

## Series PR2



AVENTICS™ Series PR2

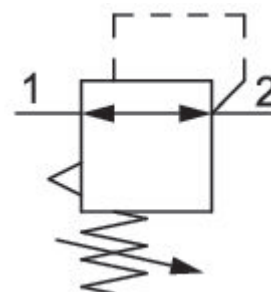


# Precision pressure regulator, Series PR2- RGP

## R412010480

### General series information Series PR2

- The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.



### Technical data

Industry  
Industrial

Function  
Precision pressure regulator

Parts  
Precision pressure regulator

Port  
G 1/4

Qn =  
380 l/min

Mounting orientation  
Any

Regulator type  
Diaphragm-type pressure regulator

Regulation range min.  
0.1 bar

Regulation range max.  
4 bar

Working pressure min.  
0.5 bar

Working pressure max  
12 bar

Min. ambient temperature  
-10 °C

Max. ambient temperature  
60 °C

Activation  
Mechanical

Regulator function  
with relieving air exhaust

Pressure supply  
single

Internal air consumption  $q_v$  max.  
2.5 l/min

Medium  
Compressed air

Recommended pre-filtering  
5  $\mu$ m

Weight  
0.24 kg

## Material

Housing material  
Polyamide

Seal material  
Acrylonitrile butadiene rubber

Part No.  
R412010480

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Relieving exhaust: > 300 l/min at 6 bar

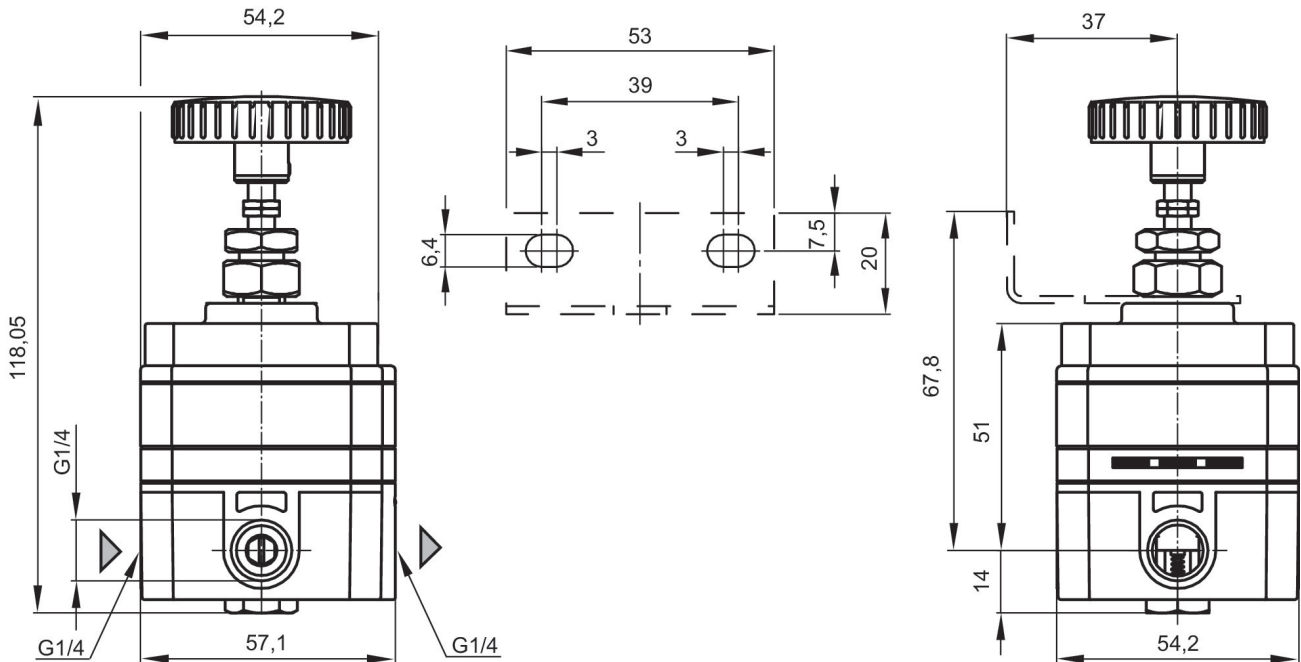
Precision: < 0.005 bar

Mounting: mounting bracket R412010482 or installation in piping

Notice: This product may only be operated with oil-free, dry compressed air.

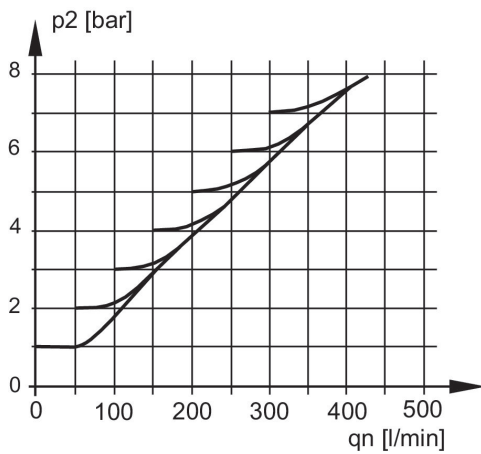
Nominal flow with secondary pressure 6,3 bar at  $\Delta p = 1$  bar

## Dimensions in mm



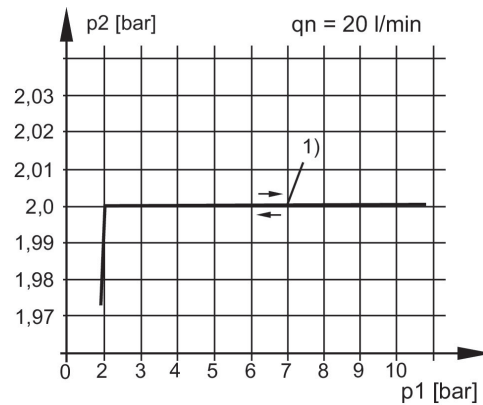
A1 = input  
A2 = output

## Exhaust characteristics



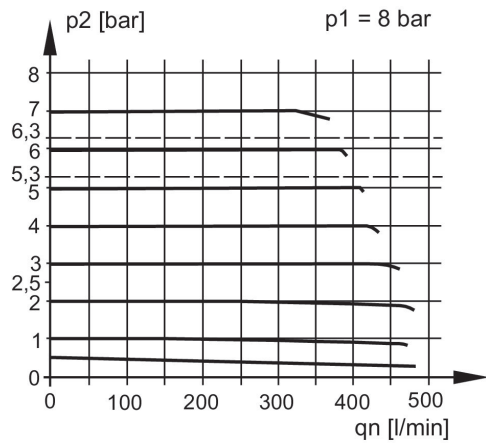
p2 = secondary pressure  
qn = nominal flow

## Pressure characteristics curve



p1 = working pressure  
p2 = secondary pressure  
qn = nominal flow  
1) Starting point

## Flow rate characteristic, $p_2 = 0,05 - 7$ bar



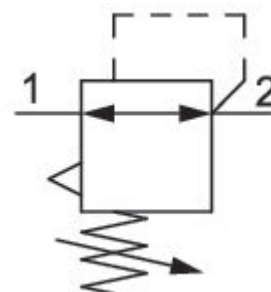
$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q_n$  = nominal flow

# Precision pressure regulator, Series PR2- RGP

R412010481

## General series information Series PR2

- The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.



## Technical data

### Industry

Industrial

### Function

Precision pressure regulator

### Parts

Precision pressure regulator

### Port

G 1/4

### Qn =

380 l/min

### Mounting orientation

Any

### Regulator type

Diaphragm-type pressure regulator

### Regulation range min.

0.1 bar

### Regulation range max.

8 bar

### Working pressure min.

0.5 bar

### Working pressure max

12 bar

### Min. ambient temperature

-10 °C

Max. ambient temperature  
60 °C

Activation  
Mechanical

Regulator function  
with relieving air exhaust

Pressure supply  
single

Internal air consumption  $q_v$  max.  
2.5 l/min

Medium  
Compressed air

Recommended pre-filtering  
5  $\mu$ m

Weight  
0.24 kg

## Material

Housing material  
Polyamide

Seal material  
Acrylonitrile butadiene rubber

Part No.  
R412010481

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Relieving exhaust: > 300 l/min at 6 bar

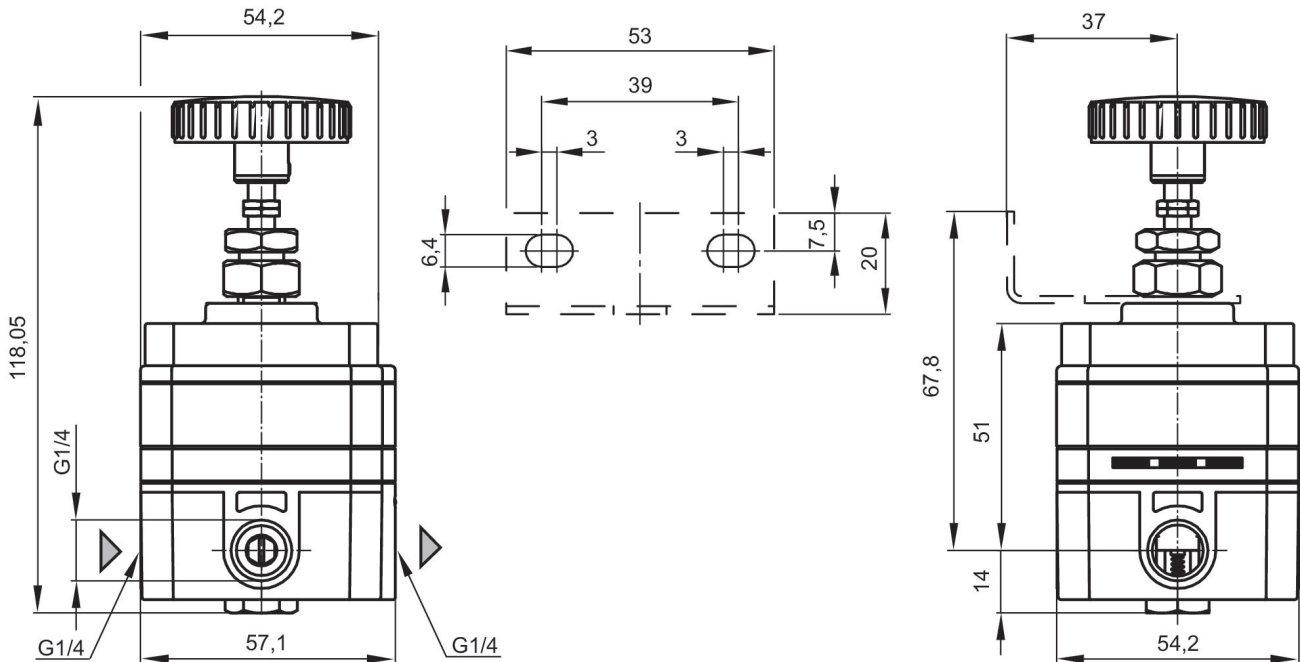
Precision: < 0.005 bar

Mounting: mounting bracket R412010482 or installation in piping

Notice: This product may only be operated with oil-free, dry compressed air.

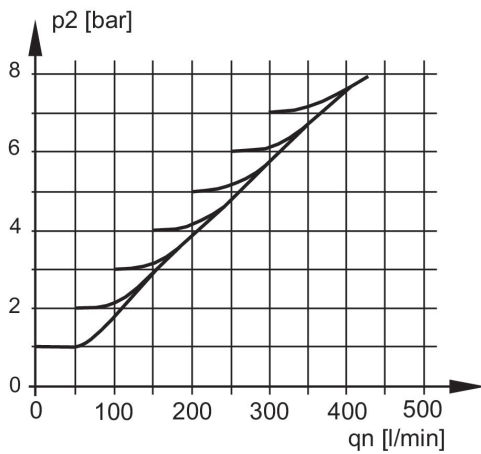
Nominal flow with secondary pressure 6,3 bar at  $\Delta p = 1$  bar

## Dimensions in mm



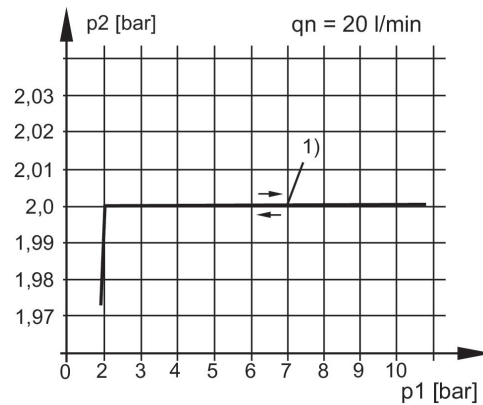
A1 = input  
A2 = output

## Exhaust characteristics



$p_2$  = secondary pressure  
 $q_n$  = nominal flow

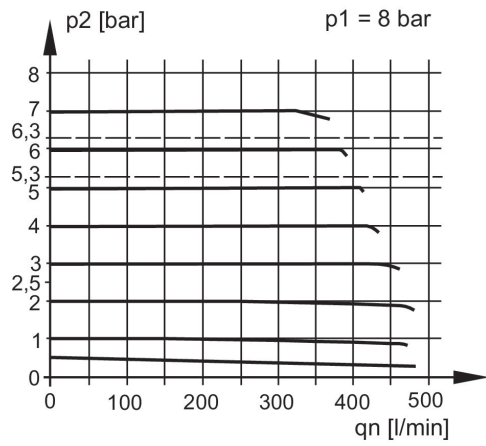
## Pressure characteristics curve



$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q_n$  = nominal flow  
1) Starting point



## Flow rate characteristic, $p_2 = 0,05 - 7$ bar



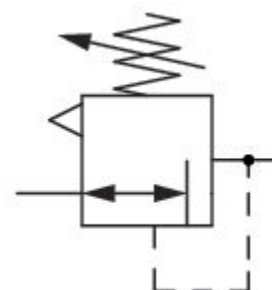
$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q_n$  = nominal flow

# Precision pressure regulator, Series PR2- RGP

## R412010840

### General series information Series PR2

- The AVENTICS Series PR1/PR2 is designed for applications that demand fast responses to the slightest fluctuation in compressed air. They can be adjusted precisely and are an alternative to electronic pressure regulators. Precision pressure regulators are used to achieve extremely accurate pressure control independent from the pilot pressure and the flow rate. They offer high performance and flexibility, combined with increased reliability.



### Technical data

#### Industry

Industrial

#### Function

Precision pressure regulator

#### Parts

Precision pressure regulator

#### Port

G 1/4

#### Nominal flow Qn

2000 l/min

#### Mounting orientation

Any

#### Regulator type

Diaphragm-type pressure regulator

#### Regulation range min.

0.05 bar

#### Regulation range max.

8 bar

#### Working pressure min.

0.5 bar

#### Working pressure max

16 bar

#### Min. ambient temperature

0 °C

Max. ambient temperature  
60 °C

Activation  
Mechanical

Regulator function  
with relieving air exhaust

Pressure supply  
single

Internal air consumption  $q_v$  max.  
1.5 l/min

Medium  
Compressed air

Recommended pre-filtering  
5  $\mu$ m

Weight  
0.24 kg

## Material

Housing material  
Aluminum

Seal material  
Acrylonitrile butadiene rubber

Part No.  
R412010840

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Relieving exhaust: > 300 l/min at 6 bar

Precision: < 0.005 bar

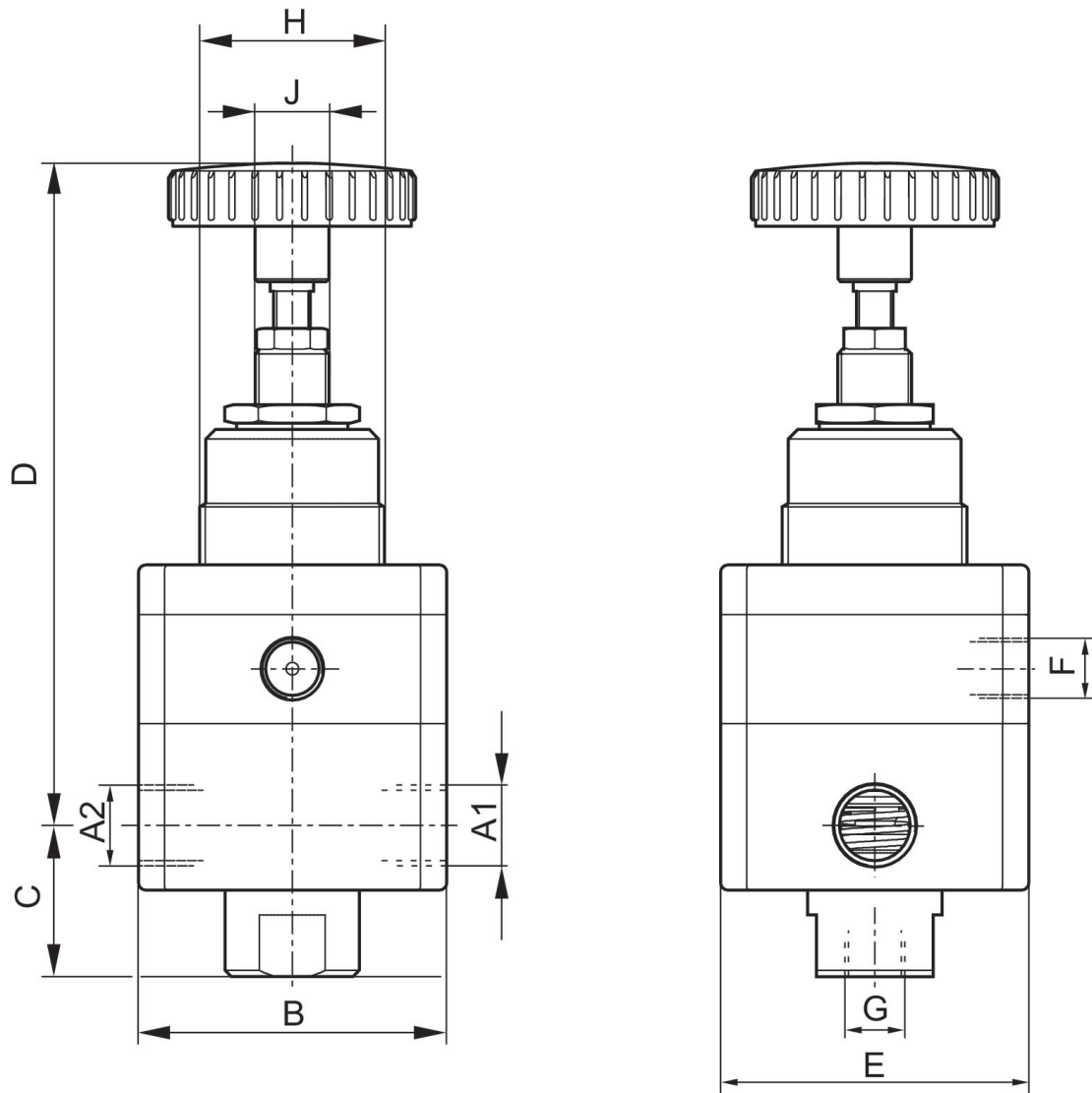
Internal air consumption at P1 = 8 bar (collected). Exhaust and internal air consumption via G 1/4 connection possible downward.

Mounting with mounting bracket 1821331013 (please order separately) and panel nuts

Notice: This product may only be operated with oil-free, dry compressed air.

Nominal flow with secondary pressure 6,3 bar at  $\Delta p = 1$  bar

## Dimensions



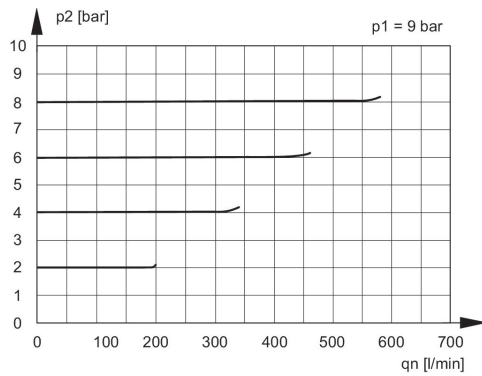
A1 = input  
A2 = output  
Unscrew handwheel including spindle completely.  
Mount precision pressure regulator using mounting bracket and panel nut.  
Screw handwheel including spindle back in fully, adjust desired pressure, and fix spindle with lock nut.

## Dimensions in mm

Part No.	A1	A2	B	C	D	E	F	G	H
R412010840	G 1/4	G 1/4	50	25	106	50	G 1/8	G 1/8	M30x1,5

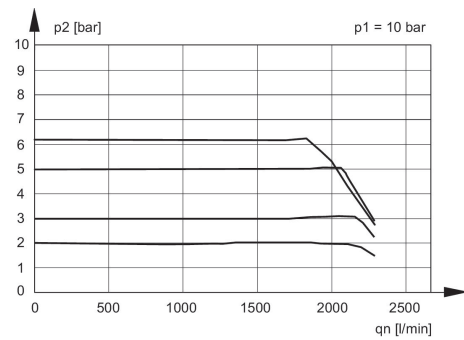
Part No.	J
R412010840	M12x1

### Exhaust characteristics



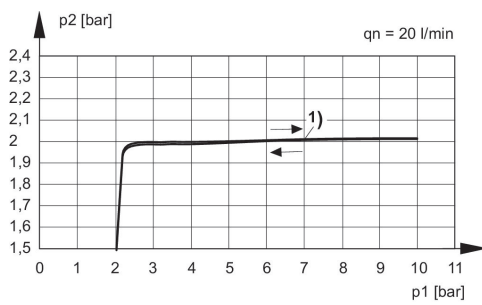
p1 = Working pressure  
p2 = Secondary pressure  
qn = Nominal flow

### Flow rate characteristic, p2 = 0,05 - 7 bar



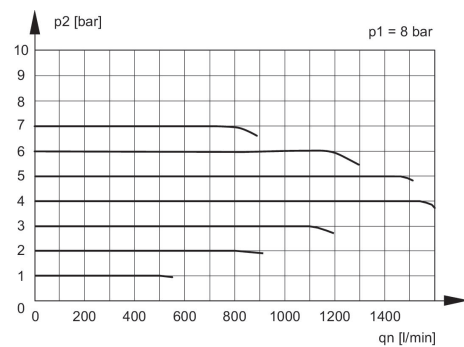
p1 = Working pressure  
p2 = Secondary pressure  
qn = Nominal flow

### Pressure characteristics curve



p1 = Working pressure  
p2 = Secondary pressure  
qn = Nominal flow  
1) Starting point

### Flow rate characteristic, p2 = 0,05 - 7 bar



p1 = Working pressure  
p2 = Secondary pressure  
qn = Nominal flow

# Mounting bracket, Series AS1-MBR-...-W02



Ambient temperature min./max.

-10 ... 50 °C

Weight

0.059 kg

## Technical data

Part No.

R412014756

## Technical information

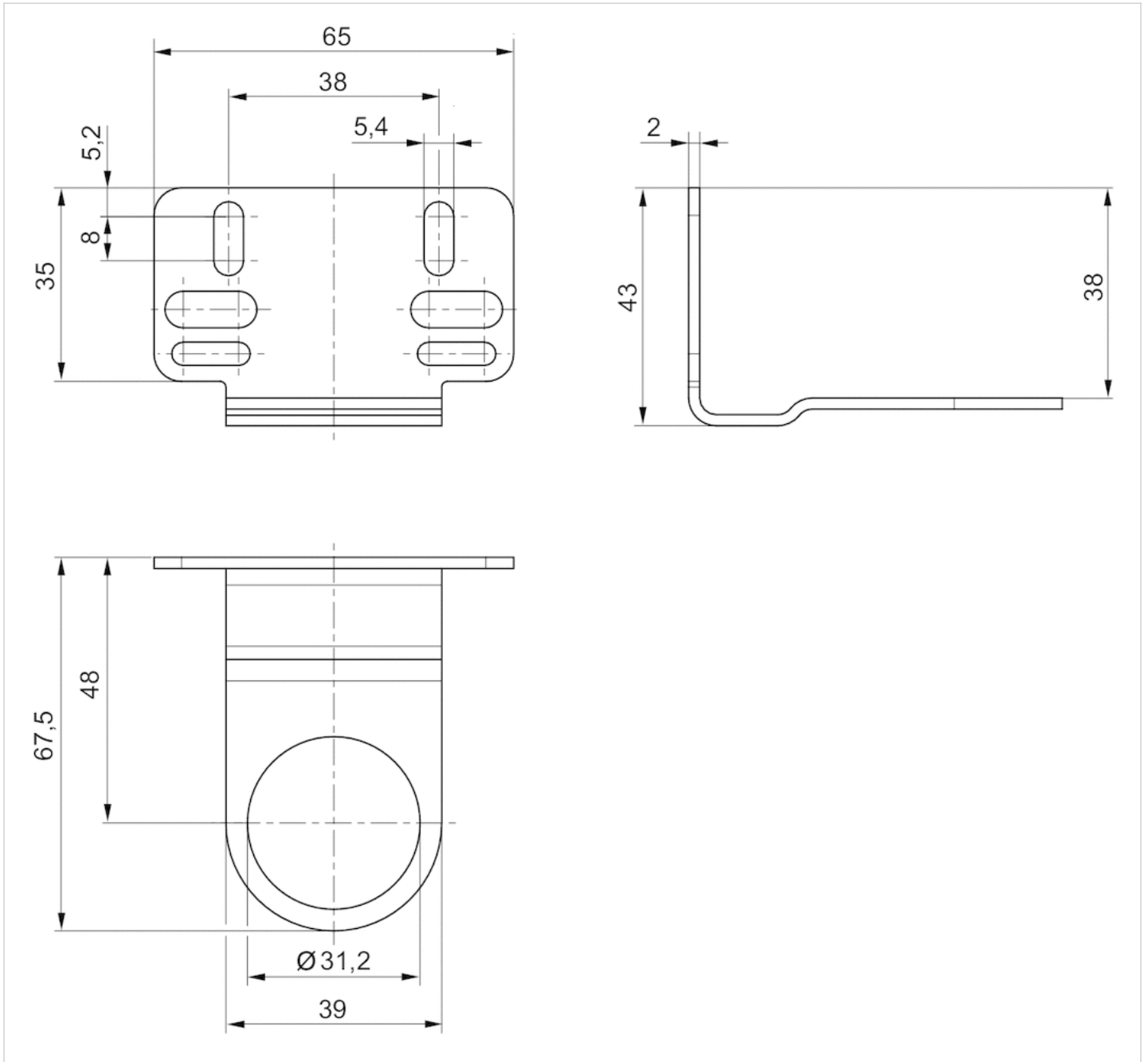
Material

Housing

Steel, galvanized

## Dimensions

Dimensions in mm



# Mounting bracket, Series NL1/NL2- MBR-...-W02



Ambient temperature min./max.

-40 ... 60 °C

Weight

0.065 kg

## Technical data

Part No.

1821331013

## Technical information

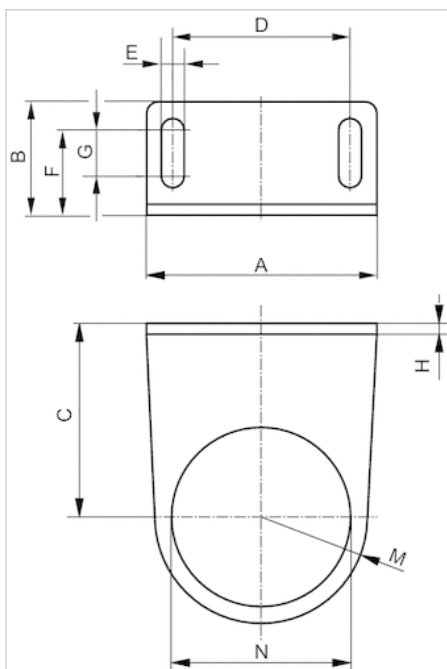
Material

Housing

Steel, galvanized

## Dimensions

### Dimensions





## Dimensions

Part No.	A	B	C	D	E	F	G	H	M	N
1821331013	48	27	43.5	38	5.4	18.5	8	3	20	30.5

# Mounting bracket, Series PR1-MBR-...-W02

- for PR1, PR2



Weight

0.037 kg

## Technical data

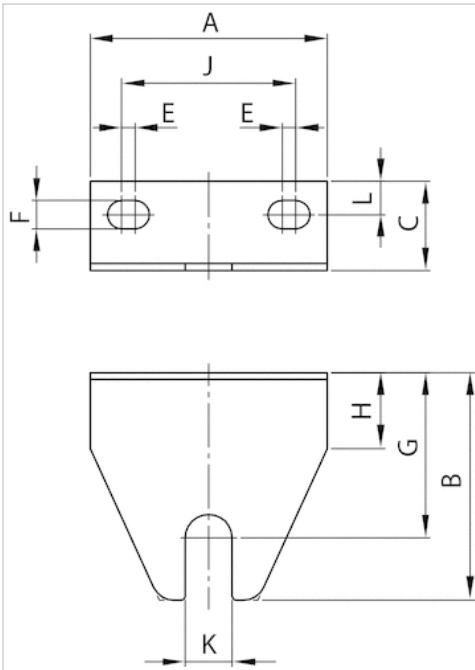
Part No.	for
R412010482	PR1, PR2

## Technical information

Material	
Housing	Steel, galvanized

## Dimensions

### Dimensions



## Dimensions

Part No.	A	B	C	E	F	G	H	J	K	L	Material	Surface	Weight
R412010482	53	51	20	3	6.4	37	17	39	10.5	7.5	Steel	galvanized	0.037 kg

# Panel nut, Series AS-MBR-...-W06

- M30x1,5

- for AS1, NL1, NL2, MU1, PR2



Weight

0.013 kg

The delivered product may vary from that in the illustration.

## Technical data

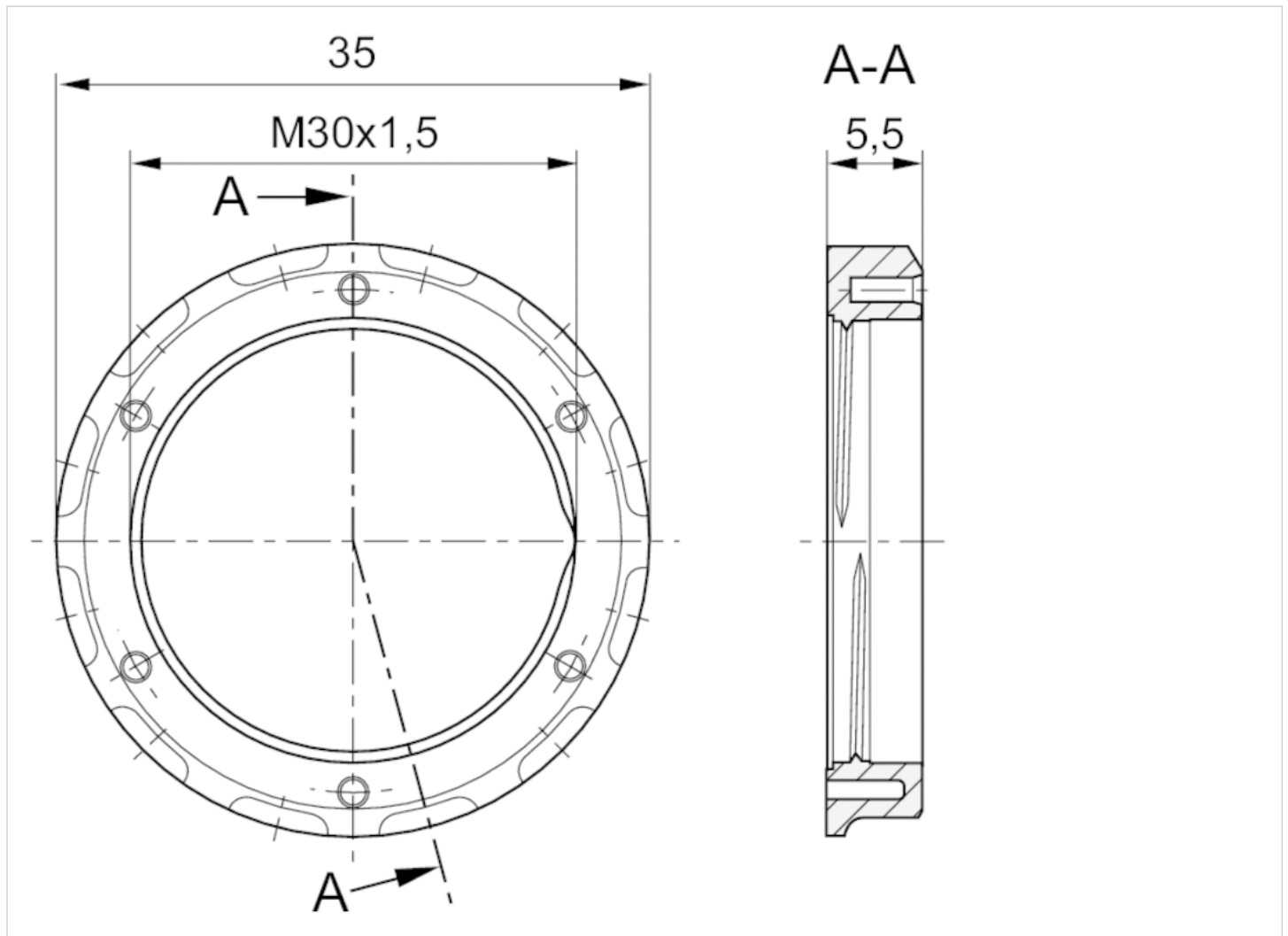
Part No.	Port	for	Scope of delivery
1829234070	M30x1,5	AS1, NL1, NL2, MU1, PR2	5 piece

## Technical information

Material	
Housing	Brass

## Dimensions

Dimensions in mm



# Panel nut, Series AS-MBR-...-W06

- M30x1,5

- for AS1, NL1, NL2, PR2



Weight

0.006 kg

The delivered product may vary from that in the illustration.

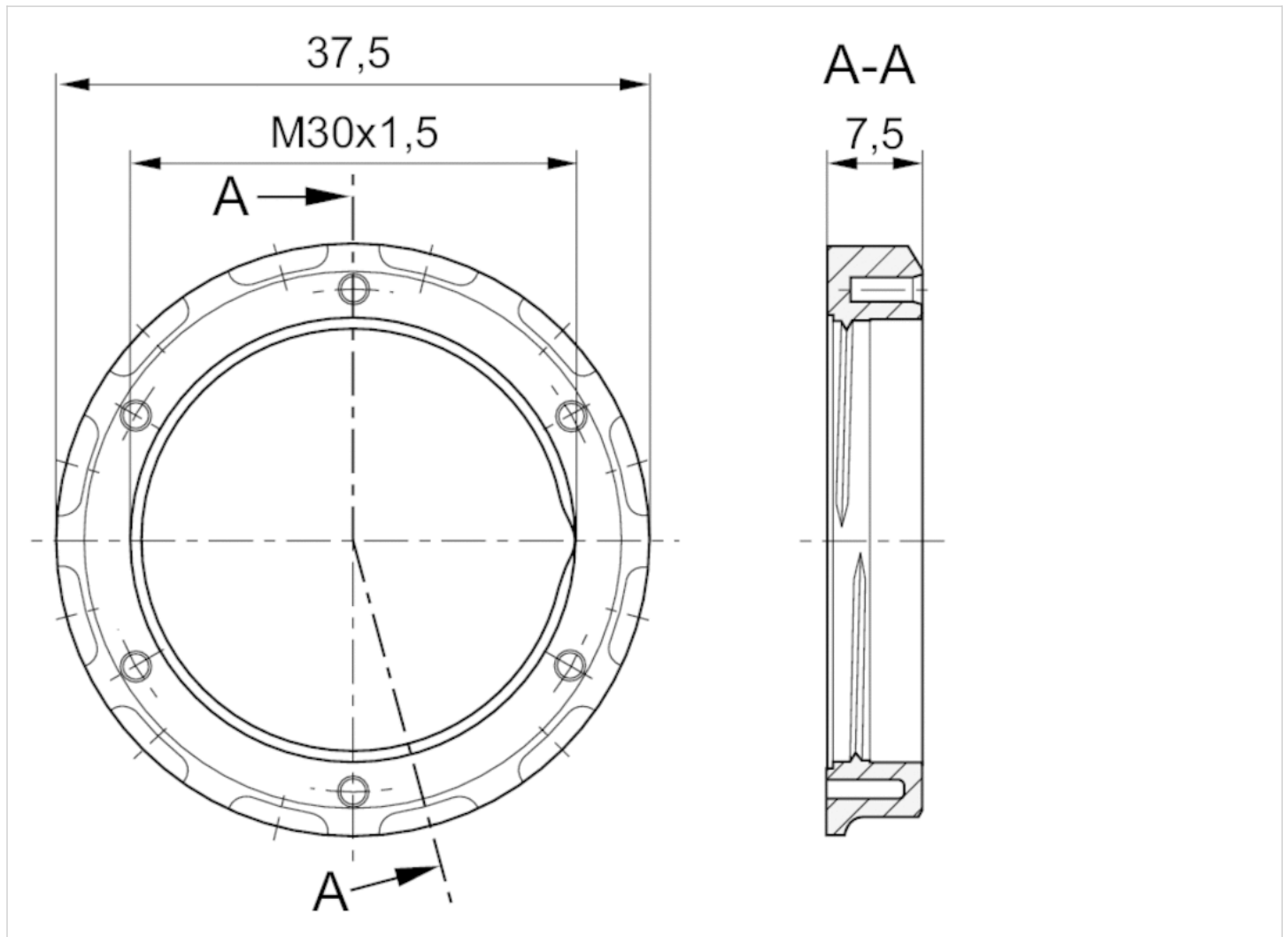
## Technical data

Part No.	Port	for	Scope of delivery
1829234073	M30x1,5	AS1, NL1, NL2, PR2	5 piece

## Technical information

Material	
Housing	Plastic

# Dimensions

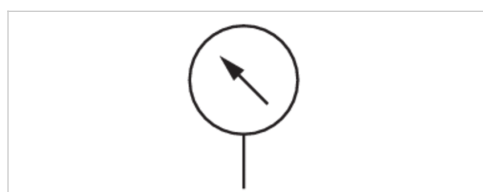


# Pressure gauge, Series PG1-SAS

- Back port
- Background color Black
- Scale color White, Grey
- Viewing window Polystyrene
- Units bar
- Units psi



Version	Bourdon tube pressure gauge
Standardization	EN 837-1
Class	2,5
Ambient temperature min./max.	-40 ... 60 °C
Medium	Compressed air
Main scale unit (outside)	bar
Main scale color (outside)	White
Secondary scale unit (inside)	psi
Secondary scale color (inside)	Grey
Background color	Black
Pointer color	White
Weight	See table below



## Technical data

Part No.	Compressed air connection	Nominal diameter	Range of application	Display range	Operating pressure	Scale value
R412003853	G 1/8	40 mm	0 bar ... 1.2	0 bar ... 1.6	0 ... 1.6 bar	0.05
R412003854	G 1/8	40 mm	0 bar ... 2	0 bar ... 2.5	0 ... 2.5 bar	0.1
R412003855	G 1/8	40 mm	0 bar ... 3.2	0 bar ... 4	0 ... 4 bar	0.1
R412003856	G 1/8	40 mm	0 bar ... 4	0 bar ... 6	0 ... 6 bar	0.2
R412003857	G 1/8	40 mm	0 bar ... 8	0 bar ... 10	0 ... 10 bar	0.2
R412003858	G 1/8	40 mm	0 bar ... 12	0 bar ... 16	0 ... 16 bar	0.5
R412004407	G 1/4	40 mm	0 bar ... 1.2	0 bar ... 1.6	0 ... 1.6 bar	0.05
R412004408	G 1/4	40 mm	0 bar ... 2	0 bar ... 2.5	0 ... 2.5 bar	0.1
R412004409	G 1/4	40 mm	0 bar ... 3.2	0 bar ... 4	0 ... 4 bar	0.1
R412004410	G 1/4	40 mm	0 bar ... 4	0 bar ... 6	0 ... 6 bar	0.2
R412004411	G 1/4	40 mm	0 bar ... 8	0 bar ... 10	0 ... 10 bar	0.2
R412004412	G 1/4	40 mm	0 bar ... 12	0 bar ... 16	0 ... 16 bar	0.5
R412004413	G 1/4	50 mm	0 bar ... 1.2	0 bar ... 1.6	0 ... 1.6 bar	0.05
R412004414	G 1/4	50 mm	0 bar ... 2	0 bar ... 2.5	0 ... 2.5 bar	0.1
R412004415	G 1/4	50 mm	0 bar ... 3.2	0 bar ... 4	0 ... 4 bar	0.1
R412004416	G 1/4	50 mm	0 bar ... 4	0 bar ... 6	0 ... 6 bar	0.2
R412004417	G 1/4	50 mm	0 bar ... 8 bar	0 bar ... 10 bar	0 ... 10 bar	0.2
R412004418	G 1/4	50 mm	0 bar ... 12	0 bar ... 16	0 ... 16 bar	0.5
R412007898	G 1/4	50 mm	0 bar ... 20	0 bar ... 25	0 ... 25 bar	1



Part No.	Compressed air connection	Nominal diameter	Range of application	Display range	Operating pressure	Scale value
R412004419	G 1/4	63 mm	0 bar ... 1.2	0 bar ... 1.6	0 ... 1.6 bar	0.05
R412004420	G 1/4	63 mm	0 bar ... 2	0 bar ... 2.5	0 ... 2.5 bar	0.1
R412004421	G 1/4	63 mm	0 bar ... 3.2	0 bar ... 4	0 ... 4 bar	0.1
R412004422	G 1/4	63 mm	0 bar ... 4	0 bar ... 6	0 ... 6 bar	0.2
R412004423	G 1/4	63 mm	0 bar ... 8	0 bar ... 10	0 ... 10 bar	0.2
R412004424	G 1/4	63 mm	0 bar ... 12	0 bar ... 16	0 ... 16 bar	0.5

Part No.	Weight	Fig.	
R412003853	0.08 kg	Fig. 4	-
R412003854	0.08 kg	Fig. 4	-
R412003855	0.08 kg	Fig. 4	-
R412003856	0.08 kg	Fig. 4	-
R412003857	0.08 kg	Fig. 4	-
R412003858	0.08 kg	Fig. 4	-
R412004407	0.08 kg	Fig. 1	-
R412004408	0.08 kg	Fig. 1	-
R412004409	0.08 kg	Fig. 1	-
R412004410	0.08 kg	Fig. 1	-
R412004411	0.08 kg	Fig. 1	-
R412004412	0.08 kg	Fig. 1	-
R412004413	0.09 kg	Fig. 2	-
R412004414	0.09 kg	Fig. 2	-
R412004415	0.09 kg	Fig. 2	-
R412004416	0.09 kg	Fig. 2	-
R412004417	0.09 kg	Fig. 2	1)
R412004418	0.09 kg	Fig. 2	1)
R412007898	0.09 kg	Fig. 2	-
R412004419	0.1 kg	Fig. 3	-
R412004420	0.1 kg	Fig. 3	-
R412004421	0.1 kg	Fig. 3	-
R412004422	0.1 kg	Fig. 3	-
R412004423	0.1 kg	Fig. 3	-
R412004424	0.1 kg	Fig. 3	-

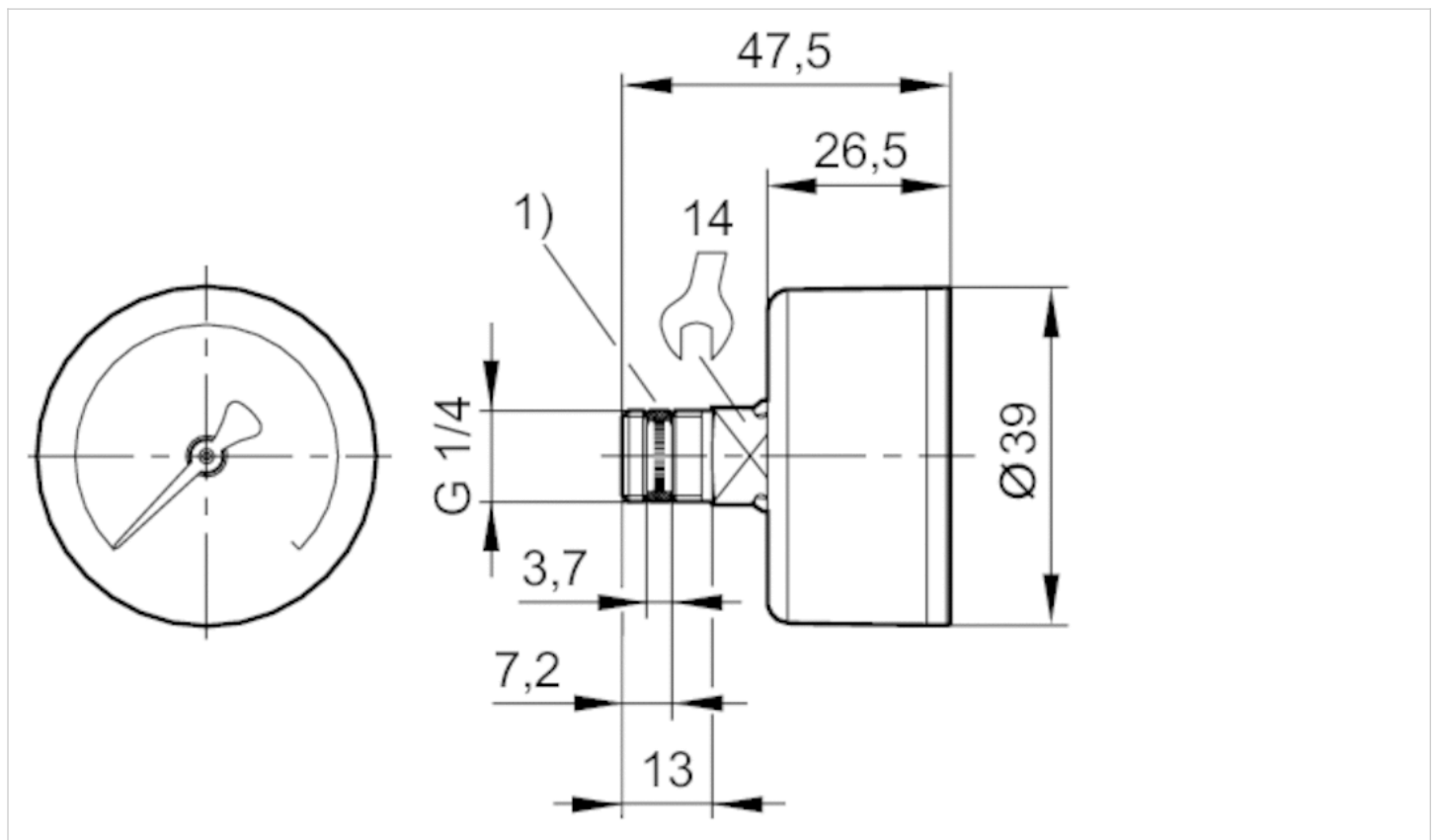
1) Suitable for use in Ex zones 1, 2, 21, 22.

## Technical information

Material	
Housing	Acrylonitrile butadiene styrene
Thread	Brass
Viewing window	Polystyrene
Seal	Polytetrafluorethylene

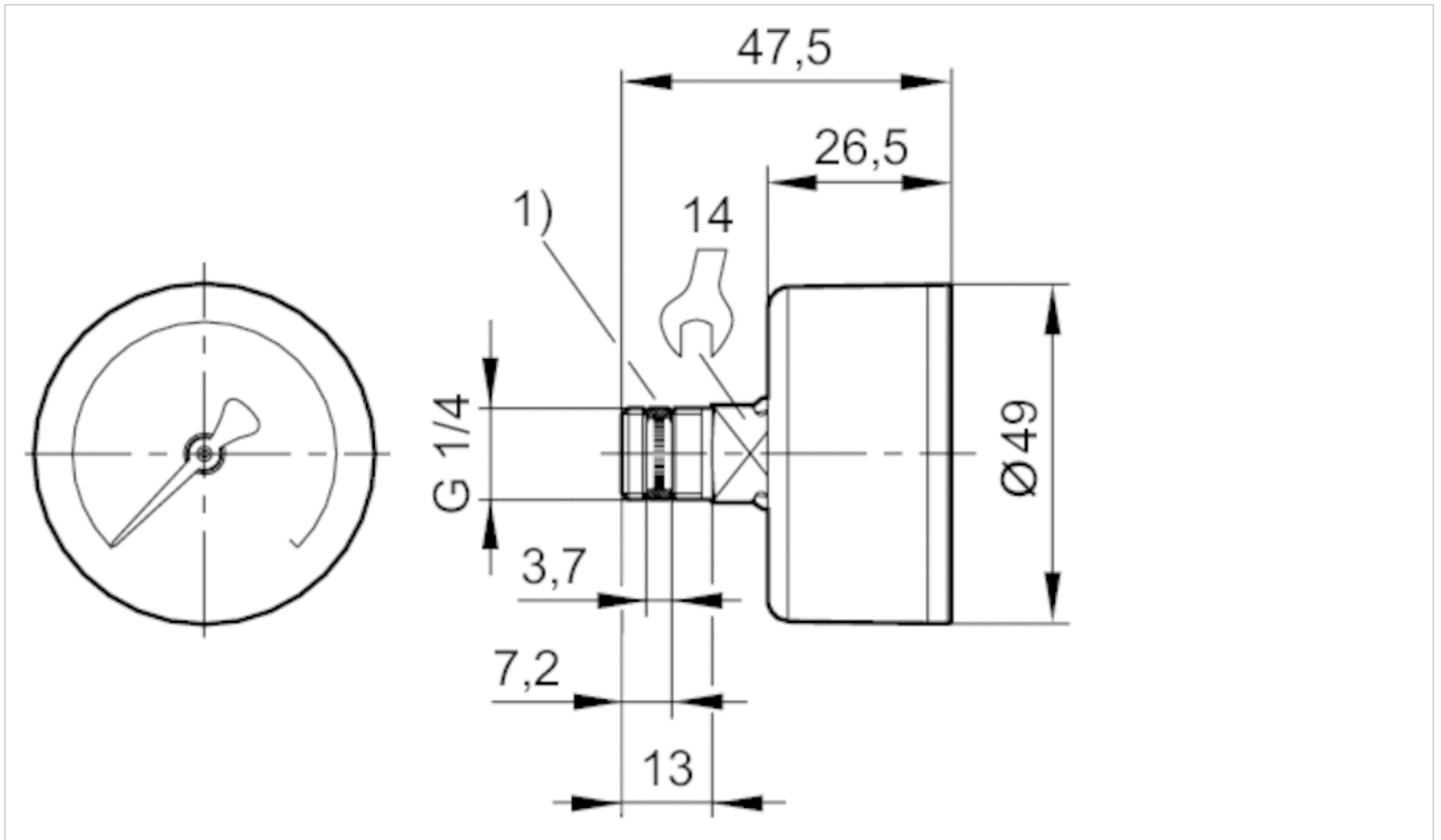
## Dimensions

Dimensions in mm, Fig. 1



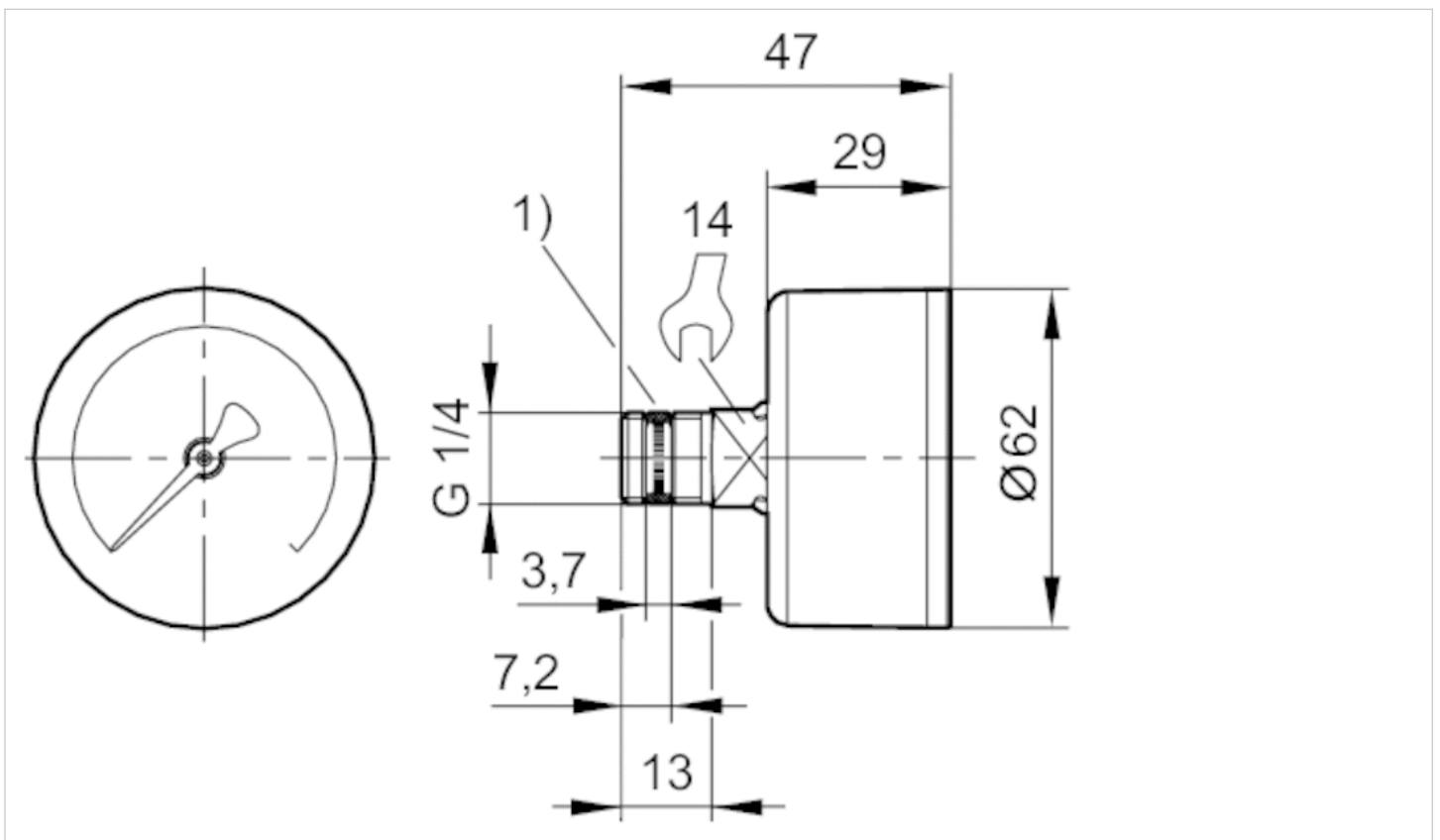
1) Gasket thread

Dimensions in mm, Fig. 2



1) Gasket thread

Dimensions in mm, Fig. 3



1) Gasket thread

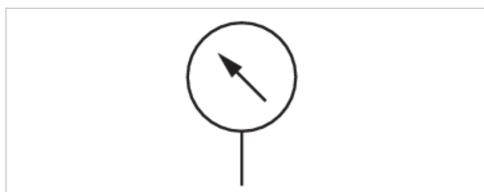


# Pressure gauge, Series PG1-STD

- Back port
- corrosion-protected
- Background color White
- Scale color Black, Red
- Viewing window Polystyrene
- Units bar
- Units psi



Version	Bourdon tube pressure gauge
Seal	Axial
Standardization	EN 837-1
Class	2,5
Ambient temperature min./max.	-40 ... 60 °C
Medium	Compressed air
Main scale unit (outside)	bar
Main scale color (outside)	Black
Secondary scale unit (inside)	psi
Secondary scale color (inside)	Red
Background color	White
Pointer color	Black



## Technical data

Part No.	Compressed air connection	Nominal diameter	Range of application	Display range	Operating pressure	Scale value
3530200160	R 1/8	40 mm	0 ... 2	0 bar ... 2.5	0 ... 3 bar	0.2
3530200130	R 1/8	40 mm	0 ... 1.2	0 bar ... 1.6	0 ... 1.6 bar	0.1
3530200120	R 1/8	40 mm	0 ... 3.2	0 bar ... 4	0 ... 4 bar	0.2
3530200110	R 1/8	40 mm	0 ... 4	0 bar ... 6	0 ... 6 bar	0.2
3530200100	R 1/8	40 mm	0 ... 8	0 bar ... 10	0 ... 10 bar	0.5
3530200150	R 1/8	40 mm	0 ... 10	0 bar ... 12	0 ... 12 bar	0.5
3530200140	R 1/8	40 mm	0 ... 12	0 bar ... 16	0 ... 16 bar	0.5
3530190120	R 1/8	50 mm	0 ... 2.5	0 bar ... 3	0 ... 3 bar	0.2
3530190130	R 1/8	50 mm	0 ... 3.2	0 bar ... 4	0 ... 4 bar	0.2
3530190110	R 1/8	50 mm	0 ... 4	0 bar ... 6	0 ... 6 bar	0.2
3530190100	R 1/8	50 mm	0 ... 10	0 bar ... 12	0 ... 12 bar	0.5
3530190140	R 1/8	50 mm	0 ... 12	0 bar ... 16	0 ... 16 bar	0.5

## Technical information

Order axial seal separately

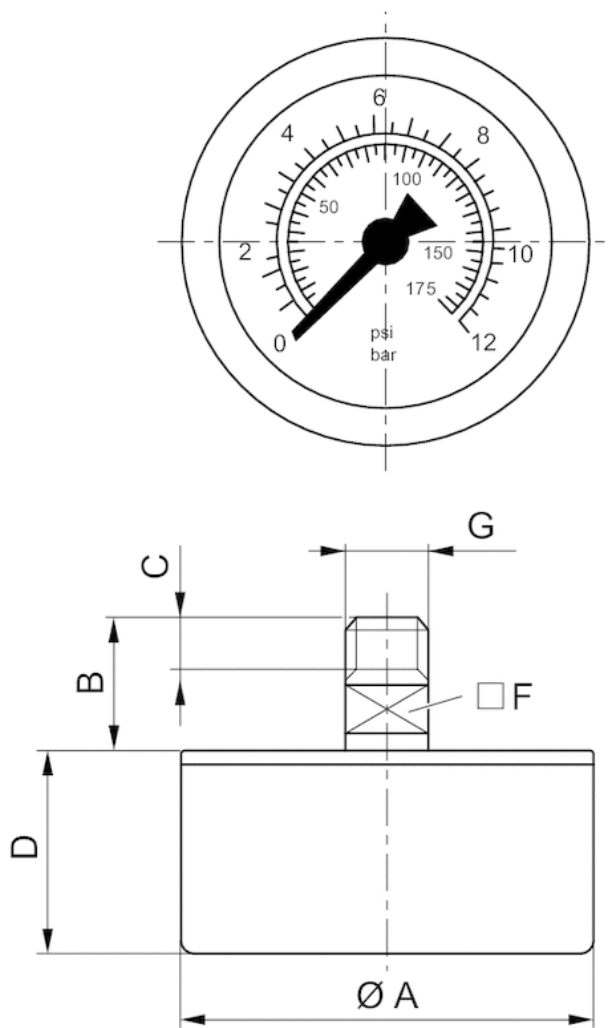
## Technical information

### Material

Housing	Acrylonitrile butadiene styrene
Thread	Brass
Viewing window	Polystyrene

## Dimensions

### Dimensions



### Dimensions in mm

Part No.	Compressed air connection	Nominal diameter	$\varnothing A$	B	C	D	F
3530200160	R 1/8	40 mm	40	19	10	26	14
3530200130	R 1/8	40 mm	40	19	10	26	14
3530200120	R 1/8	40 mm	40	19	10	26	14
3530200110	R 1/8	40 mm	40	19	10	26	14
3530200100	R 1/8	40 mm	40	19	10	26	14

Part No.	Compressed air connection	Nominal diameter	Ø A	B	C	D	F
3530200150	R 1/8	40 mm	40	19	10	26	14
3530200140	R 1/8	40 mm	40	19	10	26	14
3530190120	R 1/8	50 mm	50	19	10	27	14
3530190130	R 1/8	50 mm	50	19	10	27	14
3530190110	R 1/8	50 mm	50	19	10	27	14
3530190100	R 1/8	50 mm	50	19	10	27	14
3530190140	R 1/8	50 mm	50	19	10	27	14

# Pressure sensor, Series PE5


























- Operating pressure -1 ... 0 -1 ... 1 0 ... 6 0 ... 10 0 ... 12 bar
- electronic
- Output signal analog 0 - 10 V DC, 4 - 20 mA
- Output signal digital 2 x PNP, NPN, Push-pull PNP, NPN, Push-pull PNP, NPN, push-pull, 1x IO-Link
- Electr. connection Plug M12x1 4-pin
- Compressed air connection Internal thread G 1/4 push-in fitting Ø 4



Type	electronic
Certificates	CE declaration of conformity, cULus, RoHS, Conforms with REACH, Free of substances that impair surface wetting in the coating process
Ambient temperature min./max.	0 ... 60 °C
Medium temperature min./max.	0 ... 60 °C
Medium	Compressed air (max. 40 µm)
Max. oil content of compressed air	40 mg/m <sup>3</sup>
Measurement	Relative pressure
Display	LCD display, 4 digits, Color setting: green or red
Units displayed	bar psi kPa MPa inHg
Switching logic	NO/NC (adjustable)
Shock resistance max.	30 g
Vibration resistance	5 g (10 - 150 Hz)
Precision (% of full scale value)	±1.5% in temperature range of 10 - 30°C ± 2 % including temperature drift
Repeatability (% of full scale value)	± 0,2 %
Switching time	5 ms
Switching point	adjustable 0 ... 100%
Resetting point	adjustable 0 ... 100%
Hysteresis	adjustable
Delayed hysteresis	adjustable
Window function	adjustable
DC operating voltage min./max.	17 ... 30 V DC
Analog output	0 - 10 V DC, 4 - 20 mA
Quiescent current consumption	40 mA
Analog output linearity	± 0.5% of the final value
Maximum load (analog current output)	600 Ω
Short circuit resistance	Max. 600 ohms (current output) Min. 3K ohms (voltage output)
Mounting types	Directly on hat rail and wall mounting For panel installation using mounting kit via double nipple
Protection class	IP65 IP67 with connections assembled
Electr. connection	Plug M12x1 4-pin
Weight	0.04 kg



## Technical data

Part No.		Operating pressure range	Protection against overpressure
		min./max.	
R412010761		-1 ... 0 bar	5 bar
R412010760		-1 ... 0 bar	5 bar
R412010769		-1 ... 0 bar	5 bar
R412010768		-1 ... 0 bar	5 bar
R412010775		-1 ... 0 bar	5 bar
R412010774		-1 ... 0 bar	5 bar
R412010763		-1 ... 1 bar	5 bar
R412010762		-1 ... 1 bar	5 bar
R412010771		0 ... 6 bar	15 bar
R412010770		0 ... 6 bar	15 bar
R412010765		0 ... 6 bar	15 bar
R412010764		0 ... 6 bar	15 bar
R412010777		0 ... 6 bar	15 bar
R412010776		0 ... 6 bar	15 bar
R412010773		0 ... 10 bar	15 bar
R412010772		0 ... 10 bar	15 bar
R412010767		0 ... 10 bar	15 bar
R412010766		0 ... 10 bar	15 bar
R412010779		0 ... 10 bar	15 bar
R412010778		0 ... 10 bar	15 bar
R412010782		0 ... 12 bar	16 bar
R412010781		0 ... 12 bar	16 bar
R412010806		0 ... 12 bar	16 bar
R412010805		0 ... 12 bar	16 bar

Part No.	Output signal	Output signal
	Analog	digital
R412010761	-	2 x PNP, NPN, Push-pull
R412010760	-	2 x PNP, NPN, Push-pull
R412010769	0 - 10 V DC-4 ... 20 mA	PNP, NPN, Push-pull
R412010768	0 - 10 V DC-4 ... 20 mA	PNP, NPN, Push-pull
R412010775	-	PNP, NPN, push-pull, 1x IO-Link
R412010774	-	PNP, NPN, push-pull, 1x IO-Link
R412010763	-	2 x PNP, NPN, Push-pull
R412010762	-	2 x PNP, NPN, Push-pull
R412010771	0 - 10 V DC-4 ... 20 mA	PNP, NPN, Push-pull
R412010770	0 - 10 V DC-4 ... 20 mA	PNP, NPN, Push-pull
R412010765	-	2 x PNP, NPN, Push-pull
R412010764	-	2 x PNP, NPN, Push-pull
R412010777	-	PNP, NPN, push-pull, 1x IO-Link
R412010776	-	PNP, NPN, push-pull, 1x IO-Link
R412010773	0 - 10 V DC-4 ... 20 mA	PNP, NPN, Push-pull
R412010772	0 - 10 V DC-4 ... 20 mA	PNP, NPN, Push-pull
R412010767	-	2 x PNP, NPN, Push-pull
R412010766	-	2 x PNP, NPN, Push-pull
R412010779	-	PNP, NPN, push-pull, 1x IO-Link

Part No.	Output signal	
	Analog	digital
R412010778	-	PNP, NPN, push-pull, 1x IO-Link
R412010782	-	2 x PNP, NPN, Push-pull
R412010781	-	2 x PNP, NPN, Push-pull
R412010806	-	PNP, NPN, push-pull, 1x IO-Link
R412010805	-	PNP, NPN, push-pull, 1x IO-Link

Part No.	Compressed air connection	Fig.	
R412010761	Internal thread, G 1/4	Fig. 1	-
R412010760	push-in fitting, Ø 4	Fig. 2	-
R412010769	Internal thread, G 1/4	Fig. 1	-
R412010768	push-in fitting, Ø 4	Fig. 2	-
R412010775	Internal thread, G 1/4	Fig. 1	1)
R412010774	push-in fitting, Ø 4	Fig. 2	1)
R412010763	Internal thread, G 1/4	Fig. 1	-
R412010762	push-in fitting, Ø 4	Fig. 2	-
R412010771	Internal thread, G 1/4	Fig. 1	-
R412010770	push-in fitting, Ø 4	Fig. 2	-
R412010765	Internal thread, G 1/4	Fig. 1	-
R412010764	push-in fitting, Ø 4	Fig. 2	-
R412010777	Internal thread, G 1/4	Fig. 1	1)
R412010776	push-in fitting, Ø 4	Fig. 2	1)
R412010773	Internal thread, G 1/4	Fig. 1	-
R412010772	push-in fitting, Ø 4	Fig. 2	-
R412010767	Internal thread, G 1/4	Fig. 1	-
R412010766	push-in fitting, Ø 4	Fig. 2	-
R412010779	Internal thread, G 1/4	Fig. 1	1)
R412010778	push-in fitting, Ø 4	Fig. 2	1)
R412010782	Internal thread, G 1/4	Fig. 1	-
R412010781	push-in fitting, Ø 4	Fig. 2	-
R412010806	Internal thread, G 1/4	Fig. 1	1)
R412010805	push-in fitting, Ø 4	Fig. 2	1)

1) The IO-Link device description (IODD) for the PE5 pressure sensor is available for download in the Media Centre.

## Technical information

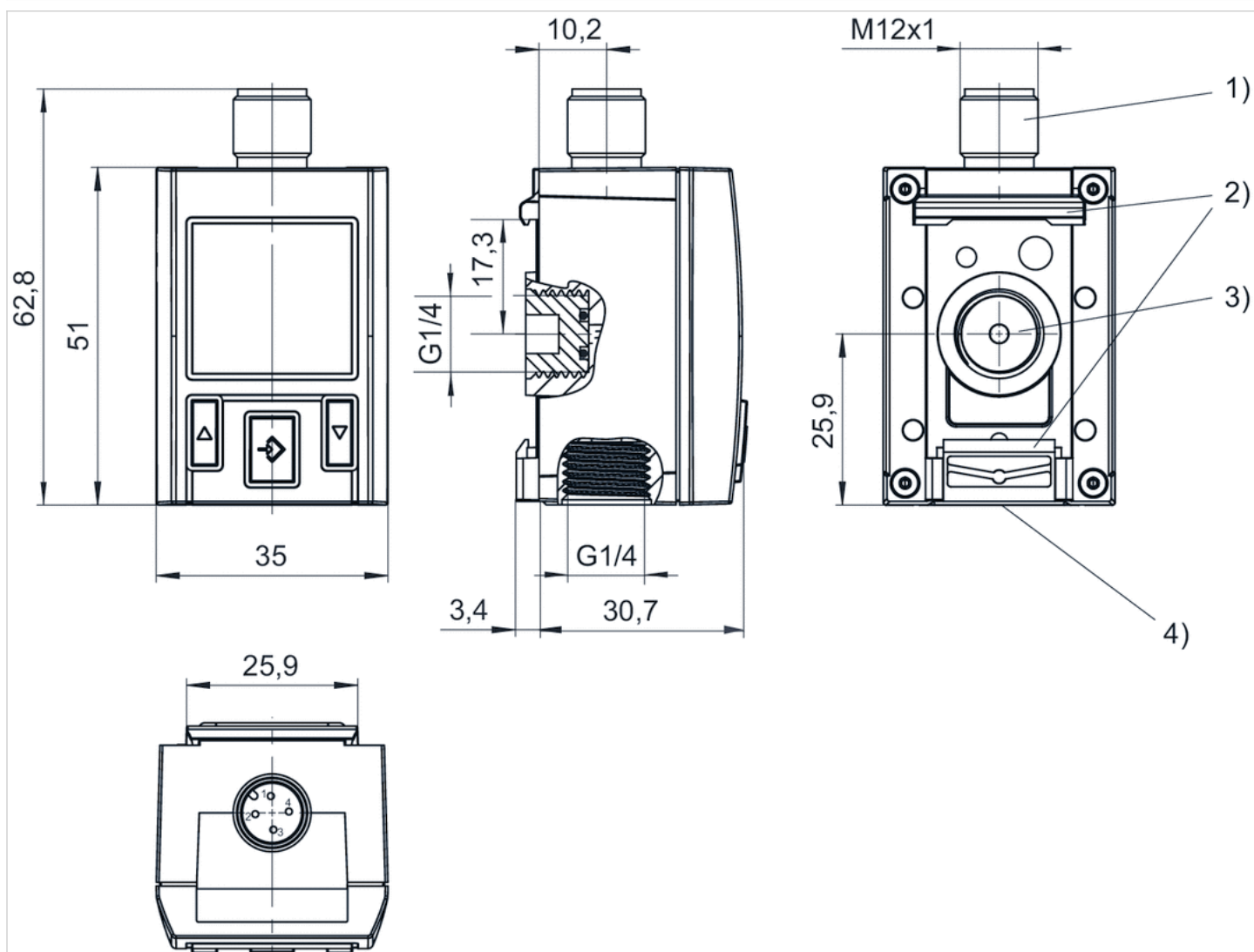
Alternative pressure connection (G1/4) on the rear side (closed with plug)  
Display color selectable, red or green

## Technical information

Material	
Housing	Polycarbonate
Seals	Acrylonitrile butadiene rubber
Blanking plug	Polyoxymethylene
Electr. connection	Aluminum, black anodized

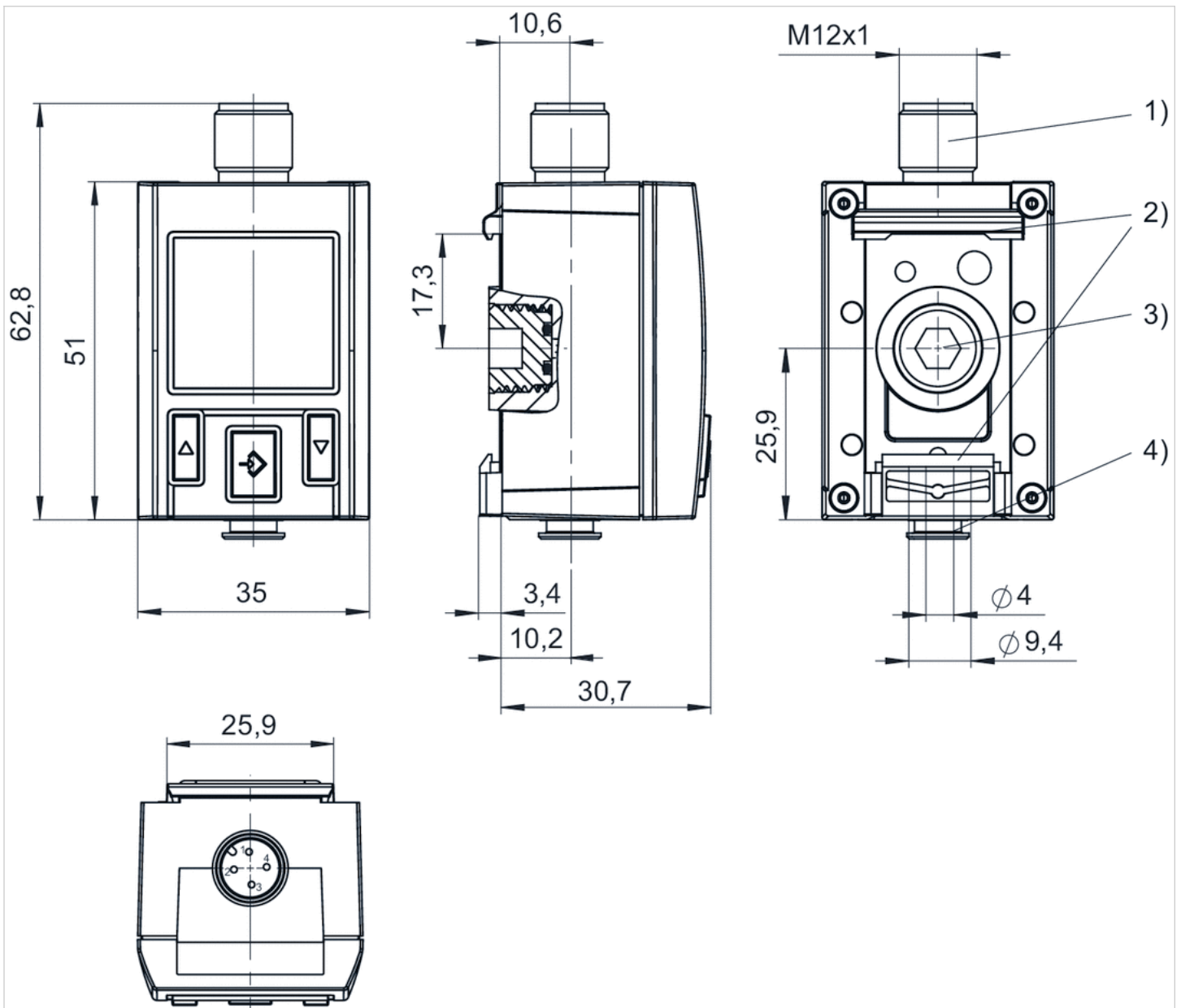
## Dimensions

Fig. 1



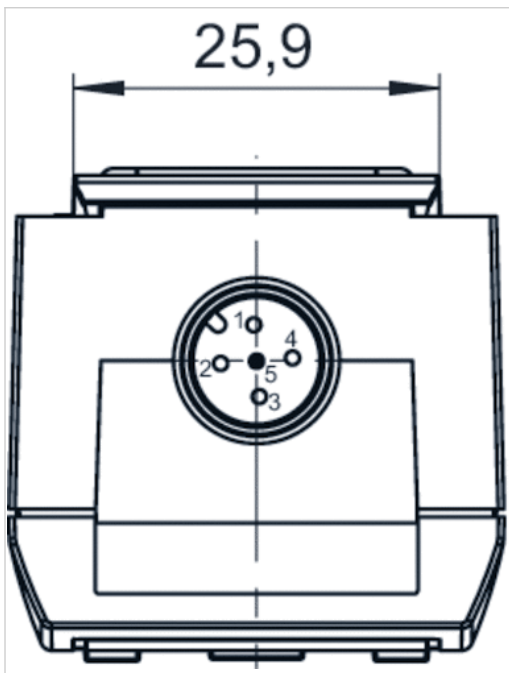
- 1) M12x1 electrical connection
- 2) Mounting for hat rail and wall mounting
- 3) Alternative pressure connection (G1/4) closed with plug
- 4) Pressure connection G1/4

Fig. 2

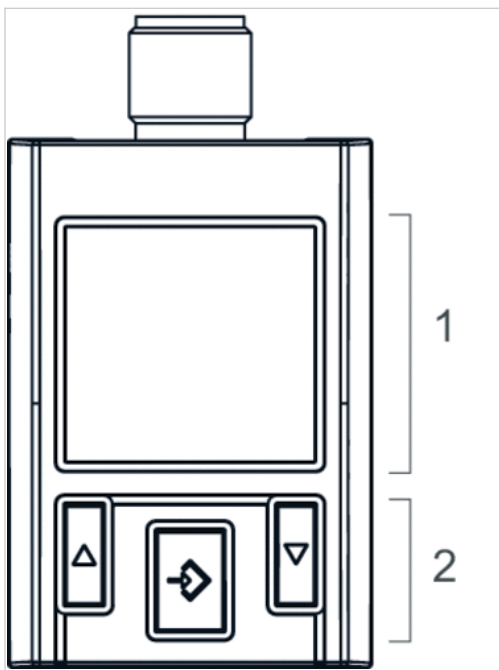


- 1) M12x1 electrical connection
- 2) Mounting for hat rail and wall mounting
- 3) Alternative pressure connection (G1/4) closed with plug
- 4) Pressure connection, tubing Ø 4 mm

Fig. 3, Electr. connection for leak test



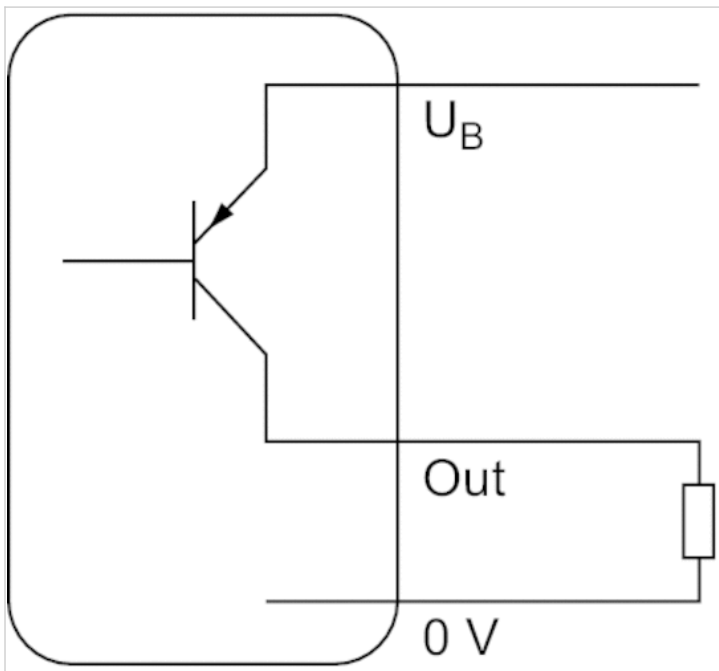
Display and operation area



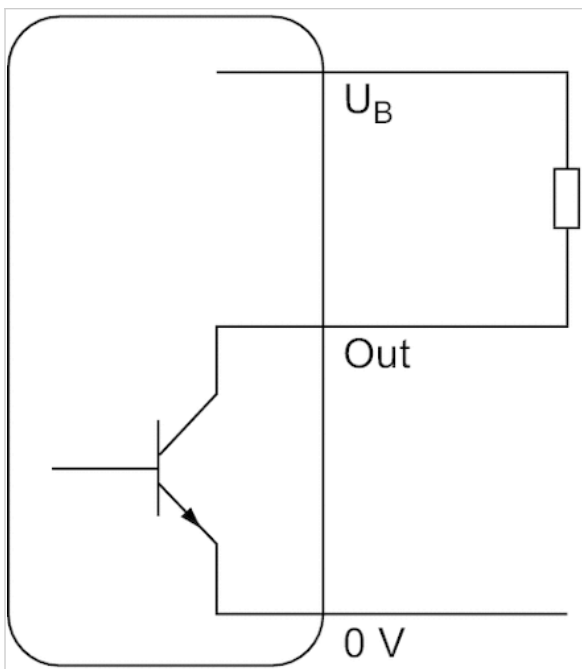
- 1) LCD display
- 2) Control panel with 3 buttons

## Diagrams

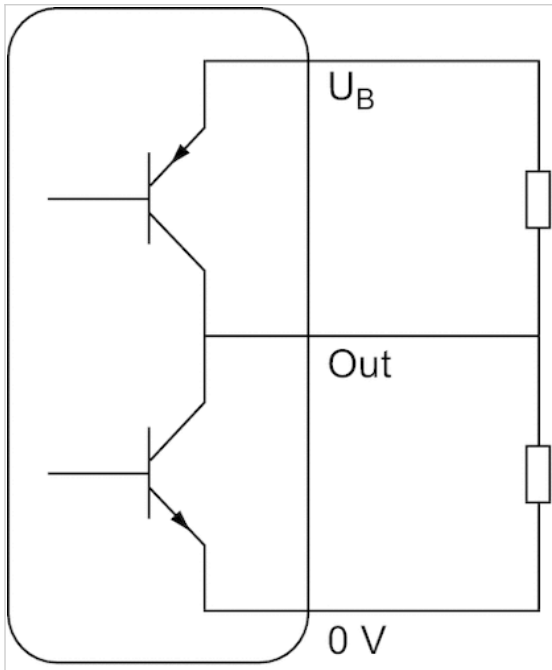
## Operating mode, PNP



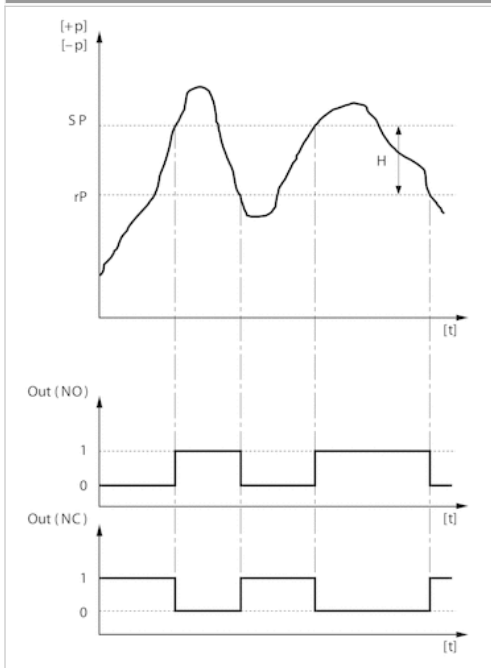
## Operating mode, NPN



Operating mode, Push-pull

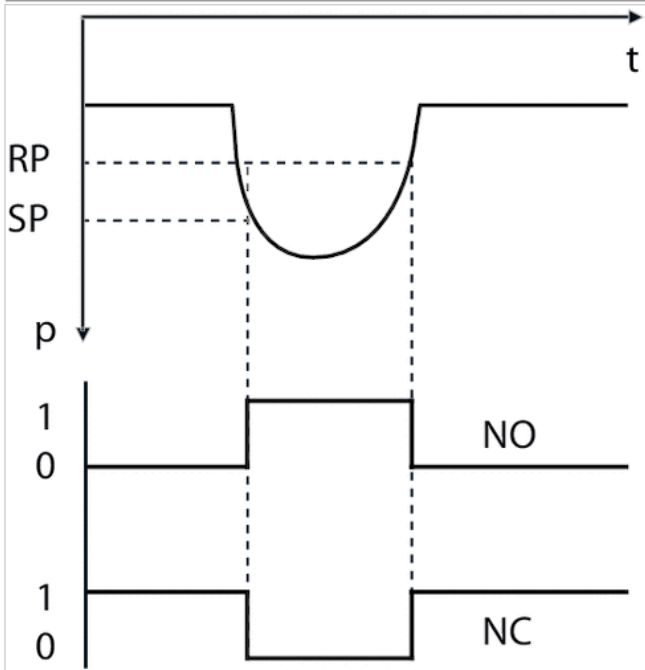


Hysteresis function: switching and resetting behavior dependent on pressure p and time t, in case of overpressure

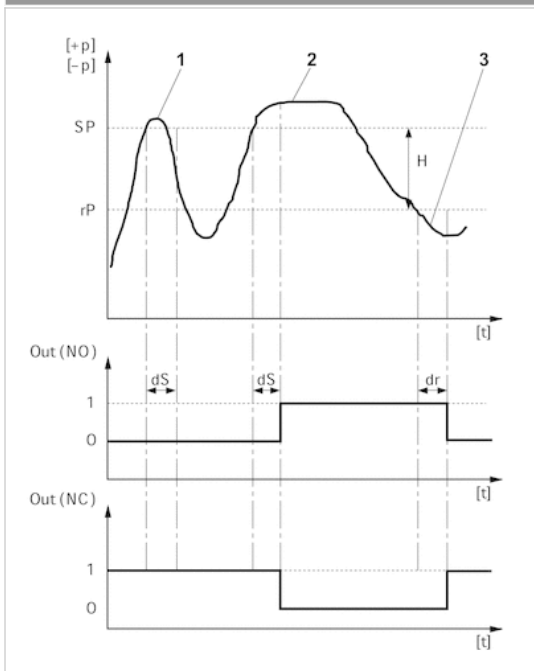


- H: Hysteresis
- SP = switching point
- RP = resetting point
- Out (NC): switch output, break contact
- Out (NO): switch output, make contact

Hysteresis function: switching and resetting behavior dependent on pressure  $p$  and time  $t$ , in case of underpressure



Delayed hysteresis function: switching and resetting behavior depending on pressure  $p$  and time  $t$



H: Hysteresis

SP = switching point

RP = resetting point

Out (NC): switch output, break contact

Out (NO): switch output, make contact

$dS$ : switching delay

$dR$  = reset delay

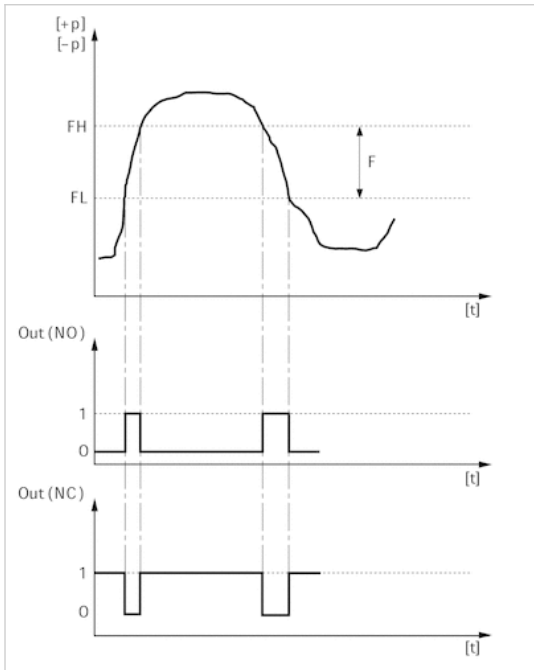
1) period of pressure over the switching point  $dS$ : pressure sensor does not switch

2) Period of pressure over the switching point  $> dS$ : pressure sensor switches

3) Period of pressure under the resetting point  $> dR$ : pressure sensor switches

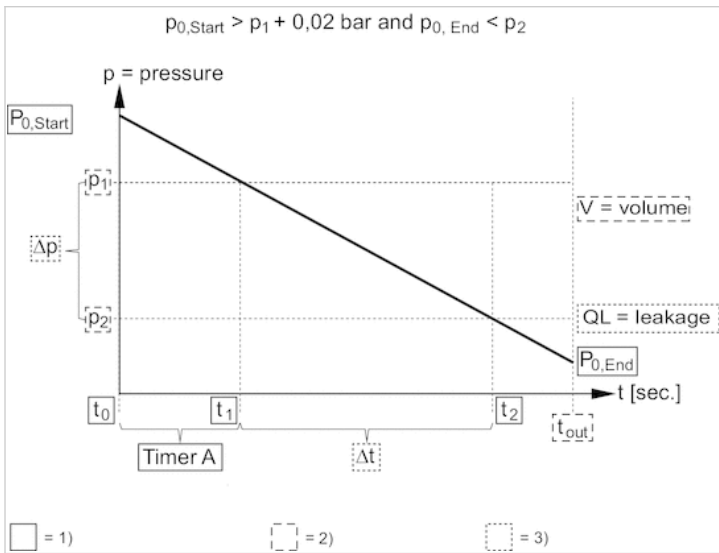


Window function: switching and resetting behavior depending on pressure p and time t



FH: pressure band, upper value  
 FL: pressure band, lower value  
 Out (NC): switch output, break contact  
 Out (NO): switch output, make contact

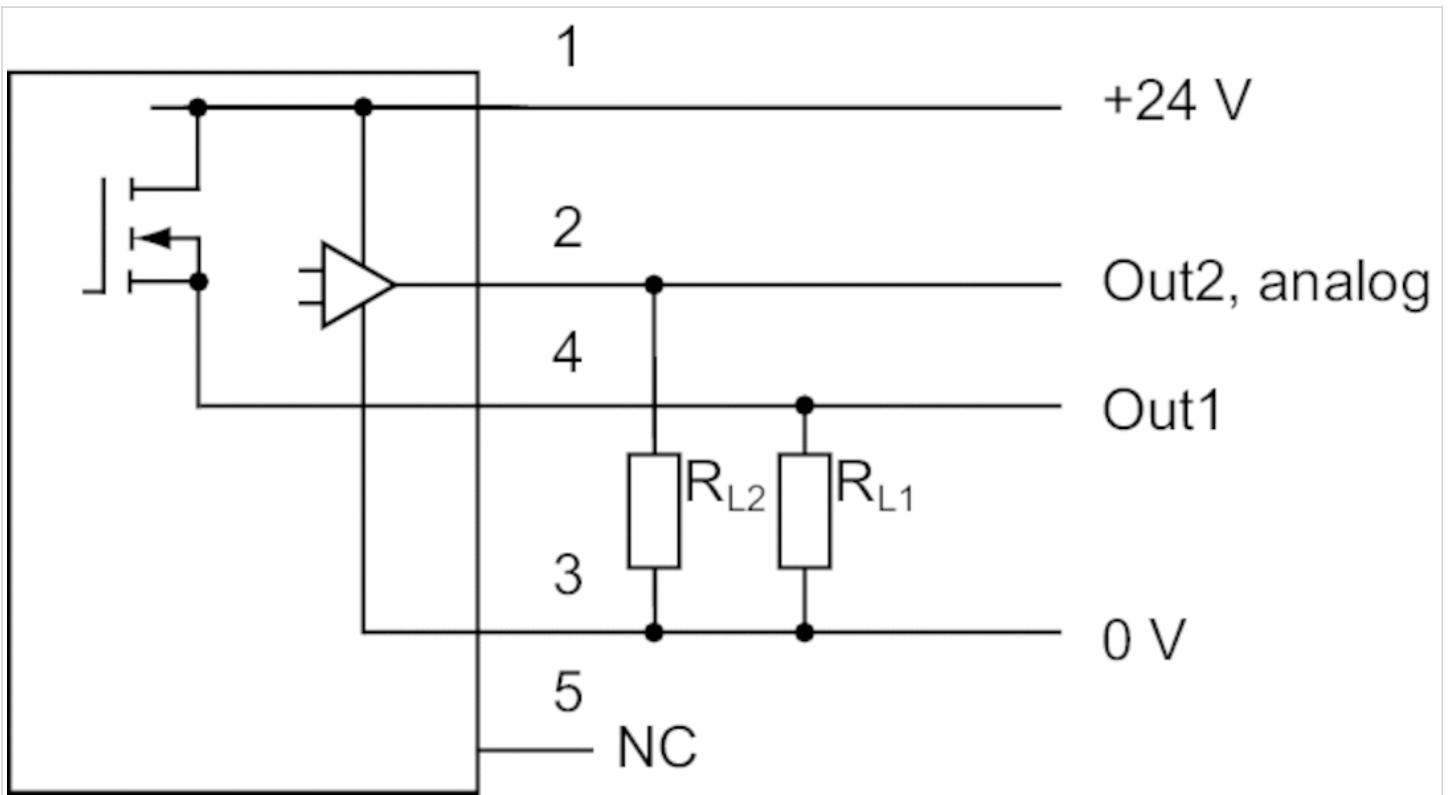
Leakage characteristic



- 1) Internally stored parameter
- 2) Adjustable parameter
- 3) Output value

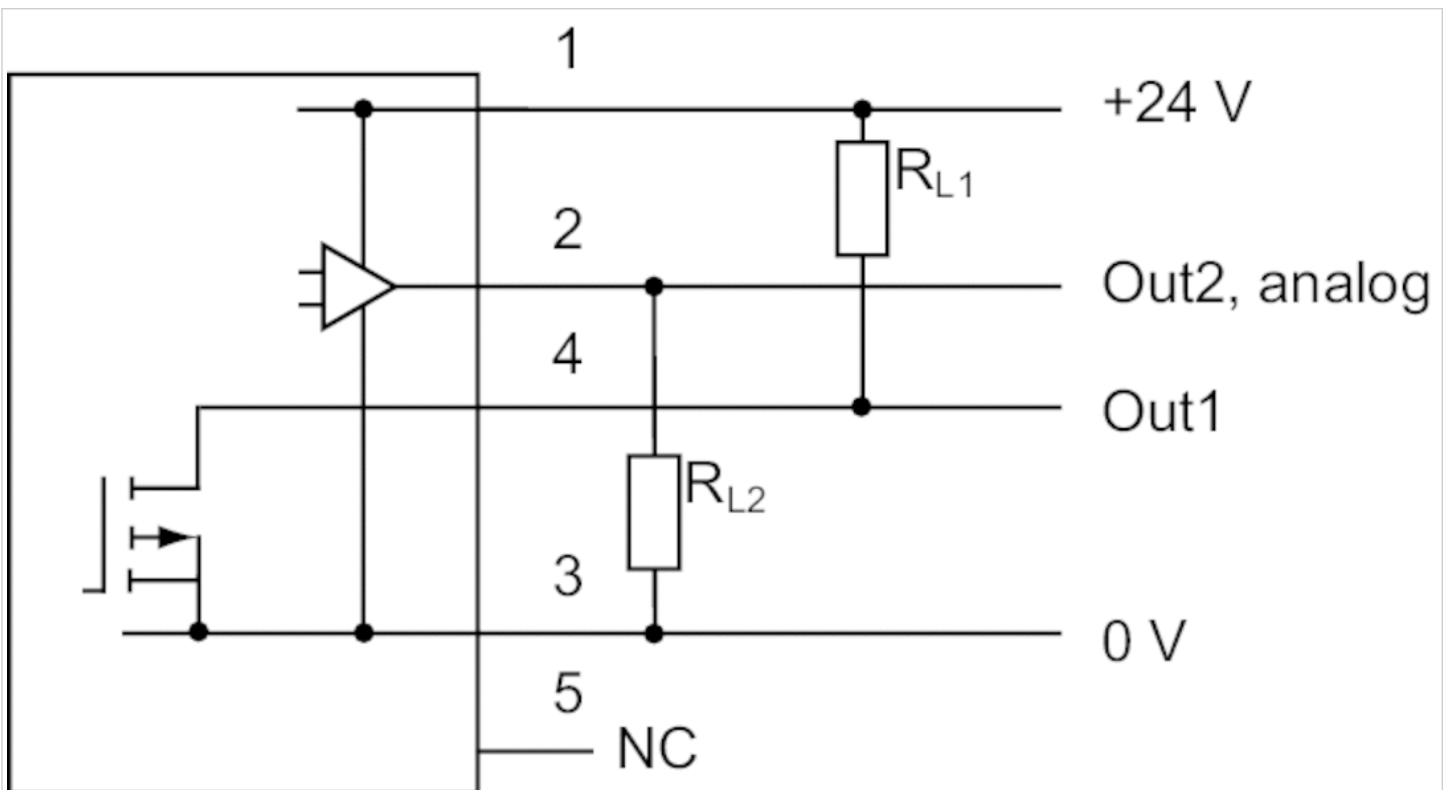
Circuit diagram

Block diagram, 1x PNP and 1x analog



RL = storable position

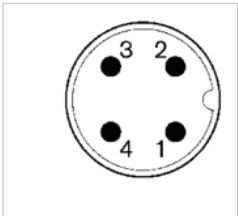
Block diagram, 1x NPN and 1x analog



RL = storable position

## Pin assignments

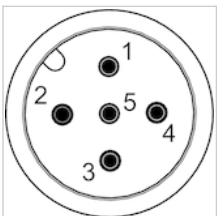
### Pin assignments, M12x1, 4-pin



Pin	1
Allocation	operational voltage + UB
	2
	3
	switch output Out2, analog: A or V, digital: PNP, NPN, push-pull
	0 V
	4
	switch output Out1, digital: PNP, NPN, push-pull

## Pin assignments

### Pin assignments, M12x1, 5-pin



Pin	1	2	3
Allocation	Supply Voltage	Switch output PNP/NPN/push-pull, switchable	0 V
		4	
		Switch output PNP/NPN/push-pull/leakage mode, digital switch input PNP	
		5	
		Analog output ( 0 to 10 V DC, 4 to 20 mA)	

# Double nipple

- External thread
- G 1/4
- External thread
- G 1/8
- FPT-S-RDO



Working pressure min./max.

0 ... 16 bar

Ambient temperature min./max.

-20 ... 80 °C

## Technical data

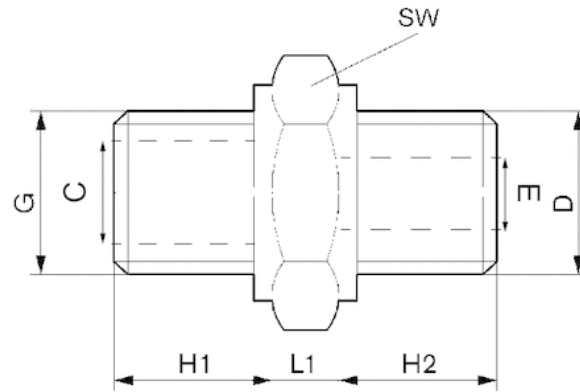
Part No.	Port G	Port D	Delivery unit
1823391016	G 1/4	G 1/8	10 piece

## Technical information

Material	
Material	Brass, nickel-plated
Seal	Polyvinyl chloride, hard

## Dimensions

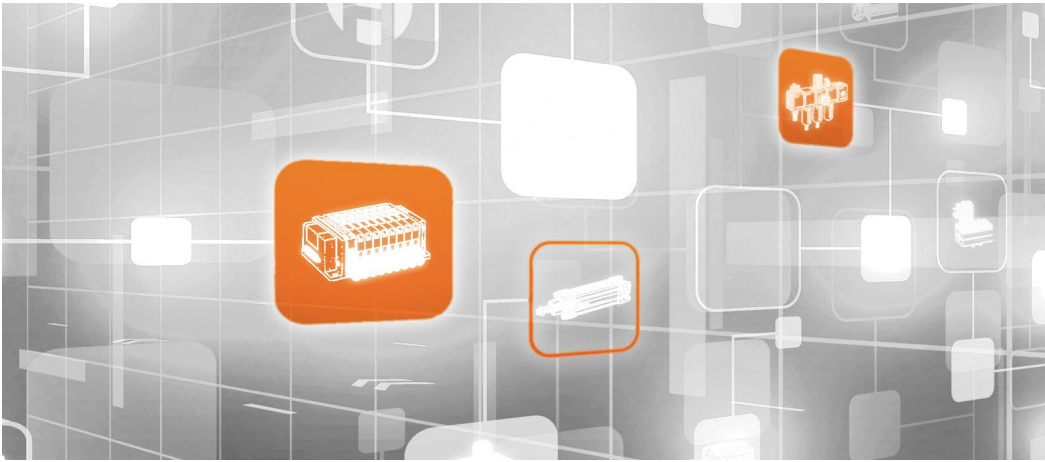
### Dimensions



## Dimensions

Part No.	Port D	Port G	ØC	ØE	H1	H2	L1	SW
1823391016	G 1/8	G 1/4	8	5	10	7	5	17

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