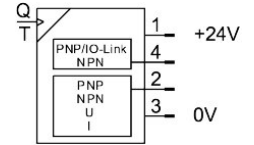


# Flow sensor

## SFAB-10U-HQ6-PNLK-PNVBA-M12

Part number: 8162824

FESTO



## Data sheet

| Feature                                      | Value                                                                                |
|----------------------------------------------|--------------------------------------------------------------------------------------|
| Certification                                | RCM compliance mark<br>c UL us - Listed (OL)                                         |
| CE marking (see declaration of conformity)   | As per EU EMC directive<br>As per 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                            | Mass flow<br>Temperature<br>Volume<br>Volumetric flow rate                           |
| Flow direction                               | Unidirectional<br>P1 -> P2                                                           |
| Flow measuring range start value             | 0.1 l/min                                                                            |
| Flow measuring range end value               | 10 l/min                                                                             |
| Temperature measuring range start value      | 0 °C                                                                                 |
| Temperature measuring range end value        | 50 °C                                                                                |
| Operating pressure                           | 0 MPa...1 MPa<br>0 bar...10 bar<br>0 psi...145 psi                                   |
| Operating medium                             | Argon<br>Compressed air as per ISO 8573-1:2010 [6:4:4]<br>Carbon dioxide<br>Nitrogen |
| Temperature of medium                        | 0 °C...50 °C                                                                         |
| Ambient temperature                          | 0 °C...50 °C                                                                         |
| Nominal temperature                          | 23 °C                                                                                |
| Accuracy of flow rate                        | ±(3% o.m.v. + 0.3% FS)                                                               |
| Accuracy of temperature in ± °C              | 5 °C                                                                                 |
| Zero point repetition accuracy in ± %FS      | 0.2 %FS                                                                              |
| Repetition accuracy margin in ± %FS          | 0.8 %FS                                                                              |
| Temperature co-efficient margin in ± %FS/K   | typ. 0.1%FS/K                                                                        |
| Pressure influence of margin in ±%FS/bar     | 0.5 %FS/b.                                                                           |
| Switching output                             | 2 x PNP or 2 x NPN switchable                                                        |
| Switching function                           | Window comparator                                                                    |

| Feature                                        | Value                                                                                                                                                                                                                                                                              |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                | Threshold value comparator                                                                                                                                                                                                                                                         |
| Switching element function                     | N/C contact/N/O contact, switchable                                                                                                                                                                                                                                                |
| On time                                        | 10 ms                                                                                                                                                                                                                                                                              |
| Switch-off time                                | 10 ms                                                                                                                                                                                                                                                                              |
| Max. output current                            | 100 mA                                                                                                                                                                                                                                                                             |
| Analog 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           | 10 l/min                                                                                                                                                                                                                                                                           |
| Temperature characteristic curve start value   | 0 °C                                                                                                                                                                                                                                                                               |
| Temperature characteristic curve end value     | 100 °C                                                                                                                                                                                                                                                                             |
| Output characteristic curve initial value      | 0 V<br>4 mA                                                                                                                                                                                                                                                                        |
| End value output characteristic curve          | 10 V<br>20 mA                                                                                                                                                                                                                                                                      |
| Max. load resistance of current output         | 500 Ohm                                                                                                                                                                                                                                                                            |
| Min. load resistance of voltage output         | 20 kOhm                                                                                                                                                                                                                                                                            |
| Short-circuit protection                       | 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 diagnosis<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             | 64 bit                                                                                                                                                                                                                                                                             |
| IO-Link®, process data content IN              | Flow-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 contents IN             | Volume / mass measured value 32-bit                                                                                                                                                                                                                                                |
| IO-Link®, minimum cycle time                   | 1.2 ms                                                                                                                                                                                                                                                                             |
| IO-Link®, data memory required                 | 0.5 KB                                                                                                                                                                                                                                                                             |
| DC operating voltage range                     | 15 V...30 V                                                                                                                                                                                                                                                                        |
| Reverse polarity protection                    | for all electrical connections                                                                                                                                                                                                                                                     |
| Electrical connection 1, connection type       | Plug                                                                                                                                                                                                                                                                               |
| Electrical connection 1, connection technology | M12x1 A-coded as per EN 61076-2-101                                                                                                                                                                                                                                                |
| Electrical connection 1, number of pins/wires  | 5                                                                                                                                                                                                                                                                                  |
| Electrical connection 1, type of mounting      | Screw-type lock<br>not rotatable<br>Compatible with rotatable screw-type lock                                                                                                                                                                                                      |
| Type of mounting                               | With through-hole<br>With DIN rail                                                                                                                                                                                                                                                 |
| Mounting position                              | Any                                                                                                                                                                                                                                                                                |
| Pneumatic connection                           | For pneumatic tubing outside diameter 6 mm                                                                                                                                                                                                                                         |
| Product weight                                 | 160 g                                                                                                                                                                                                                                                                              |
| Housing material                               | PA-reinforced                                                                                                                                                                                                                                                                      |

| Feature                          | Value                         |
|----------------------------------|-------------------------------|
| Display type                     | Multi-color backlit LCD       |
| Degree of protection             | IP65                          |
| Pressure drop                    | 100 mbar                      |
| Corrosion resistance class (CRC) | 2 - Moderate corrosion stress |
| LABS (PWIS) conformity           | VDMA24364-B1/B2-L             |