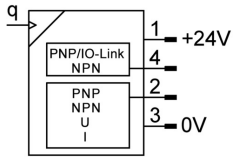
Air flow sensor
SFAH-1U-Q4S-PNLK-PNVBA-M8

Part number: 8058466



Data sheet

Feature	Value
Type code	SFAH
Protection against tampering	IO-Link® PIN code
Pneumatic connection, outlet direction	Straight
Electrical connection for input 1, connection pattern	00991171
Electrical connection 1, connection type	Plug
Electrical connection 1, connection technology	M8x1 A-coded as per EN 61076-2-104
KC characters	KC EMC
Electrical connection 1, number of pins/wires	4
Idle current	≤25 mA
Symbol	00995794
Certification	RCM compliance mark
CE marking (see declaration of conformity)	As per EU EMC directive As per EU RoHS directive
Note on materials	RoHS-compliant
Measured variable	Mass flow rate Volumetric flow rate
Flow direction	Unidirectional
Measuring principle	Thermal
Method of measurement	Heat transfer
Flow measuring range start value	0.02 l/min
Flow measuring range end value	1 l/min
Operating pressure	-0.9 bar ... 10 bar
Operating medium	Argon Compressed air as per ISO 8573-1:2010 [6:4:4] Nitrogen
Temperature of medium	0 °C ... 50 °C
Ambient temperature	0 °C ... 50 °C
Nominal temperature	23 °C
Accuracy of flow rate	± (2% o.m.v. + 1% FS)
Zero point repetition accuracy in ± %FS	0.2 %FS
Repetition accuracy margin in ± %FS	0.8 %FS
Temperature co-efficient margin in ± %FS/K	typ. 0.15% FS/K
Pressure influence of margin in ±%FS/bar	1 %FS/b.
Switching output	2 x PNP or 2 x NPN switchable
Switching function	Window comparator Auto difference monitoring Threshold value comparator

Feature	Value
Switching element function	N/C contact/N/O contact switchable
Max. output current	100 mA
Analog output	1 - 5 V 0 - 10 V 4 - 20 mA
Flow rate curve start value	0 l/min
Flow rate curve end value	1 l/min
Max. load resistance of current output	500 Ohm
Min. load resistance of voltage output	20 kOhm
Short-circuit protection	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	Diagnostics Process data variable (PDV) Identification Teach channel Binary data channel (BDC)
IO-Link®, communication mode	COM2 (38,4 kBd)
IO-Link®, SIO mode support	Yes
IO-Link®, port class	A
IO-Link®, process data width IN	3 Byte
IO-Link®, process data content IN	2 bit BDC (flow monitoring) 1 bit BDC (volume monitoring) 14 bit PDV (flow measurement)
IO-Link®, service data contents IN	32 bit volume/mass measurement
IO-Link®, minimum cycle time	4 ms
IO-Link®, data memory required	<500 byte
DC operating voltage range	22 V ... 26 V
Reverse polarity protection	for all electrical connections
Type of mounting	With accessories
Mounting position	Any
Pneumatic connection	For pneumatic tubing outside diameter 4 mm
Product weight	60 g
Housing material	PA-reinforced
Materials in contact with the media	Epoxy NBR Silicon PA-reinforced High-alloy stainless steel Wrought aluminum alloy, anodized Silicon nitride
Display type	Illuminated LCD, multi-color
Displayable unit(s)	g l/h l/min l g/min scft/h scft
Setting options	Teach-in IO-Link® Via display and pushbuttons
Degree of protection	IP40
Pressure drop	<5 mbar
Protection class	III
Corrosion resistance class (CRC)	2 - Moderate corrosion stress