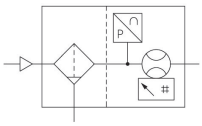
AF2 series flow rate sensor, Ethernet

R412027179

AVENTICS Series AF2 Sensors

The AVENTICS Series AF2 are flow sensors that monitor air consumption in pneumatic systems, enabling rapid intervention in the event of leakage. The Series AF2 helps to optimize energy consumption, prevent machine downtime and cut costs.



Technical data

Industry	Industrial
Note	Integrated web server, 48 VDC connection via Power over Ethernet Without mounting
Frame size	AS2
Switching principle	Flow measuring principle: calorimetric
Protocol	Ethernet TCP/IP OPC UA MQTT
Nominal flow	1060 l/min
Nominal flow Qn min., standard	5 l/min
Nominal flow Qn max., standard	1060 l/min
Nominal flow Qn min., extended	1060 l/min
Nominal flow Qn max., extended	1590 l/min
Compressed air connection	G 3/8
Certificates	CE declaration of conformity RoHS UL (Underwriters Laboratories)
Min. working pressure	0 bar
Max. working pressure	16 bar

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Min. ambient temperature	-20 °C
Max. ambient temperature	60 °C
Min. medium temperature	-20 °C
Max. medium temperature	60 °C
Medium	Compressed air Argon Nitrogen Carbon dioxide
Filter porosity	5 µm
Display	OLED
Flow display unit	l/sec l/min m³/min m³/h ft³/s m³/min
Pressure display unit	bar psi
Temperature display unit	°C °F
Electrical connection 2, type	Plug
Electrical connection 2, thread size	M12x1
Electrical connection 2, number of poles	8-pin
Output signal	OPC UA, MQTT, Integrated web server
Max. power consumption	5 W
Operational voltage	24 V DC
Min. operating voltage DC	36 V DC
Max. operating voltage DC	57 V DC
Response time	< 10 ms
Max. shock resistance	30 g, 11 ms
Vibration resistance	1 g (10 - 2000 Hz) IEC 60068 - 2-6
Reproducibility	± 1.5% of the measured value
Protection class	IP65 IP67 according to IEC 60529
Weight	0.85 kg

Material

Housing material	Polyamide Polycarbonate
Seal material	Fluorocaoutchouc
Part No.	R412027179

Technical information

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

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

The device is designed to be installed in AS series air preparation units or to be fitted as a stand-alone device using a W05 block assembly kit.

Liquid oil or water must be separated via prefiltering. If it is not separated sufficiently, drifting may result.

Precision
- Standard measurement range: ±3% of measured value, + 0.3% of final value
- Extended measurement range: ±8% of measured value, + 1% of final value

Operating voltage via PoE (in accordance with IEEE 802.3af)

The pressure dew point must be at least 15 °C less than 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 https://www.emerson.com/en-us/support).

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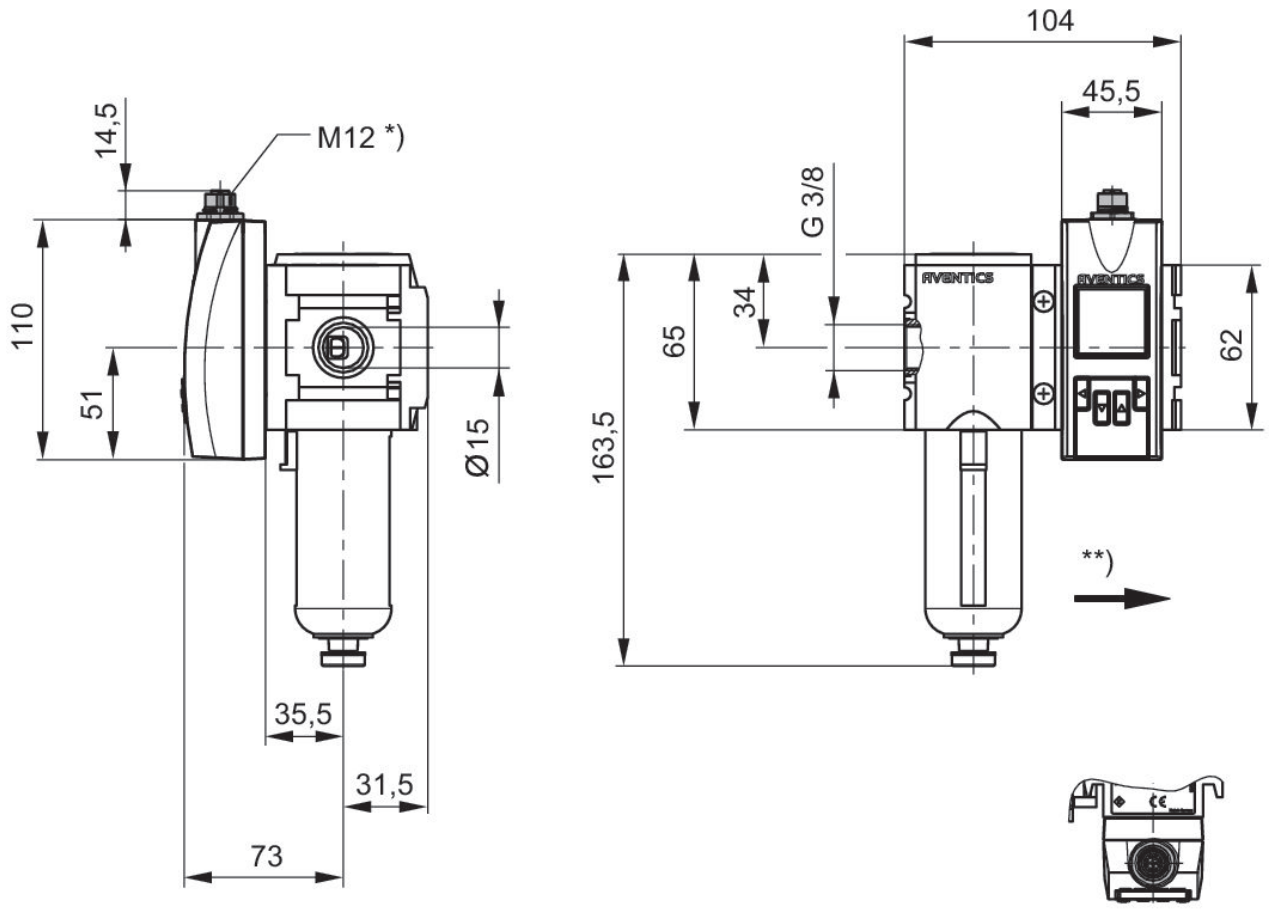
Dimensions in mm

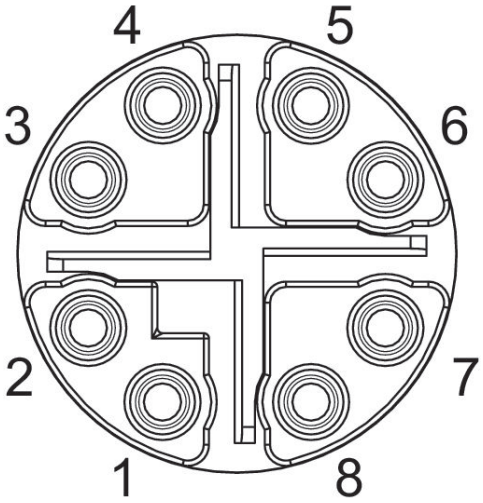


* Internal thread
** Flow direction

Pin assignments

X-coded

M12



Pin assignments

Pin	RJ45	Wire color	Identification	10/100 Mbit
1	1	WH / OG	TX(+) + POE	TxData+
2	2	OG	TX(-) + POE	TxData+
3	3	WH / GN	RX(+) - POE	TxData-
4	6	GN	RX(-) - POE	TxData-
7	5	WH / BU	POE+	
8	4	BU	POE+	
5	7	WH / BN	POE-	
6	8	BN	POE-	