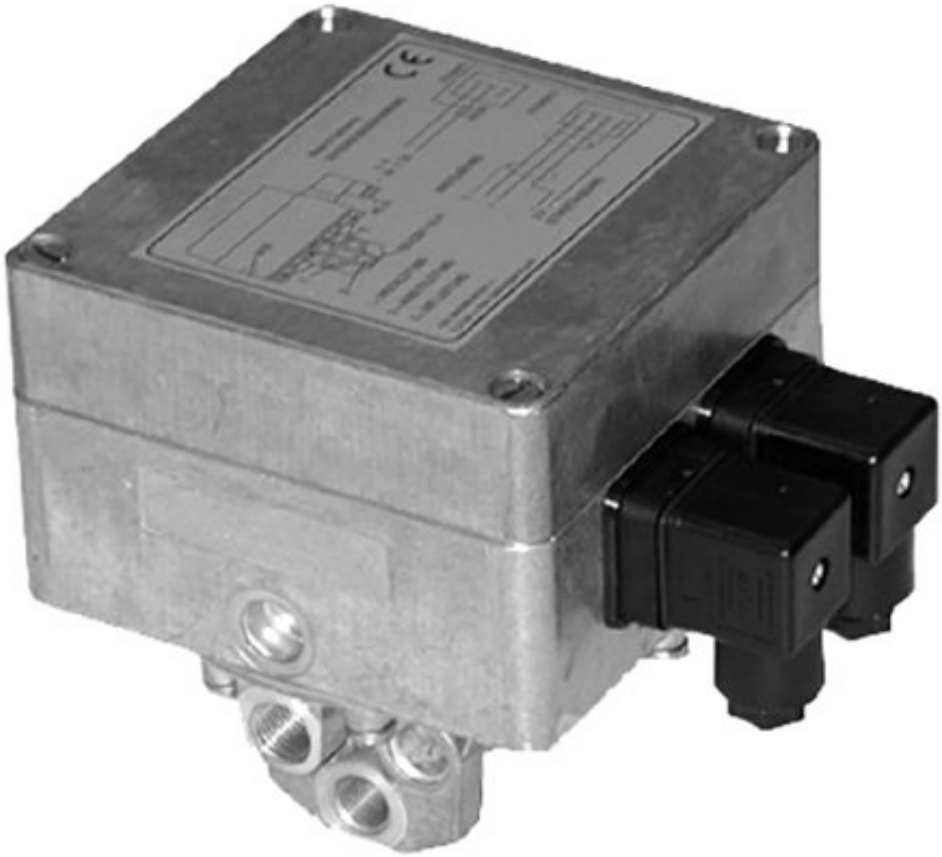
Series EV07

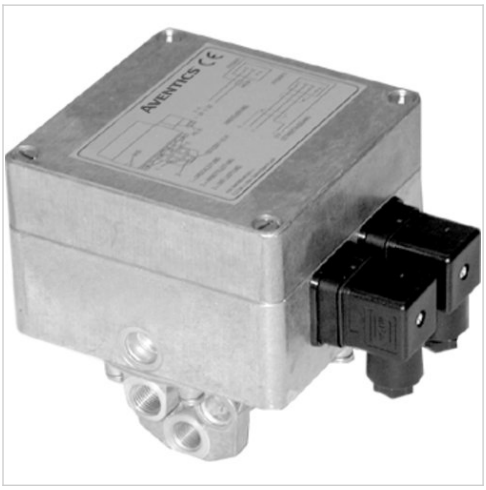


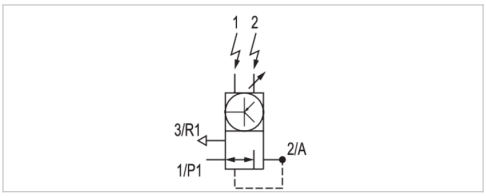
AVENTICS™ Series EV07

EMERSON.

E/P pressure regulator, Series EV07

- Qn = 800 l/min
- Compressed air connection output G 1/4
- Electr. connection Plug, EN 175301-803, form A
- Signal connection input and output, Plug, EN 175301-803, form A
- Pilot valves





Version	Poppet valve
Mounting orientation	vertical
Certificates	CE declaration of conformity
Working pressure max	See table below
Ambient temperature min./max.	5 ... 50 °C
Medium temperature min./max.	5 ... 50 °C
Compressed air connection input	G 1/4
Compressed air connection output	G 1/4
Compressed air connection, exhaust	G 1/4
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 0.1 mg/m³
Nominal flow Qn	800 l/min
Control	Analog
DC operating voltage	24 V
Voltage tolerance DC	-20% / +20%
Hysteresis	0.04 bar
Permissible ripple	5%
Max. power consumption	200 mA
Protection class	IP54
Weight	2 kg
	Nominal flow Qn with working pressure 7 bar , with secondary pressure 6 bar and Δp = 0.2 bar

Technical data

Part No.	Working pressure max	Pressure setting range min./max.	Nominal input value Min./max.
5610102050	8 bar	0.1 ... 6 bar	0 ... 20 mA
5610102060	8 bar	0.1 ... 6 bar	0 ... 20 mA
5610102070	8 bar	0.1 ... 6 bar	0 ... 10 V
5610102150	8 bar	0.1 ... 6 bar	4 ... 20 mA
5610102170	11 bar	0.15 ... 10 bar	4 ... 20 mA

Part No.	Actual output value Min./max.	Control	
5610102050	0 ... 20 mA	Analog	-
5610102060	4 ... 20 mA	Analog	-
5610102070	-	Analog	1)
5610102150	4 ... 20 mA	Analog	-
5610102170	4 ... 20 mA	Analog	-

Minimum working pressure = 0.5 bar + max. required secondary pressure, The zero point and range of the output characteristics curve can be adjusted. The recommended range for the pilot device is 0.1 to 6 bar.

1) Output 10V constant to supply a set point potentiometer.

Technical information

The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
The oil content of compressed air must remain constant during the life cycle.
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

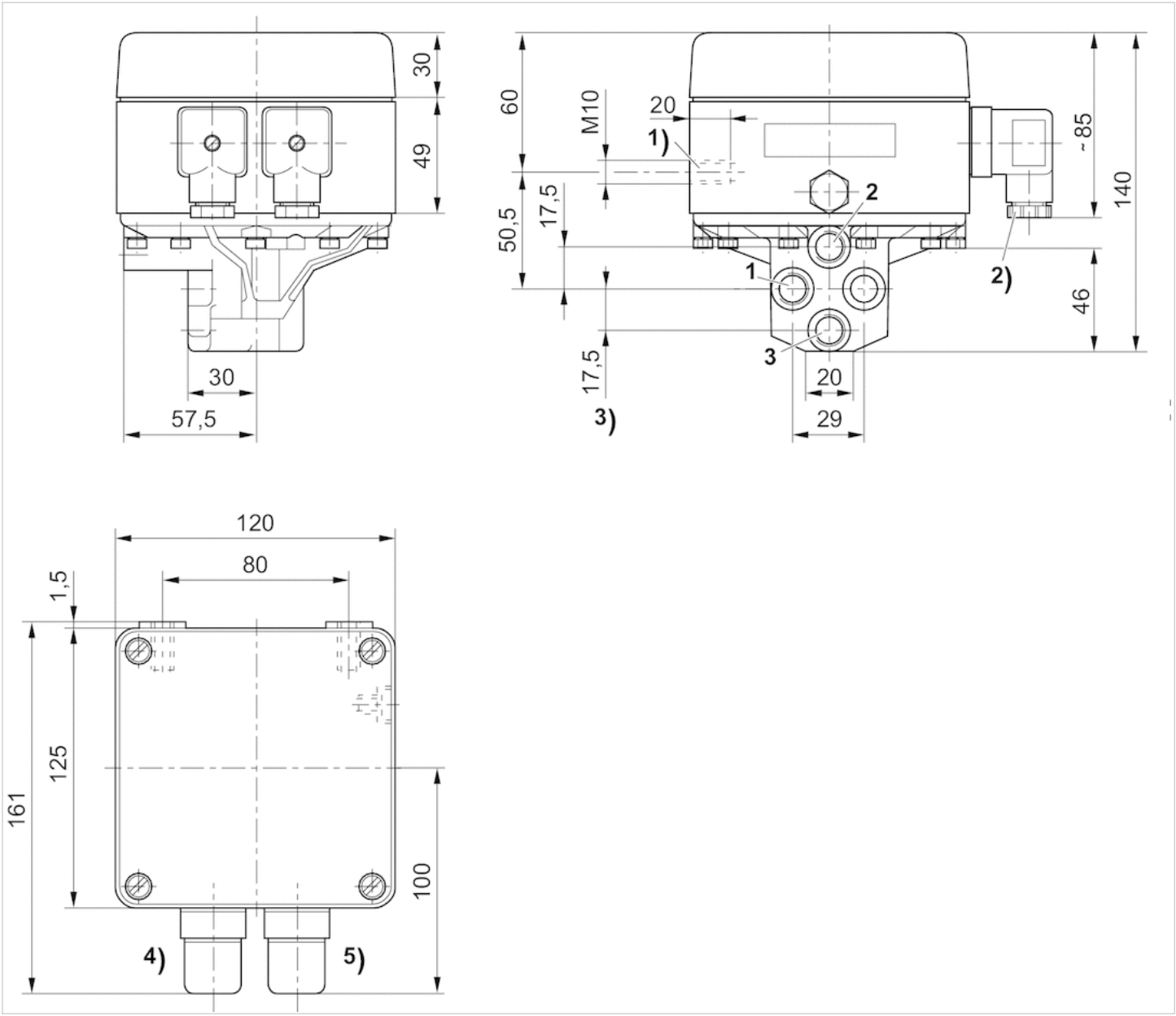
The protection class is only ensured when the plug is mounted properly. For detailed information, see operating instructions.

Technical information

Material	
Housing	Die-cast aluminum
Seals	Acrylonitrile butadiene rubber

Dimensions

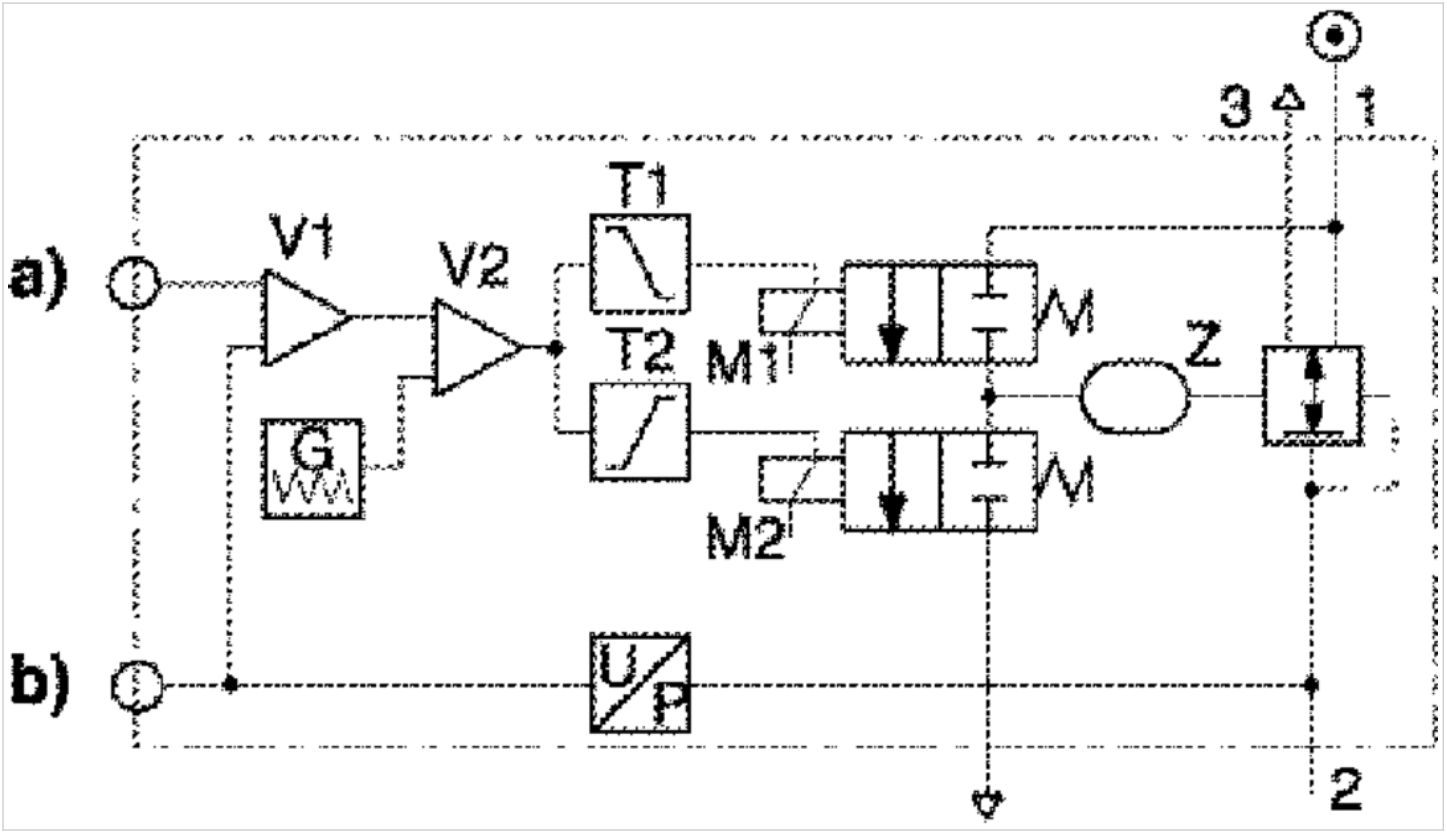
Dimensions



1) mounting thread
2) PG 9
3) threaded connection 1 - 3 = G1/4 ISO 228/1:2000
4) plug 1
5) plug 2

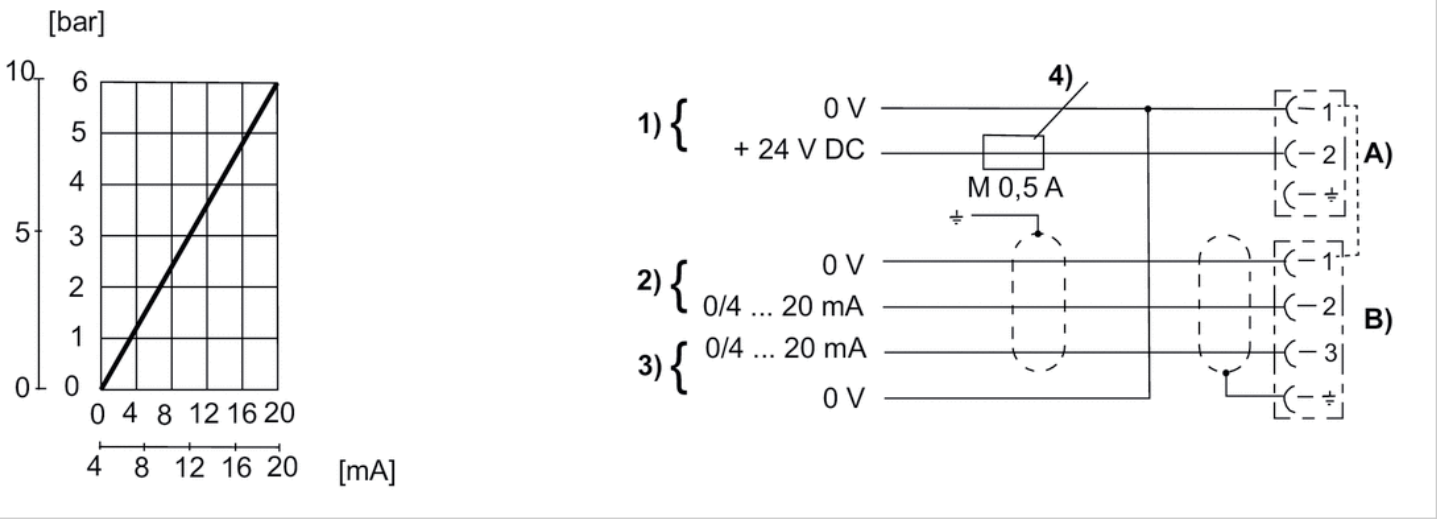
Circuit diagram

Functional diagram



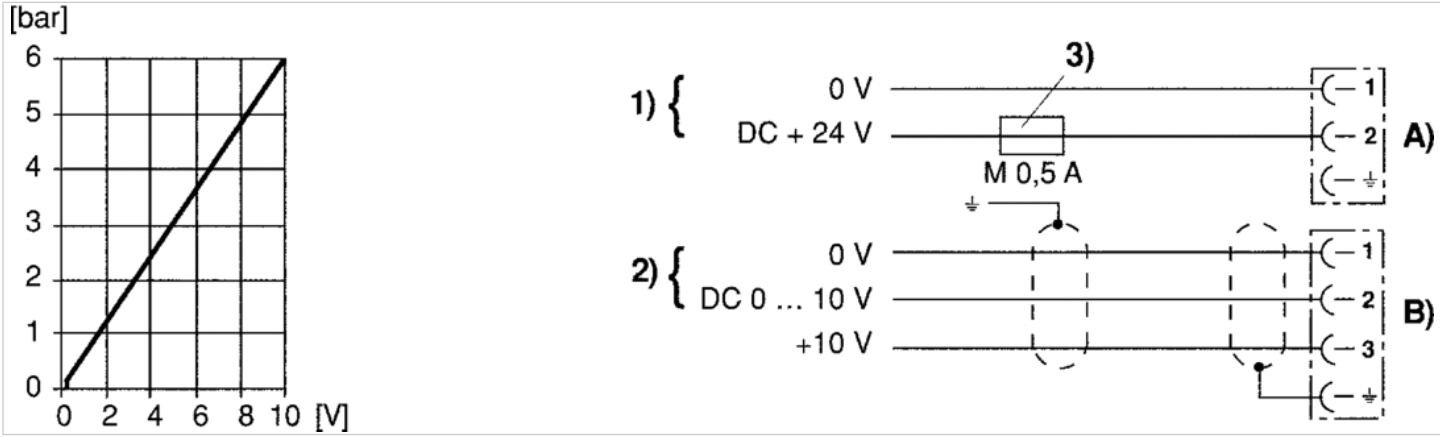
a) Nominal input value b) Actual output value
The E/P pressure control valve modulates the pressure corresponding to an analog electrical nominal input value.
The integrated electronics make a comparison between the nominal input value and the pressure in the output line (actual value).
The controller generates electrical input signals, which either ventilate or exhaust control volume Z of the relay valve by means of two pilot valves (M1, M2) until the specified pressure is attained in the output line.
1) Operating pressure
2) Working pressure
3) Exhaust

Fig. 1, Characteristic and pin assignment for current control with actual output value



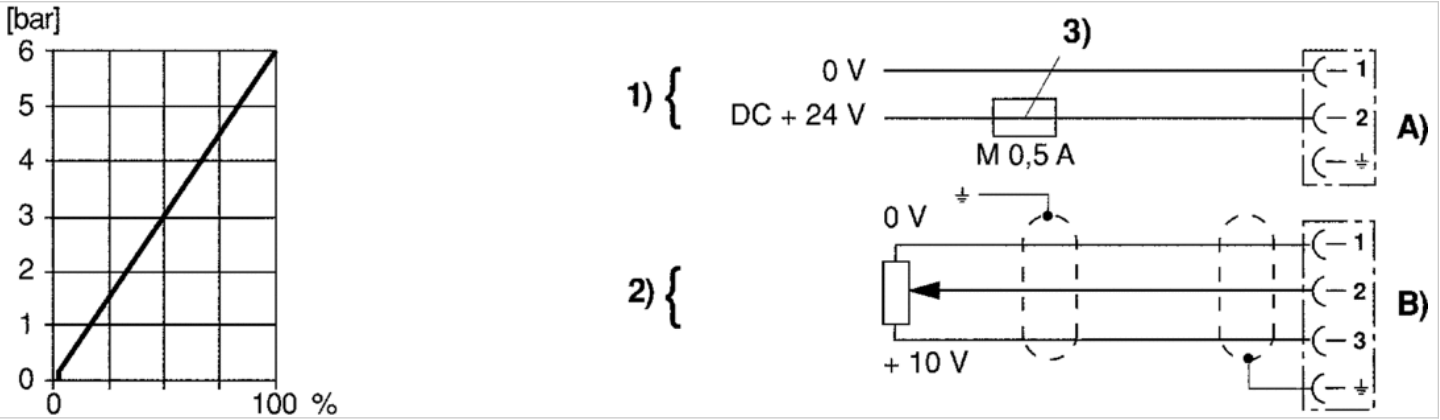
1) Supply voltage
2) Input current nominal value (ohmic load 100 Ω, max. 50 mA).
The (+) and (-) connection potential must be in the range 0-12 V related to plug 1, pin 1.
3) Actual output value (max. total resistance of downstream devices 300 Ω)
The actual value is measured between plug 2, pin 3 and plug 1, pin 1. The actual value is short circuit resistant for a limited time.
4) The supply voltage must be protected by an external M 0.5 A fuse.
Connect plug 2 via a shielded cable to ensure EMC.
A) Plug 1 B) Plug 2

Fig. 2, Characteristic and pin assignment for voltage control with actual output value



1) Supply voltage
2) Voltage control
3) The supply voltage must be protected by an external M 0.5 A fuse.
Connect plug 2 via a shielded cable to ensure EMC.
A) Plug 1 B) Plug 2

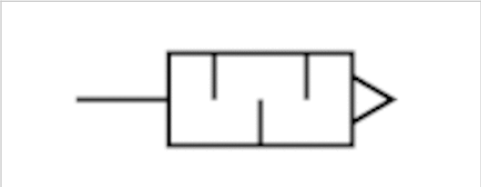
Fig. 3, Characteristic and pin assignment for potentiometer control without actual output value



1) Supply voltage
2) Potentiometer control (0 - 2 kΩ (min.), 0 - 10 kΩ (max.))
3) The supply voltage must be protected by an external M 0.5 A fuse.
Connect plug 2 via a shielded cable to ensure EMC.
A) Plug 1
B) Plug 2

Silencers, series SI1

- G 1/4
- Sintered bronze



Working pressure min./max.	0 ... 10 bar
Ambient temperature min./max.	-25 ... 80 °C
Medium	Compressed air
Sound pressure level	79 dB
Weight	0.02 kg
Comment	Flow characteristic curves can be found under “Diagrams”.

Technical data

Part No.	Compressed air connection	Flow	Delivery unit
		Qn	
1827000001	G 1/4	3390 l/min	10 piece

Weight per piece

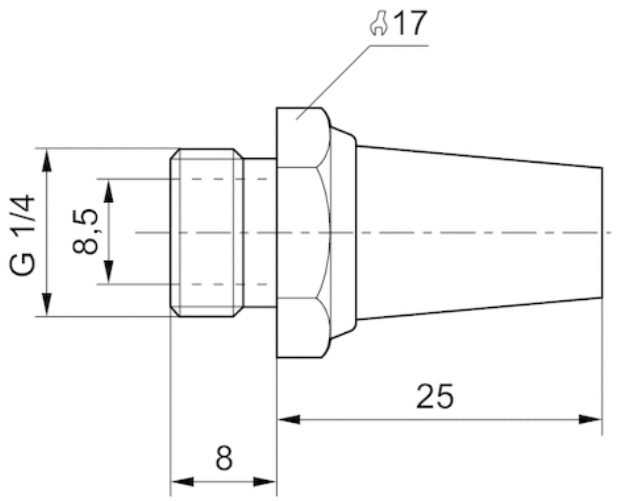
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

Technical information

Material	
Silencer	Sintered bronze
Thread	Brass

Dimensions

Dimensions in mm



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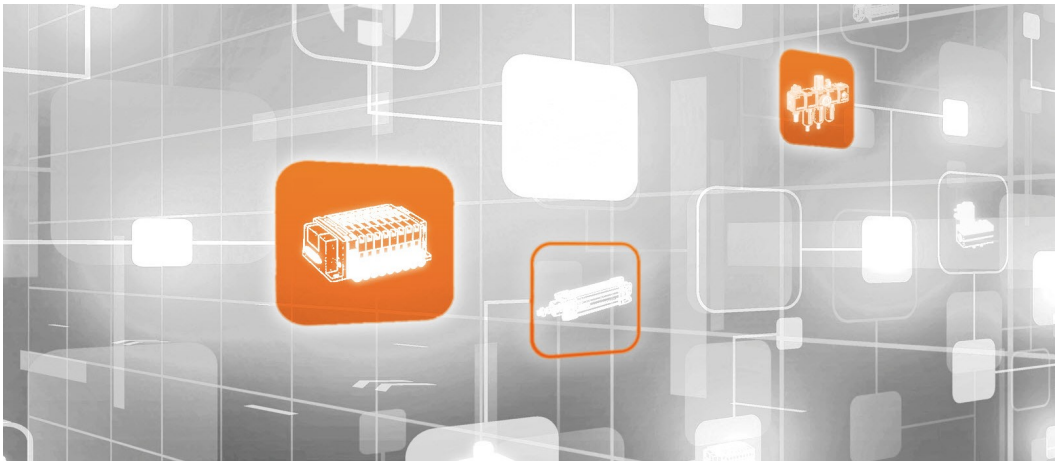

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