

## Series NL4

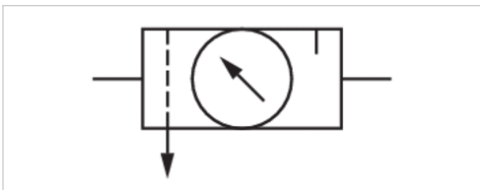


AVENTICS™ Series NL4



# Air preparation unit, 2-part, Series NL4-ACD

- G 1/2 G 3/4
- filter porosity 5  $\mu\text{m}$
- with pressure gauge



Version	2-part, Can be assembled into blocks
Parts	Filter pressure regulator, Lubricator
Mounting orientation	vertical
Working pressure min./max.	1.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Nominal flow Qn	5000 l/min
Regulator type	Diaphragm-type pressure regulator
Regulator function Adjustment	with relieving air exhaust
range min./max. Pressure supply	0.5 ... 10 bar single
Filter reservoir volume	50 cm <sup>3</sup>
Filter element	exchangeable
Lubricator reservoir volume	125 cm <sup>3</sup>
Type of filling	Manual oil filling
Weight	See table below

## Technical data

Part No.	Port	filter porosity	Flow	Condensate drain
			Qn	
0821300500	G 1/2	5 $\mu\text{m}$	5000 l/min	semi-automatic, open without pressure
0821300503	G 1/2	5 $\mu\text{m}$	5000 l/min	fully automatic, open without pressure
0821300501	G 1/2	5 $\mu\text{m}$	5000 l/min	semi-automatic, open without pressure
0821300504	G 1/2	5 $\mu\text{m}$	5000 l/min	fully automatic, open without pressure
0821300502	G 1/2	5 $\mu\text{m}$	5000 l/min	semi-automatic, open without pressure
0821300505	G 1/2	5 $\mu\text{m}$	5000 l/min	fully automatic, open without pressure
0821300530	G 3/4	5 $\mu\text{m}$	5000 l/min	semi-automatic, open without pressure
0821300533	G 3/4	5 $\mu\text{m}$	5000 l/min	fully automatic, open without pressure
0821300531	G 3/4	5 $\mu\text{m}$	5000 l/min	semi-automatic, open without pressure
0821300535	G 3/4	5 $\mu\text{m}$	5000 l/min	fully automatic, open without pressure

Part No.	Pressure gauge	Reservoir	Protective guard	Weight
0821300500	with pressure gauge	Polycarbonate	-	1.73 kg
0821300503	with pressure gauge	Polycarbonate	-	1.79 kg
0821300501	with pressure gauge	Polycarbonate	Steel	1.91 kg
0821300504	with pressure gauge	Polycarbonate	Steel	1.98 kg
0821300502	with pressure gauge	Die cast zinc	-	2.34 kg
0821300505	with pressure gauge	Die cast zinc	-	2.41 kg

Part No.	Pressure gauge	Reservoir	Protective guard	Weight
0821300530	with pressure gauge	Polycarbonate	-	1.73 kg
0821300533	with pressure gauge	Polycarbonate	-	1.79 kg
0821300531	with pressure gauge	Polycarbonate	Steel	1.91 kg
0821300535	with pressure gauge	Die cast zinc	-	2.41 kg

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

Metal protective guard can be retrofitted for all polycarbonate reservoirs

## Technical information

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

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information". A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Also suitable for separation of fluid oil or water due to the design.

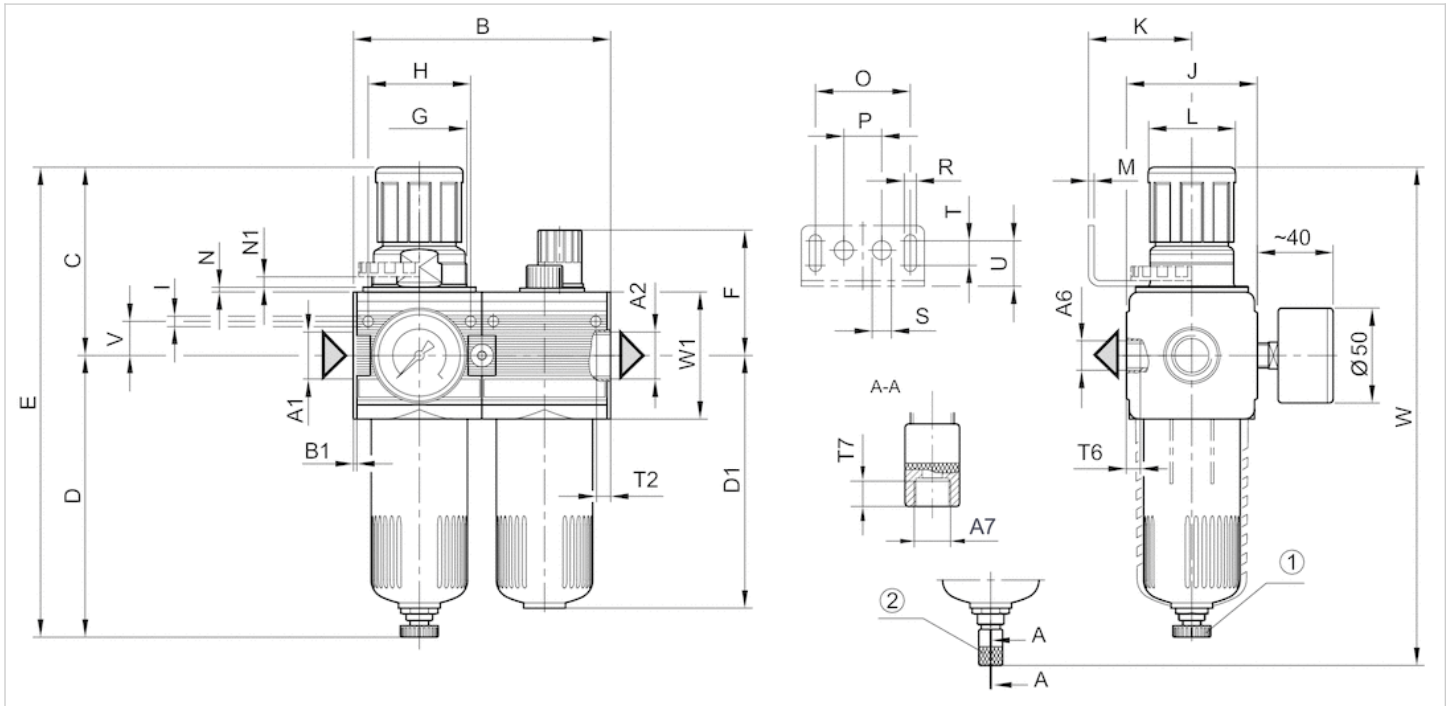
Max. achievable compressed air class acc. to ISO 8573-1:2010 6 : 7 : -

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber
Threaded bushing	Die cast zinc
Reservoir	Polycarbonate Die cast zinc
Protective guard	Steel
Filter insert	Polyethylene

# Dimensions

## Dimensions



- A1 = input
- A2 = output
- A7 = condensate drain
- 1) Semi-automatic condensate drain
- 2) fully automatic condensate drain

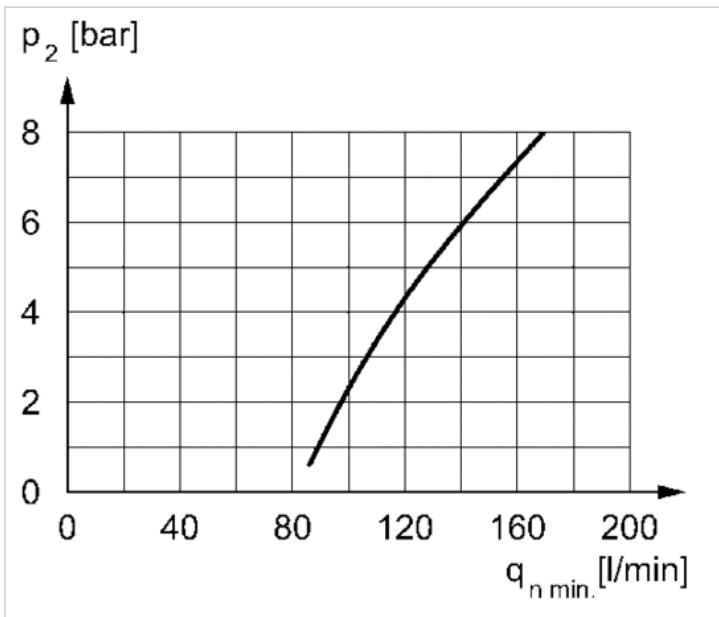
## Dimensions in mm

A1	A2	A6	A7	B	B1	C	D	D1	E	F	G	H	I	J	K	L	M	N	N1	O
G 1/2	G 1/2	G 1/4	G 1/8	135.6	1.8	100.5	147	132	247.5	65	M50x1,5	54	5.5	69	54.5	46	3	3	5.5	50
G 3/4	G 3/4	G 1/4	G 1/8	135.6	1.8	100.5	147	132	247.5	65	M50x1,5	54	5.5	69	54.5	46	3	3	5.5	50

P	R	S	T	T2	T6	T7	U	V	W	W1
20	6.4	10	13	13	7	8.5	24	18	262.5	67
20	6.4	10	13	13	7	8.5	24	18	262.5	67

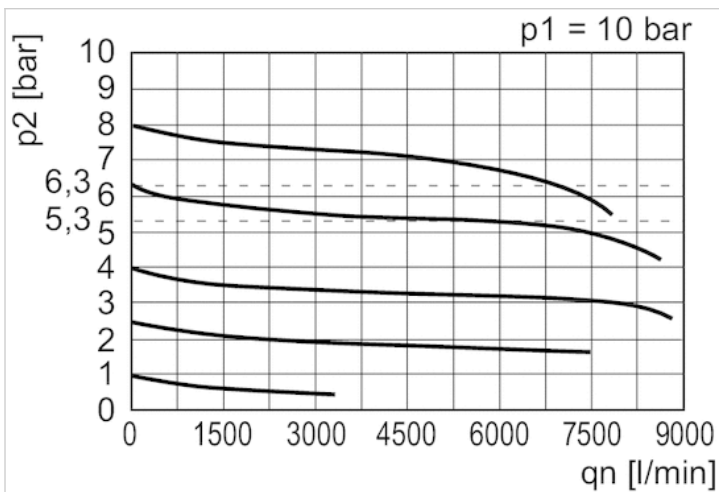
## Diagrams

minimum flow rate curve (flow rate necessary for the correct functioning of the lubricator)



$p_1$  = operating pressure  
 $p_2$  = secondary pressure  
 $q_n$  = nominal flow  
 $q_{n \text{ min.}}$  = min. nominal flow

## Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow



















# Pressure regulator, Series NL4-RGS

- G 1/2 G 3/4
- Qn = 9500 l/min
- Standard pressure regulator
- Activation Mechanical



Parts	Pressure regulator
Mounting orientation	Any
Working pressure min./max.	See table below
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Regulator type	Diaphragm-type pressure regulator Can be assembled into blocks with relieving air exhaust
Regulator function	
Adjustment range min./max.	See table below
Pressure supply	single
Activation	Mechanical
Weight	See table below

## Technical data

Part No.			Port	Flow	Working pressure min./max.	Adjustment range min./max.
				Qn		
0821302505			G 1/2	9500 l/min	0.5 ... 10 bar	0.1 ... 3 bar
0821302580			G 1/2	9500 l/min	0.5 ... 16 bar	0.2 ... 6 bar
0821302500			G 1/2	9500 l/min	0.5 ... 16 bar	0.5 ... 10 bar
0821302504		—	G 1/2	9500 l/min	0.5 ... 10 bar	0.1 ... 3 bar
0821302506		—	G 1/2	9500 l/min	0.5 ... 10 bar	0.2 ... 6 bar
0821302501		—	G 1/2	9500 l/min	0.5 ... 16 bar	0.5 ... 10 bar
0821302544			G 3/4	9500 l/min	0.5 ... 16 bar	0.1 ... 3 bar
0821302545			G 3/4	9500 l/min	0.5 ... 16 bar	0.2 ... 6 bar
0821302540			G 3/4	9500 l/min	0.5 ... 16 bar	0.5 ... 10 bar
0821302546		—	G 3/4	9500 l/min	0.5 ... 16 bar	0.1 ... 3 bar
0821302547		—	G 3/4	9500 l/min	0.5 ... 16 bar	0.2 ... 6 bar
0821302541		—	G 3/4	9500 l/min	0.5 ... 16 bar	0.5 ... 10 bar

Part No.	Pressure gauge	Weight
0821302505	with pressure gauge	0.935 kg
0821302580	with pressure gauge	0.935 kg
0821302500	with pressure gauge	0.935 kg
0821302504	-	0.85 kg
0821302506	-	0.85 kg
0821302501	-	0.85 kg
0821302544	with pressure gauge	0.935 kg
0821302545	with pressure gauge	0.935 kg
0821302540	with pressure gauge	0.935 kg

Part No.	Pressure gauge	Weight
0821302546	-	0.85 kg
0821302547	-	0.85 kg
0821302541	-	0.85 kg

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

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

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

The rear pressure gauge connection on the pressure regulator is closed with a blanking plug, the front connection is open. Depending on the customer application, a second blanking plug may be necessary. Please order separately (see accessories).

Relieving exhaust (≤ 0.3 bar over set pressure).

With rear exhaust (> 3 bar ).

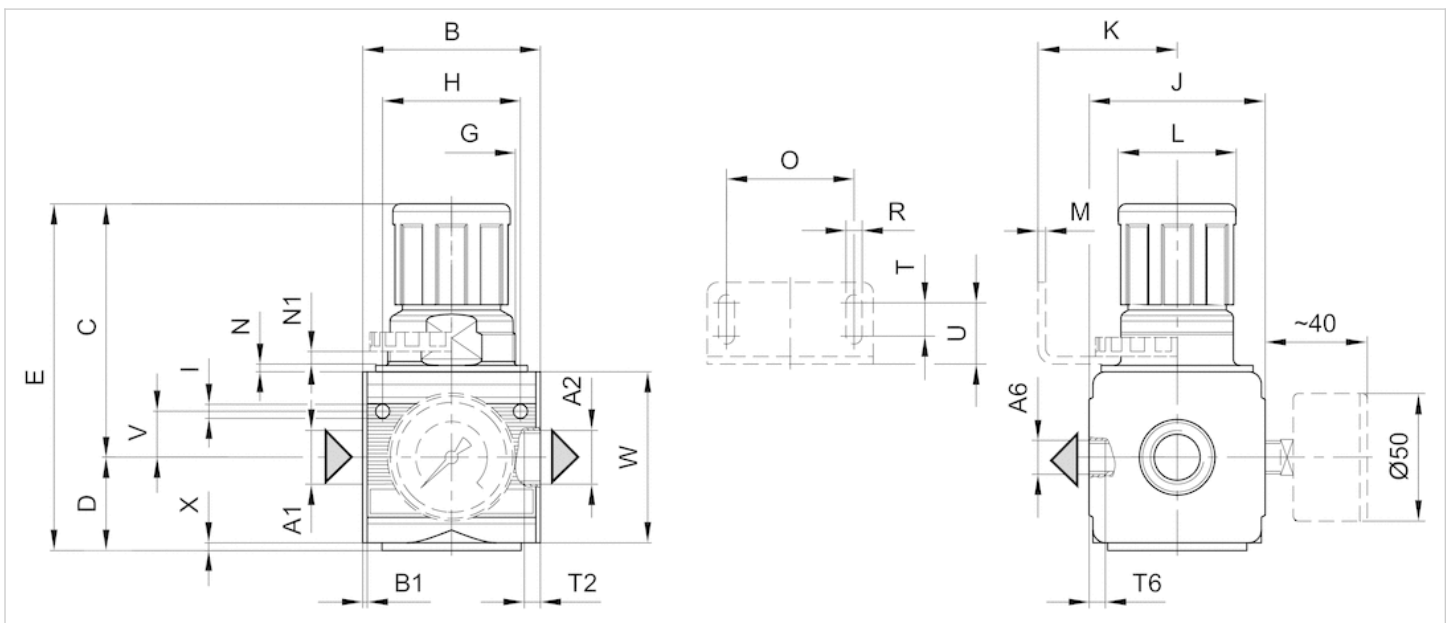
Recommended pre-filtering 5 μm

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber

## Dimensions

### Dimensions



A1 = input

A2 = output  
A6 = output

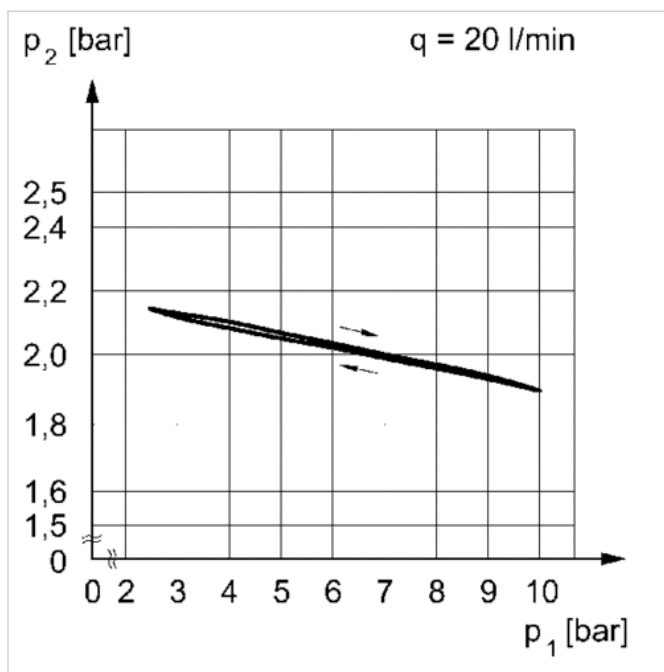
### Dimensions in mm

A1	A2	A6	B	B1	C	D	E	G	H	I	J	K	L	M	N	N1	O	R	S	T	T2	T6
G 1/2	G 1/4	G 1/4	69.5	1.8	97	35.5	132.5	M50x1,5	54	5.5	69	54.5	46	3	3	5.5	50	6.4	10	13	13	10
G 3/4	G 1/4	G 1/4	69.5	1.8	97	35.5	132.5	M50x1,5	54	5.5	69	54.5	46	3	3	5.5	50	6.4	10	13	13	10

U		V		W		X	
24		18		67		2	
24		18		67		2	

### Diagrams

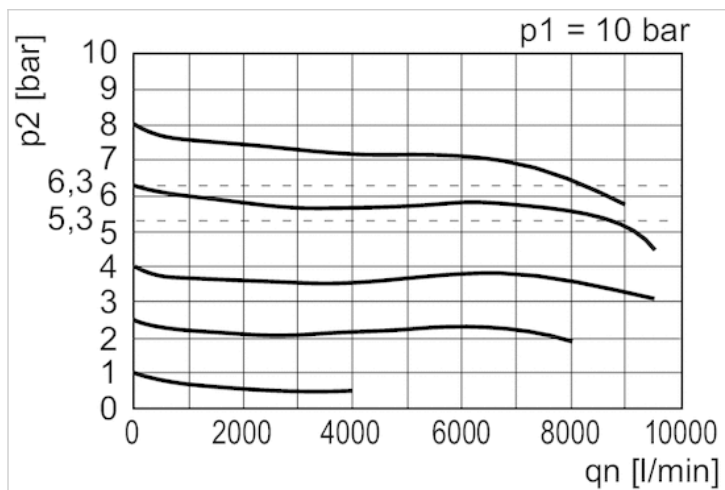
#### Pressure characteristics curve



$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q$  = flow rate



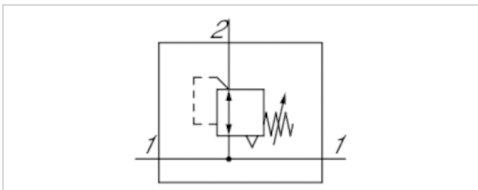
## Flow rate characteristic (setting range p2: 0.5 - 10 bar)



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

# Pressure regulator, Series NL4-RGS-...-DS

- G 1/2
- Qn = 9500 l/min
- Standard pressure regulator
- Activation Mechanical
- with continuous pressure supply



Parts	Pressure regulator with continuous pressure supply
Mounting orientation	Any
Working pressure min./max.	0.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Regulator type	Diaphragm-type pressure regulator Can be assembled into blocks with relieving air exhaust
Regulator function	See table below
Adjustment range min./max.	double
Pressure supply	Mechanical
Activation	
Weight	0.867 kg

## Technical data

Part No.	Port	Flow	Adjustment range min./max.	Max. pressure gauge Ø in blocked state
		Qn		
0821302509	G 1/2	9500 l/min	0.1 ... 3 bar	63 mm
0821302508	G 1/2	9500 l/min	0.2 ... 6 bar	63 mm
0821302507	G 1/2	9500 l/min	0.5 ... 10 bar	63 mm

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 The rear pressure gauge connection on the pressure regulator is closed with a blanking plug, the front connection is open. Depending on the customer application, a second blanking plug may be necessary. Please order separately (see accessories).  
 Relieving exhaust (≤ 0.3 bar over set pressure).  
 With rear exhaust (> 3 bar ).

Recommended pre-filtering 5 μm

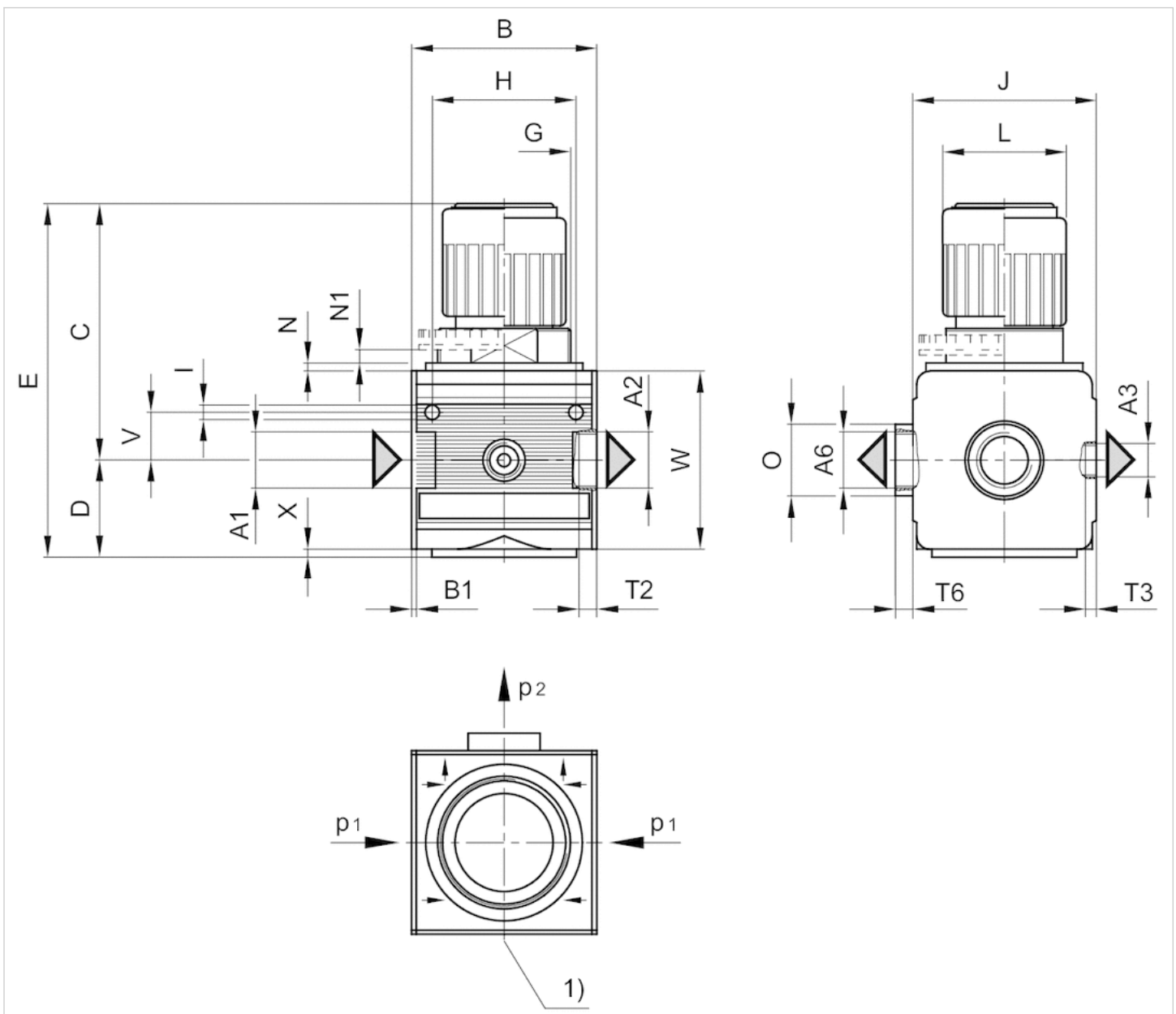
## Technical information

### Material

Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber

## Dimensions

### Dimensions



- A1 = input
- A2 = output
- A3 = output
- A6 = output
- 1) pressure gauge connection
- p1 = working pressure

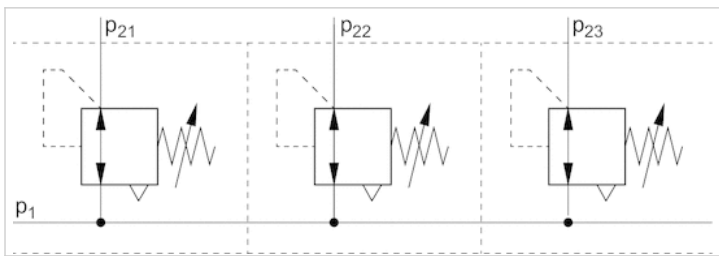
p2 = secondary pressure

Dimensions in mm

A1	A2	A3	A6	B	B1	C	D	E	G	H	I	J	L	N	N1	O	T2	T3	T6	V	W	X
G 1/2	G 1/2	G 1/4	G 1/2	69.6	1.8	97	35.5	132.5	M50x1,5	54	5.5	69	46	3	5.5	27	13	7	6	18	67	2

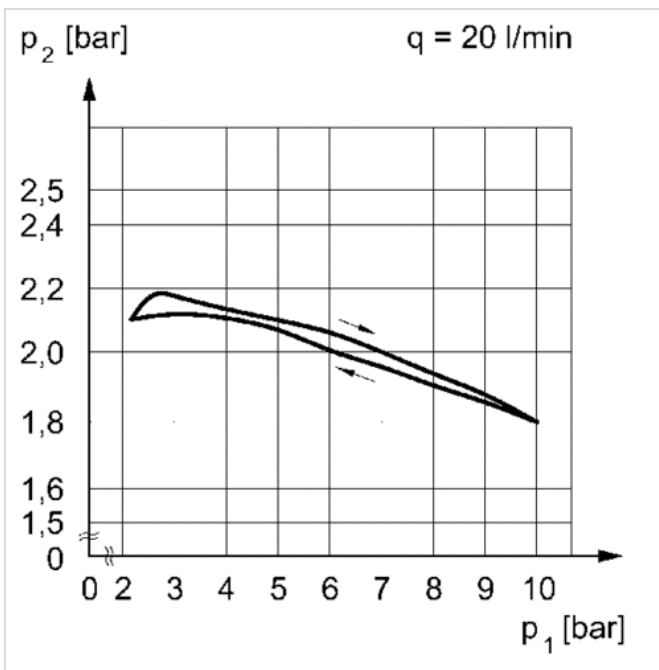
Diagrams

Application example



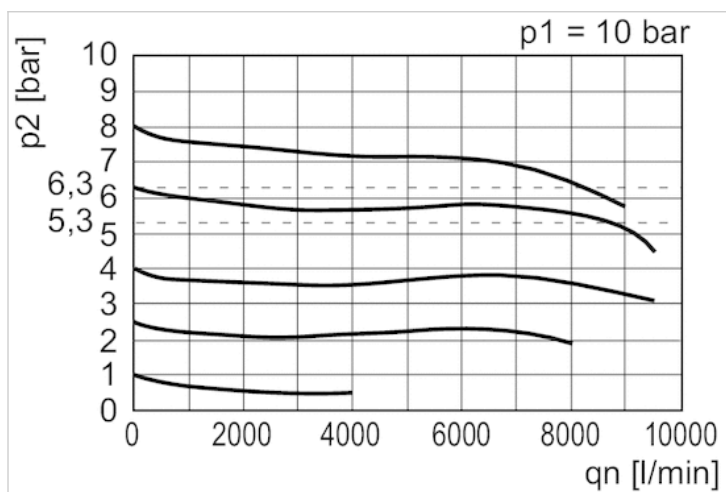
p1 = working pressure

Pressure characteristics curve



p1 = working pressure  
 p2 = secondary pressure  
 q = flow rate

Flow rate characteristic (setting range p2: 0.5 - 10 bar)



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

# Pressure regulator, Series NL4-RGS

- G 1/2 G 3/4
- Qn = 9500 l/min
- Standard pressure regulator
- Activation Mechanical
- lockable
- with key



Parts	Pressure regulator
Mounting orientation	Any
Working pressure min./max.	0.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Regulator type	Diaphragm-type pressure regulator Can be assembled into blocks with relieving air exhaust
Regulator function	See table below
Adjustment range min./max.	with key
Lock type	single
Pressure supply	Mechanical
Activation	See table below
Weight	

## Technical data

Part No.	[Symbol]	[Symbol]	Port	Flow	Adjustment range min./max.	Pressure gauge
				Qn		
0821302581	[Symbol]	[Symbol]	G 1/2	9500 l/min	0.1 ... 3 bar	with pressure gauge
0821302582	[Symbol]	[Symbol]	G 1/2	9500 l/min	0.2 ... 6 bar	with pressure gauge
0821302502	[Symbol]	[Symbol]	G 1/2	9500 l/min	0.5 ... 10 bar	with pressure gauge
0821302583	[Symbol]	-	G 1/2	9500 l/min	0.1 ... 3 bar	-
0821302584	[Symbol]	-	G 1/2	9500 l/min	0.2 ... 6 bar	-
0821302503	[Symbol]	-	G 1/2	9500 l/min	0.5 ... 10 bar	-
0821302548	[Symbol]	[Symbol]	G 3/4	9500 l/min	0.1 ... 3 bar	with pressure gauge
0821302549	[Symbol]	[Symbol]	G 3/4	9500 l/min	0.2 ... 6 bar	with pressure gauge
0821302542	[Symbol]	[Symbol]	G 3/4	9500 l/min	0.5 ... 10 bar	with pressure gauge

Part No.	Weight
0821302581	0.935 kg
0821302582	0.935 kg
0821302502	0.935 kg
0821302583	0.85 kg
0821302584	0.85 kg
0821302503	0.85 kg
0821302548	0.935 kg
0821302549	0.935 kg
0821302542	0.935 kg

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

The rear pressure gauge connection on the pressure regulator is closed with a blanking plug, the front connection is open. Depending on the customer application, a second blanking plug may be necessary. Please order separately (see accessories).

Relieving exhaust ( $\leq 0.3$  bar over set pressure).

With rear exhaust ( $> 3$  bar ).

Recommended pre-filtering 5  $\mu$ m

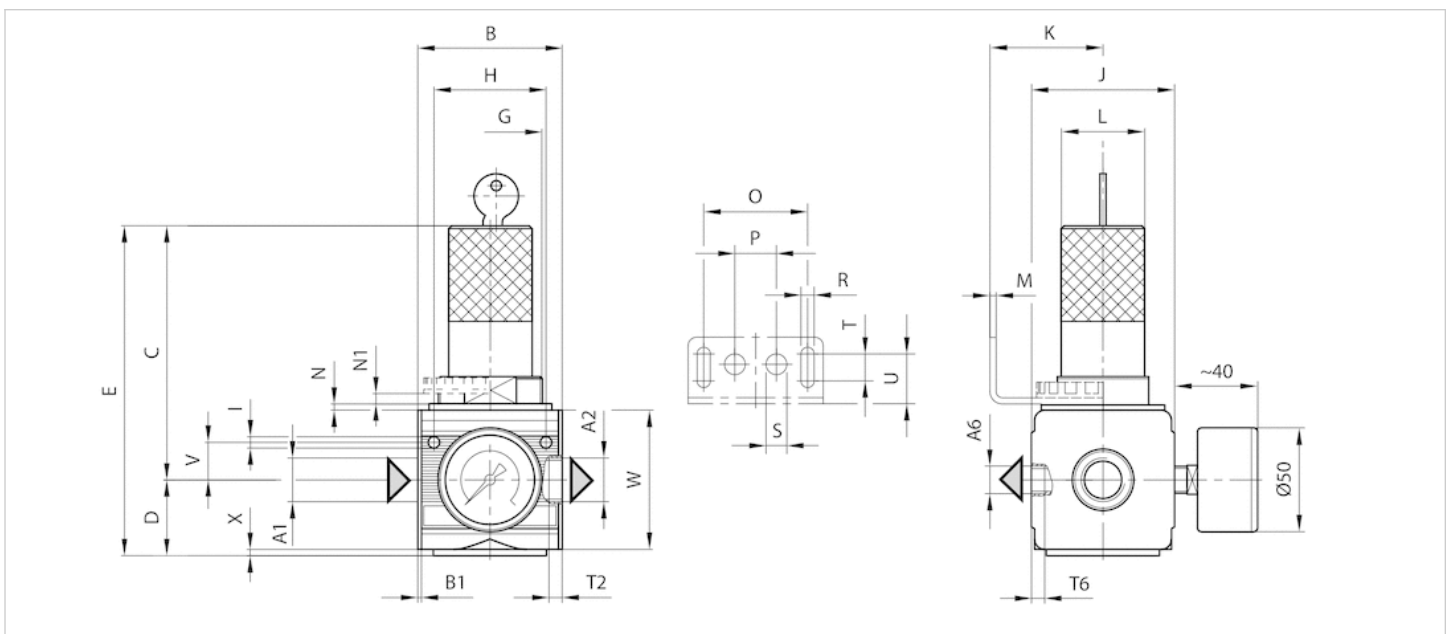
## Technical information

### Material

Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber

## Dimensions

### Dimensions



A1 = input  
 A2 = output

A6 = output

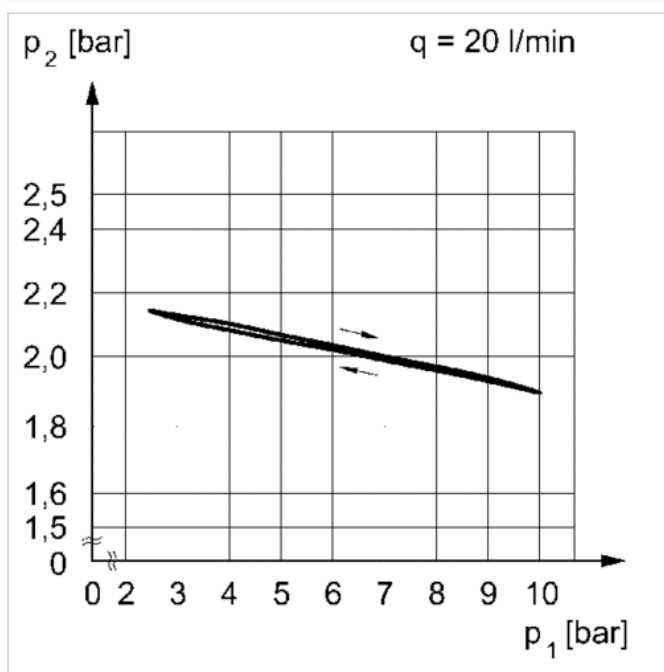
### Dimensions in mm

A1	A2	A6	B	B1	C	D	E	G	H	I	J	K	L	M	N	N1	O	P	R	S	T	T2
G 1/2	G 1/2	G 1/4	69.5	1.8	122	35.5	157.5	M50x1,5	54	5.5	67	54.5	46	3	3	5.5	50	20	6.4	10	13	13
G 3/4	G 3/4	G 1/4	69.5	1.8	122	35.5	157.5	M50x1,5	54	5.5	67	54.5	46	3	3	5.5	50	20	6.4	10	13	13

T6	U	V	W	X
7	24	18	67	2
7	24	18	67	2

### Diagrams

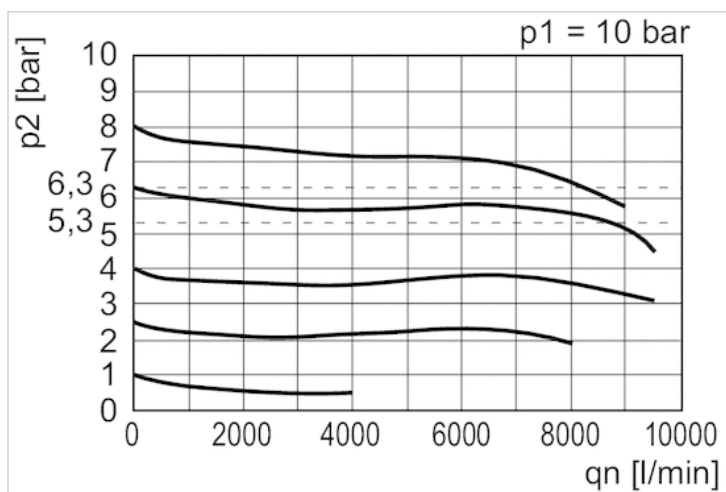
#### Pressure characteristics curve



p1 = working pressure  
 p2 = secondary pressure  
 q = flow rate



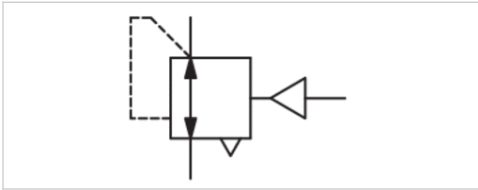
Flow rate characteristic (setting range p2: 0.5 - 10 bar)



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

# Pressure regulator, Series NL4-RGS

- G 1/2 G 3/4
- $Q_n = 9500$  l/min
- Standard pressure regulator
- Activation pneumatically



Parts	Pressure regulator
Mounting orientation	Any
Working pressure min./max.	0.5 ... 16 bar
Control pressure min./max.	10 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Regulator type	Diaphragm-type pressure regulator Can be assembled into blocks
Regulator function	Adjustment with relieving air exhaust
range min./max. Pressure supply	0.5 ... 10 bar single
Activation	pneumatically
Weight	0.85 kg

## Technical data

Part No.	Port	Flow
		$Q_n$
R412004952	G 1/2	9500 l/min
R412007667	G 3/4	9500 l/min

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

Order pressure gauge separately

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.  
 Relieving exhaust ( $\leq 0.3$  bar over set pressure).  
 With rear exhaust ( $> 3$  bar ).

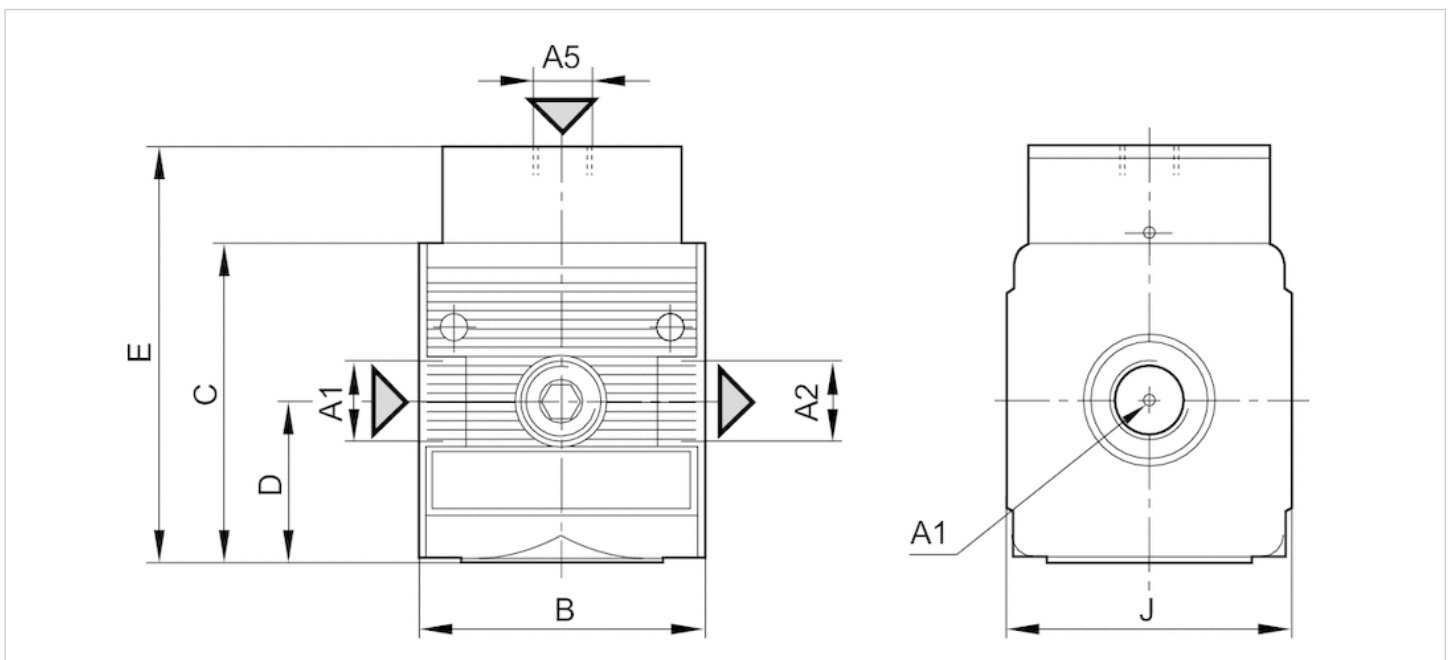
Recommended pre-filtering 5  $\mu$ m

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber

## Dimensions

### Dimensions



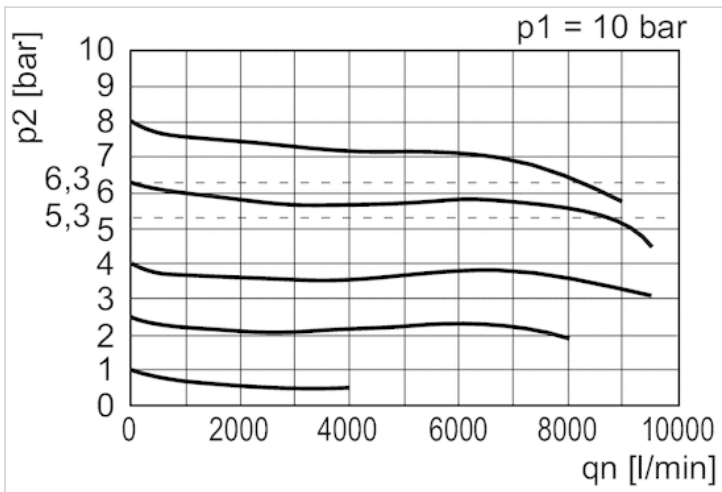
- A1 = input
- A2 = output
- A5 = control pressure connection

### Dimensions in mm

Part No.	A1	A2	A5	B	C	D	E	J
R412004952	G 1/2	G 1/2	G 1/4	69.5	70	36.5	93.5	67
R412007667	G 3/4	G 3/4	G 1/4	69.5	70	36.5	93.5	67

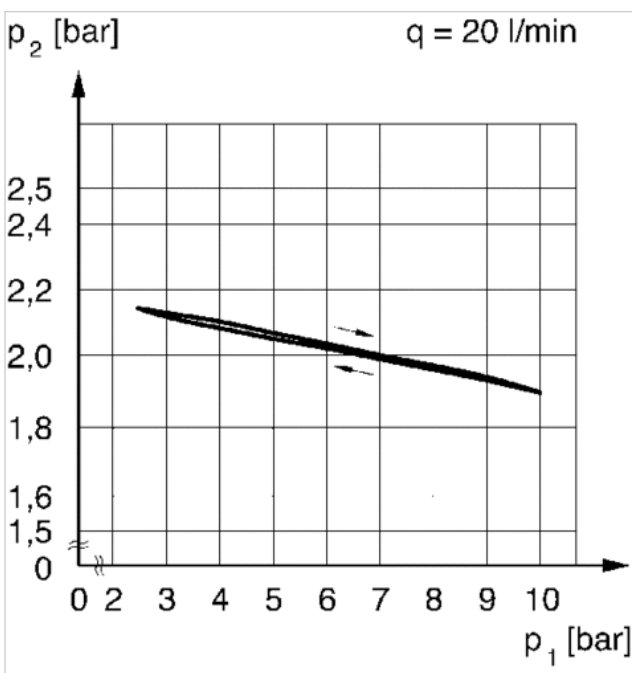
## Diagrams

### Flow rate characteristic (setting range p2: 0.5 - 10 bar)



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

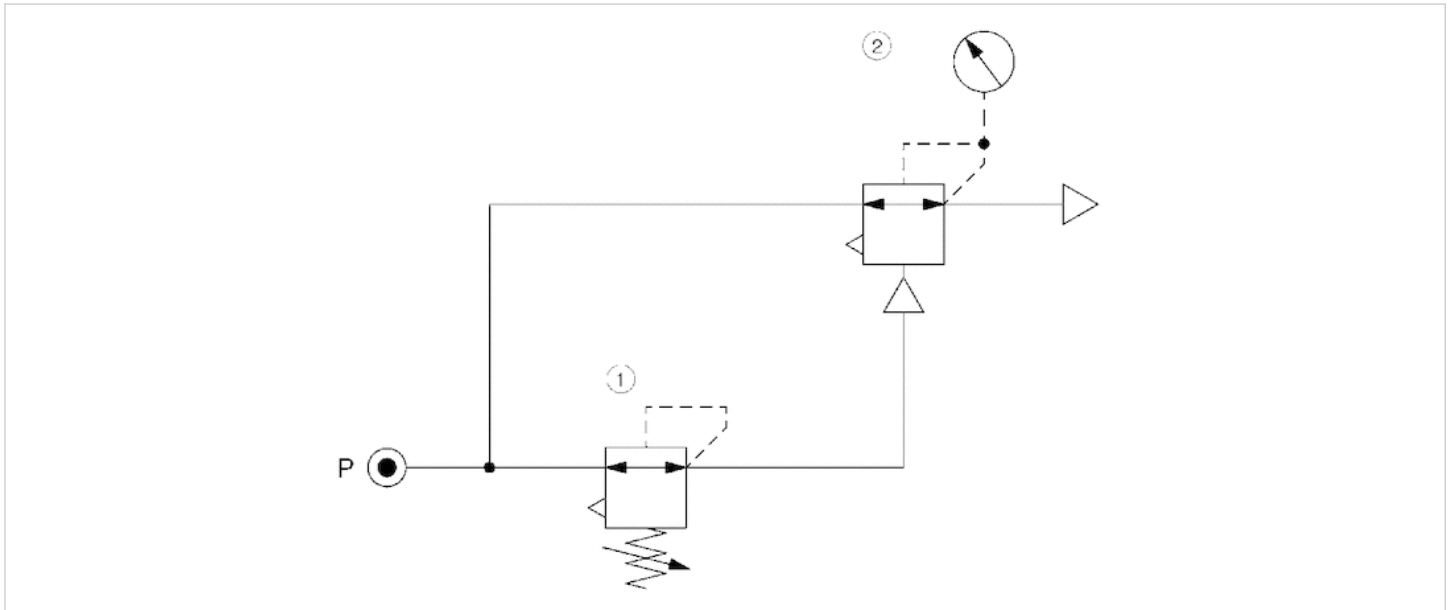
### Pressure characteristics curve



p1 = working pressure  
 p2 = secondary pressure  
 q = flow rate

## Circuit diagram

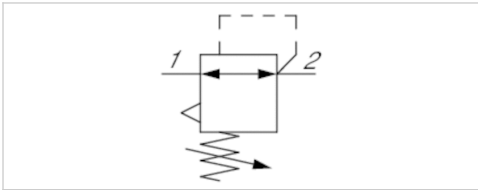
## Application example



- 1) precision pressure regulator
- 2) pressure regulator valve, pneumatically operated

# Precision pressure regulator, Series NL4-RGP

- G 1/2
- $Q_n = 6000$  l/min
- Precision pressure regulator
- Activation Mechanical



Parts	Precision pressure regulator
Mounting orientation	Any
Working pressure min./max.	0.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Regulator type	Diaphragm-type pressure regulator Can be assembled into blocks with relieving air exhaust
Regulator function	See table below
Adjustment range min./max.	single
Pressure supply	Mechanical
Activation	
Internal air consumption $q_v$ max.	2.6 l/min
Weight	0.867 kg

## Technical data

Part No.	Port	Flow	Adjustment range min./max.
		$Q_n$	
0821302511	G 1/2	6000 l/min	0.1 ... 3 bar
0821302512	G 1/2	6000 l/min	0.2 ... 6 bar
0821302513	G 1/2	6000 l/min	0.5 ... 10 bar

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

Order pressure gauge separately.

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

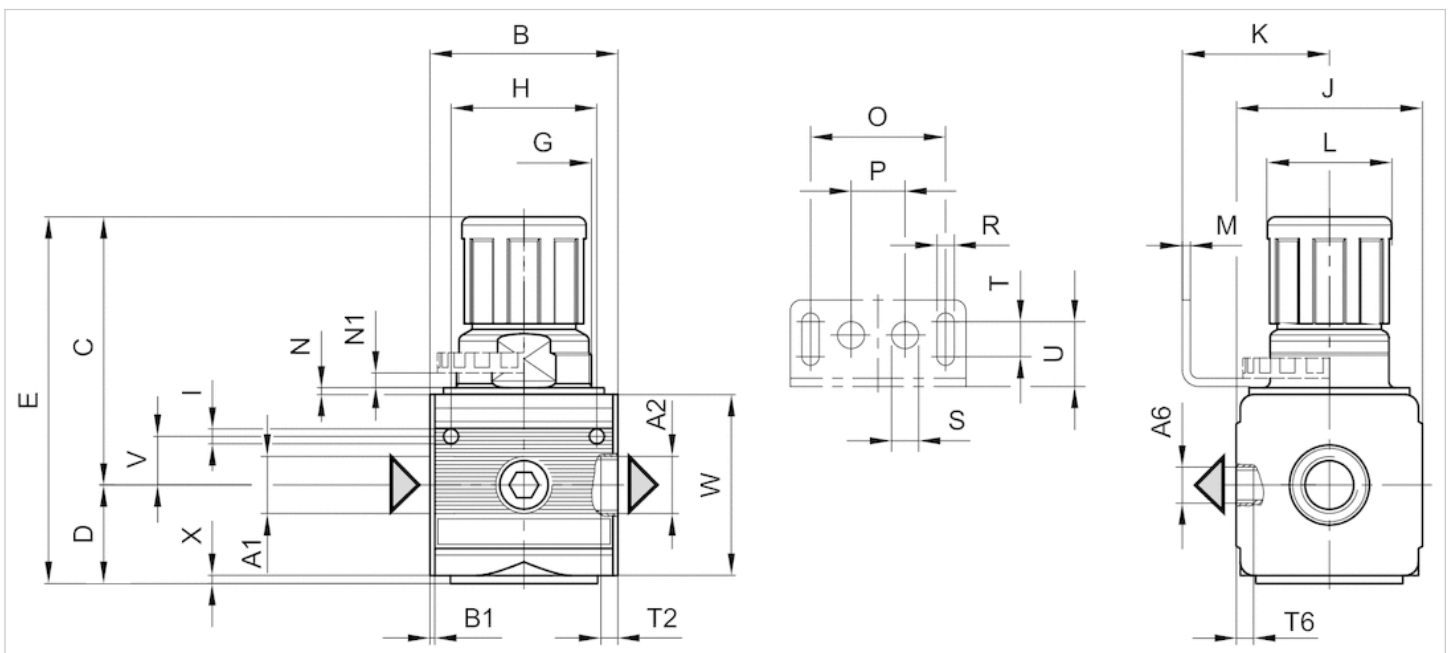
Recommended pre-filtering 5 µm

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber

## Dimensions

### Dimensions



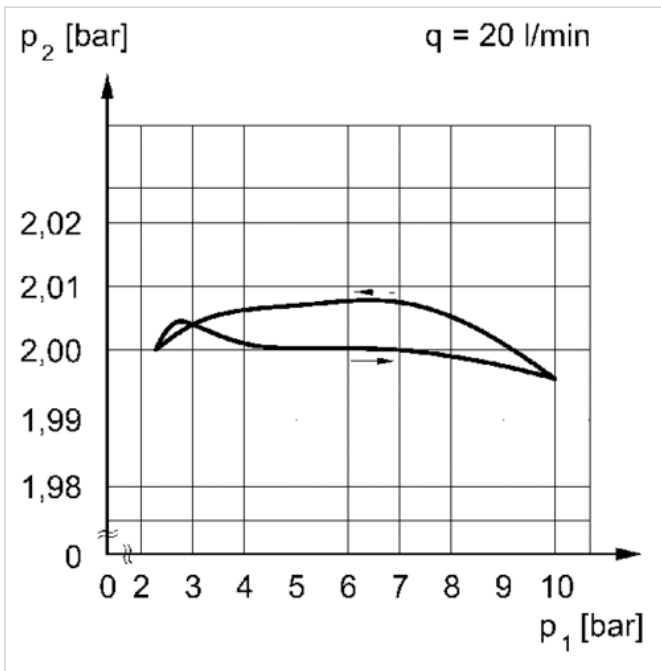
A1 = input  
 A2 = output  
 A6 = output

### Dimensions in mm

A1	A2	A6	B	B1	C	D	E	G	H	I	J	K	L	M	N	N1	O	P	R	S	T	T2
G 1/2	G 1/2	G 1/4	69.6	1.8	97	35.5	132.5	M50x1,5	54	5.5	69	54.5	46	3	3	5.5	50	20	6.4	10	13	13
			T6			U			V			W			X							
			7			24			18			67			2							

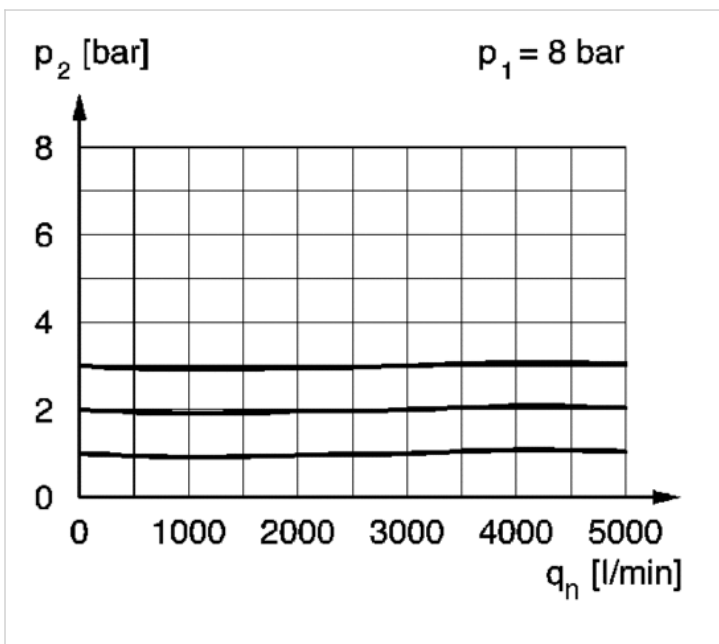
## Diagrams

### Pressure characteristics curve



$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q$  = flow rate

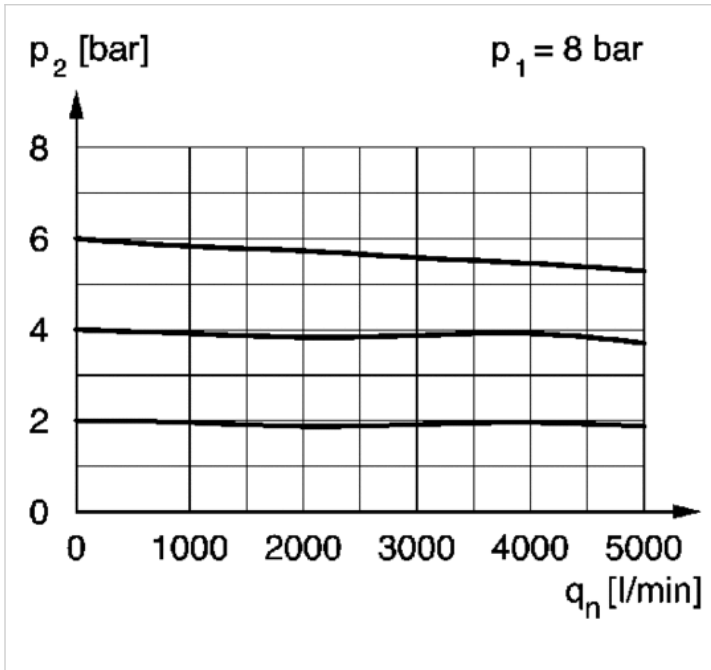
### Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow  
 $p_2 = 0,1 - 3$  bar

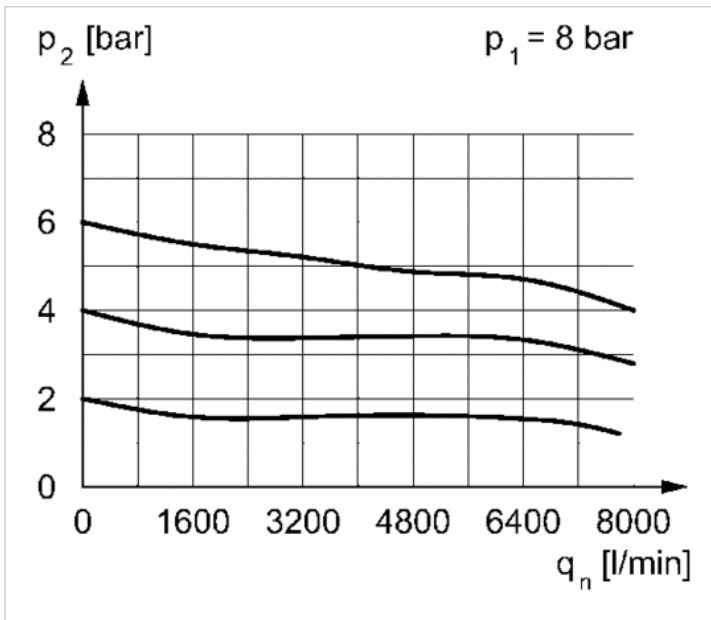


Flow rate characteristic



p1 = Working pressure  
 p2 = Secondary pressure  
 qn = Nominal flow  
 p2 = 0,2 - 6 bar

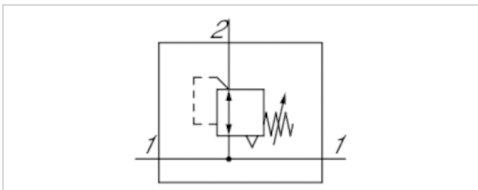
Flow rate characteristic



p1 = Working pressure  
 p2 = Secondary pressure  
 qn = Nominal flow  
 p2 = 0,5 - 10 bar

# Precision pressure regulator, Series NL4-RGP-...-DS

- G 1/2
- $Q_n = 5600$  l/min
- Precision pressure regulator
- Activation Mechanical
- with continuous pressure supply



## Parts

Mounting orientation	Any
Working pressure min./max.	0.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Regulator type	Diaphragm-type pressure regulator Can be assembled into blocks with relieving air exhaust
Regulator function	See table below
Adjustment range min./max.	double
Pressure supply	Mechanical
Activation	2.6 l/min
Internal air consumption $q_v$ max.	0.867 kg
Weight	

## Technical data

Part No.	Port	Flow	Adjustment range min./max.	Max. pressure gauge $\varnothing$ in blocked state
		$Q_n$		
0821302524	G 1/2	5600 l/min	0.1 ... 3 bar	40 mm
0821302525	G 1/2	5600 l/min	0.2 ... 6 bar	40 mm
0821302526	G 1/2	5600 l/min	0.5 ... 10 bar	40 mm

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

Order pressure gauge separately.

## Technical information

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

The rear pressure gauge connection on the pressure regulator is closed with a blanking plug, the front connection is open. Depending on the customer application, a second blanking plug may be necessary. Please order separately (see accessories).

Recommended pre-filtering 5  $\mu$ m

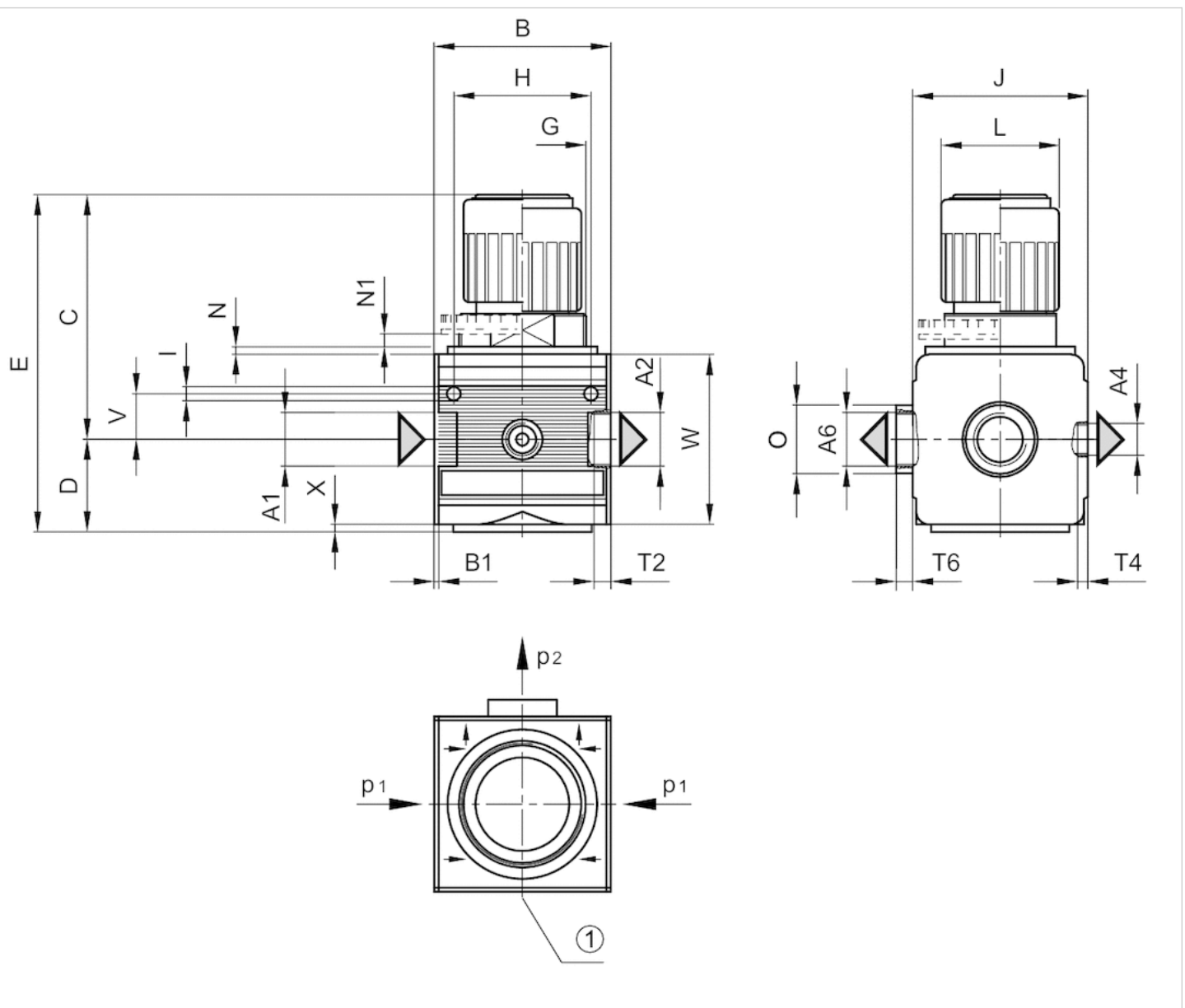
## Technical information

### Material

Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber

## Dimensions

### Dimensions



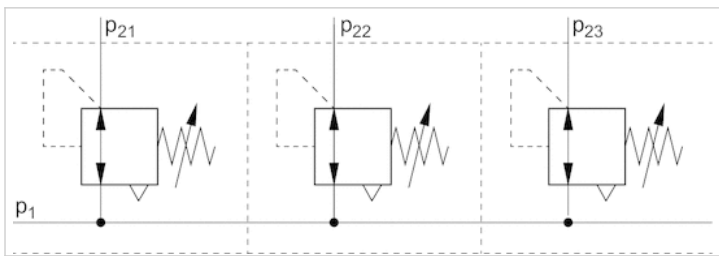
- A1 = input
- A2 = output
- A4 = output
- A6 = output
- 1) pressure gauge connection
- p1 = working pressure
- p2 = secondary pressure

Dimensions in mm

A1	A2	A4	A6	B	B1	C	D	E	G	H	I	J	L	N	N1	O	T2	T4	T6	V	W	X
G 1/2	G 1/2	G 1/4	G 1/2	69.6	1.8	97	35.5	132.5	M50x1,5	54	5.5	69	46	3	5.5	27	13	7	6	18	67	2

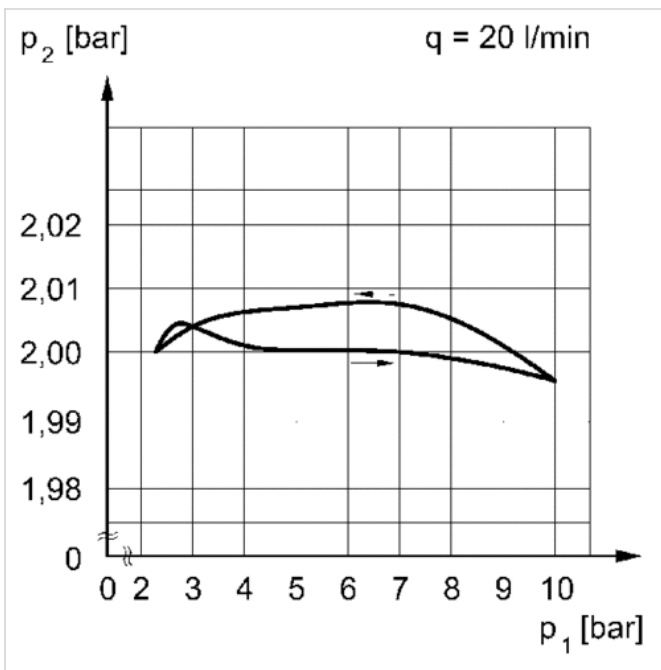
Diagrams

Application example



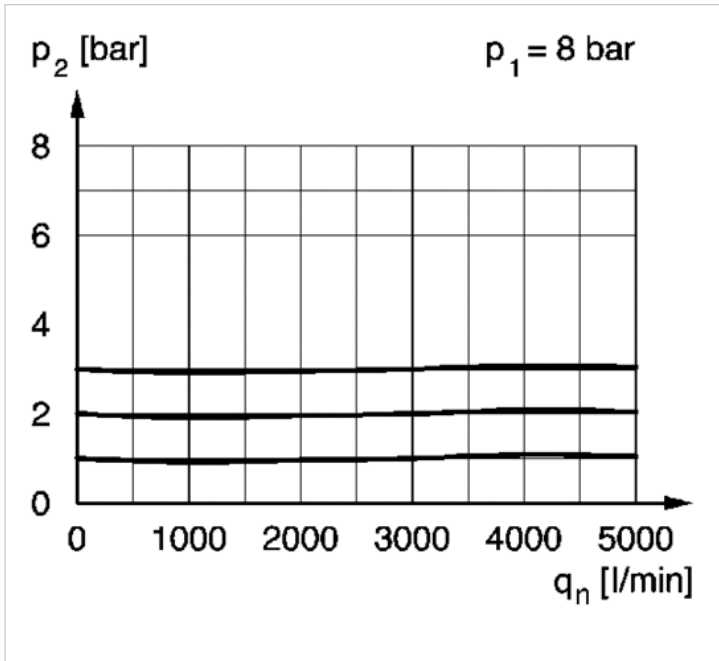
p1 = working pressure

Pressure characteristics curve



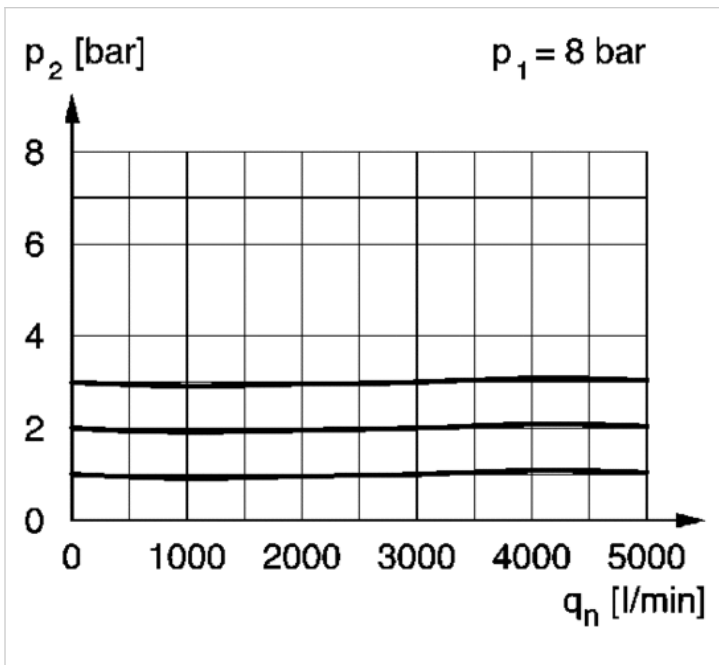
p1 = working pressure  
 p2 = secondary pressure  
 q = flow rate

Flow rate characteristic



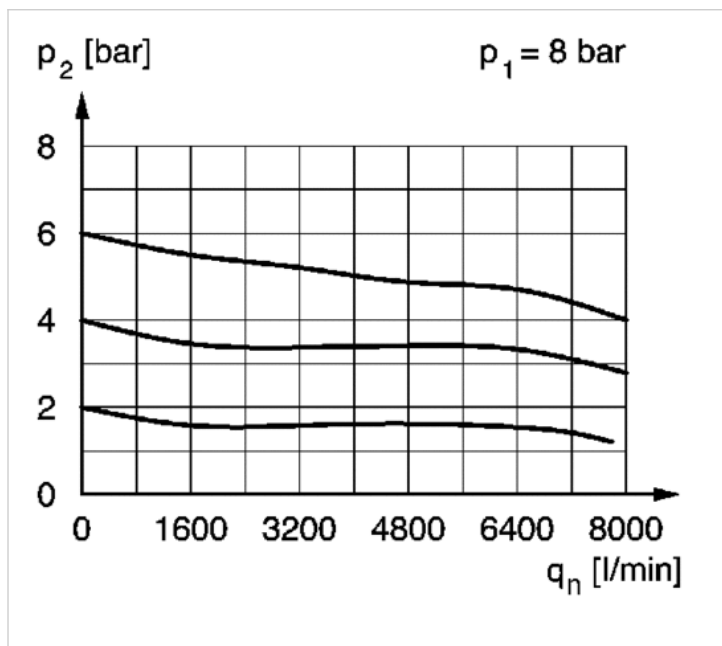
$p_2 = 0,1 - 3 \text{ bar}$   
 $p_1 = \text{Working pressure}$   
 $p_2 = \text{Secondary pressure}$   
 $q_n = \text{Nominal flow}$

Flow rate characteristic



$p_2 = 0,2 - 6 \text{ bar}$   
 $p_1 = \text{Working pressure}$   
 $p_2 = \text{Secondary pressure}$   
 $q_n = \text{Nominal flow}$

## Flow rate characteristic



$p_2 = 0,5 - 10$  bar

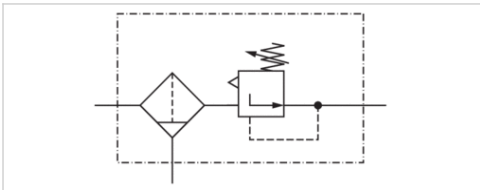
$p_1 =$  Working pressure

$p_2 =$  Secondary pressure

$q_n =$  Nominal flow

# Filter pressure regulator, Series NL4-FRE

- G 1/2
- filter porosity 5  $\mu\text{m}$



Version	1-part, Can be assembled into blocks
Parts	Filter pressure regulator
Mounting orientation	vertical
Working pressure min./max.	1.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Nominal flow Qn	6900 l/min
Regulator type	Diaphragm-type pressure regulator
Regulator function Adjustment	with relieving air exhaust
range min./max. Pressure supply	0.5 ... 10 bar
Filter reservoir volume	50 cm <sup>3</sup>
Filter element	exchangeable
Weight	See table below

## Technical data

Part No.	Port	filter porosity	Flow	Condensate drain
			Qn	
0821300364	G 1/2	5 $\mu\text{m}$	6900 l/min	semi-automatic, open without pressure
0821300367	G 1/2	5 $\mu\text{m}$	6900 l/min	fully automatic, open without pressure
0821300281	G 1/2	5 $\mu\text{m}$	6900 l/min	fully automatic, open without pressure

Part No.	Reservoir	Weight
0821300364	Polycarbonate	1.19 kg
0821300367	Polycarbonate	1.26 kg
0821300281	Die cast zinc	1.47 kg

Nominal flow Qn with secondary pressure p<sub>2</sub> = 6 bar at  $\Delta p$  = 1 bar

Metal protective guard can be retrofitted for all polycarbonate reservoirs, Order pressure gauge separately

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".  
 A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.  
 Also suitable for separation of fluid oil or water due to the design.  
 The rear pressure gauge connection on the pressure regulator is closed with a blanking plug, the front connection is open. Depending on the customer application, a second blanking plug may be necessary. Please order separately (see accessories).

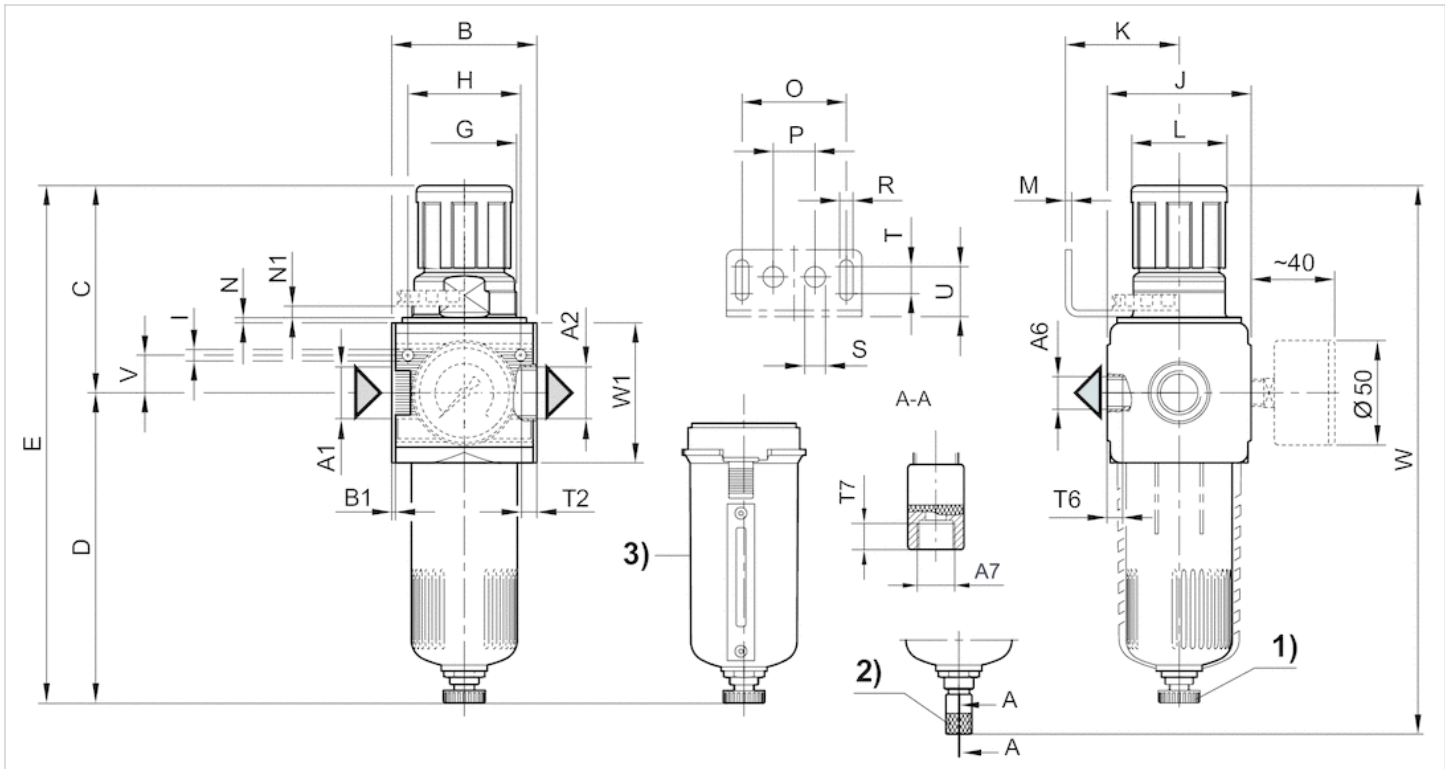
Max. achievable compressed air class acc. to ISO 8573-1:2010 6 : 7 :-

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber
Threaded bushing	Die cast zinc
Reservoir	Polycarbonate Die cast zinc
Filter insert	Polyethylene

## Dimensions

### Dimensions



- A1 = input
- A2 = output
- A6 = output
- 1) Semi-automatic condensate drain
- 2) fully automatic condensate drain



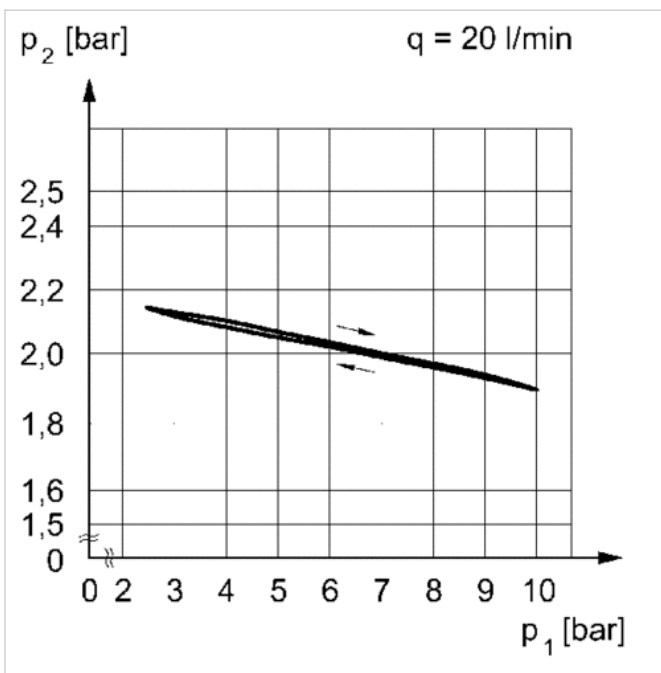
3) Metal reservoir with level indicator

Dimensions in mm

A1	A2	A6	A7	B	B1	C	D	E	G	H	I	J	K	L	M	N	N1	O	P	R
G 1/2	G 1/2	G 1/4	G 1/8	69.6	1.8	98.3	146.5	244.8	M50x1,5	54	5.5	69	54.5	46	3	3	5.5	50	20	6.4
S	T	T2	T6	T7	U	V	W	W1												
10	13	13	7	8.5	24	18	262.8	67												

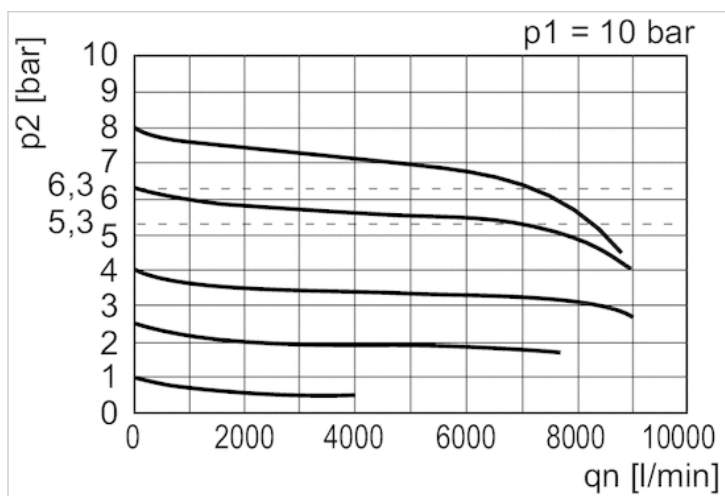
Diagrams

Pressure characteristics curve



$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q$  = flow rate

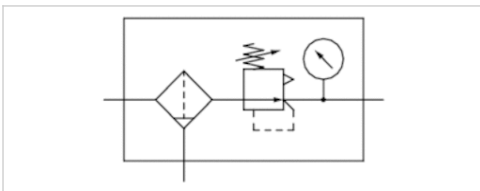
## Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

# Filter pressure regulator, Series NL4-FRE

- G 1/2 G 3/4
- filter porosity 5  $\mu\text{m}$
- with pressure gauge



Version	1-part, Can be assembled into blocks
Parts	Filter pressure regulator
Mounting orientation	vertical
Working pressure min./max.	1.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Nominal flow Qn	6900 l/min
Regulator type	Diaphragm-type pressure regulator
Regulator function Adjustment range min./max. Pressure supply	with relieving air exhaust 0.5 ... 10 bar single
Filter reservoir volume	50 cm <sup>3</sup>
Filter element	exchangeable
Weight	See table below

## Technical data

Part No.		Port	filter porosity	Flow	Condensate drain
				Qn	
0821300350		G 1/2	5 $\mu\text{m}$	6900 l/min	semi-automatic, open without pressure
0821300351		G 1/2	5 $\mu\text{m}$	6900 l/min	semi-automatic, open without pressure
0821300352		G 1/2	5 $\mu\text{m}$	6900 l/min	semi-automatic, open without pressure
0821300353		G 1/2	5 $\mu\text{m}$	6900 l/min	fully automatic, open without pressure
0821300354		G 1/2	5 $\mu\text{m}$	6900 l/min	fully automatic, open without pressure
0821300355		G 1/2	5 $\mu\text{m}$	6900 l/min	fully automatic, open without pressure
0821300380		G 3/4	5 $\mu\text{m}$	6900 l/min	semi-automatic, open without pressure
0821300381		G 3/4	5 $\mu\text{m}$	6900 l/min	semi-automatic, open without pressure
0821300382		G 3/4	5 $\mu\text{m}$	6900 l/min	semi-automatic, open without pressure
0821300383		G 3/4	5 $\mu\text{m}$	6900 l/min	fully automatic, open without pressure
0821300384		G 3/4	5 $\mu\text{m}$	6900 l/min	fully automatic, open without pressure
0821300385		G 3/4	5 $\mu\text{m}$	6900 l/min	fully automatic, open without pressure

Part No.	Pressure gauge	Reservoir	Protective guard	Weight
0821300350	with pressure gauge	Polycarbonate	-	1.19 kg
0821300351	with pressure gauge	Polycarbonate	Steel	1.28 kg
0821300352	with pressure gauge	Die cast zinc	-	1.41 kg
0821300353	with pressure gauge	Polycarbonate	-	1.26 kg
0821300354	with pressure gauge	Polycarbonate	Steel	1.35 kg

Part No.	Pressure gauge	Reservoir	Protective guard	Weight
0821300355	with pressure gauge	Die cast zinc	-	1.47 kg
0821300380	with pressure gauge	Polycarbonate	-	1.19 kg
0821300381	with pressure gauge	Polycarbonate	Steel	1.28 kg
0821300382	with pressure gauge	Die cast zinc	-	1.41 kg
0821300383	with pressure gauge	Polycarbonate	-	1.26 kg
0821300384	with pressure gauge	Polycarbonate	Steel	1.35 kg
0821300385	with pressure gauge	Die cast zinc	-	1.47 kg

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

Metal protective guard can be retrofitted for all polycarbonate reservoirs, Pressure gauge enclosed separately

## Technical information

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

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Also suitable for separation of fluid oil or water due to the design.

The rear pressure gauge connection on the pressure regulator is closed with a blanking plug, the front connection is open. Depending on the customer application, a second blanking plug may be necessary. Please order separately (see accessories).

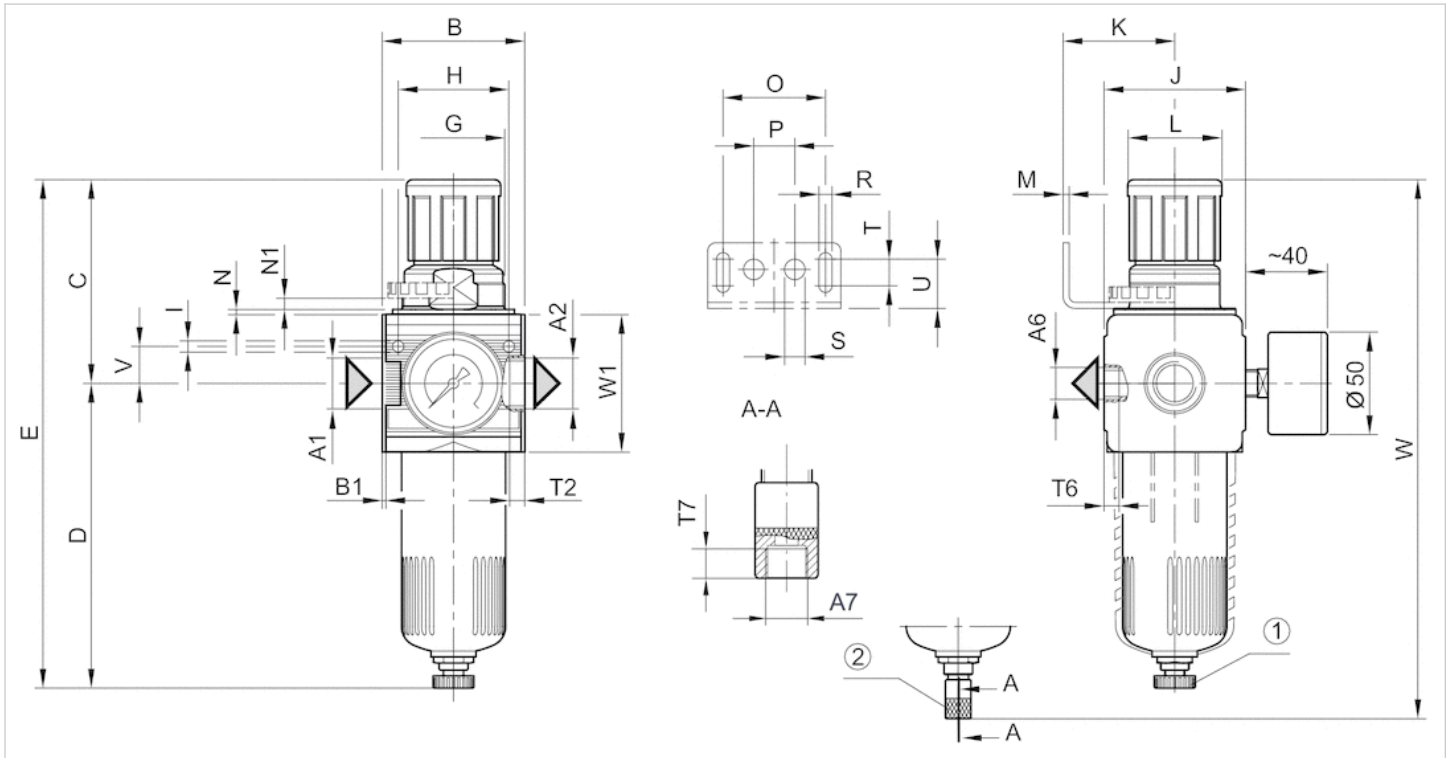
Max. achievable compressed air class acc. to ISO 8573-1:2010 6 : 7 : -

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber
Threaded bushing	Die cast zinc
Reservoir	Polycarbonate Die cast zinc
Protective guard	Steel
Filter insert	Polyethylene

# Dimensions

## Dimensions



- A1 = input
- A2 = output
- A6 = output
- A7 = condensate drain
- 1) Semi-automatic condensate drain
- 2) fully automatic condensate drain

## Dimensions in mm

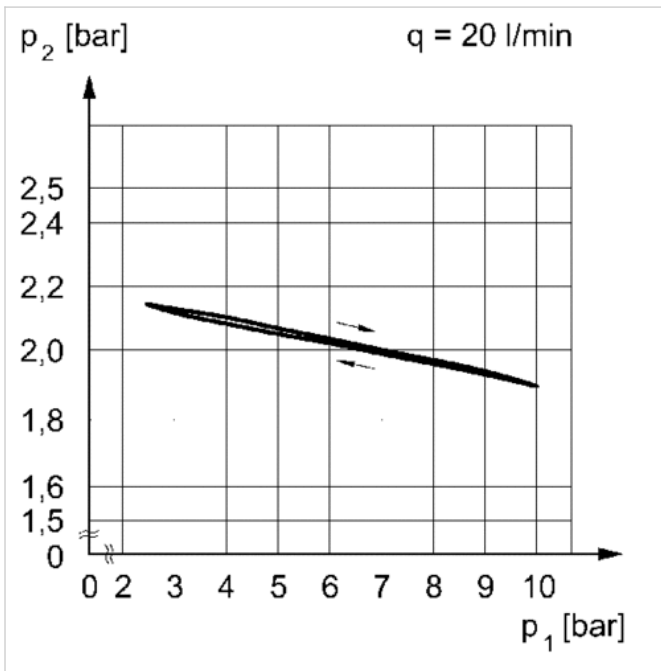
A1	A2	A6	A7	B	B1	C	D	E	G	H	I	J	K	L	M	N	N1	O	P	R
G 1/2	G 1/2	G 1/4	G 1/8	69.6	1.8	98.3	146.5	244.8	M50x1,5	54	5.5	69	54.5	46	3	3	5.5	50	20	6.4
G 3/4	G 3/4	G 1/4	G 1/8	69.6	1.8	98.3	146.5	244.8	M50x1,5	54	5.5	69	54.5	46	3	3	5.5	50	20	6.4

S	T	T2	T6	T7	U	V	W	W1
10	13	13	7	8.5	24	18	262.8	67
10	13	13	7	8.5	24	18	262.8	67

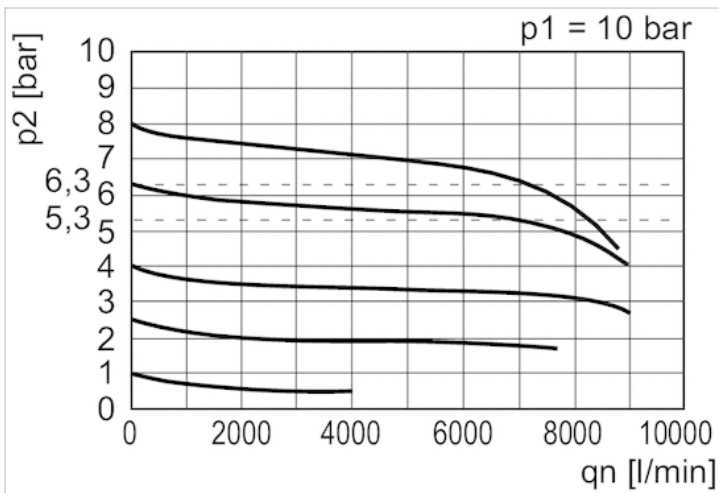
## Diagrams

### Pressure characteristics curve



$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q$  = flow rate

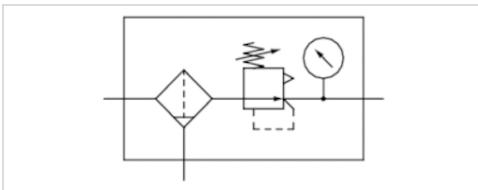
### Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow









# Filter pressure regulator, Series NL4-FRE

- G 1/2 G 3/4
- filter porosity 5 µm
- lockable
- with key
- with pressure gauge



Version	1-part, Can be assembled into blocks
Parts	Filter pressure regulator
Mounting orientation	vertical
Working pressure min./max.	1.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Nominal flow Qn	6900 l/min
Regulator type	Diaphragm-type pressure regulator
Regulator function Adjustment	with relieving air exhaust
range min./max. Pressure supply	0.5 ... 10 bar single
Filter reservoir volume	50 cm <sup>3</sup>
Filter element	exchangeable
Weight	See table below

## Technical data

Part No.		Port	filter porosity	Flow	Condensate drain
				Qn	
0821300356		G 1/2	5 µm	6900 l/min	semi-automatic, open without pressure
0821300236		G 1/2	5 µm	6900 l/min	fully automatic, open without pressure
0821300234		G 1/2	5 µm	6900 l/min	semi-automatic, open without pressure
0821300237		G 1/2	5 µm	6900 l/min	fully automatic, open without pressure
0821300238		G 1/2	5 µm	6900 l/min	fully automatic, open without pressure
0821300386		G 3/4	5 µm	6900 l/min	semi-automatic, open without pressure
0821300240		G 3/4	5 µm	6900 l/min	semi-automatic, open without pressure

Part No.	Pressure gauge	Reservoir	Protective guard	Weight
0821300356	with pressure gauge	Polycarbonate	-	2.01 kg
0821300236	with pressure gauge	Polycarbonate	-	2.08 kg
0821300234	with pressure gauge	Polycarbonate	Steel	2.1 kg
0821300237	with pressure gauge	Polycarbonate	Steel	2.17 kg
0821300238	with pressure gauge	Die cast zinc	-	2.29 kg
0821300386	with pressure gauge	Polycarbonate	-	2.01 kg
0821300240	with pressure gauge	Die cast zinc	-	2.23 kg

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6 \text{ bar}$  at  $\Delta p = 1 \text{ bar}$

## Technical information

The pressure dew point must be at least  $15 \text{ }^\circ\text{C}$  under ambient and medium temperature and may not exceed  $3 \text{ }^\circ\text{C}$ .

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by  $180^\circ$  about the vertical axis. Please see the operating instructions for further details.

Also suitable for separation of fluid oil or water due to the design.

The rear pressure gauge connection on the pressure regulator is closed with a blanking plug, the front connection is open. Depending on the customer application, a second blanking plug may be necessary. Please order separately (see accessories).

Max. achievable compressed air class acc. to ISO 8573-1:2010 6 : 7 : -

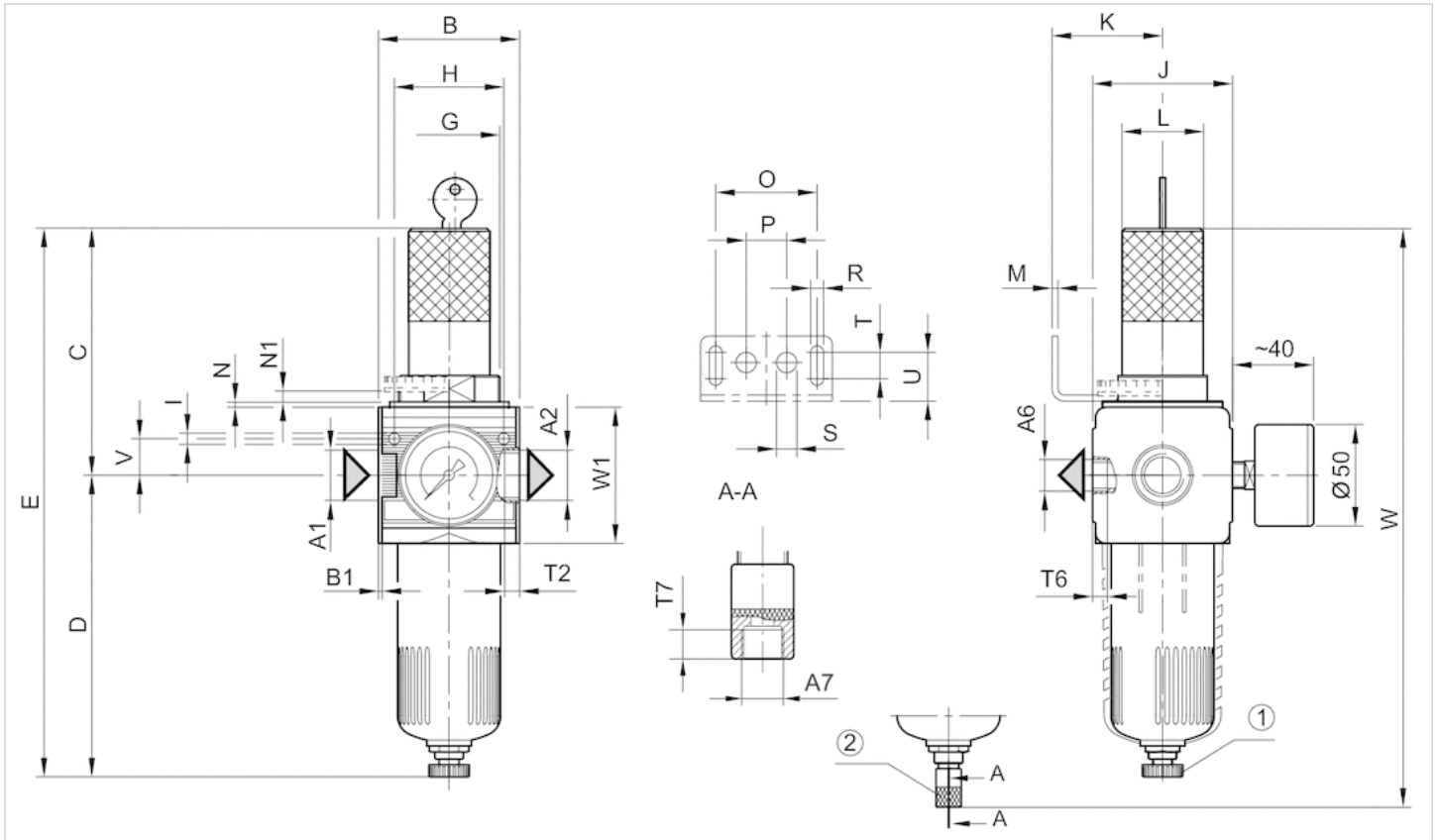
## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber
Threaded bushing	Die cast zinc
Reservoir	Polycarbonate Die cast zinc
Protective guard	Steel
Filter insert	Polyethylene



# Dimensions

## Dimensions



- A1 = input
- A2 = output
- A6 = output
- A7 = condensate drain
- 1) Semi-automatic condensate drain
- 2) fully automatic condensate drain

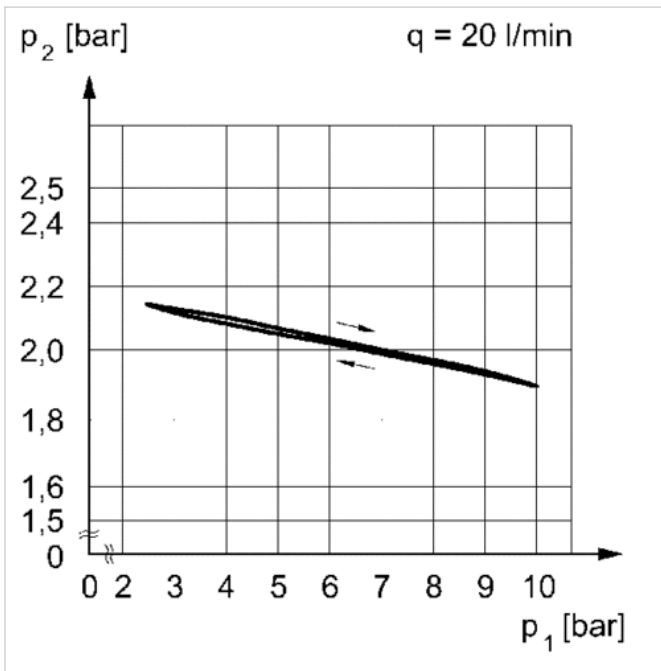
## Dimensions in mm

A1	A2	A6	A7	B	B1	C	D	E	G	H	I	J	K	L	M	N1	O	P	R	S
G 1/2	G 1/2	G 1/4	G 1/8	69.6	1.8	122	146.5	268.5	M50x1,5	54	5.5	69	54.5	46	3	5.5	50	20	6.4	10
G 1/2	G 1/2	G 1/4	G 1/8	69.6	1.8	122	146.5	268.5	M50x1,5	54	5.5	69	54.5	46	3	50	20	6.4	10	13
G 3/4	G 3/4	G 1/4	G 1/8	69.6	1.8	122	146.5	268.5	M50x1,5	54	5.5	69	54.5	46	3	5.5	50	20	6.4	10

T	T2	T6	T7	U	V	W	W1
13	13	7	8.5	24	18	286.5	67
13	7	8.5	24	18	286.5	67	-
13	13	7	8.5	24	18	286.5	67

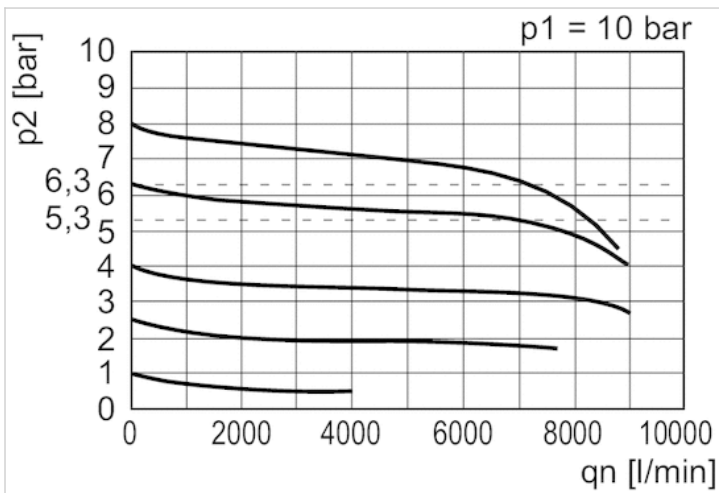
## Diagrams

### Pressure characteristics curve



$p_1$  = working pressure  
 $p_2$  = secondary pressure  
 $q$  = flow rate

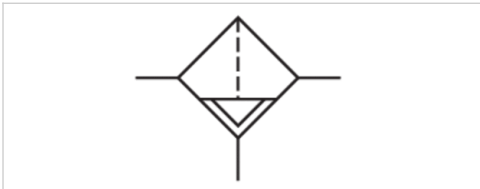
### Flow rate characteristic



$p_1$  = Working pressure  
 $p_2$  = Secondary pressure  
 $q_n$  = Nominal flow

# Filter, Series NL4-FLS

- G 1/2 G 3/4
- filter porosity 5  $\mu\text{m}$



Version	Standard filter, Can be assembled into blocks
Parts	Filter
Mounting orientation	vertical
Working pressure min./max.	1.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Filter reservoir volume	50 cm <sup>3</sup>
Filter element	exchangeable
filter porosity	5 $\mu\text{m}$
Condensate drain	See table below
Weight	See table below

## Technical data

Part No.	Port	Flow Qn	Condensate drain
0821303500	G 1/2	4000 l/min	semi-automatic, open without pressure
0821303501	G 1/2	4000 l/min	semi-automatic, open without pressure
0821303503	G 1/2	4000 l/min	fully automatic, open without pressure
0821303504	G 1/2	4000 l/min	fully automatic, open without pressure
0821303502	G 1/2	4000 l/min	semi-automatic, open without pressure
0821303505	G 1/2	4000 l/min	fully automatic, open without pressure
0821303559	G 1/2	4000 l/min	fully automatic, open without pressure
0821303540	G 3/4	4000 l/min	semi-automatic, open without pressure
0821303541	G 3/4	4000 l/min	semi-automatic, open without pressure
0821303543	G 3/4	4000 l/min	fully automatic, open without pressure
0821303558	G 3/4	4000 l/min	semi-automatic, open without pressure
0821303544	G 3/4	4000 l/min	fully automatic, open without pressure
0821303545	G 3/4	4000 l/min	fully automatic, open without pressure
0821303542	G 3/4	4000 l/min	semi-automatic, open without pressure

Part No.	Version	Weight
0821303500	reservoir, polycarbonate, without protective guard	0.798 kg
0821303501	reservoir, polycarbonate, with metal protective guard	0.89 kg
0821303503	reservoir, polycarbonate, without protective guard	0.864 kg
0821303504	reservoir, polycarbonate, with metal protective guard	0.956 kg
0821303502	reservoir, metal, with inspection glass	1.23 kg

Part No.	Version	Weight
0821303505	reservoir, metal, with inspection glass	1.29 kg
0821303559	reservoir, metal, with inspection glass	1.29 kg
0821303540	reservoir, polycarbonate, without protective guard	0.798 kg
0821303541	reservoir, polycarbonate, with metal protective guard	0.89 kg
0821303543	reservoir, polycarbonate, without protective guard	0.864 kg
0821303558	reservoir, polycarbonate, with metal protective guard	0.798 kg
0821303544	reservoir, polycarbonate, with metal protective guard	0.956 kg
0821303545	reservoir, metal, with inspection glass	1.29 kg
0821303542	reservoir, metal, with inspection glass	1.23 kg

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

## Technical information

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

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Also suitable for separation of fluid oil or water due to the design.

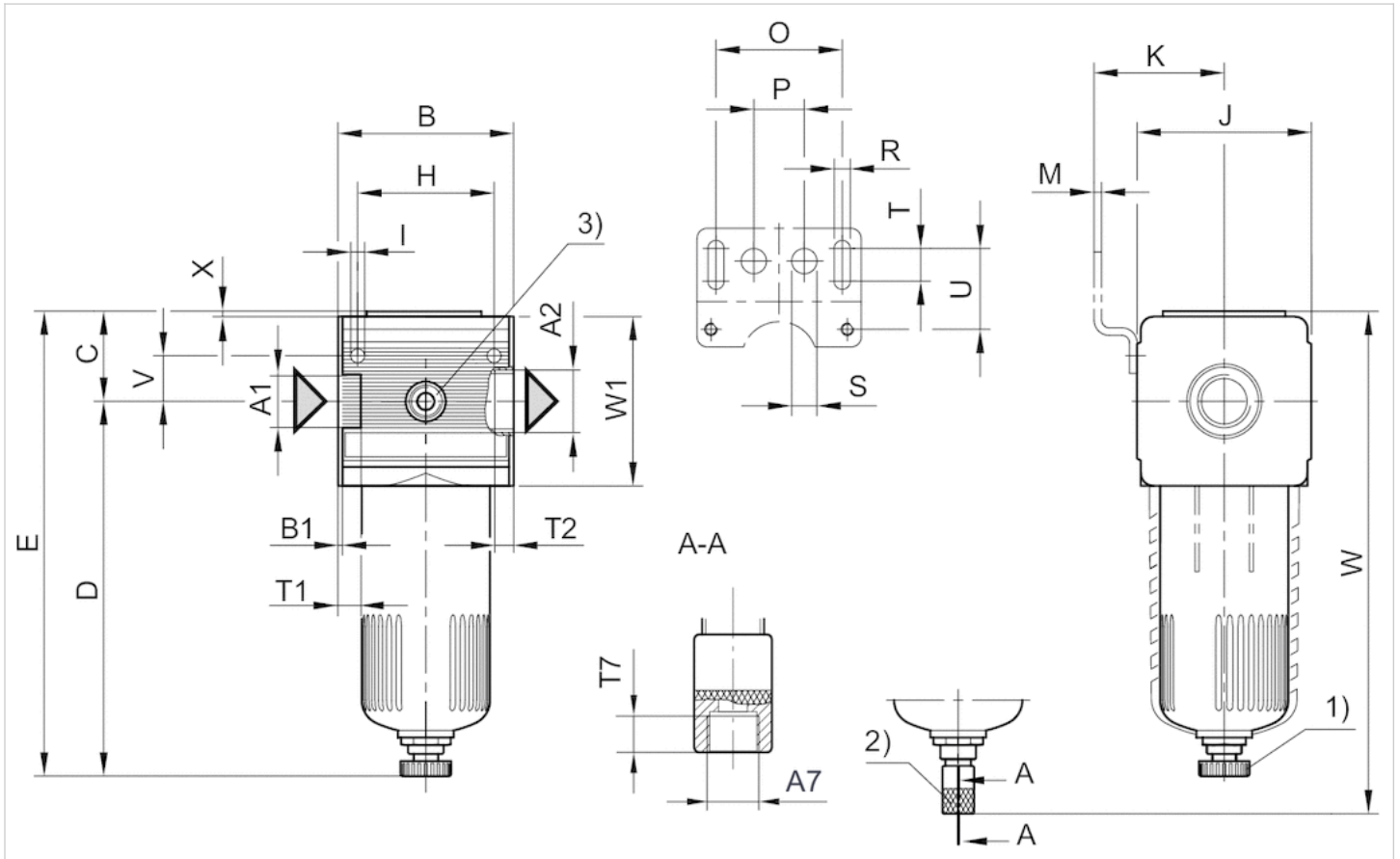
Max. achievable compressed air class acc. to ISO 8573-1:2010 6 : 7 : -

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber
Reservoir	Polycarbonate Die cast zinc
Protective guard	Steel
Filter insert	Cellpor

## Dimensions

### Dimensions



- A1 = input
- A2 = output
- A7 = condensate drain
- 1) Semi-automatic condensate drain
- 2) fully automatic condensate drain
- 3) Optional pressure gauge connection G 1/4

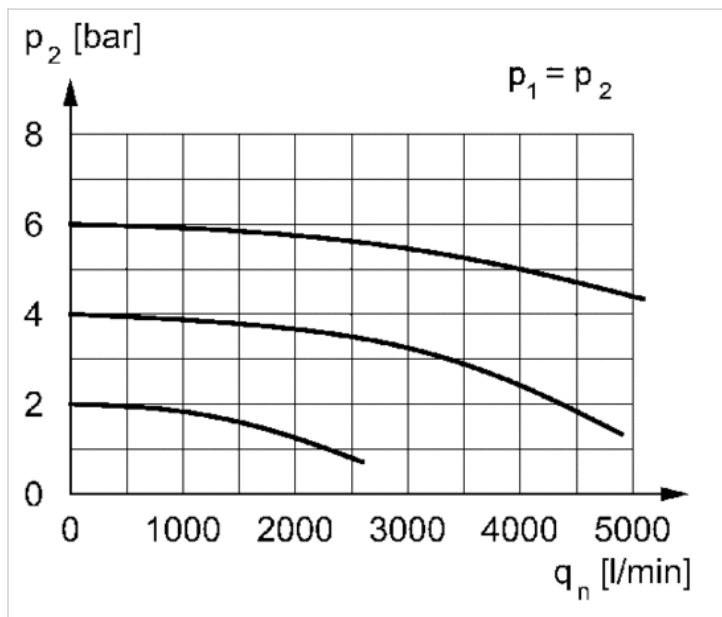
### Dimensions in mm

A1	A2	A7	B	B1	C	D	E	H	I	J	K	M	O	P	R	S	T	T1	T2	T7	U	V	W
G 1/2	G 1/2	G 1/8	69.6	1.8	36.5	146.5	183	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	8.5	33	18	199
G 3/4	G 3/4	G 1/8	69.6	1.8	36.5	146.5	183	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	8.5	33	18	199

W1		X
67		3
67		3

## Diagrams

### Flow rate characteristic



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

# Pre-filter, Series NL4-FLP

- G 1/4 G 1/2

- filter porosity 0.3 µm



Version

Parts

Mounting orientation

Working pressure min./max.

Ambient temperature min./max.

Medium temperature min./max.

Medium

Filter reservoir volume

Filter element

filter porosity

Condensate drain

Weight

Pre-filter, Can be assembled into blocks

Pre-filter

vertical

1.5 ... 16 bar

-10 ... 60 °C

-10 ... 60 °C

Compressed air Neutral gases

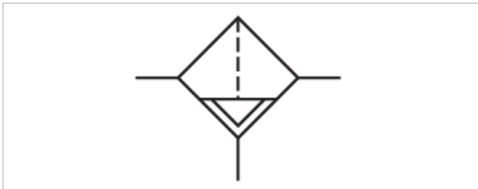
25 cm<sup>3</sup>

exchangeable

0.3 µm

See table below

See table below



## Technical data

Part No.	Port	Flow Qn	Condensate drain
0821303302	G 1/4	1000 l/min	fully automatic, open without pressure
0821303303	G 1/4	2500 l/min	fully automatic, open without pressure
0821303515	G 1/2	2500 l/min	fully automatic, open without pressure
0821303529	G 1/2	1000 l/min	semi-automatic, open without pressure

Part No.	Version	Weight
0821303302	Metal reservoir without window	0.482 kg
0821303303	reservoir, metal, long, without inspection glass	0.886 kg
0821303515	reservoir, metal, long, without inspection glass	1.29 kg
0821303529	reservoir, polycarbonate, without protective guard	0.798 kg

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 0.1 bar

## Technical information

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

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".  
 A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Recommended pre-filtering 5 µm

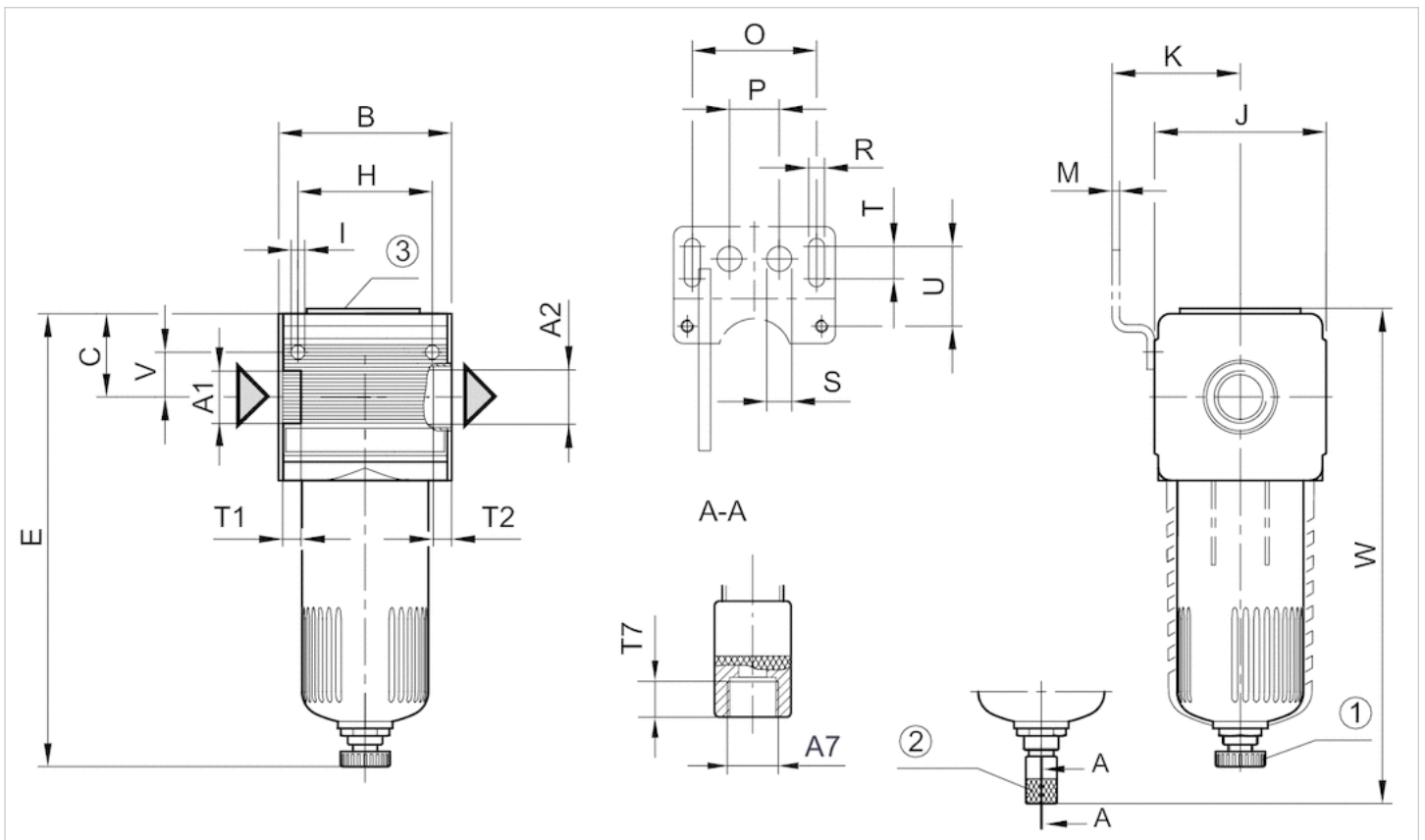
Max. achievable compressed air class acc. to ISO 8573-1:2010 2 : - : 3

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber
Reservoir	Die cast zinc Polycarbonate
Filter insert	Impregnated paper

## Dimensions

### Dimensions



A1 = input  
 A2 = output  
 A7 = condensate drain



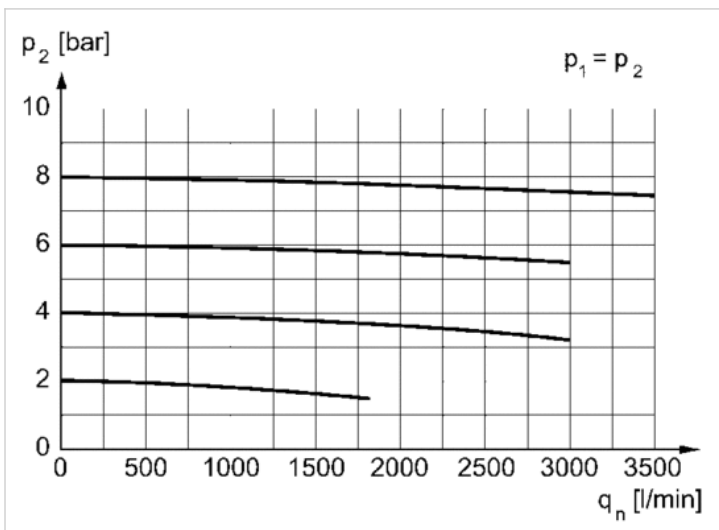
- 1) semi-automatic condensate drain
- 2) fully automatic condensate drain
- 3) differential pressure gauge connection

### Dimensions in mm

A1	A2	A7	B	C	E	H	I	J	K	M	O	P	R	S	T	T1	T2	T7	U	V	W
G 1/4	G 1/4	G 1/8	69.6	38.5	–	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	8.5	33	18	203
G 1/4	G 1/4	G 1/8	69.6	38.5	–	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	8.5	33	18	232
G 1/2	G 1/2	G 1/8	69.6	38.5	–	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	8.5	33	18	317
G 1/2	G 1/2	G 1/8	69.6	38.5	185	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	8.5	33	18	–

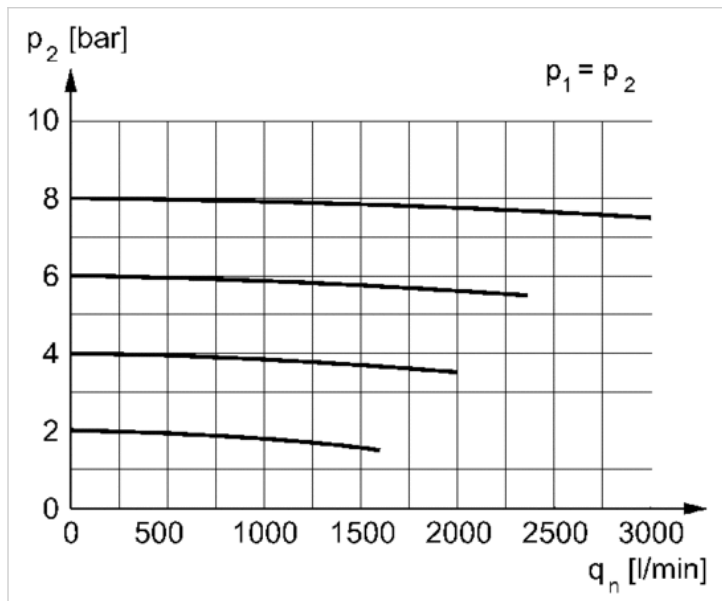
### Diagrams

Flow rate characteristic, Fig. 1



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

## Flow rate characteristic, Fig. 2

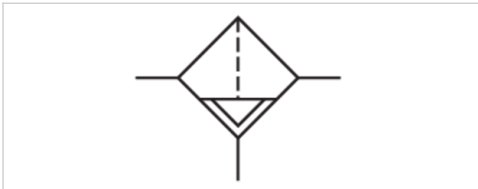


$p_2$  = secondary pressure  
 $q_n$  = nominal flow

# Microfilter, Series NL4-FLC

- G 1/4 G 1/2

- filter porosity 0.01 µm



Version	Microfilter, Can be assembled into blocks
Parts	Microfilter
Mounting orientation	vertical
Working pressure min./max.	1.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Filter reservoir volume	25 cm <sup>3</sup>
Filter element	exchangeable
filter porosity	0.01 µm
Condensate drain	See table below
Weight	See table below

## Technical data

Part No.	Port	Flow Qn	Condensate drain
0821303418	G 1/4	720 l/min	fully automatic, open without pressure
0821303419	G 1/4	720 l/min	fully automatic, open without pressure
0821303514	G 1/2	720 l/min	semi-automatic, open without pressure
0821303516	G 1/2	1200 l/min	fully automatic, open without pressure
R412010794	G 1/2	720 l/min	semi-automatic, open without pressure
R412010795	G 1/2	720 l/min	semi-automatic, open without pressure
0821303571	G 1/2	720 l/min	fully automatic, open without pressure
R412010796	G 1/2	720 l/min	fully automatic, open without pressure
R412010797	G 1/2	720 l/min	fully automatic, open without pressure

Part No.	Version
0821303418	reservoir, metal, with inspection glass
0821303419	Metal reservoir without window
0821303514	reservoir, polycarbonate, without protective guard
0821303516	reservoir, metal, with inspection glass
R412010794	reservoir, polycarbonate, with metal protective guard
R412010795	reservoir, metal, with inspection glass
0821303571	reservoir, polycarbonate, without protective guard
R412010796	reservoir, polycarbonate, with metal protective guard
R412010797	reservoir, metal, with inspection glass

Part No.	Weight
0821303418	0.886 kg
0821303419	0.886 kg
0821303514	1.23 kg
0821303516	1.63 kg
R412010794	1.23 kg
R412010795	1.23 kg
0821303571	1.29 kg
R412010796	1.29 kg
R412010797	1.29 kg

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 0.1$  bar

## Technical information

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

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Recommended pre-filtering 0.3 µm

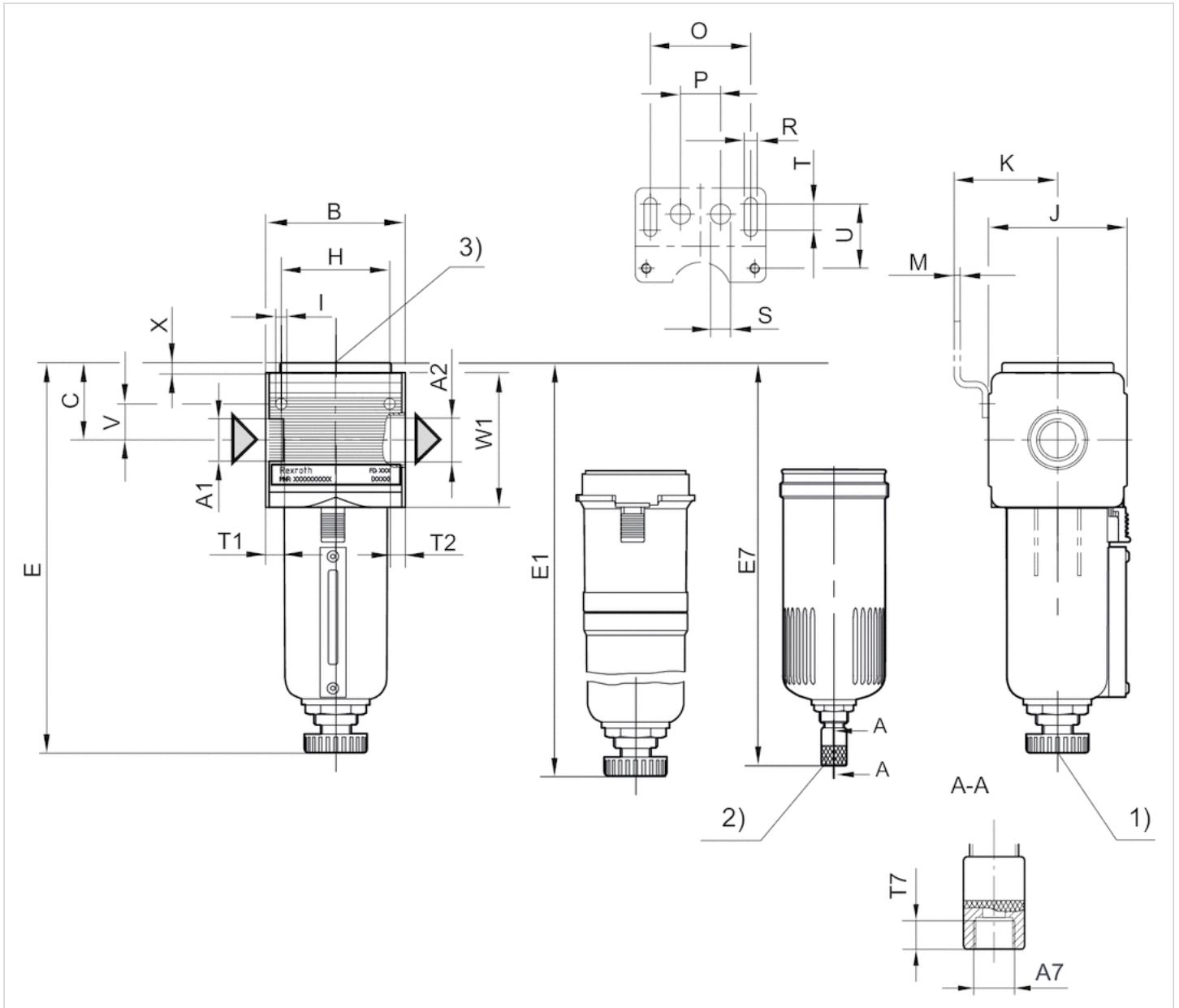
Max. achievable compressed air class acc. to ISO 8573-1:2010 1 : - : 2

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber
Threaded bushing	Die cast zinc
Reservoir	Die cast zinc Polycarbonate
Protective guard	Steel
Filter insert	Borosilicate glass fiber

# Dimensions

## Dimensions



- A1 = input
- A2 = output
- A7 = condensate drain
- 1) semi-automatic condensate drain
- 2) fully automatic condensate drain
- 3) differential pressure gauge connection

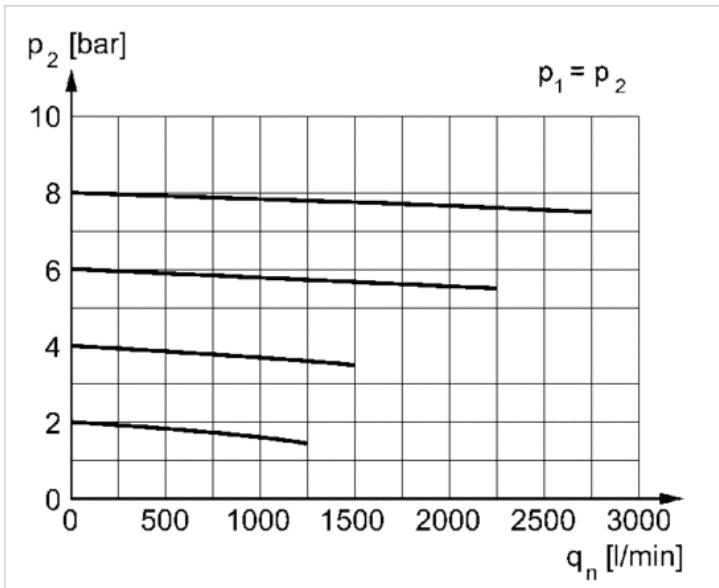
## Dimensions in mm

A1	A2	A7	B	C	E	E1	E7	H	I	J	K	M	O	P	R	S	T	T1	T2	T7	U	V	W1	X
G 1/4	G 1/4	G 1/8	69.6	38.5	202	-	-	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	8.5	33	18	67	5
G 1/4	G 1/4	G 1/8	69.6	-	-	249	-	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	8.5	33	18	67	-
G 1/2	G 1/2	G 1/8	69.6	39.5	186	-	-	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	8.5	33	18	67	-
G 1/2	G 1/2	G 1/8	69.6	38.5	-	335	-	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	8.5	33	18	67	5

A1	A2	A7	B	C	E	E1	E7	H	I	J	K	M	O	P	R	S	T	T1	T2	T7	U	V	W1	X
G 1/2	G 1/2	G 1/8	69.6	38.5	-	186	-	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	8.5	33	18	67	-
G 1/2	G 1/2	G 1/8	69.6	38.5	186	-	-	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	8.5	33	18	67	-
G 1/2	G 1/2	G 1/8	69.6	38.5	-	-	201	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	8.5	33	18	67	-

## Diagrams

### Flow rate characteristic



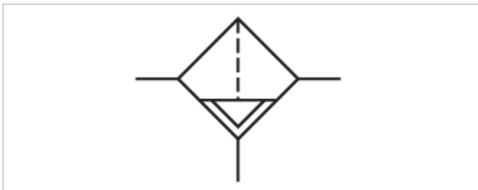
$p_2$  = secondary pressure  
 $q_n$  = nominal flow

# Active carbon filter, Series NL4-FLA

- G 1/4 G 1/2



Version	Active carbon filter, Can be assembled into blocks
Parts	Active carbon filter
Mounting orientation	vertical
Working pressure min./max.	0.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Filter reservoir volume	50 cm <sup>3</sup>
Filter element	exchangeable
Condensate drain	without
Weight	See table below



## Technical data

Part No.	Port	Flow Qn	Version	Weight	
0821303300	G 1/4	2250 l/min	Metal reservoir without window	0.836 kg	1)
0821303301	G 1/4	2250 l/min	reservoir, metal, long, without inspection glass	0.836 kg	1)
0821303517	G 1/2	2250 l/min	reservoir, metal, long, without inspection glass	1.58 kg	1)

Nominal flow Qn with secondary pressure p<sub>2</sub> = 6 bar at Δp = 0.1 bar

1) Metal protective guard can be retrofitted for all polycarbonate reservoirs

## Technical information

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

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Recommended pre-filtering 0.01 μm

Max. achievable compressed air class acc. to ISO 8573-1:2010 - - : 1

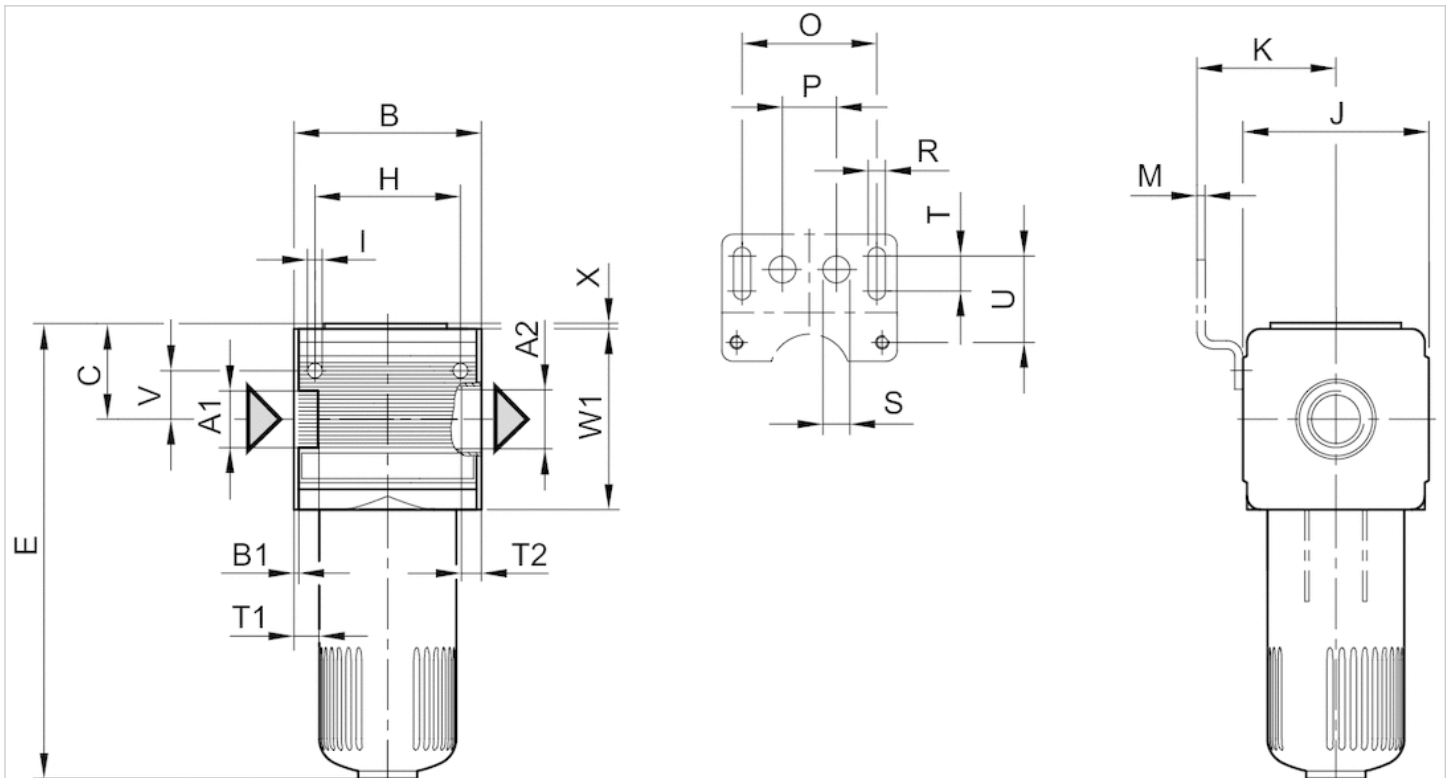
## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene

Material	
Seals	Acrylonitrile butadiene rubber
Reservoir	Polycarbonate Die cast zinc
Filter insert	Active carbon

## Dimensions

### Dimensions



A1 = input  
A2 = output

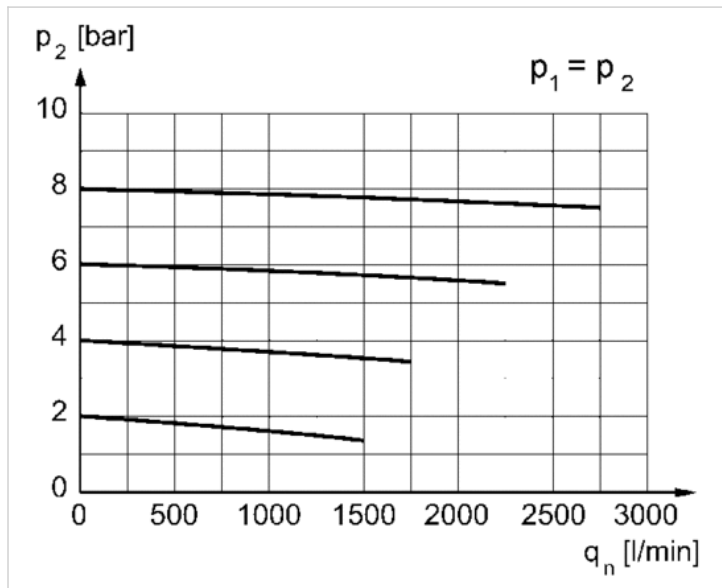
### Dimensions in mm

A1	A2	B	B1	C	D	E	H	I	J	K	M	O	P	R	S	T	T1	T2	U	V	W1	X
G 1/4	G 1/4	69.6	1.8	34.5	-	170	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	33	18	67	1
G 1/4	G 1/4	69.6	1.8	34.5	-	222	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	33	18	67	1
G 1/2	G 1/2	69.6	1.8	34.5	-	308	54	5.5	69	54.5	3	50	20	6.4	10	13	13	13	33	18	67	1



## Diagrams

### Flow rate characteristic



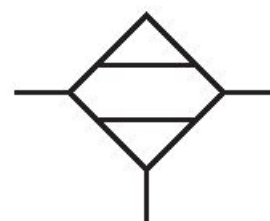
$p_2$  = secondary pressure  
 $q_n$  = nominal flow

# Diaphragm-type dryer, Series NL4-ADD

## R412007606

### General series information Series NL4

- The AVENTICS Series NL maintenance units are suitable for all areas: as individual components or as assembled maintenance units, for centralized or decentralized compressed air preparation, in compact or powerful versions, for use in high or low temperatures. This line offers a complete, customizable compressed air preparation technology. It includes an option to combine every component in the Series to achieve the desired function, making it possible to adjust the components precisely to the application requirements.



### Technical data

Industry  
Industrial

Parts  
Diaphragm-type dryer

Type  
Diaphragm-type dryer

Mounting orientation  
vertical

Port  
G 1/2

Nominal flow Qn  
500 l/min

Recommended pre-filtering  $\mu\text{m}$

5  $\mu\text{m}$   
0.01  $\mu\text{m}$

Filter element  
not exchangeable

Working pressure min.  
4 bar

Working pressure max  
12.5 bar

Min. ambient temperature  
2 °C

Max. ambient temperature  
60 °C

Medium  
Compressed air  
Neutral gases

Weight  
4.43 kg

## Materials:

### Housing

Die cast zinc

### Front plate

Acrylonitrile butadiene styrene

### Seal

Acrylonitrile butadiene rubber

### Reservoir

Aluminum

### Part No.

R412007606

## Technical information

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

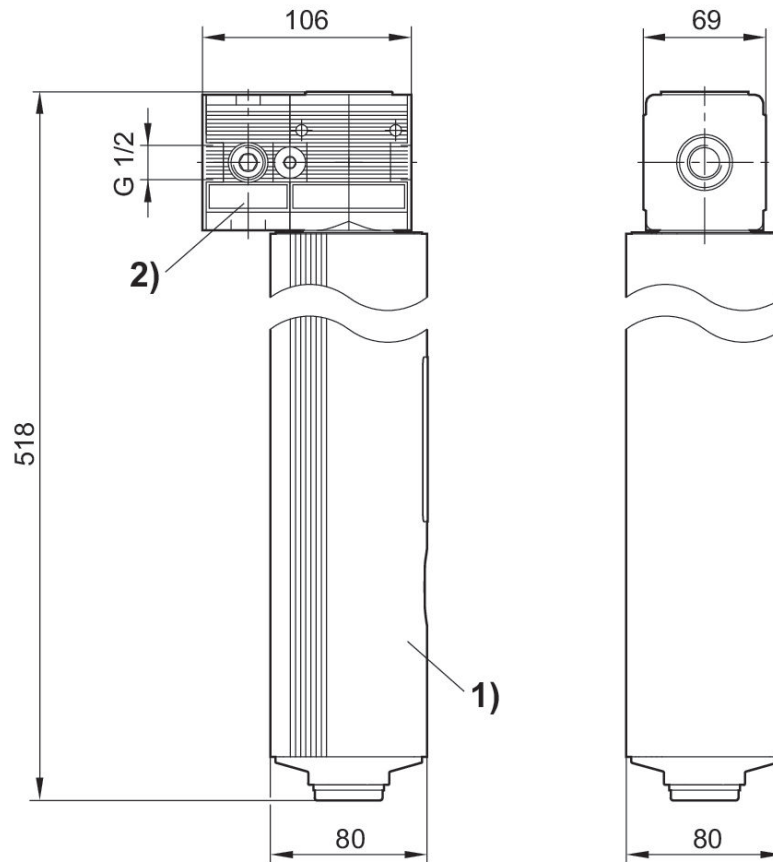
Notice: air may not contain condensate

Purge air approx. 12 % of nominal flow  $Q_n$  at 7 bar

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

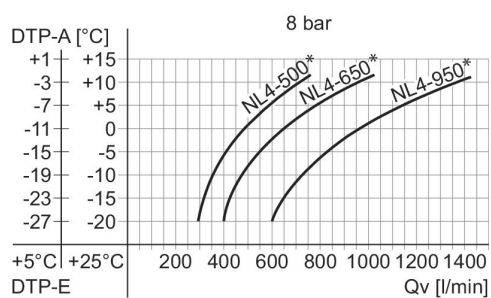
Pressure dew point reduction: see diagram

## Dimensions in mm



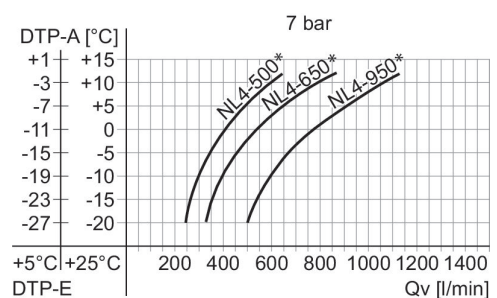
- 1) Diaphragm-type dryer  
2) Incl. second distributor

## Performance charts



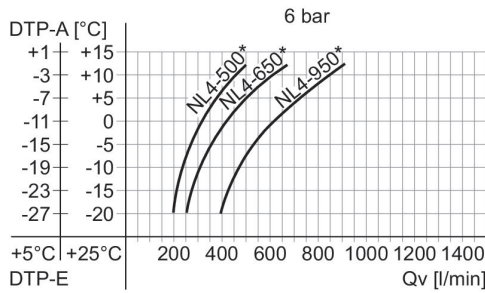
DTP-E: pressure dew point input, DTP-A: pressure dew point output, Qv: input flow rate (output flow rate + purge air).  
\* Nominal flow Qn

## Performance charts



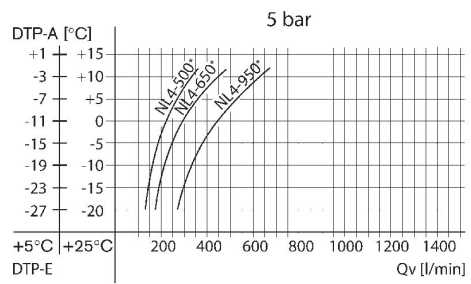
DTP-E: pressure dew point input, DTP-A: pressure dew point output, Qv: input flow rate (output flow rate + purge air).  
\* Nominal flow Qn

### Performance charts



DTP-E: pressure dew point input, DTP-A: pressure dew point output, Qv: input flow rate (output flow rate + purge air).  
\* Nominal flow Qn

### Performance charts

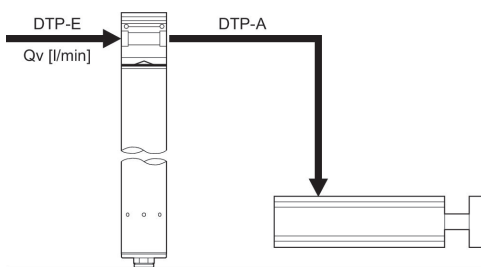


DTP-E: pressure dew point input, DTP-A: pressure dew point output, Qv: input flow rate (output flow rate + purge air).  
\* Nominal flow Qn

### Example

Wanted:

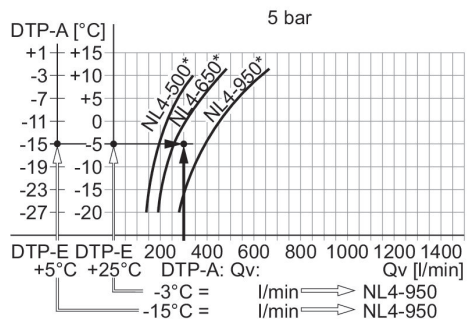
Suitable membrane dryer



### Example

Give values:

Qv = 350 l/min, DTP-E = +5 (+25) °C,  
searched values: DTP-A = -15 (-3) °C a  
suitable membrane dryer



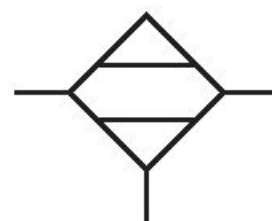
Result: membrane dryer series NL4-950 (with a Qn of 950 l/min), part no. R412007608  
\* Nominal flow Qn

# Diaphragm-type dryer, Series NL4-ADD

## R412007607

### General series information Series NL4

- The AVENTICS Series NL maintenance units are suitable for all areas: as individual components or as assembled maintenance units, for centralized or decentralized compressed air preparation, in compact or powerful versions, for use in high or low temperatures. This line offers a complete, customizable compressed air preparation technology. It includes an option to combine every component in the Series to achieve the desired function, making it possible to adjust the components precisely to the application requirements.



### Technical data

Industry  
Industrial

Parts  
Diaphragm-type dryer

Type  
Diaphragm-type dryer

Mounting orientation  
vertical

Port  
G 1/2

Nominal flow Qn  
650 l/min

Recommended pre-filtering  $\mu\text{m}$   
5  $\mu\text{m}$   
0.01  $\mu\text{m}$

Filter element  
not exchangeable

Working pressure min.  
4 bar

Working pressure max  
12.5 bar

Min. ambient temperature  
2 °C

Max. ambient temperature  
60 °C

Medium  
Compressed air  
Neutral gases

Weight  
4.55 kg

## Materials:

### Housing

Die cast zinc

### Front plate

Acrylonitrile butadiene styrene

### Seal

Acrylonitrile butadiene rubber

### Reservoir

Aluminum

### Part No.

R412007607

## Technical information

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

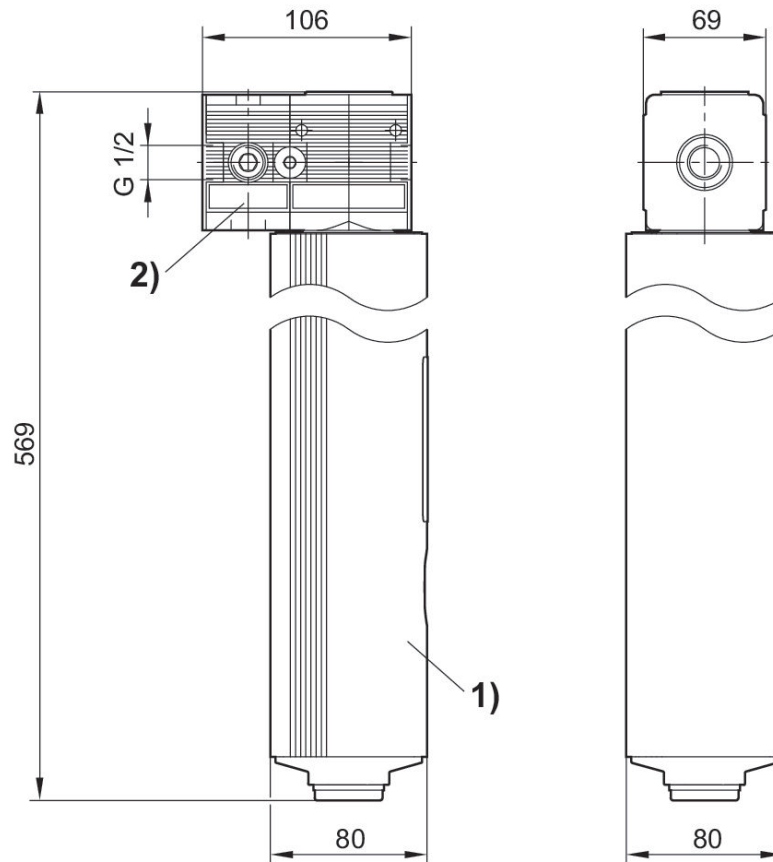
Notice: air may not contain condensate

Purge air approx. 12 % of nominal flow Qn at 7 bar

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

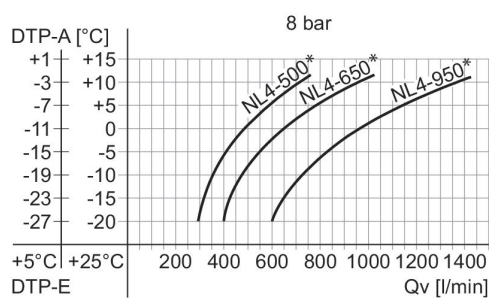
Pressure dew point reduction: see diagram

## Dimensions in mm



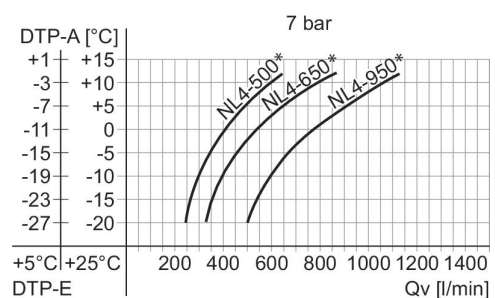
- 1) Diaphragm-type dryer  
2) Incl. second distributor

## Performance charts



DTP-E: pressure dew point input, DTP-A: pressure dew point output, Qv: input flow rate (output flow rate + purge air).  
\* Nominal flow Qn

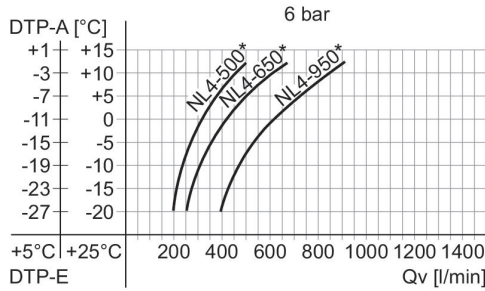
## Performance charts



DTP-E: pressure dew point input, DTP-A: pressure dew point output, Qv: input flow rate (output flow rate + purge air).  
\* Nominal flow Qn

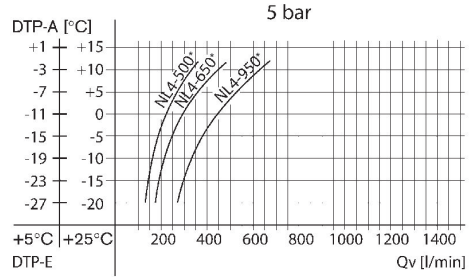


### Performance charts



DTP-E: pressure dew point input, DTP-A: pressure dew point output, Qv: input flow rate (output flow rate + purge air).  
\* Nominal flow Qn

### Performance charts

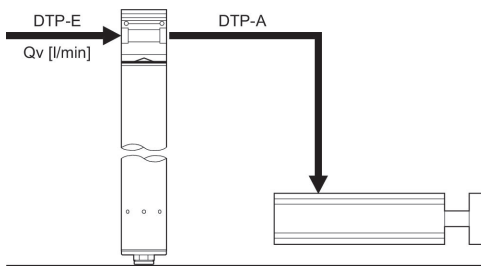


DTP-E: pressure dew point input, DTP-A: pressure dew point output, Qv: input flow rate (output flow rate + purge air).  
\* Nominal flow Qn

### Example

Wanted:

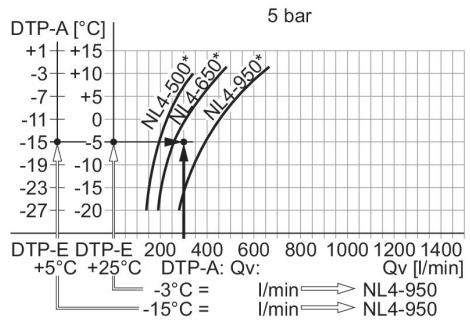
Suitable membrane dryer



### Example

Give values:

Qv = 350 l/min, DTP-E = +5 (+25) °C,  
searched values: DTP-A = -15 (-3) °C a  
suitable membrane dryer



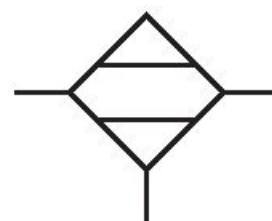
Result: membrane dryer series NL4-950 (with a Qn of 950 l/min), part no. R412007608  
\* Nominal flow Qn

# Diaphragm-type dryer, Series NL4-ADD

## R412007608

### General series information Series NL4

- The AVENTICS Series NL maintenance units are suitable for all areas: as individual components or as assembled maintenance units, for centralized or decentralized compressed air preparation, in compact or powerful versions, for use in high or low temperatures. This line offers a complete, customizable compressed air preparation technology. It includes an option to combine every component in the Series to achieve the desired function, making it possible to adjust the components precisely to the application requirements.



### Technical data

Industry  
Industrial

Parts  
Diaphragm-type dryer

Type  
Diaphragm-type dryer

Mounting orientation  
vertical

Port  
G 1/2

Nominal flow Qn  
950 l/min

Recommended pre-filtering  $\mu\text{m}$   
5  $\mu\text{m}$   
0.01  $\mu\text{m}$

Filter element  
not exchangeable

Working pressure min.  
4 bar

Working pressure max  
12.5 bar

Min. ambient temperature  
2 °C

Max. ambient temperature  
60 °C

Medium  
Compressed air  
Neutral gases

Weight  
4.65 kg

## Materials:

### Housing

Die cast zinc

### Front plate

Acrylonitrile butadiene styrene

### Seal

Acrylonitrile butadiene rubber

### Reservoir

Aluminum

### Part No.

R412007608

## Technical information

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

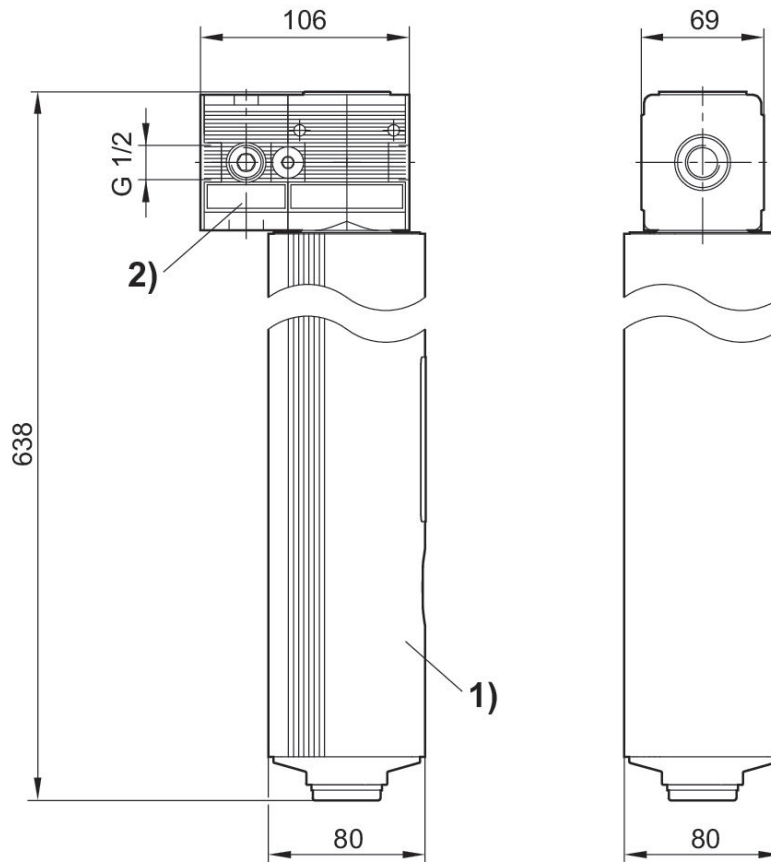
Notice: air may not contain condensate

Purge air approx. 12 % of nominal flow  $Q_n$  at 7 bar

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

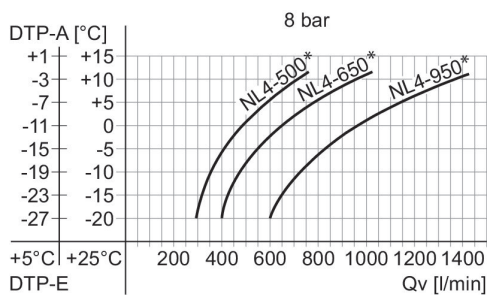
Pressure dew point reduction: see diagram

## Dimensions in mm



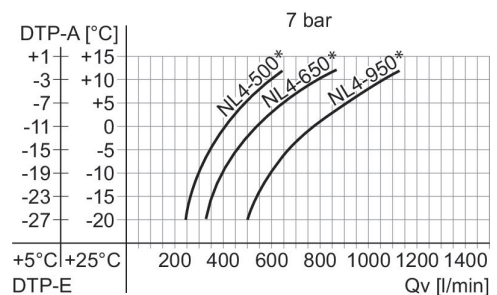
- 1) Diaphragm-type dryer  
2) Incl. second distributor

## Performance charts



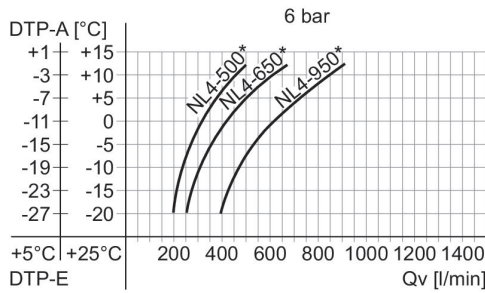
DTP-E: pressure dew point input, DTP-A: pressure dew point output, Qv: input flow rate (output flow rate + purge air).  
\* Nominal flow Qn

## Performance charts



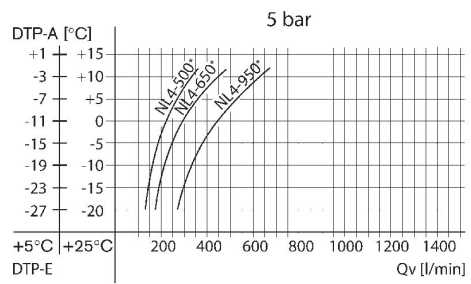
DTP-E: pressure dew point input, DTP-A: pressure dew point output, Qv: input flow rate (output flow rate + purge air).  
\* Nominal flow Qn

### Performance charts



DTP-E: pressure dew point input, DTP-A: pressure dew point output, Qv: input flow rate (output flow rate + purge air).  
\* Nominal flow Qn

### Performance charts

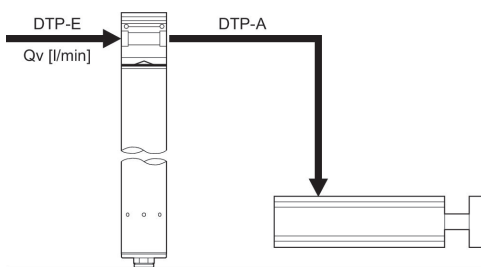


DTP-E: pressure dew point input, DTP-A: pressure dew point output, Qv: input flow rate (output flow rate + purge air).  
\* Nominal flow Qn

### Example

Wanted:

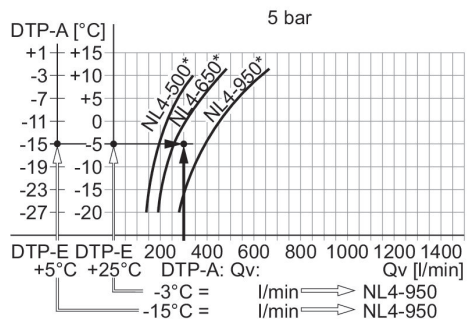
Suitable membrane dryer



### Example

Give values:

Qv = 350 l/min, DTP-E = +5 (+25) °C,  
searched values: DTP-A = -15 (-3) °C a  
suitable membrane dryer



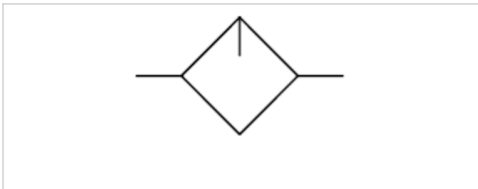
Result: membrane dryer series NL4-950 (with a Qn of 950 l/min), part no. R412007608  
\* Nominal flow Qn

# Standard oil-mist lubricator, Series NL4-LBS

- G 1/2 G 3/4



Version	Oil-mist lubricator, Can be assembled into blocks
Parts	Standard oil-mist lubricator
Mounting orientation	vertical
Working pressure min./max.	0.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Type of filling	Manual oil filling
Weight	See table below



## Technical data

Part No.	Port	Nominal flow Qn	Lubricator reservoir volume	Material Reservoir	Protective guard
0821301500	G 1/2	6000 l/min	125 cm <sup>3</sup>	Polycarbonate	-
0821301501	G 1/2	6000 l/min	125 cm <sup>3</sup>	Polycarbonate	Steel
0821301515	G 1/2	6000 l/min	116 cm <sup>3</sup>	Polycarbonate	-
0821301502	G 1/2	6000 l/min	125 cm <sup>3</sup>	Die cast zinc with window	-
0821301540	G 3/4	6000 l/min	125 cm <sup>3</sup>	Polycarbonate	-
0821301541	G 3/4	6000 l/min	125 cm <sup>3</sup>	Polycarbonate	Steel
0821301545	G 3/4	6000 l/min	116 cm <sup>3</sup>	Polycarbonate	-
0821301542	G 3/4	6000 l/min	125 cm <sup>3</sup>	Die cast zinc with window	-

Part No.	Reservoir	Electrical level indicator
0821301500	reservoir, polycarbonate, without protective guard	-
0821301501	reservoir, polycarbonate, with metal protective guard	-
0821301515	reservoir, polycarbonate, without protective guard	with internal query
0821301502	reservoir, metal, with inspection glass	-
0821301540	reservoir, polycarbonate, without protective guard	-
0821301541	reservoir, polycarbonate, with metal protective guard	-
0821301545	reservoir, polycarbonate, without protective guard	with internal query
0821301542	reservoir, metal, with inspection glass	-

Part No.	Weight
0821301500	0.684 kg
0821301501	0.776 kg
0821301515	0.725 kg
0821301502	0.9 kg
0821301540	0.684 kg
0821301541	0.776 kg
0821301545	0.725 kg
0821301542	0.9 kg

Nominal flow  $Q_n$  with secondary pressure  $p_2 = 6$  bar at  $\Delta p = 1$  bar

## Technical information

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

The entire preset drip quantity enters the pressure system.

Manual oil filling possible during operation.

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

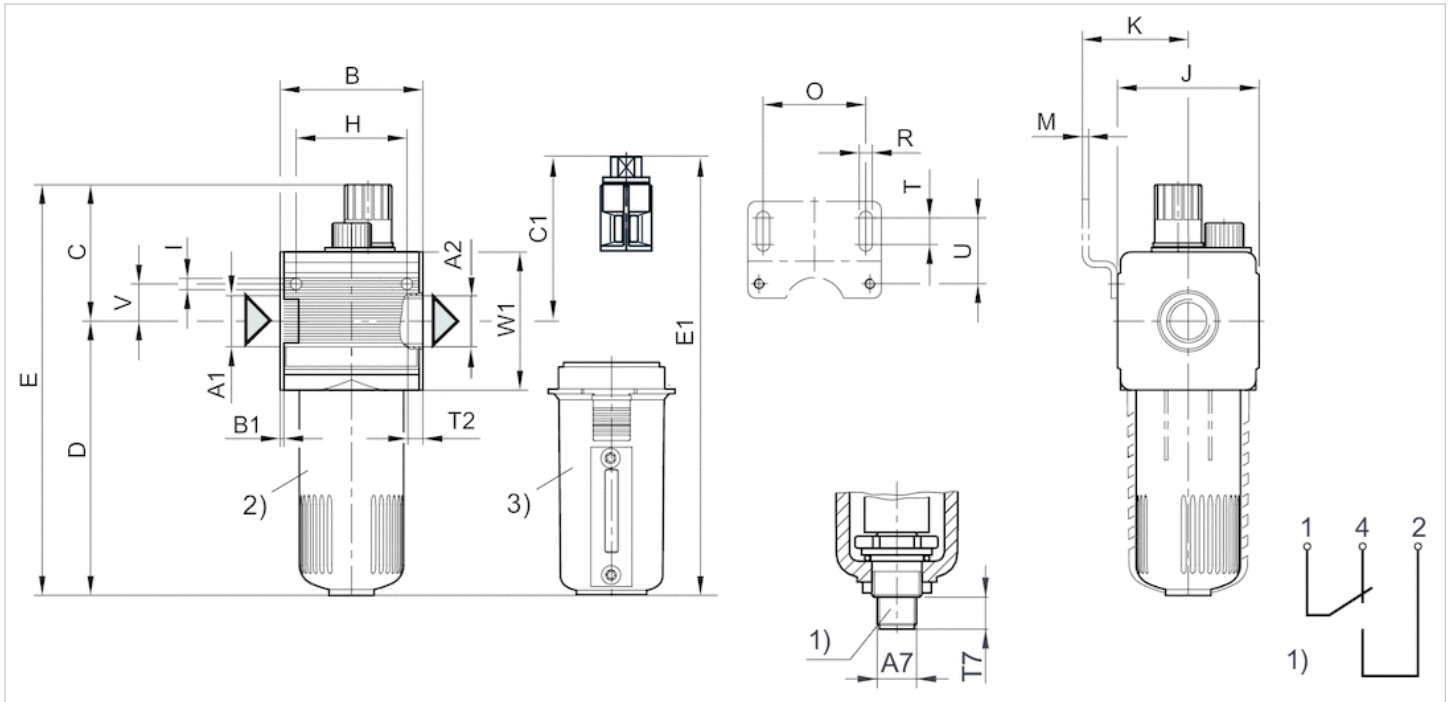
Oil dosing at 1000 l/min 1-2 drops

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber
Threaded bushing	Die cast zinc
Reservoir	Polycarbonate Die cast zinc
Protective guard	Steel

## Dimensions

### Dimensions



- A1 = input
- A2 = output
- 1) electrical level indicator
  - connection: 4-pin, M12x1
  - contact load: 50 V AC/0.5 A/5 W
  - type: 1 change-over contact (make contact/break contact) for min. fluid level
- Order valve plug connector (M12x1) separately
- 2) PC reservoir
- 3) Metal reservoir with level indicator

### Dimensions in mm

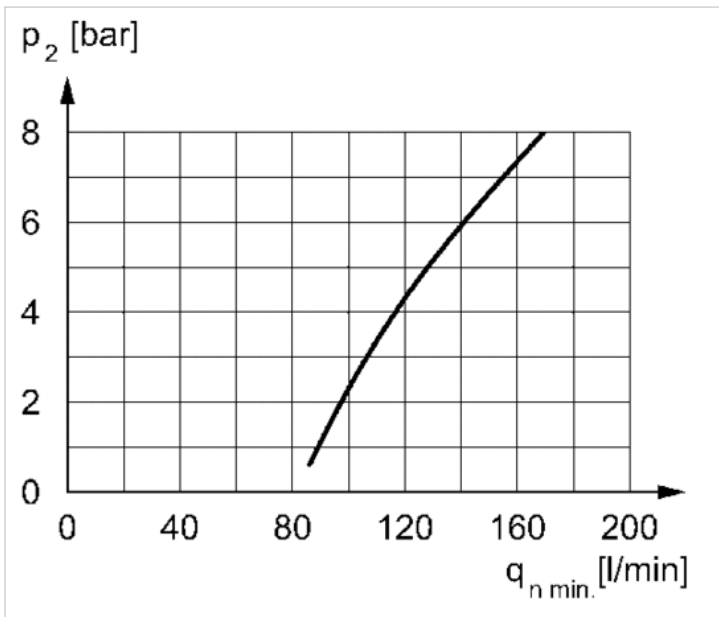
A1	A2	A7	B	B1	C	C1	D	D2	E	E1	F	H	I	J	K	M	O	P	R	S	T	T2	T7
G 1/2	G 1/2	M12x1	69.5	1.8	65	-	132	12	197	-	M12x1	54	5.5	67	54.5	3	50	20	6.4	10	13	13	12
G 1/2	G 1/2	M12x1	69.5	1.8	65	81	132	12	197	212	M12x1	54	5.5	67	54.5	3	50	20	6.4	10	13	13	12
G 3/4	G 3/4	M12x1	69.5	1.8	65	-	132	12	197	-	M12x1	54	5.5	67	54.5	3	50	20	6.4	10	13	13	12
G 3/4	G 3/4	M12x1	69.5	1.8	65	81	132	12	197	212	M12x1	54	5.5	67	54.5	3	50	20	6.4	10	13	13	12

U	V	W1
33	18	67
33	18	67
33	18	67
33	18	67



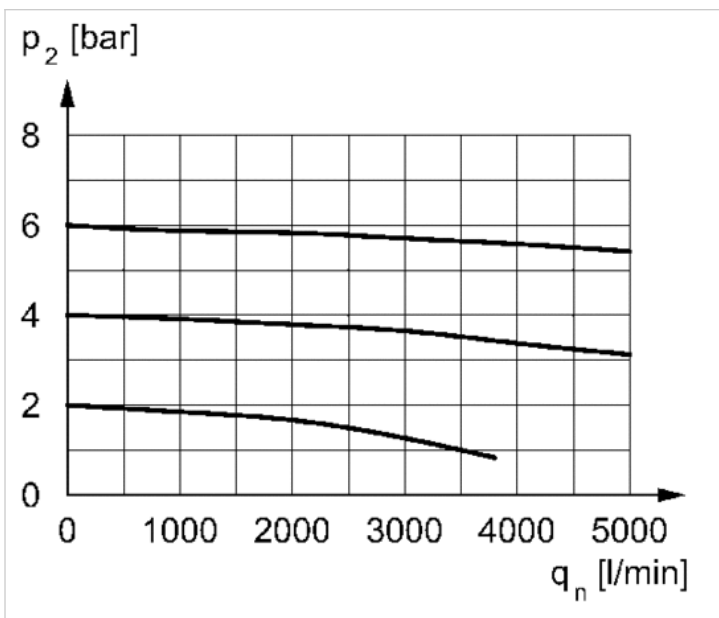
## Diagrams

minimum flow rate curve (flow rate necessary for the correct functioning of the lubricator)



p2 = secondary pressure  
qnmin. = min. nominal flow

## Flow rate characteristic



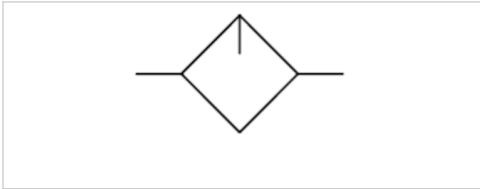
p2 = secondary pressure  
qn = nominal flow

# Micro oil-mist lubricator, Series NL4-LBM

- G 1/2



Version	Micro oil-mist lubricator, Can be assembled into blocks
Parts	Micro oil-mist lubricator
Mounting orientation	vertical
Compressed air connection	G 1/2
Working pressure min./max.	0.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Type of filling	Manual oil filling



## Technical data

Part No.	Port	Nominal flow Q <sub>n</sub>	Lubricator reservoir volume	Material Reservoir	Protective guard
R412007655	G 1/2	4700 l/min	125 cm <sup>3</sup>	Polycarbonate	Steel
R412007654	G 1/2	4700 l/min	125 cm <sup>3</sup>	Polycarbonate	-
R412007657	G 1/2	4700 l/min	125 cm <sup>3</sup>	Polycarbonate	-
R412007658	G 1/2	4700 l/min	1000 cm <sup>3</sup>	Die cast zinc with window	-
R412007659	G 1/2	4700 l/min	1500 cm <sup>3</sup>	Die cast zinc with window	-

Part No.	Reservoir	Electrical level indicator
R412007655	reservoir, polycarbonate, with metal protective guard	-
R412007654	reservoir, polycarbonate, without protective guard	-
R412007657	reservoir, polycarbonate, without protective guard	with internal query
R412007658	1.0 l metal reservoir with window	with internal query
R412007659	1.5 l metal reservoir with window	with internal query

Nominal flow Q<sub>n</sub> with secondary pressure p<sub>2</sub> = 6 bar at Δp = 1 bar

## Technical information

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

Only approx. 10% of the preset drip quantity enters the compressed air system.

oil filling not possible during operation.

Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

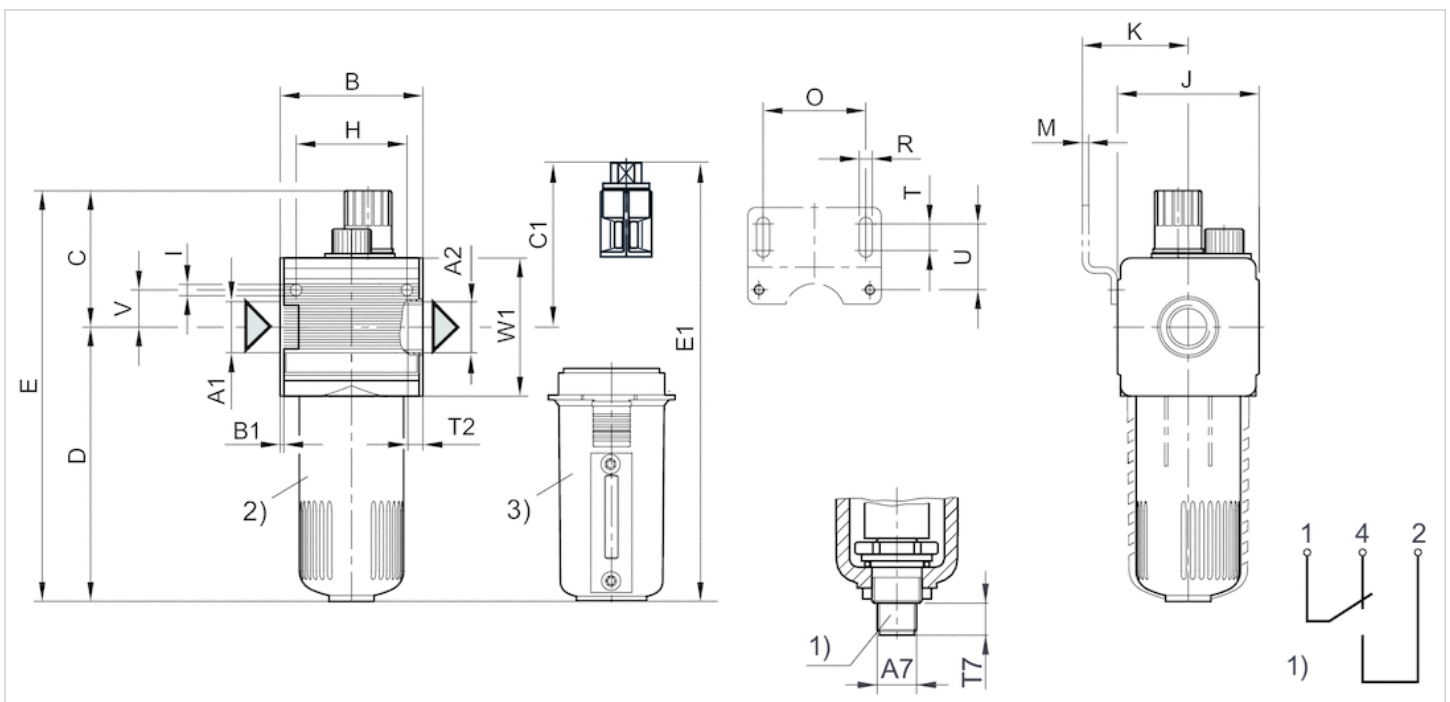
Oil dosing at 1000 l/min 10-20 drops

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber
Reservoir	Polycarbonate Die cast zinc
Protective guard	Steel

## Dimensions

### Dimensions



A1 = input

A2 = output

1) electrical level indicator

– connection: 4-pin, M12x1

– contact load: 50 V AC/0.5 A/5 W

– type: 1 change-over contact (make contact/break contact) for min. fluid level

Order valve plug connector (M12x1) separately

2) PC reservoir

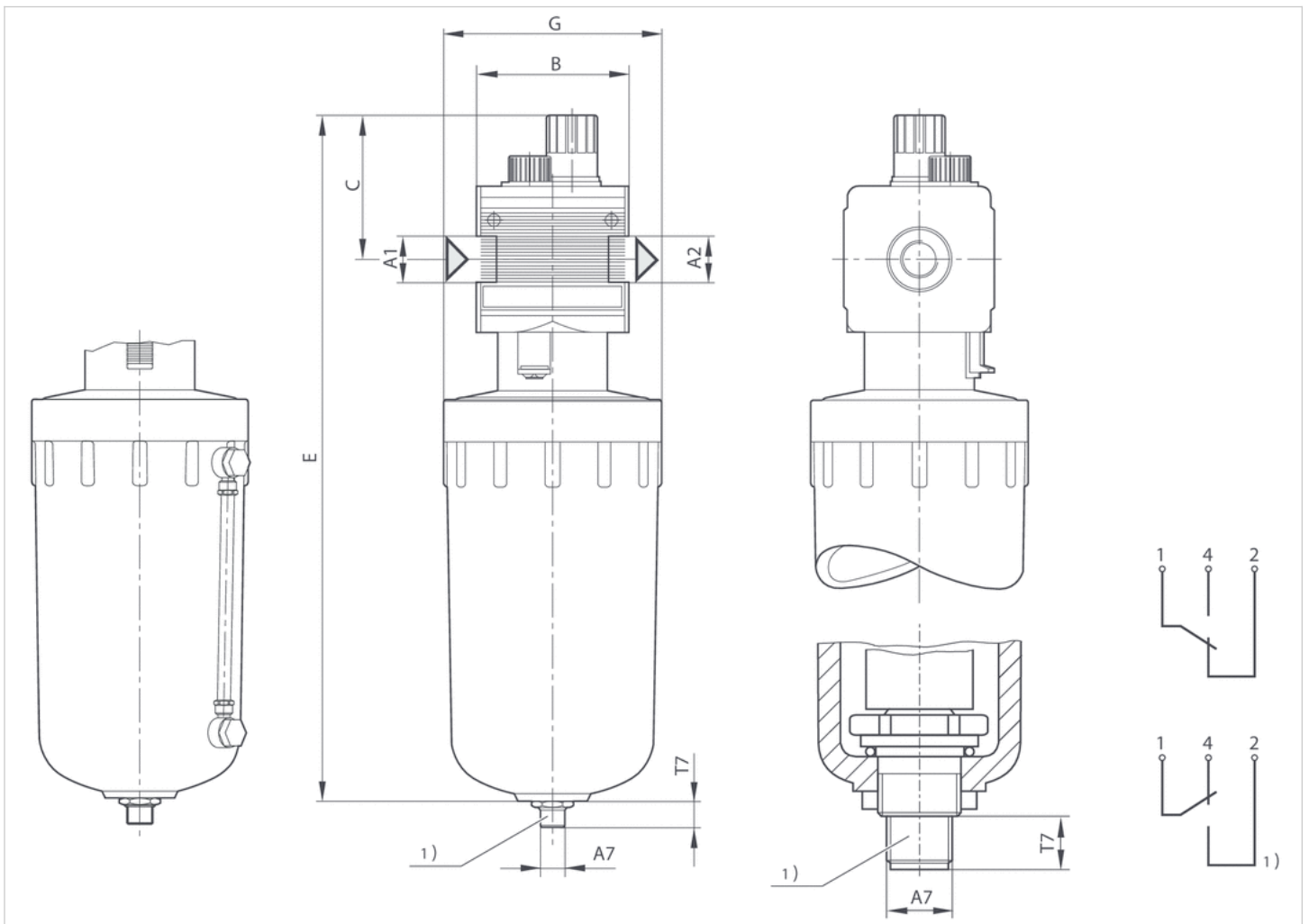
3) Metal reservoir with level indicator

Dimensions in mm

A1	A2	A7	B	B1	C	C1	D	E	E1	H	I	J	K	M	O	P	R	S	T	T2	T7	U	V	W1
G 1/2	G 1/2	M12x1	69.5	1.8	65	81	132	197	212	54	5.5	67	54.5	3	50	20	6.4	10	13	13	12	33	18	67
G 1/2	G 1/2	M12x1	69.5	1.8	65	-	132	197	-	54	5.5	67	54.5	3	50	20	6.4	10	13	13	12	33	18	67

Dimensions

Fig. 3, Dimensions, Metal reservoir



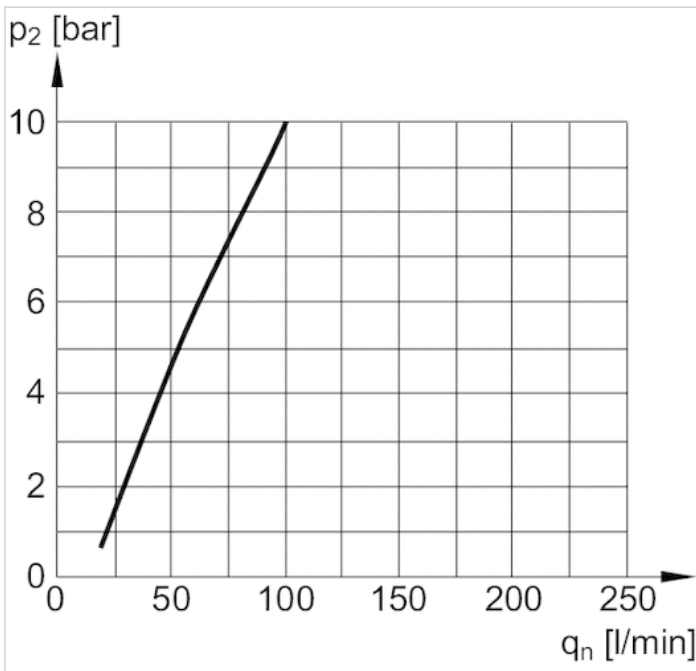
- A1 = input
  - A2 = output
  - 1) electrical level indicator
    - connection: 4-pin, M12x1
    - contact load: 50 V AC/0.5 A/5 W
    - type: 1 change-over contact (make contact/break contact) for min. fluid level
- Order valve plug connector (M12x1) separately

Dimensions in mm

A1		A2	A7	B ±5	C ±5	E	G ±5	T7
G 1/2	1 L	G 1/2	M12x1	69.6	66	315	Ø 100	12
G 1/2	1,5 L	G 1/2	M12x1	69.6	66	415	Ø 100	12

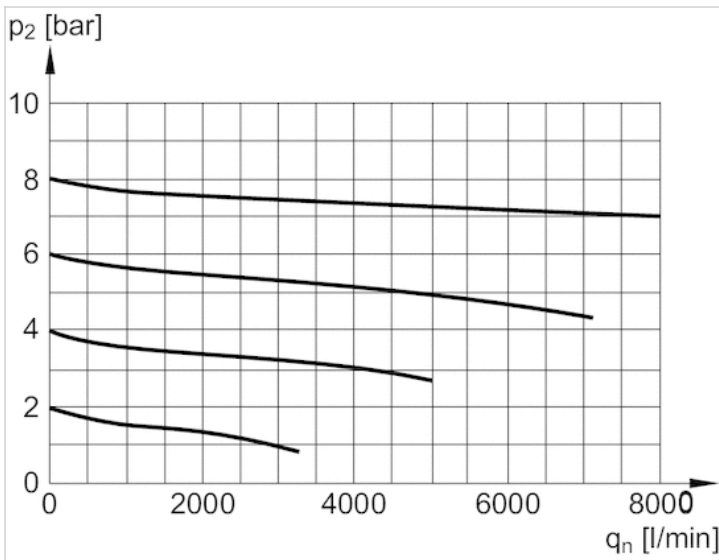
## Diagrams

minimum flow rate curve (flow rate necessary for the correct functioning of the lubricator)



p2 = secondary pressure  
 qnmin. = min. nominal flow

## Flow rate characteristic



p2 = secondary pressure  
 qn = nominal flow

# Filling unit, pneumatically operated, Series NL4-SSU

- Compressed air connection G 1/2
- Pipe connection



Version	Poppet valve, Can be assembled into blocks
Pilot	Internal
Sealing principle	Soft sealing
Working pressure min./max.	0 ... 16 bar
Control pressure min./max.	2.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Max. particle size	5 µm
Weight	1.69 kg

## Technical data

Part No.	Port	Exhaust	Flow		
			Qn 1→2	Qn 2→3	
0821300949	G 1/2	G 1/2	2500 l/min	1600 l/min	1)
0821300954	G 1/2	G 1/2	2500 l/min	1600 l/min	2)

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

- Adjustable filling
- Filling with fixed diaphragm

## Technical information

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

The filling valve builds up pressure slowly in the pneumatic systems, i.e. prevents a sudden pressure build-up during a recommissioning after a mains pressure failure or avoids emergency OFF switching. This allows dangerous abrupt cylinder motions to be avoided.

Do not position filling valves or filling units upstream of open consumers, such as nozzles, air barriers, air curtains, since these may prevent through connection of components.

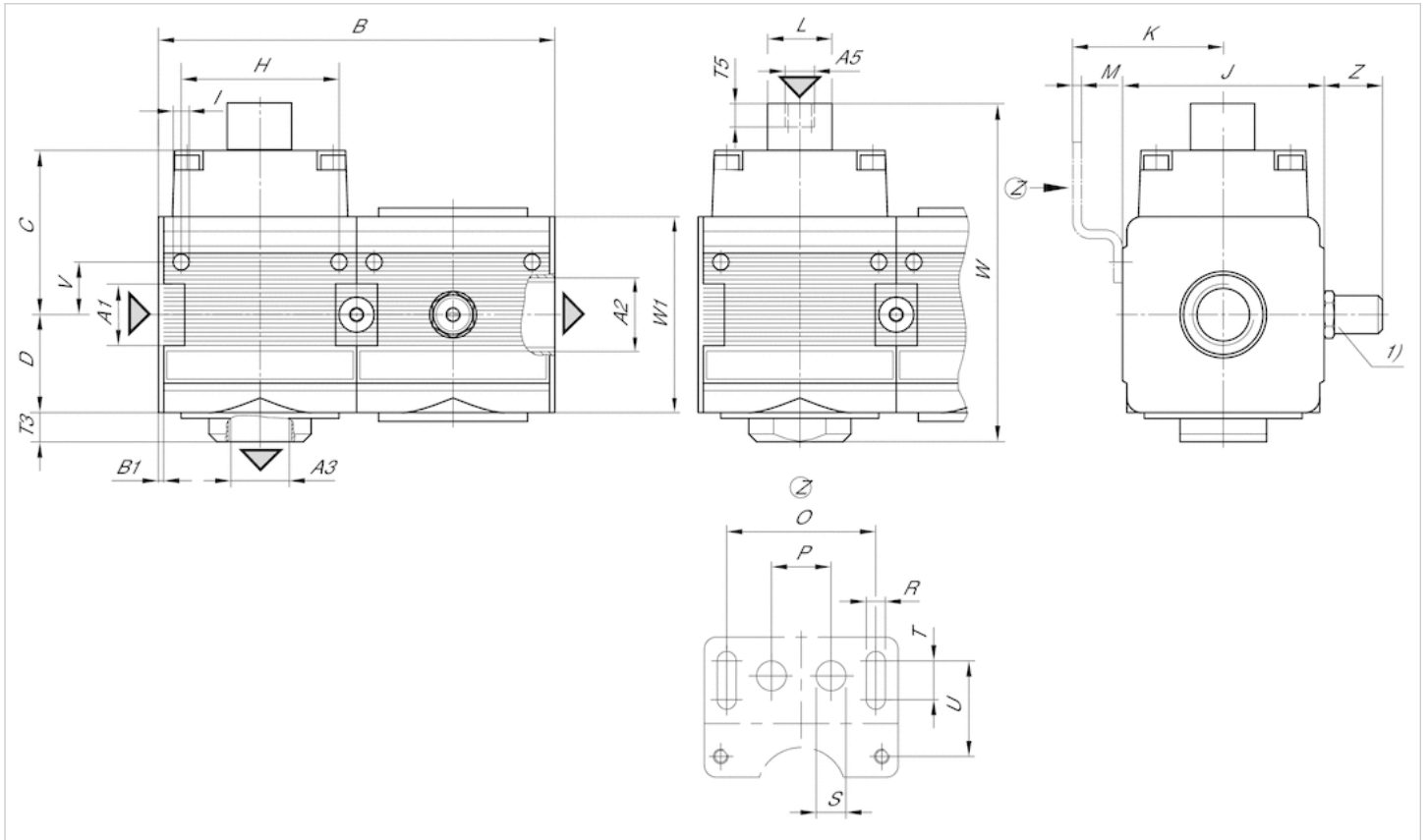
A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber
Threaded bushing	Die cast zinc

## Dimensions

### Dimensions



- A1 = input
- A2 = output
- A3 = ventilation port
- A5 = control pressure connection
- 1) Adjustment screw for filling time

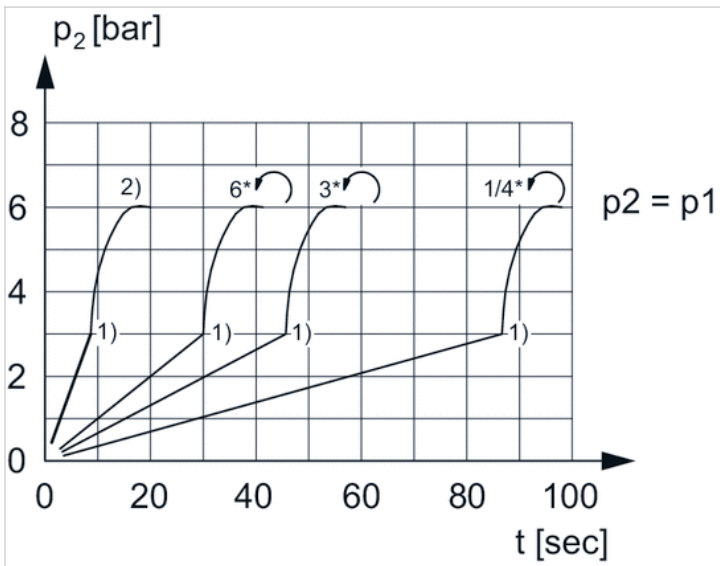
### Dimensions in mm

A1	A2	A3	A5	B	B1	C	D	H	I	J	K	L	M	O	P	R	S	T	T3	T5	U	V
G 1/2	G 1/2	G 1/2	G 1/8	135.6	1.8	56.5	33.5	54	5.5	69	54.5	22	3	50	20	6.4	20	10	10	13	27.5	12.3
G 1/2	G 1/2	G 1/2	G 1/8	135.6	1.8	56.5	33.5	54	5.5	69	54.5	22	3	50	20	6.4	20	10	10	13	27.5	12.3

W	W1	Z
96	52	20
96	52	-

## Diagrams

### secondary pressure while filling



p1 = working pressure

p2 = secondary pressure

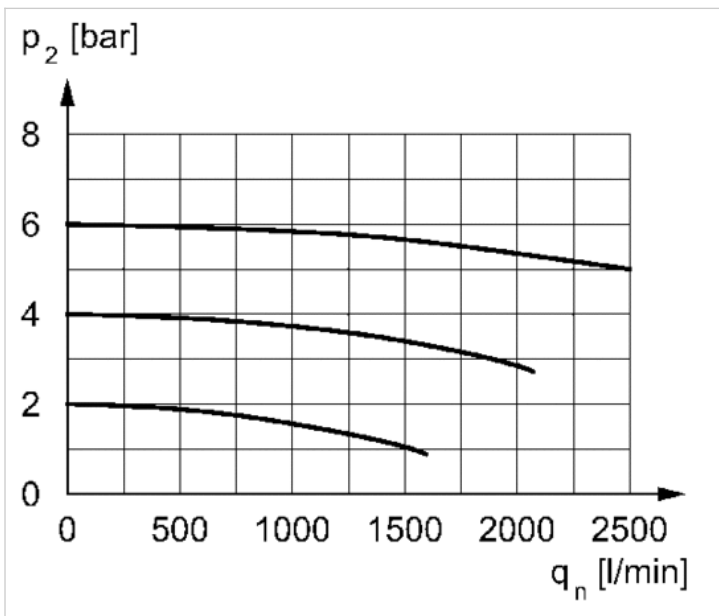
t = filling time, adjustable via adjustment screw (throttle)

1) Switching point: adjustable filling time, fixed change-over pressure  $\approx 0.5 \times p1$  (50%)

2) Throttle fully opened

\* Adjustment screw rotations

### Flow rate characteristic



p2 = secondary pressure

qn = nominal flow



# Filling unit, electrically operated, Series NL4-SSU

- Compressed air connection G 1/2
- Pipe connection
- Electrical connection: Plug, ISO 6952, form B



Version	Poppet valve, Can be assembled into blocks
Parts	Filling valve, 3/2-directional valve, electrically operated
Nominal flow 1 ► 2	2500 l/min
Nominal flow 2 ► 3	1600 l/min
Working pressure min./max.	2.5 ... 10 bar
Medium	Compressed air Neutral gases
Medium temperature min./max.	-10 ... 60 °C
Ambient temperature min./max.	-10 ... 60 °C
Pilot	Internal
Sealing principle	Soft sealing
Max. particle size	5 µm
Protection class acc. to DIN EN 61140 with plug	IP65
Duty cycle	100 %
Weight	See table below

## Technical data

Part No.		Compressed air connection input	Compressed air connection output	Exhaust
0821300950		G 1/2	G 1/2	G 1/2
0821300955		G 1/2	G 1/2	G 1/2
Part No.	Operational voltage	Power consumption		Manual override
	DC	DC		
0821300950	24 V	4.8 W		-
0821300955	24 V	4.8 W		-
Part No.	Electrical connection	Connector standard	basic valve with electrical connector	
	Pilot valve			
0821300950	Plug, ISO 6952, form B	ISO 6952	-	
0821300955	Plug, ISO 6952, form B	ISO 6952	-	
Part No.	Reverse polarity protection		Weight	
0821300950	Protected against polarity reversal		1.74 kg	1)
0821300955	Protected against polarity reversal		1.74 kg	2)

Nominal flow Q<sub>n</sub> with secondary pressure p<sub>2</sub> = 6 bar at Δp = 1 bar

1) adjustable filling

2) Filling with fixed diaphragm

## Technical information

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

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Do not position filling valves or filling units upstream of open consumers, such as nozzles, air barriers, air curtains, since these may prevent through connection of components.

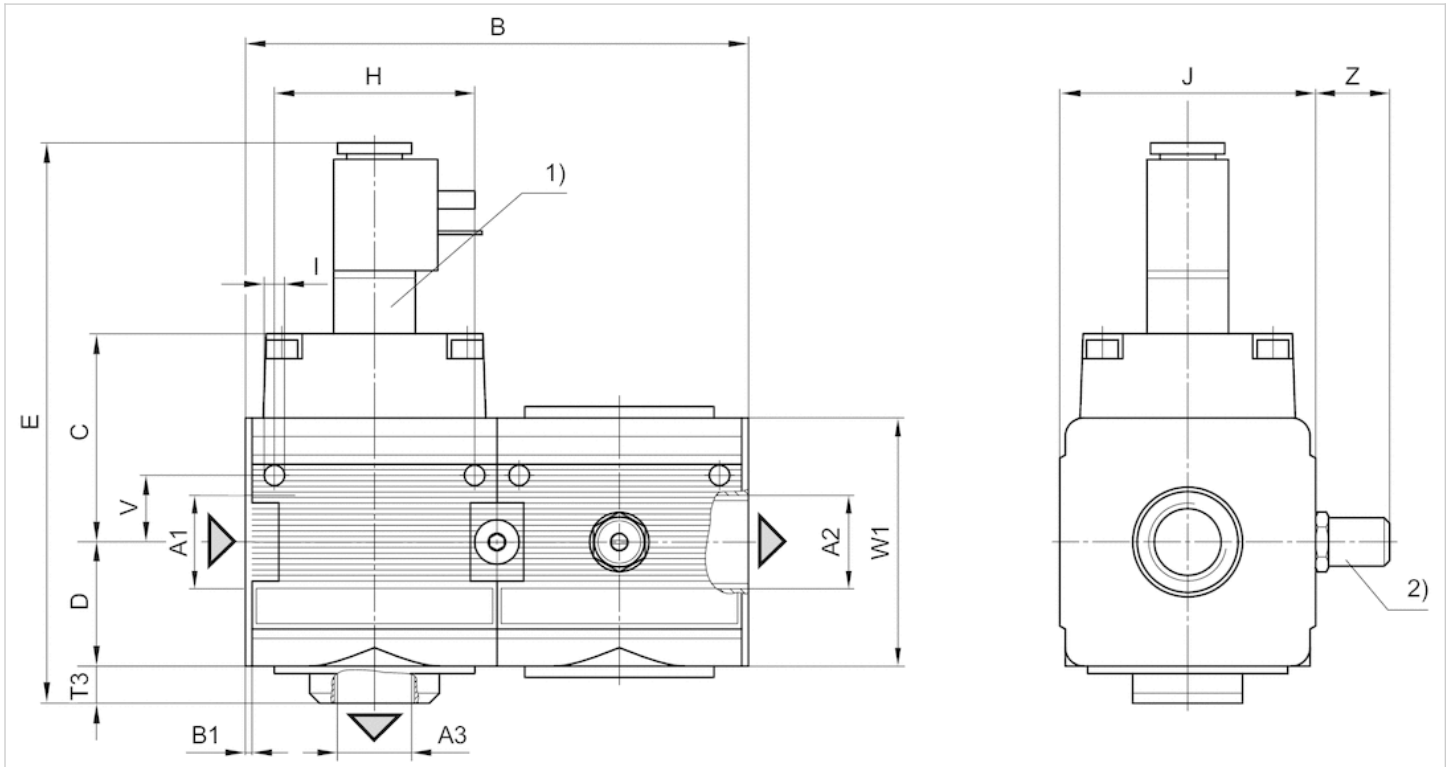
The filling valve builds up pressure slowly in the pneumatic systems, i.e. prevents a sudden pressure build-up during a recommissioning after a mains pressure failure or avoids emergency OFF switching. This allows dangerous abrupt cylinder motions to be avoided.

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene styrene
Threaded bushing	Die cast zinc

## Dimensions

### Dimensions



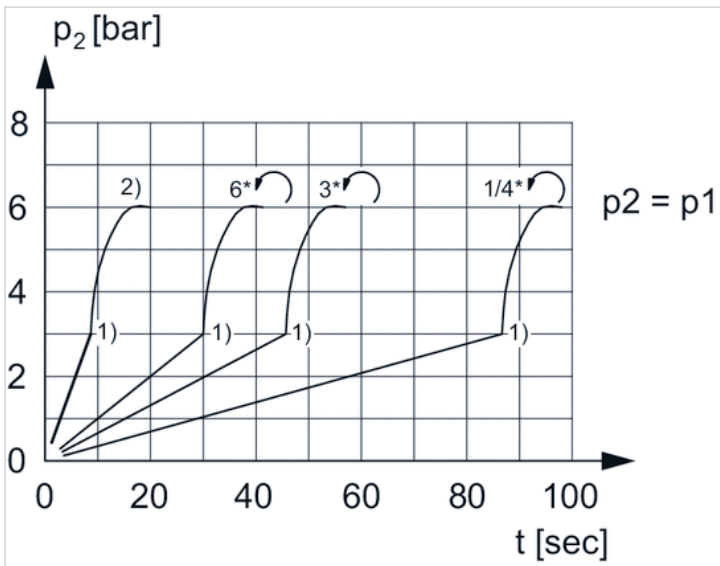
- A1 = input
- A2 = output
- A3 = ventilation port
- 1) electrically operated
- 2) Adjustment screw for filling time

### Dimensions in mm

A1	A2	A3	B	B1	C	D	E	H	I	J	T3	W1	Z
G 1/2	G 1/2	G 1/2	135.6	1.8	56.5	33.5	151	54	5.5	69	10	52	20
G 1/2	G 1/2	G 1/2	135.6	1.8	56.5	33.5	151	54	5.5	69	10	52	-

## Diagrams

### secondary pressure while filling



$p_1$  = working pressure

$p_2$  = secondary pressure

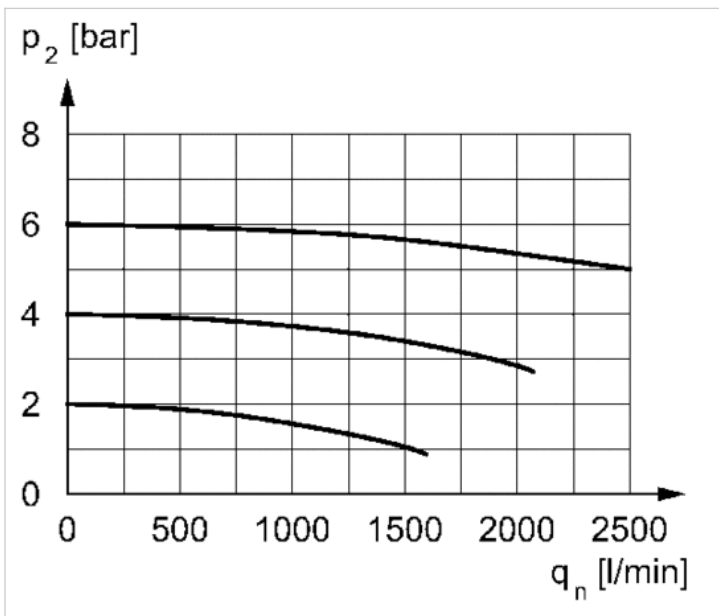
$t$  = filling time, adjustable via adjustment screw (throttle)

1) Switching point: adjustable filling time, fixed change-over pressure  $\approx 0.5 \times p_1$  (50%)

2) Throttle fully opened

\* Adjustment screw rotations

### Flow rate characteristic



$p_2$  = secondary pressure

$q_n$  = nominal flow



# Filling valve, pneumatically operated, Series NL4-SSV

- Compressed air connection G 1/2
- Pipe connection



Version	Poppet valve, Can be assembled into blocks
Sealing principle	Soft sealing
Working pressure min./max.	0 ... 16 bar
Control pressure min./max.	2.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Max. particle size	5 µm
Weight	See table below

## Technical data

Part No.		Port	Flow	Weight	
			Qn		
0821300936		G 1/2	4000 l/min	0.76 kg	1)
0821300935		G 1/2	4000 l/min	0.685 kg	2)

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

- Adjustable filling
- Filling with fixed diaphragm

## Technical information

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

The filling valve builds up pressure slowly in the pneumatic systems, i.e. prevents a sudden pressure build-up during a recommissioning after a mains pressure failure or avoids emergency OFF switching. This allows dangerous abrupt cylinder motions to be avoided.

Do not position filling valves or filling units upstream of open consumers, such as nozzles, air barriers, air curtains, since these may prevent through connection of components.

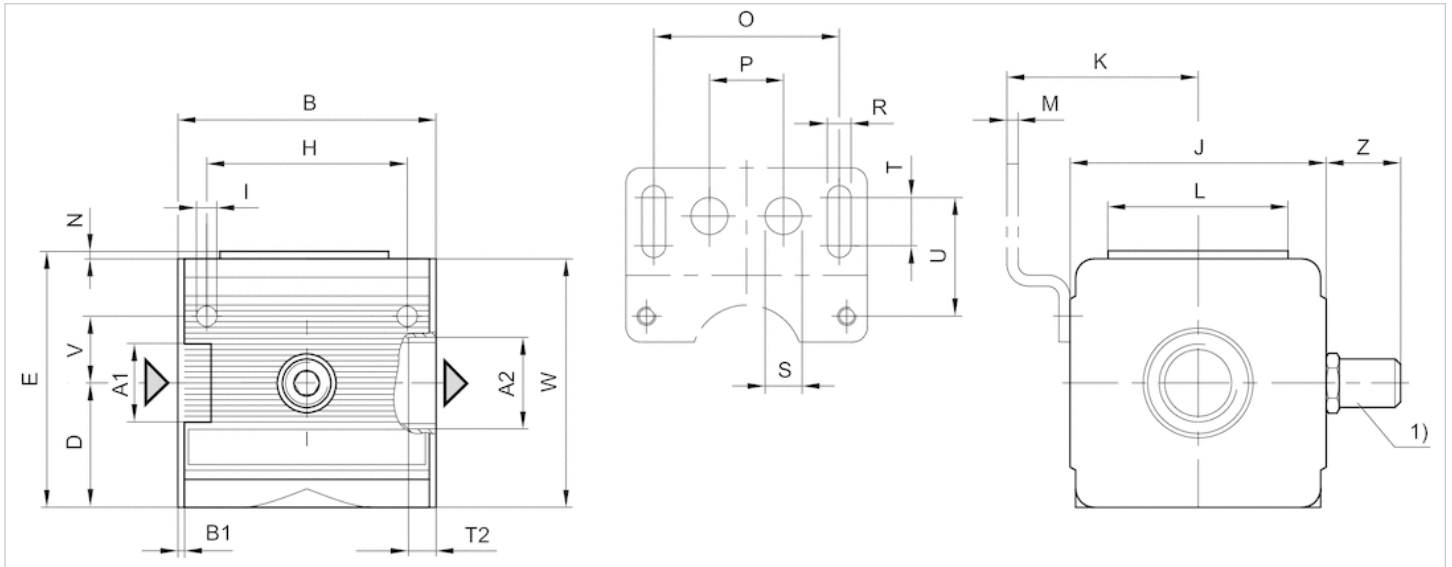
A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber
Threaded bushing	Die cast zinc

## Dimensions

### Dimensions



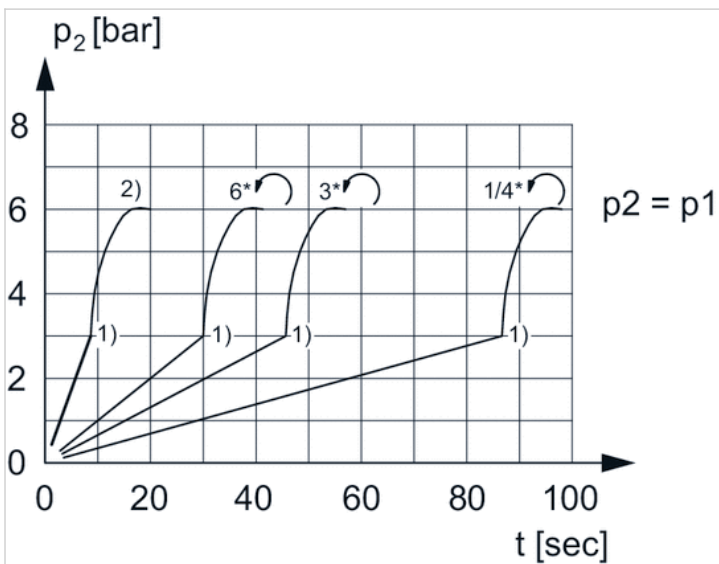
- A1 = input
- A2 = output
- 1) Adjustment screw for filling time

### Dimensions in mm

A1	A2	B	B1	D	E	H	I	J	K	L	M	N	O	P	R	S	T	T2	U	V	W	Z
G 1/2	G 1/2	69.6	1.8	36.5	73	54	5.4	69	54.5	48	3	3	50	20	6.4	10	13	13	33	18	67	20
G 1/2	G 1/2	69.6	1.8	36.5	73	54	5.4	69	54.5	48	3	3	50	20	6.4	10	13	13	33	18	67	-

## Diagrams

### secondary pressure while filling



- $p_1$  = working pressure
- $p_2$  = secondary pressure

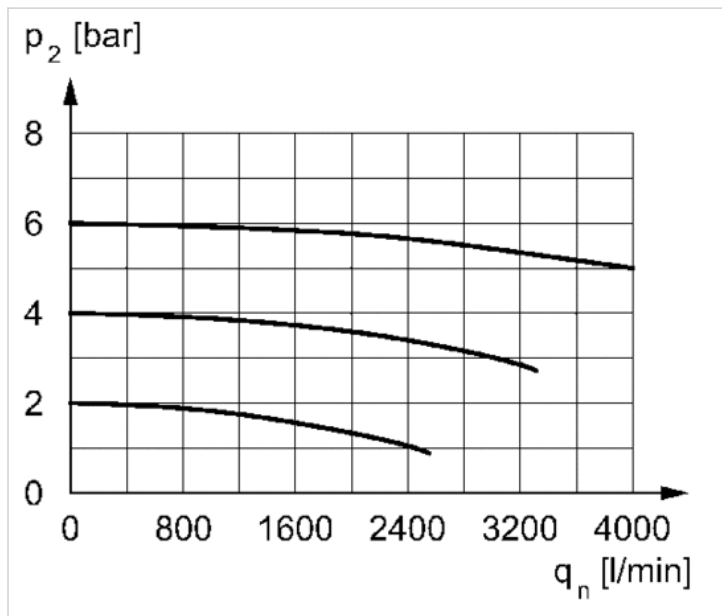
t = filling time, adjustable via adjustment screw (throttle)

1) Switching point: adjustable filling time, fixed change-over pressure  $\approx 0.5 \times p_1$  (50%)

2) Throttle fully opened

\* Adjustment screw rotations

## Flow rate characteristic



p2 = secondary pressure

qn = nominal flow

# 3/2-directional valve, electrically operated, Series NL4-SOV

- Compressed air connection G 1/2
- Pipe connection
- Electrical connection: Plug, ISO 6952, form B



Version	Poppet valve, Can be assembled into blocks
Parts	3/2-directional valve, electrically operated
Nominal flow 1 ▶ 2	4000 l/min
Nominal flow 2 ▶ 3	1600 l/min
Working pressure min./max.	2.5 ... 10 bar
Medium	Compressed air Neutral gases
Medium temperature min./max.	-10 ... 60 °C
Ambient temperature min./max.	-10 ... 60 °C
Pilot	Internal
Sealing principle	Soft sealing
Max. particle size	5 µm
Protection class acc. to DIN EN 61140 with plug	IP65
Duty cycle	100 %
Weight	See table below

## Technical data

Part No.			Compressed air connection input	Compressed air connection output	Exhaust
0821300932		—	G 1/2	G 1/2	G 1/2
0821300933		—	G 1/2	G 1/2	G 1/2
Part No.	Operational voltage		Operational voltage	Operational voltage	
	DC		AC 50 Hz	AC 60 Hz	
0821300932	24 V		-	-	
0821300933	-		230 V	230 V	
Part No.	Power consumption		Holding power	Switch-on power	Manual override
	DC		AC 50 Hz	AC 50 Hz	
0821300932	4.8 W		-	-	-
0821300933	-		8.5 VA	11.8 VA	-
Part No.	Electrical connection		Connector standard	basic valve with electrical connector	
	Pilot valve				
0821300932	Plug, ISO 6952, form B		ISO 6952	-	
0821300933	Plug, ISO 6952, form B		ISO 6952	-	
Part No.	Reverse polarity protection			Weight	
0821300932	Protected against polarity reversal			1.05 kg	
0821300933	Protected against polarity reversal			1.05 kg	

Nominal flow Q<sub>n</sub> with secondary pressure 6 bar at Δp = 1 bar, MO = Manual override



## Technical information

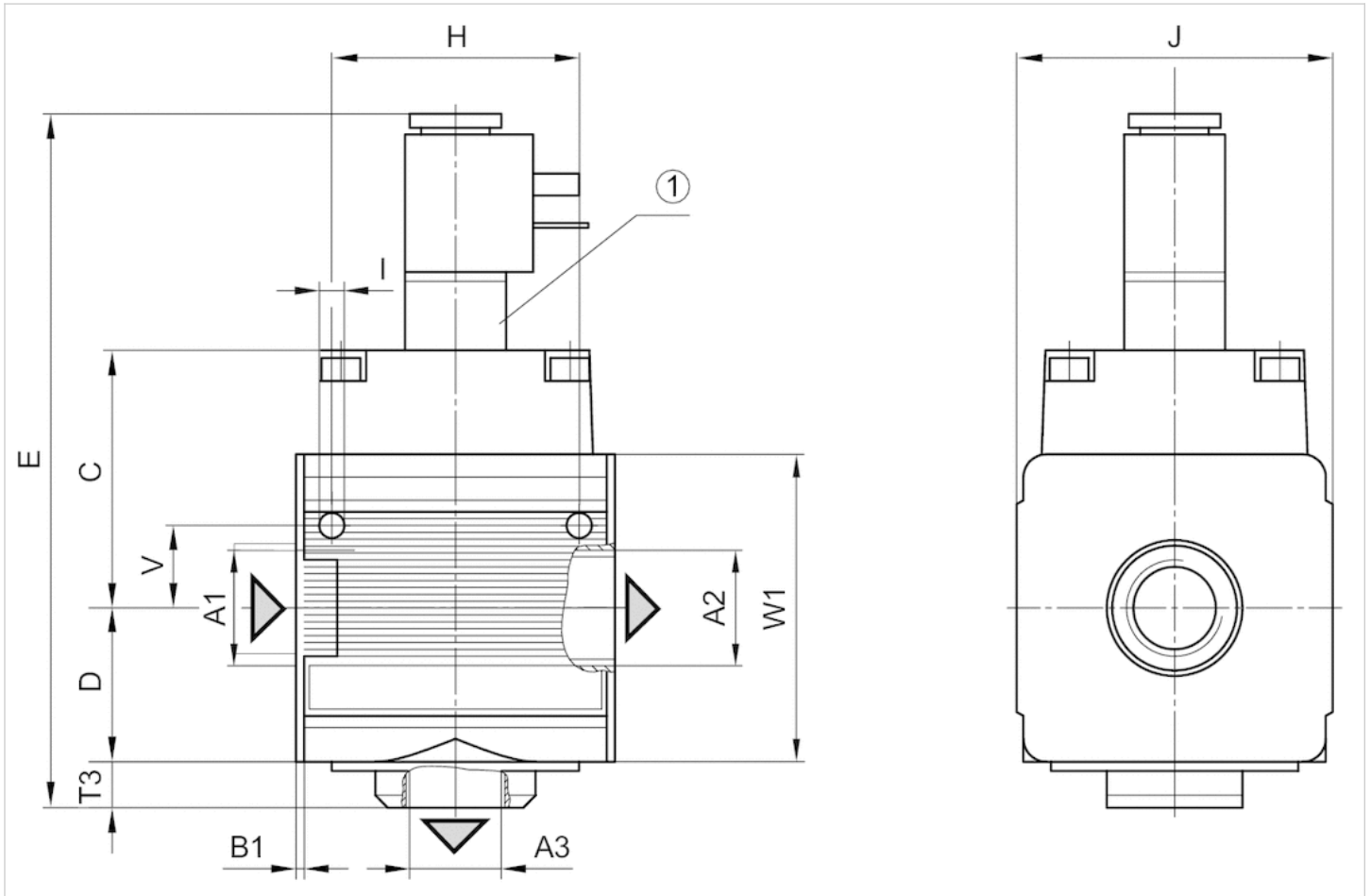
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene styrene

## Dimensions

### Dimensions



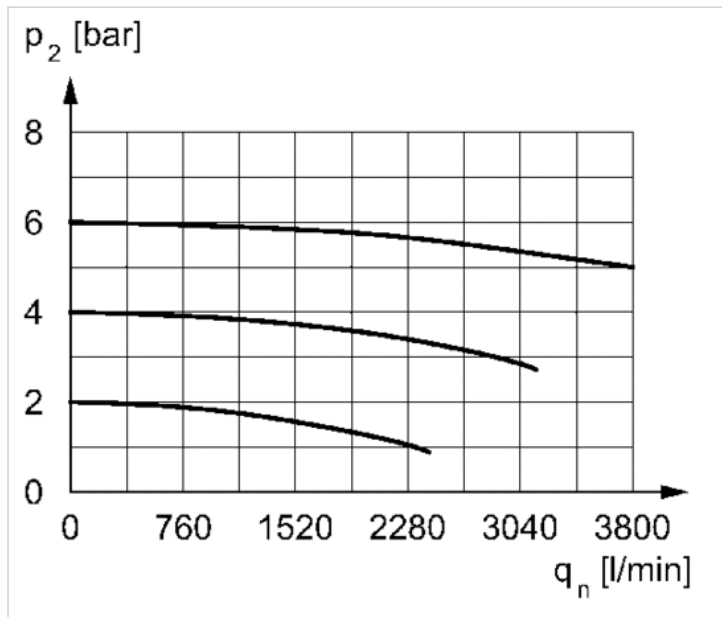
- A1 = input
- A2 = output
- A3 = ventilation port
- 1) electrically operated

### Dimensions in mm

A1	A2	A3	B1	C	D	E	H	I	J	T3	W1
G 1/2	G 1/2	G 1/2	1.8	56.5	33.5	151	54	5.5	69	10	67

## Diagrams

### Flow rate characteristic



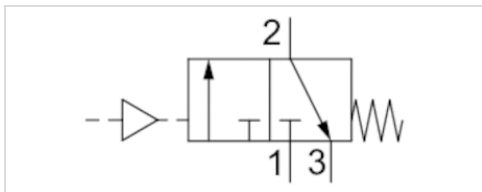
$p_2$  = secondary pressure  
 $q_n$  = nominal flow

# 3/2-directional valve, pneumatically operated, Series NL4-SOV

- Compressed air connection G 1/2
- Pipe connection



Version	Poppet valve, Can be assembled into blocks
Sealing principle	Soft sealing
Working pressure min./max.	0 ... 16 bar
Control pressure min./max.	2.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Weight	1 kg



## Technical data

Part No.	Port	Exhaust	Flow	Flow
			Qn 1→2	Qn 2→3
0821300931	G 1/2	G 1/2	4000 l/min	1600 l/min

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

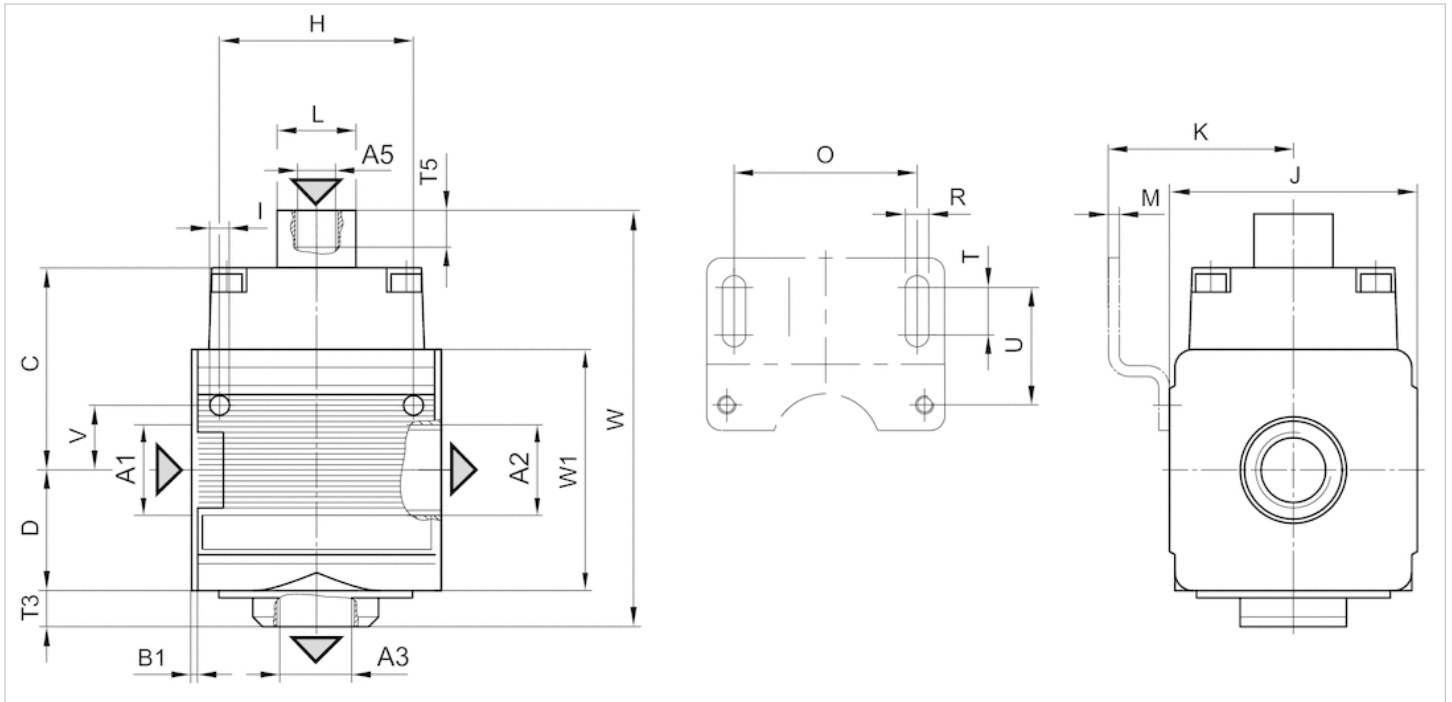
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber

## Dimensions

### Dimensions



- A1 = input
- A2 = output
- A3 = ventilation port
- A5 = control pressure connection

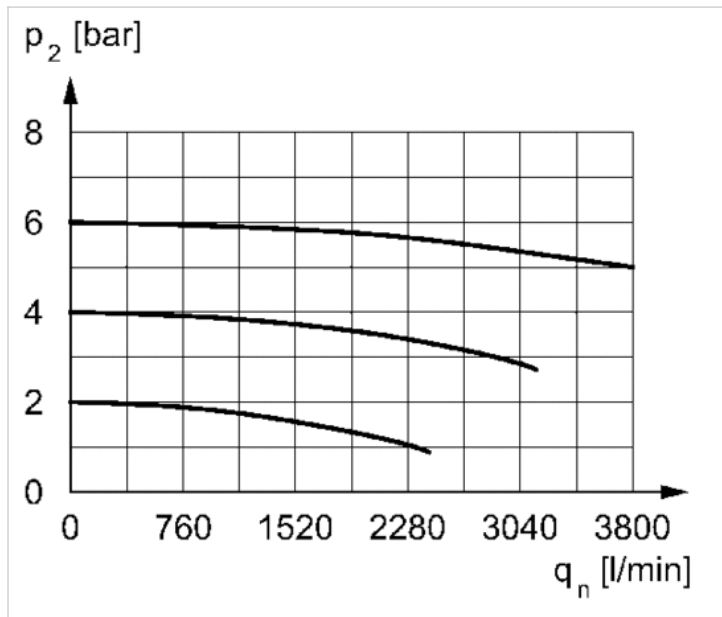
### Dimensions in mm

Part No.	A1	A2	A3	A5	B1	C	D	F	H	I	J	K	L	M	O	R	T	T1	T5	U	V
0821300931	G 1/2	G 1/2	G 1/2	G 1/8	1.8	56.5	33.5	10	54	5.5	69	54.4	22	3	50	6.4	13	1.8	13	33	18

W											W1										
116											67										

## Diagrams

### Flow rate characteristic



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

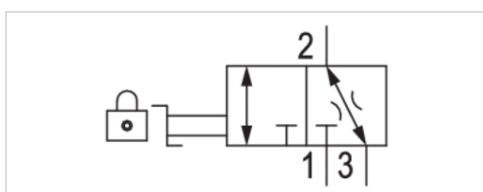
# 3/2-shut-off valve, mechanically operated, Series NL4-BAV

- Qn 1►2 = 11000 l/min
- Qn 2►3 = 110 l/min
- Compressed air connection output G 1/2 G 3/4



Version	Ball valve
Activation	Mechanical
Lock type	lockable
Sealing principle	metal/metal sealing
Working pressure min./max.	0 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Weight	0.82 kg

The delivered product may vary from that in the illustration.



## Technical data

Part No.	Actuating element	Version	Compressed air connection type	Compressed air connection Input
0821300911	rotary switch	3/2	Internal thread	G 1/2
0821300913	rotary switch	3/2	Internal thread	G 3/4
0821300982	Rotary knob	3/2	Internal thread	G 1/2
0821300983	Rotary knob	3/2	Internal thread	G 3/4

Part No.	Compressed air connection Output	Compressed air connection Exhaust	Flow	Flow
			Qn 1 ► 2	Qn 2 ► 3
0821300911	G 1/2	G 1/2	11000 l/min	110 l/min
0821300913	G 3/4	G 1/2	11000 l/min	110 l/min
0821300982	G 1/2	G 1/2	11000 l/min	110 l/min
0821300983	G 3/4	G 1/2	11000 l/min	110 l/min

Part No.	Lock type	Fig.
0821300911	for padlocks	Fig. 1
0821300913	for padlocks	Fig. 1
0821300982	with key	Fig. 2
0821300983	with key	Fig. 2

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

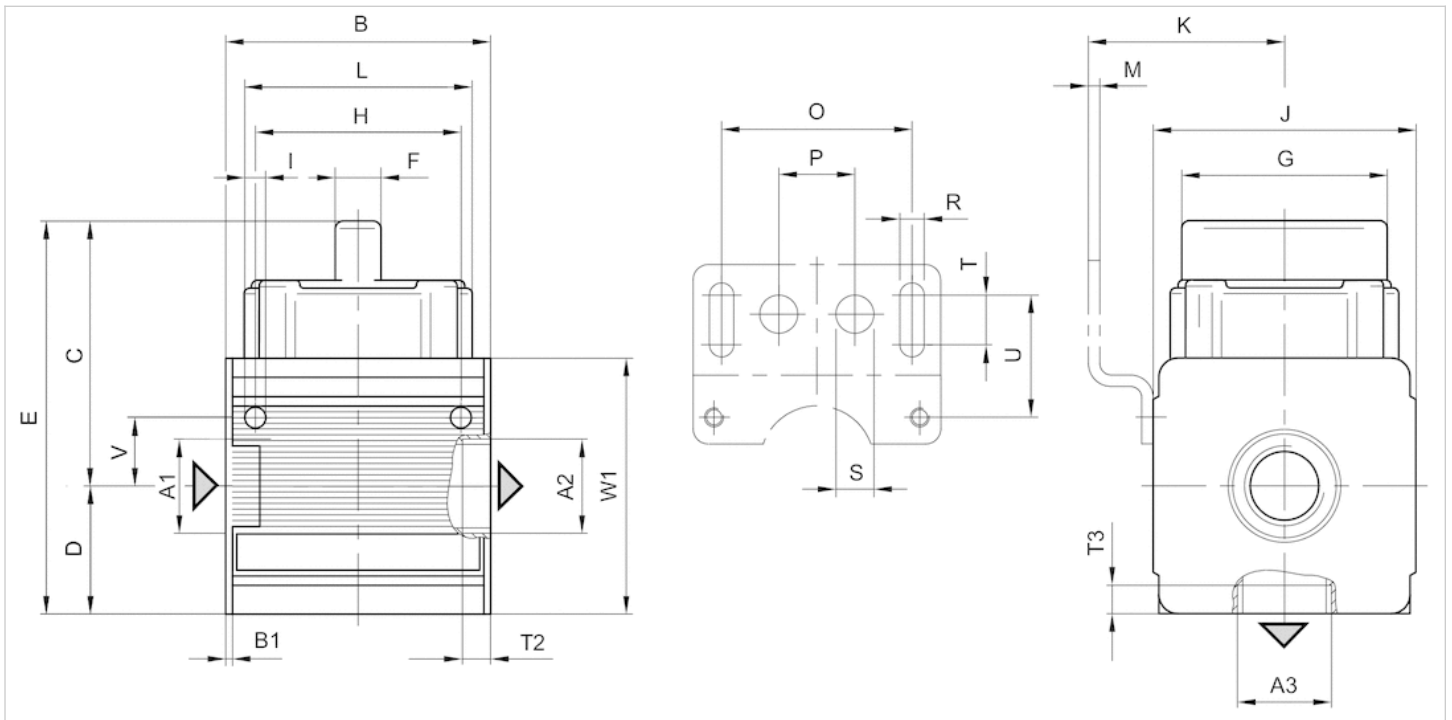
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber
Actuating element	Polyoxymethylene

## Dimensions

Fig. 1



A1 = input  
 A2 = output  
 A3 = ventilation port

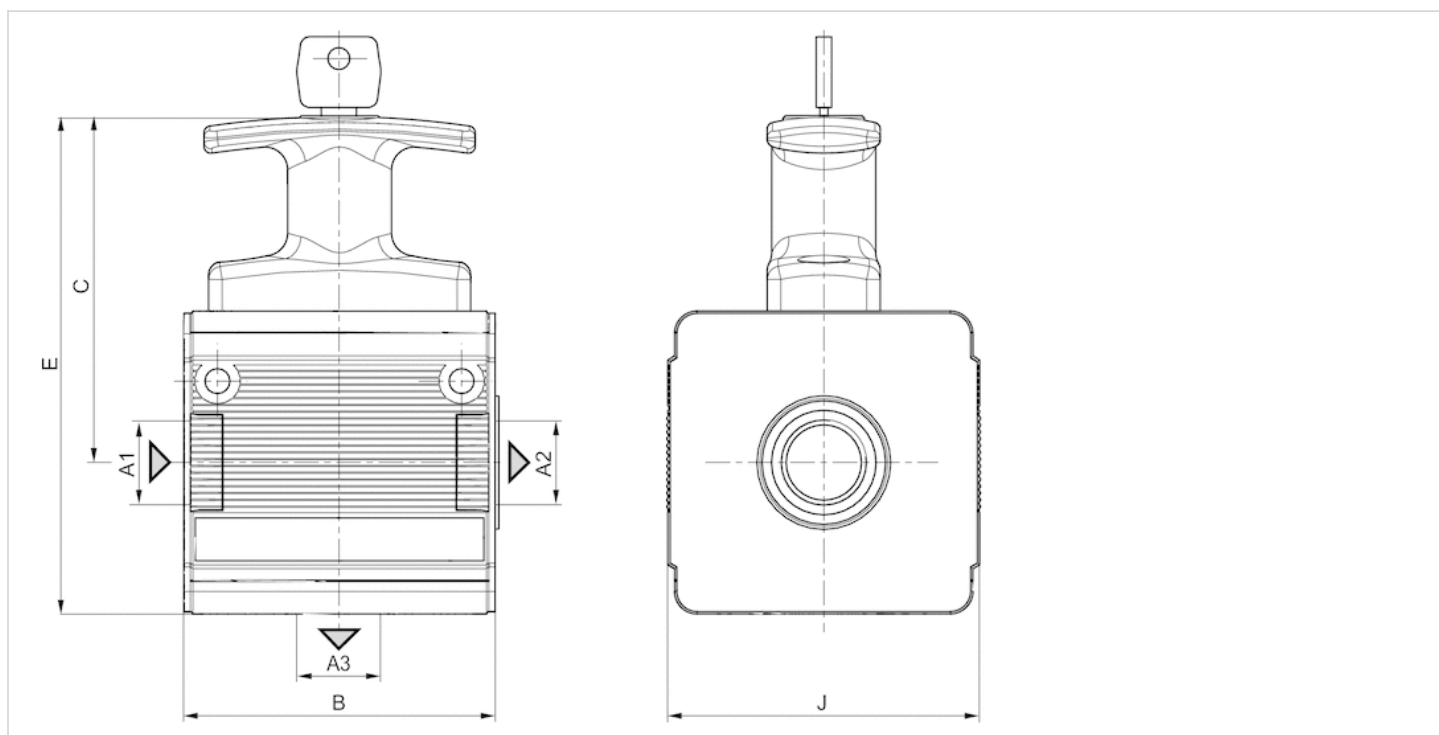
## Dimensions in mm

A2	A3	B	B1	C	D	E	F	H	G	I	J	K	L	M	O	P	R	S	T	T2	T3	U	V	W1
G 1/2	G 1/2	69.6	1.8	69.5	33.5	103	12	54	60	5.5	69	54.5	60	3	38	20	6.4	10	13	10.5	10.5	33	18	67
G 3/4	G 1/2	69.6	1.8	69.5	33.5	103	12	54	60	5.5	69	54.5	60	3	50	20	6.4	10	13	10.5	10.5	33	18	67



## Dimensions

Fig. 2



A1 = input  
A2 = output

## Dimensions in mm

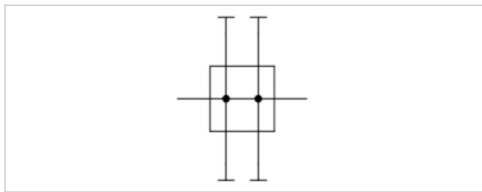
A2	B	C	E	J
G 1/2	69.6	78	111,5	69
G 3/4	69.6	78	111,5	69

# Distributor, Series NL4-DIL

- G 1/2
- Distributor 4x



Version	Narrow distributor, Can be assembled into blocks
Parts	Distributor
Mounting orientation	Any
Working pressure min./max.	0 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Weight	0.4 kg



## Technical data

Part No.	Port	Nominal flow	Nominal flow	Nominal flow	Nominal flow	Nominal flow
		Qn 1►2	Qn 1►3	Qn 1►4	Qn 1►5	Qn 1►6
0821300930	G 1/2	11000 l/min	8750 l/min	1340 l/min	8750 l/min	1340 l/min

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

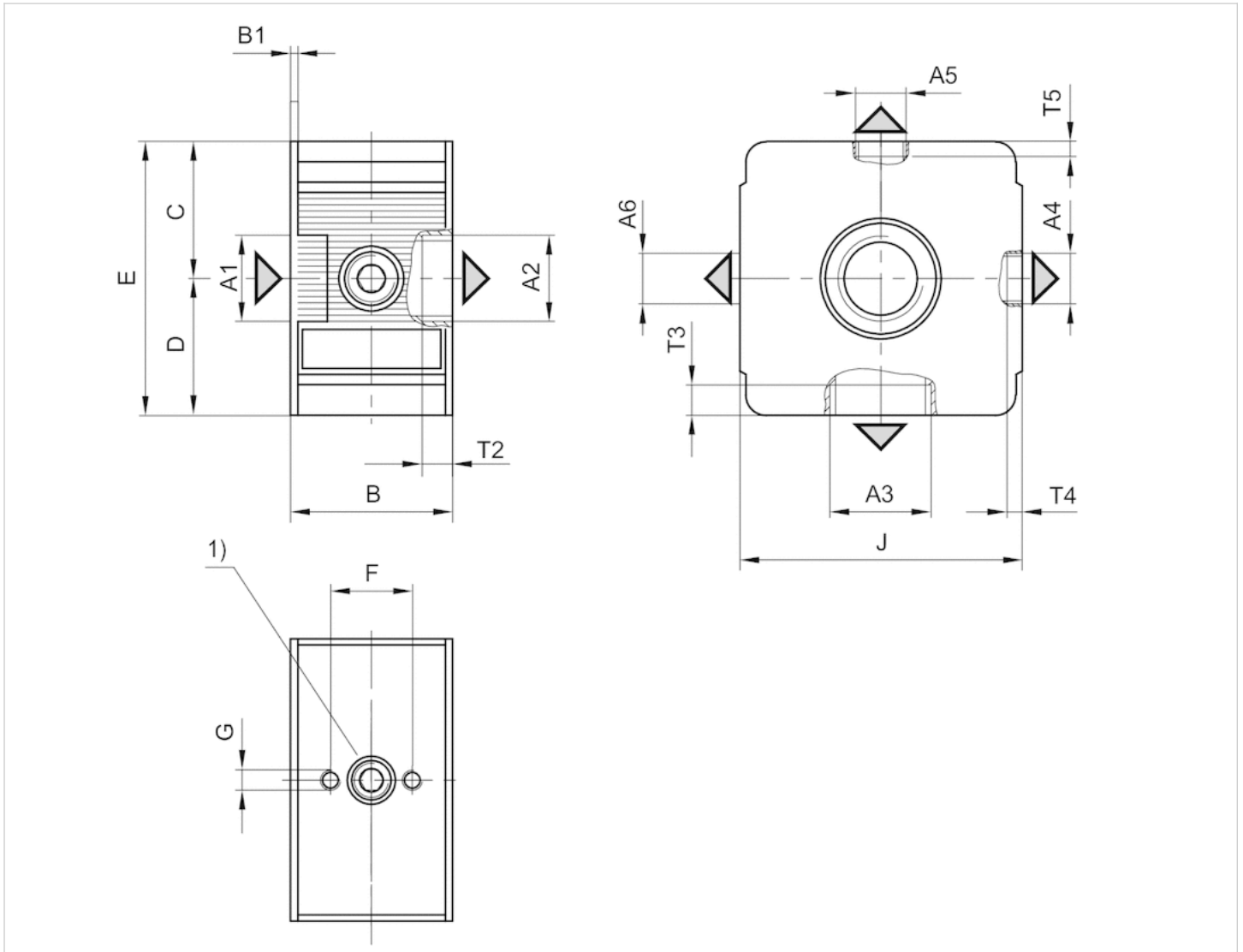
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.  
 Suitable for direct mounting of a PE2 and PM1 series pressure sensor (flange version).

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene

## Dimensions

### Dimensions



- A1 = input
- A2 = output
- A3 = output
- A4 = output
- A5 = output
- A6 = output
- 1) hole pattern for mechanical vacuum/pressure switch

### Dimensions in mm

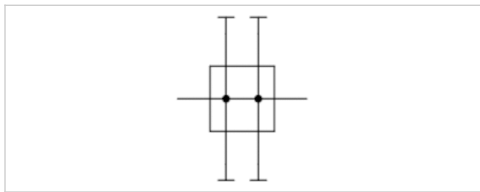
A1	A2	A3	A4	A5	A6	B	B1	C	D	E	F	G	J	T2	T3	T4	T5
G 1/2	G 1/2	G 3/8	G 1/4	G 1/8	G 1/4	39.6	1.8	33.5	33.5	67	20	M5	69	14	10.5	7	8

# Distributor, Series NL4-DIS

- G 1/2 G 3/4
- Distributor 4x
- Distributor



Version	Distributor, Can be assembled into blocks
Parts	Distributor
Mounting orientation	Any
Working pressure min./max.	0 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Weight	0.682 kg



## Technical data

Part No.	Port	Nominal flow	Nominal flow	Nominal flow	Nominal flow	Nominal flow
		Qn 1►2	Qn 1►3	Qn 1►4	Qn 1►5	Qn 1►6
0821300917	G 1/2	11000 l/min	8750 l/min	1340 l/min	8750 l/min	1340 l/min
0821300919	G 3/4	11000 l/min	8750 l/min	1340 l/min	8750 l/min	1340 l/min

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

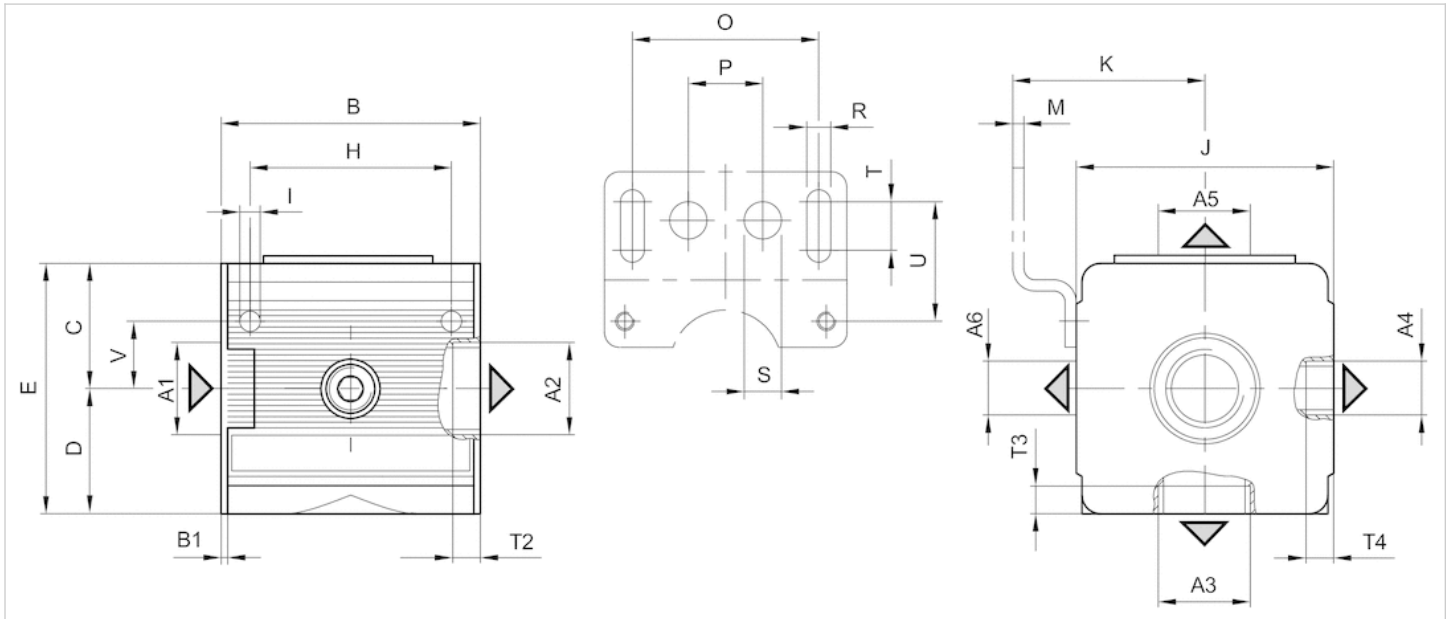
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene

# Dimensions

## Dimensions



- A1 = input
- A2 = output
- A3 = output
- A4 = output
- A5 = output
- A6 = output

## Dimensions in mm

A1	A2	A3	A4	A5	A6	B	B1	C	D	E	H	I	J	K	M	O	P	R	S	T	T2
G 1/2	G 1/2	G 1/2	G 1/4	G 1/2	G 1/4	69.6	1.8	33.5	33.5	67	54	5.5	69	54.5	3	50	20	6.4	10	13	13
G 3/4	G 3/4	G 1/2	G 1/4	G 1/2	G 1/4	69.6	1.8	33.5	33.5	67	54	5.5	69	54.5	3	50	20	6.4	10	13	13

T3	T4	U	V
7.5	9	33	18
7.5	9	33	18

# Distributor, Series NL4-DIN

- G 1/2 G 3/4
- Distributor 4x
- Non-return valve



Version

Non-return valve, Can be assembled into blocks

Parts

Distributor

Mounting orientation

Any

Working pressure min./max.

0.1 ... 16 bar

Ambient temperature min./max.

-10 ... 60 °C

Medium temperature min./max.

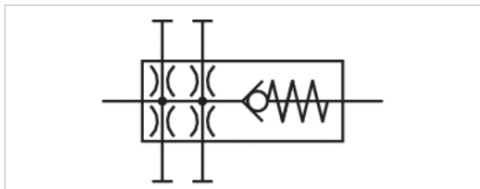
-10 ... 60 °C

Medium

Compressed air Neutral gases

Weight

0.682 kg



## Technical data

Part No.	Port	Nominal flow	Nominal flow	Nominal flow	Nominal flow	Nominal flow
		Qn 1►2	Qn 1►3	Qn 1►4	Qn 1►5	Qn 1►6
0821300914	G 1/2	2400 l/min	2400 l/min	1020 l/min	2400 l/min	1020 l/min
0821300916	G 3/4	2400 l/min	2400 l/min	1020 l/min	2400 l/min	1020 l/min

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

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

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

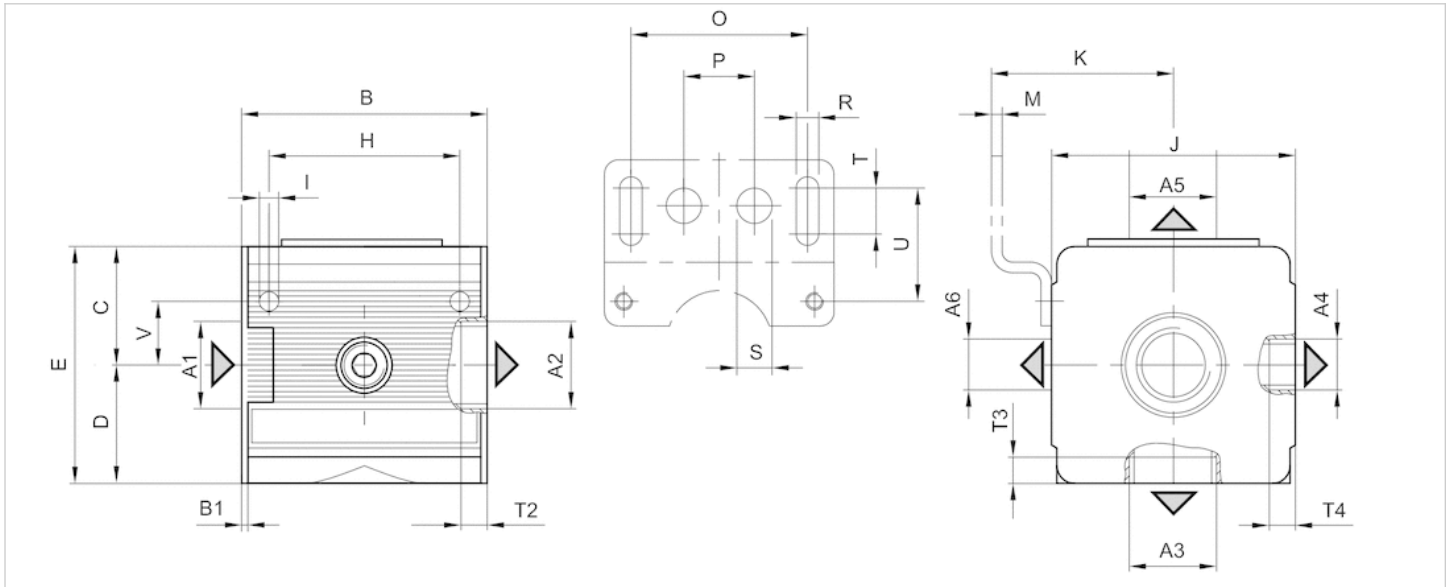
## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene

Material	
Seals	Acrylonitrile butadiene rubber

## Dimensions

### Dimensions



- A1 = input
- A2 = output
- A3 = output
- A4 = output
- A5 = output
- A6 = output

### Dimensions in mm

A1	A2	A3	A4	A5	A6	B	B1	C	D	E	H	I	J	K	M	O	P	R	S	T	T2
G 1/2	G 1/2	G 1/2	G 1/4	G 1/2	G 1/4	69.6	1.8	33.5	33.5	67	54	5.5	69	54.5	3	50	20	6.4	10	13	13
G 3/4	G 3/4	G 1/2	G 1/4	G 1/2	G 1/4	69.6	1.8	33.5	33.5	67	54	5.5	69	54.5	3	50	20	6.4	10	13	13

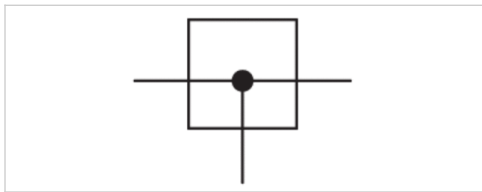
T3		T4		U		V	
7.5		9		33		18	
7.5		9		33		18	

# Distributor, Series NL4-DIC

- G 3/4
- Distributor 1x
- Center infeed



Version	Center infeed, Can be assembled into blocks
Parts	Distributor
Mounting orientation	Any
Working pressure min./max.	0 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air Neutral gases
Weight	0.593 kg



## Technical data

Part No.	Port	Nominal flow	
		Qn 1→2	Qn 1→3
0821300928	G 3/4	11000 l/min	11000 l/min

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .  
 A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

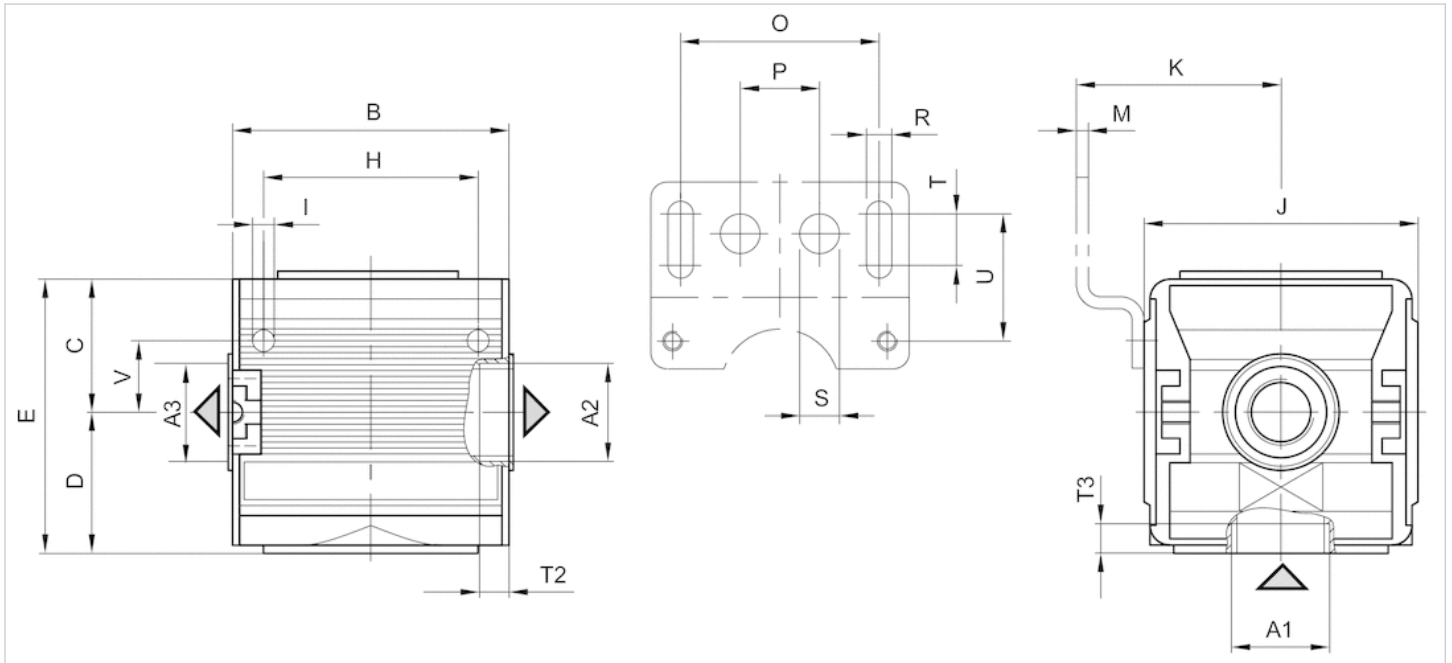
## Technical information

Material	
Housing	Die cast zinc
Front plate	Acrylonitrile butadiene styrene



## Dimensions

### Dimensions



A1 = input  
 A2 = output  
 A3 = output

### Dimensions in mm

A1	A2	A3	B	C	D	E	H	I	J	K	M	O	P	R	S	T	T2	T3	U	V
G 3/4	G 1/2	G 1/2	66	35.5	35.5	71	54	5.5	69	54.5	3	50	20	6.4	10	13	13	10.5	33	18

# Reservoir, Series NL4-CLS, NL6-CLS

- For filter - filter pressure regulator
- Material Polycarbonate Die cast zinc



Version	Reservoir
Working pressure min./max.	1.5 ... 16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Medium	Compressed air
Filter reservoir volume	50 cm <sup>3</sup>
Weight	See table below

## Technical data

Part No.	Condensate drain	Reservoir	Weight
1827009337	semi-automatic, open without pressure	Polycarbonate	0.17 kg
1827009343	semi-automatic, open without pressure	Die cast zinc, with window	0.55 kg
1827009338	fully automatic, open without pressure	Polycarbonate	0.2 kg
1827009344	fully automatic, open without pressure	Die cast zinc, with window	0.56 kg

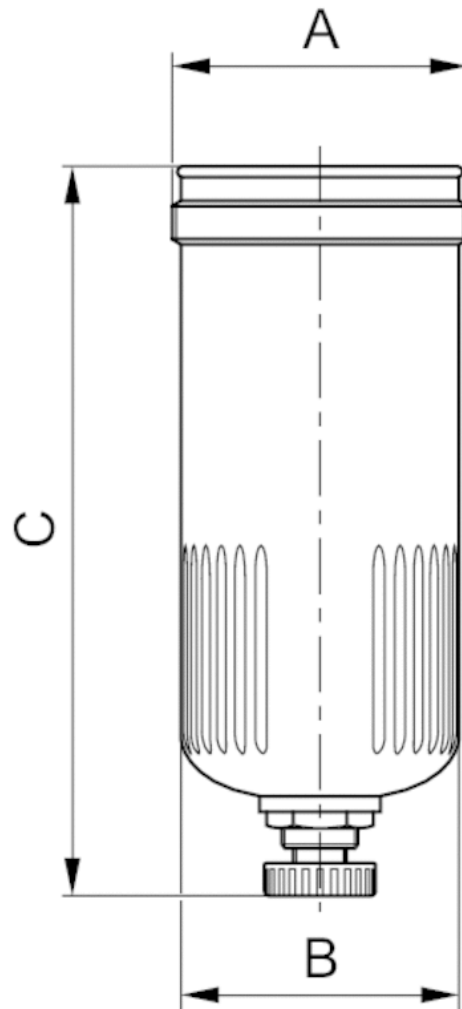
Part No.	Fig.
1827009337	Fig. 1
1827009343	Fig. 2
1827009338	Fig. 3
1827009344	Fig. 4

## Technical information

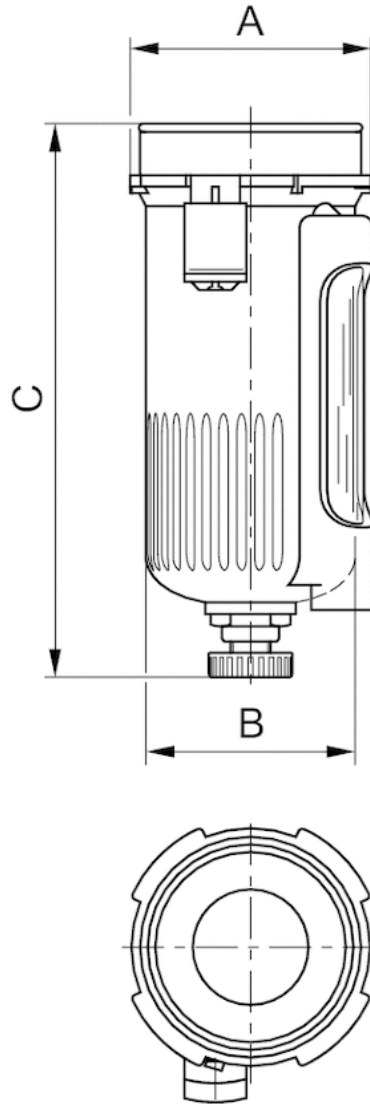
Material	
Reservoir	Polycarbonate Die cast zinc
Seal	Acrylonitrile butadiene rubber

## Dimensions

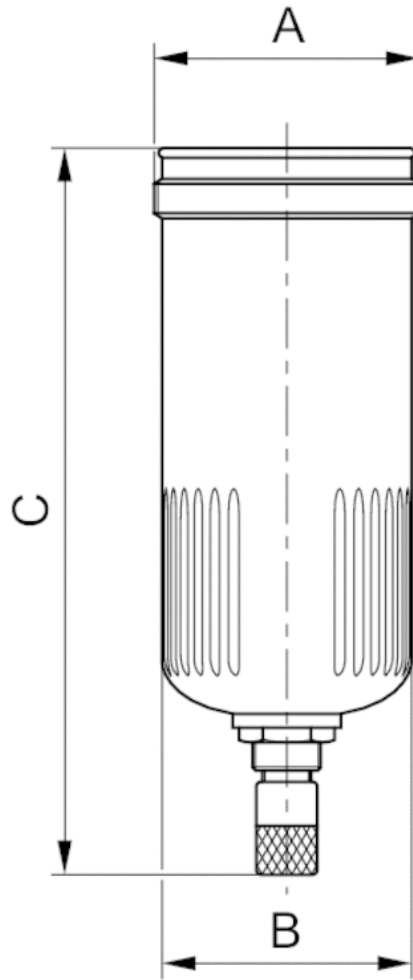
Dimensions, Fig. 1



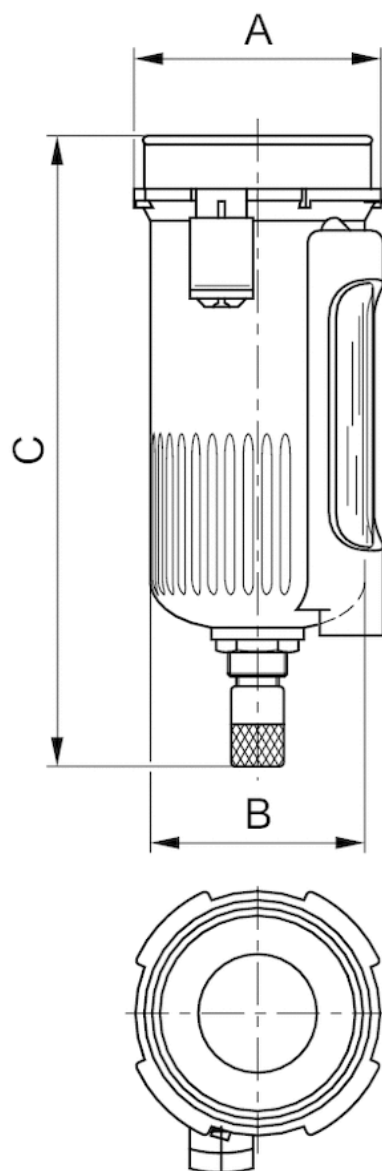
Dimensions, Fig. 2



Dimensions, Fig. 3



Dimensions, Fig. 4



Dimensions in mm

Part No.	A	B	C
1827009337	M56x1,5	53.5	132
1827009343	62.5	53.5	132
1827009338	M56x1,5	53.5	150
1827009344	62.5	53.5	150

# Reservoir, Series NL4-CLC

- for prefilters and microfilters

- Material Die cast zinc



Version

Version

Working pressure min./max.

Ambient temperature min./max.

Medium temperature min./max.

Medium

Filter reservoir volume

Weight

Reservoir

Metal reservoir without window

1.5 ... 16 bar

-10 ... 50 °C

-10 ... 50 °C

Compressed air

50 cm<sup>3</sup>

See table below

## Technical data

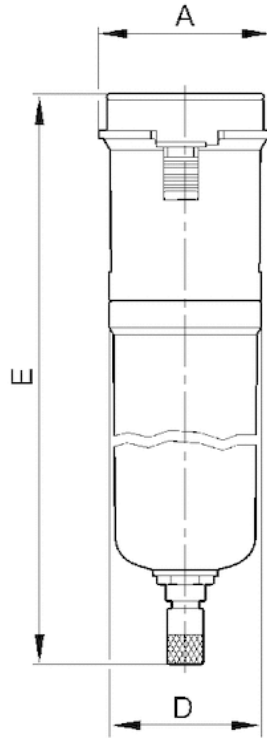
Part No.	Condensate drain	Weight
1827009602	fully automatic, open without pressure	0.54 kg
1827009603	fully automatic, open without pressure	0.655 kg

## Technical information

Material	
Reservoir	Die cast zinc
Seal	Acrylonitrile butadiene rubber

## Dimensions

### Dimensions



### Dimensions in mm

Part No.	A	D	E
1827009602	62.5	52	195
1827009603	62.5	52	281



# Reservoir, Series NL4-CLA

- for active carbon filter
- Material Die cast zinc



Version	Reservoir
Version	Metal reservoir without window
Working pressure min./max.	16 bar
Ambient temperature min./max.	-10 ... 50 °C
Medium temperature min./max.	-10 ... 50 °C
Medium	Compressed air
Filter reservoir volume	50 cm <sup>3</sup>
Weight	See table below

## Technical data

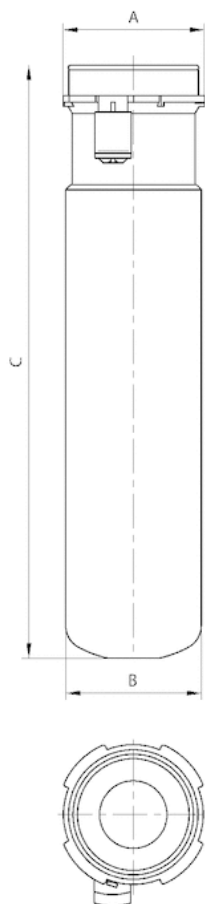
Part No.	Condensate drain	Weight
1827009608	semi-automatic, open without pressure	0.51 kg
1827009609	semi-automatic, open without pressure	0.61 kg

## Technical information

Material	
Reservoir	Die cast zinc
Seal	Acrylonitrile butadiene rubber

## Dimensions

### Dimensions



### Dimensions in mm

Part No.	A	B	C
1827009608	62.5	56	172
1827009609	62.5	56	258

# Reservoir, Series NL4-CBS, NL4-CLA, NL6-CBS

- for active carbon filter and lubricator
- Material Polycarbonate Die cast zinc



Version	Reservoir
Working pressure min./max.	16 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °C
Lubricator reservoir volume	125 cm <sup>3</sup>
Weight	See table below

## Technical data

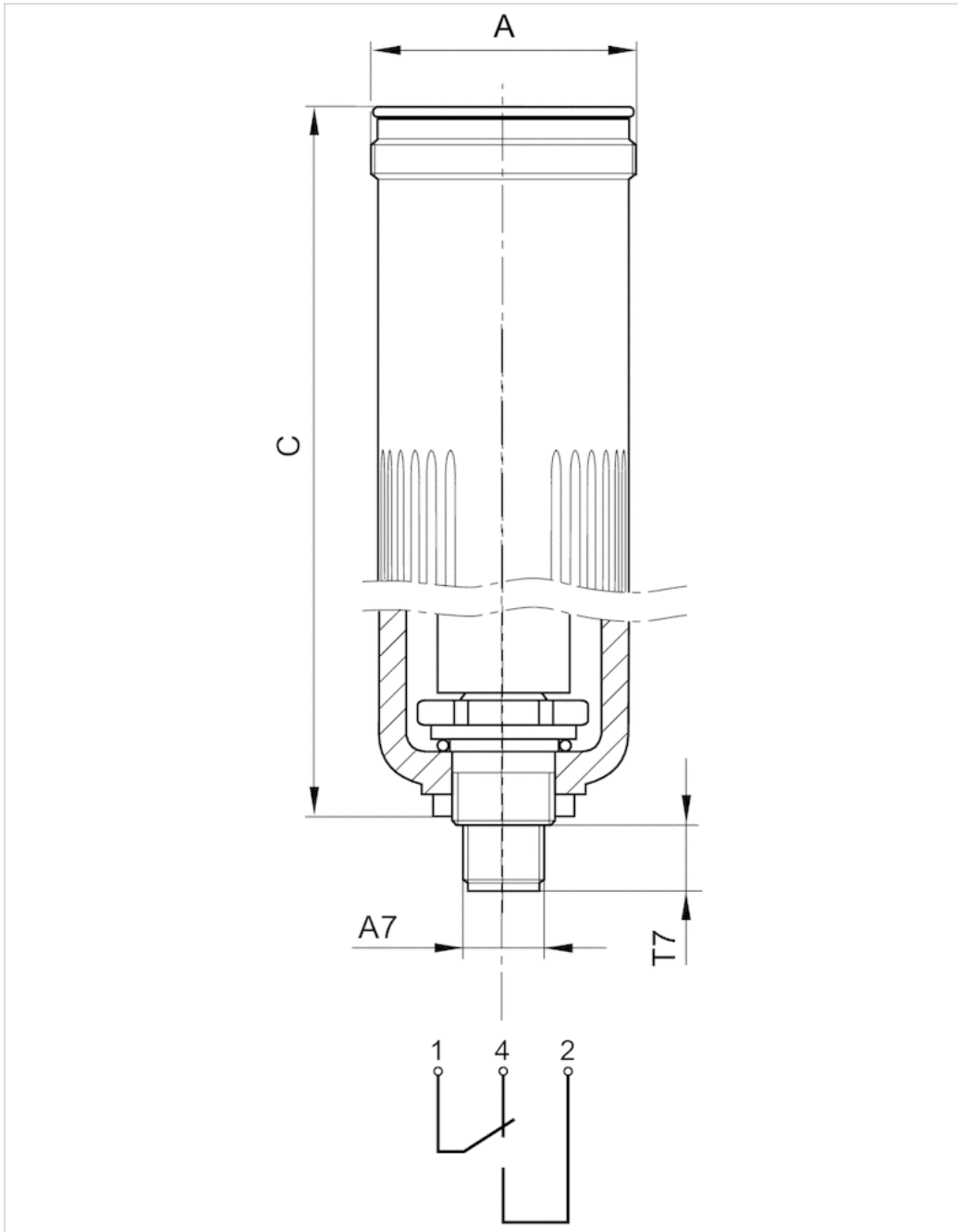
Part No.	Electrical level indicator	Reservoir	Weight	Fig.
R412003757	with internal query	Polycarbonate	0.18 kg	Fig. 1
1827009336	-	Polycarbonate	0.15 kg	Fig. 2
1827009342	-	Die cast zinc, with window	0.55 kg	Fig. 3

## Technical information

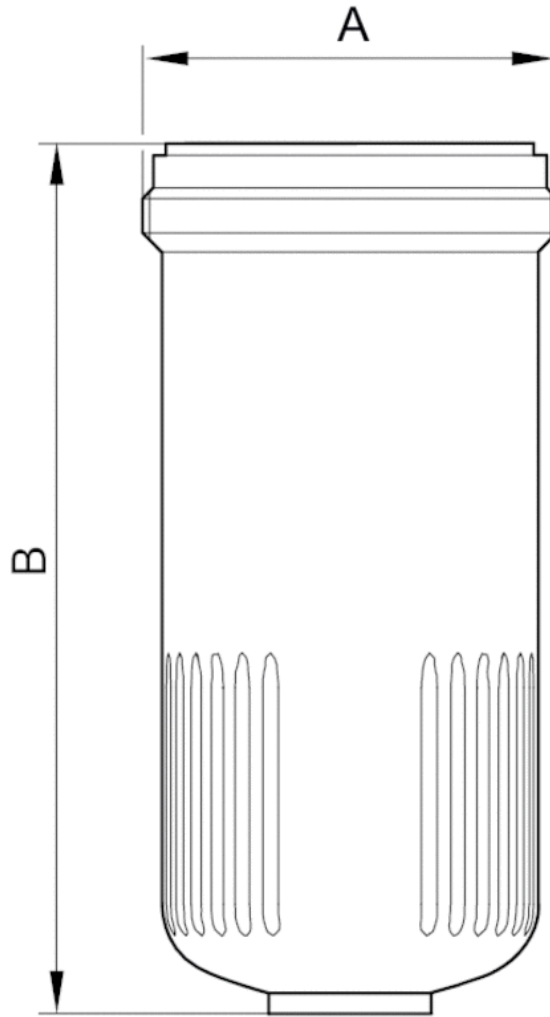
Material	
Reservoir	Polycarbonate Die cast zinc
Seal	Acrylonitrile butadiene rubber

# Dimensions

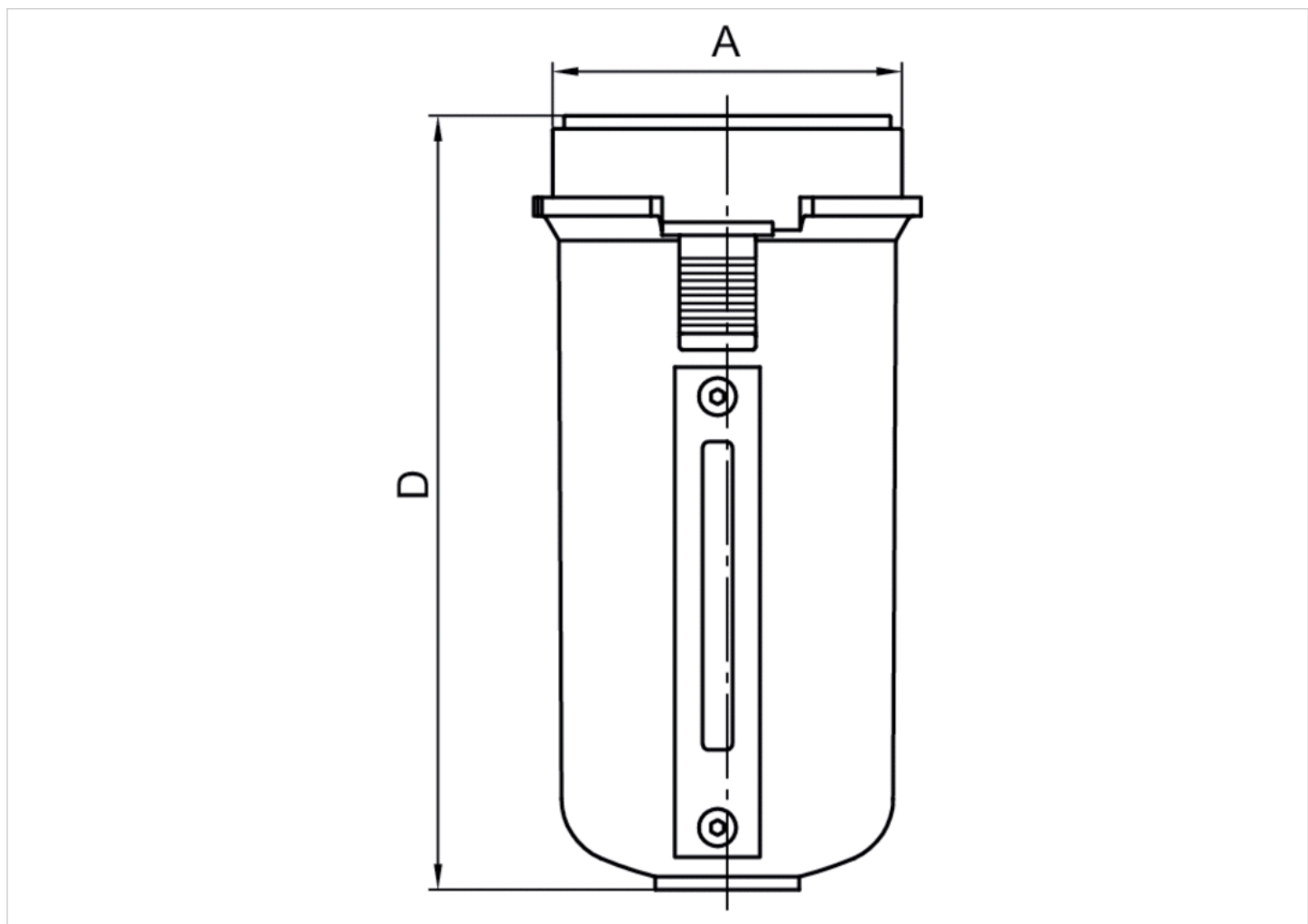
Dimensions, Fig. 1



Dimensions, Fig. 2



Dimensions, Fig. 3



Dimensions in mm

Part No.	A	A7	B	C	D	T7
R412003757	M56x1.5	M12x1	-	129.5	-	12
1827009336	M56x1.5	-	117.5	129.5	-	-
1827009342	Ø53.1	-	-	119	119	-

# Protective guard

- NL4, NL6
- Filter, Lubricator



Weight

0.14 kg

## Technical data

Part No.	Type
1820507001	NL4

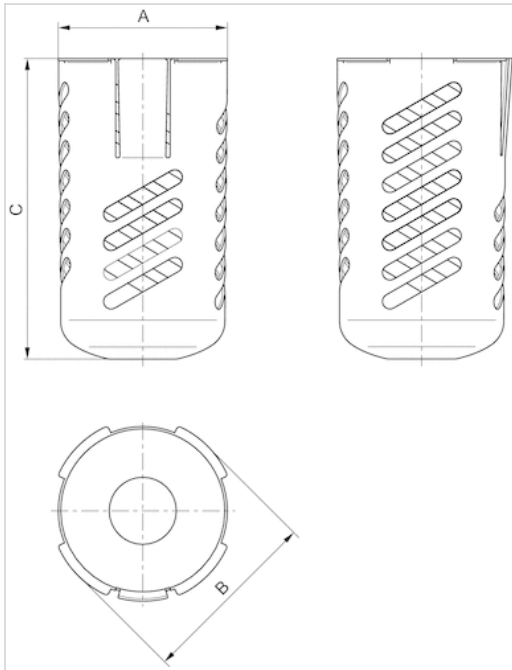
## Technical information

Can be retrofitted for PC reservoir

## Technical information

Material	
Material	Steel black oxidized

## Dimensions



## Dimensions

Part No.	Type	A	B	C
1820507001	NL4	57,8	62,6	103



# Mounting plate, Series NL4-MBR-...-W01



Ambient temperature min./max. -40 ... 60 °C  
 Weight 0.1 kg

## Technical data

Part No.

1821336007

Scope of delivery incl. mounting screws

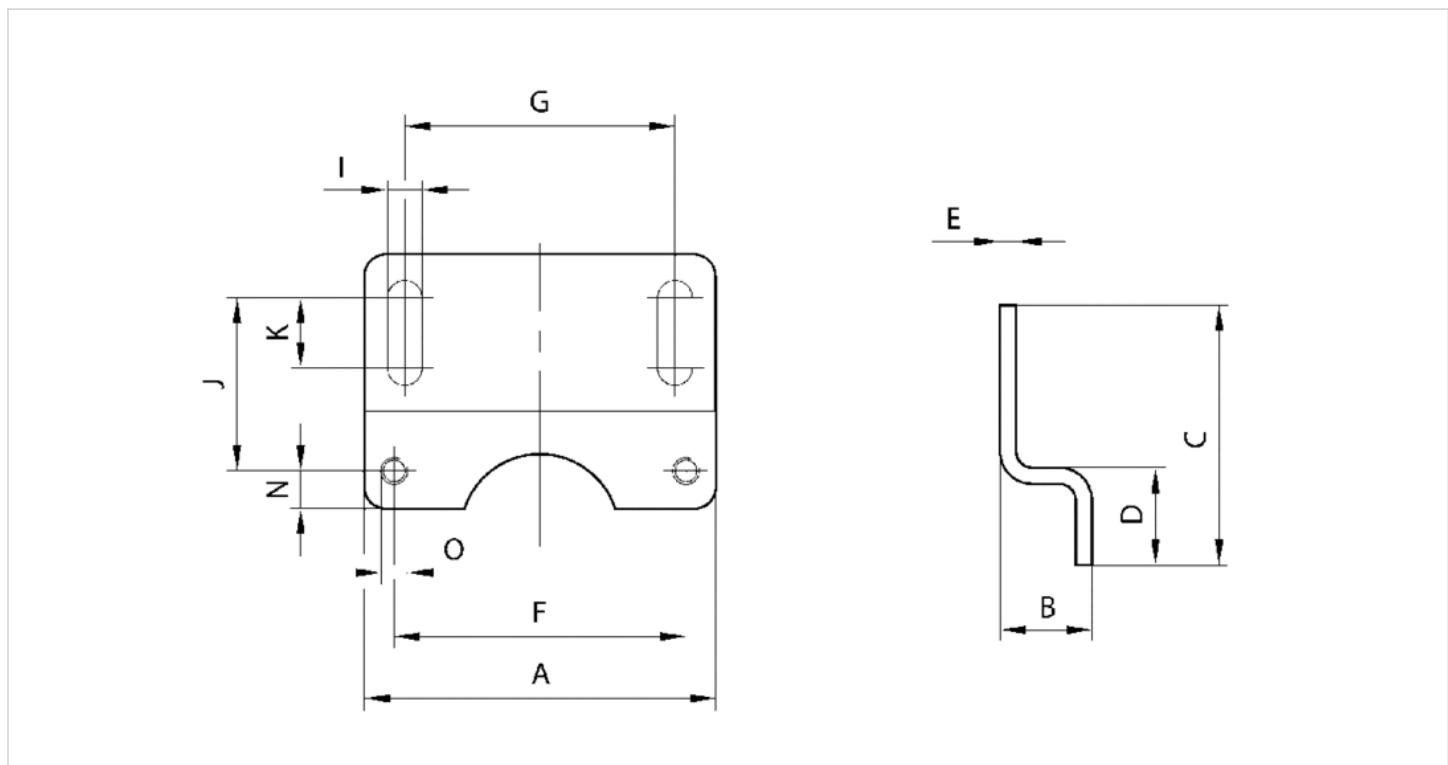
## Technical information

Material

Housing

Steel, galvanized

## Dimensions



## Dimensions

Part No.	A	B	C	D	E	F	G	I	J	K	N	O
1821336007	65	20	48	18	3	54	50	6.4	33	13	7	M5

# Mounting bracket, Series NL4-MBR-...-W02

- for NL4



Weight

0.1 kg

## Technical data

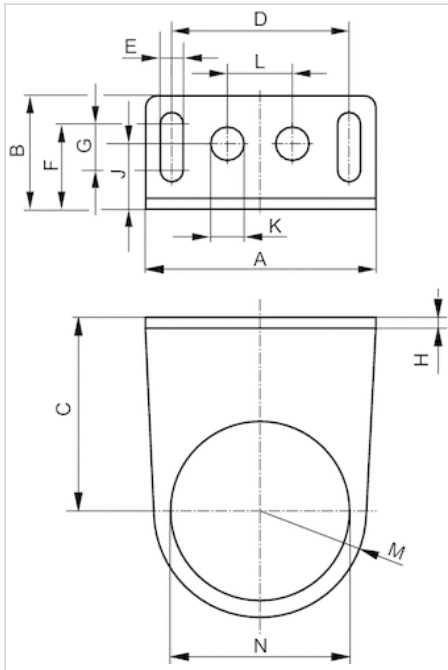
Part No.	for
1821331014	NL4

## Technical information

Material	
Housing	Steel, galvanized

## Dimensions

### Dimensions



## Dimensions

Part No.	A	B	C	D	E	F	G	H	J	K	L	M	N
1821331014	65	32	54.5	50	6.4	24	13	3	19	10	20	30	50.5

# Block assembly kit, Series NL4-MBR-...-W04



Weight

0.025 kg

## Technical data

Part No.

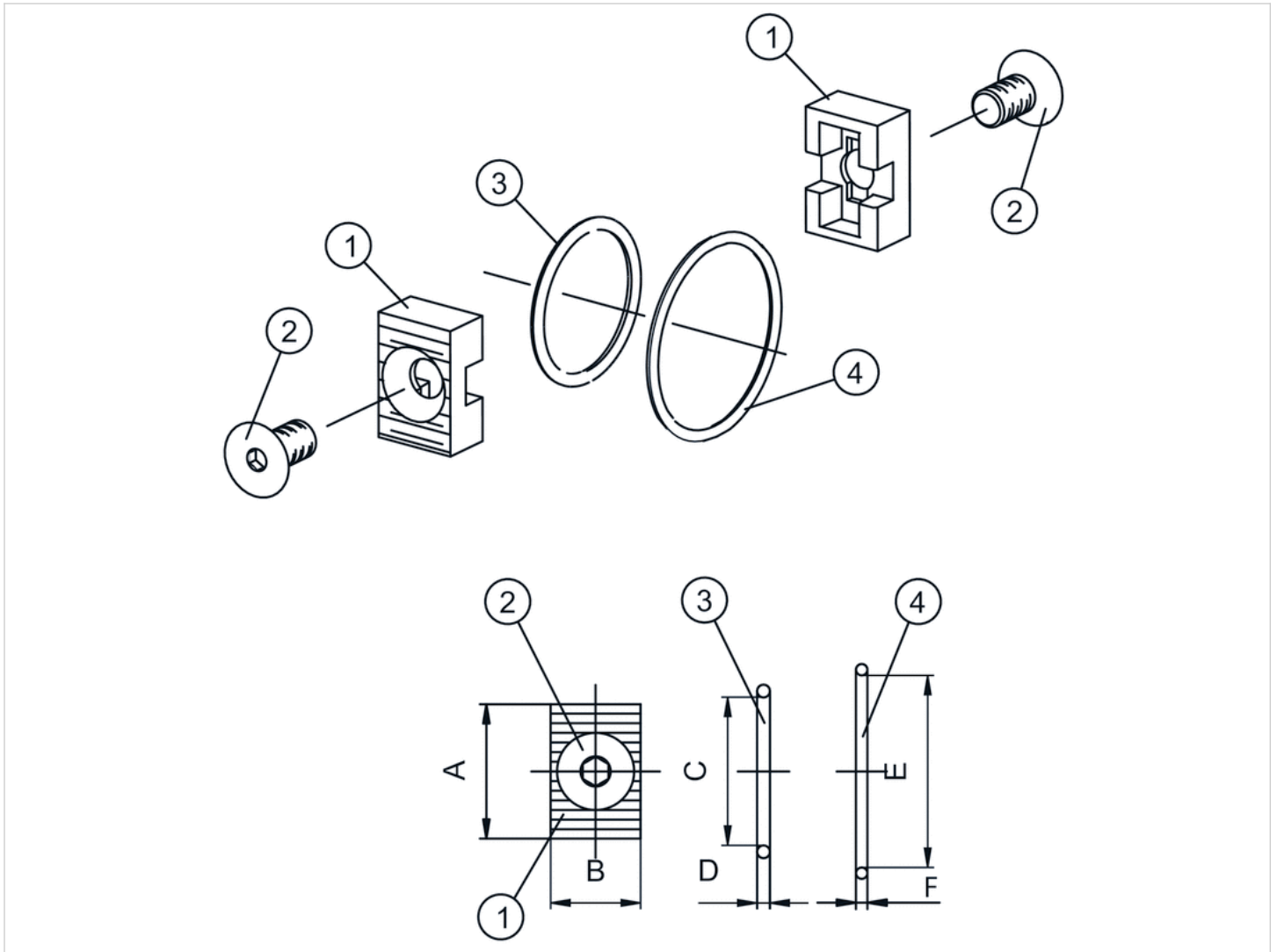
1827009360

Scope of delivery: 2 clamp mountings, 2 screws ISO 10642 M6x10-8.8, 2 O-rings

## Technical information

to assemble two modules into blocks

## Dimensions



1) clamp mounting 2) screw 3) O-ring 4) O-ring

## Dimensions

Part No.	A	B	C	D	E	F
1827009360	20.9	14	23	2	29.87	1.78

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

- M50x1.5
- for AS5, NL4



Weight

0.009 kg

The delivered product may vary from that in the illustration.

## Technical data

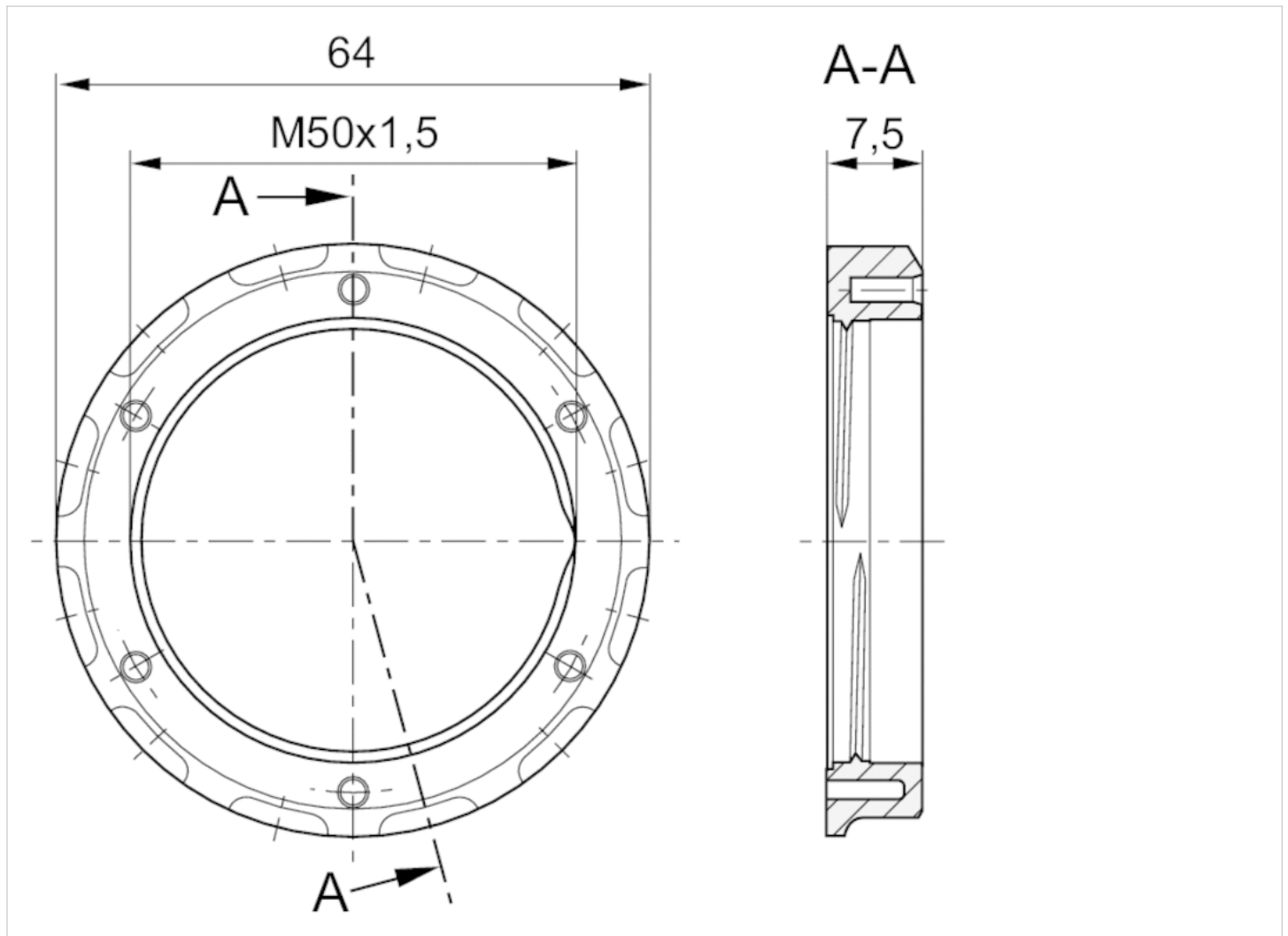
Part No.	Port	for	Scope of delivery
1829234071	M50x1.5	AS5, NL4	2 piece

## Technical information

Material	
Housing	Plastic

## Dimensions

Dimensions in mm





# Mounting screws for wall mounting, Series NL2, NL4



Weight

See table below

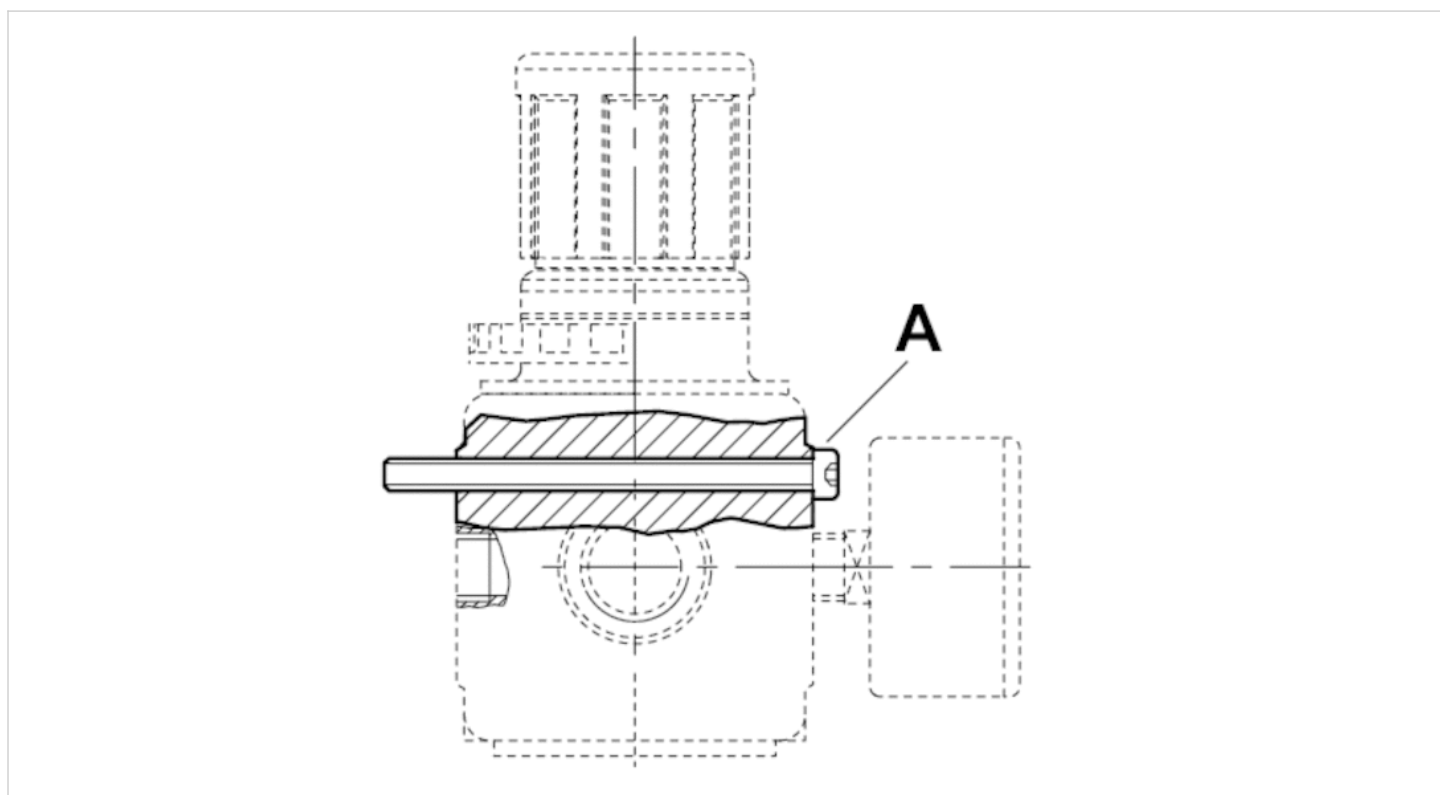
## Technical data

Part No.	Type	Type	Delivery unit	Weight
1823414009	DIN 912 - M4x60	NL2	10 piece	0.006 kg
1823414014	DIN 912 - M5x85	NL4	10 piece	0.007 kg

## Technical information

Material	
Material	Steel galvanized

## Dimensions

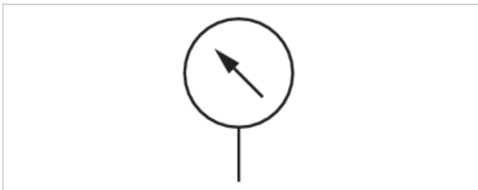


## Dimensions

Part No.	usage Series	A
1823414009	NL2	M4x60
1823414014	NL4	M5x85

# Pressure gauge, Series PG1-SNL-ADJ

- Back port
- with adjustable work area display
- Background color White
- Scale color Black
- Viewing window Polystyrene
- Units bar



Version	Bourdon tube pressure gauge with adjustable work area display
Version	Axial
Seal	EN 837-1
Standardization	2,5
Class	-40 ... 60 °C
Ambient temperature min./max.	Compressed air
Medium	adjustable work area display
Work area	Red Green
Work Area Display, Color	bar
Main scale unit (outside)	Black
Main scale color (outside)	White
Background color	Black
Pointer color	Black
Weight	0.09 kg

## Technical data

Part No.	Compressed air connection	Nominal diameter	Range of application	Display range	Operating pressure	Scale value
R412003474	G 1/4	50 mm	0 bar ... 1.2	0 bar ... 1.6	0 ... 1.6 bar	0.05
R412003475	G 1/4	50 mm	0 bar ... 2	0 bar ... 2.5	0 ... 2.5 bar	0.1
R412003476	G 1/4	50 mm	0 bar ... 3.2	0 bar ... 4	0 ... 4 bar	0.2
R412003477	G 1/4	50 mm	0 bar ... 4	0 bar ... 6	0 ... 6 bar	0.2
R412003478	G 1/4	50 mm	0 bar ... 8	0 bar ... 10	0 ... 10 bar	0.5
R412003479	G 1/4	50 mm	0 bar ... 12	0 bar ... 16	0 ... 16 bar	0.5

## Technical information

To set the operating range, the cover (inspection glass) must be removed. To do this, carefully lift the inspection glass by inserting a pointed or flat object in the slot provided for this purpose on the housing circumference.  
Order axial seal separately

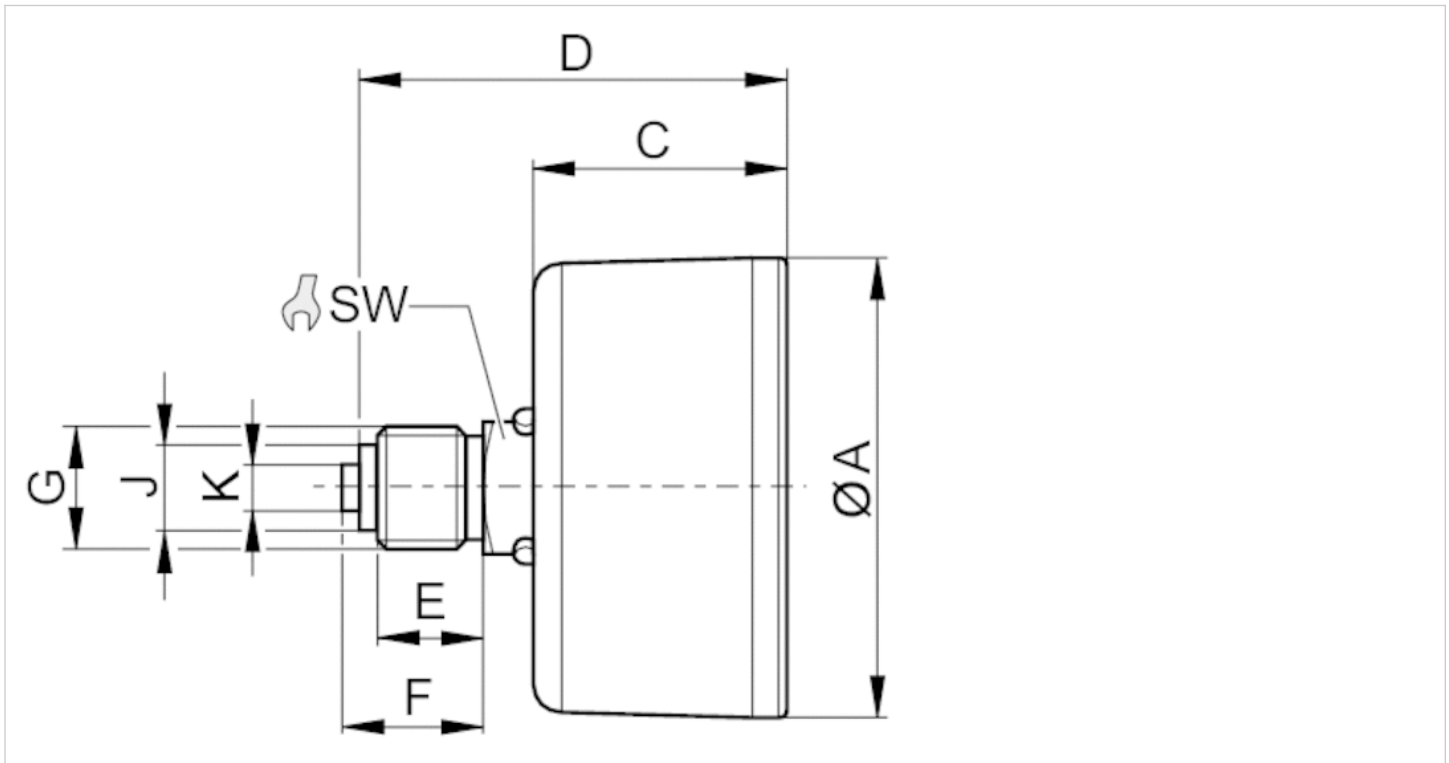
## Technical information

Material	
Housing	Acrylonitrile butadiene styrene
Thread	Brass

Material	
Viewing window	Polystyrene

## Dimensions

### Dimensions

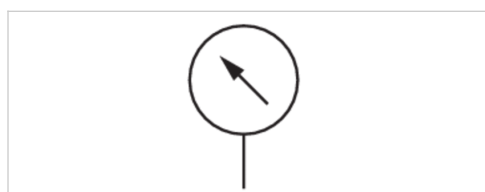


### Dimensions

Compressed air connection	Nominal diameter	Ø A	C	D	E	F	J	K	SW
G 1/4	50 mm	49	26.5	44.5	11	15	9.5	5	14

# Pressure gauge, Series PG1-SNL

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



Version	Bourdon tube pressure gauge
Seal	Axial
Standardization	EN 837-1
Class	1,6
Ambient temperature min./max.	-40 ... 60 °C
Medium	Compressed air
Main scale unit (outside)	bar
Main scale color (outside)	Green
Secondary scale unit (inside)	psi
Secondary scale color (inside)	White
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	Weight	
1827231057	G 1/4	40 mm	-0.8 ... 0	-1 ... 0	-1 ... 0 bar	0.1	0.06 kg	-
1827231047	G 1/4	40 mm	0 ... 10	0 ... 16	0 ... 16 bar	0.5	0.06 kg	1)
1827231059	G 1/4	40 mm	0 ... 4	0 ... 6	0 ... 6 bar	0.2	0.06 kg	-
1827231060	G 1/4	40 mm	0 ... 8	0 ... 10	0 ... 10 bar	0.5	0.06 kg	1)
1827231054	G 1/4	50 mm	-0.8 ... 0	-1 ... 0	-1 ... 0 bar	0.1	0.09 kg	-
1827231012	G 1/4	50 mm	0 ... 2	0 ... 2.5	0 ... 2.5 bar	0.1	0.09 kg	-
1827231016	G 1/4	50 mm	0 ... 4	0 ... 6	0 ... 6 bar	0.2	0.09 kg	1)
1827231015	G 1/4	50 mm	0 ... 8	0 ... 10	0 ... 10 bar	0.5	0.09 kg	1)
1827231010	G 1/4	50 mm	0 ... 12	0 ... 16	0 ... 16 bar	0.5	0.09 kg	1)
1827231055	G 1/4	63 mm	-0.8 ... 0	-1 ... 0	-1 ... 0 bar	0.1	0.1 kg	-
1827231011	G 1/4	63 mm	0 ... 12	0 ... 16	0 ... 16 bar	0.5	0.1 kg	1)

Order seal 1829202004 separately

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

## Technical information

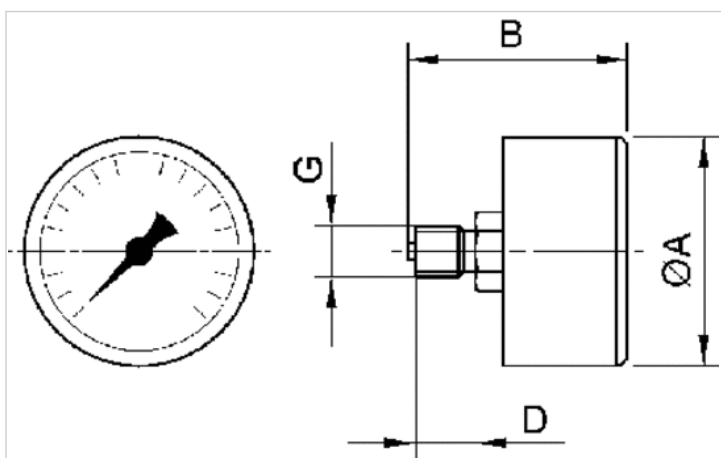
Order axial seal separately

## Technical information

Material	
Housing	Acrylonitrile butadiene styrene
Thread	Brass
Viewing window	Polystyrene

## Dimensions

### Dimensions

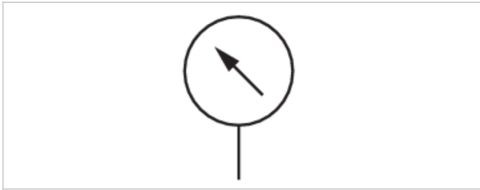


### Dimensions in mm

G	Nominal diameter	Ø A	B	D
G 1/4	40 mm	41	41.5	10
G 1/4	50 mm	49	47.5	13
G 1/4	63 mm	63	48.3	13

# Pressure gauge, Series PG1-SNL

- Back port
- Background color Black
- Scale color Green, White
- Viewing window Mineral glass
- Units bar
- Units psi



Version	Bourdon tube pressure gauge
Seal	Axial
Standardization	EN 837-1
Class	1,6
Ambient temperature min./max.	-40 ... 60 °C
Medium	Compressed air
Main scale unit (outside)	bar
Main scale color (outside)	Green
Secondary scale unit (inside)	psi
Secondary scale color (inside)	White
Background color	Black
Pointer color	White
Weight	0.09 kg

## Technical data

Part No.	Compressed air connection	Nominal diameter	Range of application	Display range	Operating pressure	Scale value
R412004987	G 1/4	50 mm	0 ... 12 bar	0 ... 16 bar	0 ... 16 bar	0.5

## Technical information

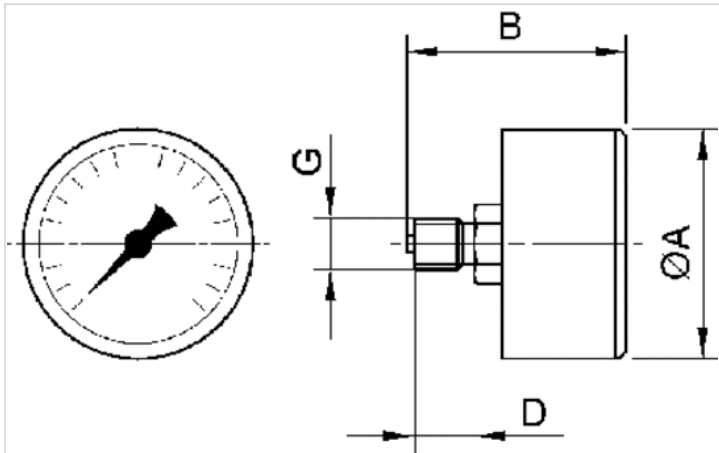
Suitable for use in Ex zones 1, 2, 21, 22.  
Order axial seal separately

## Technical information

Material	
Housing	Acrylonitrile butadiene styrene
Thread	Brass
Viewing window	Mineral glass

## Dimensions

### Dimensions



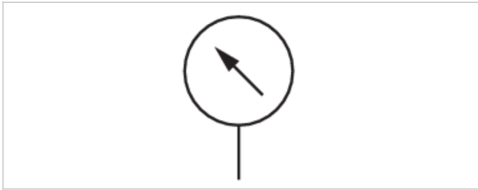
### Dimensions in mm

G	Nominal diameter	Ø A	B	D
G 1/4	50 mm	49	47.5	13



# Pressure gauge, Series PG1-SNL

- For panel installation
- Background color Black
- Scale color Green, White
- Viewing window Polystyrene
- Units bar
- Units psi



Version	Bourdon tube pressure gauge
Mounting	with U-clip
Seal	Axial
Standardization	EN 837-1
Class	1,6
Ambient temperature min./max.	-40 ... 60 °C
Medium	Compressed air
Main scale unit (outside)	bar
Main scale color (outside)	Green
Secondary scale unit (inside)	psi
Secondary scale color (inside)	White
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	Weight
1827231032	G 1/4	50 mm	0 ... 2	0 ... 2.5	0 ... 2.5 bar	0.1	0.148 kg
1827231036	G 1/4	63 mm	0 ... 2	0 ... 2.5	0 ... 2.5 bar	0.1	0.19 kg
1827231033	G 1/4	50 mm	0 ... 4	0 ... 6	0 ... 6 bar	0.2	0.148 kg
1827231037	G 1/4	63 mm	0 ... 4	0 ... 6	0 ... 6 bar	0.2	0.19 kg
1827231034	G 1/4	50 mm	0 ... 8	0 ... 10	0 ... 10 bar	0.5	0.148 kg
1827231038	G 1/4	63 mm	0 ... 8	0 ... 10	0 ... 10 bar	0.5	0.19 kg
1827231035	G 1/4	50 mm	0 ... 12	0 ... 16	0 ... 16 bar	0.5	0.148 kg
1827231039	G 1/4	63 mm	0 ... 12	0 ... 16	0 ... 16 bar	0.5	0.19 kg

## Technical information

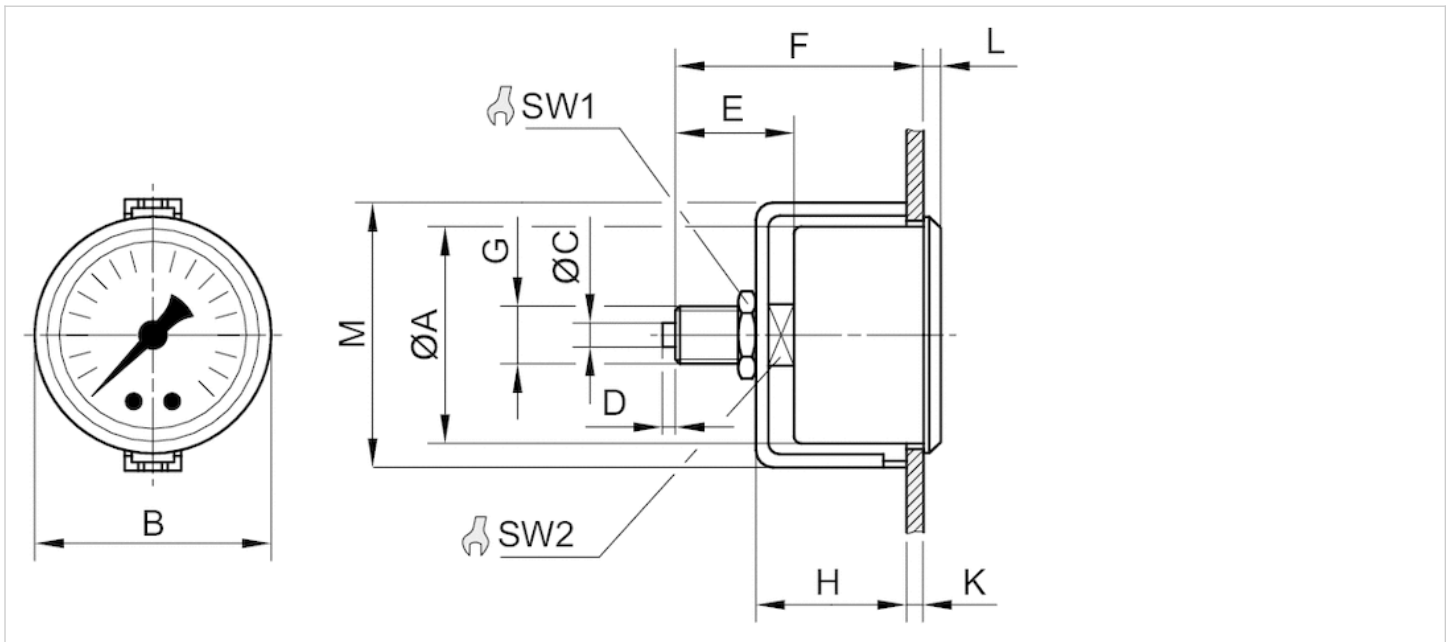
Order axial seal separately

## Technical information

Material	
Housing	Steel
Thread	Brass
Front ring	Steel, chrome-plated
Viewing window	Polystyrene

## Dimensions

### Dimensions



### Dimensions in mm

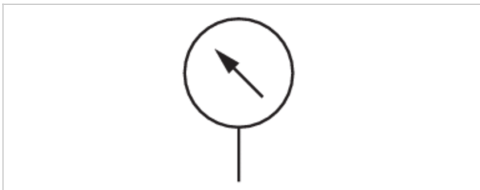
Compressed air connection	Nominal diameter	Ø A	B	C	D	E	F	H	K	L	M	SW1
G 1/4	50 mm	50	54	5	3	29.5	51.5	34.5	3	4.5	61	17
G 1/4	63 mm	62	67	5	3	27	53	36.3	4.2	5.5	75	17
G 1/4	50 mm	50	54	5	3	29.5	51.5	34.5	3	4.5	61	17
G 1/4	63 mm	62	67	5	3	27	53	36.3	4.2	5.5	75	17
G 1/4	50 mm	50	54	5	3	29.5	51.5	34.5	3	4.5	61	17
G 1/4	63 mm	62	67	5	3	27	53	36.3	4.2	5.5	75	17
G 1/4	50 mm	50	54	5	3	29.5	51.5	34.5	3	4.5	61	17
G 1/4	63 mm	62	67	5	3	27	53	36.3	4.2	5.5	75	17

SW2
14
14
14
14
14

	SW2
	14
	14
	14

# Pressure gauge, Series PG1-SNL

- Back port
- Background color Black
- Scale color Green, White
- Viewing window Polystyrene
- Units bar
- Units psi
- suitable for ATEX



Version	Bourdon tube pressure gauge
Seal	Axial
Standardization	EN 837-1
Class	1,6
Ambient temperature min./max.	-40 ... 60 °C
Medium	Compressed air
Main scale unit (outside)	bar
Main scale color (outside)	Green
Secondary scale unit (inside)	psi
Secondary scale color (inside)	White
Background color	Black
Pointer color	White
Weight	0.09 kg

## Technical data

Part No.	Compressed air connection	Nominal diameter	Range of application	Display range	Operating pressure	Scale value
1827231023	G 1/4	50 mm	0 ... 1.2	0 ... 1.6	0 ... 1.6 bar	0.05

Order seal 1829202004 separately

## Technical information

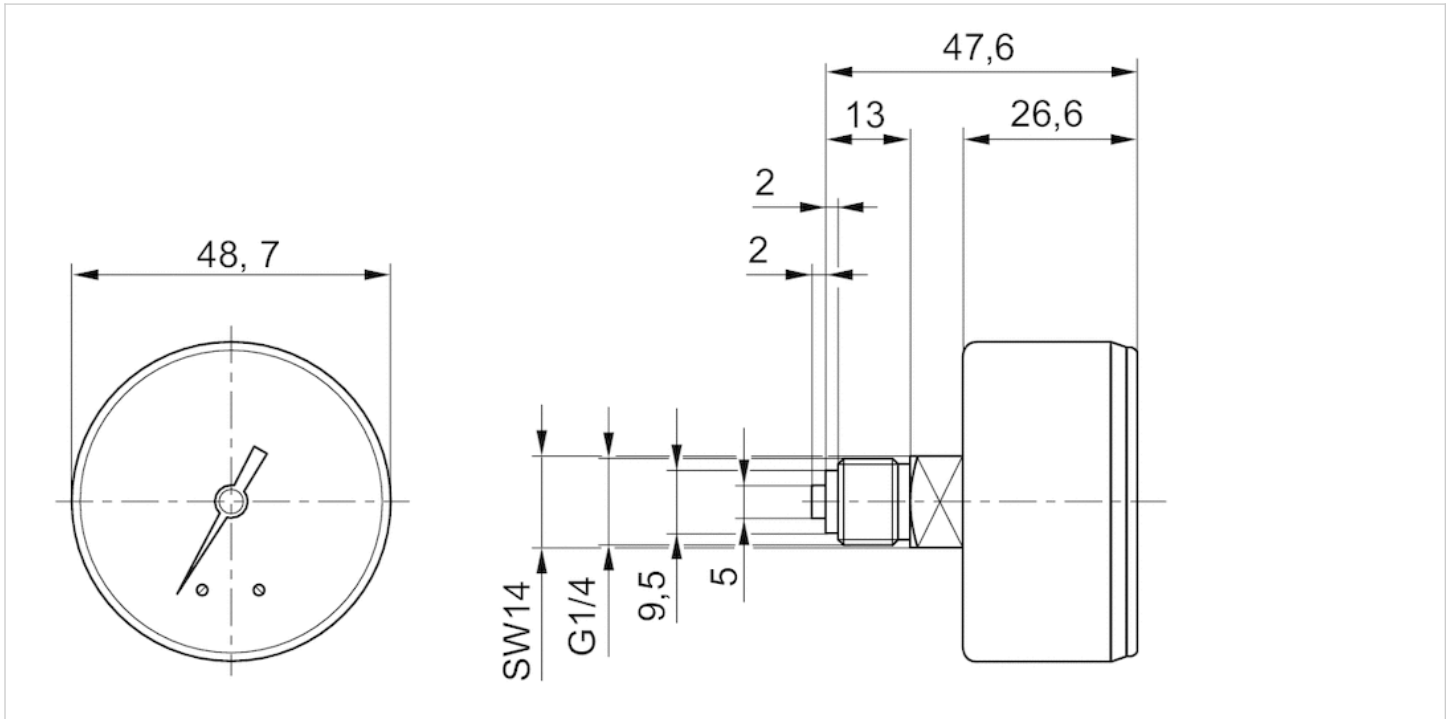
Order axial seal separately

## Technical information

Material	
Housing	Acrylonitrile butadiene styrene
Thread	Brass
Front ring	Steel, chrome-plated
Viewing window	Polystyrene

## Dimensions

### Dimensions in mm

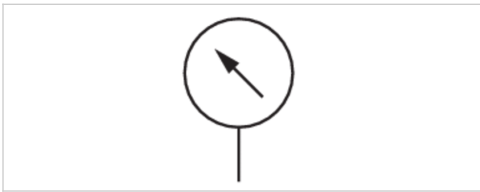


# Pressure gauge, Series PG1-DIM

- for differential pressure measurement for prefilters and microfilters
- flange version
- Background color White
- Scale color Black
- Viewing window Polystyrene
- Units bar
- suitable for ATEX



Version	Diaphragm pressure gauge
Mounting orientation	vertical
Ambient temperature min./max.	0 ... 60 °C
Medium	Compressed air
Color for differential pressure range	Green Red
Main scale unit (outside)	bar
Main scale color (outside)	Black
Background color	White
Pointer color	Black
Weight	0.127 kg



## Technical data

Part No.	Range of application	Display range	Operating pressure	Scale value
1827231072	0 ... 0.5 bar	0 ... 0.5 bar	0 ... 16 bar	0.1

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

## Technical information

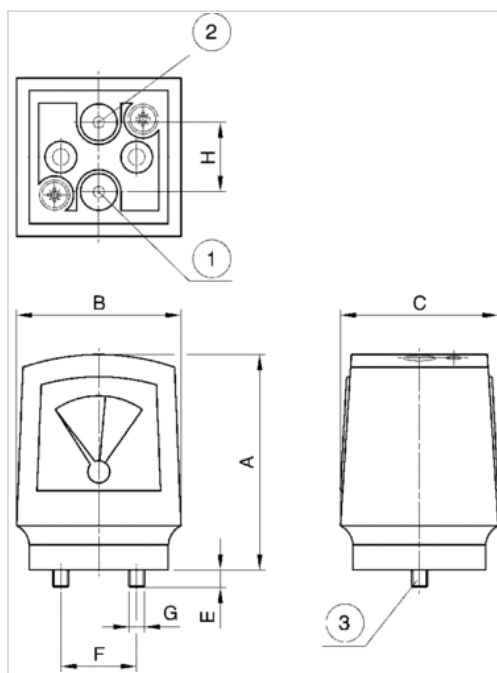
Suitable for use in Ex zones 1, 2, 21, 22.

## Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Viewing window	Polystyrene
Seal	Acrylonitrile butadiene styrene

## Dimensions

### Dimensions



- 1) Input pressure p1
- 2) Output pressure p2
- 3) Mounting screw and 2 O-rings included in scope of delivery

### Dimensions in mm

A	B	C	E	F	G	H
68	52	50	6	24	M5	22

# contamination display

- for prefilters and microfilters



Weight

0.025 kg

## Technical data

Part No.

R412006363

2 mounting screws and 2 O-rings supplied loose

## Technical information

Material

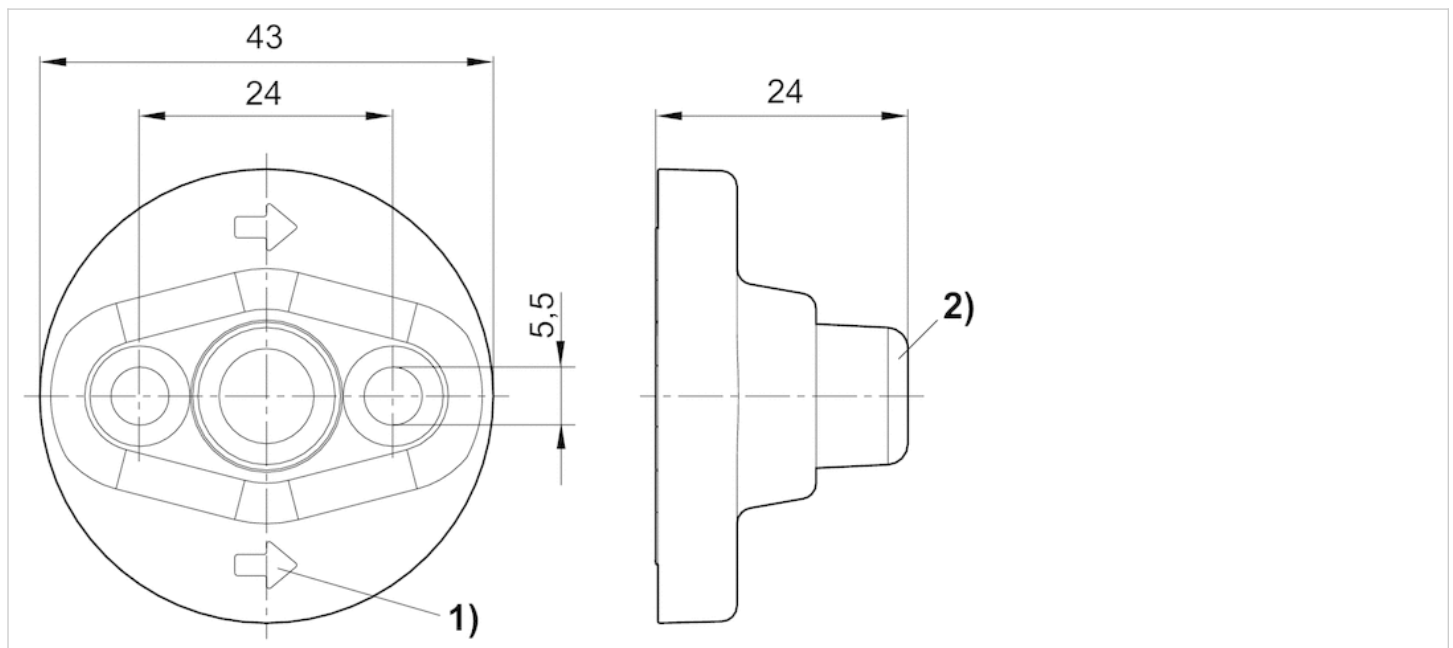
Material

Polyamide



## Dimensions

### Dimensions in mm



1) Flow direction

2) Display in initial state: green (=  $\Delta p$  0.35 bar )

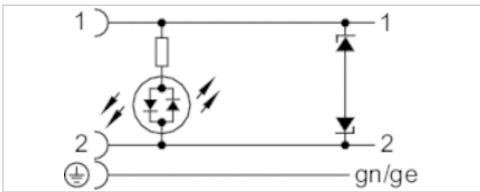
Display turns red on contamination of the filter element (=  $\Delta p \geq 0.35$  bar ).

# Valve plug connector, series CON-VP

- Socket form B 2+E angled 90°
- open cable ends 3-pin
- with cable
- unshielded



Ambient temperature min./max.	-20 ... 80 °C
Operational voltage	24 V AC/DC
Protection class	IP67
Protective circuit	Z-diode
Wire cross-section	0.75 mm <sup>2</sup>
Mounting screw tightening torque	0.4 Nm
Weight	See table below



## Technical data

Part No.	Max. current	Contact assignment	LED status display	Number of wires	Cable-Ø	Cable length	Weight	Fig.
1834484153	10 A	2+E	Yellow	3	5.9 mm	3 m	0.2 kg	Fig. 2
1834484155	10 A	2+E	Yellow	3	5.9 mm	5 m	0.31 kg	Fig. 2

Scope of delivery incl. flat gasket

## Technical information

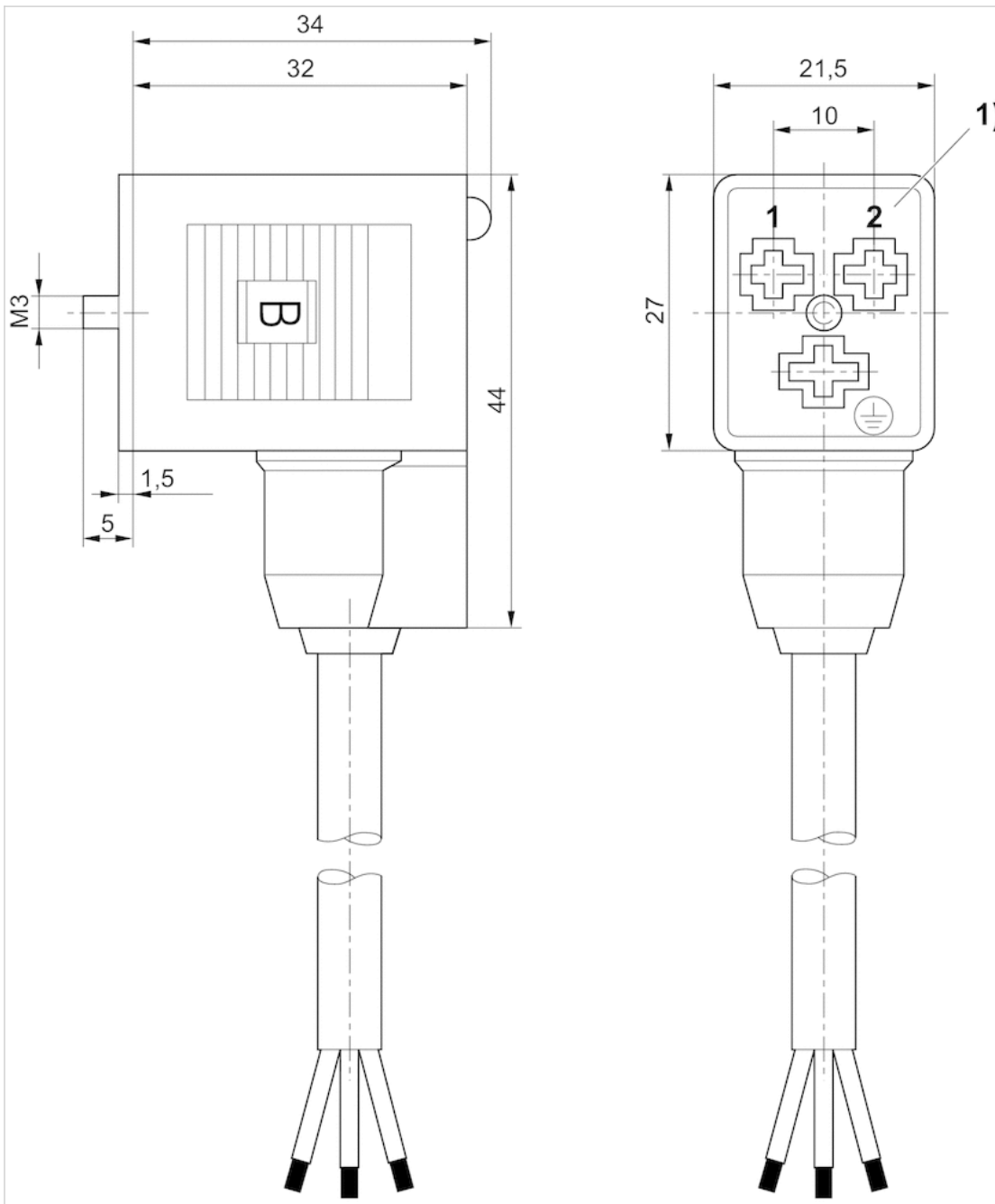
The specified protection class is only valid in assembled and tested state.

## Technical information

Material	
Seals	caoutchouc/butadiene caoutchouc
Cable sheath	Polyvinyl chloride

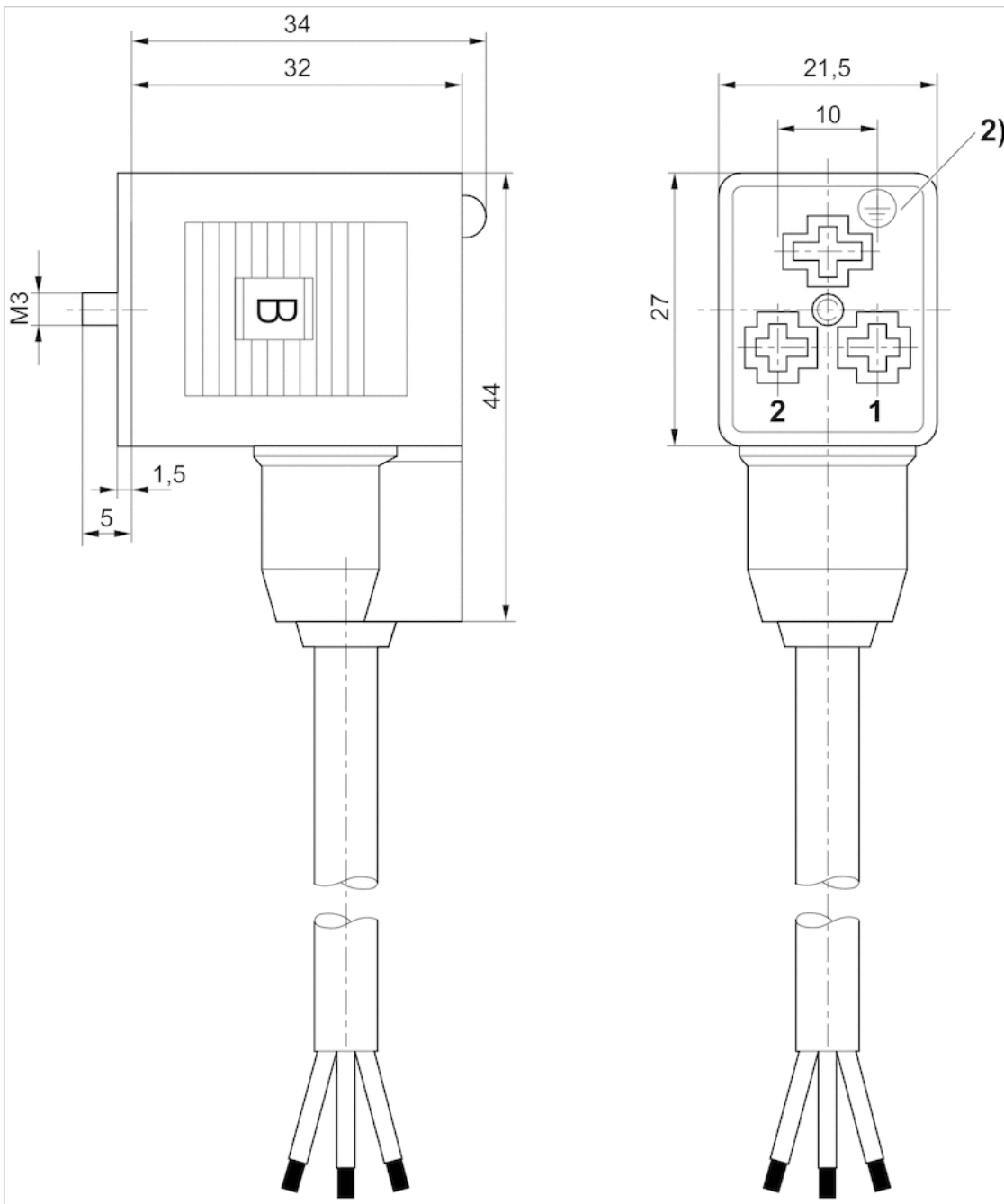
# Dimensions

Fig. 1



1) 0° female insert

Fig. 2



2) 180° female insert

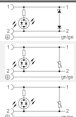


# Valve plug connector, series CON-VP

- Socket, form B, 2+E, angled, 90°
- ISO 6952
- unshielded
- with LED Yellow Red Red



Connection type	Screws
Ambient temperature min./max.	-25 ... 50 °C
Operational voltage	See table below
Protection class	IP65
Mounting screw tightening torque	0.4 Nm
Weight	0.02 kg

## Technical data

Part No.		Operational voltage	Protective circuit	Contact assignment
1834484104		24 V AC/DC	Z-diode	2+E
1834484105		110 V AC	Varistor	2+E
1834484106		230 V AC	Varistor	2+E

Part No.	LED status display	suitable cable-Ø min./max	Fig.
1834484104	Yellow	6 / 8 mm	Fig. 2
1834484105	Red Red	6 / 8 mm	Fig. 2
1834484106	Red Red	6 / 8 mm	Fig. 2

Profile seal, Flat gasket

## Technical information

The specified protection class is only valid in assembled and tested state.

## Technical information

Material	
Seals	Silicone caoutchouc

# Dimensions

Fig. 1

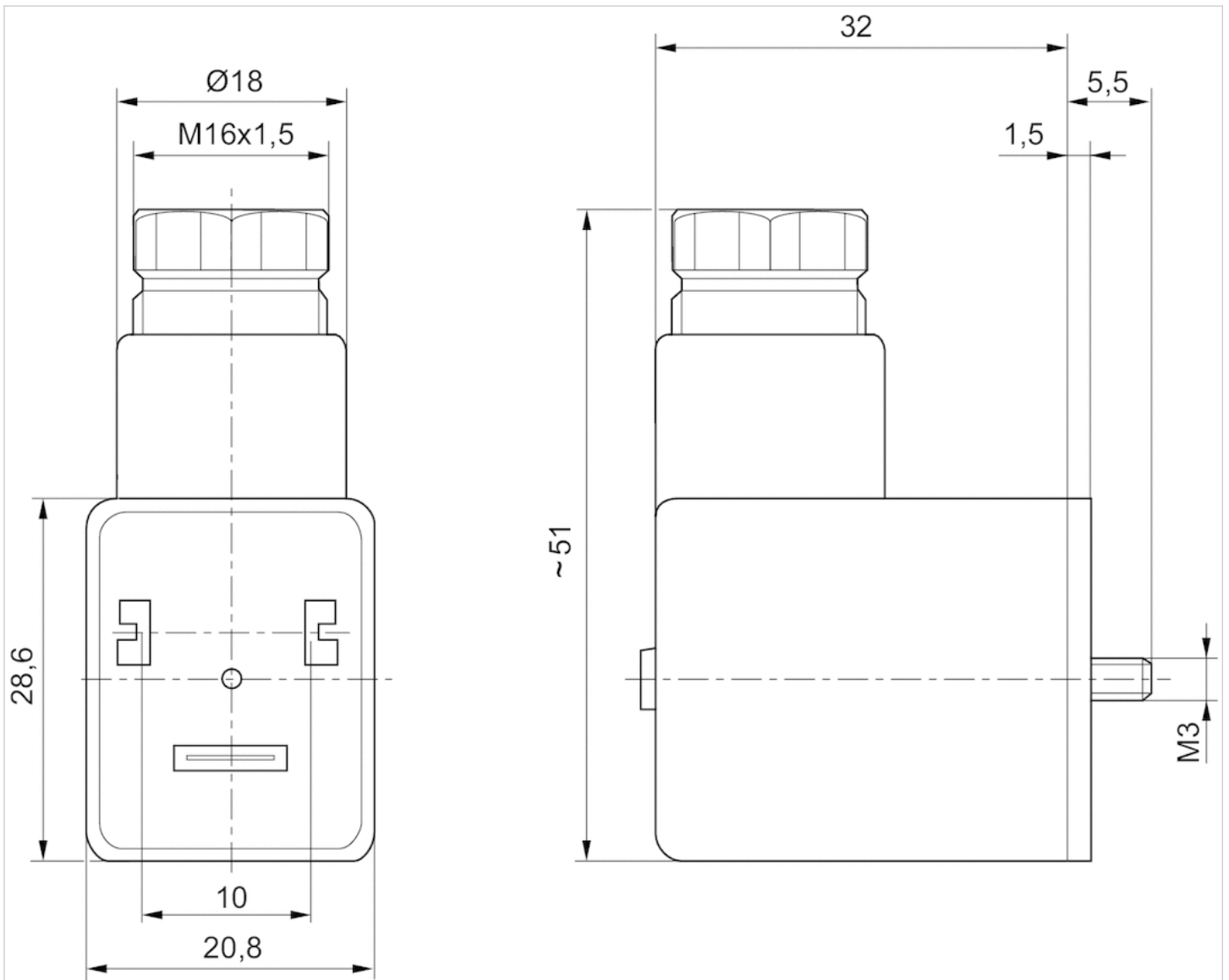
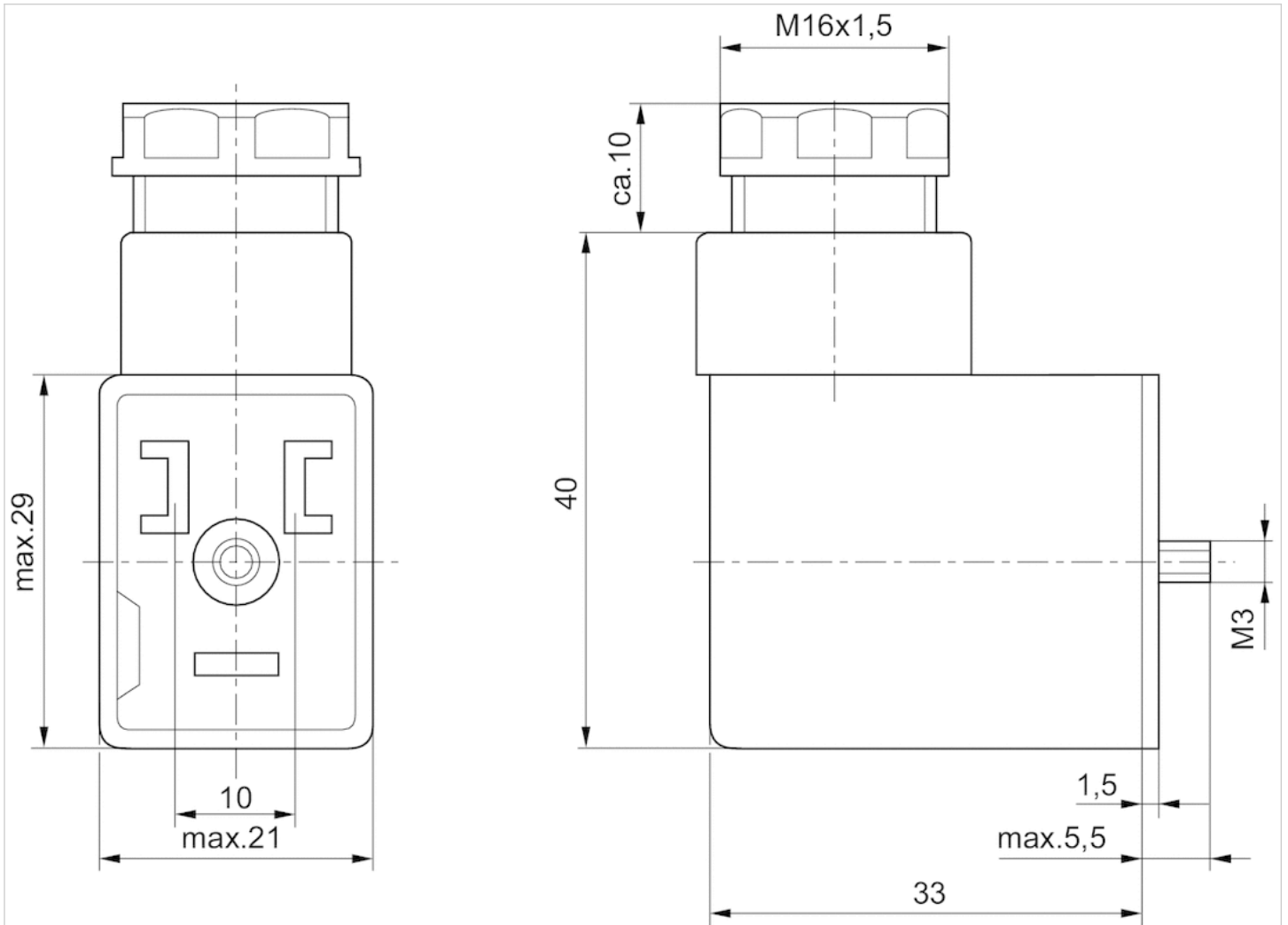


Fig. 2

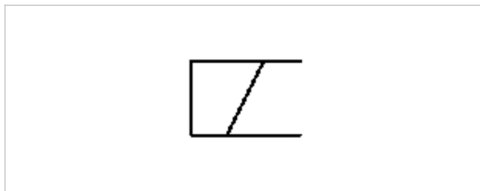


# Coil, Series C01

- form B
- Coil width 22 mm
- Power consumption DC 4.8-5.9 W
- Holding power AC 7.7-9.7 VA
- Switch-on power AC 10.5-12.6 VA



Connector standard	EN 175301-803, form B
electrical connections	Plug, 3-pin
Ambient temperature min./max.	50 °C
Protection class With valve plug connector/plug	IP65
Duty cycle ED	100 %
Compatibility index	14
Weight	0.07 kg



## Technical data

Part No.	Operational voltage	Operational voltage	Operational voltage
	DC	AC 50 Hz	AC 60 Hz
1824210239	12 V	24 V	24 V
1824210243	24 V	48 V	48 V
1824210241	48 V	-	-
1824210237	60 V	110 V	110 V
1824210235	110 V	220 V	230 V

Part No.	Voltage tolerance	Voltage tolerance	Voltage tolerance	Power consumption
	DC	AC 50 Hz	AC 60 Hz	DC
1824210239	-10% / +10%	-10% / +10%	-10% / +10%	5.5 W
1824210243	-10% / +10%	-10% / +10%	-10% / +10%	4.8 W
1824210241	-10% / +10%	-10% / +10%	-10% / +10%	5 W
1824210237	-10% / +10%	-10% / +10%	-10% / +10%	5.9 W
1824210235	-10% / +10%	-10% / +10%	-10% / +10%	4.9 W

Part No.	Holding power	Holding power	Switch-on power	Switch-on power
	AC 50 Hz	AC 60 Hz	AC 50 Hz	AC 60 Hz
1824210239	8.9 VA	7.3 VA	12 VA	9.9 VA
1824210243	7.7 VA	6.2 VA	10.5 VA	9.4 VA
1824210241	-	-	-	-
1824210237	8.4 VA	6.8 VA	11 VA	9.4 VA



Part No.	Holding power		Switch-on power	
	AC 50 Hz	AC 60 Hz	AC 50 Hz	AC 60 Hz
1824210235	9.7 VA	7.9 VA	12.6 VA	10.2 VA

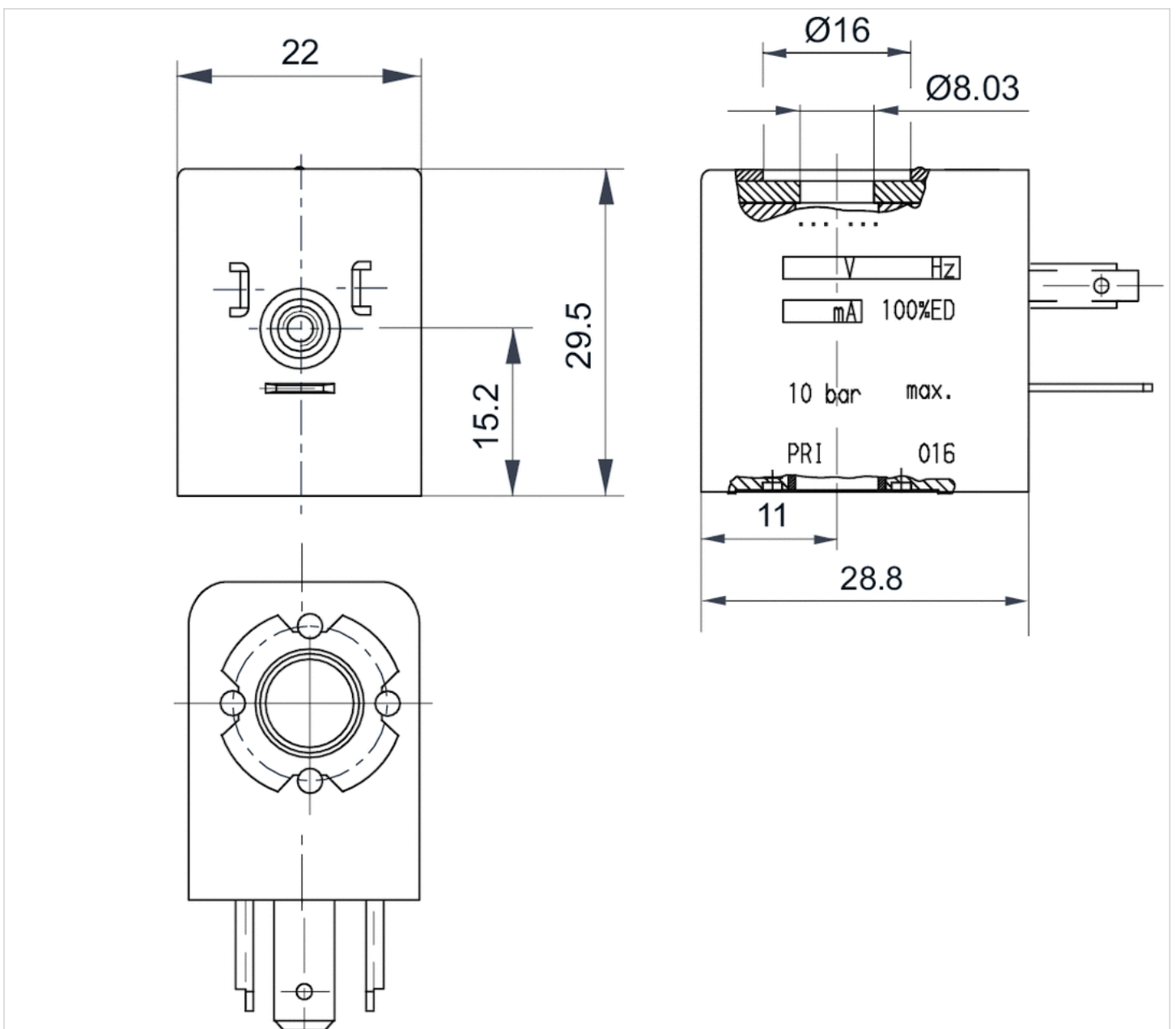
## Technical information

### Material

Housing Thermoplastic elastomer

## Dimensions

### Dimensions
















# 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



Type	electronic
Certificates	CE declaration of conformity cULus RoHS Conforms with REACH Free of substances that impair surface wetting in the coating process
Compressed air connection	Internal thread G 1/4
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
R412010769		-1 ... 0 bar	5 bar
R412010775		-1 ... 0 bar	5 bar
R412010763		-1 ... 1 bar	5 bar
R412010771		0 ... 6 bar	15 bar
R412010765		0 ... 6 bar	15 bar
R412010777		0 ... 6 bar	15 bar
R412010773		0 ... 10 bar	15 bar
R412010767		0 ... 10 bar	15 bar
R412010779		0 ... 10 bar	15 bar
R412010782		0 ... 12 bar	16 bar
R412010806		0 ... 12 bar	16 bar

Part No.	Output signal	Output signal	Fig.	
	Analog	digital		
R412010761	-	2 x PNP, NPN, Push-pull	Fig. 1	-
R412010769	0 - 10 V DC-4 ... 20 mA	PNP, NPN, Push-pull	Fig. 1	-
R412010775	-	PNP, NPN, push-pull, 1x IO-Link	Fig. 1	1)
R412010763	-	2 x PNP, NPN, Push-pull	Fig. 1	-
R412010771	0 - 10 V DC-4 ... 20 mA	PNP, NPN, Push-pull	Fig. 1	-
R412010765	-	2 x PNP, NPN, Push-pull	Fig. 1	-
R412010777	-	PNP, NPN, push-pull, 1x IO-Link	Fig. 1	1)
R412010773	0 - 10 V DC-4 ... 20 mA	PNP, NPN, Push-pull	Fig. 1	-
R412010767	-	2 x PNP, NPN, Push-pull	Fig. 1	-
R412010779	-	PNP, NPN, push-pull, 1x IO-Link	Fig. 1	1)
R412010782	-	2 x PNP, NPN, Push-pull	Fig. 1	-
R412010806	-	PNP, NPN, push-pull, 1x IO-Link	Fig. 1	1)

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

## Technical information

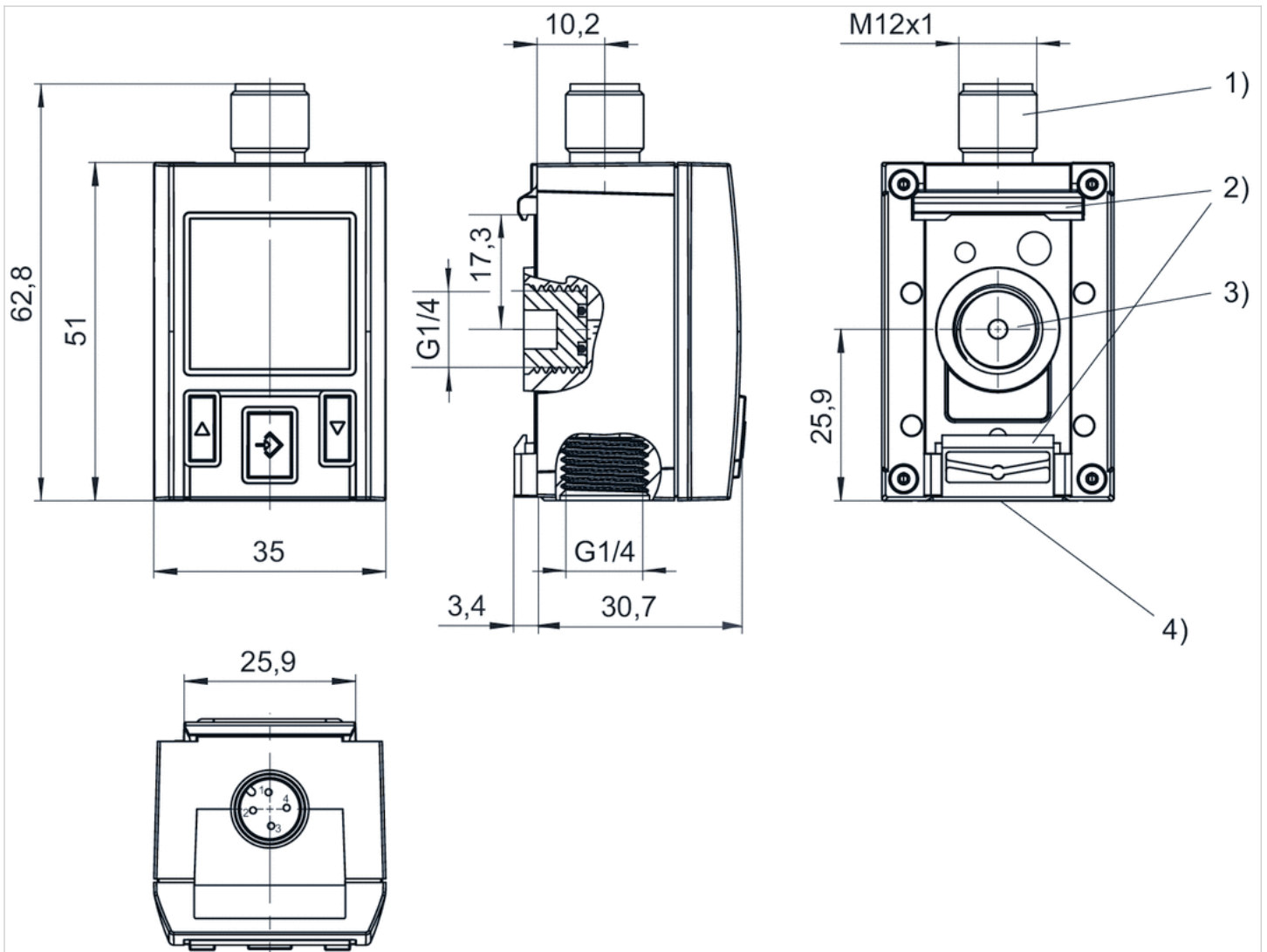
Alternative pressure connection (G1/4) on the rear side (closed with plug)  
Display color selectable, red or green

## Technical information

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

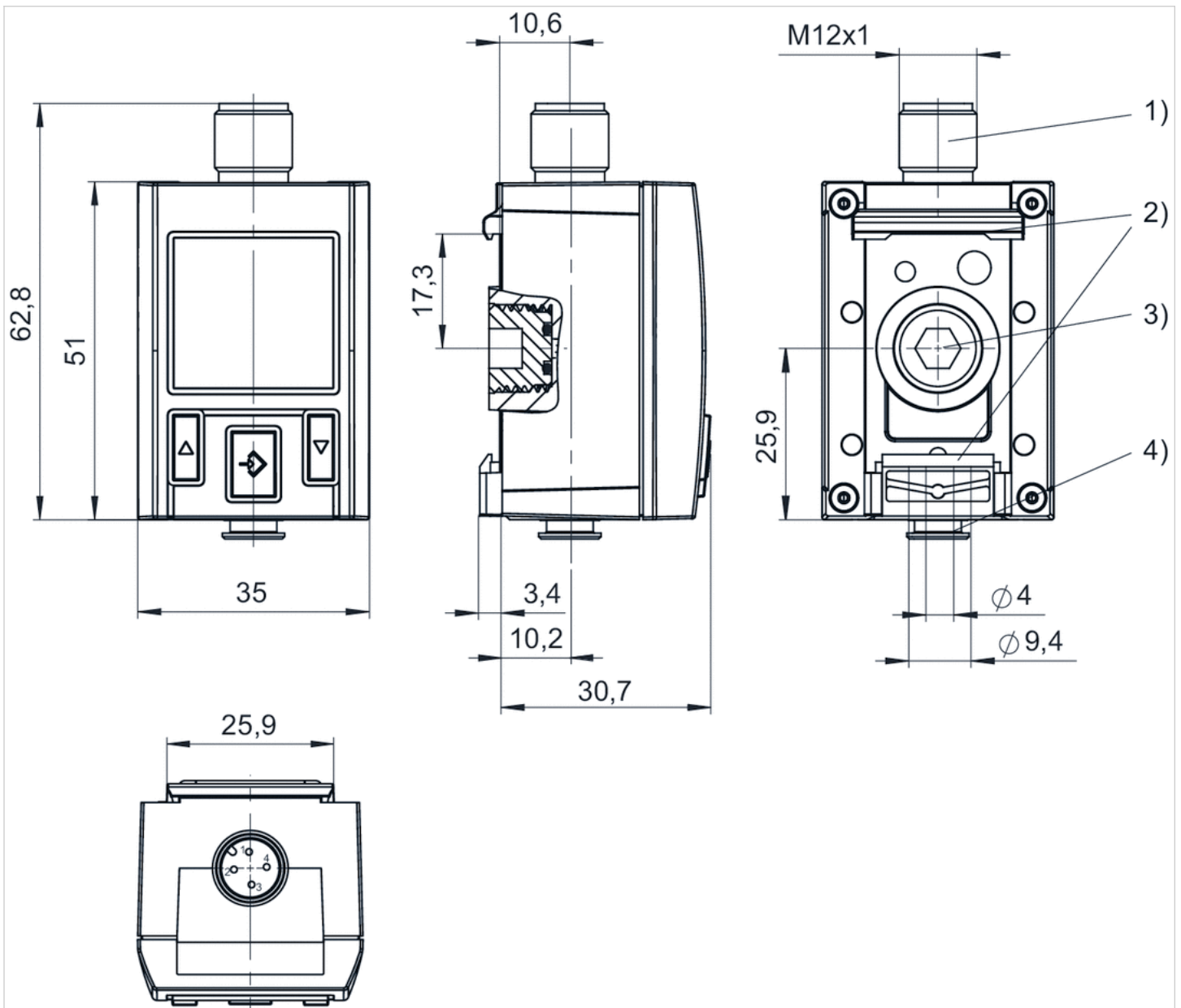
## Dimensions

Fig. 1



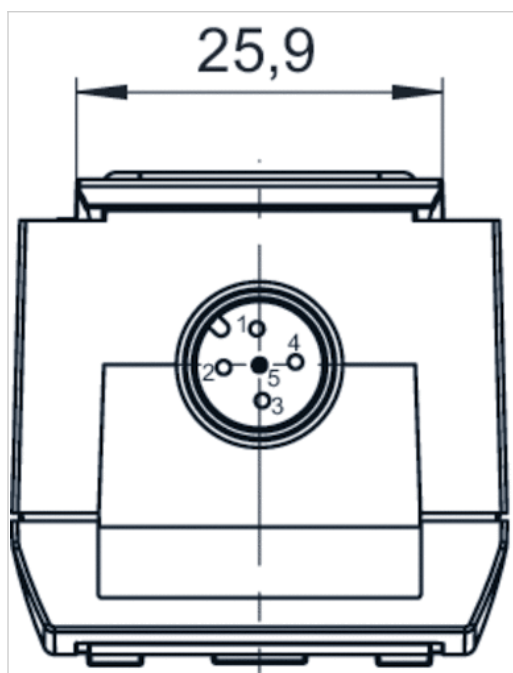
- 1) M12x1 electrical connection
- 2) Mounting for hat rail and wall mounting
- 3) Alternative pressure connection (G1/4) closed with plug
- 4) Pressure connection G1/4

Fig. 2

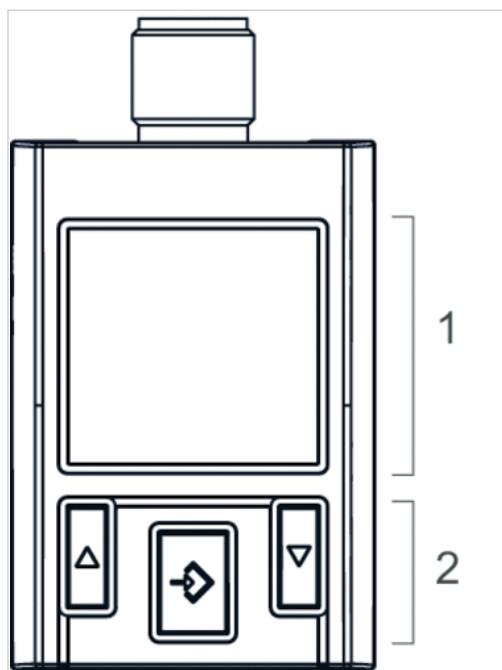


- 1) M12x1 electrical connection
- 2) Mounting for hat rail and wall mounting
- 3) Alternative pressure connection (G1/4) closed with plug
- 4) Pressure connection, tubing Ø 4 mm

Fig. 3, Electr. connection for leak test



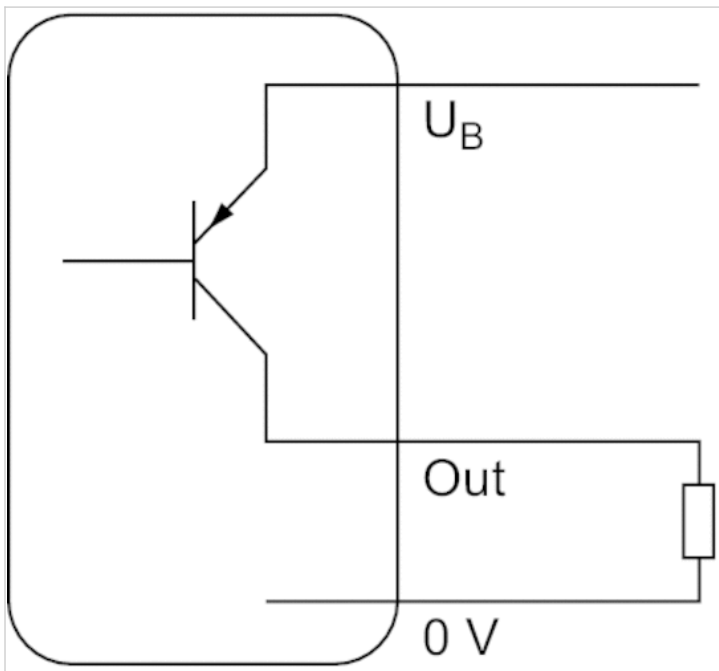
Display and operation area



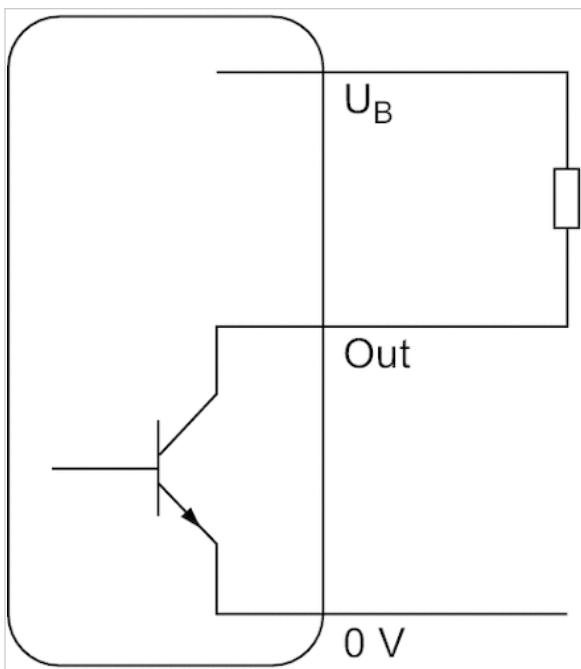
- 1) LCD display
- 2) Control panel with 3 buttons

## Diagrams

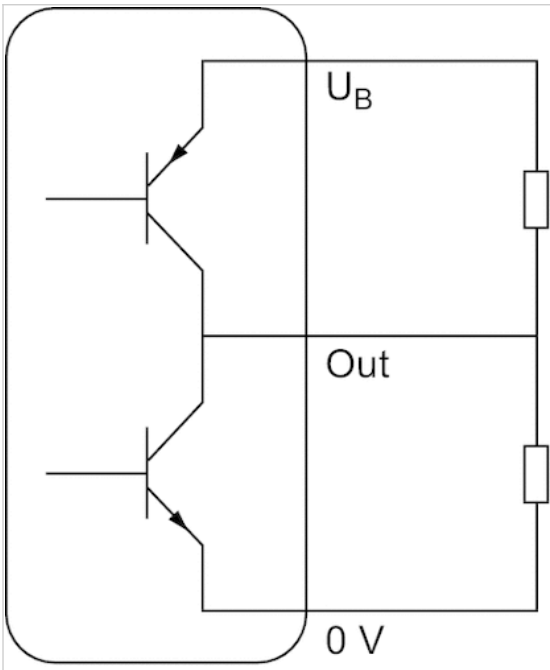
### Operating mode, PNP



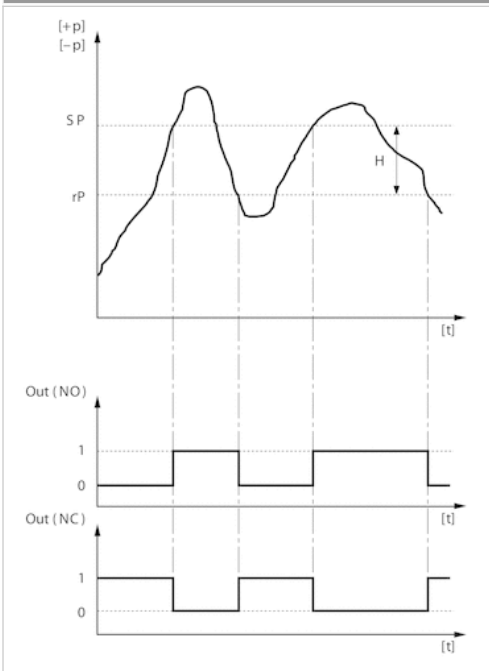
### Operating mode, NPN



Operating mode, Push-pull



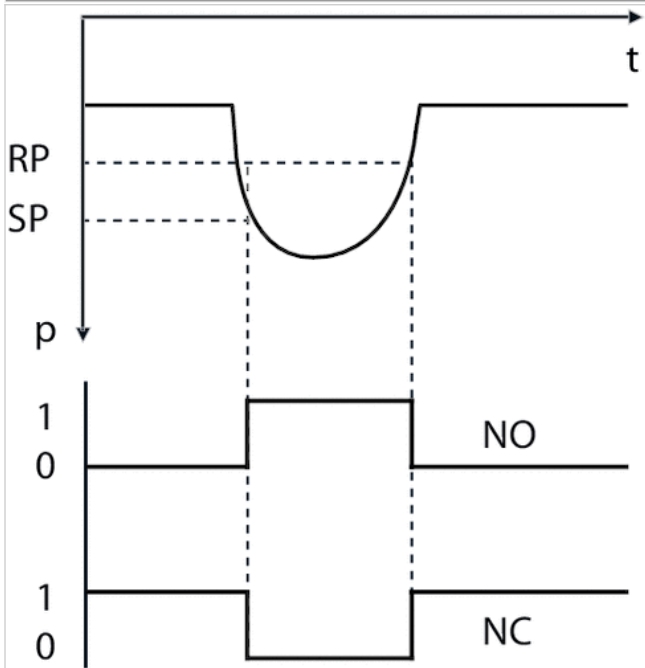
Hysteresis function: switching and resetting behavior dependent on pressure p and time t, in case of overpressure



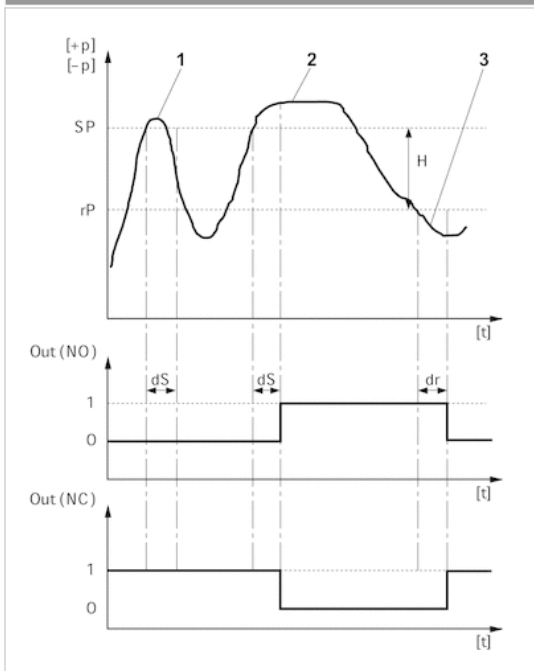
- H: Hysteresis
- SP = switching point
- RP = resetting point
- Out (NC): switch output, break contact
- Out (NO): switch output, make contact



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

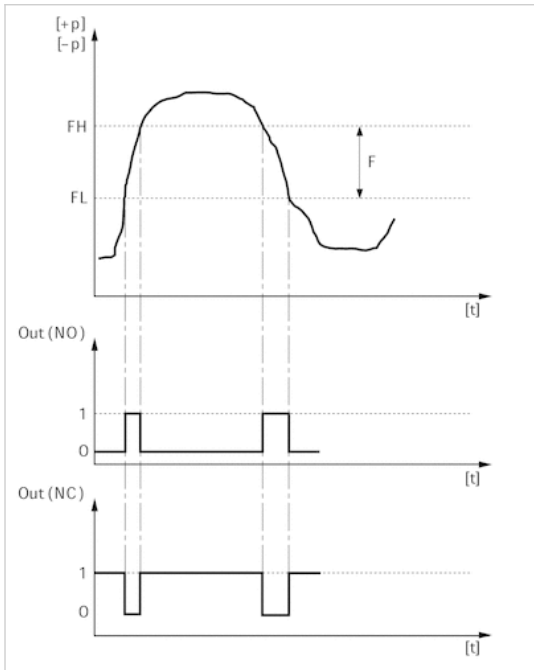


Delayed hysteresis function: switching and resetting behavior depending on pressure  $p$  and time  $t$



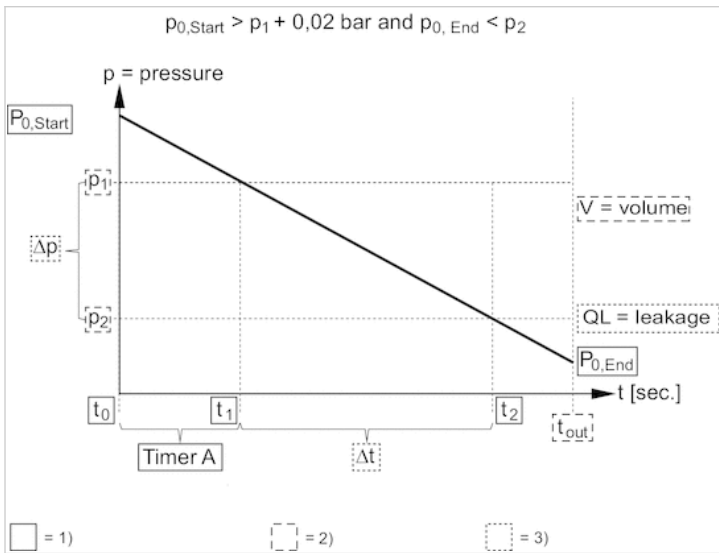
- H: Hysteresis
- SP = switching point
- RP = resetting point
- Out (NC): switch output, break contact
- Out (NO): switch output, make contact
- dS: switching delay
- dR = reset delay
- 1) period of pressure over the switching point  $dS$ : pressure sensor does not switch
- 2) Period of pressure over 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

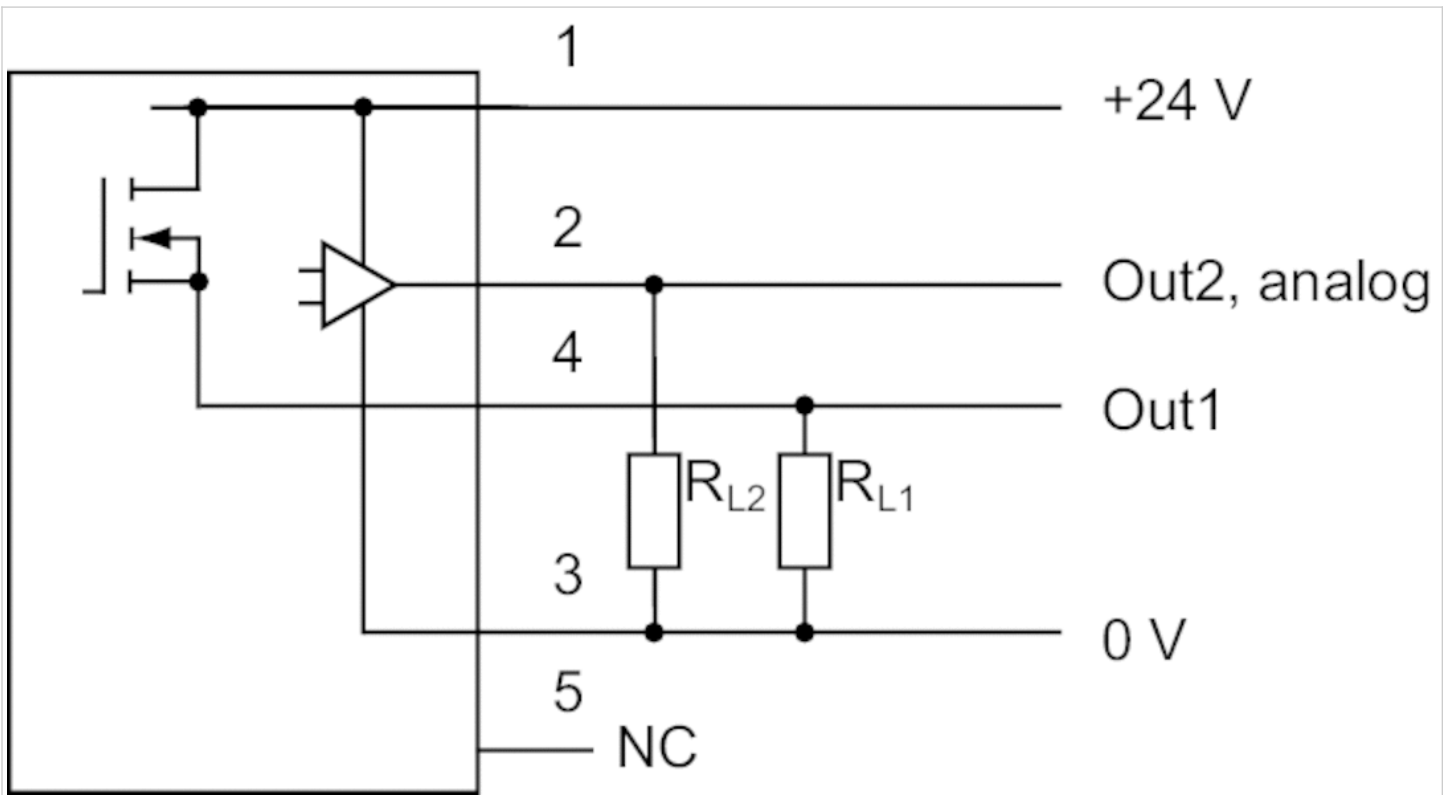
Leakage characteristic



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

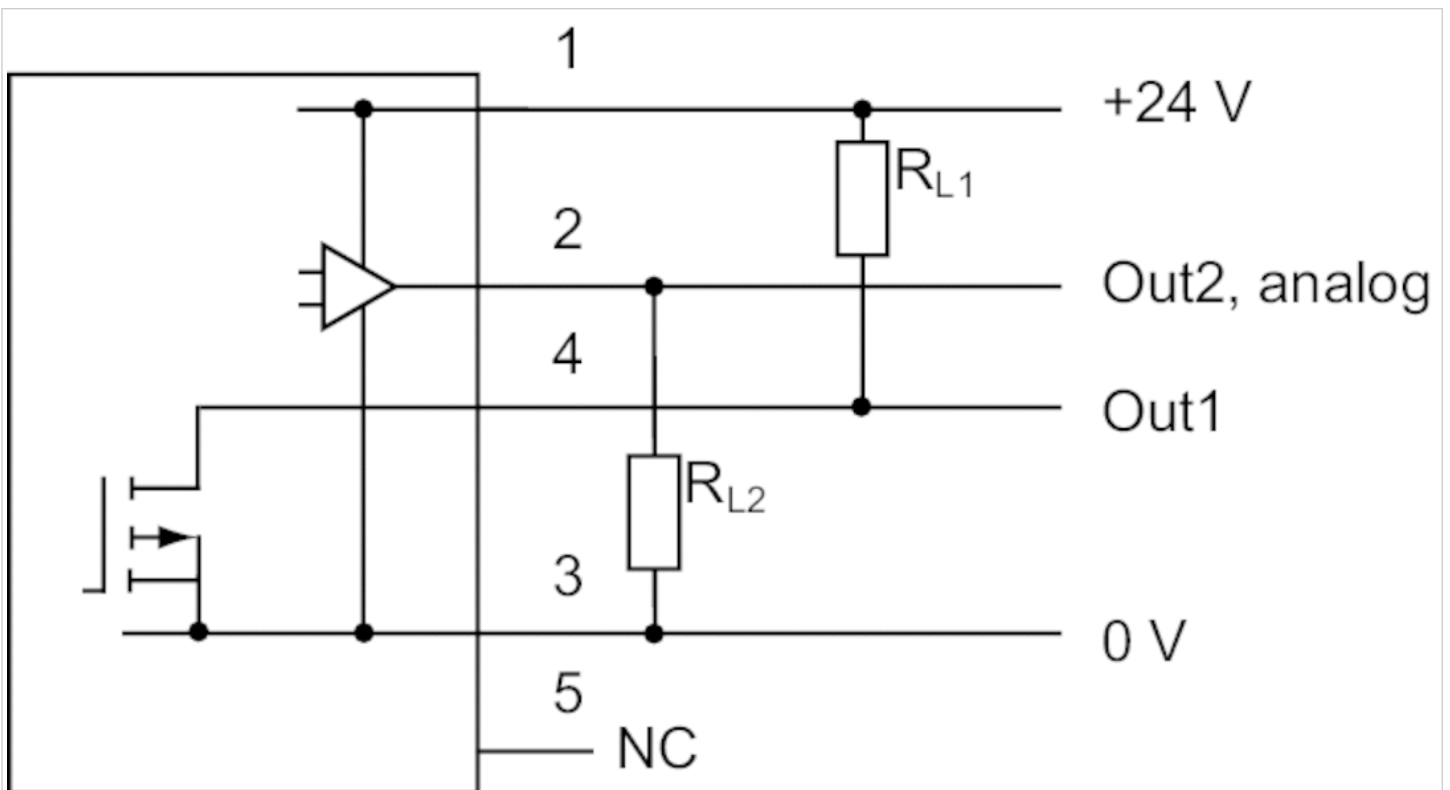
Circuit diagram

Block diagram, 1x PNP and 1x analog



RL = storable position

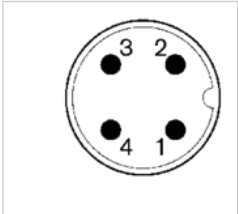
Block diagram, 1x NPN and 1x analog



RL = storable position

## Pin assignments

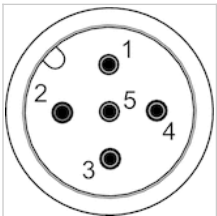
### Pin assignments, M12x1, 4-pin



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)	











# Pressure sensor, Series PE2

- Operating pressure -1 ... 1 0 ... 16 bar
- electronic
- Output signal analog 1 x PNP, 1 x analog 4-20 mA
- Electr. connection Plug M12x1 5-pin
- Compressed air connection Internal thread G 1/4 Flange with O-ring Ø 5x1,5



Type	electronic
Function	1 x PNP, 2 x PNP 1x PNP and 1x analog
Mounting orientation	Any
Certificates	CE declaration of conformity EMV
Working pressure min./max.	See table below
Ambient temperature min./max.	-10 ... 75 °C
Medium temperature min./max.	-10 ... 75 °C
Medium	Compressed air Neutral gases
Measurement	Relative pressure
Display	OLED
Units displayed	bar mbar psi kPa MPa %
Switching logic	Hysteresis function NO/NC (programmable) Window function NO/NC (programmable)
Operating pressure display	2 LED
Shock resistance max.	30 g
Vibration resistance	5 g (10 - 150 Hz)
Precision (% of full scale value)	± 1 % including temperature drift
Switching time	10 ms at loads 100 kΩ > 10 ms at loads > 100 kΩ
Switching point	Adjustable ≥ 0.5% ... 100% FS
Resetting point	Adjustable 0% FS to SP -0.5% FS (or +0.5% FS when SP 0)
Hysteresis	adjustable
Switching/reset delay	adjustable
DC operating voltage min./max.	15 ... 32 V DC
Analog output	1 x PNP, 1 x analog 4-20 mA
Quiescent current consumption	50 mA
Maximum load (analog current output)	600 Ω
Short circuit resistance	short circuit resistant
Mounting types	via through holes
Protection class	IP65
Electr. connection	Plug M12x1 5-pin
Weight	0.3 kg

## Technical data

Part No.		Type	Operating pressure range
			min./max.
R412010848		PE2-P1-G014-V10-010-M012	-1 ... 1 bar
R412010849		PE2-P1-F001-V10-010-M012	-1 ... 1 bar
R412010853		PE2-P2-G014-V10-010-M012	-1 ... 1 bar
R412010856		PE2-PA-G014-V10-010-M012	-1 ... 1 bar
R412010850		PE2-P1-G014-000-160-M012	0 ... 16 bar
R412010851		PE2-P1-F001-000-160-M012	0 ... 16 bar
R412010854		PE2-P2-G014-000-160-M012	0 ... 16 bar
R412010855		PE2-P2-F001-000-160-M012	0 ... 16 bar
R412010857		PE2-PA-G014-000-160-M012	0 ... 16 bar
R412010858		PE2-PA-F001-000-160-M012	0 ... 16 bar

Part No.	Protection against overpressure	Output signal	Output signal	Compressed air connection
		Analog	digital	
R412010848	10 bar	-	1 x PNP	Internal thread, G 1/4
R412010849	10 bar	-	1 x PNP	Flange with O-ring, Ø 5x1,5
R412010853	10 bar	-	2 x PNP	Internal thread, G 1/4
R412010856	10 bar	4 ... 20 mA	1 x PNP	Internal thread, G 1/4
R412010850	40 bar	-	1 x PNP	Internal thread, G 1/4
R412010851	40 bar	-	1 x PNP	Flange with O-ring, Ø 5x1,5
R412010854	40 bar	-	2 x PNP	Internal thread, G 1/4
R412010855	40 bar	-	2 x PNP	Flange with O-ring, Ø 5x1,5
R412010857	40 bar	4 ... 20 mA	1 x PNP	Internal thread, G 1/4
R412010858	40 bar	4 ... 20 mA	1 x PNP	Flange with O-ring, Ø 5x1,5

Part No.	Fig.
R412010848	Fig. 1
R412010849	Fig. 2
R412010853	Fig. 1
R412010856	Fig. 1
R412010850	Fig. 1
R412010851	Fig. 2
R412010854	Fig. 1
R412010855	Fig. 2
R412010857	Fig. 1
R412010858	Fig. 2

## Technical information

Menu navigation is based on the VDMA specification with an additional plain text menu.

## Technical information

Material	
Housing	Aluminum, Vibration-ground
Seals	Fluorocaoutchouc
Electr. connection	Aluminum with polymer insert
flange connection	Nitrile butadiene rubber, Fluorocaoutchouc

## Dimensions

Fig. 1

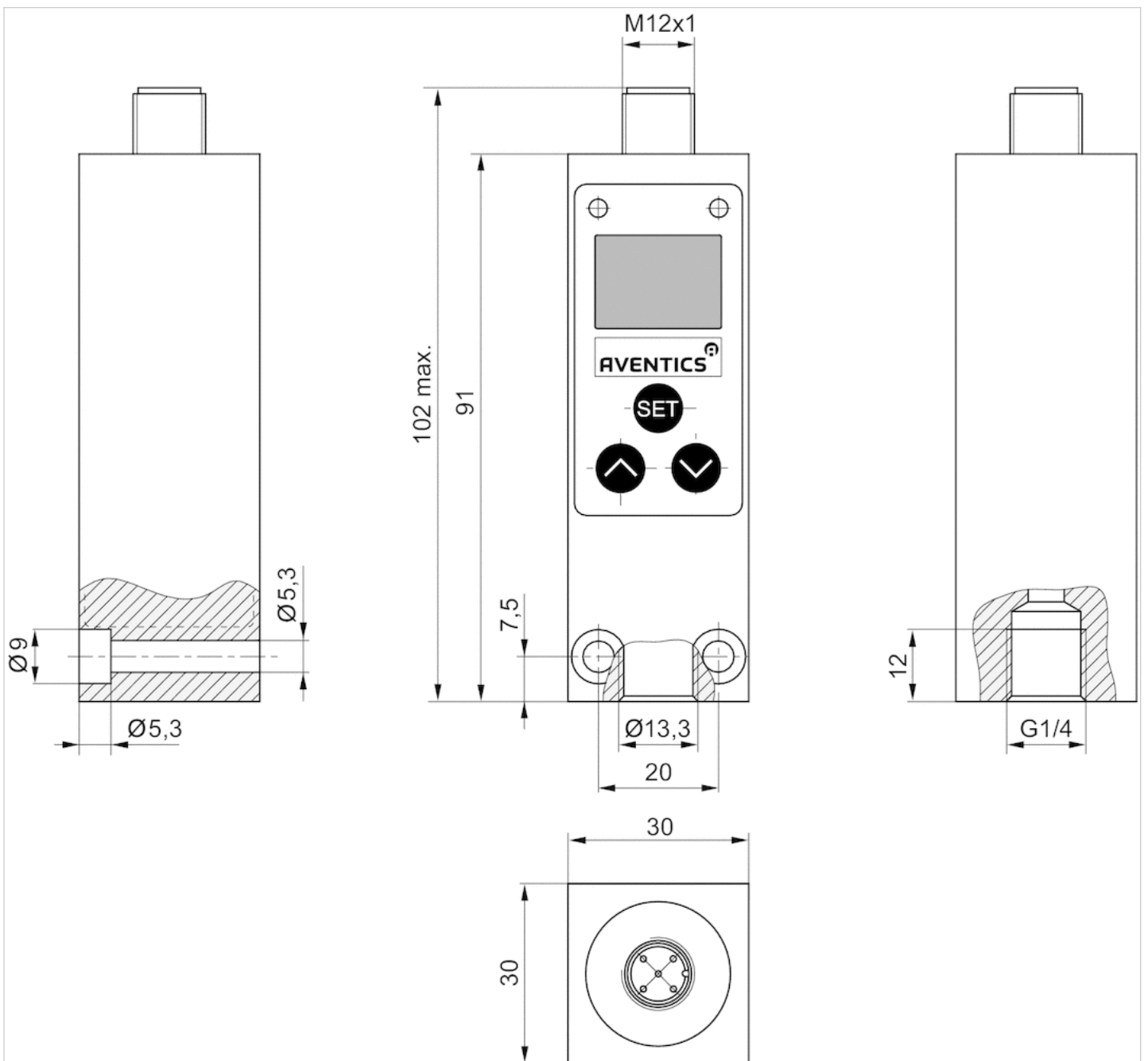
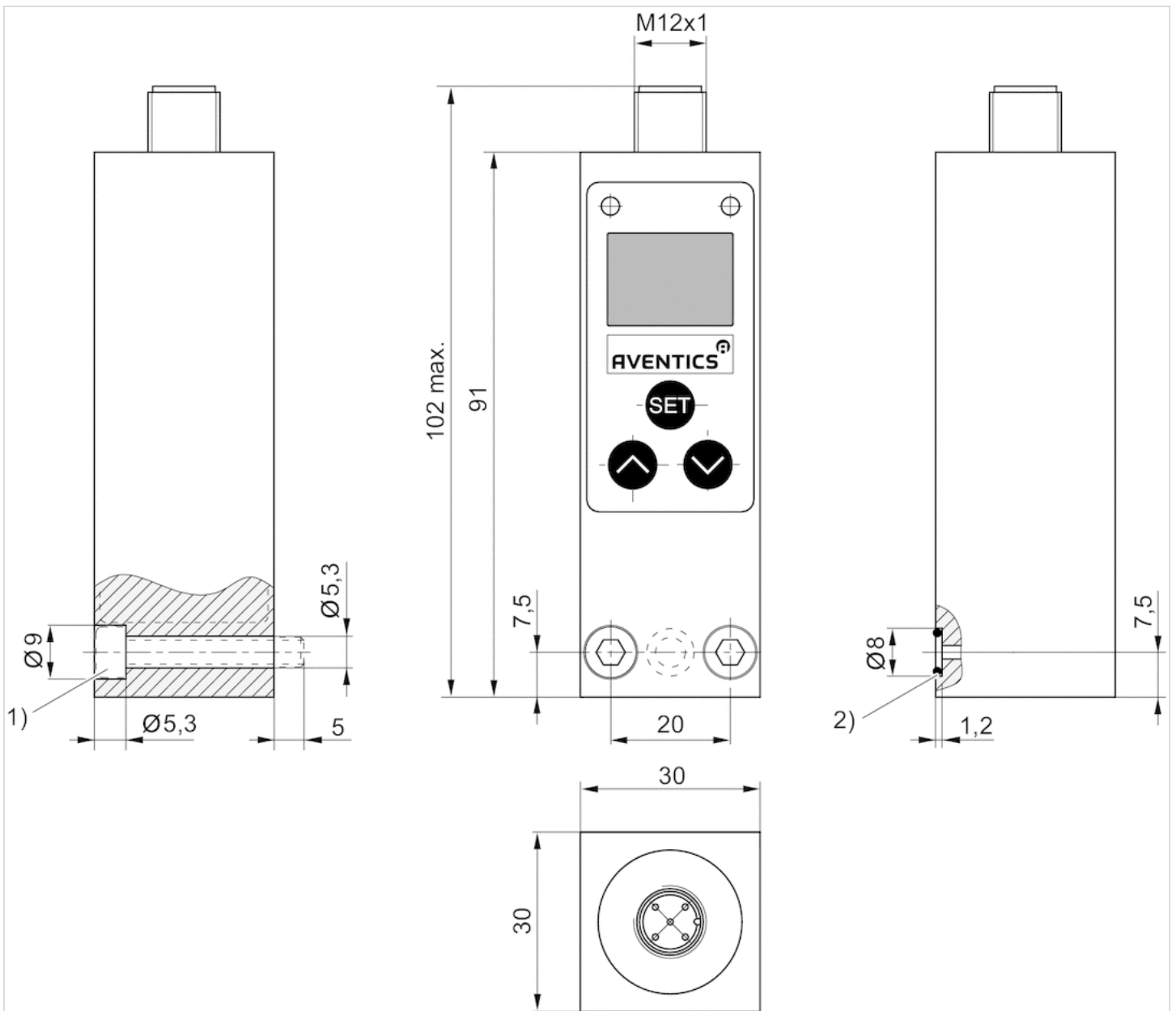


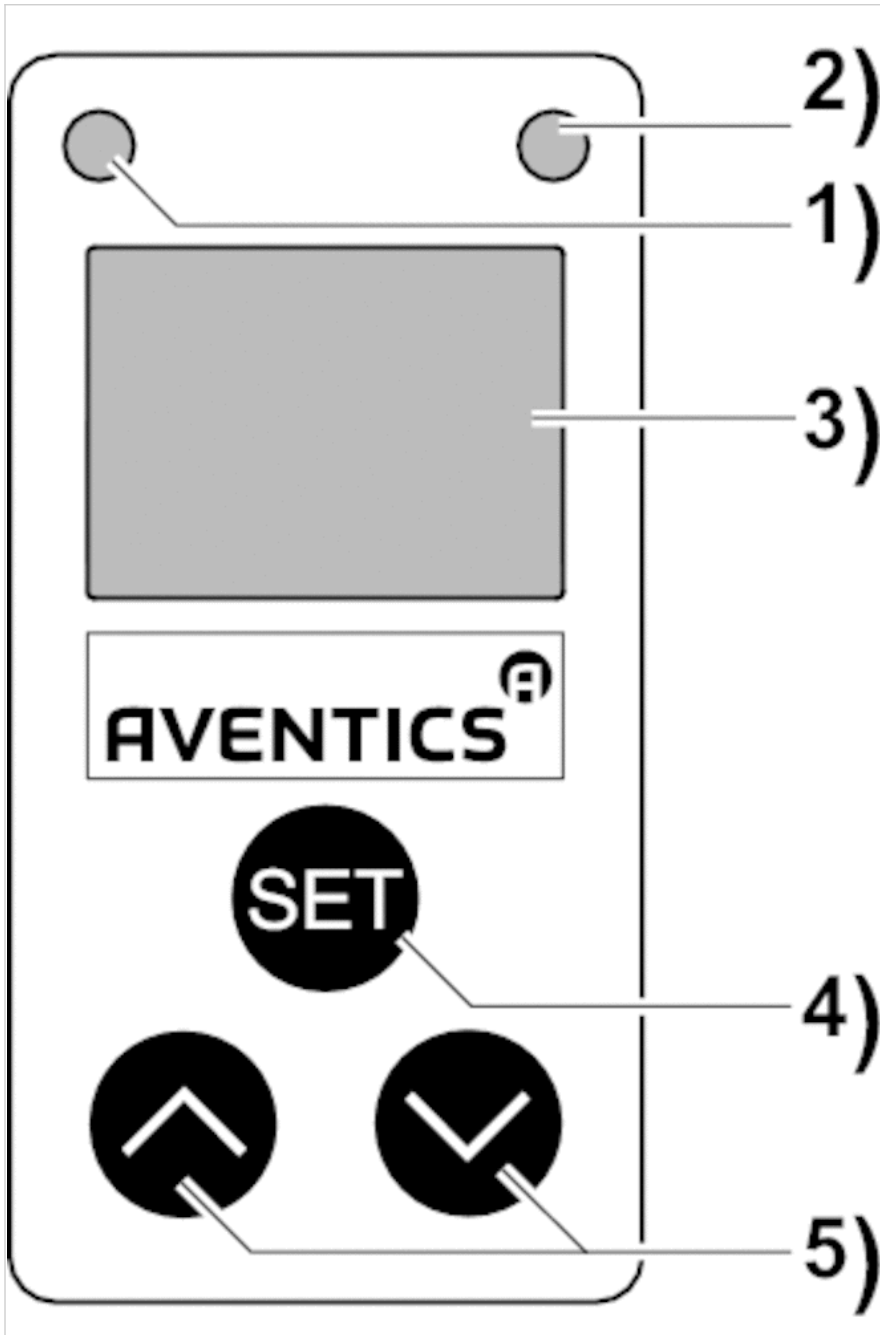
Fig. 2



- 1) cylinder screw M5x35 (included in scope of delivery)
- 2) O-ring  $\varnothing 5 \times 1,5$  (included)



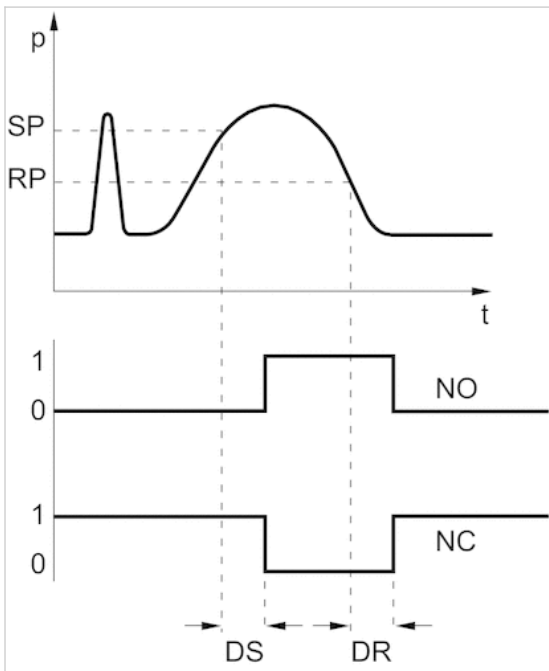
Display and operation area



- 1) LED for switch output 1
- 2) LED for switch output 2
- 3) Display (pressure, operating modes, navigation)
- 4) Confirm menu/menu item selection
- 5) Button for menu item/parameter change selection

## Diagrams

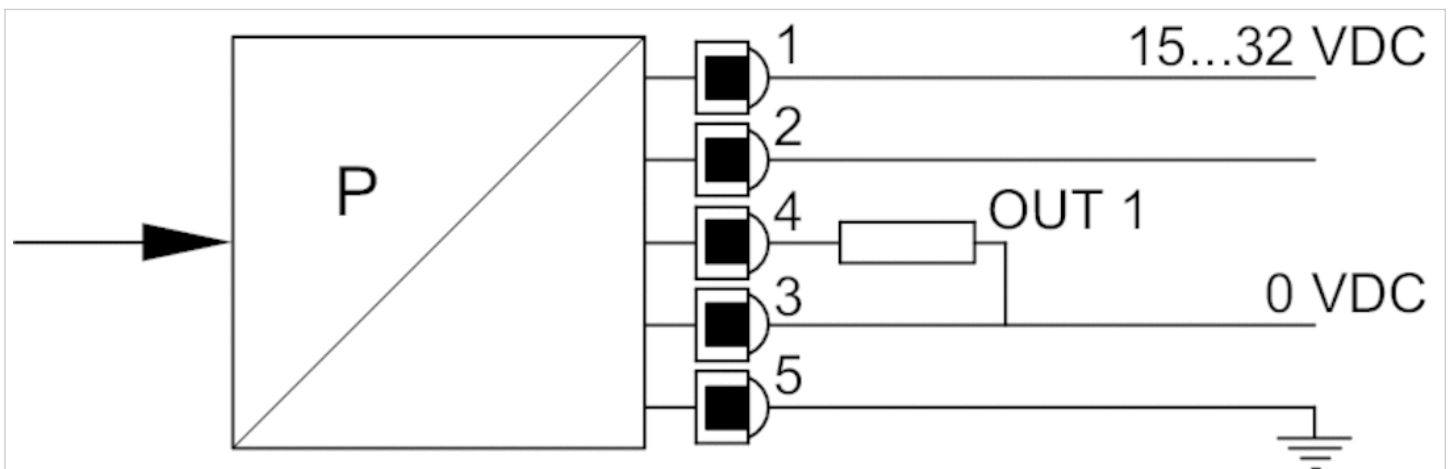
### Pressure-voltage characteristics curve



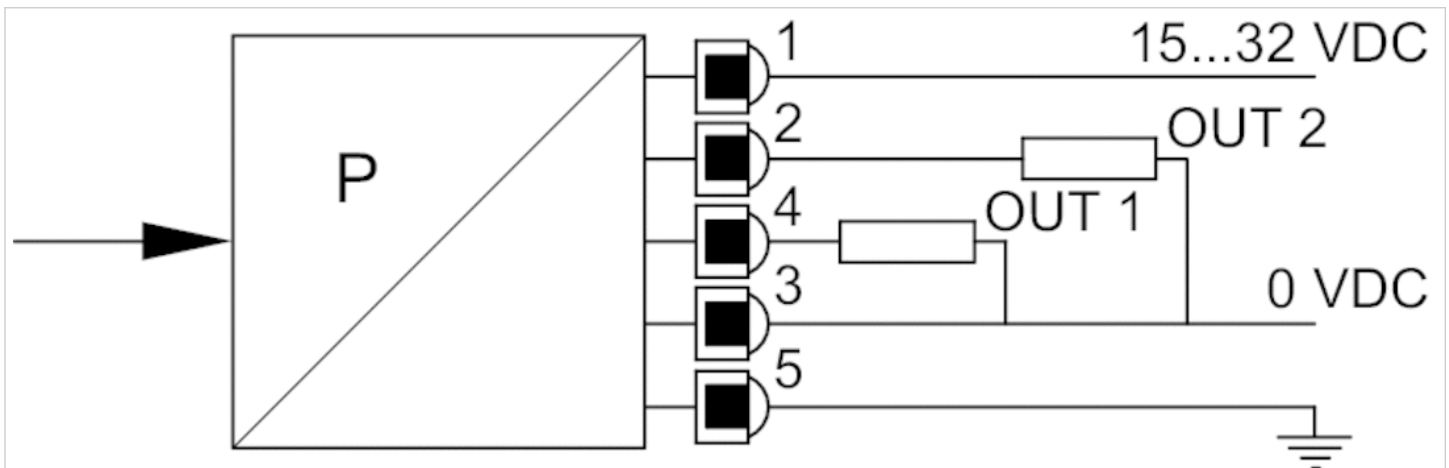
- SP = switching point
- RP = resetting point
- NO = Switching function open
- NC = Switching function closed without current
- DS = Delay for the switching point
- DR = Delay for the resetting point

## Circuit diagram

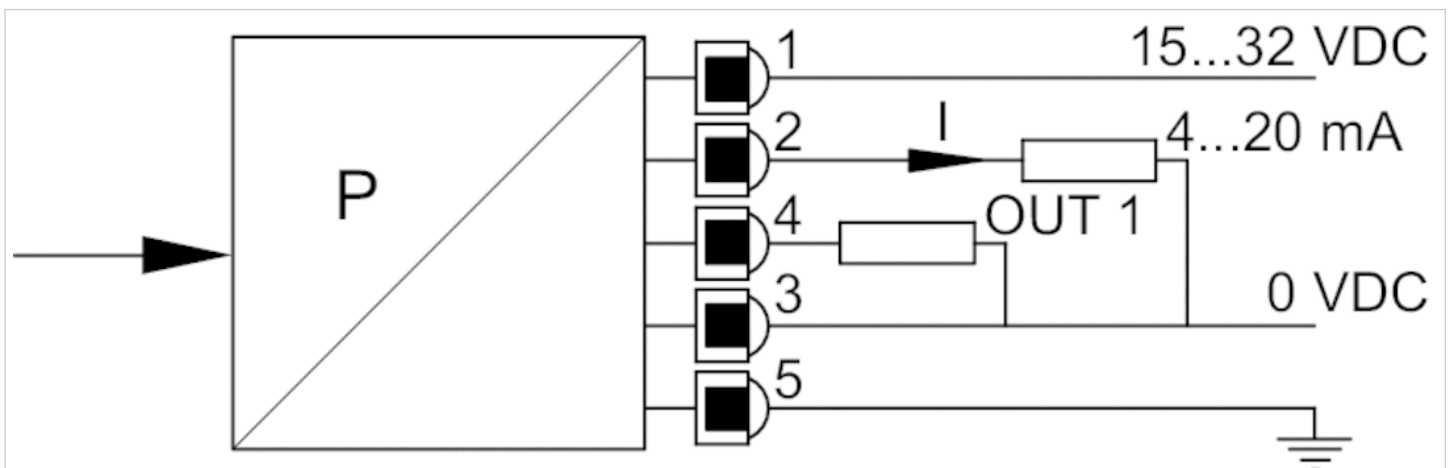
### Block diagram, 1 x PNP



Block diagram, 2 x PNP

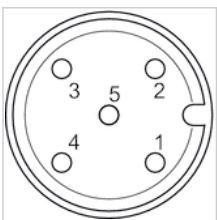


Block diagram, 1x PNP and 1x analog



Pin assignments

Pin assignments



pin 1: signal + UB, color: brown pin 2: signal: out 2 (PNP)/analog 4 - 20 mA, color: white pin 3: signal: 0 volt, color: blue pin 4: signal: out 1 (PNP), color: black pin 5: signal: FE, color: gray








# Pressure Switches, Series PM1

- Operating pressure -0.9 ... 0 -0.9 ... 3 0.2 ... 16 bar
- Mechanical
- Spring-loaded bellows, adjustable
- Electr. connection Plug EN 175301-803, form A
- Compressed air connection Internal thread G 1/4 Flange with O-ring Ø 5x1,5



Type	Mechanical
Function	change-over contact (mechanical)
Mounting orientation	Any
Working pressure min./max.	See table below
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-10 ... 80 °C
Medium	Compressed air Hydraulic oil
Measurement	Relative pressure
Switching element	microswitch (input/output)
Protection against overpressure	80 bar
Max. switching frequency	1,5 Hz
Shock resistance max.	15 g
Vibration resistance	10 g (60 - 500 Hz)
Repeatability (% of full scale value)	± 1 %
Switching point	adjustable
Hysteresis	max. switching pressure difference
DC operating voltage min./max.	12 ... 30 V DC
Operational voltage AC min./max.	12 ... 250 V AC
Mounting types	via through holes
Protection class	IP65
Electr. connection	Plug EN 175301-803, form A
Weight	0.16 kg

## Technical data

Part No.		Type	Operating pressure range	Compressed air connection
			min./max.	
R412010711		PM1-M3-G014	-0.9 ... 0 bar	Internal thread, G 1/4
R412022752		PM1-M3-G014	-0.9 ... 3 bar	Internal thread, G 1/4
R412010712		PM1-M3-G014	0.2 ... 16 bar	Internal thread, G 1/4
R412010713		PM1-M3-G014	0.2 ... 16 bar	Internal thread, G 1/4
R412010714		PM1-M3-F001	-0.9 ... 0 bar	Flange with O-ring, Ø 5x1,5
R412010715		PM1-M3-F001	0.2 ... 16 bar	Flange with O-ring, Ø 5x1,5
R412010718		PM1-M3-F001	0.2 ... 16 bar	Flange with O-ring, Ø 5x1,5

Part No.	Scope of delivery	Fig.	
R412010711	With valve plug connector	Fig. 1	-
R412022752	Without valve plug connector	Fig. 1	-
R412010712	Without valve plug connector	Fig. 1	1)
R412010713	With valve plug connector	Fig. 1	1)
R412010714	With valve plug connector	Fig. 2	-
R412010715	Without valve plug connector	Fig. 2	1)

Part No.	Scope of delivery	Fig.	
R412010718	With valve plug connector	Fig. 2	1)

1) Min. switching pressure range 0.2 bar falling/0.5 bar rising

## Technical information

Switching function increasing pressure: contact switches from 1-2 to 1-3.

Switching function decreasing pressure: contact switches from 1-3 to 1-2.

Notice: Too-high currents can damage contacts. Inductive or capacitive loads must be equipped with appropriate spark-quenching!

The microswitch has silver-plated contacts.

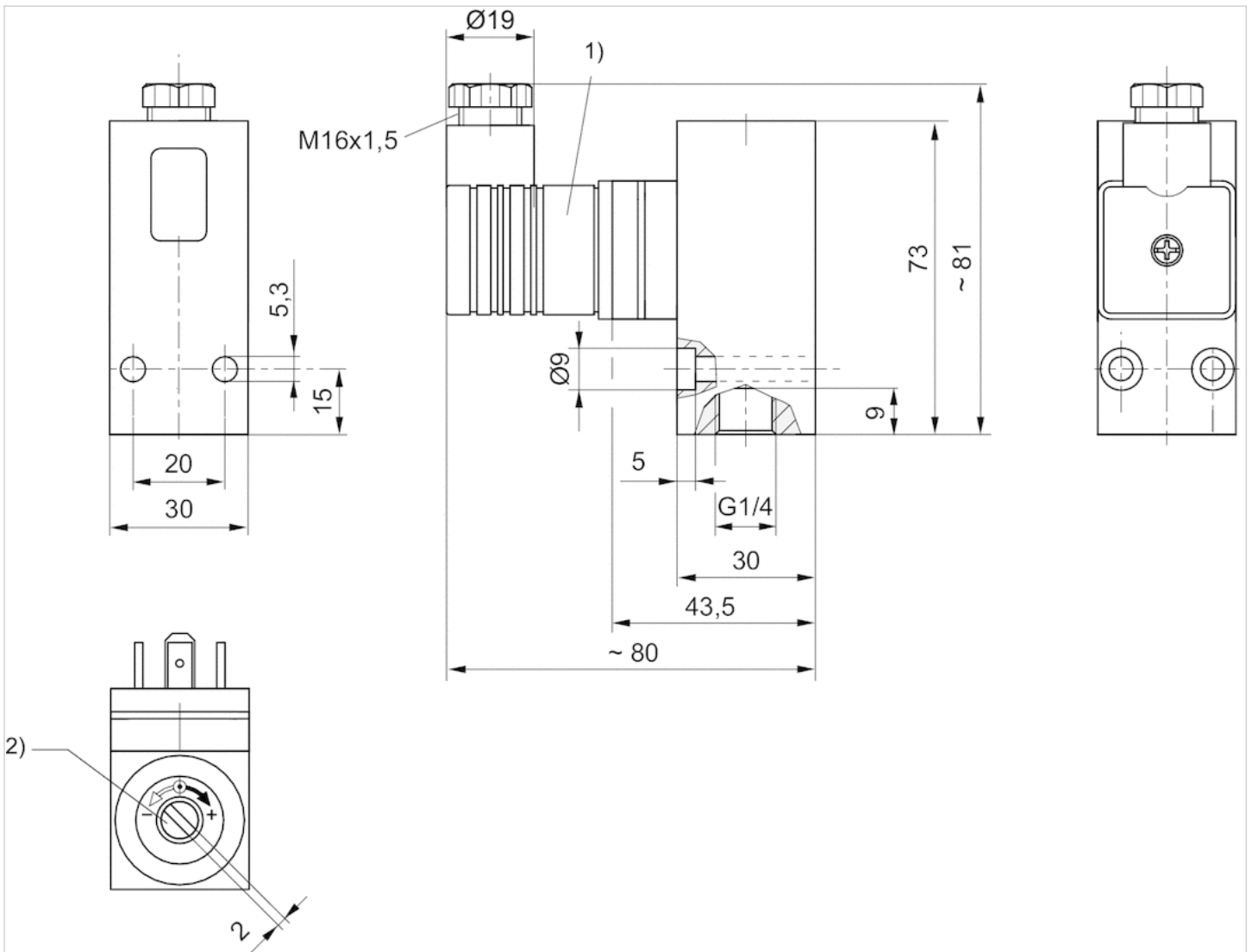
Please observe the pin assignment when selecting plug connectors.

## Technical information

Material	
Housing	Aluminum
Seals	Acrylonitrile butadiene rubber
Electr. connection	Brass, nickel-plated

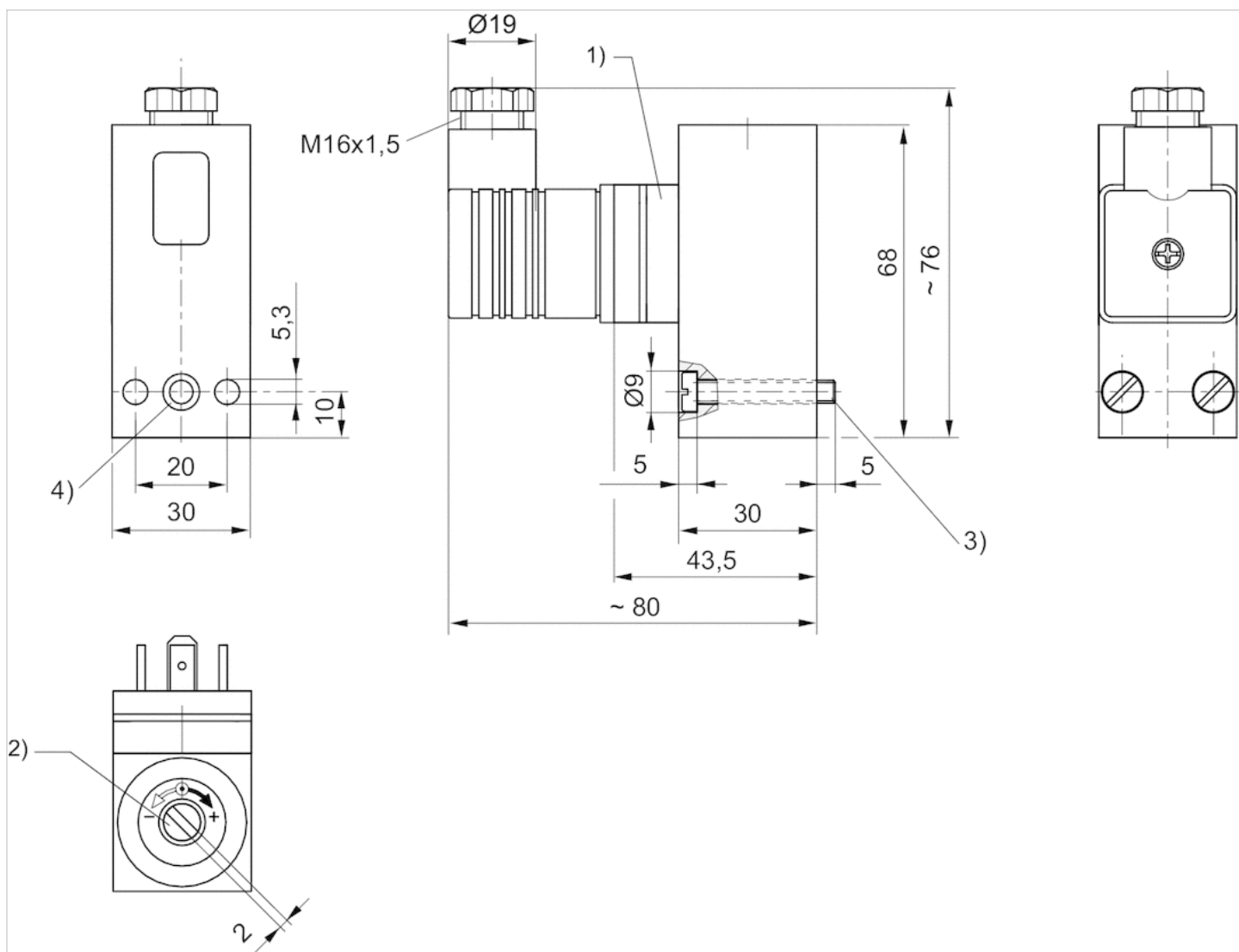
## Dimensions

Fig. 1



- 1) Valve plug connector
- 2) Adjustment screw, self-holding

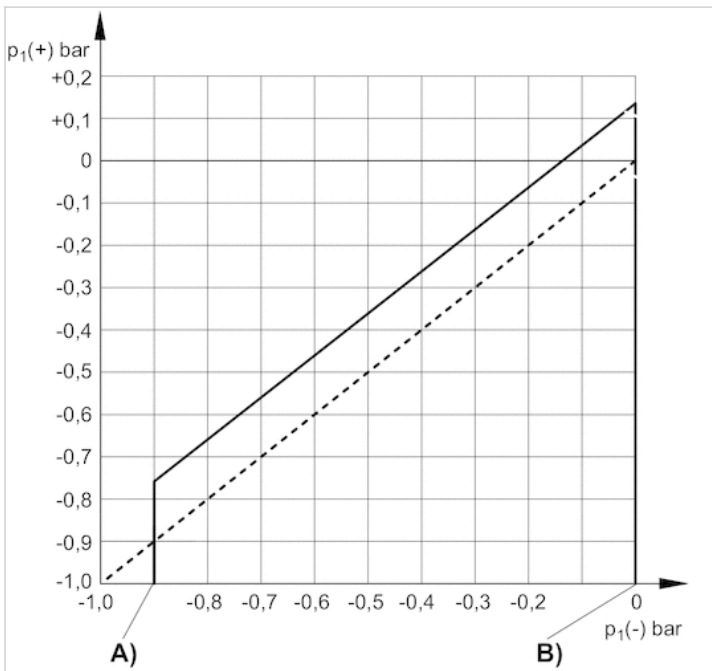
Fig. 2



- 1) Valve plug connector
- 2) Adjustment screw, self-holding
- 3) cylinder screw M5x30 (included in scope of delivery)
- 4) O-ring  $\text{Ø}5 \times 1,5$  (included)

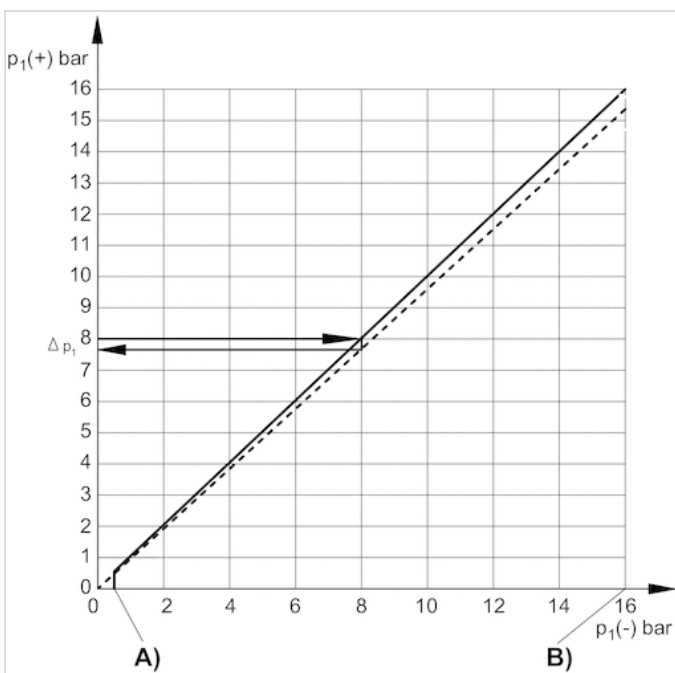
# Diagrams

## 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

## differential switching pressure characteristic curve (0,2 - 16 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  
 $\Delta p_1$  = max. operating pressure difference or hysteresis  
 Example:



$p_1 (+) = 8 \text{ bar} > p_1 (-) = 7.6 \text{ bar}$   
 $\Delta p_1 = 0.4 \text{ bar}$

max. permissible continuous current  $I_{max.}$  [A] with ohmic load

U [V]	I [A] 1)	I [A] 2)
30	5	3
48	5	1,2
60	5	0,8
125	5	0,4
250	5	–

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

- 1) AC
- 2) DC

max. permissible continuous current  $I_{max.}$  [A] with inductive load

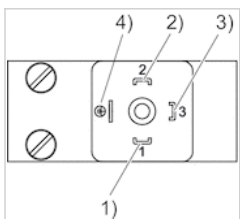
U [V]	I [A] 1) 3)	I [A] 2) 4)
30	3	2
48	3	0.55
60	3	0.4
125	3	0.15
250	3	–

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

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

## Pin assignments

PIN assignment for valve plug connectors



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





# Pressure Switches, Series PM1

- Operating pressure -0.9 ... 0 0.2 ... 16 bar
- Mechanical
- Spring-loaded bellows, adjustable
- Electr. connection Plug M12x1
- Compressed air connection Internal thread G 1/4 Flange with O-ring Ø 5x1,5



Type	Mechanical
Function	change-over contact (mechanical)
Mounting orientation	Any
Working pressure min./max.	See table below
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-10 ... 80 °C
Medium	Compressed air Hydraulic oil
Measurement	Relative pressure
Switching element	microswitch (input/output)
Protection against overpressure	80 bar
Max. switching frequency	1,5 Hz
Shock resistance max.	15 g
Vibration resistance	10 g (60 - 500 Hz)
Repeatability (% of full scale value)	± 1 %
Switching point	adjustable
Hysteresis	max. switching pressure difference
DC operating voltage min./max.	12 ... 30 V DC
Operational voltage AC min./max.	12 ... 30 V AC
Mounting types	via through holes
Protection class	IP67
Electr. connection	Plug M12x1
Weight	0.15 kg

## Technical data

Part No.		Type	Operating pressure range	Compressed air connection
			min./max.	
R412010716		PM1-M3-G014	-0.9 ... 0 bar	Internal thread, G 1/4
R412010717		PM1-M3-G014	0.2 ... 16 bar	Internal thread, G 1/4
R412010719		PM1-M3-F001	-0.9 ... 0 bar	Flange with O-ring, Ø 5x1,5
R412010720		PM1-M3-F001	0.2 ... 16 bar	Flange with O-ring, Ø 5x1,5

Part No.	Fig.	
R412010716	Fig. 1	-
R412010717	Fig. 1	1)
R412010719	Fig. 2	-
R412010720	Fig. 2	1)

1) Min. switching pressure range 0.2 bar falling/0.5 bar rising

## Technical information

Switching function increasing pressure: contact switches from 1-2 to 1-3.

Switching function decreasing pressure: contact switches from 1-3 to 1-2.

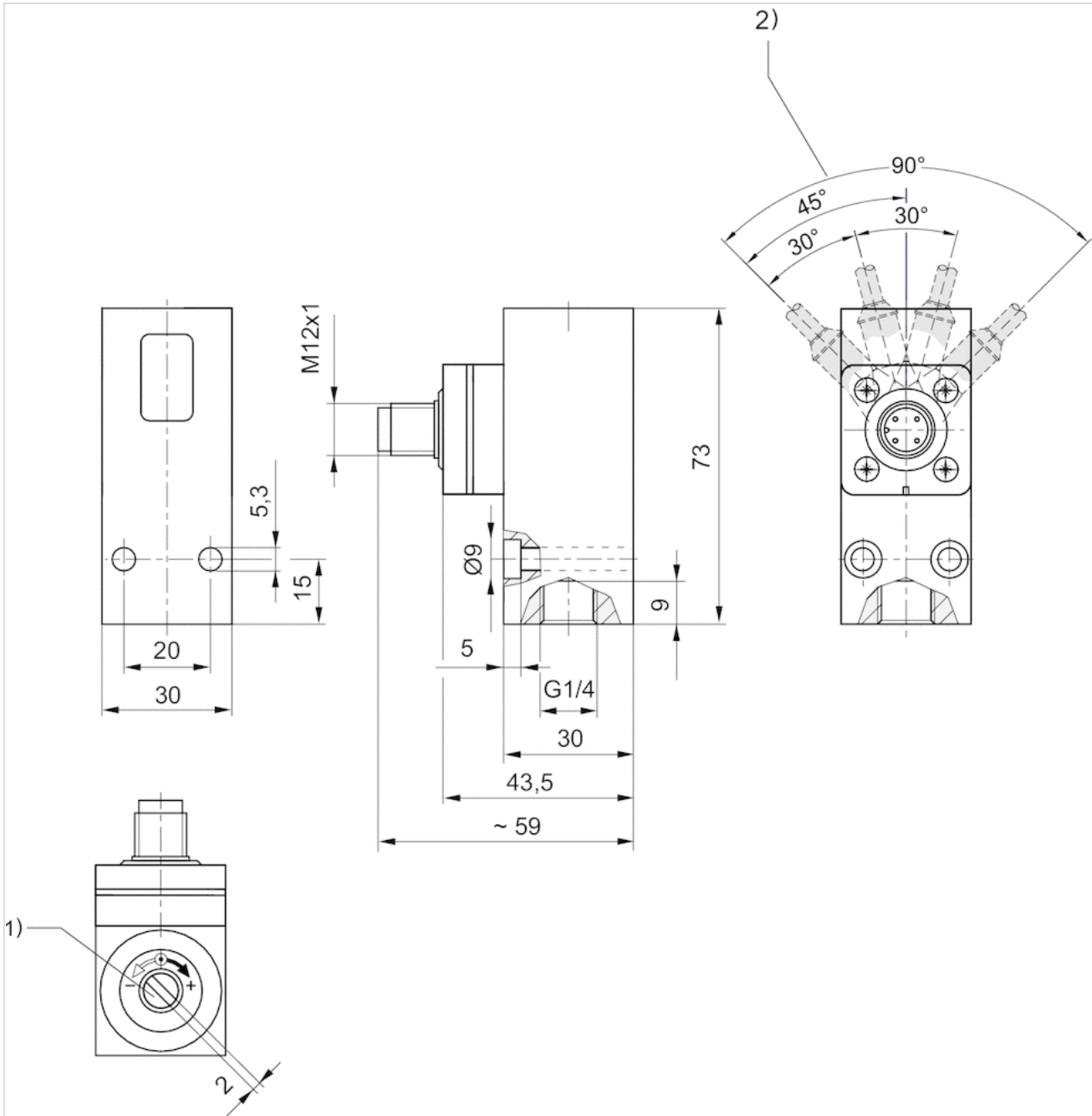
Notice: Too-high currents can damage contacts. Inductive or capacitive loads must be equipped with appropriate spark-quenching!  
The microswitch has silver-plated contacts.

## Technical information

Material	
Housing	Aluminum
Seals	Acrylonitrile butadiene rubber
Electr. connection	Brass, nickel-plated

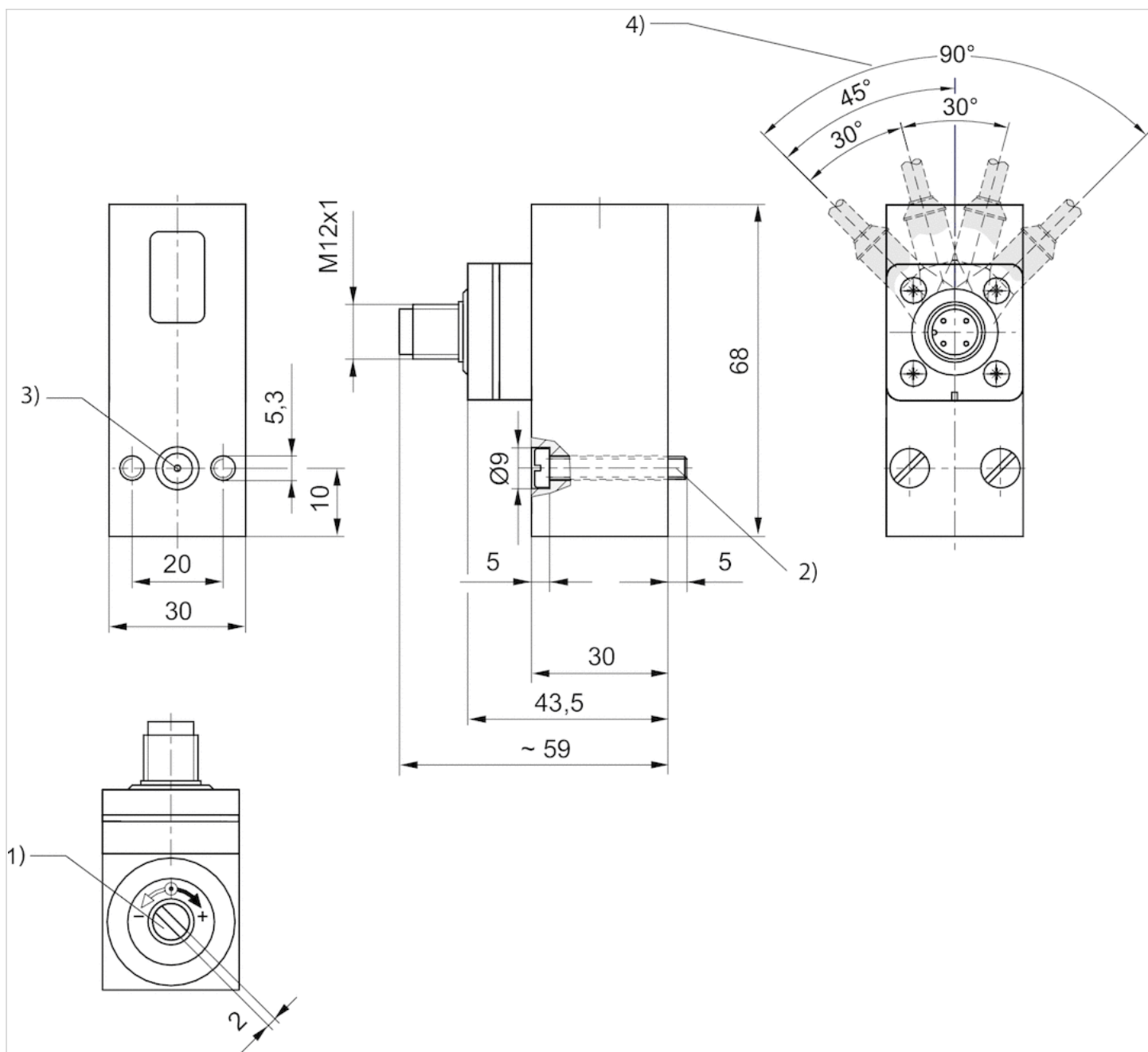
# Dimensions

Fig. 1



- 1) Adjustment screw, self-holding
- 2) Detent position

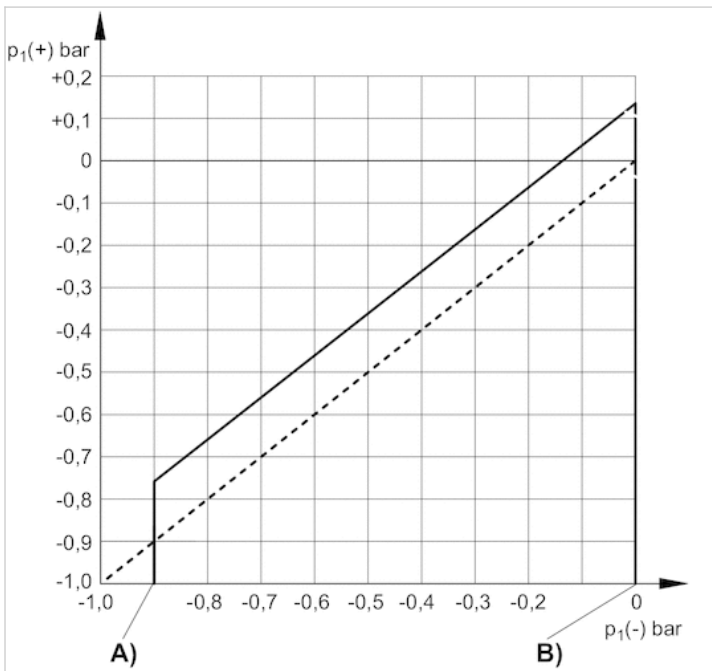
Fig. 2



- 1) Adjustment screw, self-holding
- 2) cylinder screw M5x30 (included in scope of delivery)
- 3) O-ring  $\varnothing 5 \times 1,5$  (included)
- 4) Detent position

## Diagrams

### differential switching pressure characteristic curve (-0,9 - 0 bar)



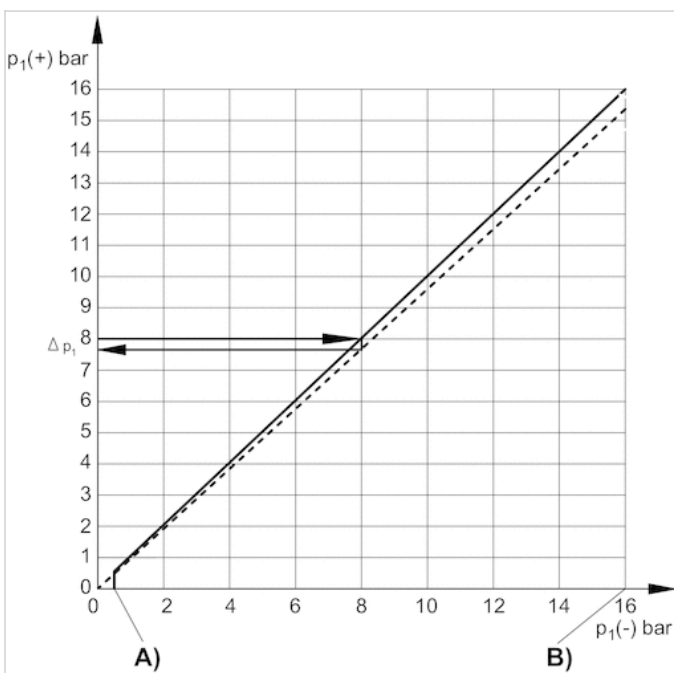
A)  $p_1(-)$ , min.

B)  $p_1(-)$ , max.

$p_1(+)$  = upper switching pressure with increasing pressure

$p_1(-)$  = lower switching pressure with decreasing pressure

### differential switching pressure characteristic curve (0,2 - 16 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

$\Delta p_1$  = max. operating pressure difference or hysteresis

Example:

$p_1 (+) = 8 \text{ bar} > p_1 (-) = 7.6 \text{ bar}$   
 $\Delta p_1 = 0.4 \text{ bar}$

max. permissible continuous current  $I_{\text{max}}$  [A] with ohmic load

U [V]	I [A] 1)	I [A] 2)
30-250	3A	
30 / 48 / 60 / 125		3 / 1,2 / 0,8 / 0,4

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

- 1) AC
- 2) DC

max. permissible continuous current  $I_{\text{max}}$  [A] with inductive load

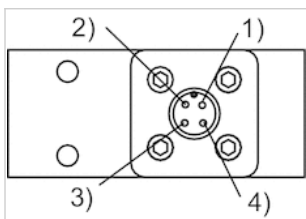
U [V]	I [A] 1) 3)	I [A] 2) 4)
30-250	3A	
30 / 48 / 60 / 125		2 / 0,55 / 0,4 / 0,2

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

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

Pin assignments

Pin assignments



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

## QR1-S-RPN standard series

- Straight fitting
- External thread
- G 1/4 G 3/8 G 1/2
- push-in fitting
- Ø 4 Ø 6 Ø 8 Ø 10 Ø 12 Ø 14 Ø 16
- QR1-S-RPN



Working pressure min./max.	-0.95 ... 10 bar
Ambient temperature min./max.	0 ... 60 °C
Weight per piece	See table below

### Technical data

Part No.	Port G	Port D	Delivery unit	Weight per piece
2121004140	G 1/4	Ø 4	10 piece	0.02 kg
2121006140	G 1/4	Ø 6	10 piece	0.021 kg
2121008140	G 1/4	Ø 8	10 piece	0.024 kg
2121010140	G 1/4	Ø 10	10 piece	0.026 kg
2121012140	G 1/4	Ø 12	10 piece	0.039 kg
R412005000	G 3/8	Ø 6	10 piece	0.032 kg
2121008380	G 3/8	Ø 8	10 piece	0.035 kg
2121010380	G 3/8	Ø 10	10 piece	0.042 kg
2121012380	G 3/8	Ø 12	10 piece	0.045 kg
2121014380	G 3/8	Ø 14	10 piece	0.046 kg
R412005005	G 3/8	Ø 16	10 piece	0.058 kg
R412005001	G 1/2	Ø 8	10 piece	0.052 kg
2121010120	G 1/2	Ø 10	10 piece	0.058 kg
2121012120	G 1/2	Ø 12	10 piece	0.057 kg
2121014120	G 1/2	Ø 14	10 piece	0.064 kg
R412005006	G 1/2	Ø 16	10 piece	0.067 kg

### Technical information

The series QR1 (plastic) and QR2 (metal) can not be combined  
Thread seal with captive O-ring

For further information about assembling and tolerances of adaptable tubing can be found in the "Technical information" document (available in the MediaCentre).

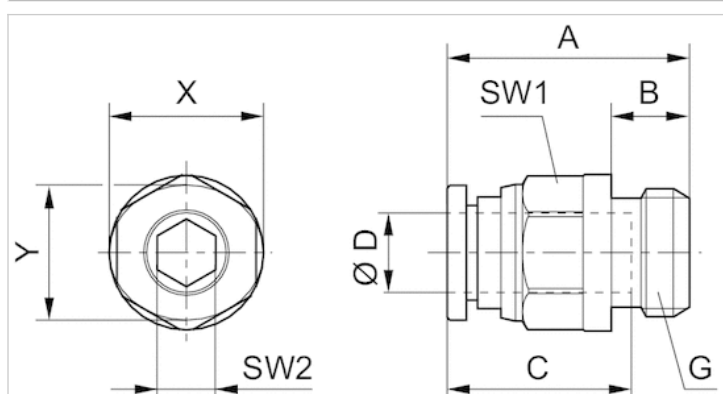


## Technical information

Material	
Material	nickel-plated
Housing	Brass, nickel-plated
Seal	Acrylonitrile butadiene rubber
Tooth lock washer	Stainless steel
Release ring	Polyoxymethylene
Release ring holder	Die cast zinc Brass, nickel-plated
Thread	Brass, nickel-plated

## Dimensions

### Dimensions



### Dimensions

Part No.	Port D	Port G	A	B	C	SW1	SW2	X	Y
2121004140	Ø 4	G 1/4	19.1	6	16	10	3	12	10
2121006140	Ø 6	G 1/4	21.6	6	17	12	4	14	12
2121008140	Ø 8	G 1/4	22.4	6	18.5	14	6	16	14
2121010140	Ø 10	G 1/4	29.9	6	21	17	7	19	17
2121012140	Ø 12	G 1/4	33.4	6	22.5	21	7	23	21
R412005000	Ø 6	G 3/8	21.6	7	17	12	4	14	12
2121008380	Ø 8	G 3/8	23.2	7	18.5	14	6	16	14
2121010380	Ø 10	G 3/8	25.9	7	21	17	8	19	17
2121012380	Ø 12	G 3/8	33.5	7	23	21	9	23	21
2121014380	Ø 14	G 3/8	30.1	7	24.6	22	9	25	23
R412005005	Ø16	G 3/8	35.3	7	25.5	24	8	27	24
R412005001	Ø 8	G 1/2	25.7	8.5	18.5	14	6	16	14
2121010120	Ø 10	G 1/2	27.4	8.5	21	17	8	19	17
2121012120	Ø 12	G 1/2	29.5	8.5	23	21	10	23	21
2121014120	Ø 14	G 1/2	25.6	8.5	24.6	24	11	25	23
R412005006	Ø16	G 1/2	36.3	8.5	25.5	24	10	27	24

## QR1-S-RVT standard series

- Elbow fitting
- External thread
- G 1/4 G 3/8 G 1/2
- push-in fitting
- Ø 4 Ø 6 Ø 8 Ø 10 Ø 12 Ø 14 Ø 16
- QR1-S-RVT



Working pressure min./max.	-0.95 ... 10 bar
Ambient temperature min./max.	0 ... 60 °C
Weight per piece	See table below

### Technical data

Part No.	Port G	Port D	Delivery unit	Weight per piece
2122004140	G 1/4	Ø 4	10 piece	0.017 kg
2122006140	G 1/4	Ø 6	10 piece	0.019 kg
2122008140	G 1/4	Ø 8	10 piece	0.023 kg
2122010140	G 1/4	Ø 10	10 piece	0.029 kg
2122012140	G 1/4	Ø 12	10 piece	0.042 kg
R412005092	G 3/8	Ø 6	10 piece	0.031 kg
2122008380	G 3/8	Ø 8	10 piece	0.033 kg
2122010380	G 3/8	Ø 10	10 piece	0.04 kg
2122012380	G 3/8	Ø 12	10 piece	0.044 kg
2122014380	G 3/8	Ø 14	5 piece	0.048 kg
R412005097	G 3/8	Ø 16	5 piece	0.061 kg
R412005093	G 1/2	Ø 8	10 piece	0.049 kg
2122010120	G 1/2	Ø 10	10 piece	0.05 kg
2122012120	G 1/2	Ø 12	10 piece	0.056 kg
2122014120	G 1/2	Ø 14	5 piece	0.066 kg
R412005098	G 1/2	Ø 16	5 piece	0.076 kg

### Technical information

The series QR1 (plastic) and QR2 (metal) can not be combined  
Thread seal with captive O-ring

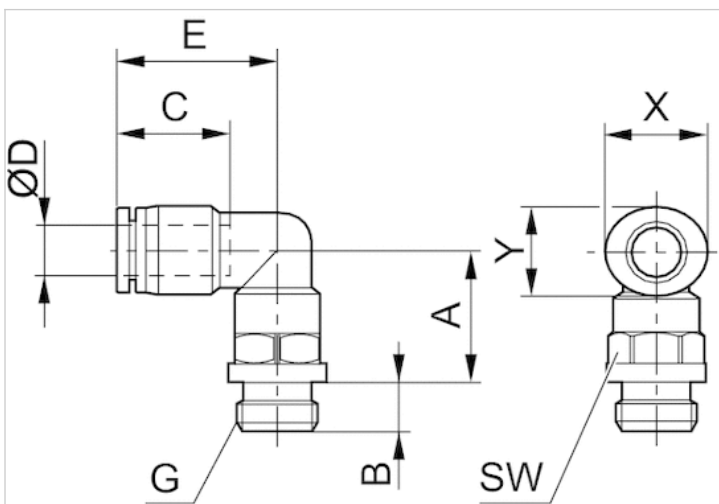
For further information about assembling and tolerances of adaptable tubing can be found in the "Technical information" document (available in the MediaCentre).

## Technical information

Material	
Material	nickel-plated
Housing	Polybutyleneterephthalate
Seal	Acrylonitrile butadiene rubber
Tooth lock washer	Stainless steel
Release ring	Polyoxymethylene
Release ring holder	Die cast zinc Brass, nickel-plated
Thread	Brass, nickel-plated

## Dimensions

### Dimensions



### Dimensions

Part No.	Port D	Port G	A	B	C	E	SW	X	Y
2122004140	Ø 4	G 1/4	9.5	6	16	18.5	16	12	10
2122006140	Ø 6	G 1/4	10.7	6	17	20.3	16	14	12
2122008140	Ø 8	G 1/4	11.5	6	18.5	22.6	16	16	14
2122010140	Ø 10	G 1/4	16.5	6	21	27	16	19	17
2122012140	Ø 12	G 1/4	18.3	6	22.5	29.2	16	23	21
R412005092	Ø 6	G 3/8	11.2	7	17	20.3	20	14	12
2122008380	Ø 8	G 3/8	11.5	7	18.5	22.6	20	16	14
2122010380	Ø 10	G 3/8	13.6	7	21	27	20	19	16
2122012380	Ø 12	G 3/8	15.3	7	22.5	29.2	20	23	21
2122014380	Ø 14	G 3/8	23.1	7	24.6	32.1	20	25	23
R412005097	Ø16	G 3/8	24.2	7	24.8	33.3	20	27	24
R412005093	Ø 8	G 1/2	12.5	8.5	18.5	22.6	24	16	14
2122010120	Ø 10	G 1/2	14.1	8.5	21	27	24	19	14
2122012120	Ø 12	G 1/2	15.8	8.5	22.5	29.2	24	23	21
2122014120	Ø 14	G 1/2	17.1	8.5	24.6	32.1	24	25	23

Part No.	Port D	Port G	A	B	C	E	SW	X	Y
R412005098	Ø16	G 1/2	18.2	8.5	24.8	33.3	24	27	24

## Series QR2-S-RPN standard

- Straight fitting
- External thread
- G 1/4 G 3/8 G 1/2
- push-in fitting
- Ø 4 Ø 5 Ø 6 Ø 8 Ø 10 Ø 12 Ø 14 Ø 16
- QR2-S-RPN



Working pressure min./max.

-0.95 ... 16 bar

Ambient temperature min./max.

-20 ... 80 °C

Weight per piece

See table below

### Technical data

Part No.	Port G	Port D	Delivery unit	Weight per piece	Fig.
1823373045	G 1/4	Ø 4	25 piece	0.012 kg	Fig. 1
1823373046	G 1/4	Ø 5	10 piece	0.013 kg	Fig. 1
1823373047	G 1/4	Ø 6	25 piece	0.015 kg	Fig. 1
1823373048	G 1/4	Ø 8	10 piece	0.016 kg	Fig. 1
1823373049	G 1/4	Ø 10	10 piece	0.026 kg	Fig. 1
1823391809	G 1/4	Ø 12	10 piece	0.031 kg	Fig. 1
R412004708	G 1/4	Ø 12	10 piece	0.022 kg	Fig. 2
1823373050	G 3/8	Ø 8	10 piece	0.021 kg	Fig. 1
1823373051	G 3/8	Ø 10	10 piece	0.028 kg	Fig. 1
1823373052	G 3/8	Ø 12	5 piece	0.038 kg	Fig. 1
1823373053	G 3/8	Ø 14	5 piece	0.059 kg	Fig. 1
1823373054	G 1/2	Ø 12	5 piece	0.048 kg	Fig. 1
1823373055	G 1/2	Ø 14	5 piece	0.064 kg	Fig. 1
R412007955	G 1/2	Ø 16	1 piece	0.072 kg	Fig. 1

### Technical information

The series QR1 (plastic) and QR2 (metal) can not be combined  
Thread seal with captive O-ring

For further information about assembling and tolerances of adaptable tubing can be found in the "Technical information" document (available in the MediaCentre).

## Technical information

Material	
Housing	Brass, nickel-plated
Seal	Acrylonitrile butadiene rubber
Tooth lock washer	Stainless steel
Release ring	Brass, nickel-plated
Thread	Brass, nickel-plated

## Dimensions

Fig. 1

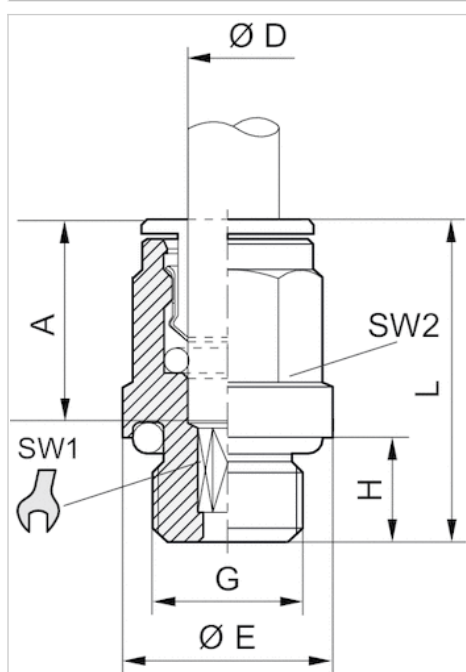
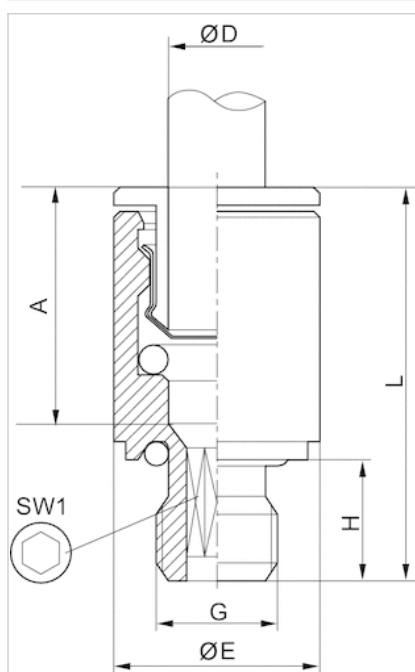


Fig. 2



## Dimensions

Part No.	Port D	Port G	Ø E	H	L	A Insertion depth	SW 1	SW 2	Fig.
1823373045	Ø 4	G 1/4	17	8	21	15	2.5	9	Fig. 1
1823373046	Ø 5	G 1/4	17	8	22	16	4	10	Fig. 1
1823373047	Ø 6	G 1/4	17	6.5	22.5	16	4	11	Fig. 1
1823373048	Ø 8	G 1/4	17	8	25	18	6	13	Fig. 1
1823373049	Ø 10	G 1/4	16	8	29.5	19	7	16	Fig. 1
1823391809	Ø 12	G 1/4	16	6.5	30	20	7	18	Fig. 1
R412004708	Ø 12	G 1/4	17	8.3	31	7	-	-	Fig. 2
1823373050	Ø 8	G 3/8	20	9	25	18	6	13	Fig. 1
1823373051	Ø 10	G 3/8	21	9	29.5	19	8	16	Fig. 1
1823373052	Ø 12	G 3/8	21	9	31	20	10	18	Fig. 1
1823373053	Ø 14	G 3/8	21	9	34	22	10	21	Fig. 1
1823373054	Ø 12	G 1/2	24	11	31	20	10	18	Fig. 1
1823373055	Ø 14	G 1/2	24	11	34	22	12	21	Fig. 1
R412007955	Ø16	G 1/2	24	11	37	12	24	-	Fig. 1

## Series QR2-S-RVT standard

- Elbow fitting, rotatable
- External thread
- G 1/4 G 3/8 G 1/2
- push-in fitting
- Ø 4 Ø 6 Ø 8 Ø 10 Ø 12 Ø 14 Ø 16
- QR2-S-RVT



Working pressure min./max.	-0.95 ... 16 bar
Ambient temperature min./max.	-20 ... 80 °C
Weight per piece	See table below

### Technical data

Part No.	Port G	Port D	Delivery unit	Weight per piece
1823391713	G 1/4	Ø 4	10 piece	0.024 kg
1823391714	G 1/4	Ø 6	10 piece	0.025 kg
1823391715	G 1/4	Ø 8	10 piece	0.027 kg
1823391718	G 1/4	Ø 10	5 piece	0.031 kg
1823391843	G 1/4	Ø 12	5 piece	0.042 kg
1823391716	G 3/8	Ø 8	5 piece	0.042 kg
1823391717	G 3/8	Ø 10	5 piece	0.042 kg
1823391838	G 3/8	Ø 12	5 piece	0.045 kg
1823391839	G 3/8	Ø 14	5 piece	0.062 kg
R412010182	G 3/8	Ø 16	1 piece	0.072 kg
R412007589	G 1/2	Ø 10	5 piece	0.046 kg
1823391840	G 1/2	Ø 12	5 piece	0.065 kg
1823391841	G 1/2	Ø 14	5 piece	0.07 kg
R412007956	G 1/2	Ø 16	1 piece	0.084 kg

### Technical information

The series QR1 (plastic) and QR2 (metal) can not be combined  
Thread seal with captive O-ring

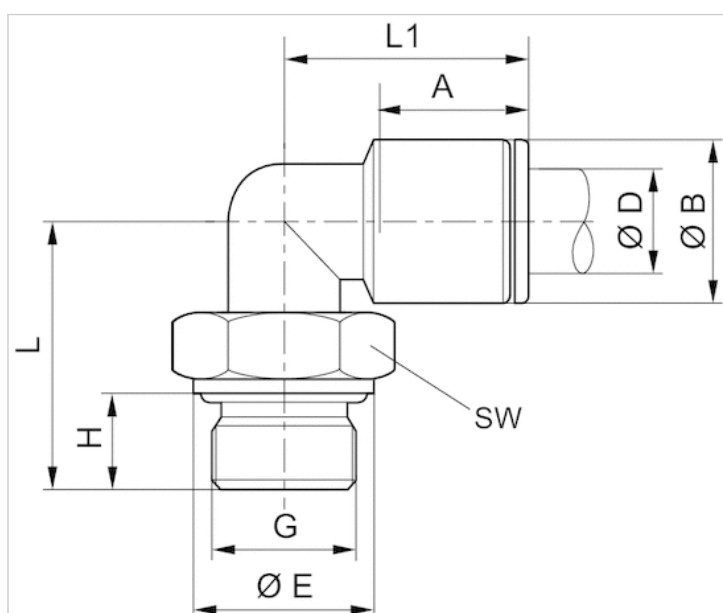
For further information about assembling and tolerances of adaptable tubing can be found in the "Technical information" document (available in the MediaCentre).



## Technical information

Material	
Housing	Brass, nickel-plated
Seal	Acrylonitrile butadiene rubber
Tooth lock washer	Stainless steel
Release ring	Brass, nickel-plated
Thread	Brass, nickel-plated

## Dimensions



## Dimensions

Part No.	Port D	Port G	ØB	ØE	H	L	L1	A Insertion depth	SW
1823391713	Ø 4	G 1/4	9	16	8	24	19	15	13
1823391714	Ø 6	G 1/4	11	16	8	24	21	16	13
1823391715	Ø 8	G 1/4	13	16	8	24	24	18	13
1823391718	Ø 10	G 1/4	15	16	8	24	27	19	16
1823391843	Ø 12	G 1/4	17	16	8	30.5	29	20	16
1823391716	Ø 8	G 3/8	13	20	9	25.5	24	18	13
1823391717	Ø 10	G 3/8	15	20	9	28	27	19	16
1823391838	Ø 12	G 3/8	17	20	9	28.5	28	20	20
1823391839	Ø 14	G 3/8	20	20	9	28.5	31	22	20
R412010182	Ø16	G 3/8	23	20	9	33.5	33	23.5	20
R412007589	Ø 10	G 1/2	15	25	11	30	27	19	16
1823391840	Ø 12	G 1/2	17	25	11	33.5	28	20	20
1823391841	Ø 14	G 1/2	20	25	11	33.5	31	22	20
R412007956	Ø16	G 1/2	23	25	11	38	33	23.5	20

## Series NU2

- Swivel banjo connection 1-fold
- External thread
- G 3/8 G 1/2
- plug-in with tube nut
- Ø 8 Ø 13
- NU2-S-RW1



Working pressure min./max.	-0.95 ... 10 bar
Ambient temperature min./max.	-10 ... 60 °C
Weight per piece	See table below

### Technical data

Part No.	Port G	Port D	Delivery unit	Weight per piece
1823391296	G 3/8	Ø 8	2 piece	0.056 kg
R412007839	G 3/8	Ø 13	2 piece	0.079 kg
R412007838	G 1/2	Ø 13	2 piece	0.098 kg

### Technical information

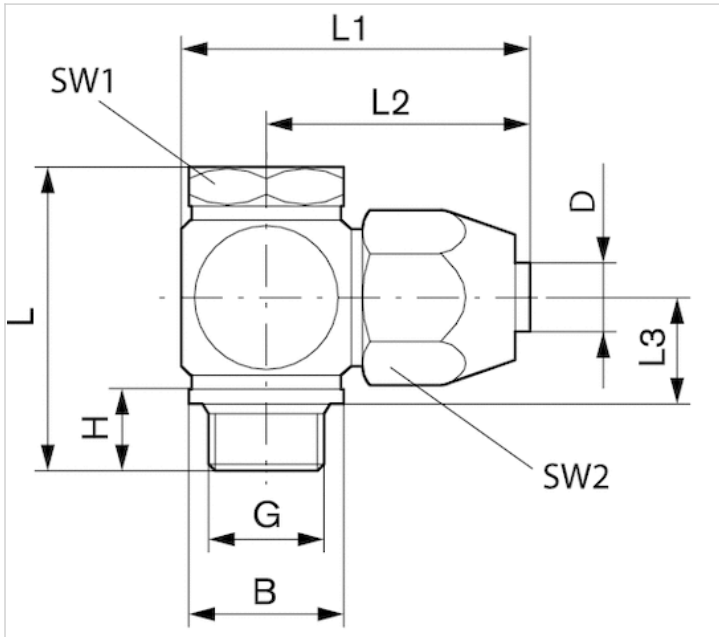
For further information about assembling and tolerances of adaptable tubing can be found in the "Technical information" document (available in the MediaCentre).

### Technical information

Material	
Housing	Aluminum, anodized
Seal	Polyvinyl chloride

## Dimensions

### Dimensions



for fabric-reinforced plastic tubing

## Dimensions

Part No.	Port D	Port G	B	H	L	L1	L2	L3	SW1	SW2
1823391296	Ø 8	G 3/8	21	12.5	43	47	35	15.5	22	22
R412007839	Ø 13	G 3/8	22.9	12.5	47	49	37	18.5	22	30
R412007838	Ø 13	G 1/2	22.9	14	49.5	55	40	18.5	27	30

Connection D = inside diameter of the tubing to be used

# Double nipple, Series PE5

- External thread



Weight per piece

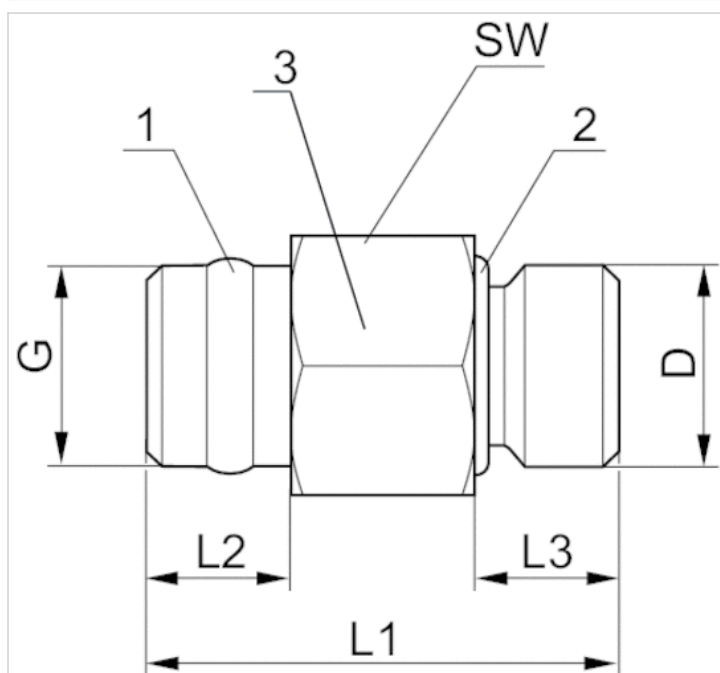
0.04 kg

## Technical data

Part No.	Port G	Port D	Delivery unit
R412010015	G 1/4	G 1/8	2 piece
R412010016	G 1/4	G 1/4	2 piece

## Dimensions

### Dimensions



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

## Dimensions

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

# Blanking screw

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



Working pressure min./max.

0 ... 16 bar

Ambient temperature min./max.

-20 ... 80 °C

## Technical data

Part No.	Port G	Delivery unit
1823462004	G 1/8	10 piece
1823462003	G 1/4	10 piece

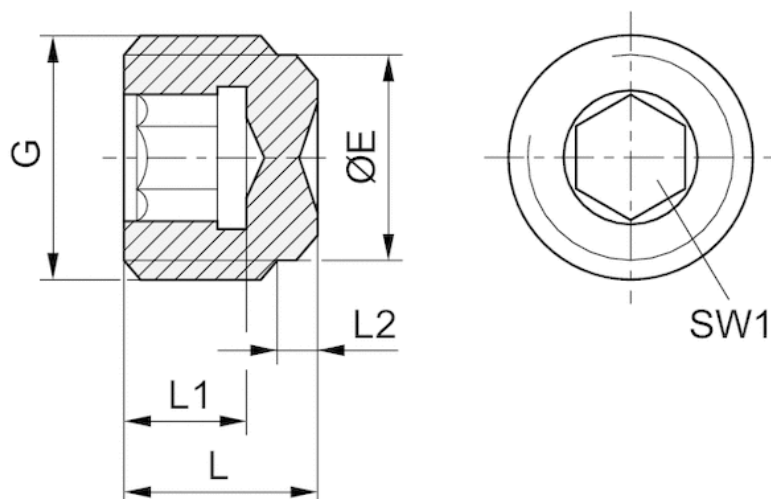
## Technical information

Material

Material	Brass
----------	-------

## Dimensions

### Dimensions



## Dimensions in mm

Port G	ØE	L	L1	L2	SW1
G 1/8	8	8	5	2	5
G 1/4	11	11	7	3.5	6

# plugs



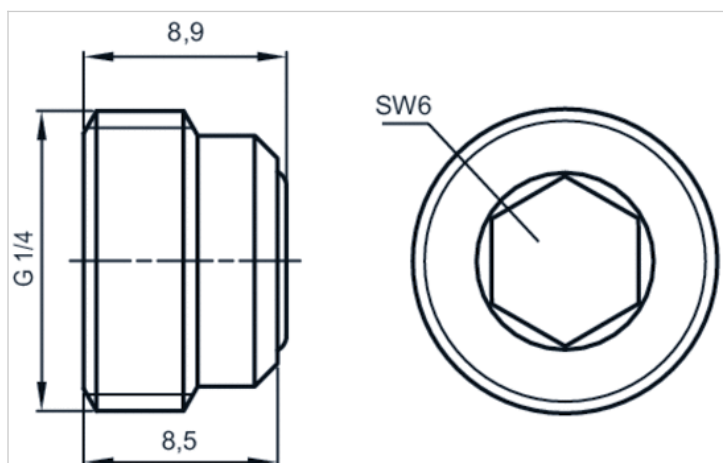
## Technical data

Part No.	Type	Suitable for	Delivery unit
R412010124	plugs	Pressure gauge connection: G 1/4	10 piece

## Technical information

Material	
Housing	Polyamide
Seal	Acrylonitrile butadiene rubber

## Dimensions





# Reducing nipple

- External thread
- G 1/2 G 3/4
- Internal thread
- G 1/4 G 3/8 G 1/2
- FPT-S-RDZ



Working pressure min./max.

0 ... 60 bar

Ambient temperature min./max.

-20 ... 70 °C

## Technical data

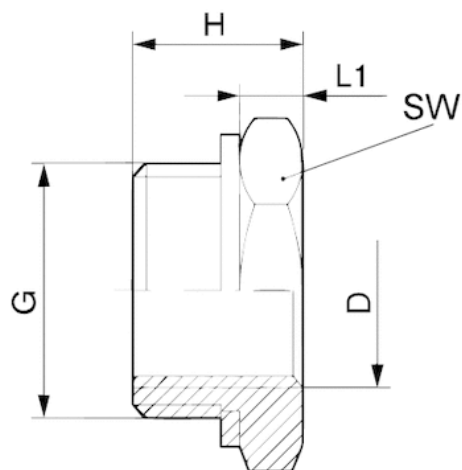
Part No.	Port G	Port D	Delivery unit
1823391300	G 1/2	G 1/4	5 piece
1823391014	G 1/2	G 3/8	5 piece
1823391028	G 3/4	G 1/2	5 piece

## Technical information

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

## Dimensions

### Dimensions



## Dimensions

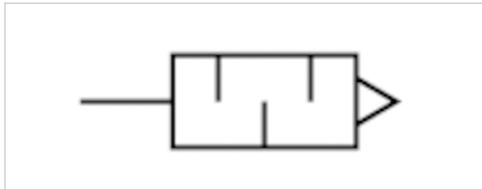
Part No.	Port D	Port G	H	L1	SW
1823391300	G 1/4	G 1/2	15.5	5.5	24
1823391014	G 3/8	G 1/2	15.5	5.5	24
1823391028	G 1/2	G 3/4	19	7	32

# Silencers, series SI1

- G 1/2
- Sintered bronze



Working pressure min./max.	0 ... 10 bar
Ambient temperature min./max.	-25 ... 80 °C
Medium	Compressed air
Sound pressure level	90 dB
Weight	0.08 kg
Comment	Flow characteristic curves can be found under "Diagrams".



## Technical data

Part No.	Compressed air connection	Flow	Delivery unit
		Qn	
1827000003	G 1/2	7223 l/min	2 piece

Weight per piece

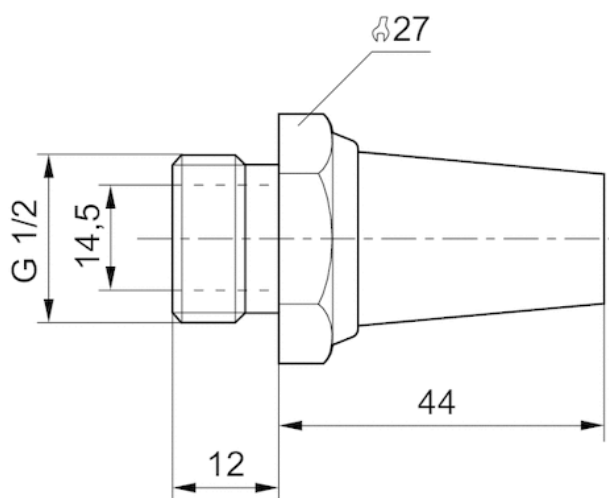
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

## Technical information

Material	
Silencer	Sintered bronze
Thread	Brass

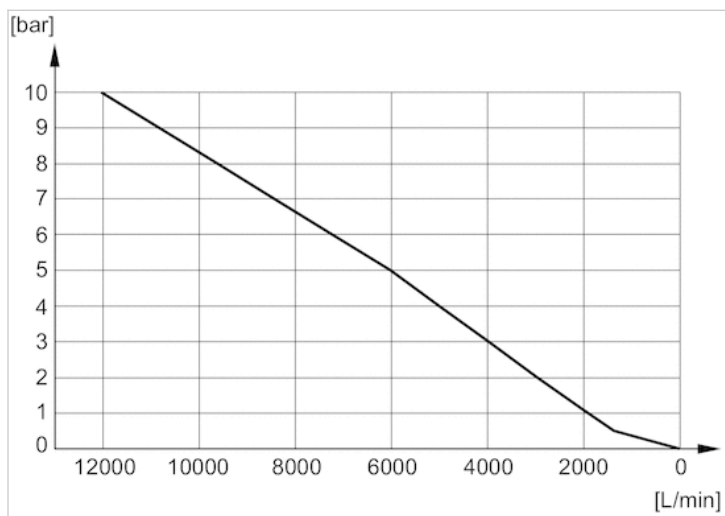
## Dimensions

### Dimensions in mm



## Diagrams

### Flow diagram, 1827000003

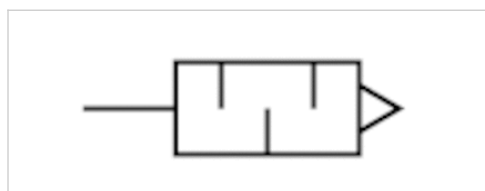


# Silencers, series SI1

- G 1/2
- Stainless steel



Working pressure min./max.	0 ... 12 bar
Ambient temperature min./max.	-20 ... 150 °C
Medium	Compressed air
Sound pressure level	95 dB
Weight	0.048 kg
Comment	Flow characteristic curves can be found under "Diagrams".



## Technical data

Part No.	Compressed air connection	Flow	Delivery unit
		Qn	
R412010084	G 1/2	5649 l/min	1 piece

Weight per piece

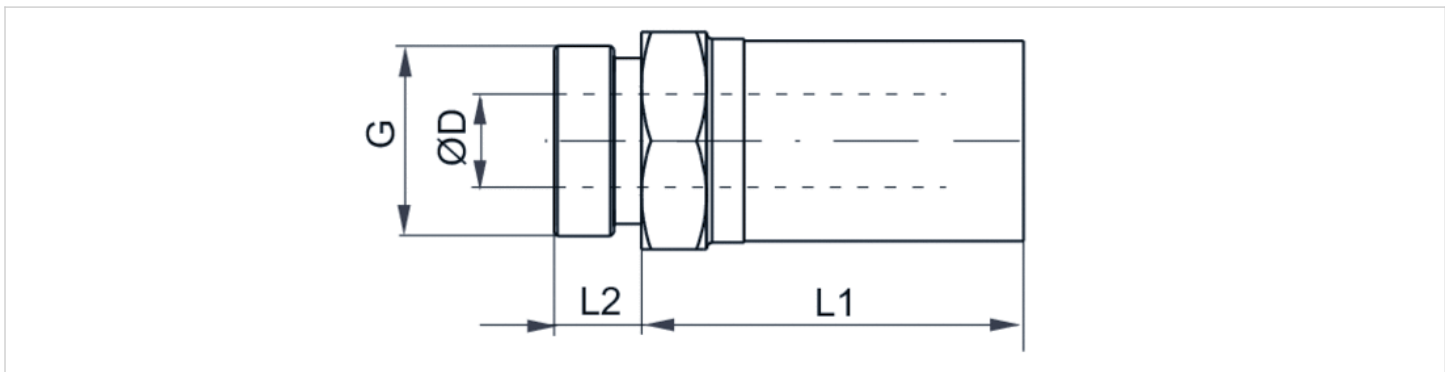
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

## Technical information

Material	
Silencer	Stainless steel
Thread	Stainless steel

## Dimensions

### Dimensions

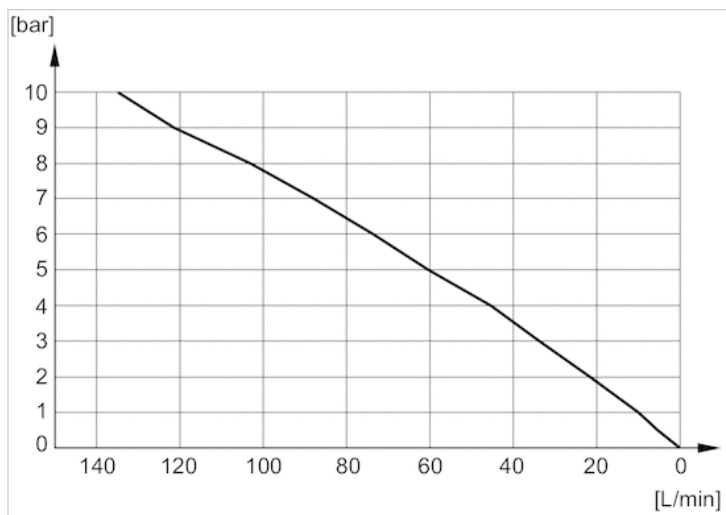


## Dimensions

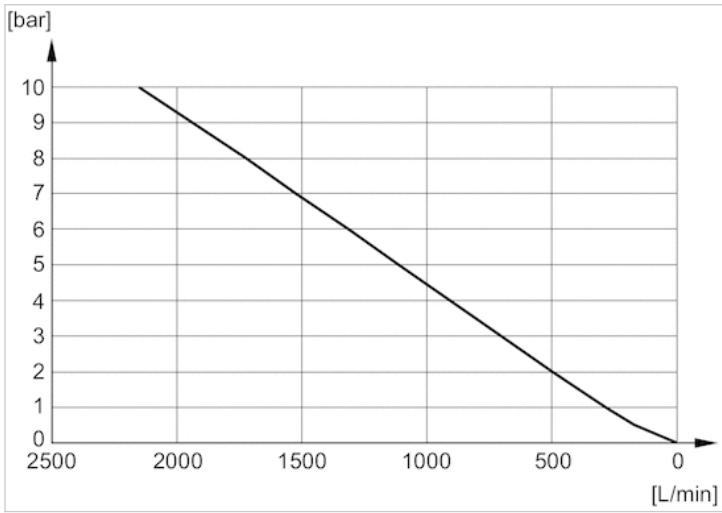
Part No.	Port G	SW	$\varnothing D$	L1	L2
R412010084	G 1/2	24	15.3	39.5	9.5

## Diagrams

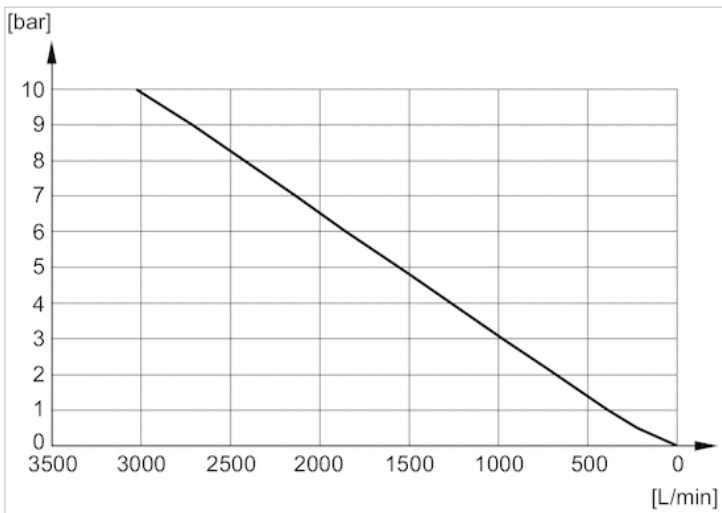
### Flow diagram, R412010090



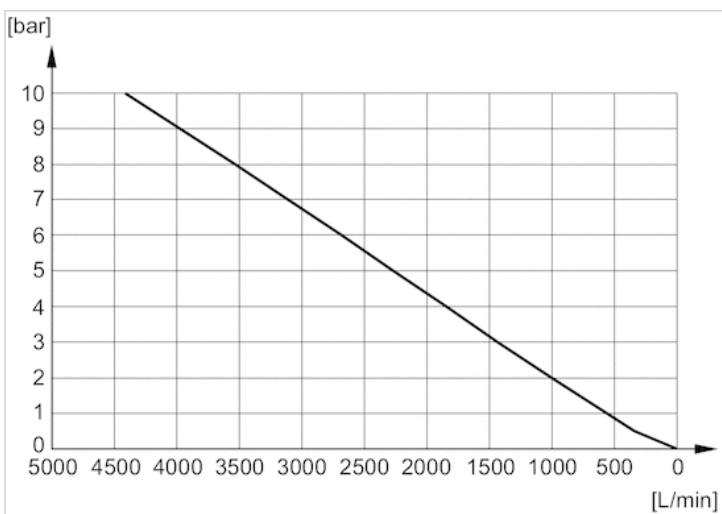
Flow diagram, R412010081



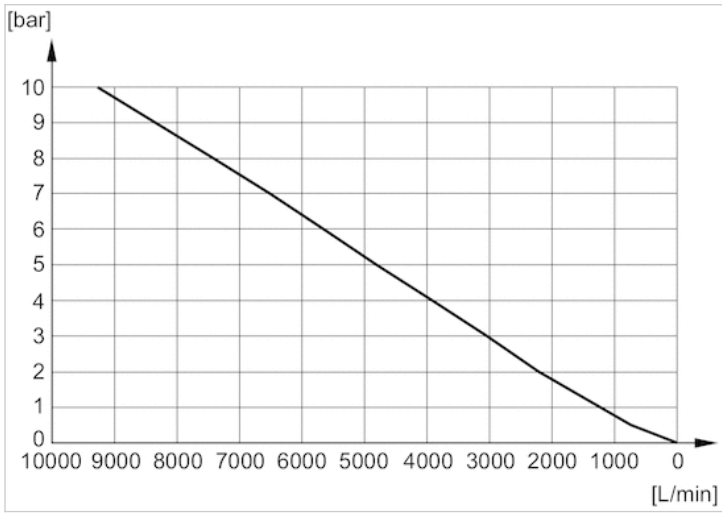
Flow diagram, R412010082



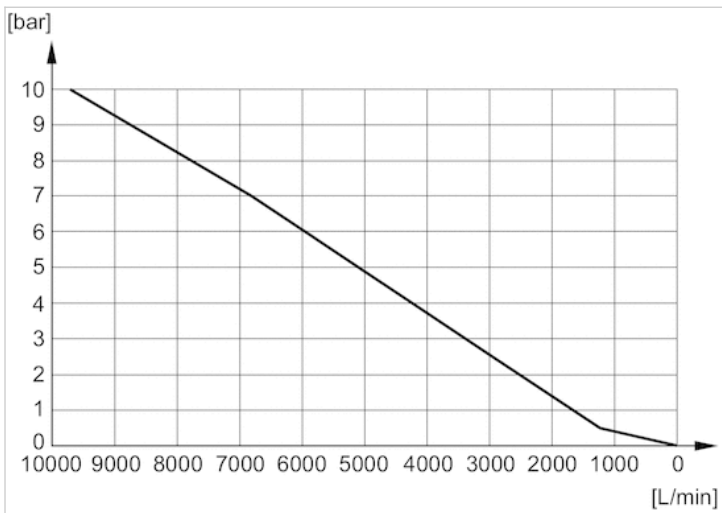
Flow diagram, R412010083



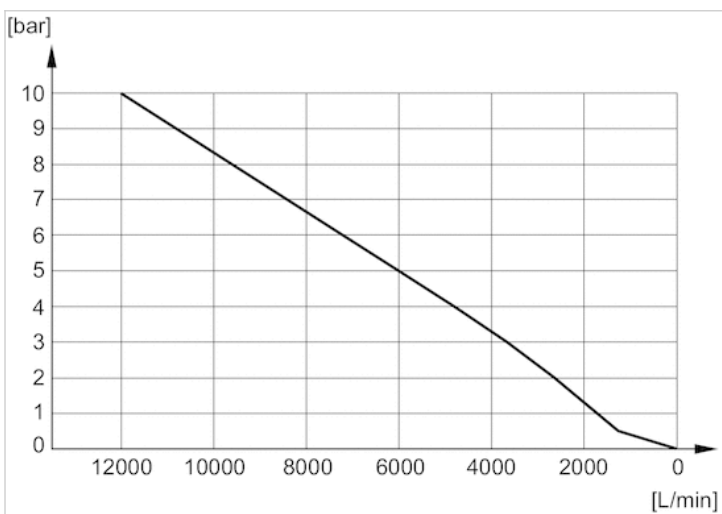
Flow diagram, R412010084



Flow diagram, R412010085



Flow diagram, R412010086



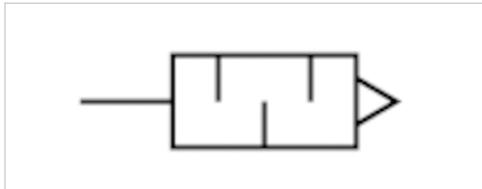


# Silencers, series SI1

- G 1/2
- Sintered bronze



Working pressure min./max.	0 ... 10 bar
Ambient temperature min./max.	-25 ... 80 °C
Medium	Compressed air
Sound pressure level	85 dB
Weight	0.035 kg
Comment	Flow characteristic curves can be found under "Diagrams".



## Technical data

Part No.	Compressed air connection	Flow	Delivery unit
		Qn	
1827000035	G 1/2	2568 l/min	2 piece

Weight per piece

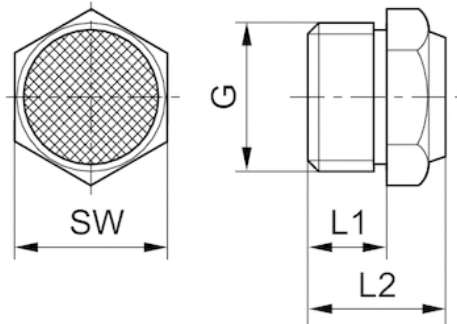
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

## Technical information

Material	
Silencer	Sintered bronze
Thread	Brass

## Dimensions

### Dimensions



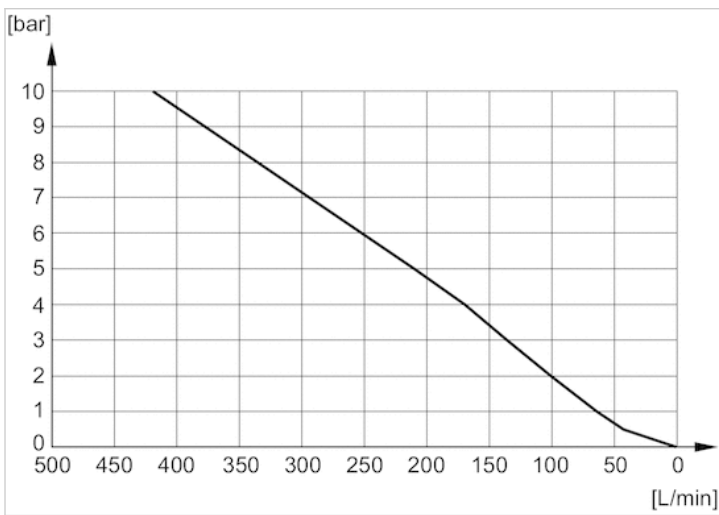
## Dimensions

Part No.	Port G	L1	L2	SW
1827000035	G 1/2	12	19.5	27

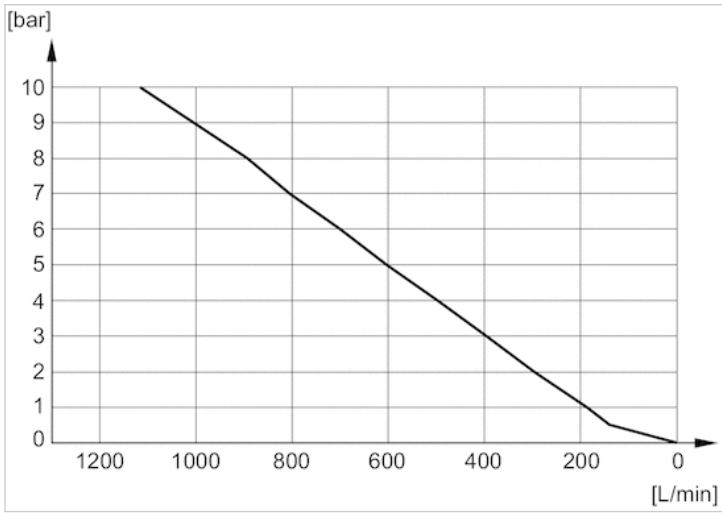
Sound pressure level measured at 6 bar at 1 m distance

## Diagrams

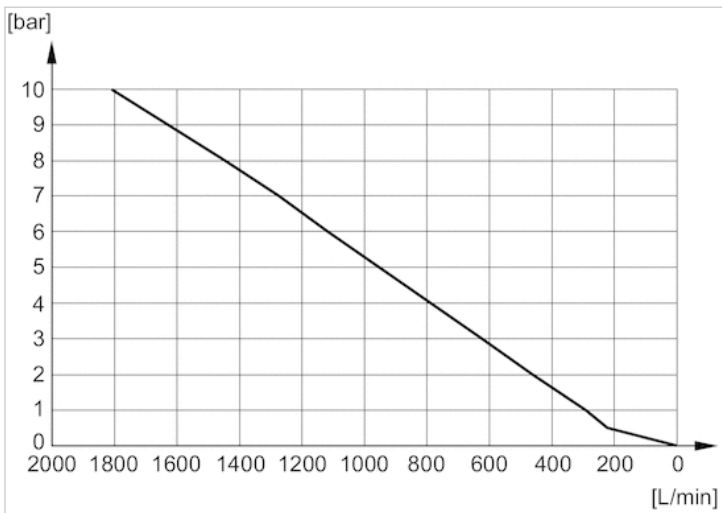
### Flow diagram, 1827000032



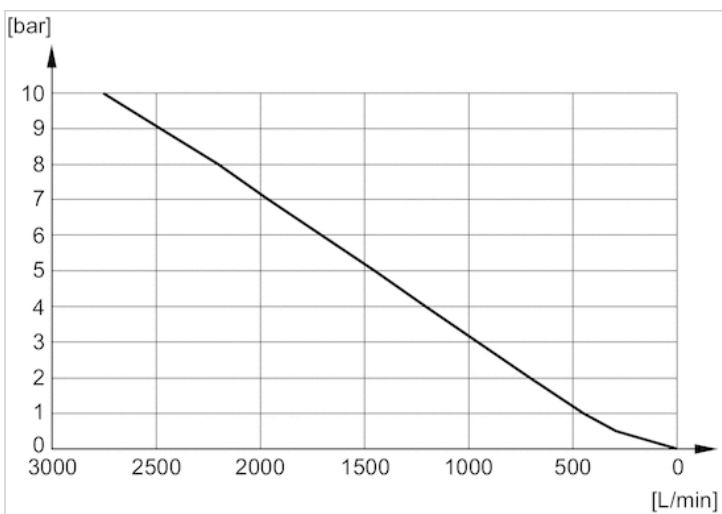
Flow diagram, 1827000031



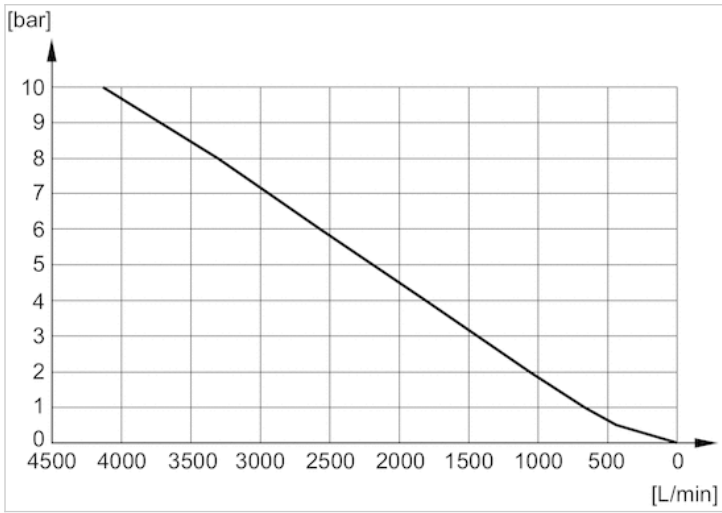
Flow diagram, 1827000033



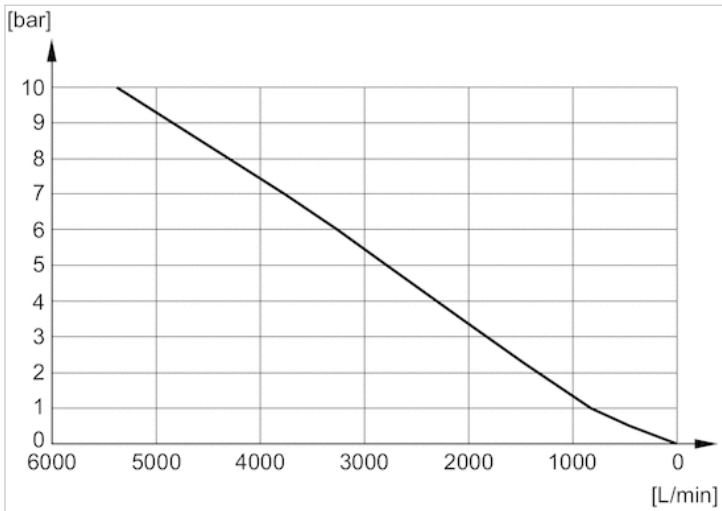
Flow diagram, 1827000034



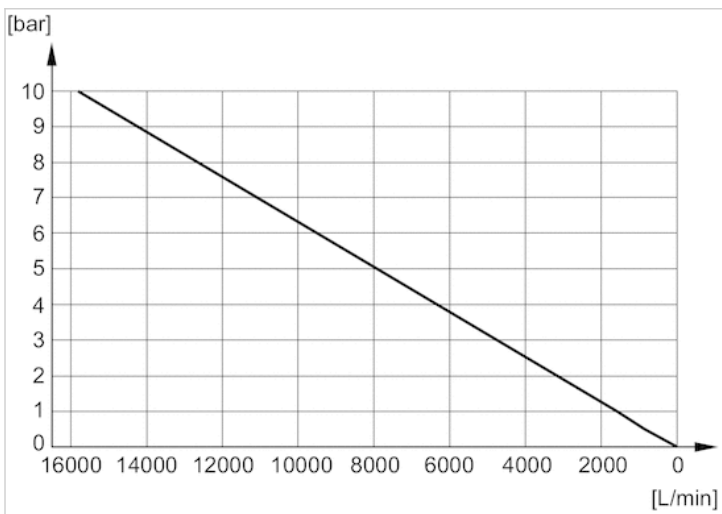
Flow diagram, 1827000035



Flow diagram, 8145003400



Flow diagram, 8145001000

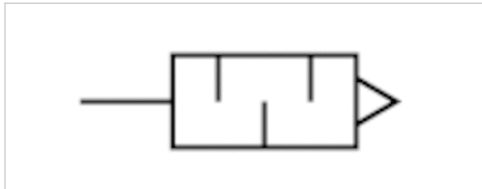


# Silencers, series SI1

- G 1/2
- Polyethylene



Working pressure min./max.	0 ... 10 bar
Ambient temperature min./max.	-25 ... 80 °C
Medium	Compressed air
Sound pressure level	88 dB
Weight	0.013 kg



## Technical data

Part No.	Compressed air connection	Flow	Delivery unit
		Qn	
1827000022	G 1/2	7142 l/min	1 piece

Weight per piece

Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

## Technical information

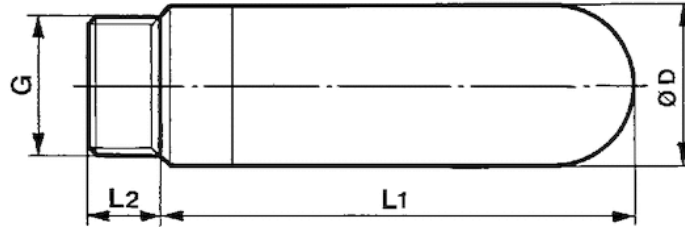
Flow characteristic curves can be found under "Diagrams".

## Technical information

Material	
Silencer	Polyethylene
Thread	Polyethylene

## Dimensions

### Dimensions

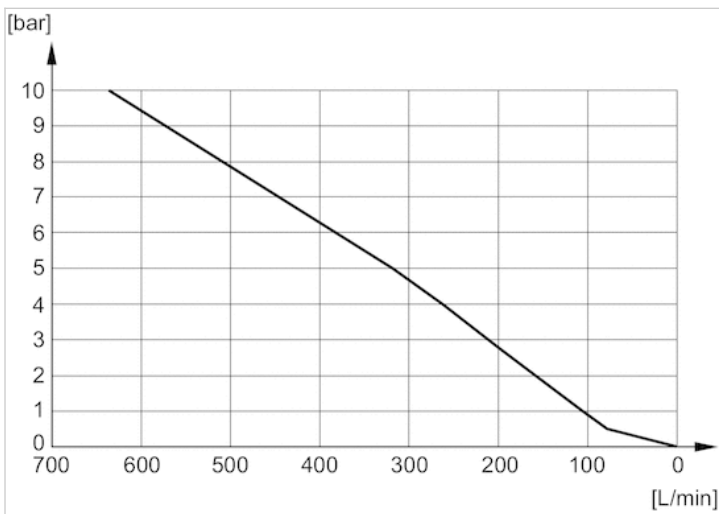


## Dimensions

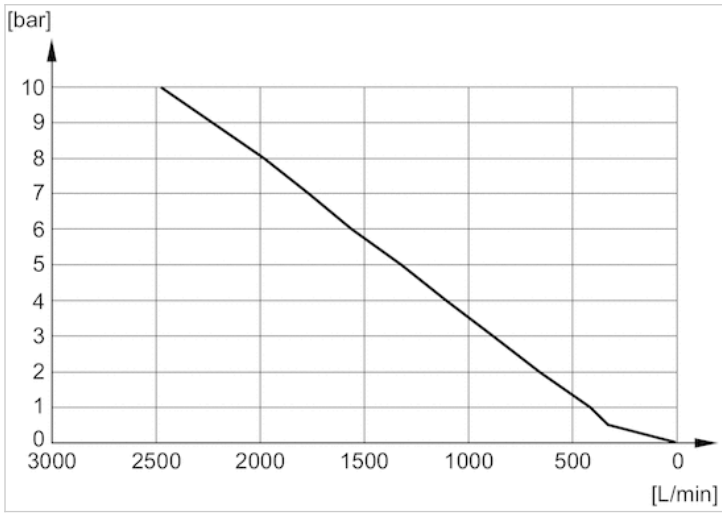
Part No.	Port G	Ø D	L1	L2
1827000022	G 1/2	23.3	66.5	11

## Diagrams

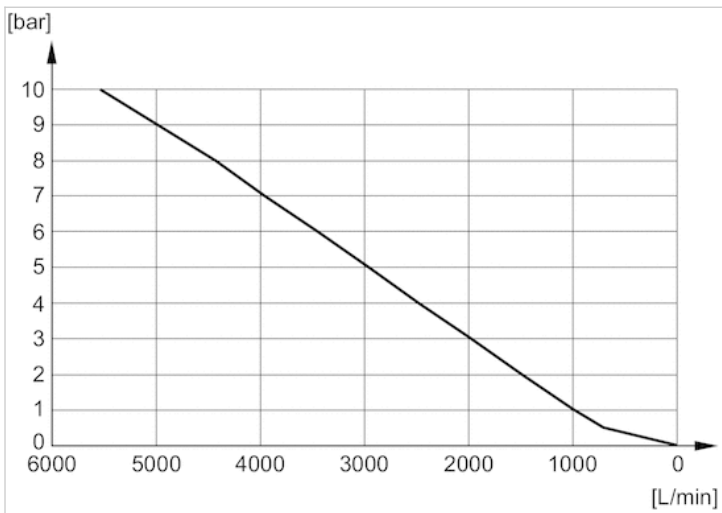
### Flow diagram, 1827000018



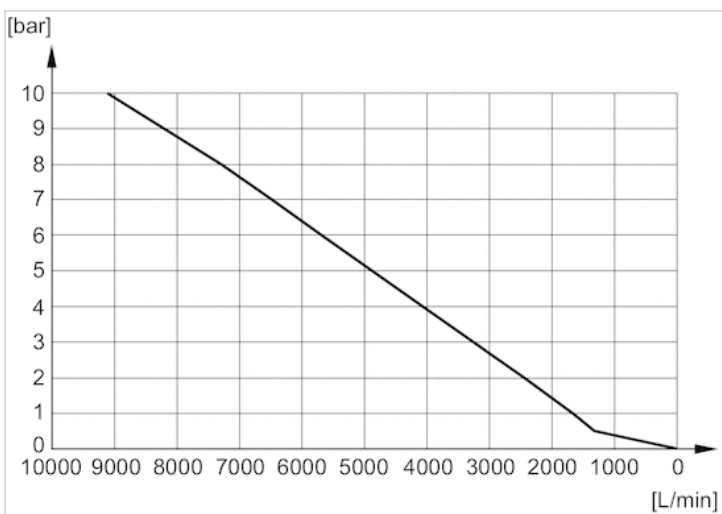
Flow diagram, 1827000019



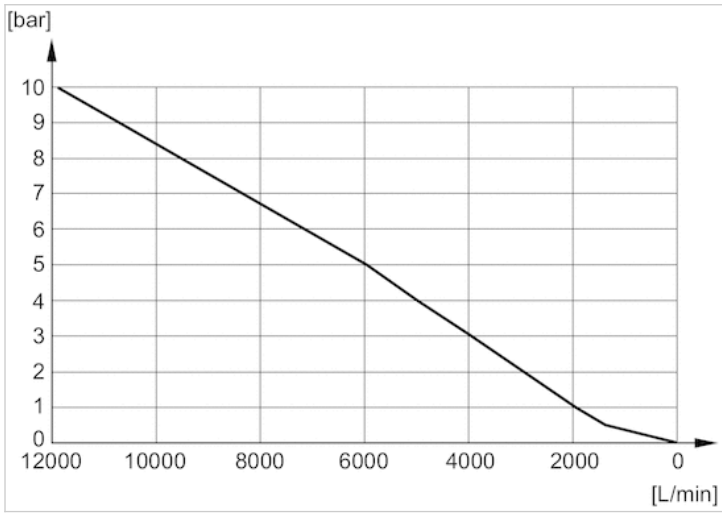
Flow diagram, 1827000020



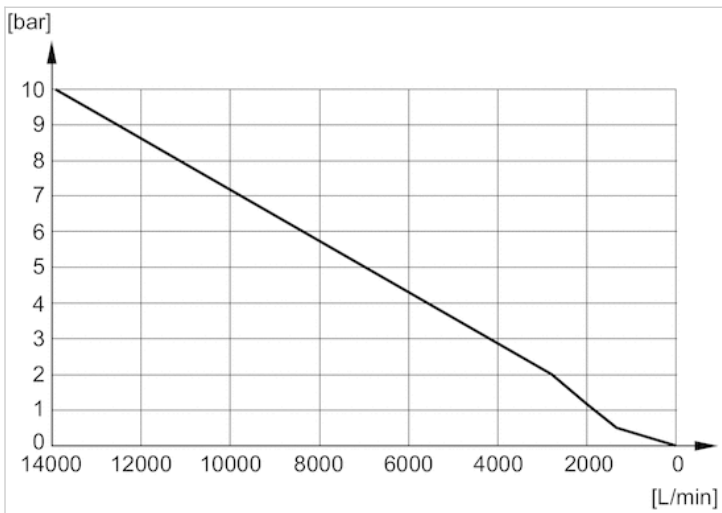
Flow diagram, 1827000021



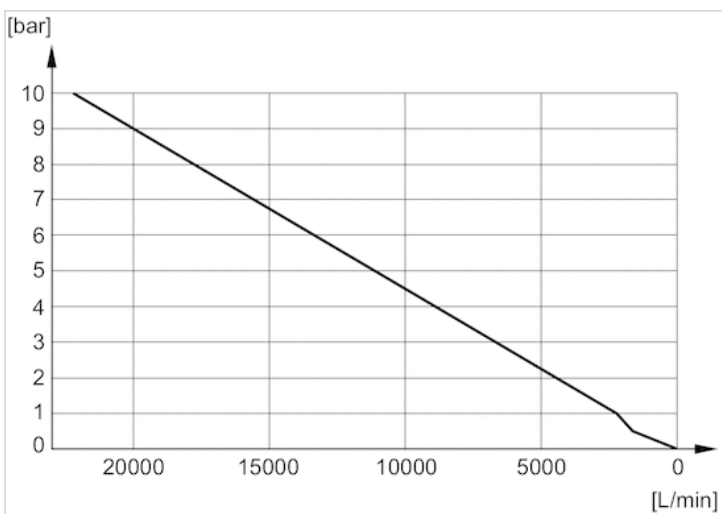
Flow diagram, 1827000022



Flow diagram, 1827000023



Flow diagram, 1827000024





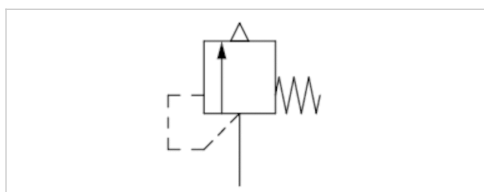
# Series RV1

- Qn 1►2 = 676-16037 l/min
- thread-in
- External thread
- G 1/4 G 3/8 G 1/2
- Uncollected



Version  
 Certificates  
 Working pressure min./max.  
 Opening pressure of valve  
 Ambient temperature min./max.  
 Medium

Poppet valve  
 CE declaration of conformity  
 0 ... 20 bar  
 See table below  
 -20 ... 100 °C  
 Compressed air



## Technical data

Part No.	Port 1	Opening pressure of valve	Flow
			Qn 1►2
R412007521	G 1/4	0.8 bar	676 l/min
R412007522	G 1/4	1.5 bar	996 l/min
R412007523	G 1/4	2 bar	1219 l/min
R412007524	G 1/4	3.5 bar	1872 l/min
R412007525	G 1/4	4 bar	2084 l/min
R412007526	G 1/4	4.8 bar	2424 l/min
R412007527	G 1/4	6 bar	2933 l/min
R412007528	G 1/4	8 bar	3783 l/min
R412007529	G 1/4	10 bar	4632 l/min
R412007530	G 1/4	11 bar	5056 l/min
R412007531	G 1/4	15 bar	6755 l/min
R412007532	G 1/4	16 bar	7179 l/min
R412007533	G 3/8	2 bar	2194 l/min
R412007534	G 3/8	3.7 bar	3567 l/min
R412007535	G 3/8	4 bar	3799 l/min
R412007721	G 3/8	5 bar	4573 l/min
R412007536	G 3/8	6 bar	5347 l/min
R412007537	G 3/8	6.8 bar	5966 l/min
R412007538	G 3/8	8 bar	6895 l/min
R412007539	G 3/8	10 bar	8443 l/min

Part No.	Port 1	Opening pressure of valve	Flow
			Qn 1►2
R412007540	G 3/8	11 bar	9217 l/min
R412007541	G 3/8	16 bar	13087 l/min
R412007542	G 1/2	0.4 bar	1115 l/min
R412007720	G 1/2	2.9 bar	3613 l/min
R412007690	G 1/2	3.5 bar	4182 l/min
R412007691	G 1/2	4 bar	4656 l/min
R412007692	G 1/2	5 bar	5604 l/min
R412007699	G 1/2	5.5 bar	6142 l/min
R412007696	G 1/2	6 bar	6553 l/min
R412007702	G 1/2	6.5 bar	7101 l/min
R412007698	G 1/2	7 bar	7501 l/min
R412007697	G 1/2	8 bar	8449 l/min
R412007693	G 1/2	8.5 bar	9018 l/min
R412007694	G 1/2	9 bar	9398 l/min
R412007700	G 1/2	10 bar	10346 l/min
R412007701	G 1/2	10.5 bar	10934 l/min
R412007695	G 1/2	11 bar	11295 l/min
R412007703	G 1/2	12 bar	12243 l/min
R412007543	G 1/2	16 bar	16037 l/min

## Technical information

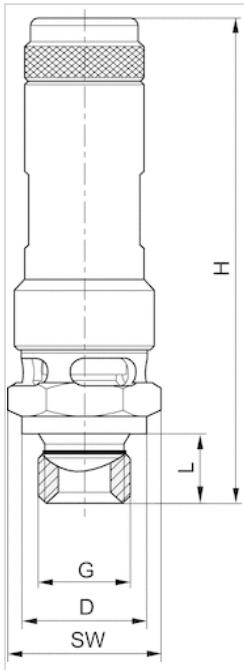
The specified performance values are achieved at a 10% (PE 1 bar , 0.1 bar ) pressure increase, measured with compressed air at 20 °C .

## Technical information

Material	
Housing	Brass
Seals	Fluorocaoutchouc

## Dimensions

### Dimensions



G = connection 1

## Dimensions

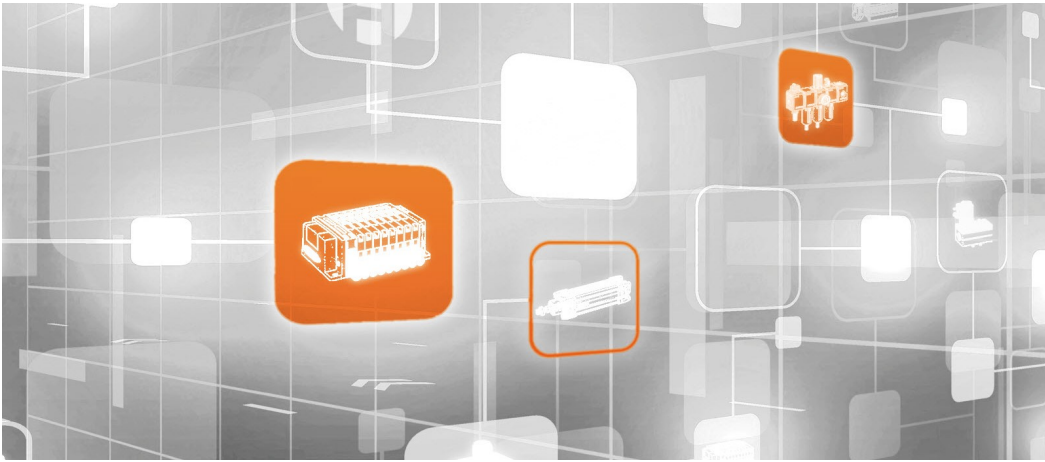
Part No.	Port G	Ø D	H	L	SW	T [Nm]	NW
R412007521	G 1/4	18	69	10	19	30	8
R412007522	G 1/4	18	69	10	19	30	8
R412007523	G 1/4	18	69	10	19	30	8
R412007524	G 1/4	18	69	10	19	30	8
R412007525	G 1/4	18	69	10	19	30	8
R412007526	G 1/4	18	69	10	19	30	8
R412007527	G 1/4	18	69	10	19	30	8
R412007528	G 1/4	18	69	10	19	30	8
R412007529	G 1/4	18	69	10	19	30	8
R412007530	G 1/4	18	69	10	19	30	8
R412007531	G 1/4	18	69	10	19	30	8
R412007532	G 1/4	18	69	10	19	30	8
R412007533	G 3/8	22	75	10	24	40	10
R412007534	G 3/8	22	75	10	24	40	10
R412007535	G 3/8	22	75	10	24	40	10
R412007721	G 3/8	22	75	10	24	40	10
R412007536	G 3/8	22	75	10	24	40	10
R412007537	G 3/8	22	75	10	24	40	10
R412007538	G 3/8	22	75	10	24	40	10
R412007539	G 3/8	22	88	10	24	40	10
R412007540	G 3/8	22	88	10	24	40	10
R412007541	G 3/8	22	88	10	24	40	10
R412007542	G 1/2	26	78	12	27	50	15

Part No.	Port G	Ø D	H	L	SW	T [Nm]	NW
R412007720	G 1/2	26	78	12	27	50	15
R412007690	G 1/2	26	78	12	27	50	15
R412007691	G 1/2	26	78	12	27	50	15
R412007692	G 1/2	26	78	12	27	50	15
R412007699	G 1/2	26	78	12	27	50	15
R412007696	G 1/2	26	78	12	27	50	15
R412007702	G 1/2	26	78	12	27	50	15
R412007698	G 1/2	26	78	12	27	50	15
R412007697	G 1/2	26	77.5	12	27	50	15
R412007693	G 1/2	26	91	12	27	50	15
R412007694	G 1/2	26	91	12	27	50	15
R412007700	G 1/2	26	91	12	27	50	15
R412007701	G 1/2	26	91	12	27	50	15
R412007695	G 1/2	26	91	12	27	50	15
R412007703	G 1/2	26	91	12	27	50	15
R412007543	G 1/2	26	91	12	27	50	15

T = maximum torque

NW = nominal width

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