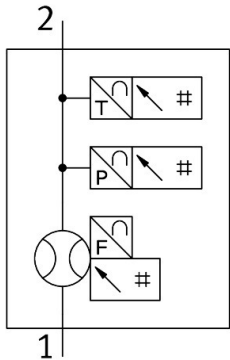
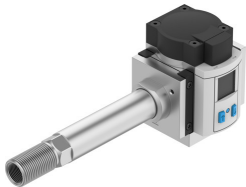


# Flow sensor

## SFAM-62-3000L-TG12-PNLK-PNVBA-M12

Part number: 8181245

FESTO



## Data sheet

| Feature                                      | Value                                                       |
|----------------------------------------------|-------------------------------------------------------------|
| Approval                                     | RCM trademark                                               |
| CE mark (see declaration of conformity)      | To EU EMC Directive<br>In accordance with EU RoHS Directive |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC<br>To UK RoHS instructions       |
| Note on materials                            | RoHS-compliant                                              |
| Flow direction                               | Unidirectional<br>From left to right                        |
| Start value for pressure measuring range     | 0 MPa<br>0 bar<br>0 psi                                     |
| End value for pressure measuring range       | 1.6 MPa<br>16 bar<br>232 psi                                |
| Start value for flow rate measuring range    | 30 l/min                                                    |
| End value for flow rate measuring range      | 3000 l/min                                                  |
| Temperature measurement start value          | 0 °C                                                        |
| Temperature measurement end value            | 50 °C                                                       |
| Operating pressure                           | 1.6 MPa<br>16 bar<br>232 psi                                |
| Overload pressure                            | 2 MPa<br>20 bar<br>290 psi                                  |
| Operating medium                             | Compressed air to ISO 8573-1:2010 [7:4:4]<br>Nitrogen       |
| Media temperature                            | 0 °C...50 °C                                                |
| Ambient temperature                          | 0 °C...50 °C                                                |
| Nominal temperature                          | 23 °C                                                       |

| Feature                                              | Value                                                                                                                                                                                                                                                                                |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Accuracy of pressure value in $\pm$ %FS              | 1.5 %FS                                                                                                                                                                                                                                                                              |
| Accuracy of flow rate                                | $\pm$ (3% o.m.v. + 0.3% FS)                                                                                                                                                                                                                                                          |
| Accuracy temperature in $\pm$ °C                     | 5 °C                                                                                                                                                                                                                                                                                 |
| Repetition accuracy of pressure value in $\pm$ %FS   | 0.3 %FS                                                                                                                                                                                                                                                                              |
| Repetition accuracy offset in $\pm$ %FS              | 0.2 %FS                                                                                                                                                                                                                                                                              |
| Repetition accuracy span in $\pm$ %FS                | 0.8 %FS                                                                                                                                                                                                                                                                              |
| Temperature coefficient in $\pm$ %FS/K               | 0.05 %FS/K                                                                                                                                                                                                                                                                           |
| Temperature coefficient span in $\pm$ %FS/K          | Typ. 0.1%FS/K                                                                                                                                                                                                                                                                        |
| Pressure influence span in $\pm$ %FS/bar             | 0.5 %FS/b.                                                                                                                                                                                                                                                                           |
| Analogue output                                      | 0 - 10 V<br>4 - 20 mA                                                                                                                                                                                                                                                                |
| Flow characteristic curve start value                | 0 l/min                                                                                                                                                                                                                                                                              |
| Flow characteristic curve end value                  | 3000 l/min                                                                                                                                                                                                                                                                           |
| Temperature characteristic curve start value         | 0 °C                                                                                                                                                                                                                                                                                 |
| Temperature characteristic curve end value           | 100 °C                                                                                                                                                                                                                                                                               |
| Output characteristic curve start value              | 0 V                                                                                                                                                                                                                                                                                  |
| Output characteristic curve end value                | 10 V<br>20 mA                                                                                                                                                                                                                                                                        |
| Output characteristic curve starting value           | 4 mA                                                                                                                                                                                                                                                                                 |
| Max. load resistance current output                  | 500 Ohm                                                                                                                                                                                                                                                                              |
| Min. load resistance voltage output                  | 20 kOhm                                                                                                                                                                                                                                                                              |
| Short circuit current rating                         | yes                                                                                                                                                                                                                                                                                  |
| Overload protection                                  | Available                                                                                                                                                                                                                                                                            |
| Protocol                                             | IO-Link®                                                                                                                                                                                                                                                                             |
| IO-Link, revision ID                                 | V1.1                                                                                                                                                                                                                                                                                 |
| IO-Link, device profile                              | Function Extended identification<br>Function Measurement data, standard resolution<br>Function Multiple switching signal<br>Firmware update<br>Function locator<br>Function Product URI<br>Function Teach single value<br>Identification and diagnostics<br>Smart sensor - SSP 4.1.2 |
| IO-Link, transmission rate                           | COM3                                                                                                                                                                                                                                                                                 |
| IO-Link, SIO-Mode support                            | Yes                                                                                                                                                                                                                                                                                  |
| IO-Link, port type                                   | Class A                                                                                                                                                                                                                                                                              |
| IO-Link, process data length output                  | 0 bit                                                                                                                                                                                                                                                                                |
| IO-Link, process data length input                   | 96 bit                                                                                                                                                                                                                                                                               |
| IO-Link, Process data content IN                     | Pressure measured value 16 bit MDC<br>Pressure monitoring 2 bit SSC<br>Flow rate measured value 16-bit MDC<br>Flow rate monitoring 2-bit SSC<br>Temperature measured value 16 bit MDC<br>Temperature monitoring 2-bit SSC<br>Volume / mass pulse 1 bit SSC                           |
| IO-Link, Service data IN                             | Volume/mass measured value 32 bit                                                                                                                                                                                                                                                    |
| IO-Link, minimum cycle time                          | 1.5 ms                                                                                                                                                                                                                                                                               |
| IO-Link, Data storage required                       | 0.5 Byte                                                                                                                                                                                                                                                                             |
| Operational voltage range DC                         | 18 V...30 V                                                                                                                                                                                                                                                                          |
| Reverse polarity protection                          | For all electrical connections                                                                                                                                                                                                                                                       |
| Electrical connection 1, connection type             | Plugs                                                                                                                                                                                                                                                                                |
| Electrical connection 1, connector system            | M12x1, A-coded to EN 61076-2-101                                                                                                                                                                                                                                                     |
| Electrical connection 1, number of connections/cores | 5                                                                                                                                                                                                                                                                                    |
| Electrical connection 1, type of mounting            | Screw-type lock                                                                                                                                                                                                                                                                      |
| Electrical connection 1, compatible type of mounting | Compatible with rotatable screw-type lock                                                                                                                                                                                                                                            |
| Max. cable length                                    | 20 m with IO-Link® operation<br>30 m                                                                                                                                                                                                                                                 |

| Feature                        | Value                               |
|--------------------------------|-------------------------------------|
| Type of mounting               | In-line installation                |
| Mounting position              | optional                            |
| Pneumatic connection           | G1/2                                |
| Product weight                 | 600 g                               |
| Material housing               | Die-cast aluminium<br>PA-reinforced |
| Display type                   | Illuminated LCD, multi-colour       |
| Degree of protection           | IP60                                |
| Corrosion resistance class CRC | 2 - Moderate corrosion stress       |
| LABS (PWIS) conformity         | VDMA24364-B1/B2-L                   |