Flow sensor
SFAH-

Part number: 8035300

General operating condition

Data sheet

Overall data sheet – Individual values depend upon your configuration.

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 RoHS instructions
Certificate issuing authority	UL E322346
Note on materials	RoHS compliant
Measured variable	Mass flow rate Volumetric flow rate
Flow direction	Bi-directional Unidirectional
Measuring principle	thermal
Measurement method	Heat transfer
Start value for flow rate measuring range	0.002 l/min ... 4 l/min
End value for flow rate measuring range	0.1 l/min ... 200 l/min
Operating pressure	-0.9 bar ... 10 bar
Operating medium	Compressed air to ISO 8573-1:2010 [6:4:4] Nitrogen
Media temperature	0 °C ... 50 °C
Ambient temperature	0 °C ... 50 °C
Nominal temperature	23 °C
Accuracy of flow rate	± (2% o.m.v. + 1% FS)
Repetition accuracy offset in ± %FS	0.2 %FS
Repetition accuracy span in ± %FS	0.8 %FS
Temperature coefficient span in ± %FS/K	typ. 0.15%FS/K
Pressure influence span in ± %FS/bar	1 %FS/b.
Switching output	2 x PNP or 2 x NPN, switchable
Switching function	Window comparator Threshold value comparator Auto difference monitoring
Switching element function	NC or NO, switchable
Max. output current	100 mA
Analogue output	0 - 10 V 4 - 20 mA 1 - 5 V
Flow characteristic curve start value	-200 l/min
Flow characteristic curve end value	200 l/min

Feature	Value
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, Protocol version	Device V 1.1
IO-Link, Profile	Smart sensor profile
IO-Link, Function classes	Binary data channel (BDC) Process data variable (PDV) Identification Diagnostics Teach channel
IO-Link, communication mode	COM2 (38.4 kBaud)
IO-Link, SIO-Mode support	Yes
IO-Link, Port class	A
IO-Link, Process data length IN	3 bytes
IO-Link, Process data content IN	1 bit BDC (volume monitoring) 14 bit PDV (measured flow value) 2 bit BDC (flow monitoring)
IO-Link, Service data IN	32-bit volume / mass measured value
IO-Link, Min. cycle time	4 ms
IO-Link, Data storage required	‹500 Byte
Operational voltage range DC	22 V ... 26 V
No-load supply current	≤25 mA
Reverse polarity protection	For all electrical connections
Electrical connection 1, connection type	Plug
Electrical connection 1, connector system	M8x1, A-coded, to EN 61076-2-104
Electrical connection 1, number of connections/cores	4
Electrical connection 1, type of mounting	Not rotatable
Electrical connection 1, compatible type of mounting	Compatible with latching lock Compatible with rotatable screw-type lock
Type of mounting	With accessories
Mounting position	Any
Pneumatic connection	Female thread G1/8 Female thread G1/4 For tubing O.D. 4 mm For tubing O.D. 6 mm For tubing O.D. 8 mm
Pneumatic connection, outlet direction	Straight Angled, adjustable
Product weight	60 g ... 90 g
Material housing	Reinforced PA
Material in contact with the medium	Silicon Silicon nitride High-alloy stainless steel
Display type	Illuminated LCD, multi-colour
Displayable units	g g/min l l/h l/min scft scft/h scft/min
Setting options	IO-Link® Teach-in Via display and buttons
Protection against tampering	IO-Link® PIN code
Degree of protection	IP40

Feature	Value
Pressure drop	5 mbar ... 56 mbar
Protection class	III
Corrosion resistance class CRC	2 - Moderate corrosion stress
LABS (PWIS) conformity	VDMA24364-B2-L
Suitability for the production of Li-ion batteries	Suitable for battery production with reduced Cu/Zn/Ni values (F1a)
Cleanroom suitability, measured according to ISO 14644-14	Class 4 according to ISO 14644-1
Pollution degree	3