# Series AF2 flow rate sensor, IO-Link

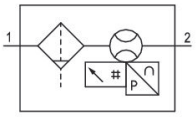
652

**G652AVBP4JA000N**

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. If not separated sufficiently, drifting may result. Precision: Standard measurement range: ±4 % of measured value, + 0.5 % of final value. Extended measurement range: ±8 % of measured value, + 1 % of final value.


## Technical data

| | |
|---|---|
| Industry | Industrial |
| Note | Output signal: 1 analog output 4 mA ... 20 mA + 1 digital/analog output (PNP, NPN, push-pull, 4 mA ... 20 mA/switchable) + 1 digital output (PNP, NPN, push-pull, switchable), IO-Link V1.1 (COM3/230K4 baud)<br>Without mounting |
| Frame size | 652 |
| Switching principle | Flow measuring principle: calorimetric |
| Protocol | IO-Link<br>Analog |
| Nominal flow | 1630 l/min |
| Nominal flow Qn min., standard | 8 l/min |
| Nominal flow Qn max., standard | 1630 l/min |
| Nominal flow Qn min., extended | 1630 l/min |
| Nominal flow Qn max., extended | 2445 l/min |
| Compressed air connection | G 1/2 |
| Certificates | CE declaration of conformity<br>RoHS<br>UL (Underwriters Laboratories) |
| Min. working pressure | 0 bar |
| Max. working pressure | 16 bar |
| Min. ambient temperature | -20 °C |
| Max. ambient temperature | 50 °C |
| Min. medium temperature | -20 °C |

| | |
|---|---|
| Max. medium temperature | 50 °C |
| Medium | Compressed air<br>Argon<br>Nitrogen<br>Carbon dioxide |
| Filter porosity | 5 µm |
| Display | OLED |
| Flow display unit | l/sec<br>l/min<br>m³/min<br>m³/h<br>ft³/s<br>m³/min |
| Pressure display unit | bar<br>psi |
| Temperature display unit | °C<br>°F |
| Electrical connection 2, type | Plug |
| Electrical connection 2, thread size | M12x1 |
| Electrical connection 2, number of poles | 5-pin |
| Electrical connection 2, coding | A-coded |
| Output signal | PNP, NPN, push-pull, 1x IO-Link |
| Output signal digital | PNP/NPN/push-pull, switchable |
| Output signal analog | 4 ... 20 mA |
| Max. power consumption | 12 W |
| Operational voltage | 17-30 V DC |
| Min. operating voltage DC | 17 V DC |
| Max. operating voltage DC | 30 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<br>IP67 according to IEC 60529 |
| Weight | 0.73 kg |

## Material

| | |
|---|---|
| Housing material | Polyamide<br>Polycarbonate<br>Aluminum |
| Seal material filter | Nitrile butadiene rubber |
| Seal material sensor | Fluorocarbon caoutchouc |
| Part No. | G652AVBP4JA000N |

## 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.

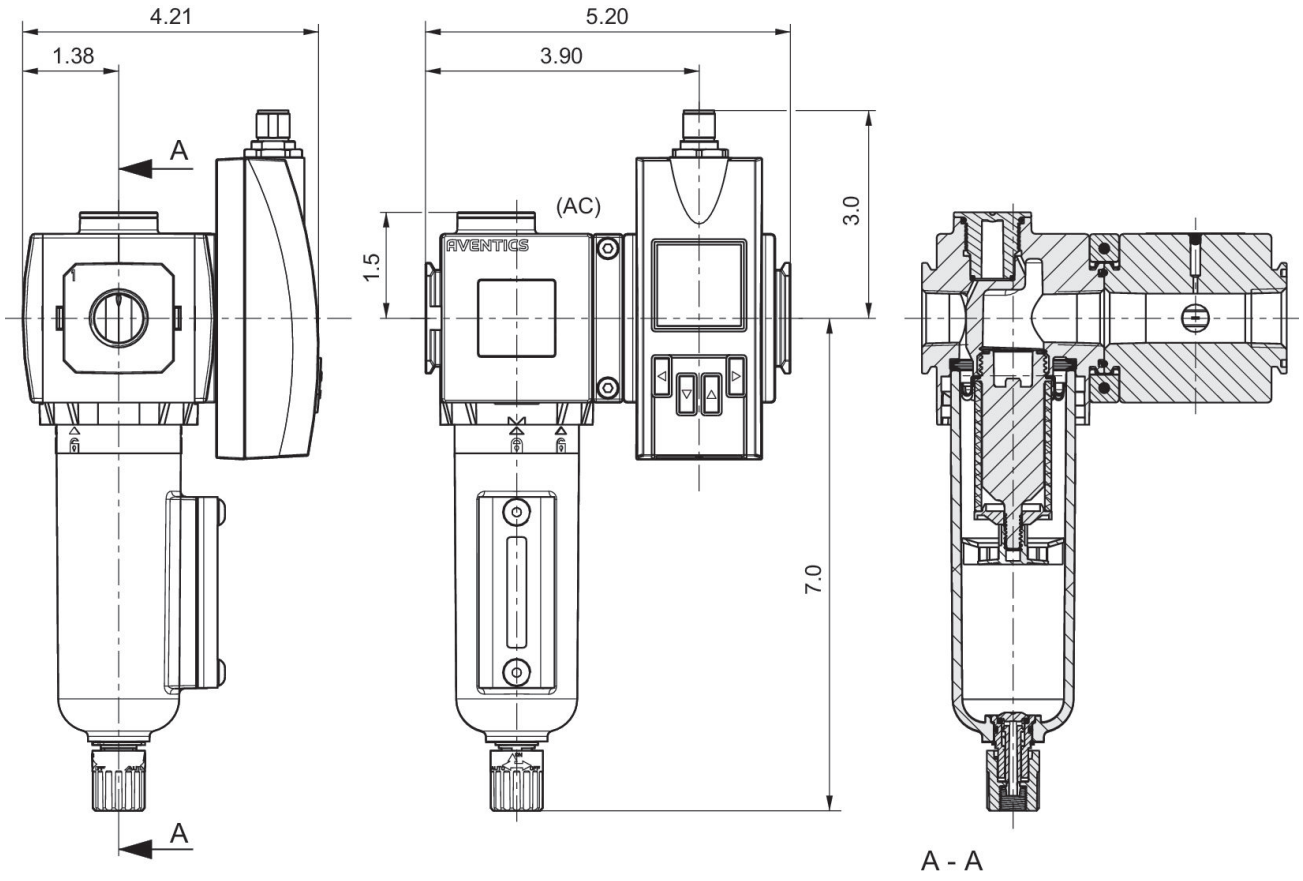
5 microns - ±4% of measured value + 0.5% of standard full scale ±8% of measured value + 1% of extended full scale

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

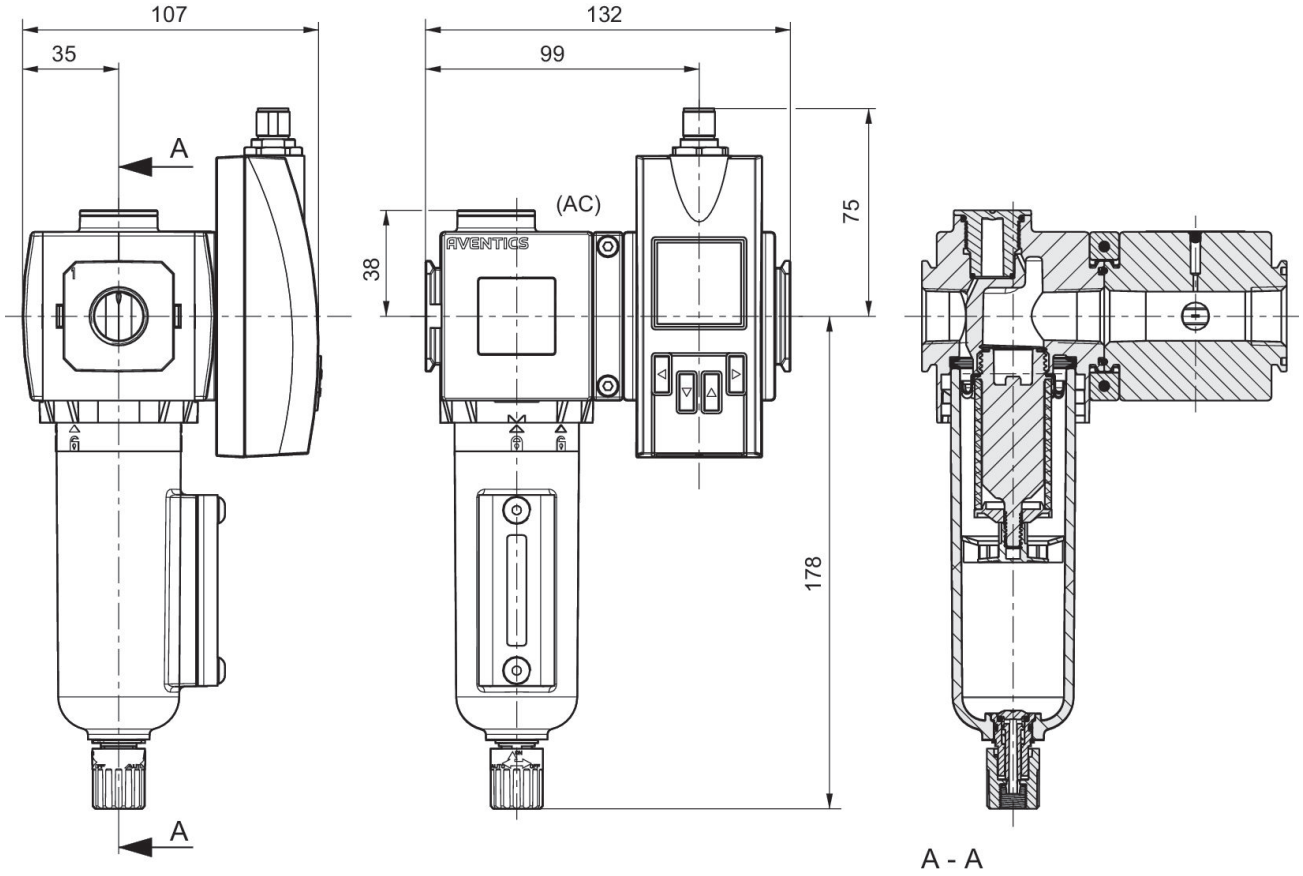
The oil content of compressed air must remain constant during the life cycle.

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).

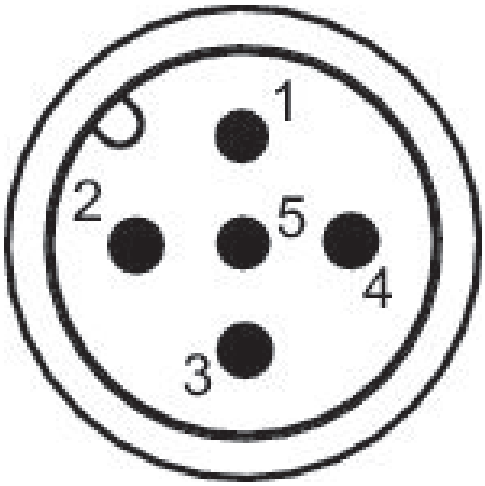
## Dimensions in inches



## Dimensions in mm



## Pin assignments




## Pin assignments

| Pin | Allocation | Wire color |
|---|---|---|
| 1 | L+ Supply Voltage | brown |
| 2 | QA (output 4 ... 20 mA) | white |
| 3 | m = mass | blue |
| 4 | C/Q1 (IO-Link/switch output) | black |
| 5 | Analog output 4 ... 20 mA | yellow |