

Series VZ

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Classic ejectors series HV

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Technical details

Temperature range	-10°C ... +70°C (-10°C...+60°C for use in ATEX areas)
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR and POM, inner parts: Al, stainless steel and brass
	Products without their own potential ignition source in accordance with Directive 2014/34/EU, suitable for use in hazardous areas (chap. 12)



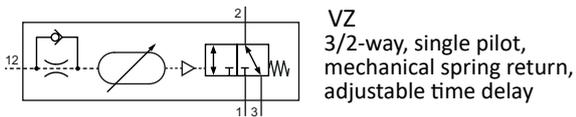
This valve may be used either normally open or normally closed.

Normally closed: pressure inlet port 1 (P).

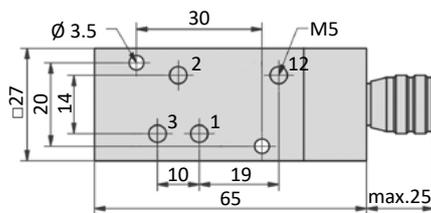
Normally open: pressure inlet port 3 (R).

A signal arriving at 12 (Z) switches the flow of the valve from 1 (P) to 2 (A) and closes port 3 (R) after the set time has expired.

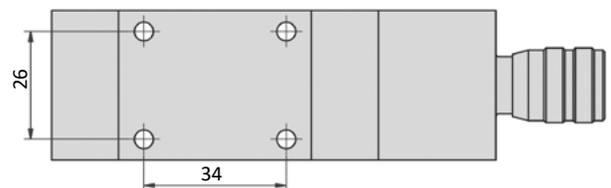
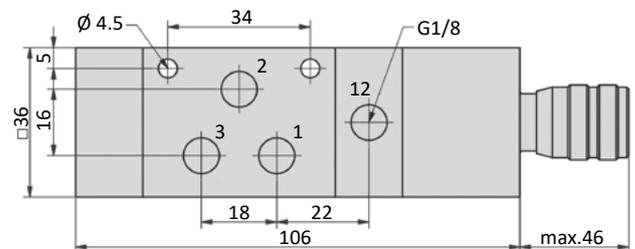
Instead of supplying main pressure to either port 1 or 3, the branched signal line can be connected to 1 or 3. The signal line to port 1 or 3 must not be longer than the signal line to port 12.

3/2-way-valves

Technical data

Model-no.:	VZ-25-310	VZ-18-310	VZ-18-310-20
Connection	M5	G1/8	G1/8
Nominal size (mm)	3.2	6	6
Operating pressure (bar)	3 ... 10	3 ... 10	3 ... 10
Pilot pressure (bar)	3 ... 10	3 ... 10	3 ... 10
Time range (s)	0,25 ... 5	0,5 ... 10	1 ... 20
Flow rate (NI/min)	160	600	600
Weight (kg)	0.135	0.360	0.360

Dimensions
VZ-25-310


- 1 = pressure inlet
- 2 = outlet
- 3 = exhaust
- 12 = signal port

VZ-18-310, VZ-18-310-20


Series SZ

Technical details

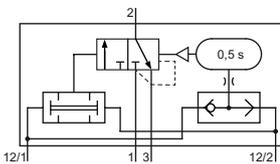
Temperature range	-10°C ... +70°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR and POM, inner parts: Al, stainless steel and brass



The valve operates after two input signals at 12 arriving within 0.5 s.
 The valve is actuated as long as the signals continue.
 If the input signals do not arrive within 0.5 s, the valve does not operate.
 Both signals must be reset before the valve switches back on.

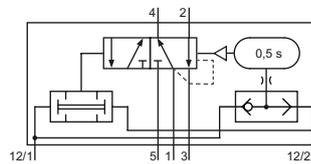
This part is no safety device in the sense of the MRL 2006/42/EG.

3/2-way valve



SZ-18-310
two-signal controls,
3/2-way

5/2-way valve



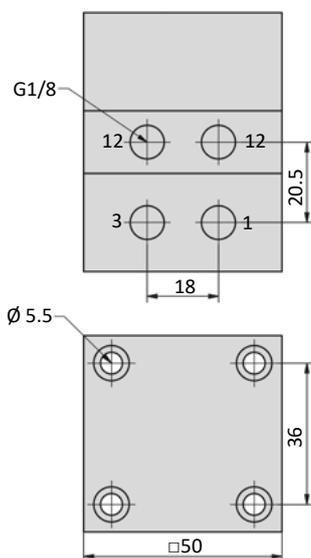
SZ-14-510
two-signal controls,
5/2-way

Technical data

Model-no.:	SZ-18-310	SZ-14-510
Connection	G1/8	G1/4
Nominal size (mm)	4	8
Operating pressure (bar)	4 ... 10	4 ... 10
Pilot pressure (bar)	4 ... 10	4 ... 10
Flow rate (Nl/min)	280	1300
Weight (kg)	0.360	0.825

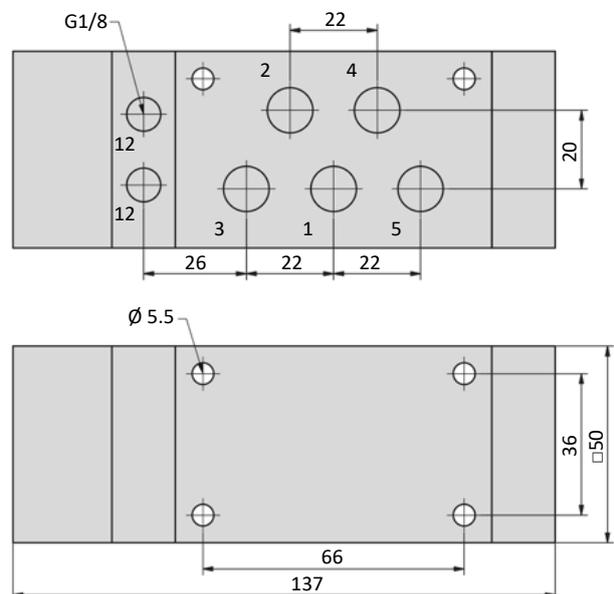
Dimensions

SZ-18-310



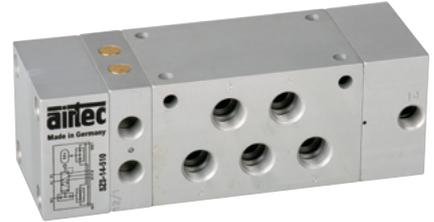
- 1 = pressure inlet
- 2,4 = outlets
- 3,5 = exhausts
- 12 = signal ports

SZ-14-510



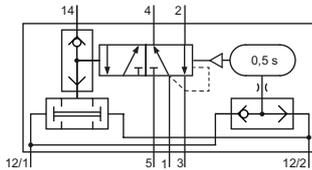
Technical details

Temperature range	-10°C ... +70°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR and POM, inner parts: Al, stainless steel and brass



The valve operates after two input signals at 12 arriving within 0.5 s. The valve is actuated as long as the signals continue. If the input signals do not arrive within 0.5 s, the valve does not operate. Both signals must be reset before the valve switches back on. In addition, it has a self-locking device. A signal to 14 actuates the two-signal-control as a standard 5/2-valve. When the signal at 14 ends, the valve resets.

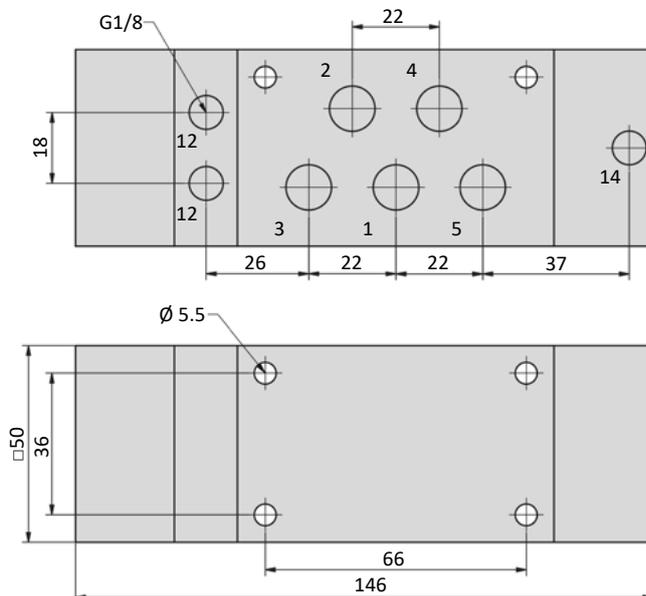
This part is no safety device in the sense of the MRL 2006/42/EG.

5/2-way valve


SZS-14-510
two-signal controls,
5/2-way

Technical data

Model-no.:	SZS-14-510
Connection	G1/4
Nominal size (mm)	8
Operating pressure (bar)	4 ... 10
Pilot pressure (bar)	4 ... 10
Flow rate (NI/min)	1300
Weight (kg)	0.885

Dimensions
SZS-14-510


- 1 = pressure inlet
- 2,4 = outlets
- 3,5 = exhausts
- 12 = signal ports
- 14 = signal port

Series SU

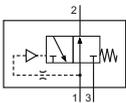
Technical details

Temperature range	-10°C ... +70°C (-10°C...+60°C for use in ATEX areas)
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR and POM, inner parts: Al, stainless steel and brass
	Products without their own potential ignition source in accordance with Directive 2014/34/EU, suitable for use in hazardous areas (chap. 12)



3/2-way one-shot valve. It converts a continuous pneumatic signal into a 0.3 s pulse.

3/2-way valve



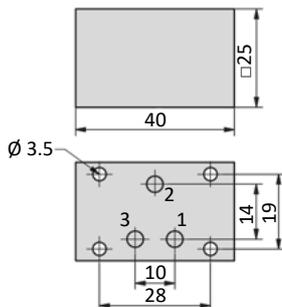
SU-25-310
signal interrupter,
3/2-way

Technical data

Model-no.:	SU-25-310
Connection	M5
Nominal size (mm)	3.2
Operating pressure (bar)	3 ... 10
Pilot pressure (bar)	3 ... 10
Duration of pulse (s)	0.3
Reset time (s)	0.1
Flow rate (NI/min)	160
Weight (kg)	0.063

Dimensions

SU-25-310



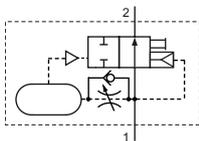
- 1 = pressure inlet
- 2 = outlet
- 3 = exhaust

Technical details

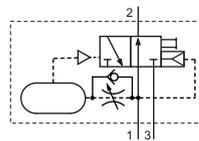
Temperature range	-10°C ... +70°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR and POM, inner parts: Al, stainless steel and brass



The valve is interrupting a permanent pneumatic signal and provides an impulse. The duration of the impulse is adjustable. Not activated, the incoming air at port 1 has free flow to port 2. Depending on the adjusted time at the adjusting screw (see drawing below), the valve will change position, closing using the model SUZ-18-210-H, or air is vented from port 2 to port 3 using model SUZ-18-310-H. The valve will maintain this position until there is a new air signal at port one. This will switch the valve back to the NO position and keeps it open based on the adjusted time setting. Operating the manual override is switching the valve back to its NO position.

2/2-way valve


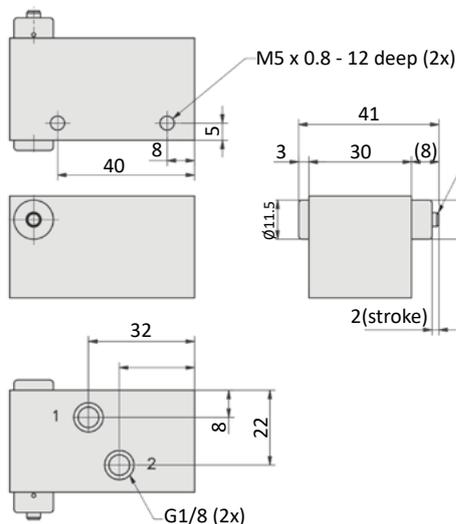
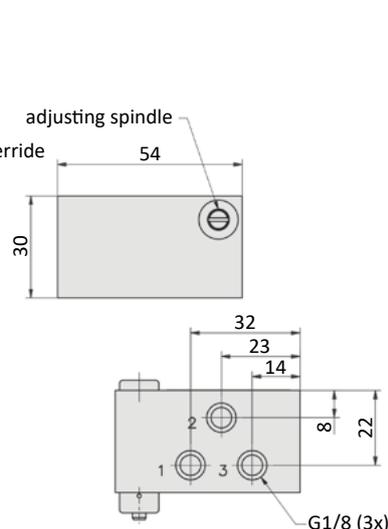
SUZ-18-210-H
signal interrupter,
2/2-way, adjustable time delay,
manual override non-detend

3/2-way valve


SUZ-18-310-H
signal interrupter,
3/2-way, adjustable time delay,
manual override non-detend

Technical data

Model-no.:	SUZ-18-210-H	SUZ-18-310-H
Connection	G1/8	G1/8
Nominal size (mm)	6	5.3
Operating pressure (bar)	3 ... 10	3 ... 10
Pilot pressure (bar)	3 ... 10	3 ... 10
Duration of pulse (s)	0.3 ... 5	0.3 ... 5
Reset time (s)	0.1	0.1
Flow rate (NI/min)	500	480
Weight (kg)	0.135	0.135

Dimensions
SUZ-18-210-H

SUZ-18-310-H


- 1 = pressure inlet
- 2 = outlet
- 3 = exhaust

Series OZ

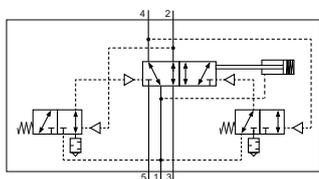
Technical details

Temperature range	-10°C ... +70°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR and POM, inner parts: Al, stainless steel and brass



5/2-way oscillating valve with integrated control lines and pneumatic emergency start function. This prevents an undefined centre position of the valve and ensures safe start-up. The use of throttle silencers in the exhausts is required during operation. This allows the oscillation speed to be adjusted.

5/2-way-valve

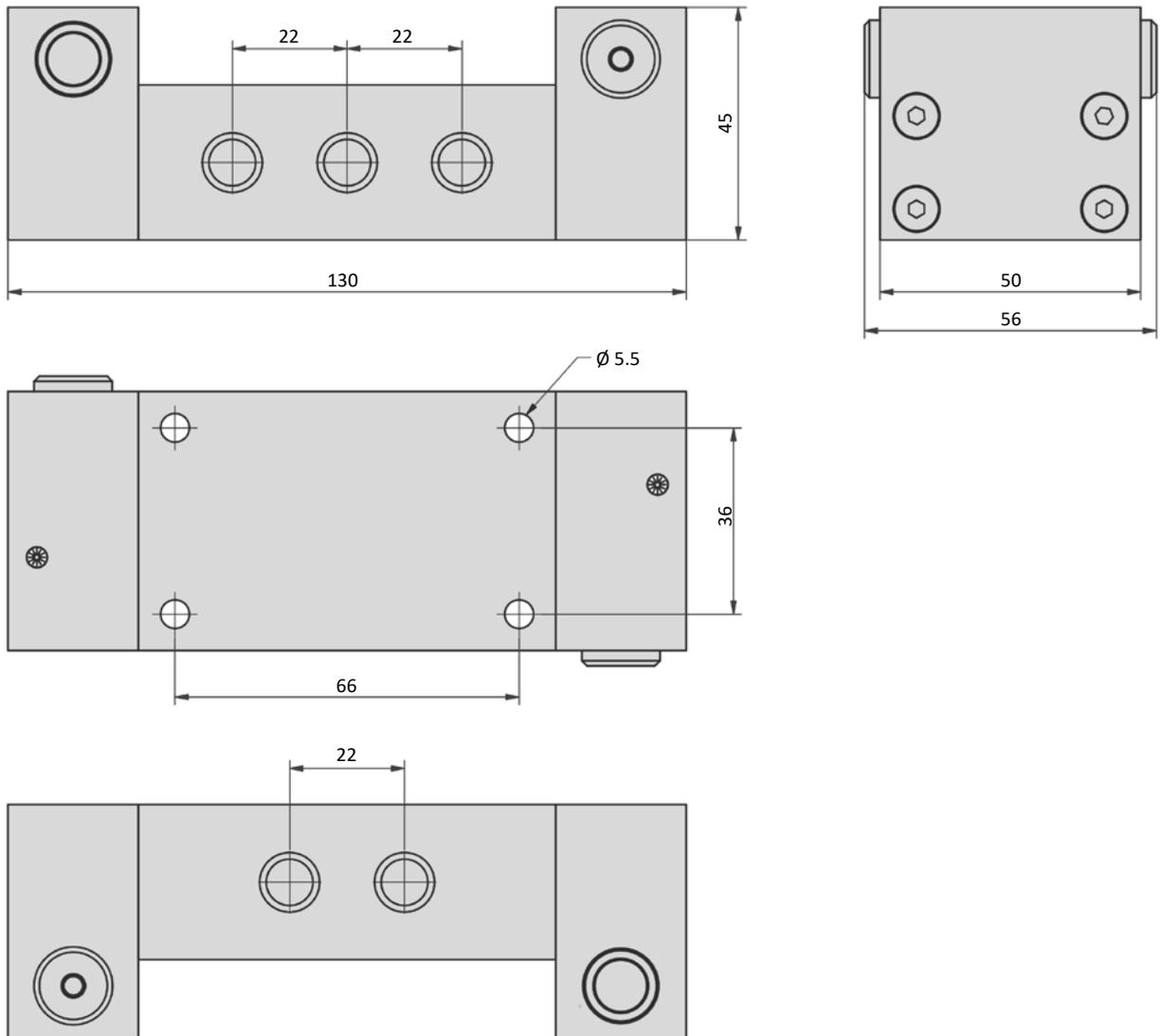


OZ-14-520
oszillating valve,
5/2-way

Technical data

Model-no.:	OZ-14-520
Connection	G1/4
Nominal size (mm)	9
Operating pressure (bar)	2.5 ... 10
Pilot pressure (bar)	2.5 ... 10
Flow rate (Nl/min)	1580
Weight (kg)	0.620

Dimensions



Series OZP

Technical details

Temperature range	-10°C ... +70°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR and POM, inner parts: Al, stainless steel and brass



5/2-way oscillating valve with internal switch-back function.

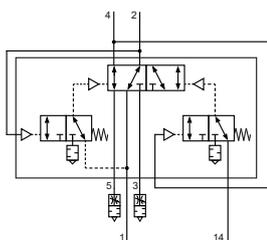
The compressed air is applied to port 1. The air flows from port 1 to port 2 and the cylinder is in its initial position.

The oscillating function is started by applying a continuous pressure signal to pilot port 14. If the pressure at port 14 is switched off, the cylinder always returns to its starting position.

If the operating pressure is interrupted, the cylinder remains in an undefined position, even if the control pressure is still applied.

The valve is supplied fully assembled.

5/2-way-valve

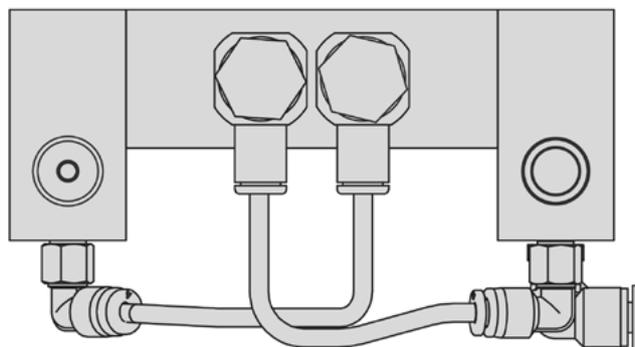
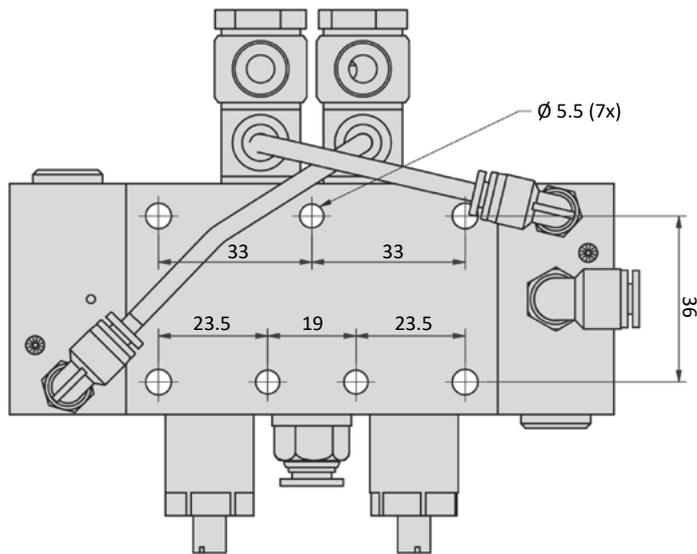
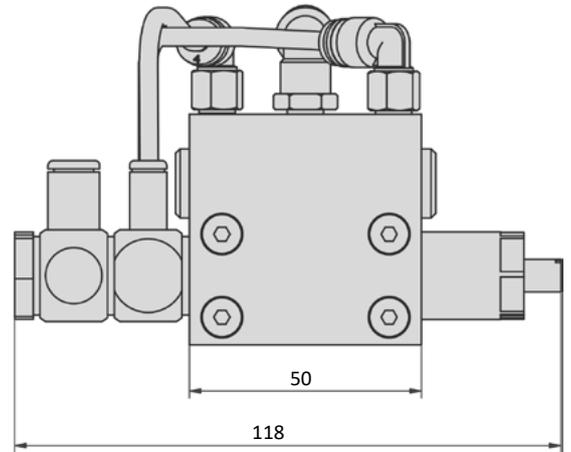
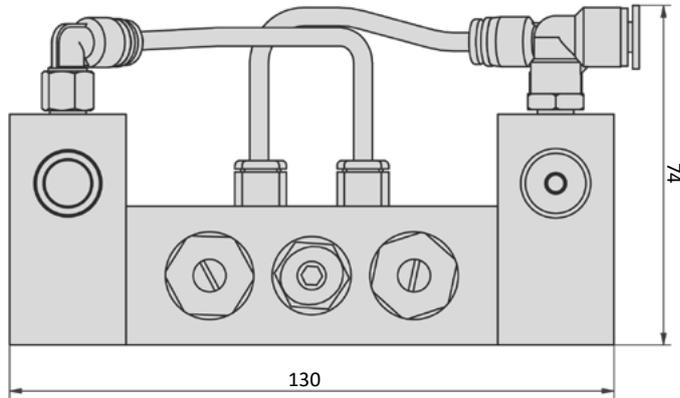


OZP-14-520
oszillating valve,
5/2-way

Technical data

Model-no.:	OZP-14-520
Connection	Ø 6 mm, Ø 4 mm signal port
Nominal size (mm)	9
Operating pressure (bar)	3 ... 10
Pilot pressure (bar)	3 ... 10
Flow rate (NI/min)	1580
Weight (kg)	0.760

Dimensions



Series OR

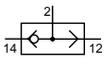
Technical details

Temperature range	-10°C ... +70°C (-10°C...+60°C for use in ATEX areas)
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR, inner parts: stainless steel and brass
	Products without their own potential ignition source in accordance with Directive 2014/34/EU, suitable for use in hazardous areas (chap. 12)



Output signal is present if one inlet is pressurized. The higher input signal (min. difference 0.2 bar) is dominant.

OR valves



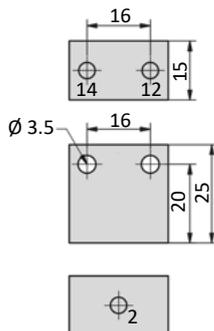
OR-xx
OR valve

Technical data

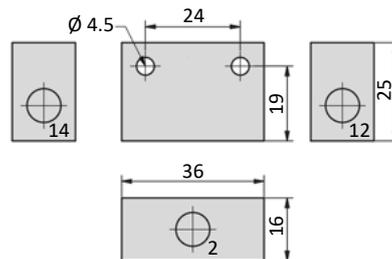
Model-no.:	OR-25	OR-18	OR-14-01
Connection	M5	G1/8	G1/4
Nominal size (mm)	3.2	4	5.5
Operating pressure (bar)	-0.95 ... 10	-0.95 ... 10	-0.95 ... 10
Min. difference (bar)	0.2	0.2	0.2
Flow rate (Nl/min)	160	280	900
Weight (kg)	0.026	0.038	0.110

Dimensions

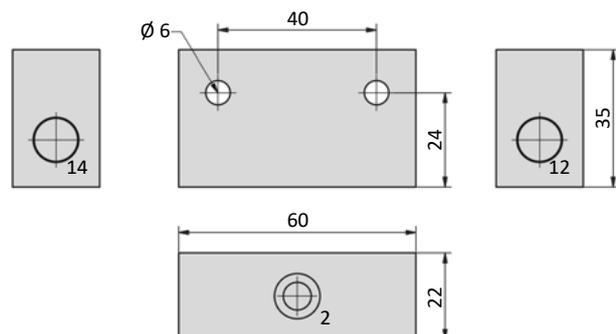
OR-25



OR-18



OR-14-01



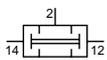
12, 14 = signal input
2 = signal output

Technical details

Temperature range	-10°C ... +70°C (-10°C...+60°C for use in ATEX areas)
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR, inner parts: stainless steel and brass
	Products without their own potential ignition source in accordance with Directive 2014/34/EU, suitable for use in hazardous areas (chap. 12)

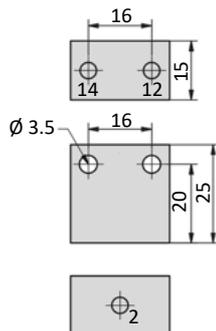
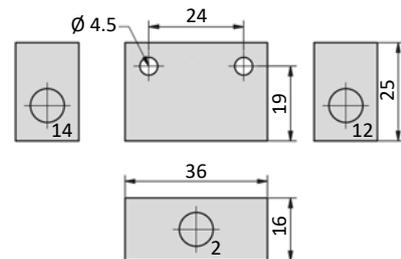


Output signal at port 2 is present if both inlets 12 and 14 are pressurized.
If both pressures are different (min. 0.2 bar), the lower pressure is switched to 2.

AND valves

 AN-xx
AND valve

Technical data

Model-no.:	AN-25	AN-18
Connection	M5	G1/8
Nominal size (mm)	3.2	4
Operating pressure (bar)	-0.95 ... 10	-0.95 ... 10
Min. difference (bar)	0.2	0.2
Flow rate (NI/min)	160	280
Weight (kg)	0.026	0.038

Dimensions
AN-25

AN-18


12, 14 = signal input
2 = signal output

Series SE and SEH

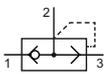
Technical details

Temperature range	-10°C ... +70°C (SEH: -20°C...+150°C) (-10°C...+60°C for use in ATEX areas)
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR (FKM for SEH)
	Products without their own potential ignition source in accordance with Directive 2014/34/EU, suitable for use in hazardous areas (chap. 12)



A quick exhaust valve is used to increase the speed of a pneumatic cylinder. The flow from the control valve to the cylinder ports is unrestricted. If valve port 1 is de-pressurized, air is exhausted from 2 to 3.

SE valves



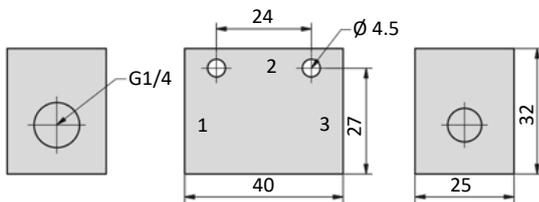
SE-xx, SEH-xx
quick exhaust valve

Technical data

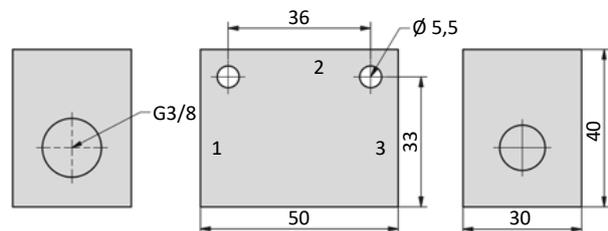
Model-no.:	SE-18, SEH-18	SE-14, SEH-14	SE-12, SEH-12
Connection (1 and 2)	G1/8	G1/4	G1/2
Nominal size 1-2 (mm)	5	7	12
Nominal size 2-3 (mm)	8	10	16
Flow rate 1-2 (NI/min)	600	1200	2800
Flow rate 2-3 (NI/min)	1200	2400	5600
Operating pressure (bar)	0.5 ... 10	0.5 ... 10	0.5 ... 10
Weight (kg)	0.070	0.125	0.310

Dimensions

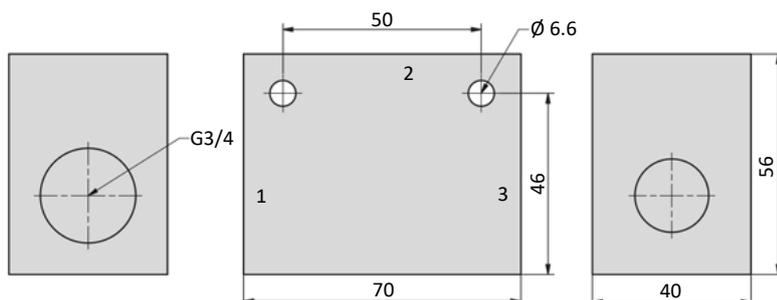
SE-18, SEH-18



SE-14, SEH-14



E-12, SEH-12



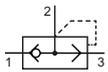
1 = inlet from valve
2 = outlet to cylinder
3 = exhaust

Technical details

Temperature range	-10°C ... +70°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR

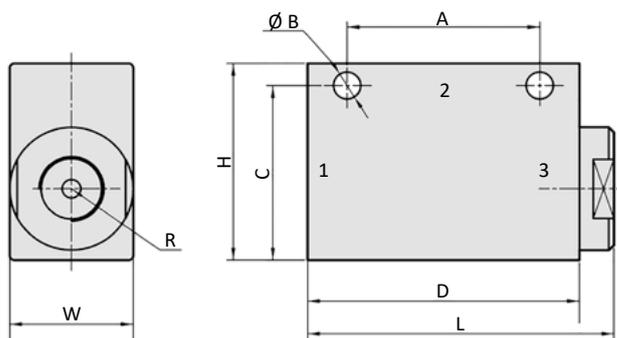


A quick exhaust valve is used to increase the speed of a pneumatic cylinder. The flow from the control valve to the cylinder ports is unrestricted. If valve port 1 is de-pressurized, air is exhausted from 2 to 3.

88-SE-valves

 88-SE-xx
quick exhaust valve

Technical data

Model-no.:	88-SE-18	88-SE-14	88-SE-38	88-SE-12
Connection (1 and 2)	G1/8	G1/4	G3/8	G1/2
Nominal size (mm)	4.5	7.5	7.5	8
Flow rate 1-2 (NI/min)	410	1160	1160	1250
Flow rate 2-3 (NI/min)	680	1750	1750	1710
Operating pressure (bar)	0.5 ... 10	0.5 ... 10	0.5 ... 10	0.5 ... 10
Weight (kg)	0.058	0.117	0.110	0.094

Dimensions


1 = inlet from valve
2 = outlet to cylinder
3 = exhaust

Model-no.:	A	ØB	C	D	H	L	R	W
88-SE-18	30	4.3	27	40	32	46	G1/4	20
88-SE-14	39	5.5	33	55	40	61	G3/8	25
88-SE-38	39	5.5	33	55	40	61	G3/8	25
88-SE-12	-	-	-	48	36	52.5	G3/8	28

Series DR

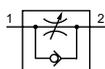
Technical details

Temperature range	-10°C ... +70°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), seals: NBR



This valve is used for the speed control of a pneumatic cylinder. The flow rate can be regulated by turning the adjusting screw.

DR-Ventile

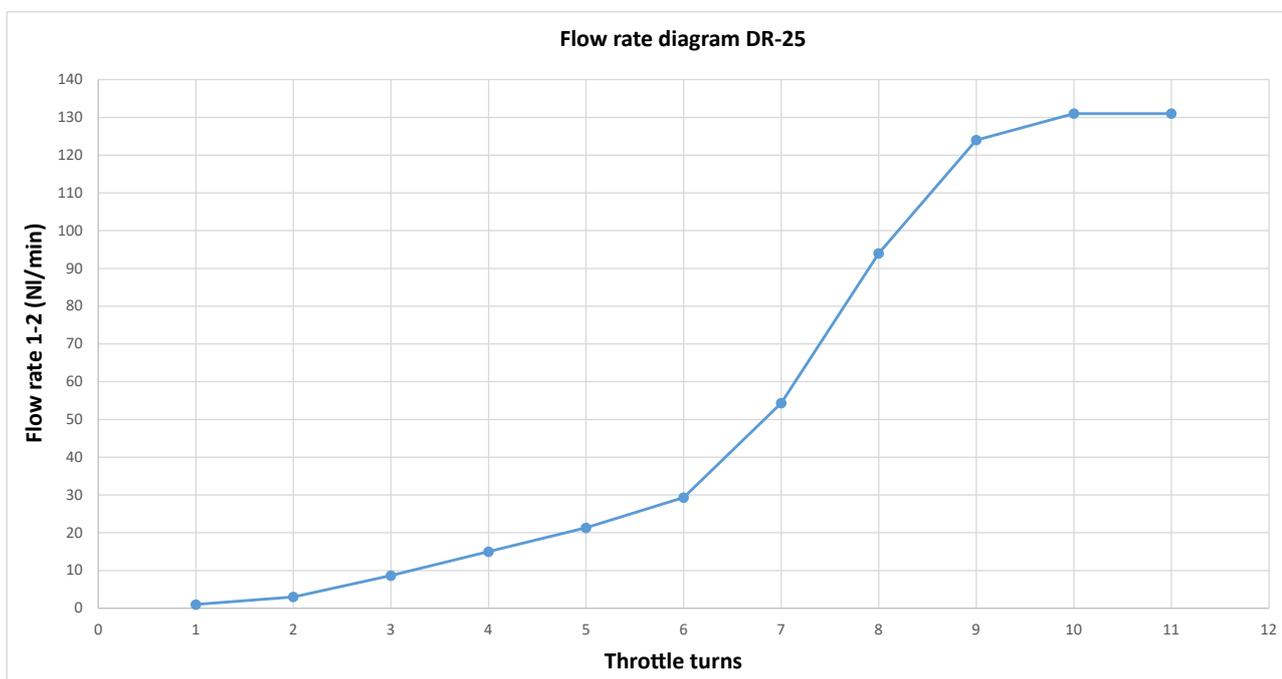


DR-xx
flow control valve

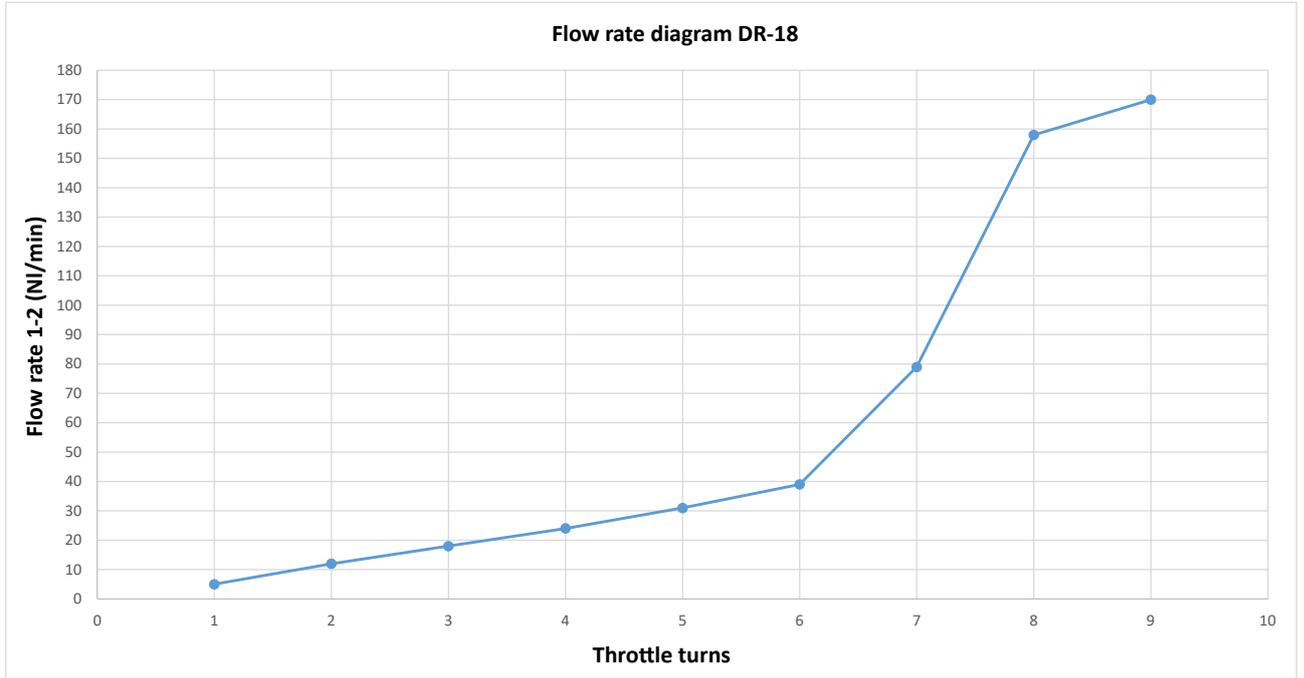
Technical data

Model-no.:	DR-25	DR-18	DR-14	84-DR-12
Connection	M5	G1/8	G1/4	G1/2
Nominal size 1-2 (mm)	0.5 ... 1.5	0.5 ... 2	1 ... 5	1 ... 4
Nominal size 2-1 (mm)	2.5	4.5	7.5	4
Flow rate 1-2 (NI/min)	5 ... 40	5 ... 90	50 ... 600	50 ... 400
Flow rate 2-1 (NI/min)	120	480	1300	430
Operating pressure (bar)	0.5 ... 10	0.5 ... 10	0.5 ... 10	0 ... 10
Weight (kg)	0.034	0.040	0.098	0.098

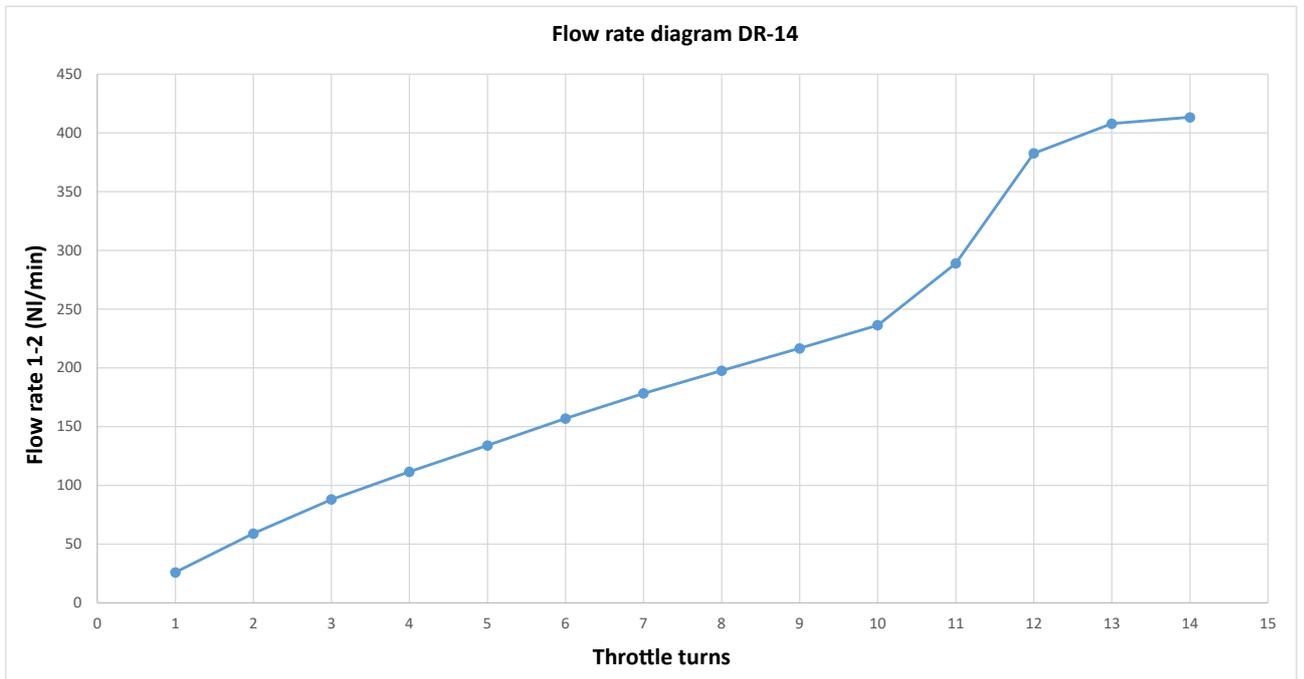
Flow rate diagram



Flow rate diagram



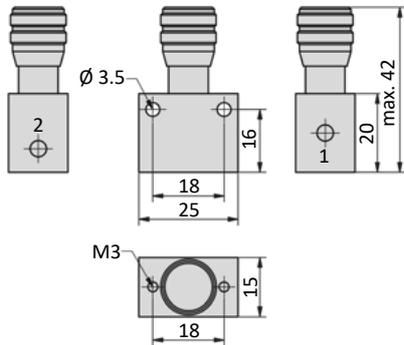
Flow rate diagram



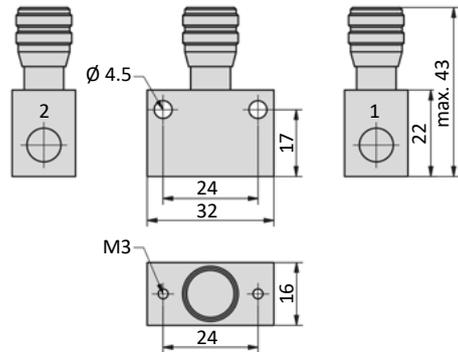
Series DR

Dimensions

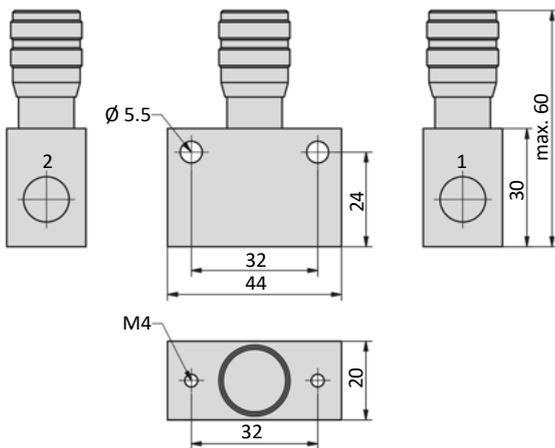
DR-25



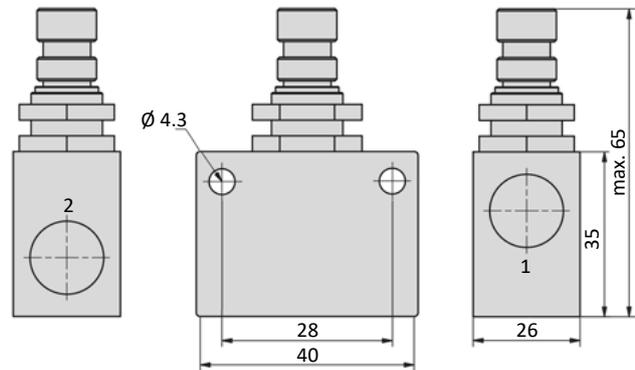
DR-18



DR-14



84-DR-12



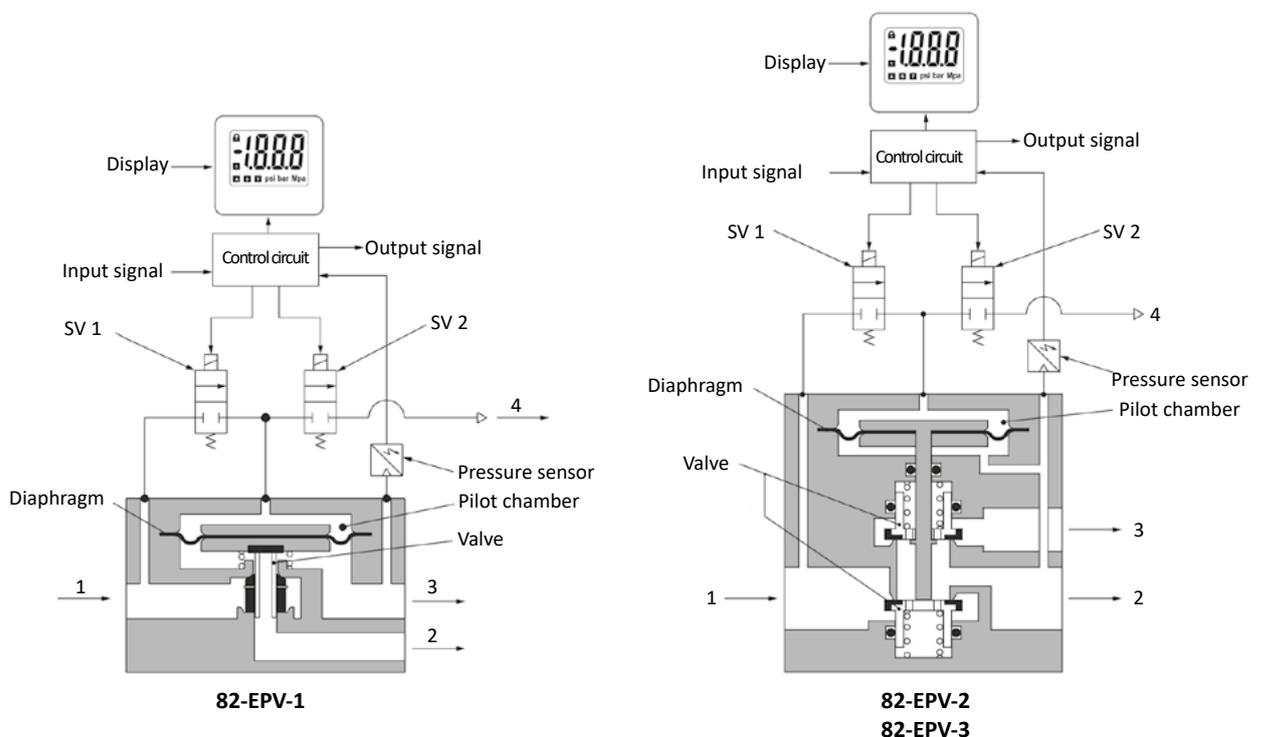
1 = pressure inlet
2 = outlet

Technical details

Temperature range	0°C ... +50°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), plastic, seals: NBR, inner parts: Al, steel and brass


Function

With an increasing input signal, the solenoid valve SV1 (air supply) is switched ON while at the same time the solenoid valve SV2 (air exhaust) remains closed. Air is supplied to the pilot chamber. The pressure in the pilot chamber increases and is applied to the upper side of the membrane. The valve which is connected to the membrane opens, and air flows towards the valve outlet. The outlet pressure is monitored by a pressure sensor which transmits a corresponding electrical signal to the control circuit. The control circuit adjusts the valve so that the outlet pressure is proportional to the input pressure. The pressure sensor continually controls the outlet pressure and keeps it proportional to the inlet pressure.



- 1 = pressure inlet
- 2 = outlet
- 3 = exhaust
- 4 = exhaust

Series 82-EPV

Order code

82-EPV-***-***-F-***

Series

Type / Nominal size

1	2 mm
2	7 mm
3	11 mm

Output range

1	0,05 ... 1 bar
3	0,05 ... 5 bar
5	0,05 ... 9 bar

Input signal

0	4 ... 20 mA DC
3	0 ... 10 V DC

Accessories

without accessories

0C	without bracket with cable connector, straight, 3m
0L	without bracket with cable connector, right angle, 3m
C0	with flat bracket without cable connector
L0	with L-type bracket without cable connector
CC	with flat bracket with cable connector, straight, 3m
CL	with flat bracket with cable connector, right angle, 3m
LC	with L-type bracket with cable connector, straight, 3m
LL	with L-type bracket with cable connector, right angle, 3m

Connection

F1	G1/8 (only type 1)
F2	G1/4
F3	G3/8 (only type 2 and 3)
F4	G1/2 (only type 3)

Output signal

1	1 ... 5 V DC
2	switch, NPN output
3	switch, PNP output
4	4 ... 20 mA DC

Accessories

Model-no.: 82-EPV-MB-L

L-type bracket



Model-no.: 86-ST-EPV-C-3

Cable connector, straight, 3m



Model-no.: 82-EPV-MB-C

Flat bracket



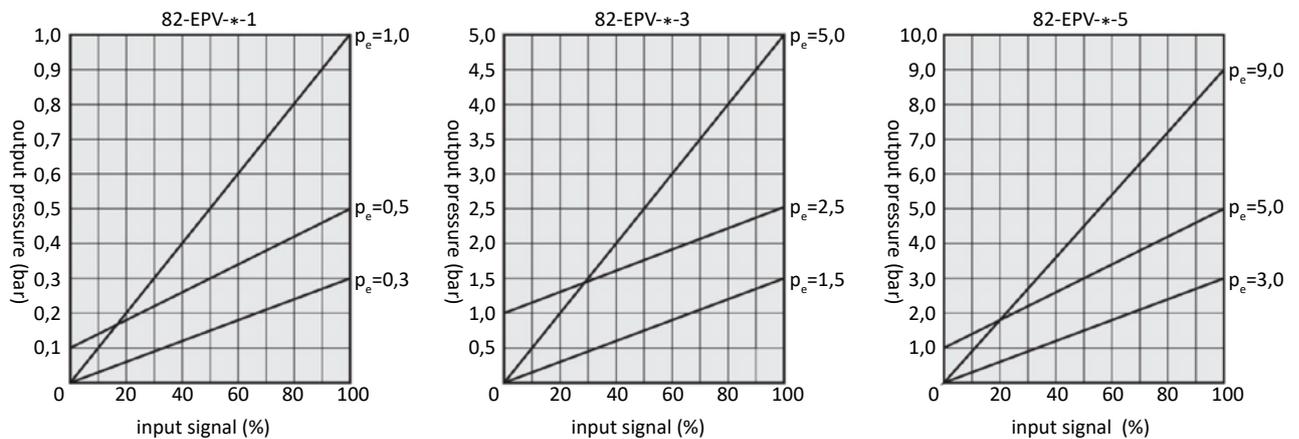
Model-no.: 86-ST-EPV-L-3

Cable connector, right angle, 3m



Technical data

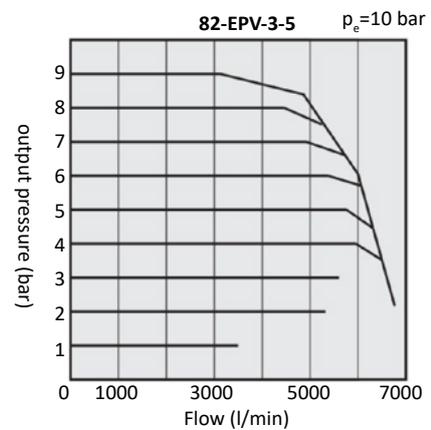
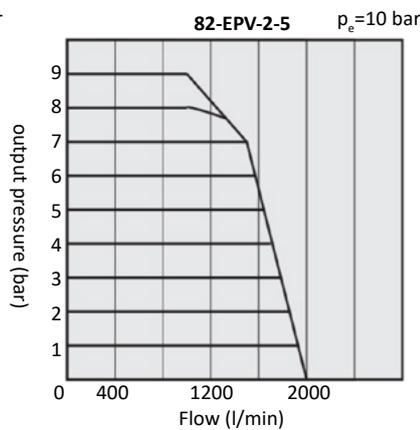
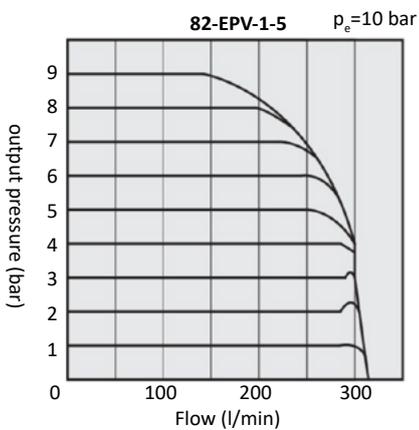
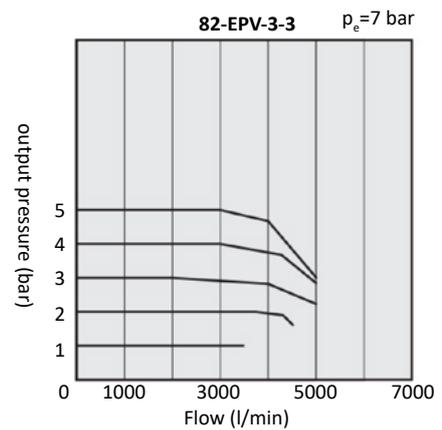
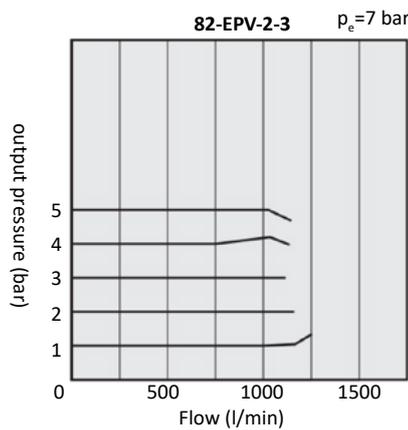
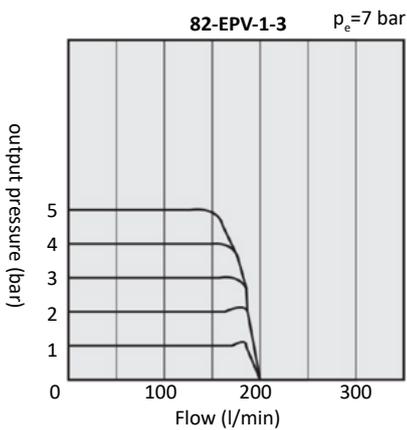
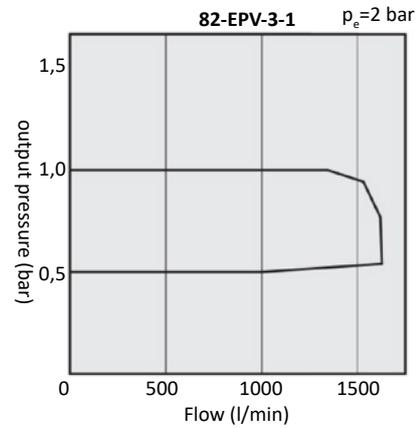
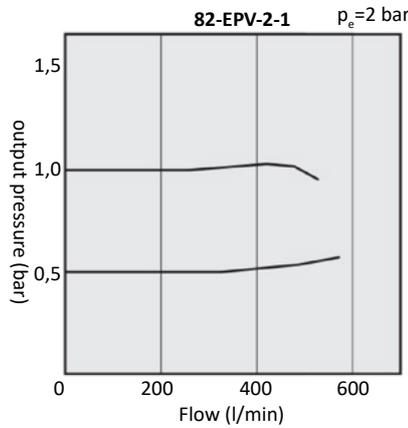
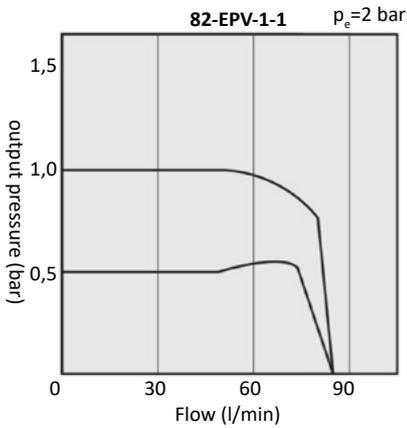
Model-no.:	82-EPV-1-1 82-EPV-2-1 82-EPV-3-1	82-EPV-1-3 82-EPV-2-3 82-EPV-3-3	82-EPV-1-5 82-EPV-2-5 82-EPV-3-5
Input range (bar)	1 ... 2	1 ... 10	1 ... 10
Output range (bar)	0.05 ... 1	0.05 ... 5	0.05 ... 9
Input signal	0 ... 10 V or 4 ... 20 mA		
Input impedance	ca. 6.5 kΩ (0 ... 10 V) ≤ 250 Ω (4 ... 20 mA)		
Output signal (analog)	1 ... 5 V or 4 ... 20 mA		
Output signal (switch)	NPN or PNP (max. 30 V, 80 mA)		
Repeatability	± 0.5% (full span)		
Linearity	± 1% (full span)		
Hysteresis	0.5% (full span)		
Temperature characteristics	2% (full span)/K		
Display precision	± 2% (full span)		
Electrically connection	M12-plug, 4-pin		
Nominal voltage	24 V DC ± 10%		
Power consumption	max. 3 W		
Protection	IP 65 according to EN 60529		
Weight (kg)	82-EPV-1	0.25	
	82-EPV-2	0.37	
	82-EPV-3	0.66	

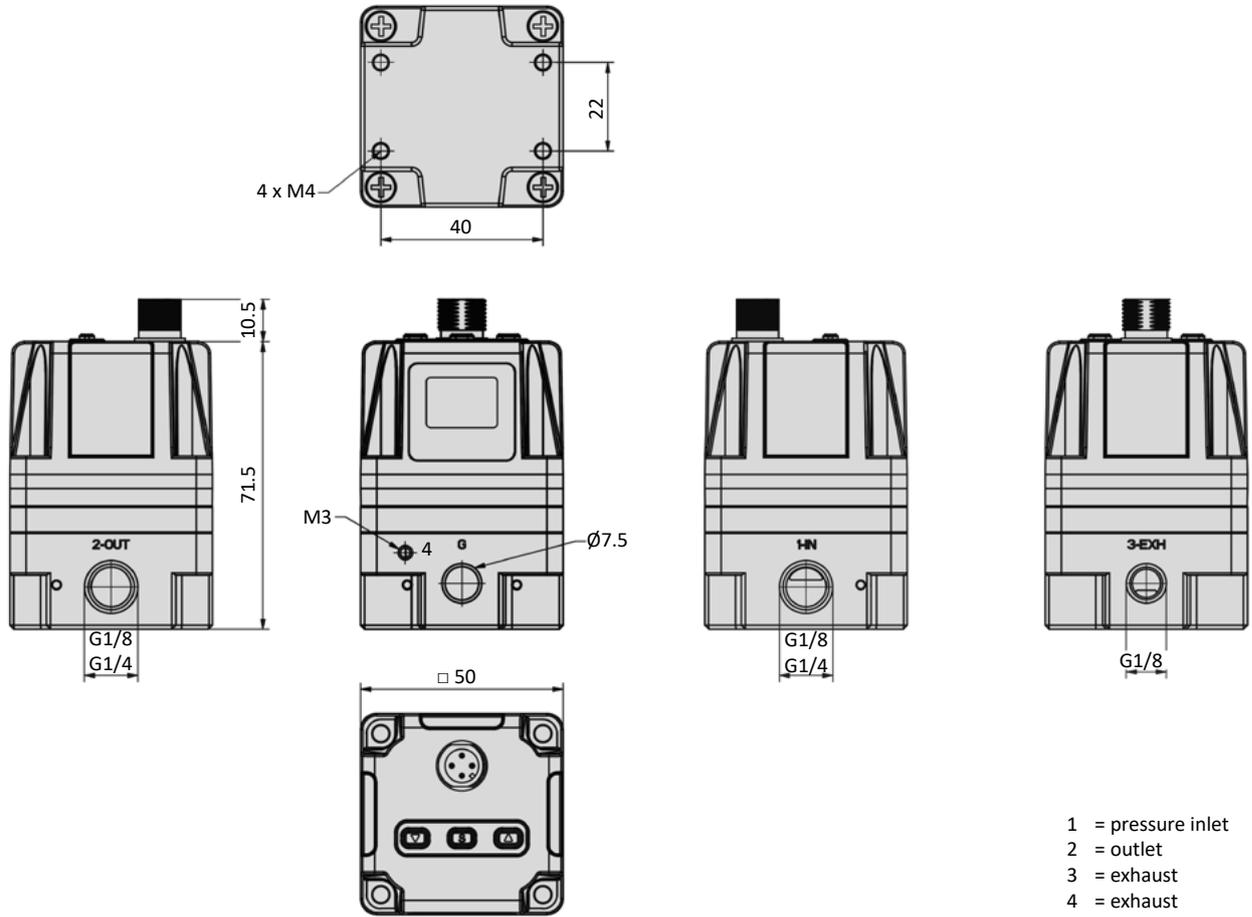
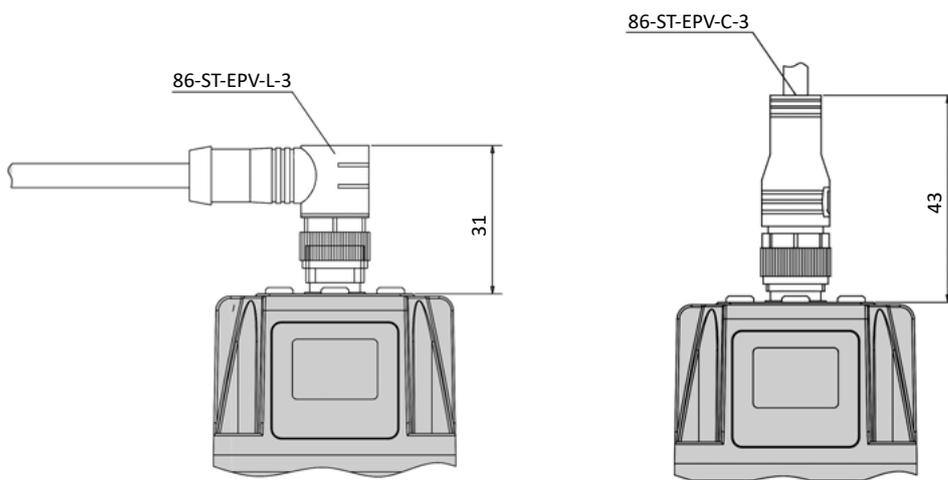
Linearity


Series 82-EPV

Technical data

Flow characteristics



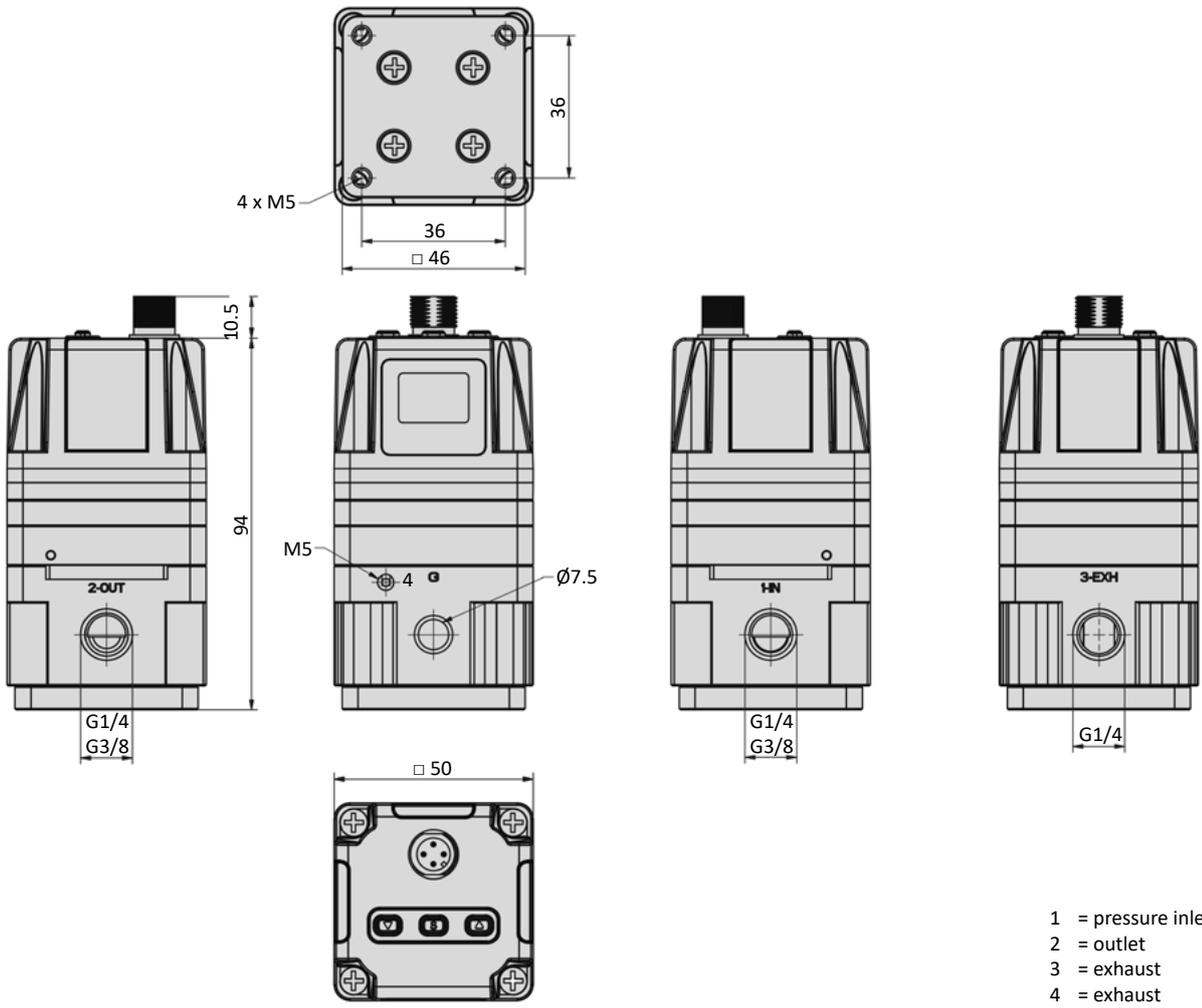
Dimensions
82-EPV-1

Cable connector


Series 82-EPV

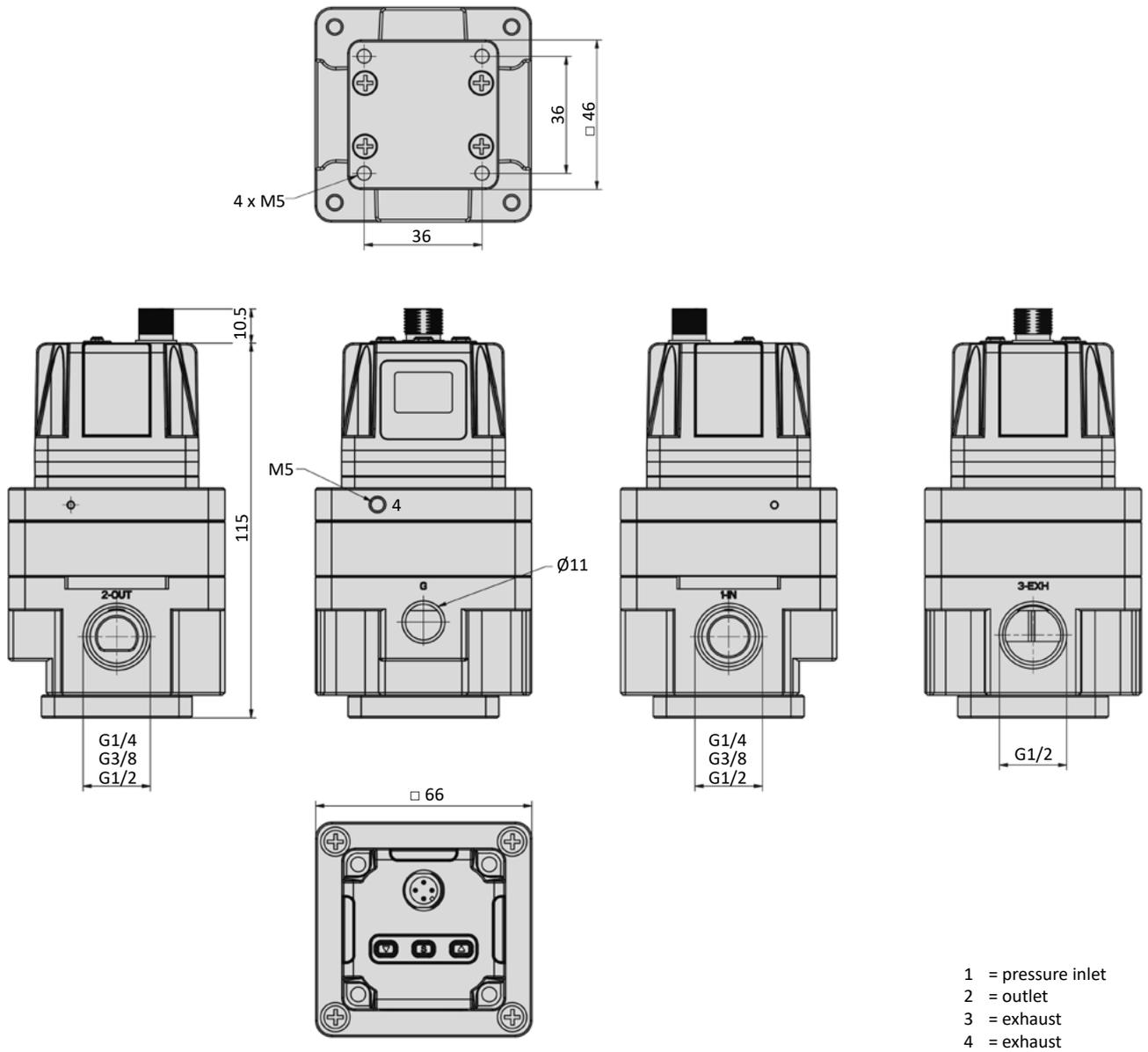


Dimensions

82-EPV-2



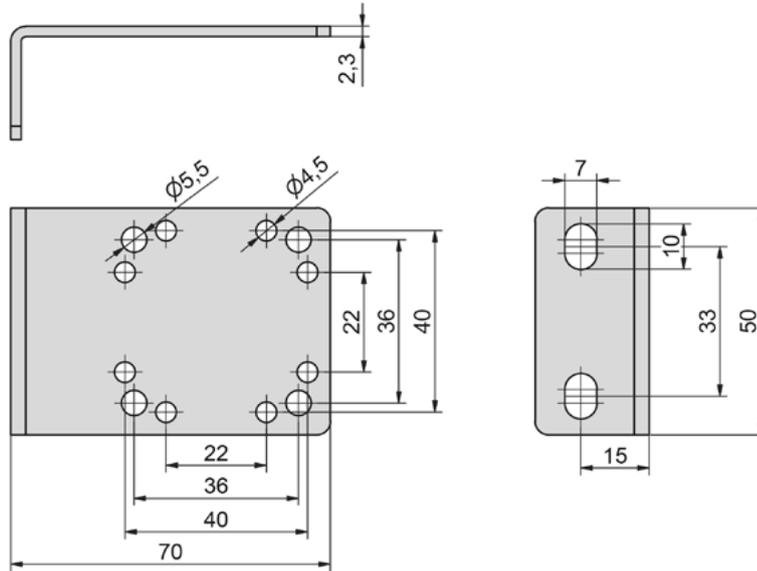
- 1 = pressure inlet
- 2 = outlet
- 3 = exhaust
- 4 = exhaust

Dimensions
82-EPV-3


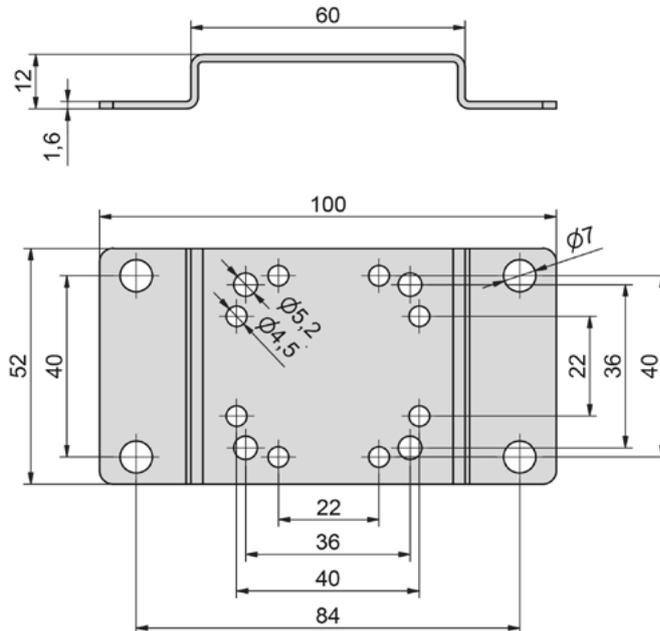
Series 82-EPV

Dimensions

Bracket 82-EPV-MB-L



Bracket 82-EPV-MB-C



Technical details

Temperature range	0°C ... +50°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: plastic, seals: NBR, pressure connector: brass, zinc plated


Function

Adjustable, digital pressure switch with 2 colour LCD display. The pressure provides a wide range of output options (see table below).
The 2m connection cable is included.

Order code

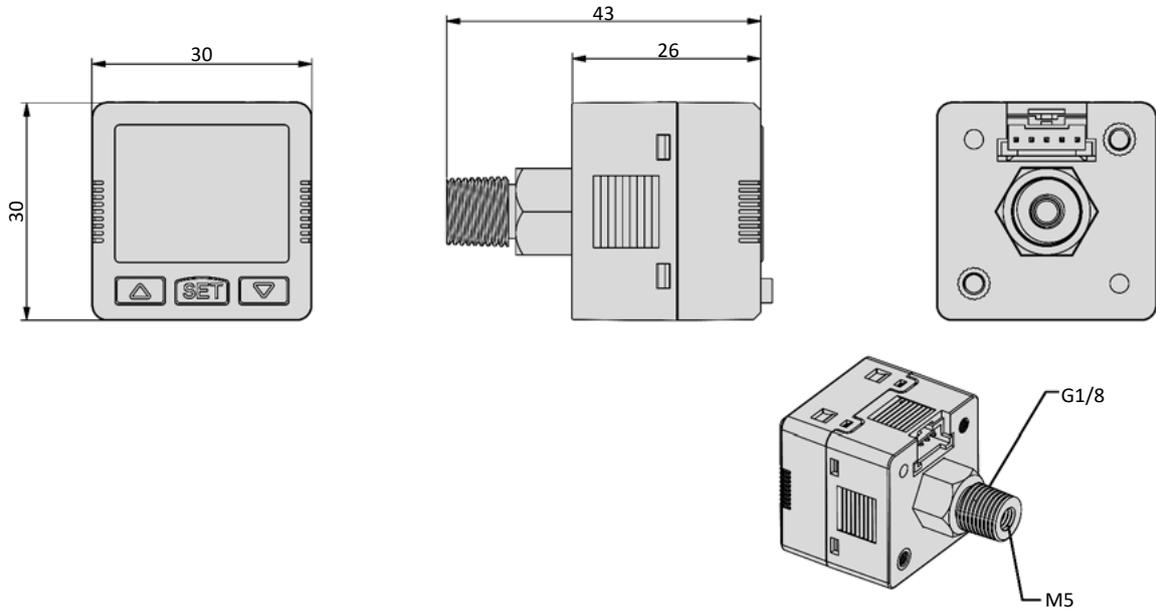
		82-DPS-***-***-***		
Series		←		Outputs
Version / Outputs		←		NN* 2 x switch, NPN
2	Standard, 2 electrical outputs			PP* 2 x switch, PNP
3	Standard, 1 electrical output			NV 1(2) x switch, NPN 1 x analog, 1 ... 5 V
5	Enhanced humidity resistance, 2 electrical outputs		→	PV 1(2) x switch, PNP 1 x analog, 1 ... 5 V
Measurement range / Setting range		←		NA 1(2) x switch, NPN 1 x analog, 4 ... 20 mA
01	-1 ... 1 bar			PA 1(2) x switch, PNP 1 x analog, 4 ... 20 mA
10	-1 ... 10 bar			PN** 2 x switch, PNP or NPN
20*	-1 ... 20 bar			
	* only 82-DPS-5...			
				* only 82-DPS-2 ** only 82-DPS-3 (2) only 82-DPS-5

Series 82-DPS

Technical data

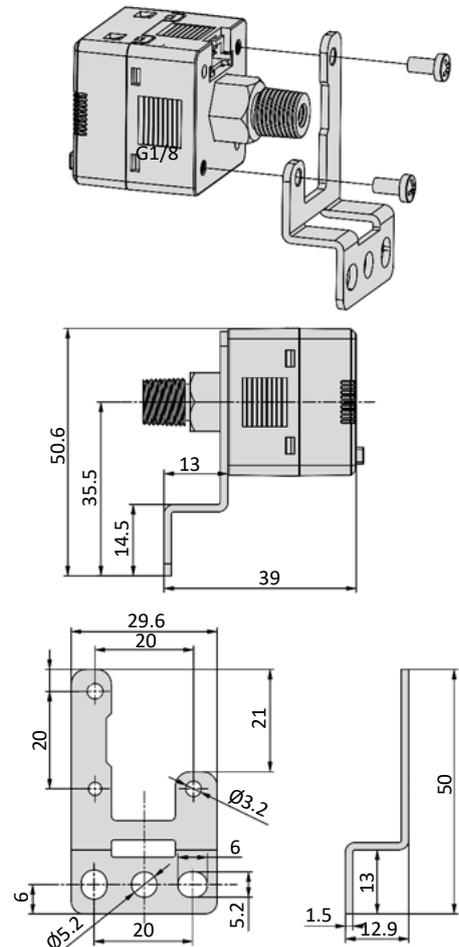
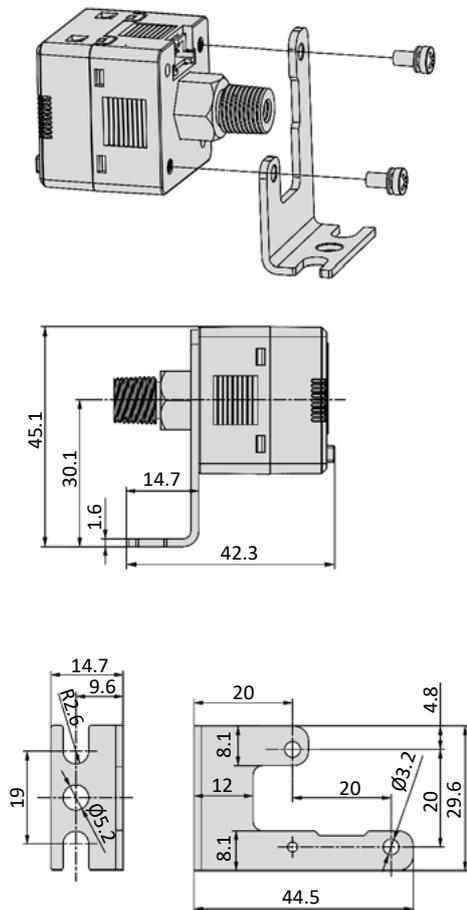
Model-no.: 82-DPS-	2-01-PN	2-10-PN	3-01-xx	3-10-xx	5-01-xx	5-10-xx	5-20-xx
Measurement range (bar)	-1 ... 1	-1 ... 10	-1 ... 1	-1 ... 10	-1 ... 1	-1 ... 10	-1 ... 20
Setting range (bar)	-1 ... 1	-1 ... 10	-1 ... 1	-1 ... 10	-1 ... 1	-1 ... 10	-1 ... 20
Withstand pressure (bar)	5	15	5	15	3	30	30
Output signal (switch)	NN: 2 x NPN, PP: 2 x PNP, Nx: 1 x NPN, Px: 1 x PNP	NPN or PNP		NN: 2 x NPN, PP: 2 x PNP, Nx: 1 x NPN, Px: 1 x PNP			
Switch function	NO or NC (programmable)						
Output modus	hysteresis mode, window comparator mode, output off						
Max. contact voltage	28 V						
Max. load current	80 mA						
Voltage drop	≤ 1 V						
Response time (ms)	adjustable: 2, 5, 20, 100, 500, 1000, 2000						
Short-circuit protection	yes						
Output signal (analog)	xV: 1 ... 5 V, load impedance ≥ 1 kΩ xA: 4 ... 20 mA, load impedance ≤ 400 Ω	-		xV: 1 ... 5 V, load impedance ≥ 1 kΩ xA: 4 ... 20 mA, load impedance ≤ 400 Ω			
Display accuracy	± 2% full span (at 25°C)						
Temperature characteristics	± 3% full span (0 ... 50°C)						
Hysteresis	adjustable						
Pressure units	mHg, psi, bar, MPa, kPa						
Display	2-line LCD-display, four digit, 1.line red/green, 2.line orange	single-line LCD-display, four digit, red/green, output status display					
Electrical connection	flat plug, 5-pin			round plug with bayonet coupling, 5-pin			
Nominal voltage	12 ... 24 V DC ± 10%						
Power consumption	max. 40 mA						
Protection	IP 40 according to EN 60529			IP 65 according to EN 60529			
Connection	G(NPT)1/8 male and M5 female			G(NPT)1/4 male and M5 female			
Weight (kg)	0.036			0.052			

Dimensions 82-DPS-2 and 82-DPS-3



82-DPS-2-3-MB-L

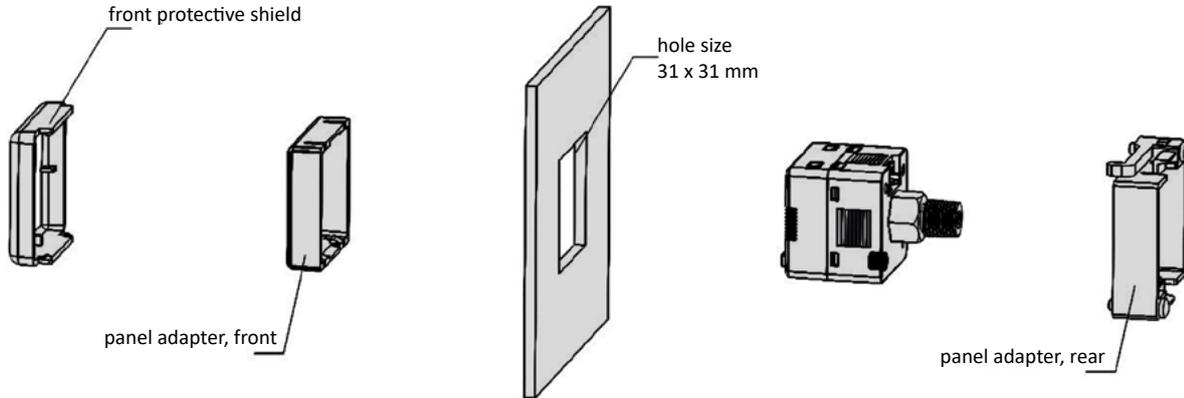
82-DPS-2-3-MB-S



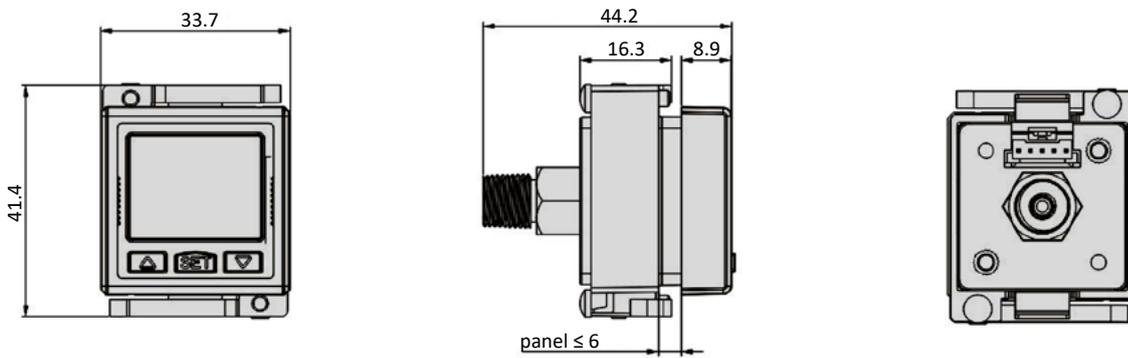
Series 82-DPS

Dimensions

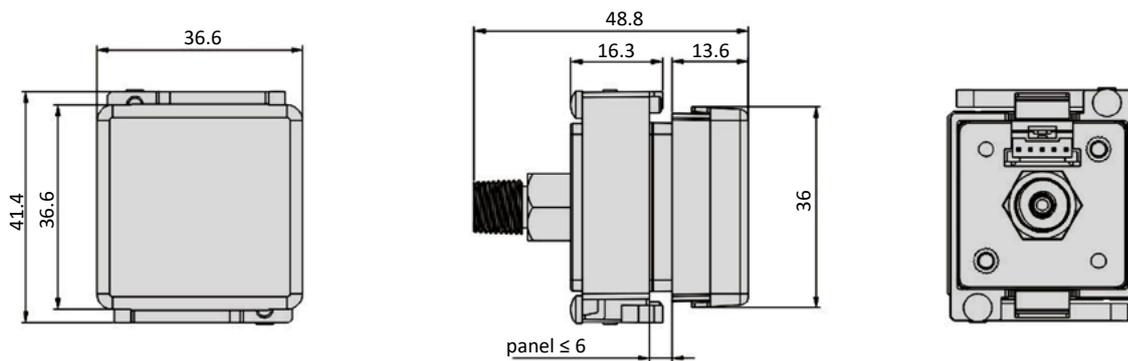
Panel mounting 82-DPS-2 and 82-DPS-3, functional principle



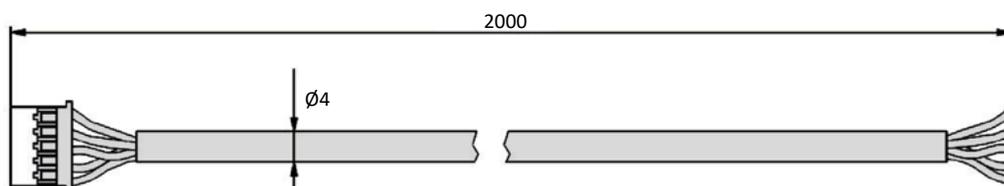
82-DPS-2-3-PM

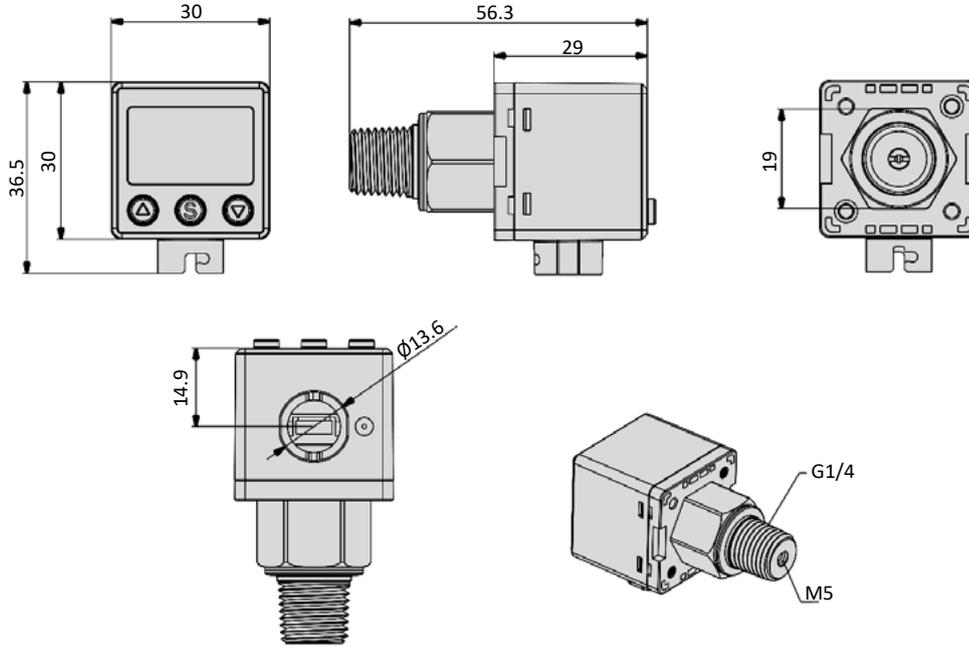
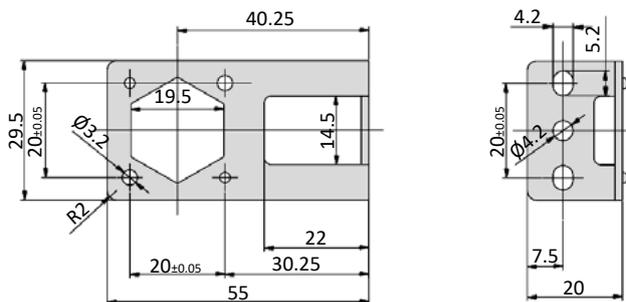
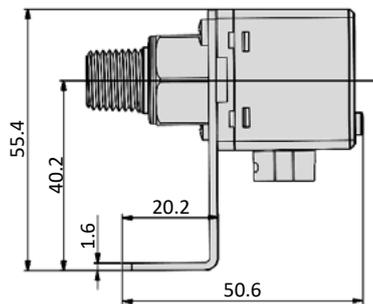
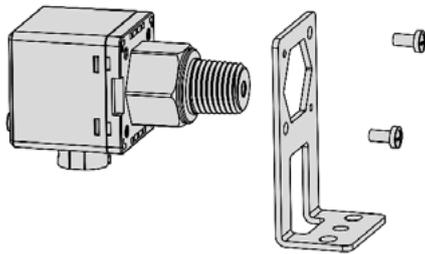
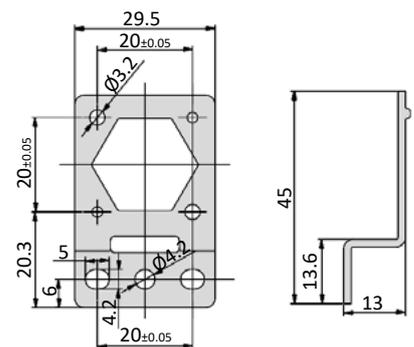
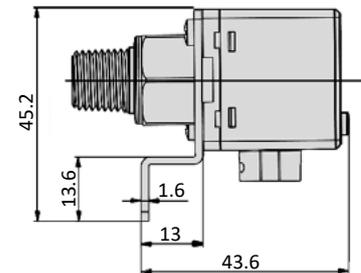
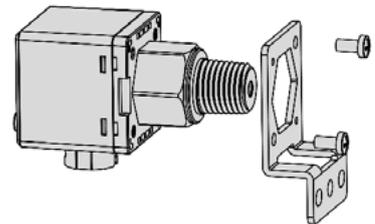


82-DPS-2-3-PMS



86-ST-DPS-2

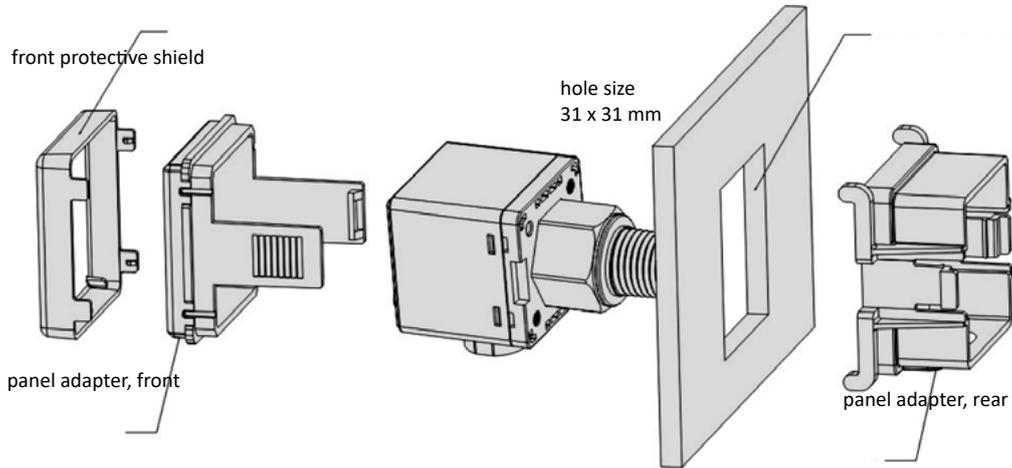


Dimensions 82-DPS-5

82-DPS-5-MB-L

82-DPS-5-MB-S


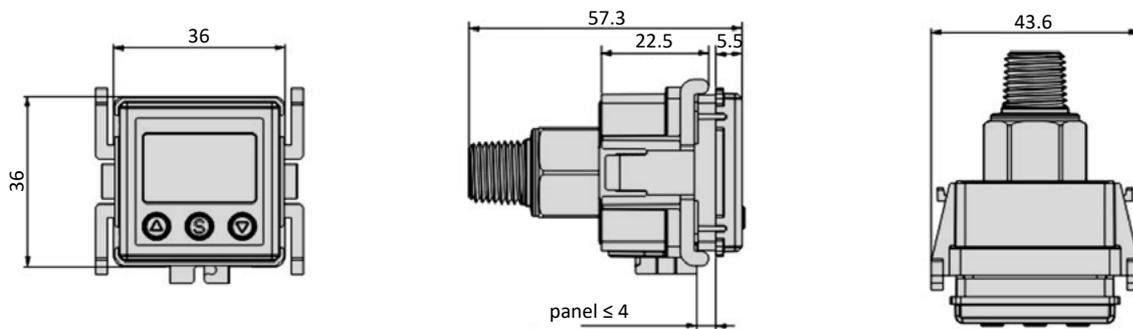
Series 82-DPS

Dimensions

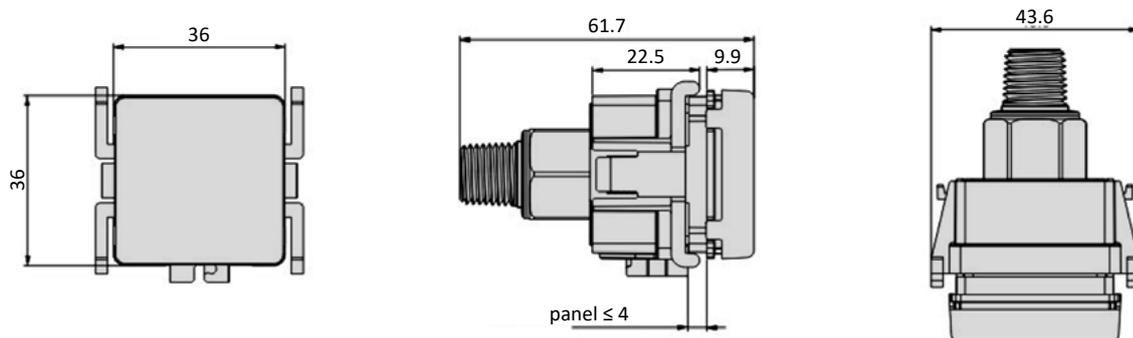
Panel mounting 82-DPS-2 and 82-DPS-3, functional principle



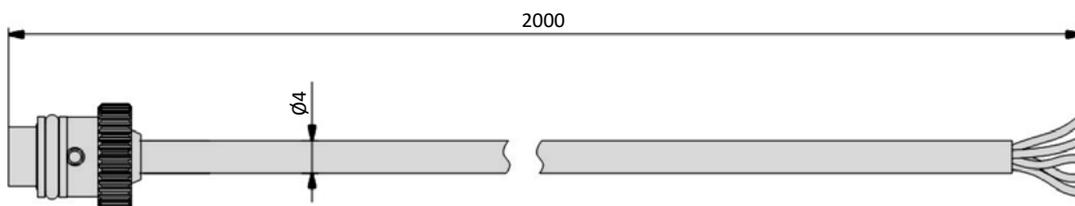
82-DPS-5-PM



82-DPS-5-PMS



86-ST-DPS-5-2



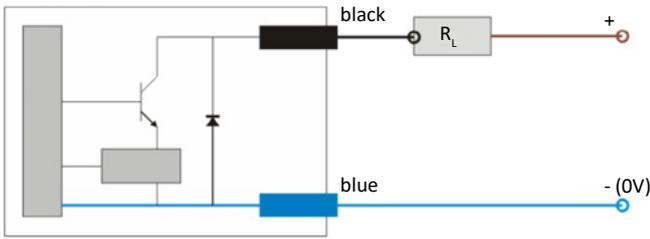
Accessories

Model-no.:	82-DPS-2-3-MB-L	Model-no.:	82-DPS-5-MB-L
	L-type bracket		L-type bracket
			
Model-no.:	82-DPS-2-3-MB-S	Model-no.:	82-DPS-5-MB-S
	S-type bracket		S-type bracket
			
Model-no.:	82-DPS-2-3-PM	Model-no.:	82-DPS-5-PM
	panel mount adapter		panel mount adapter
			
Model-no.:	82-DPS-2-3-PMS	Model-no.:	82-DPS-5-PMS
	panel mount adapter with front protective shield		panel mount adapter with front protective shield
			
Model-no.:	86-ST-DPS-2-3-2	Model-no.:	86-ST-DPS-5-2
	Cable connector, 2m (part of delivery)		Cable connector, 2m (part of delivery)
			
Model-no.:	86-ST-DPS-10		
	Cable connector, 10 m		
			

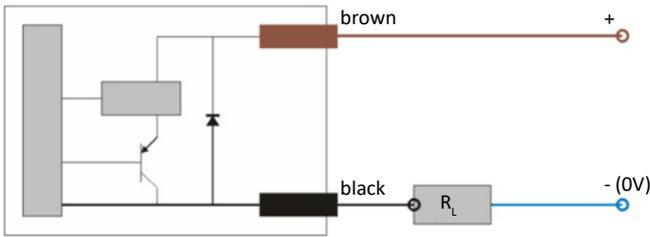
Series 82-DPS

Elektrical connection

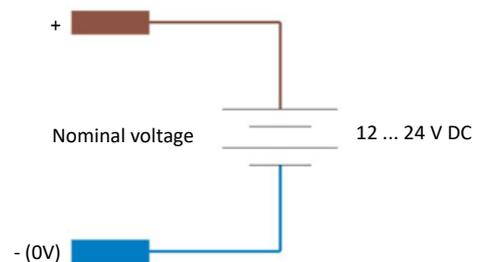
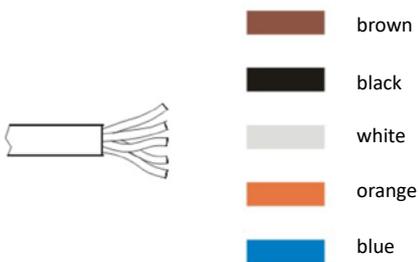
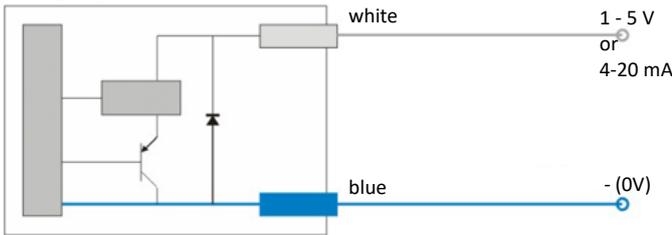
NPN output



PNP output

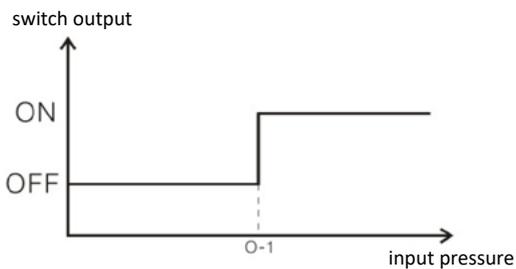


Analog output

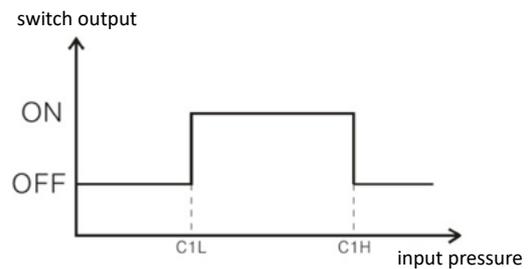


Output function

Hysteresis mode



Window comparator mode

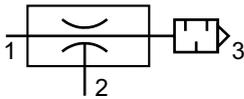


Technical details

Temperature range	0°C ... +60°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2-4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), fittings: brass, nickel plated, silencer: plastic



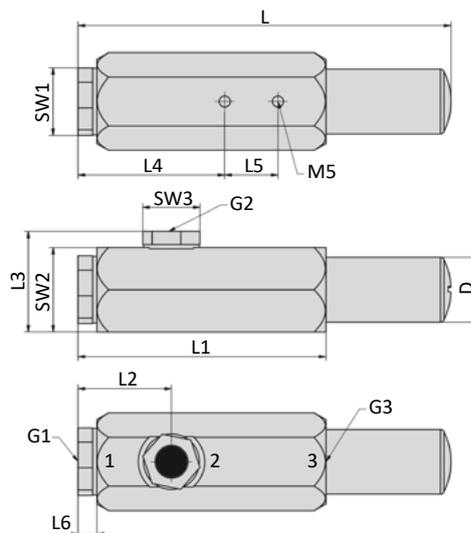
Vacuum ejectors work according to the Venturi principle. The pressure and vacuum connection have an integrated filter which protects against large dirt particles. The granulate silencer is part of delivery. The HV series is developed for high vacuum level.


Technical data

Model-no.:	HV-33	HV-63	HV-93	HV-133	HV-333	HV-533
Max. vacuum level (%)	95	95	95	95	95	95
Flow rate (l/min)**	4	10	15	30	40	45
Air consumption (l/min)*	25	45	70	120	300	480
Time to evacuate (s/l)**	7.50	3.20	2.00	0.95	0.53	0.42
Nozzle-Ø (mm)	0.7	1.1	1.3	1.7	2.5	3.0
Operating pressure (bar)	4 ... 6	4 ... 6	4 ... 6	4 ... 6	4 ... 6	4 ... 6
Weight (kg)	0.052	0.131	0.131	0.242	0.368	0.385

* at 5 bar operating pressure

** at 70% vacuum level and 5 bar operating pressure

Dimensions


- 1 = pressure inlet
- 2 = vacuum inlet
- 3 = exhaust

Model-no.:	L	L1	L2	L3	L4	L5	L6	SW1	SW2	SW3	G1	G2	G3	Ø D
HV-33	76	49.5	23.5	27.8	-	-	6.5	17	17	13	G1/8	G1/8	G1/8	15
HV-63	129.5	82.5	33.5	34.5	47	16	6.5	24	19	13	G1/4	G1/8	G3/8	24.5
HV-93	129.5	82.5	33.5	34.5	47	16	6.5	24	19	13	G1/4	G1/8	G3/8	24.5
HV-133	140	93	35	38	55	20	7	32	24	19	G1/4	G1/4	G1/2	24.5
HV-333	207	110	35	38.1	52	29	7	32	24	19	G1/4	G1/4	G3/4	48
HV-533	207	110	35	38.1	52	29	7	32	24	19	G1/4	G1/4	G3/4	48

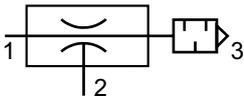
Series HF

Technical details

Temperature range	0°C ... +60°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Al (anodized), fittings: brass, nickel plated, silencer: plastic



Vacuum ejectors work according to the Venturi principle. The pressure and vacuum connection have an integrated filter which protects against large dirt particles. The granulate silencer is part of delivery. The HF series is developed for high flow rates.



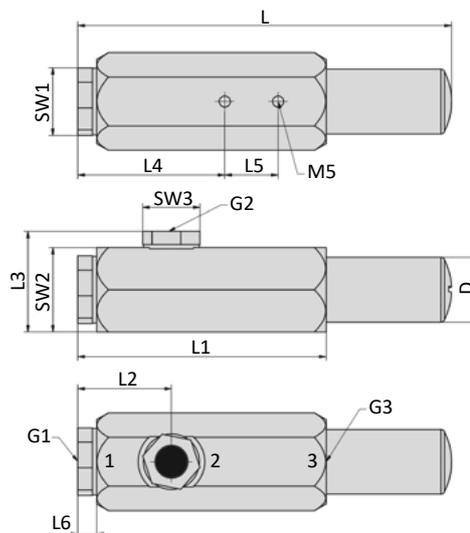
Technical data

Model-no.:	HF-133	HF-333	HF-533
Max. vacuum level (%)	60	65	80
Flow rate (l/min)**	80	190	215
Air consumption (l/min)*	110	300	480
Time to evacuate (s/l)**	0.22	0.12	0.09
Nozzle-Ø (mm)	1.7	2.5	3.0
Operating pressure (bar)	4 ... 6	4 ... 6	4 ... 6
Weight (kg)	0.242	0.368	0.385

* at 5 bar operating pressure

** at 40% vacuum level and 5 bar operating pressure

Dimensions



- 1 = pressure inlet
- 2 = vacuum inlet
- 3 = exhaust

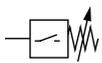
Model-no.:	L	L1	L2	L3	L4	L5	L6	SW1	SW2	SW3	G1	G2	G3	Ø D
HF-133	140	93	35	38	55	20	7	32	24	19	G1/4	G1/4	G1/2	24.5
HF-333	207	110	35	38.1	52	29	7	32	24	19	G1/4	G1/4	G3/4	48
HF-533	207	110	35	38.1	52	29	7	32	24	19	G1/4	G1/4	G3/4	48

Technical details

Temperature range	-10°C ... +80°C
Medium	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Differing the pressure dew point must be at least 10°C below lowest occurring ambient temperature.
Materials	Body: Zinc coated steel, seals: NBR (PE-14), FKM (PE-18)



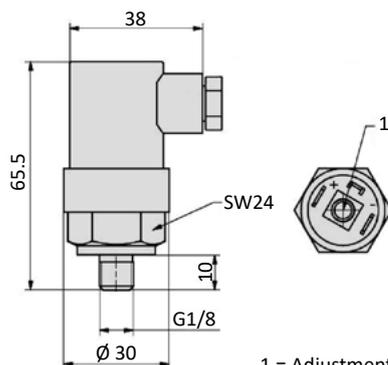
Adjustable diaphragm pressure switch. Optional, the switches are available with a pre-adjusted switching point at 4 bar. The protective cup (PE-18-01) and plug connector (PE-14-01) are included.

Pressure switch


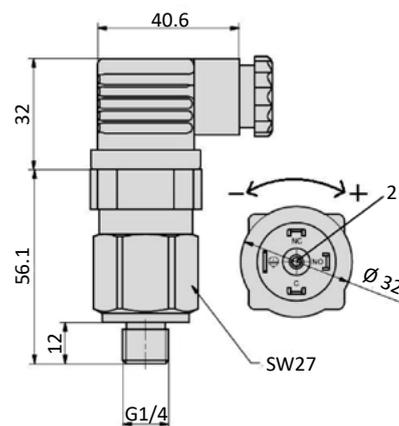
PE
pressure switch

Technical data

Model-no.:	PE-18-01		PE-14-01	
	Connection	G1/8		G1/4
Pressure range (bar)	1 ... 10		1 ... 12	
Overpressure safety (bar)	300		300	
Repeatability (bar at 20°C)	± 0.5		± 0.3	
Contact function	NO		Change-over contact	
Max. operating voltage	30 V DC	250 V AC	30 V DC	250 V AC
Max. current	1 A	0.5 A	3 A	1 A
Protection	IP 65 according to EN 60529		IP 65 according to EN 60529	
Weight (kg)	0.070		0.140	

Dimensions
PE-18-01


1 = Adjustment of pressure range
(with screwdriver)

PE-14-01


2 = Adjustment of pressure range
(with hex key 1,5 mm)

