3/2-directional valve, electrically operated, Series AS3-SOV-...-POS

- With position inquiry, with integrated sensor
- Compressed air connection G 1/2 G 3/8
- Pipe connection

Type	Poppet valve, Can be assembled into blocks
Parts	3/2-directional valve, electrically operated
Nominal flow	4500 l/min
Nominal flow 1 ▸ 2	4500 l/min
Nominal flow 2 ▸ 3	3200 l/min
Working pressure min./max.	See table below
Medium	Compressed air Neutral gases
Medium temperature min./max.	-10 ... 50 °C
Ambient temperature min./max.	-10 ... 50 °C
Sealing principle	Soft sealing
Max. particle size	25 µm
Weight	0,459 kg

Technical data

Part No.			Compressed air connection input	Compressed air connection output	Exhaust
R412007383			G 1/2	G 1/2	G 1/2
R412007381		–	G 3/8	G 3/8	G 1/2
R412007387		–	G 1/2	G 1/2	G 1/2
R412007359			G 3/8	G 3/8	G 1/2
R412007336			G 3/8	G 3/8	G 1/2
R412007396			G 3/8	G 3/8	G 1/2
R412007377			G 3/8	G 3/8	G 1/2
R412007398			G 1/2	G 1/2	G 1/2
R412007353			G 3/8	G 3/8	G 1/2
R412007355			G 3/8	G 3/8	G 1/2
R412007360			G 1/2	G 1/2	G 1/2
R412007337			G 1/2	G 1/2	G 1/2
R412007354			G 1/2	G 1/2	G 1/2
R412007356			G 1/2	G 1/2	G 1/2

Part No.	Operational voltage	Power consumption	Working pressure min./max.
	DC	DC	
R412007383	24 V	2 W	2,5 ... 16 bar
R412007381	-	-	2,5 ... 16 bar
R412007387	-	-	2,5 ... 16 bar
R412007359	24 V	2 W	2,5 ... 10 bar
R412007336	24 V	2 W	2,5 ... 10 bar
R412007396	24 V	2 W	2,5 ... 10 bar
R412007377	24 V	2 W	2,5 ... 10 bar

Part No.	Operational voltage	Power consumption	Working pressure min./max.
	DC	DC	
R412007398	24 V	2 W	2,5 ... 10 bar
R412007353	24 V	2 W	2,5 ... 10 bar
R412007355	24 V	2 W	2,5 ... 10 bar
R412007360	24 V	2 W	2,5 ... 10 bar
R412007337	24 V	2 W	2,5 ... 10 bar
R412007354	24 V	2 W	2,5 ... 10 bar
R412007356	24 V	2 W	2,5 ... 10 bar

Part No.	Electrical connection	Electrical connection	Cable length
	Pilot valve	Sensor	Sensor
R412007383	Plug, ISO 15217, form C	without wire end ferrule, tin-plated	3 m
R412007381	-	without wire end ferrule, tin-plated	3 m
R412007387	-	without wire end ferrule, tin-plated	3 m
R412007359	Plug, ISO 15217, form C	Plug, M8, 3-pin, with knurled screw	0,3 m
R412007336	Plug, ISO 15217, form C	Plug, M8, 3-pin, with knurled screw	0,3 m
R412007396	Socket, M12x1	without wire end ferrule, tin-plated	3 m
R412007377	Plug, ISO 15217, form C	without wire end ferrule, tin-plated	3 m
R412007398	Socket, M12x1	without wire end ferrule, tin-plated	3 m
R412007353	Socket, M12x1	Plug, M8, 3-pin, with knurled screw	0,3 m
R412007355	Socket, M12x1	Plug, M12, 3-pin, with knurled screw	0,3 m
R412007360	Plug, ISO 15217, form C	Plug, M8, 3-pin, with knurled screw	0,3 m
R412007337	Plug, ISO 15217, form C	Plug, M12, 3-pin, with knurled screw	0,3 m
R412007354	Socket, M12x1	Plug, M8, 3-pin, with knurled screw	0,3 m
R412007356	Socket, M12x1	Plug, M12, 3-pin, with knurled screw	0,3 m

Part No.	Fig.	
R412007383	Fig. 2	1)
R412007381	Fig. 1	2)
R412007387	Fig. 1	2)
R412007359	Fig. 2	1)
R412007336	Fig. 2	1)
R412007396	Fig. 3	1)
R412007377	Fig. 2	1)
R412007398	Fig. 3	1)
R412007353	Fig. 3	1)
R412007355	Fig. 3	1)
R412007360	Fig. 2	1)
R412007337	Fig. 2	1)
R412007354	Fig. 3	1)
R412007356	Fig. 3	1)

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar, MO = Manual override, Electronic sensor included in scope of delivery (assembled)., For sensor connection, see the selection table.

1) Basic valve with pilot valve

2) Basic valve without pilot valve

Technical information

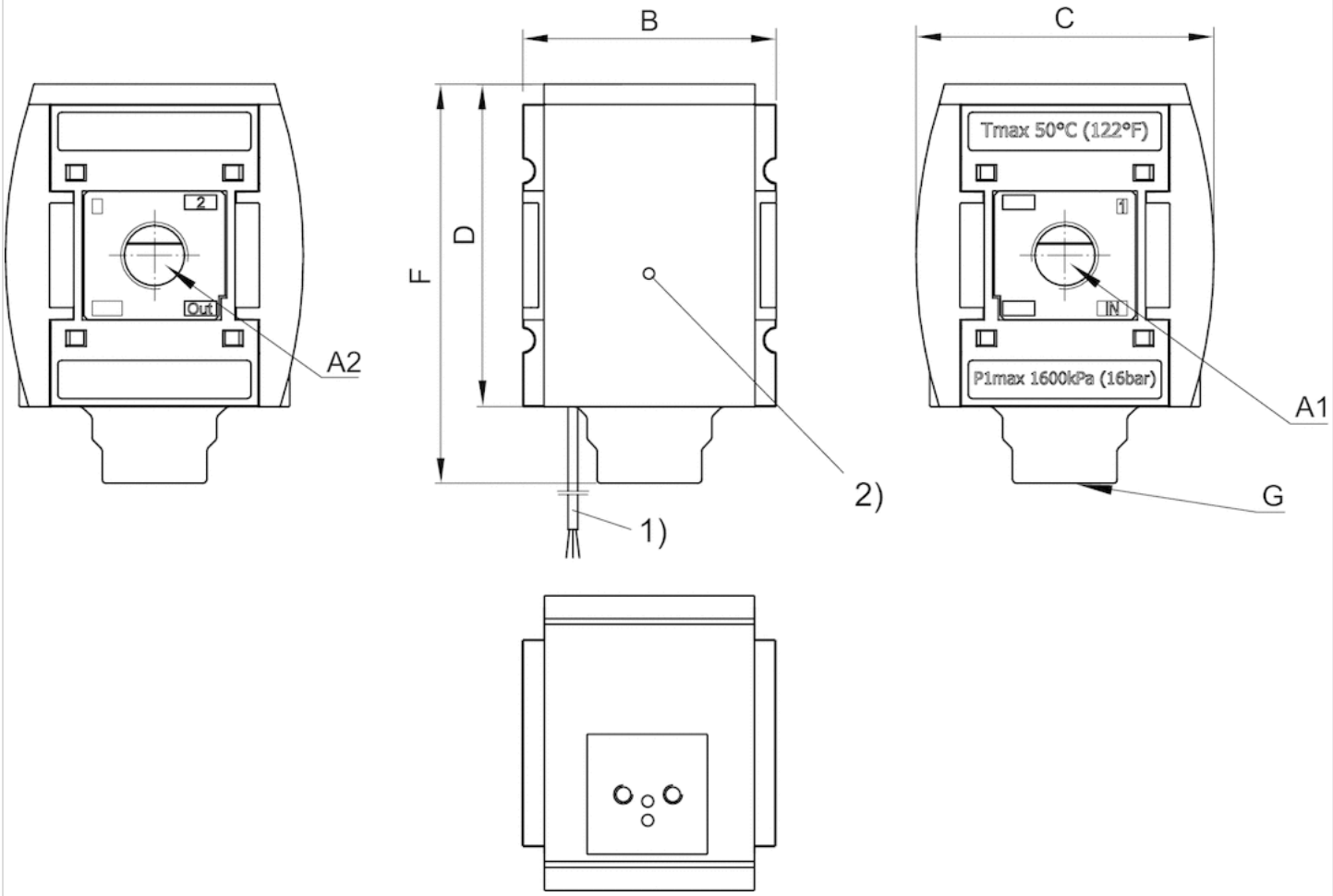
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.
Can be used in circuits with increased efficiency.
An ST6 sensor (contactless) is used to detect the switching position in the non-actuated state (position: exhaust).
The sensor signal is visible on the front of the cover.

Technical information

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

Dimensions

3/2-directional valve without pilot valve with porting configuration for series DO16



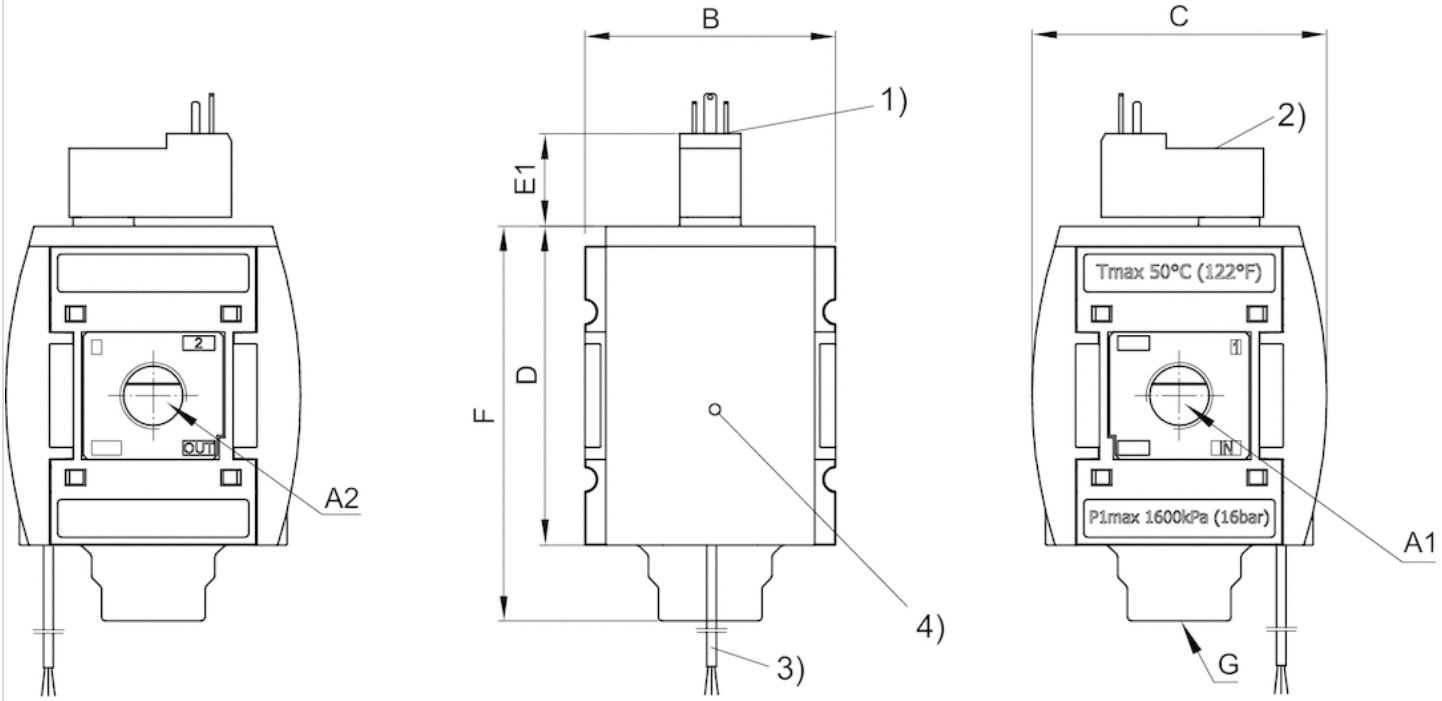
A1 = input
A2 = output
1) Connection cable
2) Optical switch status indicator

Dimensions in mm

A1	A2	B	C	D	F	G
G 3/8	G3/8	63	74	80	99	G1/2
G 1/2	G1/2	63	74	80	99	G1/2

Dimensions

Fig. 2: 3/2 directional valve with pilot valve and connection for valve plug connector form C



A1 = input
A2 = output
1) Electr. connection: valve plug connector form C, ISO 15217
2) Manual override
3) Connection cable
4) Optical switch status indicator

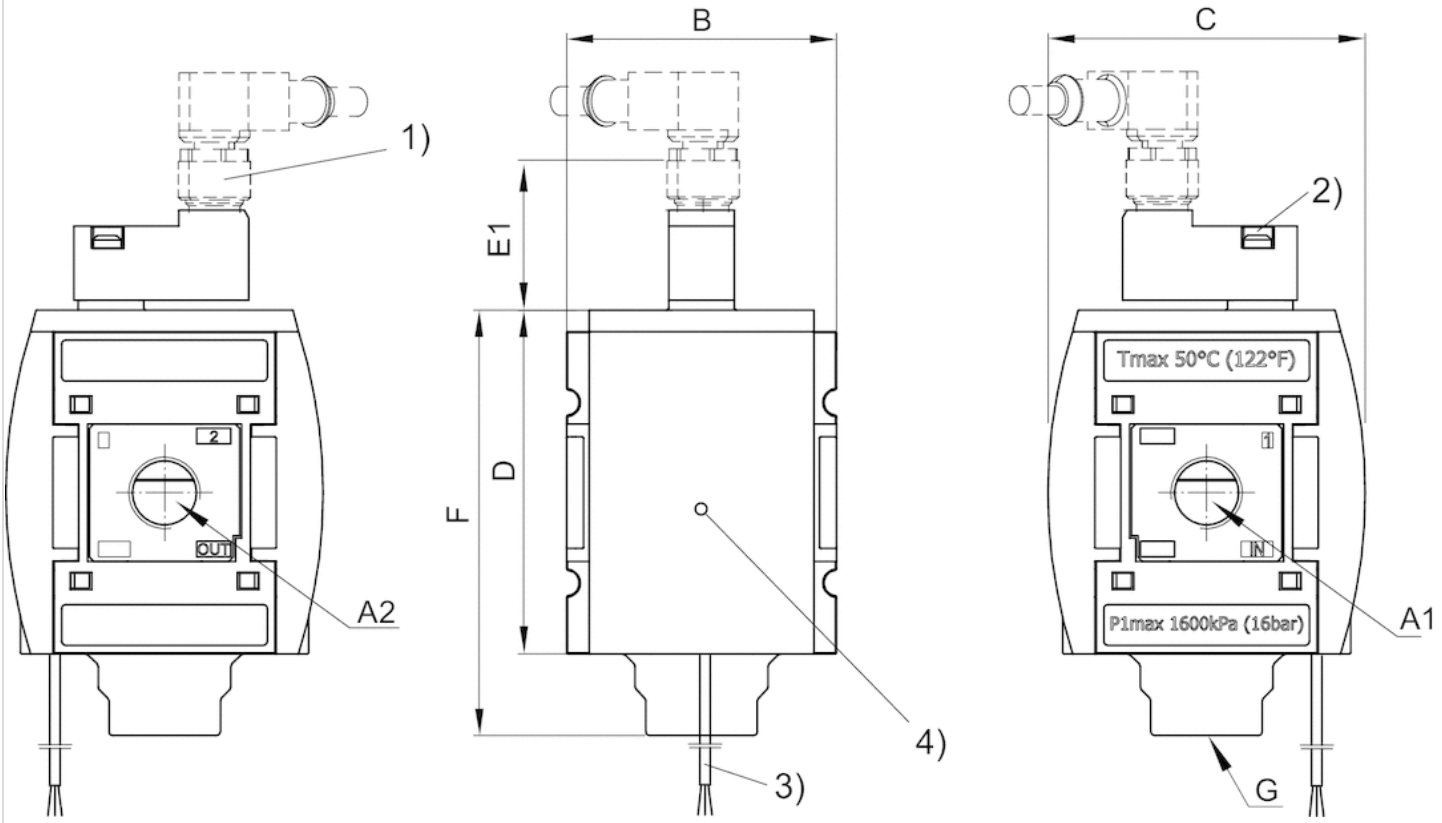
Dimensions in mm

A1	A2	B	C	D	E1	F	G
G 1/2	G1/2	63	74	80	23.2	99	G1/2
G 3/8	G3/8	63	74	80	23.2	99	G1/2

A1	A2	B	C	D	E1	F	G
G 1/2	G1/2	63	74	80	23.2	99	G1/2

Dimensions

Fig. 3: 3/2-directional valve with pilot valve, push-in fitting M12x1



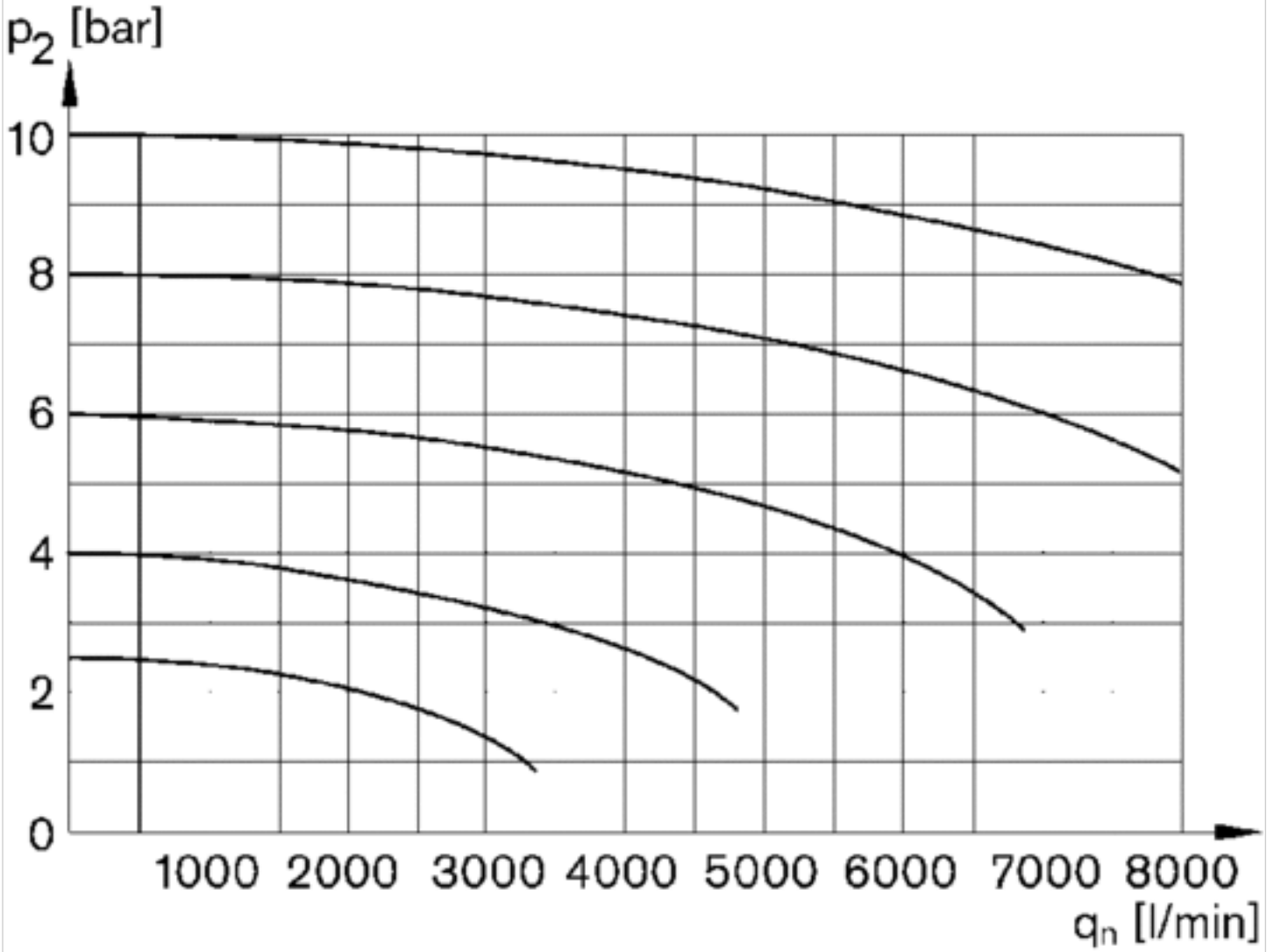
A1 = input
A2 = output
1) plug M12
2) Manual override
3) Connection cable
4) Optical switch status indicator

Dimensions in mm

A1	A2	B	C	D	E1	F	G
G 3/8	G3/8	63	74	80	39	99	G1/2
G 1/2	G1/2	63	74	80	39	99	G1/2
G 3/8	G3/8	63	74	80	39	99	G1/2
G 1/2	G1/2	63	74	80	39	99	G1/2

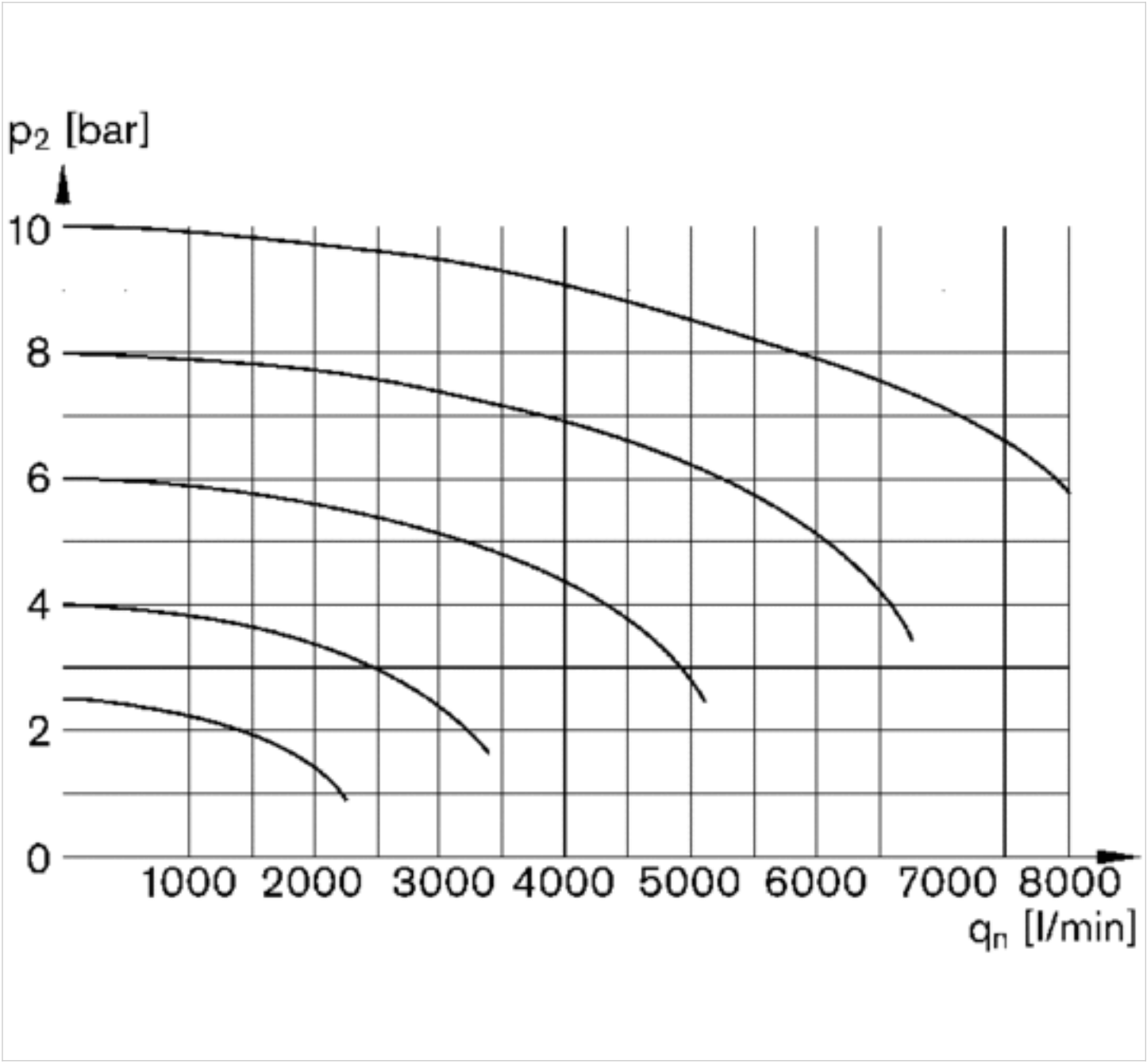
Diagrams

Flow rate characteristic



p2 = secondary pressure
qn = nominal flow

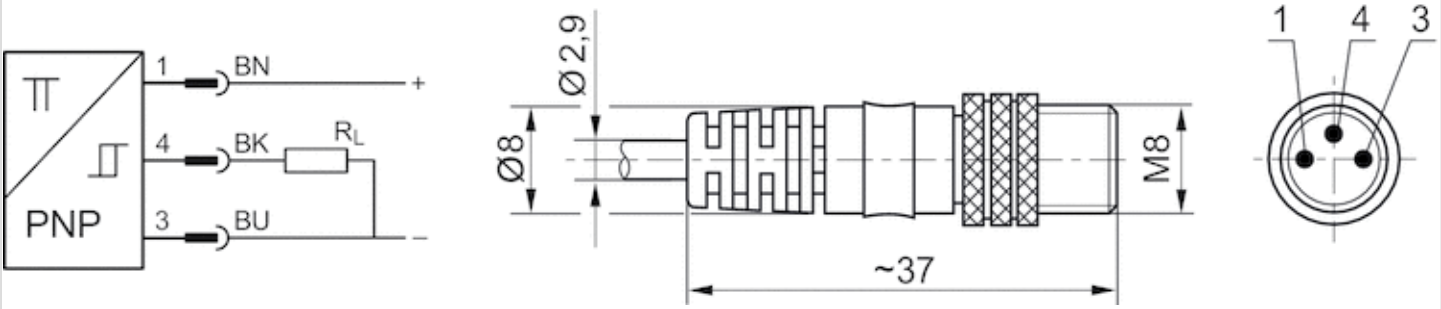
Rear exhaust



p2 = secondary pressure
qn = nominal flow

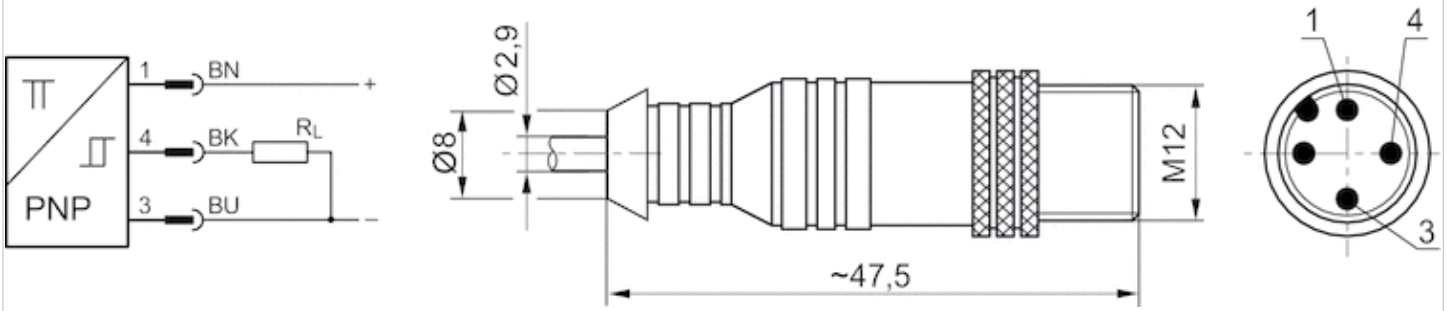
Pin assignments

PIN assignment sensor, plug M8



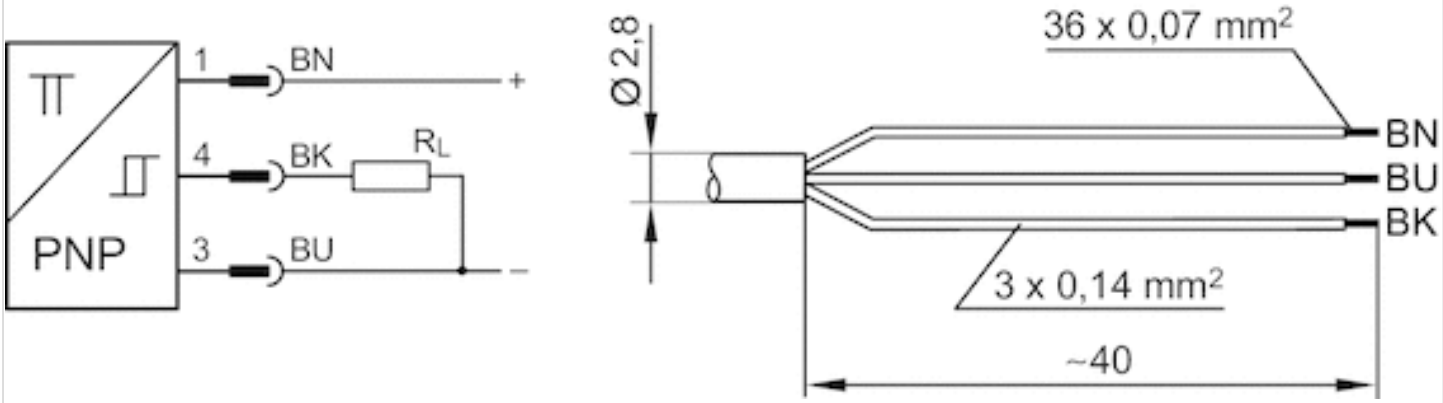
Pin assignment:
1 = (+)
3 = (-)
4 = (OUT)

PIN assignment sensor, plug, M12



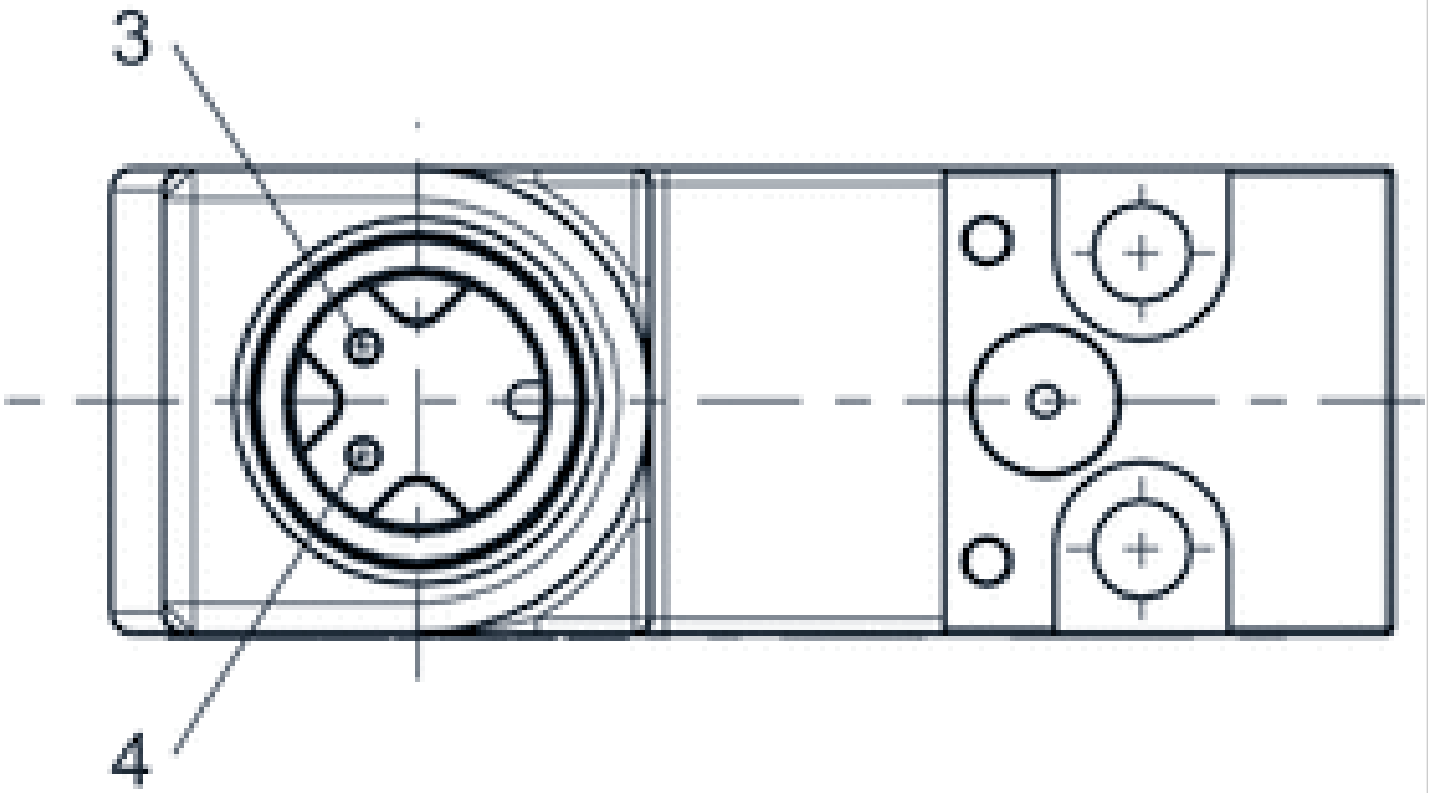
Pin assignment:
1 = (+)
3 = (-)
4 = (OUT)

Sensor pin assignment, tin-plated wire ends



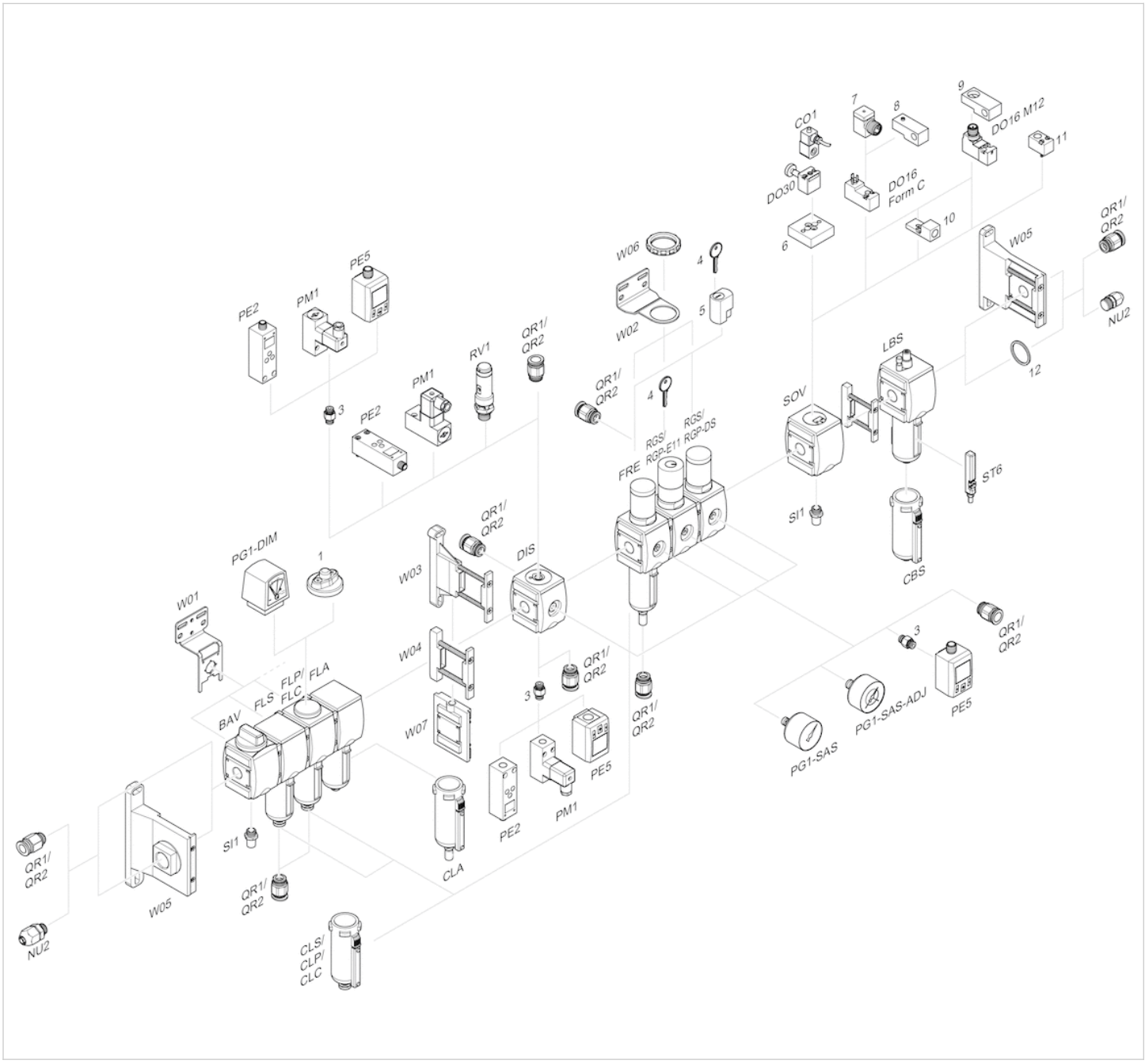
BN = brown
BK = black
BU = blue

Pin assignment M12x1



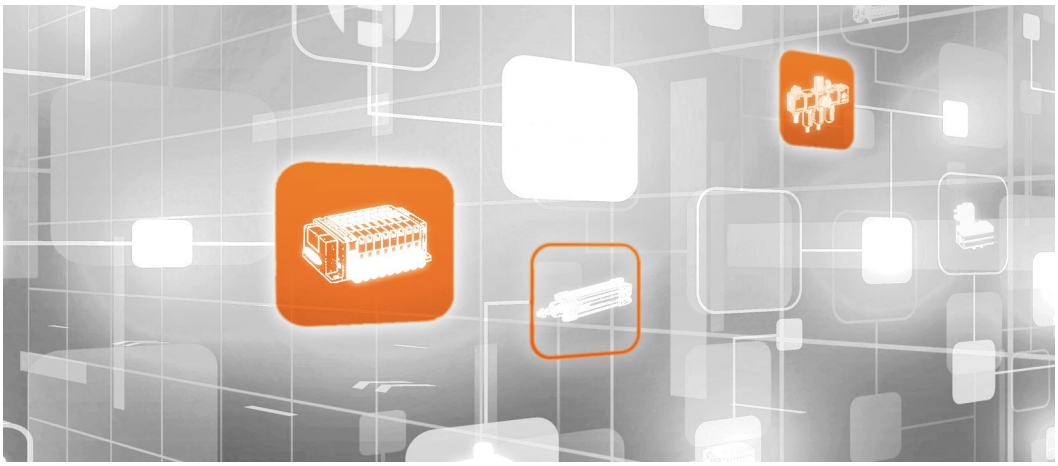
3: +/-
4: +/-

Accessories overview



1 = contamination display
3 = Double nipple
4 = Key for E11 locking
5 = mortise lock
6 = Transition plate DO30
7 = Adapter, Series CON-VP
8 = Mounting aid DO16, form C
9 = Mounting aid DO16, M12
10 = Adapter for external pilot air
11 = Adapter pneumatic operation
12 = Sealing ring

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



Visit us: Emerson.com/Aventics

Your local contact: Emerson.com/contactus

Emerson.com

Facebook.com/EmersonAutomationSolutions

LinkedIn.com/company/Emerson-Automation-Solutions

Twitter.com/EMR_Automation

2020-12

EMERSON.

CONSIDER IT SOLVED™