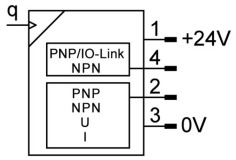
# Air flow sensor
# SFAH-0.5U-Q4S-PNLK-PNVBA-M8

Part number: 8058464




## Data sheet

| Feature | Value |
|---|---|
| Type code | SFAH |
| Protection against tampering | IO-Link®<br>PIN code |
| Pneumatic connection, outlet direction | Straight |
| Electrical connection for input 1, connection pattern | 00991171 |
| Electrical connection 1, connection type | Plug |
| Electrical connection 1, connection technology | M8x1 A-coded as per EN 61076-2-104 |
| KC characters | KC EMC |
| Electrical connection 1, number of pins/wires | 4 |
| Idle current | ≤25 mA |
| Symbol | 00995794 |
| Certification | RCM compliance mark |
| CE marking (see declaration of conformity) | As per EU RoHS directive<br>As per EU EMC directive |
| Note on materials | RoHS-compliant |
| Measured variable | Mass flow rate<br>Volumetric flow rate |
| Flow direction | Unidirectional |
| Measuring principle | Thermal |
| Method of measurement | Heat transfer |
| Flow measuring range start value | 0.01 l/min |
| Flow measuring range end value | 0.5 l/min |
| Operating pressure | -0.9 bar ... 10 bar |
| Operating medium | Argon<br>Compressed air as per ISO 8573-1:2010 [6:4:4]<br>Nitrogen |
| Temperature of medium | 0 °C ... 50 °C |
| Ambient temperature | 0 °C ... 50 °C |
| Nominal temperature | 23 °C |
| Accuracy of flow rate | ± (2% o.m.v. + 1% FS) |
| 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. 0.15% FS/K |
| Pressure influence of margin in ±%FS/bar | 1 %FS/b. |
| Switching output | 2 x PNP or 2 x NPN switchable |
| Switching function | Threshold value comparator<br>Auto difference monitoring<br>Window comparator |

| Feature | Value |
|---|---|
| Switching element function | N/C contact/N/O contact switchable |
| Max. output current | 100 mA |
| Analog output | 0 - 10 V<br>1 - 5 V<br>4 - 20 mA |
| Flow rate curve start value | 0 l/min |
| Flow rate curve end value | 0.5 l/min |
| 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®, protocol version | Device V 1.1 |
| IO-Link®, profile | Smart sensor profile |
| IO-Link®, function classes | Identification<br>Binary data channel (BDC)<br>Teach channel<br>Diagnostics<br>Process data variable (PDV) |
| IO-Link®, communication mode | COM2 (38,4 kBd) |
| IO-Link®, SIO mode support | Yes |
| IO-Link®, port class | A |
| IO-Link®, process data width IN | 3 Byte |
| IO-Link®, process data content IN | 1 bit BDC (volume monitoring)<br>14 bit PDV (flow measurement)<br>2 bit BDC (flow monitoring) |
| IO-Link®, service data contents IN | 32 bit volume/mass measurement |
| IO-Link®, minimum cycle time | 4 ms |
| IO-Link®, data memory required | <500 byte |
| DC operating voltage range | 22 V ... 26 V |
| Reverse polarity protection | for all electrical connections |
| Type of mounting | With accessories |
| Mounting position | Any |
| Pneumatic connection | For pneumatic tubing outside diameter 4 mm |
| Product weight | 60 g |
| Housing material | PA-reinforced |
| Materials in contact with the media | Silicon nitride<br>Silicon<br>High-alloy stainless steel<br>Epoxy<br>Wrought aluminum alloy, anodized<br>NBR<br>PA-reinforced |
| Display type | Illuminated LCD, multi-color |
| Displayable unit(s) | scft<br>l/h<br>l/min<br>l<br>scft/h<br>g/min<br>g |
| Setting options | IO-Link®<br>Teach-in<br>Via display and pushbuttons |
| Degree of protection | IP40 |
| Pressure drop | <5 mbar |
| Protection class | III |
| Corrosion resistance class (CRC) | 2 - Moderate corrosion stress |