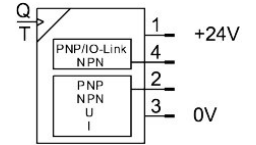


# Flow sensor

## SFAW-32-TG34-E-PNLK-PNVBA-M12

Part number: 8036873

FESTO



## Data sheet

| Feature                                      | Value                                                                                                                                                         |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Approval                                     | RCM trademark<br>c UL us listed (OL)                                                                                                                          |
| 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                                                                                                                                                |
| Measured variable                            | Flow rate<br>Temperature                                                                                                                                      |
| Flow direction                               | Unidirectional<br>P1 -> P2                                                                                                                                    |
| Measurement method                           | Flow: Vortex<br>Temperature: PT1000                                                                                                                           |
| Start value for flow rate measuring range    | 1.8 l/min                                                                                                                                                     |
| End value for flow rate measuring range      | 32 l/min                                                                                                                                                      |
| Operating pressure                           | 0 MPa...1.2 MPa<br>0 bar...12 bar<br>0 psi...174 psi                                                                                                          |
| Note on operating pressure                   | Max. 1.2 MPa (12 bar / 174 psi) at 40 °C<br>Max. 0.6 MPa (6 bar / 87 psi) at 90 °C                                                                            |
| Overload pressure                            | 4 MPa<br>40 bar<br>580 psi                                                                                                                                    |
| Operating medium                             | Liquid media<br>Water<br>Neutral fluids                                                                                                                       |
| Note on operating and pilot medium           | Media with a kinematic viscosity = 1.8 mm <sup>2</sup> /sec. [cSt]. Compatibility of the media with the substances in contact with the media must be ensured. |
| Media temperature                            | 0 °C...90 °C                                                                                                                                                  |
| Ambient temperature                          | 0 °C...50 °C                                                                                                                                                  |
| Nominal temperature                          | 23 °C                                                                                                                                                         |
| Accuracy of flow rate                        | ±2 %FS for flow ≤ 50 %FS<br>±3% of measured value for flow rate ≥ 50% FS                                                                                      |
| Accuracy temperature in ± °C                 | 2 °C                                                                                                                                                          |

| Feature                                              | Value                                                                                                      |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Repetition accuracy of flow rate                     | < ±0.5% FS for flow rate ≤ 50 %FS<br>< ±1% of measured value for flow rate ≥ 50 %FS                        |
| Temperature coefficient span in ± %FS/K              | Typ. ± 0.05%FS/K                                                                                           |
| Switching output                                     | 2 x PNP or 2 x NPN, switchable                                                                             |
| Switching function                                   | Window comparator<br>Threshold value comparator<br>Freely programmable                                     |
| Switching element function                           | N/C or N/O contact, switchable                                                                             |
| Max. output current                                  | 100 mA                                                                                                     |
| Analogue output                                      | 0 - 10 V<br>4 - 20 mA<br>1 - 5 V                                                                           |
| Flow characteristic curve start value                | 0 l/min                                                                                                    |
| Flow characteristic curve end value                  | 32 l/min                                                                                                   |
| Max. load resistance current output                  | 500 Ohm                                                                                                    |
| Min. load resistance voltage output                  | 15 kOhm                                                                                                    |
| Short circuit current rating                         | yes                                                                                                        |
| Overload protection                                  | Available                                                                                                  |
| Protocol                                             | IO-Link®                                                                                                   |
| IO-Link, Protocol version                            | Device V 1.1                                                                                               |
| IO-Link, Profile                                     | Smart sensor profile                                                                                       |
| IO-Link, Function classes                            | Binary data channel (BDC)<br>Process data variable (PDV)<br>Identification<br>Diagnostics<br>Teach channel |
| IO-Link, communication mode                          | COM2 (38.4 kBaud)                                                                                          |
| IO-Link, SIO-Mode support                            | Yes                                                                                                        |
| IO-Link, Port class                                  | A                                                                                                          |
| IO-Link, Process data length OUT                     | 0 bytes                                                                                                    |
| IO-Link, Process data length IN                      | 3 bytes                                                                                                    |
| IO-Link, Process data content IN                     | 1 bit BDC (volume monitoring)<br>14 bit PDV (measured flow value)<br>2 bit BDC (flow monitoring)           |
| IO-Link, Service data IN                             | 32-bit volume measurement                                                                                  |
| IO-Link, Min. cycle time                             | 5 ms                                                                                                       |
| IO-Link, Data storage required                       | 0.5 KB                                                                                                     |
| 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<br>Not rotatable                                                                           |
| 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                                                                       |
| Mounting position                                    | optional                                                                                                   |
| Fluid connection                                     | Female thread G3/4                                                                                         |
| Product weight                                       | 530 g                                                                                                      |
| Material housing                                     | PA-reinforced                                                                                              |
| Material in contact with the medium                  | EPDM (peroxide)<br>ETFE<br>Stainless steel<br>PA6T/6I reinforced                                           |

| Feature                        | Value                                                       |
|--------------------------------|-------------------------------------------------------------|
| Displayable units              | US gal<br>US gal/min<br>cft<br>cft/min<br>l<br>l/h<br>l/min |
| Degree of protection           | IP65                                                        |
| Corrosion resistance class CRC | 3 - high corrosion stress                                   |
| LABS (PWIS) conformity         | VDMA24364-B2-L                                              |