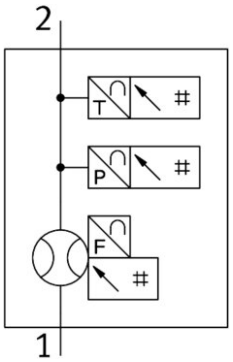
Flow sensor
SFAM

Part number: 563796



General operating condition

Data sheet

Overall data sheet – Individual values depend upon your configuration.

Feature	Value
Symbol	00992242 00992243 00997525 00997562 00997566 00997586
Certification	RCM compliance mark c UL us - Recognized (OL)
CE marking (see declaration of conformity)	As per EU EMC directive as per EU explosion protection directive (ATEX) As per EU RoHS directive
UKCA marking (see declaration of conformity)	To UK instructions for EMC To UK RoHS instructions
Explosion prevention and protection	Zone 2 (ATEX) Zone 22 (ATEX)
ATEX category gas	II 3G
Type of ignition protection for gas	Ex nA IIC T5 X Gc
ATEX category for dust	II 3D
Type of (ignition) protection for dust	Ex tc IIIB T80°C X Dc IP54
Explosive ambient temperature	0°C <= Ta <= +50°C
Certificate issuing authority	UL E322346
Note on materials	RoHS-compliant
Measured variable	Pressure Mass flow rate Temperature Volume Volumetric flow rate
Flow direction	Unidirectional From left to right From right to left
Measuring principle	Thermal
Method of measurement	Heat loss Heat transfer

Feature	Value
Pressure measuring range initial value	0 MPa
Pressure measuring range initial value	0 bar
Pressure measuring range initial value	0 psi
Pressure measuring range end value	1.6 MPa
Pressure measuring range end value	16 bar
Pressure measuring range end value	232 psi
Flow measuring range start value	10 l/min ... 150 l/min
Flow measuring range end value	1000 l/min ... 15000 l/min
Temperature measuring range start value	0 °C
Temperature measuring range end value	50 °C
Operating pressure	1.6 MPa
Operating pressure	16 bar
Operating pressure	232 psi
Overload pressure	2 MPa
Overload pressure	20 bar
Overload pressure	290 psi
Operating medium	Compressed air as per ISO 8573-1:2010 [7:4:4] Carbon dioxide Nitrogen
Temperature of medium	0 °C ... 50 °C
Ambient temperature	0 °C ... 50 °C
Nominal temperature	23 °C
Accuracy of pressure value in ± %FS	1.5 %FS
Accuracy of flow rate	± (3% o.m.v. + 0.3% FS)
Accuracy of temperature in ± °C	5 °C
Repetition accuracy of pressure value in ± %FS	0.3 %FS
Zero point repetition accuracy in ± %FS	0.2 %FS
Repetition accuracy margin in ± %FS	0.8 %FS
Temperature co-efficient in ± %FS/K	0.05 %FS/K
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 or threshold value comparator, adjustable
Switching element function	N/C contact/N/O contact switchable
Max. output current	100 mA
Analog output	0 - 10 V 1 - 5 V
Flow characteristic curve, start value	0 l/min
Flow characteristic curve, end value	1000 l/min ... 15000 l/min
Temperature characteristic curve start value	0 °C
Temperature characteristic curve end value	100 °C
Output characteristic curve initial value	0 V
End value output characteristic curve	10 V
Output characteristic curve initial value	4 mA
End value output characteristic curve	20 mA
Max. load resistance of current output	500 Ohm
Min. load resistance of voltage output	10 kOhm ... 20 kOhm
Short-circuit protection	yes
Overload protection	Available
Protocol	IO-Link®
IO-Link, revision ID	V1.1

Feature	Value
IO-Link, device profile	Firmware update Function Locator Function Product URI Function Quantity detection Identification and diagnosis Smart Sensor - SSP 4.1.3
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	Current operating status 4 bit Monitoring the pressure drop at peak flow 1 bit SSC Monitoring the pressure drop at medium flow rate 1 bit SSC Monitoring the pressure stability in active operating status 1 bit SSC Monitoring of pressure stability in passive operating status 1 bit SSC Pressure measured value 16 bit MDC Flow rate monitoring 2-bit SSC Flow rate measured value 16-bit MDC Flow rate monitoring 2-bit SSC Monitoring the average flow rate 1 bit SSC Reference record unusable 1 bit Monitoring the peak flow rate 1 bit SSC Temperature measured value 16-bit MDC Temperature monitoring 2-bit SSC Volume / mass pulse 1 bit SSC Time monitoring of the active-static operating status 1 bit SSC
IO-Link®, service data contents IN	Volume / mass measured value 32-bit Pneumatic energy measurement 32 bit Pneumatic power measurement value 32 bit
IO-Link®, minimum cycle time	1.5 ms
IO-Link®, data memory required	1000 byte
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
Electrical connection 1, type of mounting	Compatible with screw lock rotatable
Electrical connection for input 1, connection pattern	00995383 00995386
Max. cable length	20 m for IO-Link® operation 30 m
Type of mounting	With wall/surface bracket
Mounting position	Any Horizontal
Pneumatic connection	Battery module G1/2 G1 G1 1/2 1/2 NPT 1 NPT 1 1/2 NPT
Product weight	600 g ... 2750 g
Housing material	Die-cast aluminum PA-reinforced
Display type	Illuminated LCD, multi-color

Feature	Value
Displayable unit(s)	MPa bar kPa kg kg/min l m3/h psi scft °C °F
Setting options	IO-Link® Teach-in Via display and pushbuttons
Protection against tampering	IO-Link® PIN code
Setting range threshold value	0 % ... 100 %
Setting range hysteresis	0 % ... 90 %
Degree of protection	IP65
Pressure drop	40 mbar ... 200 mbar
Protection class	III
Corrosion resistance class (CRC)	2 - Moderate corrosion stress
LABS (PWIS) conformity	VDMA24364-B1/B2-L