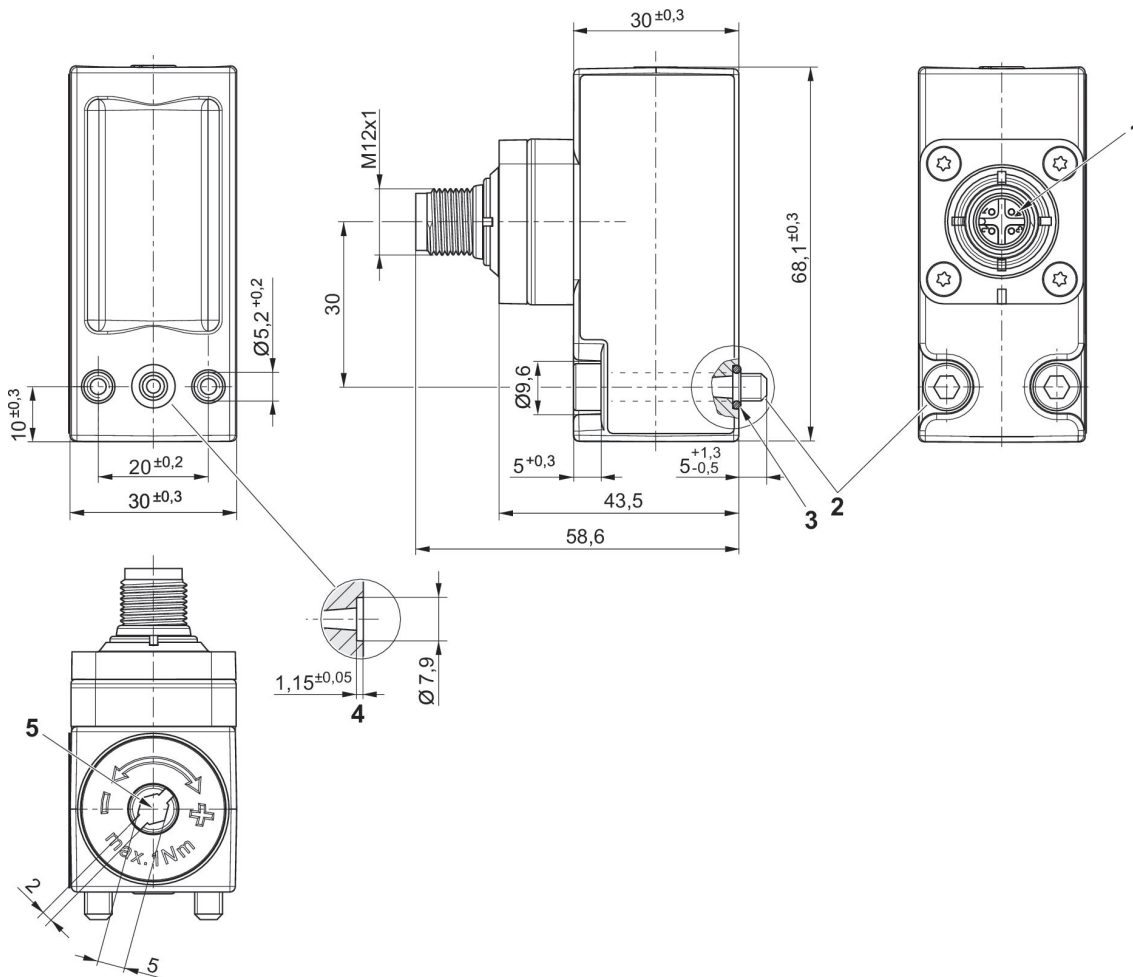
Electrical connection 2, thread size: M12x1

Compressed air connection type: Flange with O-ring



Thread connection	Operating pressure min [bar]	Operating pressure max [bar]	Protection against overpressure	Hysteresis	Mounting orientation	Part No.
Ø 5x1,5	0.2	16	80 bar	max. switching pressure difference	Any	R412010720

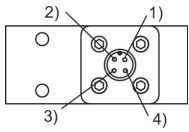
Dimensions in mm



- 1) M12 connection rotatable by 90° and 30° with detent
- 2) cylinder screw M5x30 (included in scope of delivery)
- 3) O-ring Ø5x1,5 (included)
- 4) O-ring countersink
- 5) adjustment screw

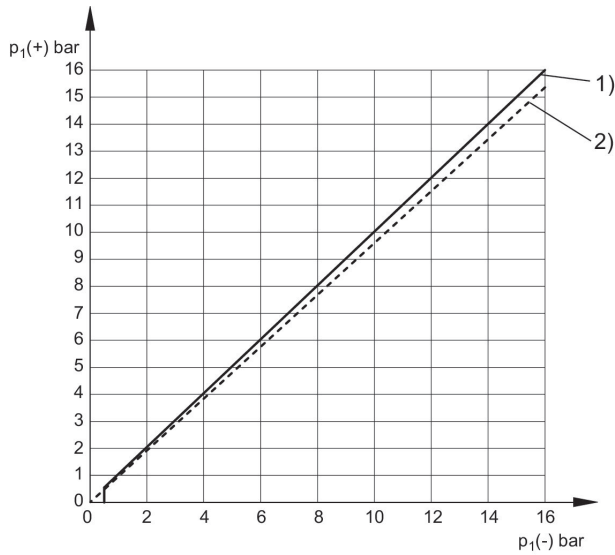
R412010720

Pin assignments



Pin	Allocation
1	+UB
2	break contact
3	No function
4	NO (make contact)

Differential switching pressure characteristic curve (0,2 - 16 bar)

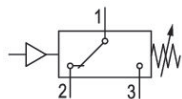
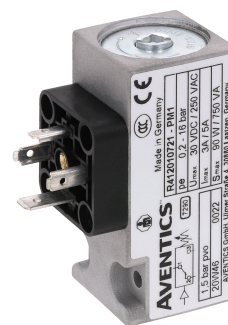


$p_{1 (+)}$ = upper switching pressure with increasing pressure
 $p_{1 (-)}$ = lower switching pressure with decreasing pressure
 1) Rising
 2) Falling

Pressure Switches, Series PM1, CNOMO, form A, without valve plug connector

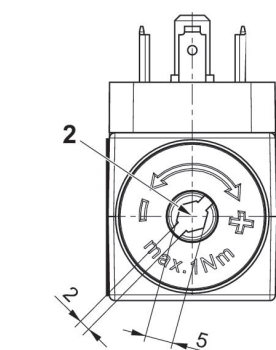
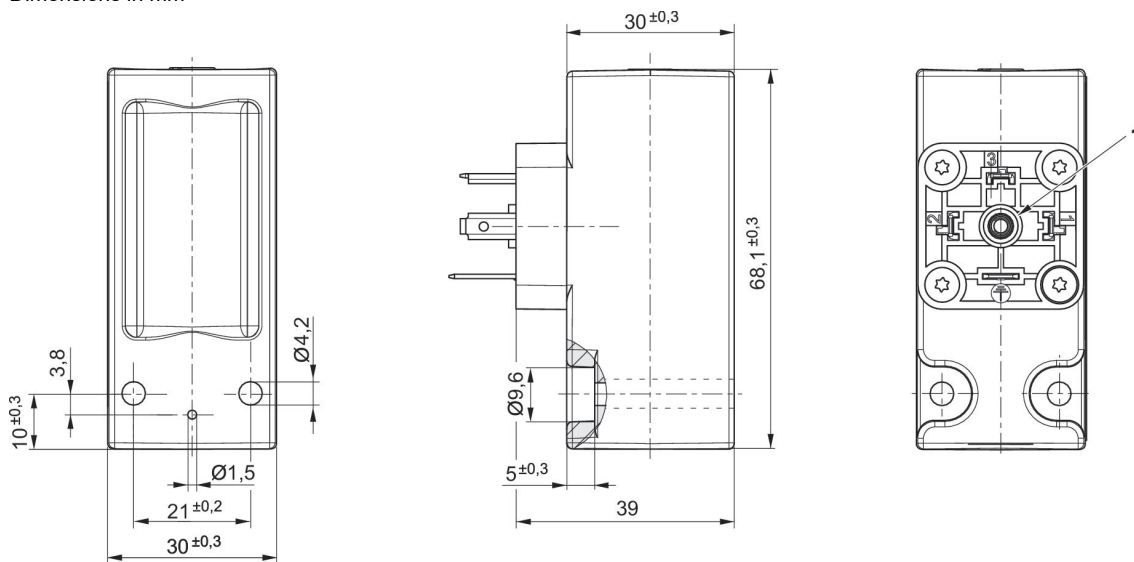
Electrical connection 2, type: Plug

Electrical connection 2, thread size: EN 175301-803, form A



Thread connection	Operating pressure min [bar]	Operating pressure max [bar]	Protection against overpressure	Hysteresis	Mounting orientation	Part No.
CNOMO	0.2	16	80 bar	max. switching pressure difference	Any	R412010721

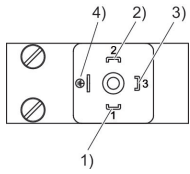
Dimensions in mm



- 1) Mounting screw
- 2) Adjustment screw, self-holding

R412010721

PIN assignment for valve plug connectors

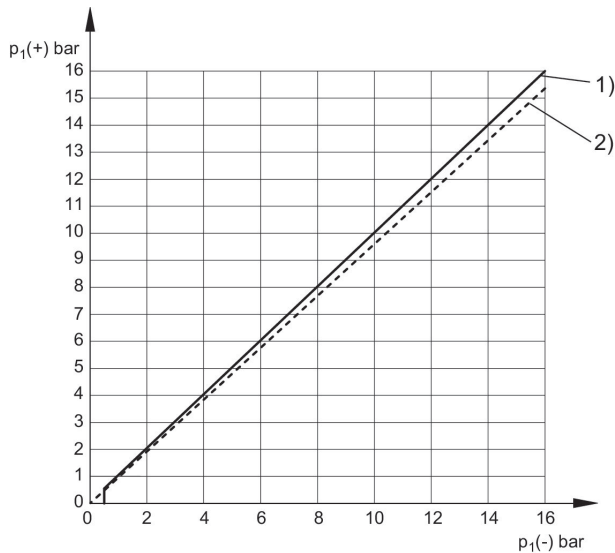


U [V]	I [A] 1) 3)	I [A] 2) 4)
30-250	3	-
30 / 48 / 60 / 125	-	2 / 0,55 / 0,4 / 0,15

reference cycle: 30/min., reference temperature: +30 °C

- 1) AC
- 2) DC
- 3) $\cos \approx 0,7^\circ$
- 4) L/R ≈ 10 ms

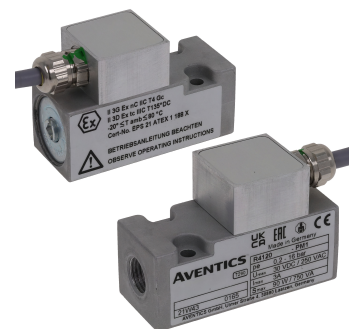
Differential switching pressure characteristic curve (0,2 - 16 bar)



- p1 (+) = upper switching pressure with increasing pressure
- p1 (-) = lower switching pressure with decreasing pressure
- 1) Rising
- 2) Falling

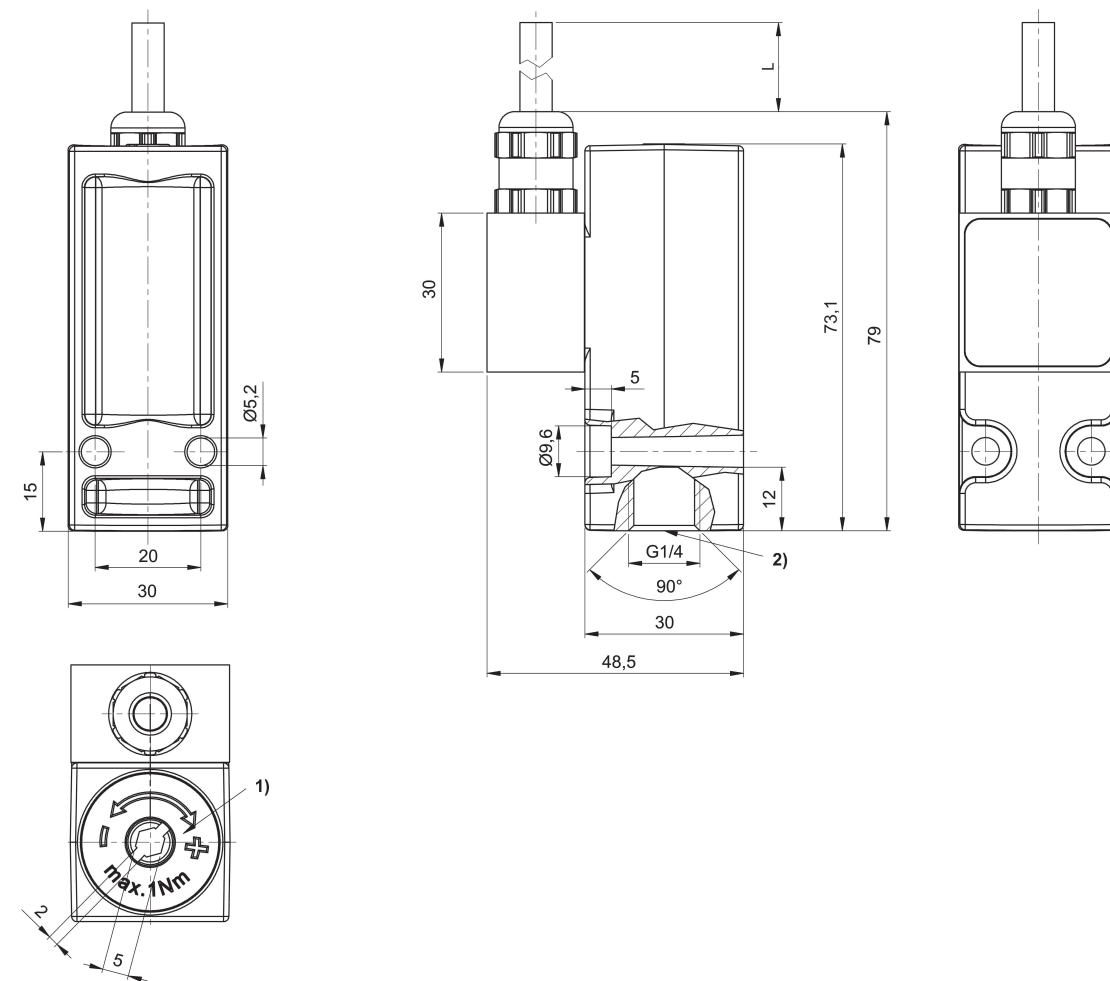
Pressure Switches, Series PM1, M12, ATEX

Electrical connection 2, type: open cable ends
Compressed air connection type: Internal thread
Certificates: ATEX



Thread connection	Operating pressure min [bar]	Operating pressure max [bar]	Protection against overpressure	Mounting orientation	Cable length L [m]	Part No.
G 1/4	-0.9	1	60 bar	Any	3	R412010730
G 1/4	0.2	16	60 bar	Any	3	R412010731
G 1/4	-0.9	1	60 bar	Any	7	R412024680
G 1/4	0.2	16	60 bar	Any	7	R412024681

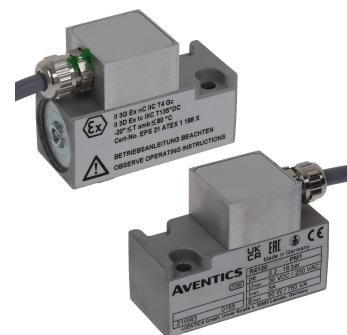
Dimensions in mm



- 1) Adjustment screw, self-holding
- 2) Tightening torque MA = 12 + 1 Nm

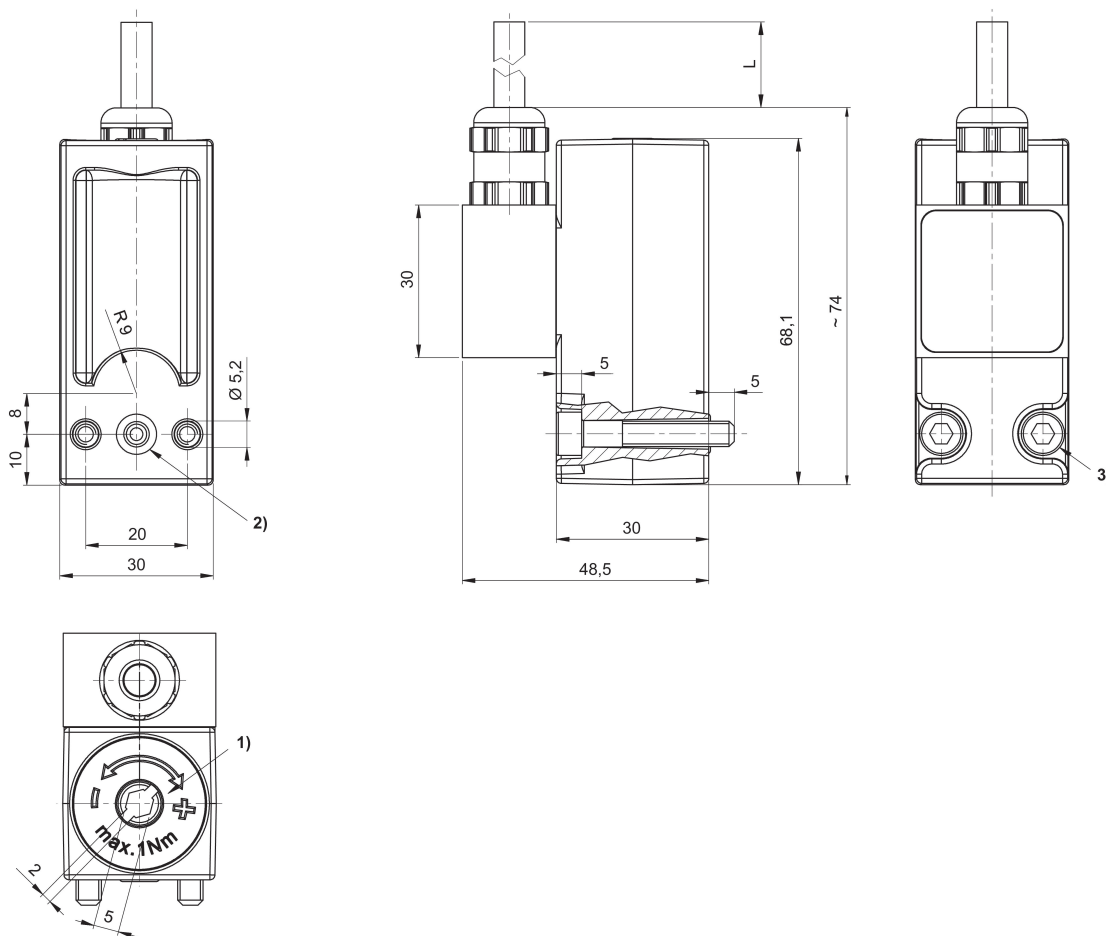
Pressure Switches, Series PM1, flange, M12, ATEX

Electrical connection 2, type: open cable ends
Compressed air connection type: Flange with O-ring
Certificates: ATEX



Thread connection	Operating pressure min [bar]	Operating pressure max [bar]	Protection against overpressure	Mounting orientation	Cable length L [m]	Part No.
Ø 5x1,5	0.2	16	60 bar	Any	3	R412010732
Ø 5x1,5	2	16	60 bar	Any	7	R412024682
Ø 5x1,5	-0.9	1	60 bar	Any	3	R412024760
Ø 5x1,5	-0.9	1	60 bar	Any	7	R412024761

Dimensions in mm



- 1) Adjustment screw, self-holding
- 2) O-ring Ø5x1,5 (included)
- 3) cylinder screw M5x30 (included in scope of delivery)

Valve plug connector, series CON-VP, Form A, 24 V DC

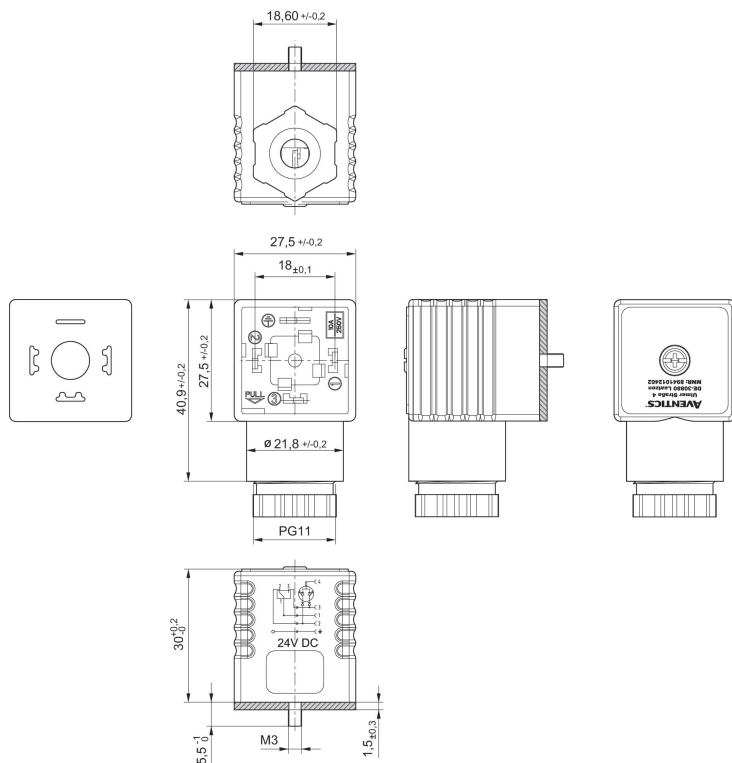
Electrical connection 1, thread size: EN 175301-803, form A



Operational voltage	Protective circuit	Max. current [A]	Contact assignment	LED status display	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
24 V DC	2 diodes (1 A)	1	3+E	green/red	4	9.5	8941012462

8941012462

Dimensions



Profile seal

Valve plug connector, series CON-VP, Form A, 300 V DC / 250 V AC, 3-pin

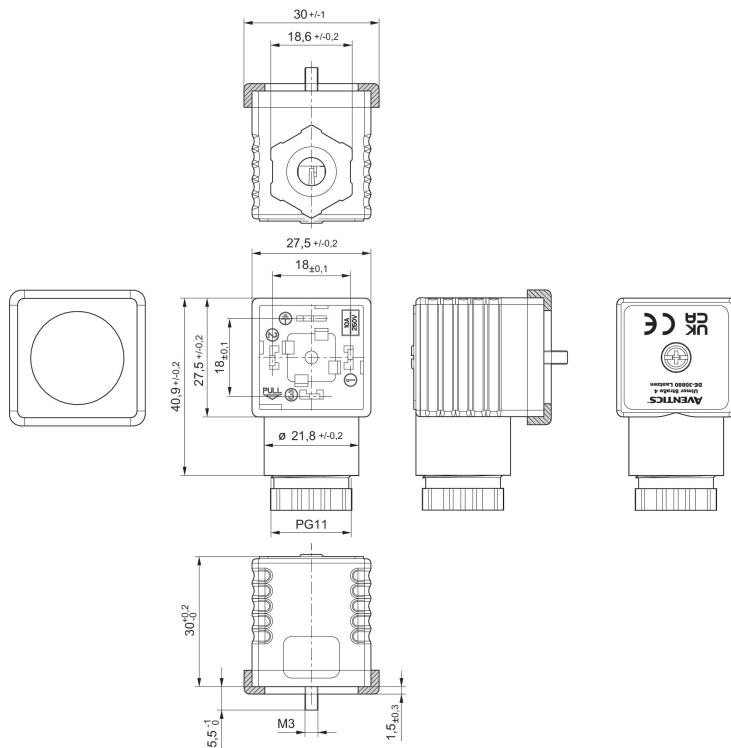
Electrical connection 1, thread size: EN 175301-803, form A
Certificates: CE declaration of conformity UKCA



Operational voltage	Max. current [A]	Contact assignment	min. suitable cable Ø [mm]	max. suitable cable Ø [mm]	Part No.
300 V DC / 250 V AC	10	3+E	4	9.5	1834484059

1834484059

Dimensions



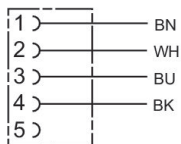
Profile seal

Round plug connector, Series CON-RD, 5-pin, angled

Electrical connection 1, type: Socket

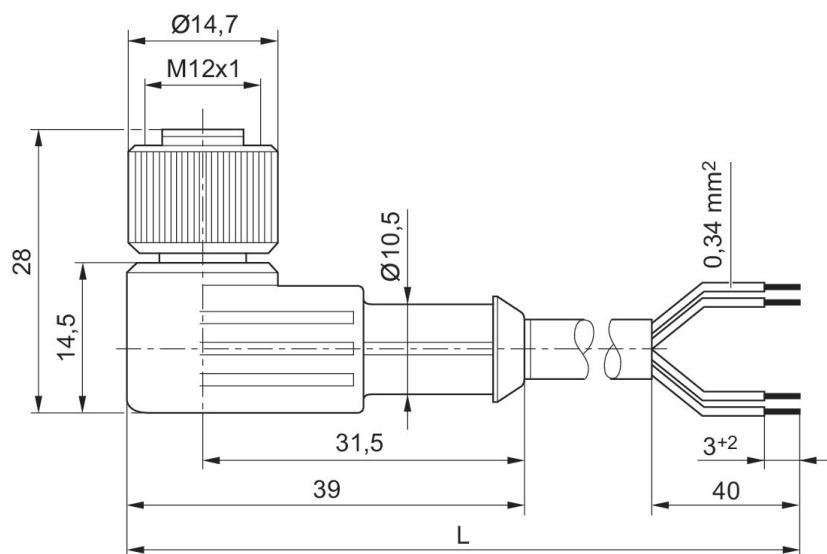
Electrical connection 1, thread size: M12x1

Electrical connection 1, number of poles: 5-pin



Operational voltage	Current [A]	Shielding	Electrical connection 1, type	Electrical connection 1, thread size	Electrical connection 1, coding	Electrical connection 2, type	Cable length [m]	Cable-Ø [mm]	Wire cross-section [mm ²]	Min. ambient temperature [°C]	Max. ambient temperature [°C]	Part No.
48 V AC/DC	4	unshielded	Socket	M12x1	A-coded	open cable ends	3	5.2	0.34	-40	85	1834484259
48 V AC/DC	4	unshielded	Socket	M12x1	A-coded	open cable ends	5	5.2	0.34	-40	85	1834484260
48 V AC/DC	4	unshielded	Socket	M12x1	A-coded	open cable ends	10	5.2	0.34	-40	85	1834484261

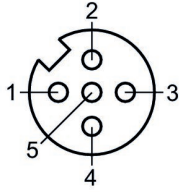
Dimensions



L = length

1834484259, 1834484260, 1834484261

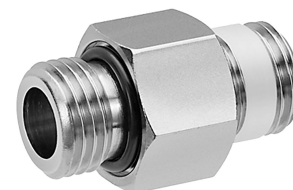
Pin assignment, socket



(1) BN=brown (2) WH=white (3) BU=blue (4) BK=black
(5) not assigned

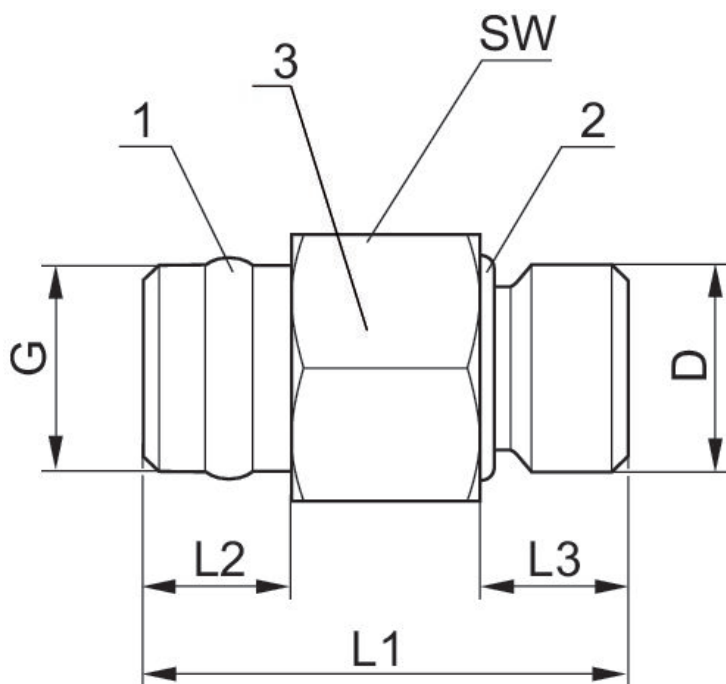
Double nipple, Series PE5

Compressed air connection type: External thread
Compressed air connection type 2: External thread



G	Ø D	Delivery unit [piece]	Weight [kg]	Part No.
G 1/4	G 1/8	2	0.04	R412010015
G 1/4	G 1/4	2	0.04	R412010016

Dimensions



- 1) sealing ring Polytetrafluorethylen
- 2) O-ring - acrylonitrile butadiene rubber
- 3) Housing - brass, nickel-plated

Part No.	Port G	Port D	L1	L2	L3	SW
R412010015	G 1/4	G 1/8	30	10	8.5	17
R412010016	G 1/4	G 1/4	30	10	8.5	17

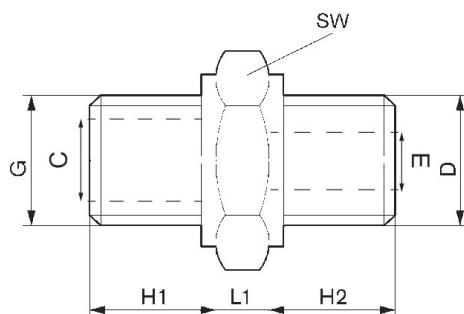
Double nipple

Compressed air connection type: External thread
Compressed air connection type 2: External thread



G	Ø D	Delivery unit [piece]	Part No.
G 1/4	G 1/8	10	1823391016
G 1/4	G 1/4	10	1823391017

Dimensions







Part No.	Port D	Port G	ØC	ØE	H1	H2	L1	SW
1823391081	M5	M5	-	2	4.5	4.5	4	8
1823391100	M5	G 1/8	-	-	7	5	5	13
1823391015	G 1/8	G 1/8	8	5	7.5	7.5	4	14
1823391016	G 1/8	G 1/4	8	5	10	7	5	17
1823391017	G 1/4	G 1/4	8	7.5	10	10	5	17
1823391018	G 1/4	G 3/8	12	7.5	10	10	5	22
1823391019	G 3/8	G 3/8	12	10	10	10	5	22
1823391020	G 3/8	G 1/2	15	10	12	10	6	27
1823391029	G 1/2	G 1/2	15	13	12	12	6	27
1823391286	G 1/2	G 3/4	20	13	12	12	7	32
1823391287	G 3/4	G 3/4	20	18	12	12	7	32
1823391288	G 3/4	G 1	25	18	15	12	8	41
1823391289	G 1	G 1	25	22	15	15	8	41

Efficient pneumatic solutions, our program:
cylinders and drives, valves and valve systems,
air supply management, proportional pressure
control valves



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