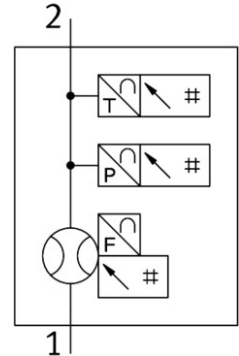


Flow sensor SFAM-90-10000L-M-PNLK-PNVBA-M12

Part number: 8181248

FESTO



 [General operating condition](#)

Data sheet

Feature	Value
Symbol	00997525 00997562
Approval	RCM trademark
CE mark (see declaration of conformity)	To EU EMC Directive In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity)	To UK instructions for EMC To UK RoHS instructions
Note on materials	RoHS-compliant
Measured variable	Pressure Mass flow rate Temperature Volume Volumetric flow rate
Flow direction	Unidirectional From left to right
Measuring principle	Thermal
Measurement method	Heat transfer
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	100 l/min
End value for flow rate measuring range	10000 l/min
Temperature measurement start value	0 °C
Temperature measurement end value	50 °C
Operating pressure	1.6 MPa
Operating pressure	16 bar
Operating pressure	232 psi
Overload pressure	2 MPa

Feature	Value
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	N/C or N/O contact, switchable
Max. output current	100 mA
Analogue output	0 - 10 V 4 - 20 mA 1 - 5 V
Flow characteristic curve start value	0 l/min
Flow characteristic curve end value	10000 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	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
IO-Link, Process data content IN	Pressure measured value 16 bit MDC Pressure monitoring 2 bit SSC Flow rate measured value 16-bit MDC Flow rate monitoring 2-bit SSC Temperature measured value 16 bit MDC Temperature monitoring 2-bit SSC Volume / mass pulse 1 bit SSC

Feature	Value
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	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
Electrical connection 1, compatible type of mounting	Compatible with rotatable screw-type lock
Electrical connection 1, connection pattern	00995386
Max. cable length	20 m with IO-Link® operation 30 m
Type of mounting	On service unit
Mounting position	optional
Pneumatic connection	Manifold module
Product weight	600 g
Material housing	Die-cast aluminium PA-reinforced
Display type	Illuminated LCD, multi-colour
Displayable units	MPa bar kPa kg kg/min l l/min m3 m3/h psi scfm scft °C °F
Setting options	IO-Link® Teach-in Via display and keys
Protection against tampering	IO-Link PIN code
Setting range threshold value	0 % ... 100 %
Setting range hysteresis	0 % ... 90 %
Degree of protection	IP65
Pressure drop	<100 mbar
Protection class	III
Corrosion resistance class CRC	2 - Moderate corrosion stress
LABS (PWIS) conformity	VDMA24364-B1/B2-L