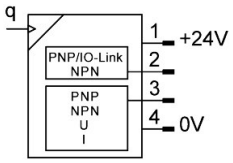
Flow sensor
SFAH-0.1U-G18FS-PNLK-PNVBA-L1

Part number: 8159375



General operating condition

Data sheet

Feature	Value
Symbol	00995795
Approval	RCM trademark c UL us listed (OL)
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	Unidirectional
Measuring principle	Thermal
Measurement method	Heat transfer
Start value for flow rate measuring range	0.002 l/min
End value for flow rate measuring range	0.1 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	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	0.1 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 measurement
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	Plugs
Electrical connection 1, connector system	Connection pattern L1J
Electrical connection 1, number of connections/cores	4
Electrical connection 1, connection pattern	00995428
Type of mounting	With accessories
Mounting position	optional
Pneumatic connection	Female thread G1/8
Pneumatic connection, outlet direction	Straight
Product weight	90 g
Material housing	PA-reinforced
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
Setting options	IO-Link® Teach-in Via display and keys
Protection against tampering	IO-Link PIN code
Degree of protection	IP40
Pressure drop	‹5 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

Feature	Value
Pollution degree	3