3/2-directional valve, Dual valve, IS12-PD series, size 1

- ISO 5599-1, ISO 13849-1
- 2 x 5/2
- Safe pressurization and exhaust■Qn = 1800 l/min (Exhaust)
- With spring return
- single solenoid
- Compressed air connection output G 1/4
- Electrical connection Plug, M12 Plug, EN 175301-803, form A
- Manual override without detent



Type	Spool valve
Sealing principle	Soft sealing
Blocking principle	Double base plate principle
Connection type	Plate connection
Standards	ISO 5599-1, ISO 13849-1
Working pressure min./max.	See table below
Control pressure min./max.	3,5 ... 10 bar
Ambient temperature min./max.	0 ... 50 °C
Medium temperature min./max.	0 ... 50 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 0,01 mg/m³
Protection class with connection	IP65
Compatibility index	15
Duty cycle	100 %
Typ. switch-on time	See table below
Switch-on time max.	18 ms
Typ. switch-off time	40 ms
Switch-off time max.	40 ms
Type sensor	electronic PNP, with LED
Sensor connection	Plug, M8, 3-pin, with knurled screw
Operating voltage sensor DC min./max.	10 ... 30 V DC
Voltage drop sensor U at Imax	≤ 2,5 V
Vibration resistance sensor	10 - 55 Hz, 1 mm
Shock resistance sensor	30 g / 11 ms
Cable length sensor	0,3 m
Protection class sensor acc. to DIN EN 61140	Class III
Weight	See table below

Technical data

Part No.		MO	Operational voltage DC	Voltage tolerance DC
R422003622			24 V	-10% / +10%
R422003623			24 V	-10% / +10%
R422003624			24 V	-10% / +10%
R422003625			24 V	-10% / +10%
R422003189			24 V	-10% / +10%
R422003190			24 V	-10% / +10%
R422003191			24 V	-10% / +10%
R422003192			24 V	-10% / +10%

Part No.	Power consumption DC	Pilot	Nominal flow 1 ▸ 2	Nominal flow 4 ▸ 5
R422003622	4,5 W	External	800 l/min	1050 l/min
R422003623	4,5 W	Internal	800 l/min	1050 l/min
R422003624	4,4 W	External	800 l/min	1050 l/min
R422003625	4,4 W	Internal	800 l/min	1050 l/min
R422003189	4,5 W	External	800 l/min	1050 l/min
R422003190	4,5 W	Internal	800 l/min	1050 l/min
R422003191	4,4 W	External	800 l/min	1050 l/min
R422003192	4,4 W	Internal	800 l/min	1050 l/min

Part No.	Nominal flow 4ext ▸ 5	Working pressure min./max.	Typ. switch-on time
R422003622	700 l/min	1 ... 10 bar	20 ms
R422003623	700 l/min	3,5 ... 10 bar	20 ms
R422003624	700 l/min	1 ... 10 bar	20 ms
R422003625	700 l/min	3,5 ... 10 bar	20 ms
R422003189	700 l/min	1 ... 10 bar	20 ms
R422003190	700 l/min	3,5 ... 10 bar	30 ms
R422003191	700 l/min	1 ... 10 bar	20 ms
R422003192	700 l/min	3,5 ... 10 bar	30 ms

Part No.	Compatibility index	Electrical connection Pilot valve	Weight	Fig.	
R422003622	15	Plug M12	2,2 kg	Fig. 1	-
R422003623	15	Plug M12	2,2 kg	Fig. 1	-
R422003624	15	Plug EN 175301-803, form A	2,2 kg	Fig. 1	-
R422003625	15	Plug EN 175301-803, form A	2,2 kg	Fig. 1	-
R422003189	15	Plug M12	2,4 kg	Fig. 2	1)
R422003190	15	Plug M12	2,4 kg	Fig. 2	1)
R422003191	15	Plug EN 175301-803, form A	2,4 kg	Fig. 2	1)
R422003192	15	Plug EN 175301-803, form A	2,4 kg	Fig. 2	1)

Nominal flow Qn at 6 bar and Δp = 1 bar

1) Dual valve with integrated non-return valve. Guaranteed minimum opening pressure of the non-return valve is 0,3 bar., The safety function “safe venting” limited to category 1 and level PL = c.

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).

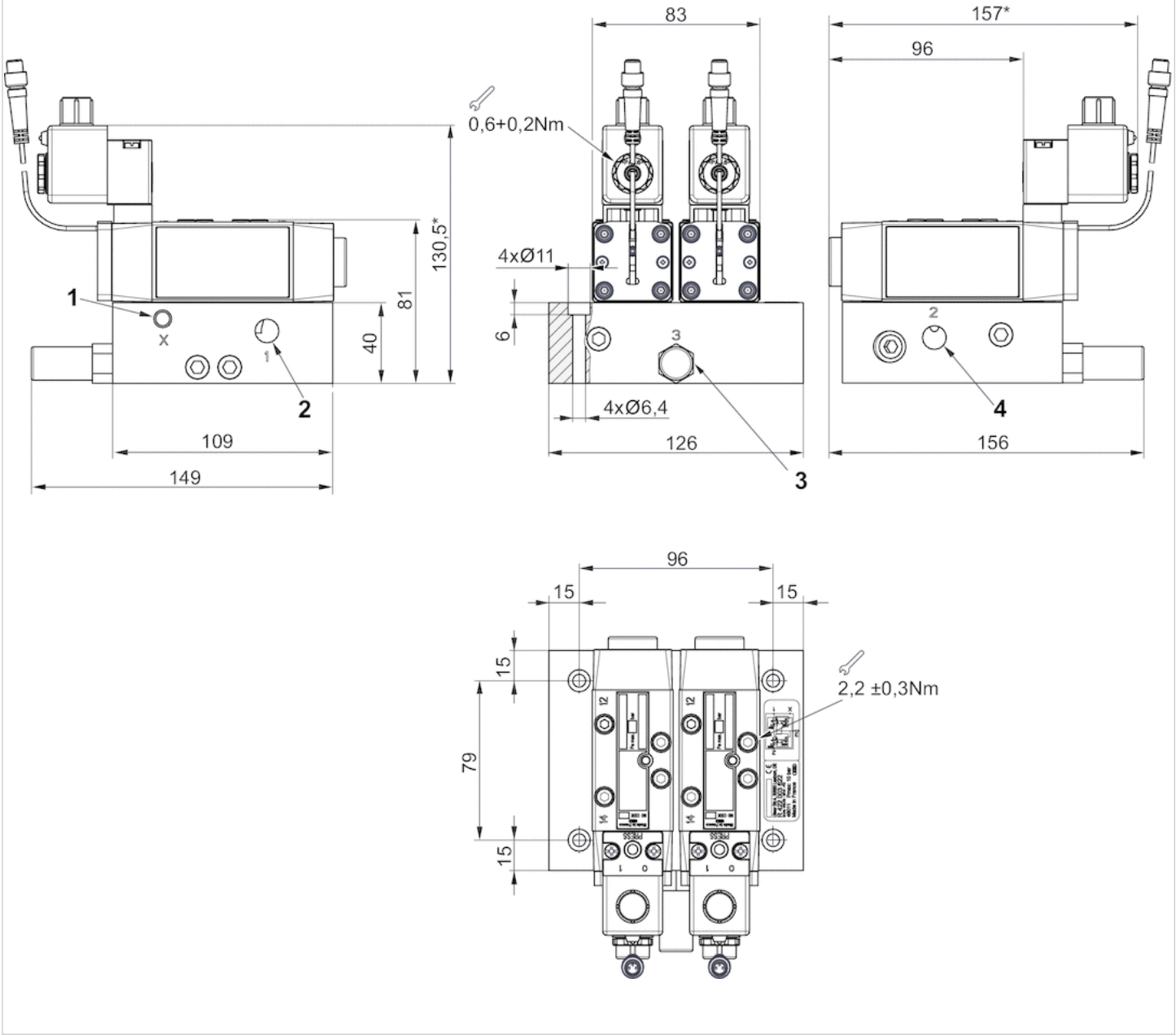
When the valve is not actuated, the sensor sends a signal through pin 4 of the sensor connection.
When the valve is actuated, the sensor does not send a signal through pin 4 of the sensor connection.
The dual valve includes two IS12-PD-5/2-SR valves with position detection and fulfills the safety function "safe venting" and "protection against unexpected start-up". The dual valve permits use in categories 3 and 4 in accordance with ISO 13849-1 to achieve a control system performance level (PL) of up to PL = e.
On its own, the valve with position detection is not a safety component and is not a complete safety solution. It is designed to increase the diagnostic coverage (DC) of the control system.
For use in categories 3 to 4, additional requirements of DIN EN ISO 13849-1:2008-12 (e.g. CCF, DC, PLr, software, systematic errors) are taken into consideration by the user.

Technical information

Housing	Polyamide Aluminum
Seals	Acrylonitrile butadiene rubber

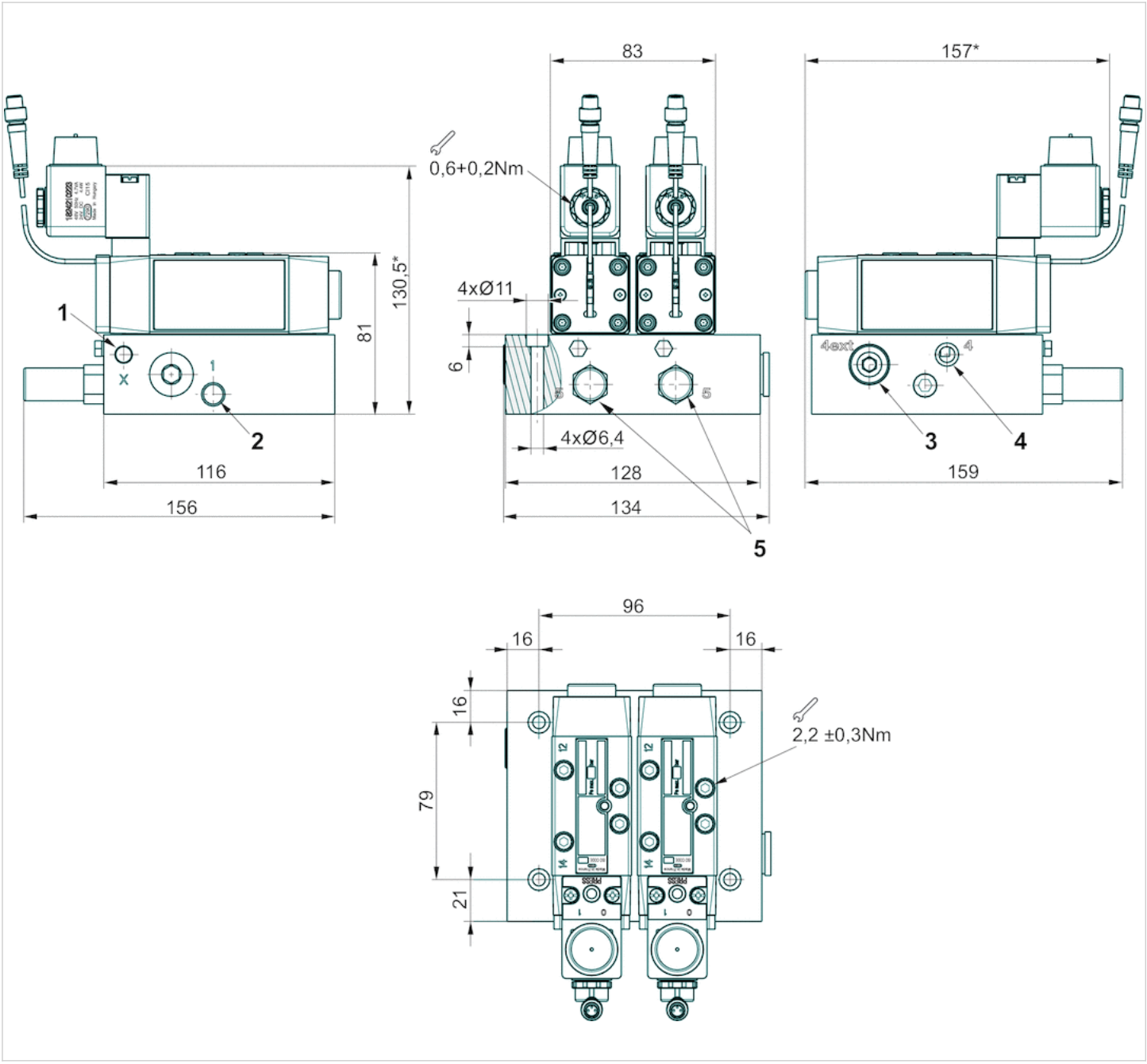
Dimensions

Dimensions, Fig. 1



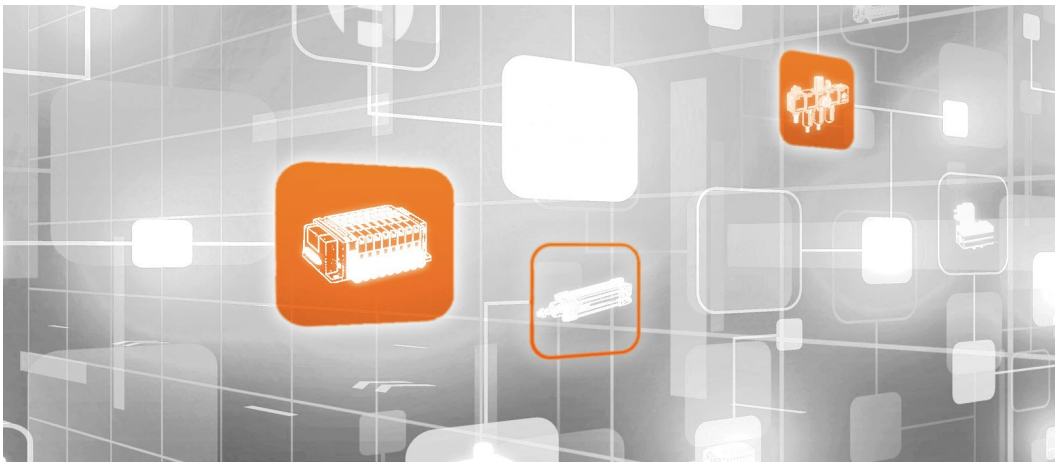
*) max.
1) External pilot pressure G1/8
2) Input pressure G1/4
3) Exhaust G 1/4
4) Output pressure G1/4

Dimensions, Fig. 2, Dual valve with integrated non-return valve



*) max.
1) External pilot pressure G1/8
2) Input pressure G1/4
3) Exhaust in with non-return valve G1/4
4) Output pressure G1/4
5) Exhaust G 1/4

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