AF2 series flow rate sensor, Ethernet

8653AV006JA0010

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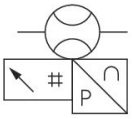
2024-03-04

Series AF2

The pressure dew point must be at least 15 °C below the ambient and medium temperatures and must not exceed 3 °C. The protection class is only ensured when the plug is mounted properly. See the operating instructions for further information. Liquid oil or water must be separated via pre-filtration. If 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.



Technical data

Industry	Industrial
Note	Integrated web server, 48 VDC connection via Power over Ethernet Without mounting
Frame size	DN25
Switching principle	Flow measuring principle: calorimetric
Protocol	TCP/IP OPC UA MQTT
Nominal flow	2945 l/min
Nominal flow Qn min., standard	14.7 l/min
Nominal flow Qn max., standard	2945 l/min
Nominal flow Qn min., extended	2945 l/min
Nominal flow Qn max., extended	4417 l/min
Compressed air connection	1 NPT
Certificates	CE declaration of conformity RoHS UL (Underwriters Laboratories)
Min. working pressure	0 bar
Max. working pressure	16 bar
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
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
Electrical connection 2, coding	X-coded
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	< 0.3 s
Short circuit resistance	short circuit resistant
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	0.685 kg

Material

Housing material	Polyamide Polycarbonate Aluminum
Pipe material	Stainless Steel 1.4301
Seal material sensor	Fluorocarbon caoutchouc
Part No.	8653AV006JA0010

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 for installation as a stand-alone device.

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

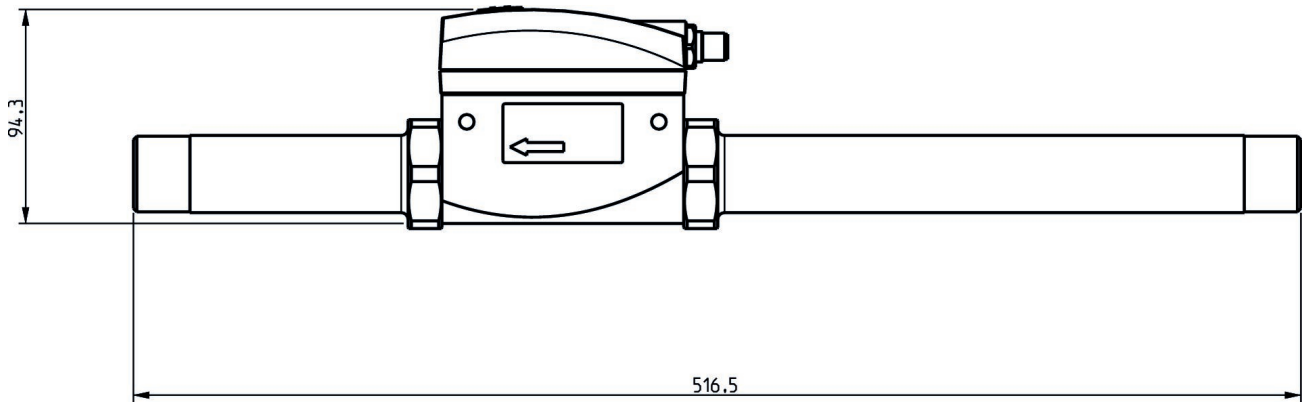
Precision
- Standard measurement range: ±3% of measured value, + 0.3% of final value
- Extended measurement range: ±8% of measured value, + 1% of final value

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

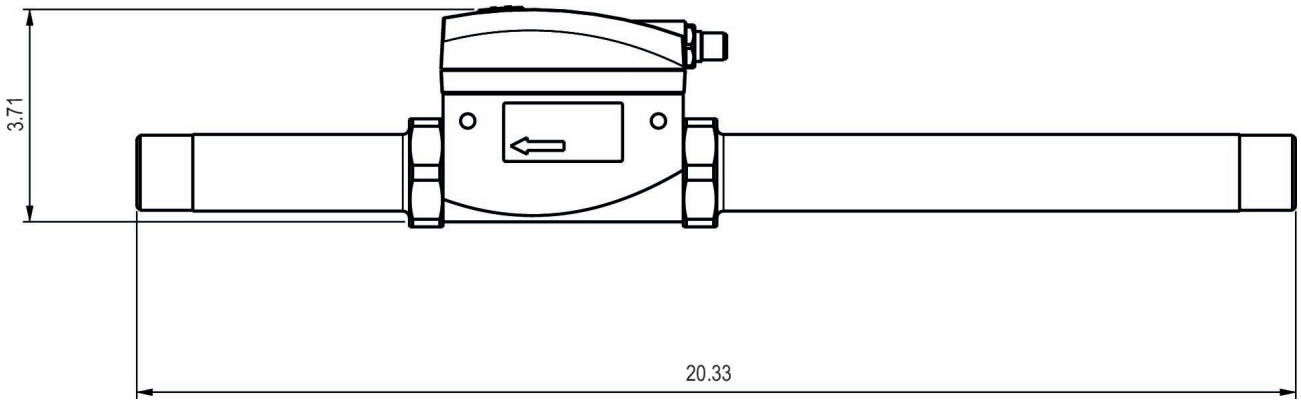
The oil content of compressed air must remain constant during the life cycle.

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).

Dimensions in mm



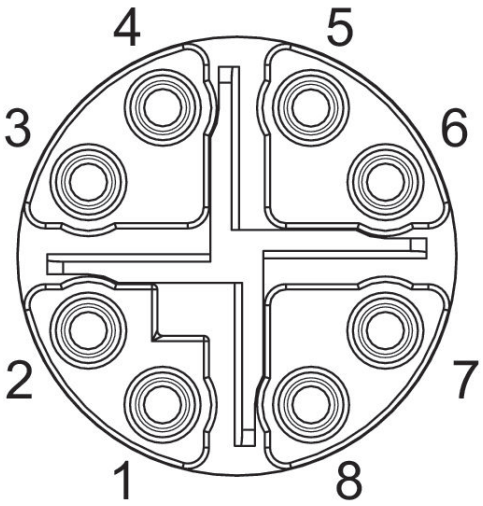
Dimensions in inches



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-	