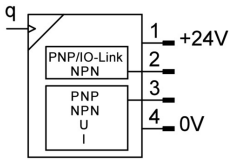
Air flow sensor
SFAH-0.1U-Q4S-PNLK-PNVBA-L1

Part number: 8058461





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	00995428
Electrical connection 1, connection type	Plug
Electrical connection 1, connection technology	Connection diagram L1J
KC characters	KC EMC
Electrical connection 1, number of pins/wires	4
Idle current	≤25 mA
Symbol	00995795
Certification	RCM compliance mark c UL us - Listed (OL)
CE marking (see declaration of conformity)	As per EU EMC directive As per EU RoHS directive
Certificate issuing authority	UL E322346
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	0.002 l/min
Flow measuring range end value	0.1 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

Feature	Value
Switching function	Window comparator Threshold value comparator Auto difference monitoring
Switching element function	N/C contact/N/O contact switchable
Max. output current	100 mA
Analog 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
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	Binary data channel (BDC) Process data variable (PDV) Identification Diagnostics Teach channel
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	1 bit BDC (volume monitoring) 14 bit PDV (flow measurement) 2 bit BDC (flow monitoring)
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	Wrought aluminum alloy, anodized Epoxy NBR PA-reinforced Silicon Silicon nitride High-alloy stainless steel
Display type	Illuminated LCD, multi-color
Displayable unit(s)	g g/min l l/h l/min scft scft/h
Setting options	IO-Link® Teach-in Via display and pushbuttons
Degree of protection	IP40
Pressure drop	‹5 mbar
Protection class	III

Feature	Value
Corrosion resistance class (CRC)	2 - Moderate corrosion stress