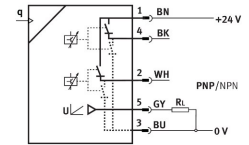


# Flow sensor SFAM

Part number: 563796

FESTO



General operating condition

## Data sheet

Overall data sheet – Individual values depend upon your configuration.

Feature	Value
Symbol	00997525 00997562 00997566 00997586
Approval	RCM c UL us - Recognised (Oil)
CE mark (see declaration of conformity)	To EU EMC Directive To EU Explosion Protection Directive (ATEX) In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity)	To UK RoHS instructions
Explosion protection	Zone 2 (ATEX) Zone 22 (ATEX)
ATEX category gas	II 3G
Explosion ignition protection type for gas	Ex nA IIC T5 X Gc
ATEX category dust	II 3D
Explosion ignition protection type for dust	Ex tc IIIB T80°C X Dc IP54
Explosion 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
Start value for pressure measuring range	0 MPa
Start value for pressure measuring range	0 bar
Start value for pressure measuring range	0 psi
End value for pressure measuring range	1.6 MPa
End value for pressure measuring range	16 bar
End value for pressure measuring range	232 psi
Start value for flow rate measuring range	10 l/min ... 150 l/min
End value for flow rate measuring range	1000 l/min ... 15000 l/min
Temperature measurement start value	0 °C
Temperature measurement end value	100 °C

Feature	Value
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	Argon Compressed air to ISO 8573-1:2010 [7:4:4] Carbon dioxide Nitrogen
Media temperature	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 temperature in ± °C	5 °C
Repetition accuracy of pressure value in ± %FS	0.3 %FS
Repetition accuracy offset in ± %FS	0.2 %FS
Repetition accuracy span in ± %FS	0.8 %FS
Temperature coefficient in ± %FS/K	0.05 %FS/K
Temperature coefficient span in ± %FS/K	typ. 0.1%FS/K
Pressure influence span 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	NC or NO, switchable
Max. output current	100 mA
Analogue 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 start value	0 V
Output characteristic curve end value	10 V
Output characteristic curve starting value	4 mA
Output characteristic curve end value	20 mA
Max. load resistance current output	500 Ohm
Min. load resistance voltage output	10 kOhm ... 20 kOhm
Short circuit current rating	Yes
Overload protection	Available
Protocol	IO-Link®
IO-Link, revision ID	V1.1
IO-Link, device profile	Firmware update Function locator Function Product URI Function quantity detection Identification and diagnostics 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

Feature	Value
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 the pressure stability in passive operating status 1 bit SSC Pressure measured value 16 bit MDC Pressure monitoring 2 bit SSC Flow rate measurement 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 Measured temperature 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 IN	Volume/mass measured value 32 bit Pneumatic energy measurement 32 bit Pneumatic power measurement 32 bit
IO-Link, minimum cycle time	1.5 ms
IO-Link, Data storage required	1000 Byte
Operational voltage range DC	15 V ... 30 V
Reverse polarity protection	For all electrical connections
Electrical connection 1, connection type	Plug
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
Electrical connection 1, connection pattern	00995383 00995386
Max. cable length	30 M
Type of mounting	On service unit Via wall/surface bracket
Mounting position	Any Horizontal
Pneumatic connection	G1/2 G1 G1 1/2 1/2 NPT 1 NPT 1 1/2 NPT
Product weight	600 g ... 2750 g
Material housing	Die-cast aluminium Reinforced PA
Display type	Illuminated LCD, multi-colour
Displayable units	MPa bar kPa kg kg/min l m <sup>3</sup> /h psi scft °C °F
Setting options	IO-Link® Teach-in Via display and buttons
Protection against tampering	IO-Link® PIN code
Setting range threshold value	0 % ... 100 %
Setting range hysteresis	0 % ... 90 %
Degree of protection	IP65

<b>Feature</b>	<b>Value</b>
Pressure drop	40 mbar ... 200 mbar
Protection class	III
Corrosion resistance class CRC	2 - Moderate corrosion stress
LABS (PWIS) conformity	VDMA24364-B1/B2-L