

# 3/2-directional valve, electrically operated, Series AS1-SOV

- Compressed air connection G 1/4
- Air supply left
- Pipe connection
- NC



Type	Poppet valve, Can be assembled into blocks
Parts	3/2-directional valve, electrically operated
Nominal flow 1 ▶ 2	2000 l/min
Nominal flow 2 ▶ 3	380 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
Pilot	Internal
Sealing principle	Soft sealing
Max. particle size	25 µm
Oil content of compressed air	0 ... 5 mg/m <sup>3</sup>
Protection class acc. to DIN EN 61140 with plug	IP65
Weight	See table below

## Technical data

Part No.				Compressed air connection input	Compressed air connection output	Exhaust
R412014669		—	NC	G 1/4	G 1/4	G 1/4
R412014670		—	NC	G 1/4	G 1/4	G 1/4
R412014666			NC	G 1/4	G 1/4	G 1/4
R412014668			NC	G 1/4	G 1/4	G 1/4
R412010680			NC	G 1/4	G 1/4	G 1/4

Part No.	Operational voltage	Operational voltage	Operational voltage
	DC	AC 50 Hz	AC 60 Hz
R412014669	-	-	-
R412014670	-	-	-
R412014666	24 V	-	-
R412014668	-	230 V	230 V
R412010680	24 V	-	-

Part No.	Power consumption	Holding power	Switch-on power	Switch-on power
	DC	AC 50 Hz	AC 50 Hz	AC 60 Hz
R412014669	-	-	-	-
R412014670	-	-	-	-
R412014666	2 W	-	-	-
R412014668	-	1,6 VA	3 VA	3 VA
R412010680	2 W	-	-	-

Part No.	Working pressure min./max.	Electrical connection	Connector standard
		Pilot valve	
R412014669	2 ... 12 bar	-	-
R412014670	2 ... 12 bar	-	-
R412014666	2 ... 10 bar	Plug, ISO 15217, form C	EN 175301-803, form C
R412014668	2 ... 10 bar	Plug, ISO 15217, form C	EN 175301-803, form C
R412010680	2 ... 10 bar	Plug, M12	-

Part No.	basic valve with electrical connector	Weight	Fig.
R412014669	Basic valve without pilot valve	0,196 kg	Fig. 1
R412014670	Basic valve without pilot valve, with CNOMO subbase	0,21 kg	Fig. 1
R412014666	Basic valve with pilot valve	0,215 kg	Fig. 2
R412014668	Basic valve with pilot valve	0,214 kg	Fig. 2
R412010680	Basic valve with pilot valve	0,232 kg	Fig. 3

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

## Technical information

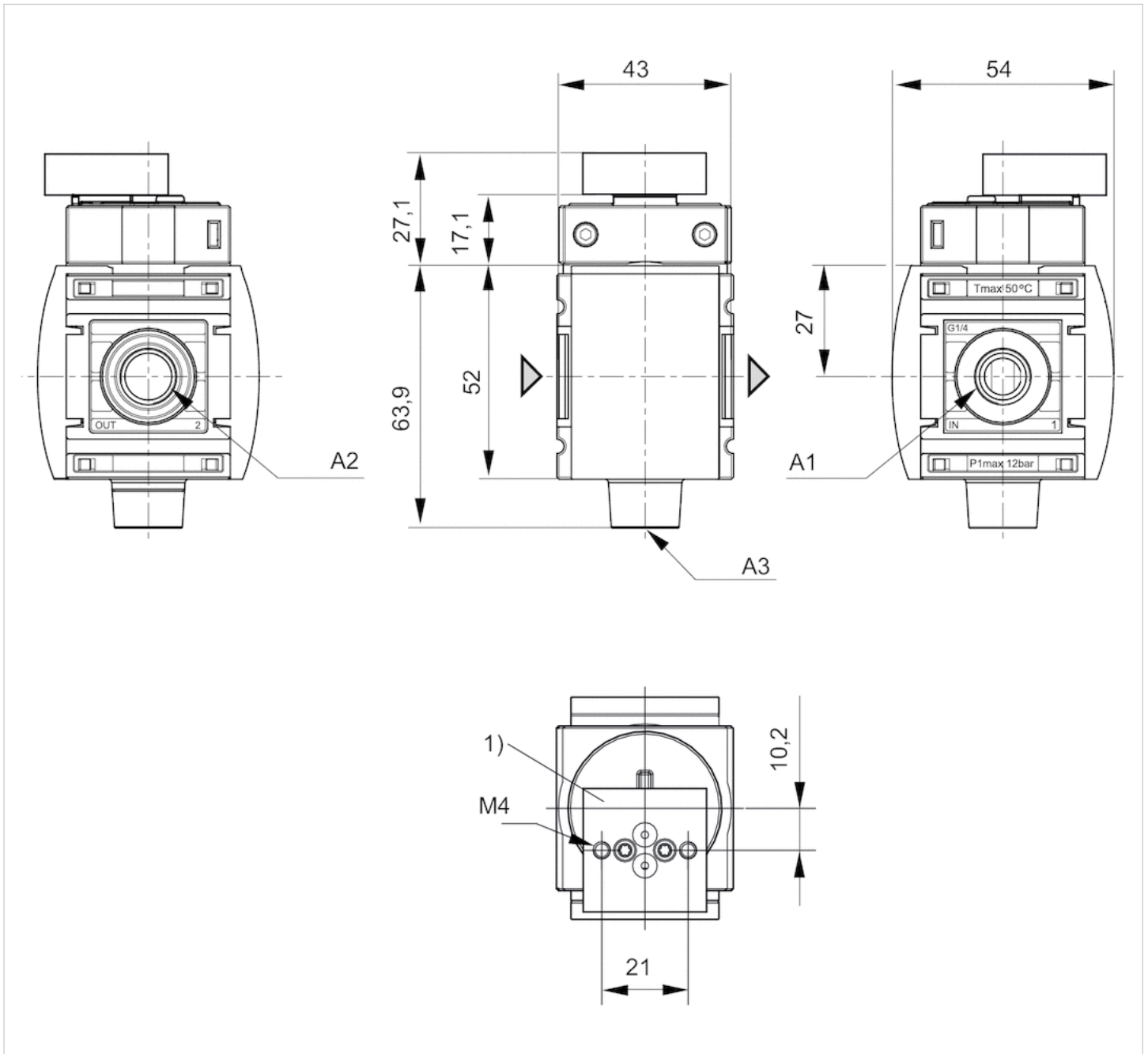
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

## Technical information

Material	
Housing	Polyamide
Front plate	Acrylonitrile butadiene styrene
Seals	Acrylonitrile butadiene rubber

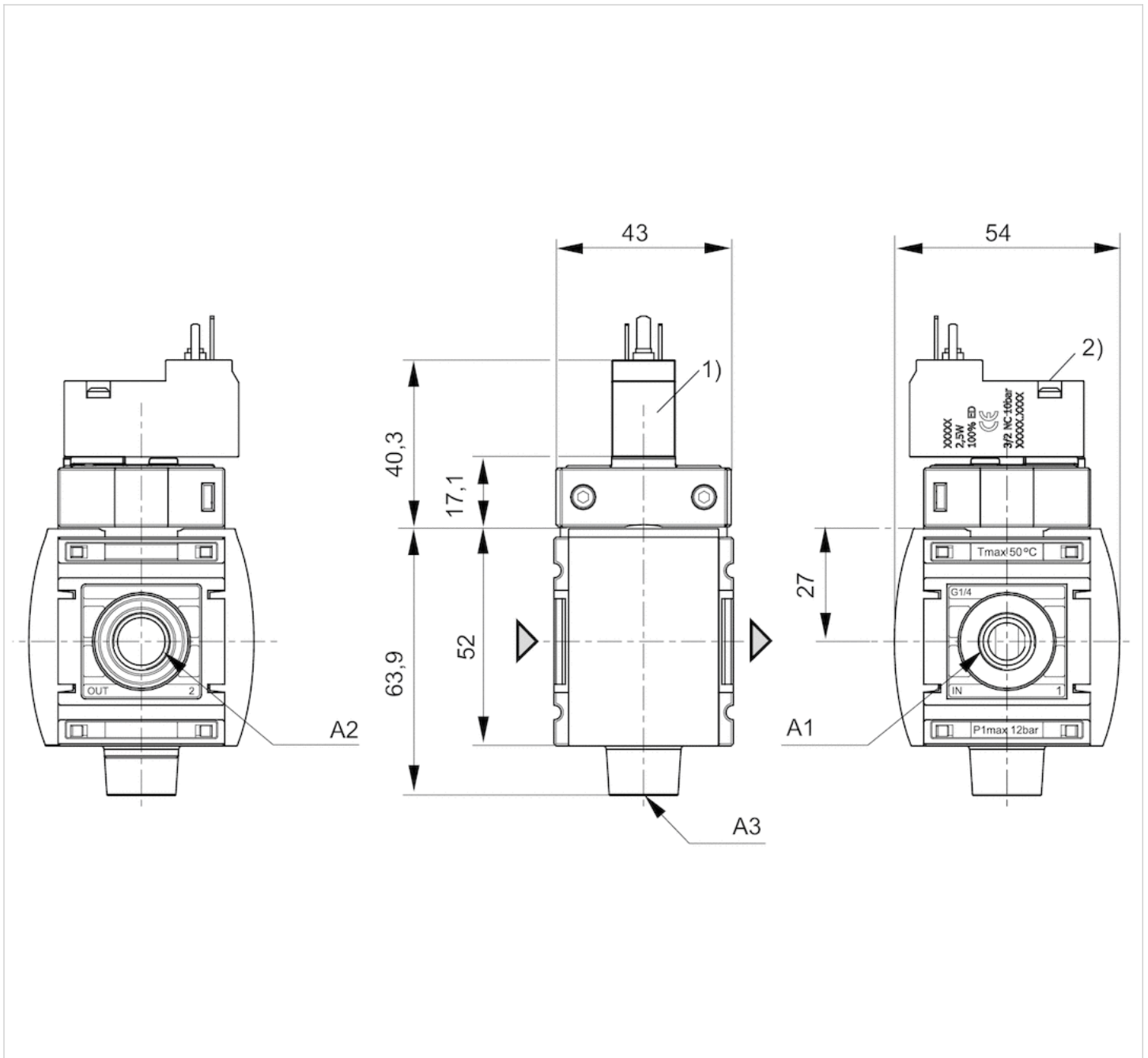
## Dimensions

Fig. 1: 3/2-directional valve with transition plate for pilot valve series DO30



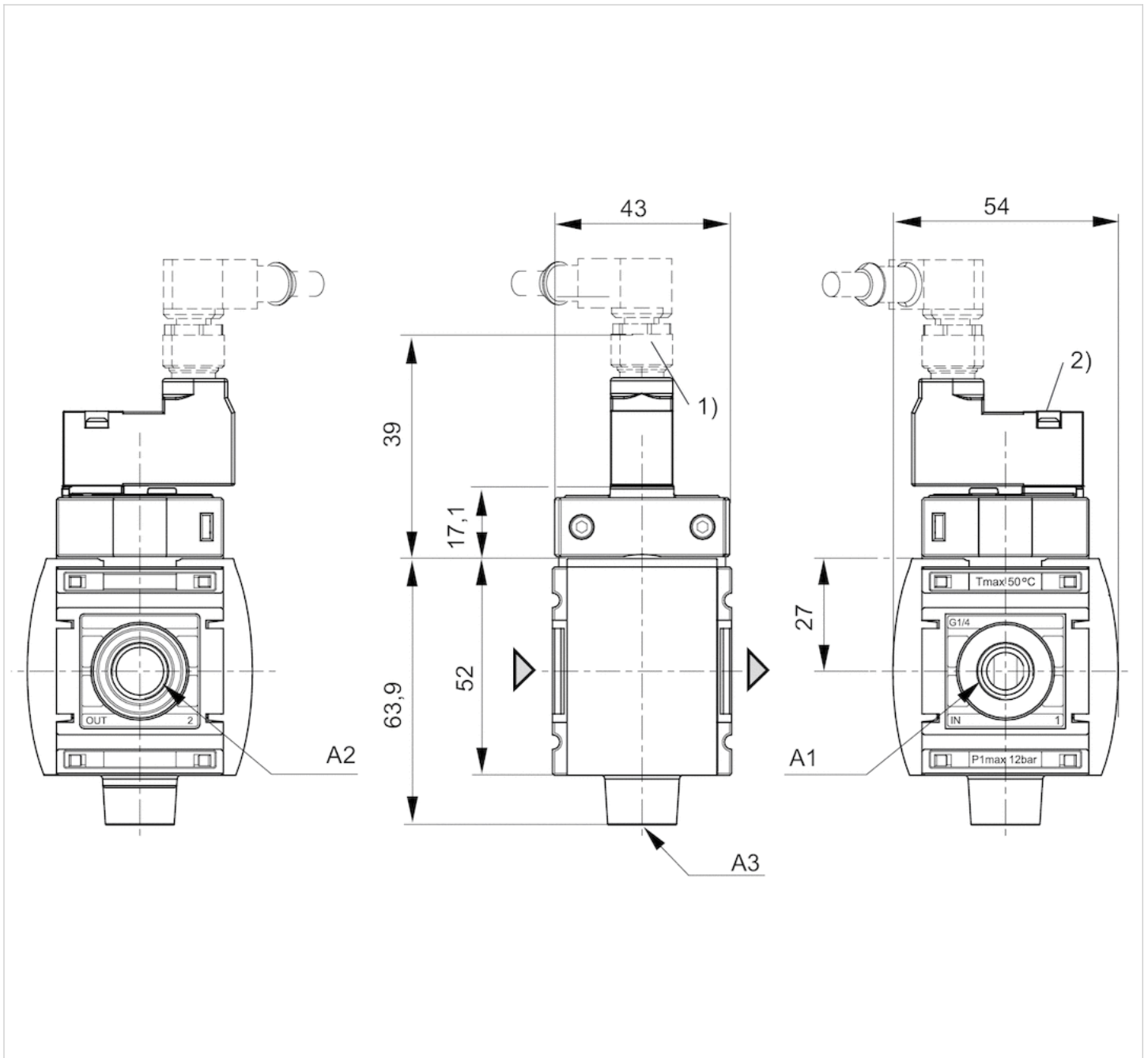
- A1 = input
- A2 = output
- A3 = ventilation port
- 1) Transition plate with CNOMO porting configuration for pilot valve DO30

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



- A1 = input
- A2 = output
- A3 = ventilation port
- 1) For valve plug connectors according to ISO 15217 (form C)
- 2) Manual override

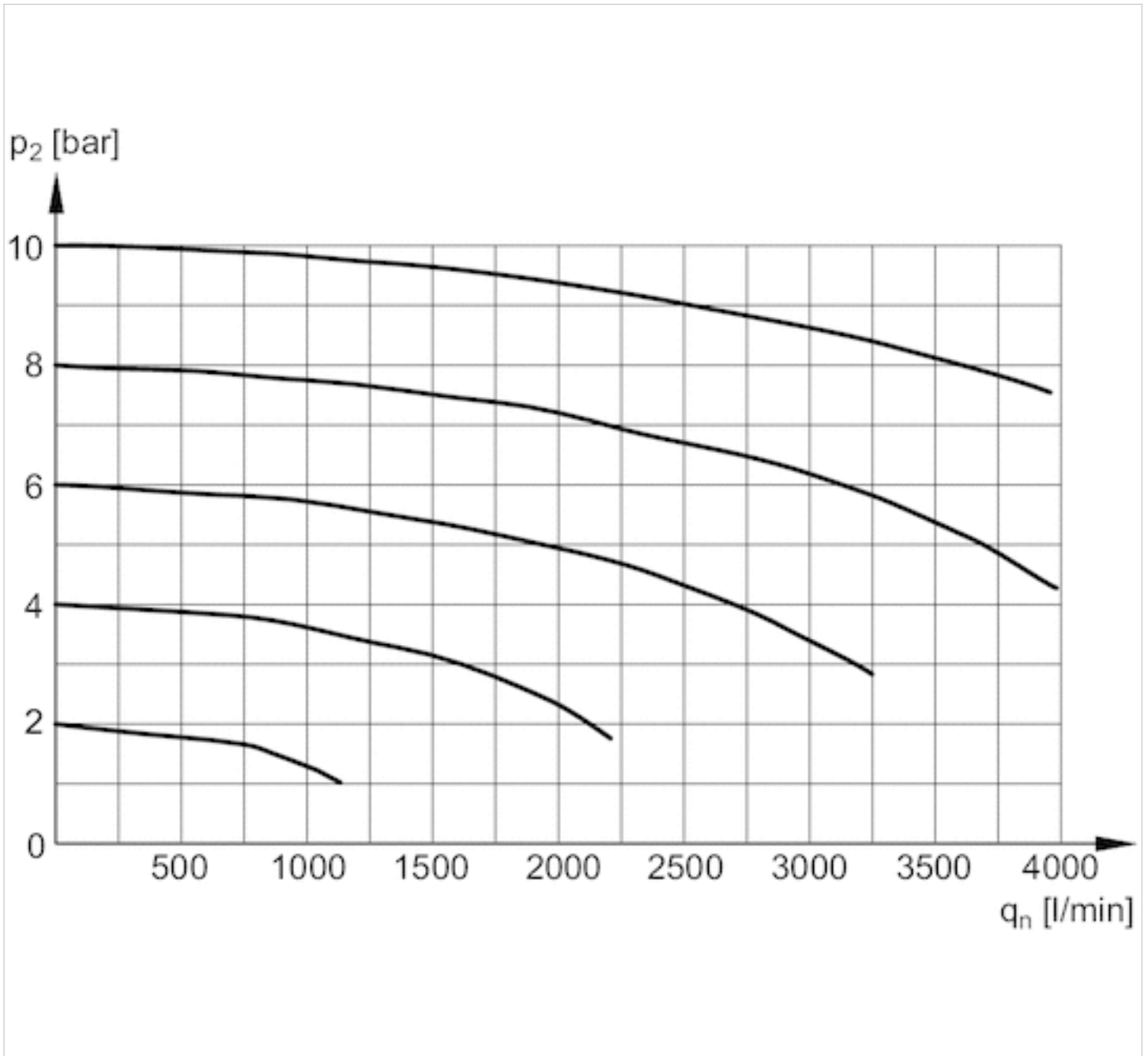
Fig. 3: 3/2-directional valve with pilot valve, push-in fitting M12x1



- A1 = input
- A2 = output
- A3 = ventilation port
- 1) plug M12
- 2) Manual override

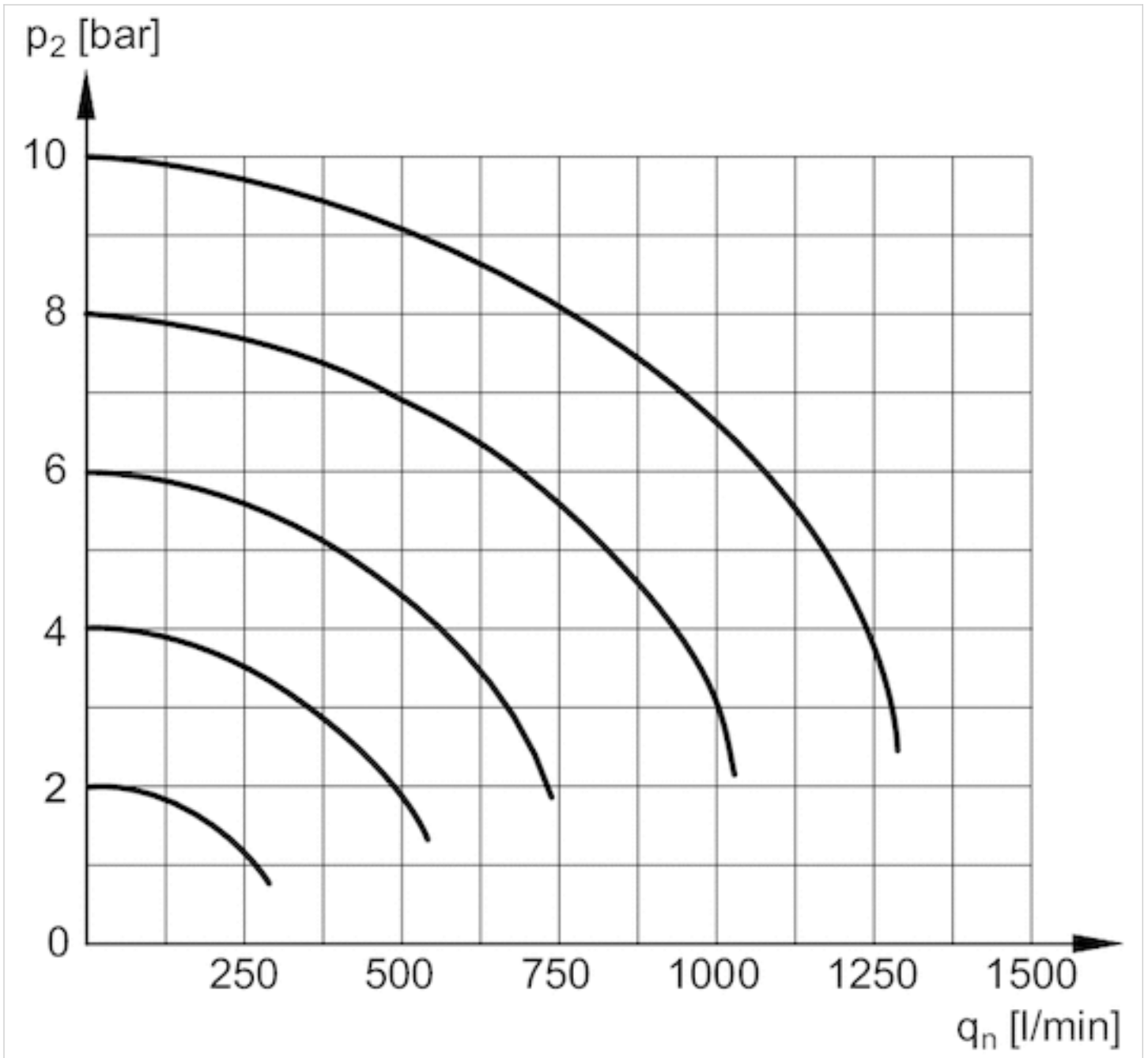
# Diagrams

## Flow rate characteristic



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

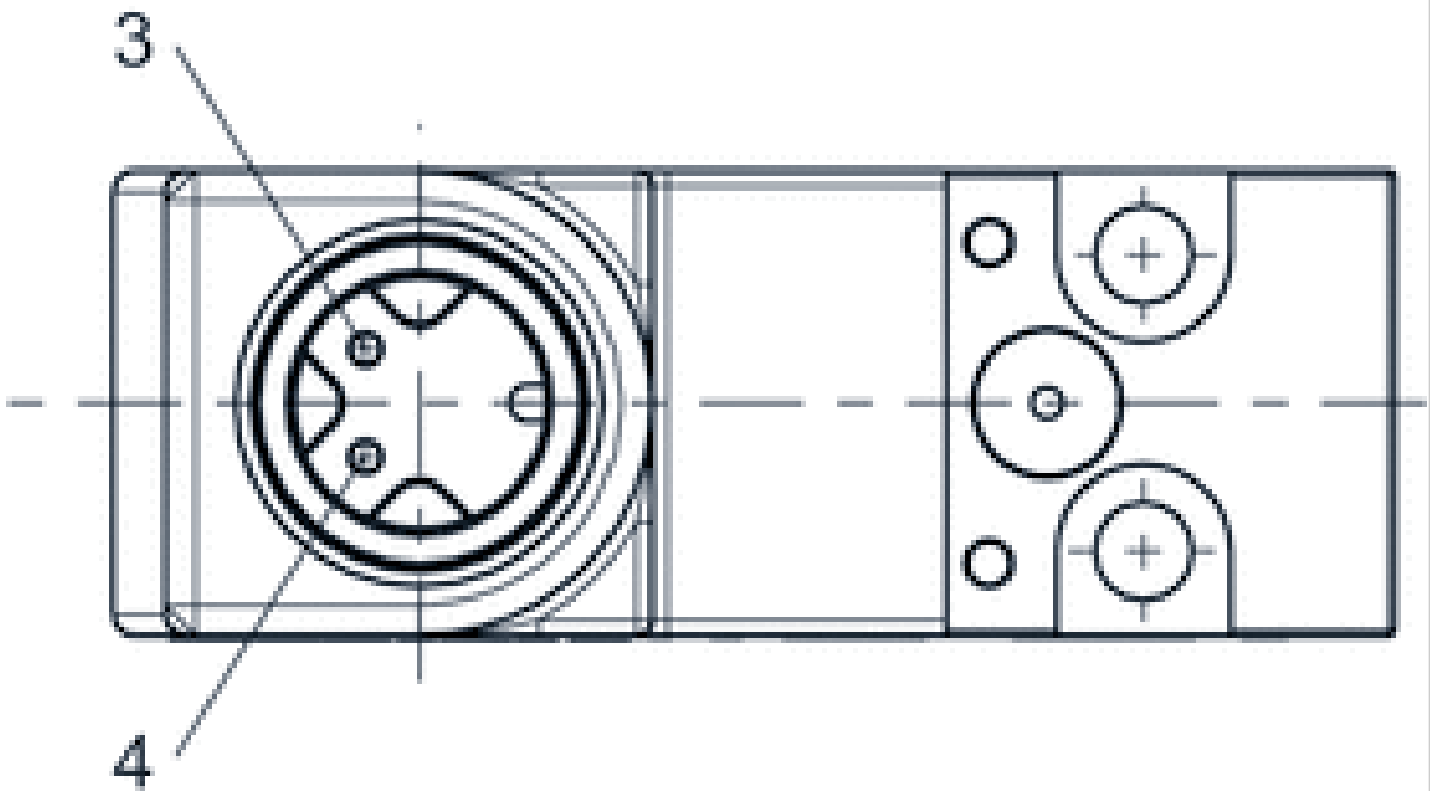
Rear exhaust



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

## Pin assignments

### Pin assignment M12x1

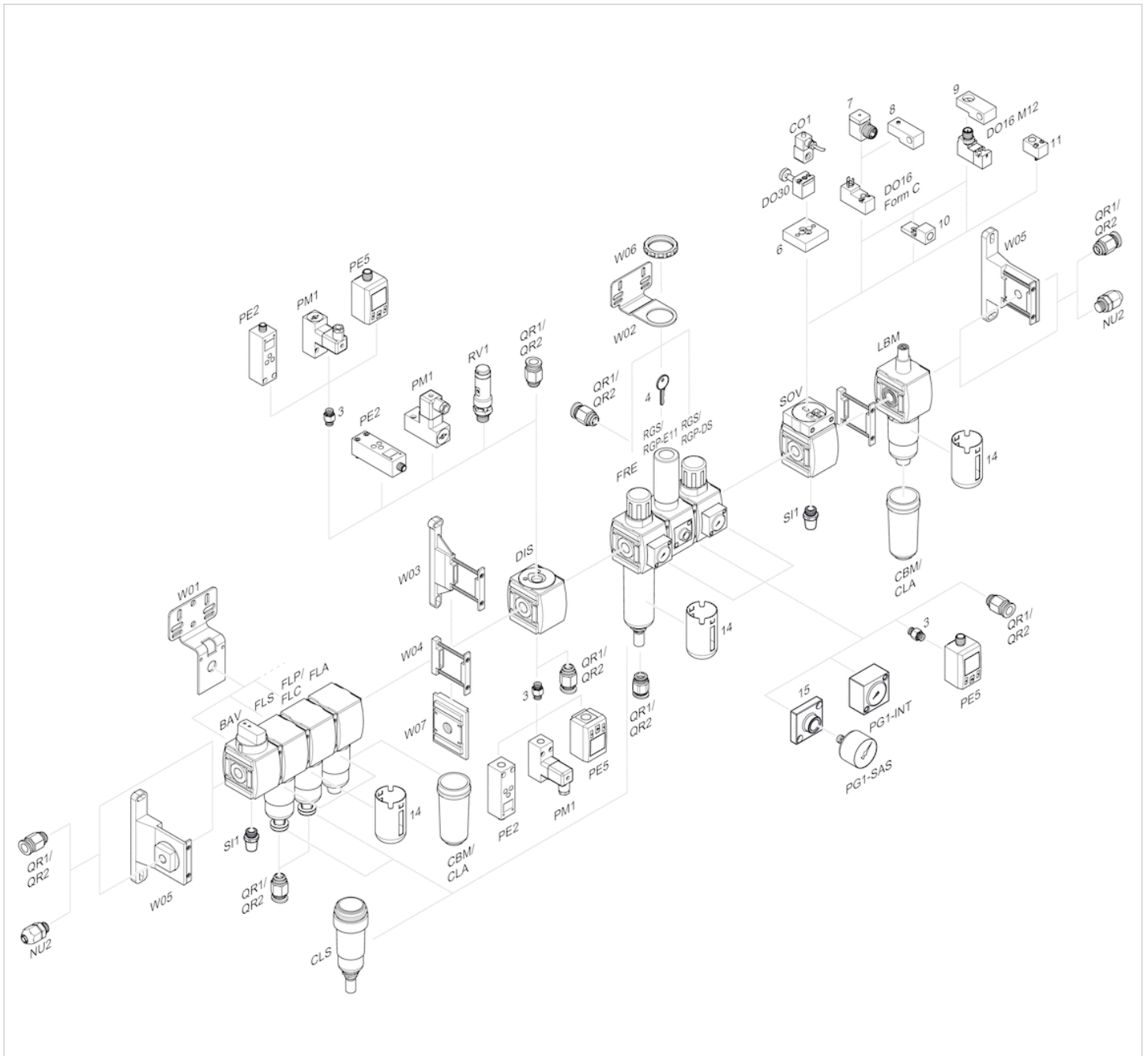


3: +/-

4: +/-



# Accessories overview



- 3 = Double nipple
- 4 = Key for E11 locking
- 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
- 14 = Protective guard
- 15 = Transition plate for assembling a pressure gauge with connection thread G 1/8

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



Visit us: [Emerson.com/Aventics](https://www.emerson.com/Aventics)

Your local contact: [Emerson.com/contactus](https://www.emerson.com/contactus)



[Emerson.com](https://www.emerson.com)



[Facebook.com/EmersonAutomationSolutions](https://www.facebook.com/EmersonAutomationSolutions)



[LinkedIn.com/company/Emerson-Automation-Solutions](https://www.linkedin.com/company/Emerson-Automation-Solutions)



[Twitter.com/EMR\\_Automation](https://twitter.com/EMR_Automation)

An example configuration is depicted on the title page. The delivered product may thus vary from that in the illustration. Subject to change. This Document, as well as the data, specifications and other information set forth in it, are the exclusive property of AVENTICS GmbH. It may not be reproduced or given to third parties without its consent. Only use the AVENTICS products shown in industrial applications. Read the product documentation completely and carefully before using the product. Observe the applicable regulations and laws of the respective country. When integrating the product into applications, note the system manufacturer's specifications for safe use of the product. The data specified only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgement and verification. It must be remembered that the products are subject to a natural process of wear and aging.

The Emerson logo is a trademark and service mark of Emerson Electric Co. Brand logotype are registered trademarks of one of the Emerson family of companies. All other marks are the property of their respective owners. © 2020 Emerson Electric Co. All rights reserved.  
2020-12



## CONSIDER IT SOLVED™