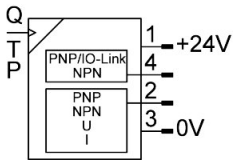
Flow sensor
SFAM-90-5000L-M-PNLK-PNVBA-M12

Part number: 8181247





Data sheet

Feature	Value
Approval	RCM c UL us - Listed (Oil)
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
Flow direction	Unidirectional From left to right
Start value for pressure measuring range	0 MPa 0 bar 0 psi
End value for pressure measuring range	1.6 MPa 16 bar 232 psi
Start value for flow rate measuring range	50 l/min
End value for flow rate measuring range	5000 l/min
Temperature measurement start value	0 °C
Temperature measurement end value	100 °C
Operating pressure	1.6 MPa 16 bar 232 psi
Overload pressure	2 MPa 20 bar 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

Feature	Value
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.
Flow characteristic curve start value	0 l/min
Flow characteristic curve end value	5000 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 20 mA
Output characteristic curve starting value	4 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 measurement 16 bit MDC Flow rate monitoring 2-bit SSC Measured temperature value 16 bit MDC Temperature monitoring 2-bit SSC Volume / mass pulse 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	1 KB
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
Max. cable length	20 m with IO-Link® operation 30 M
Type of mounting	On service unit
Mounting position	Any
Pneumatic connection	Manifold module
Product weight	600 g
Material housing	Die-cast aluminium Reinforced PA

Feature	Value
Display type	Illuminated LCD, multi-colour
Degree of protection	IP65
Corrosion resistance class CRC	2 - Moderate corrosion stress
LABS (PWIS) conformity	VDMA24364-B1/B2-L