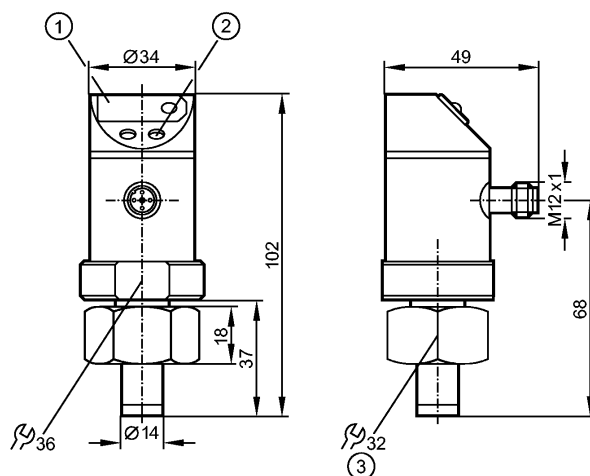


SA3010

SAD18BDBFRKG/W/US-100-IPF

Flow sensors



- 1: 7-segment LED display
- 2: Programming buttons
- 3: internal thread M26 x 1.5

Made in Germany



Product characteristics

Flow monitor

Can be calibrated for specific T-pieces

Connector

Function programmable

2 outputs

OUT1 = switching output

OUT2 = switching output or analogue output

7-segment LED display

Display units:

l/min, gal/min, l/h, gal/h, m³/h

Application

Application

water*)
T-shape fittings (DIN 2353)
QL 18-18-18 (nominal diameter 15 mm) / QL 22-18-22 (nominal diameter 19 mm)
/ QL 28-18-28 (nominal diameter 24 mm)

Medium temperature

[°C]

0...80

Electrical data

Electrical design

DC PNP/NPN

Operating voltage

[V]

20...28 DC

Current consumption

[mA]

< 80

Protection class

III

Reverse polarity protection

yes

Outputs

Output function

2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x analogue (4...20 mA / 0...10 V; scaleable)

Current rating

[mA]

2 x 250

Voltage drop

[V]

< 2

Short-circuit protection

pulsed

Overload protection

yes

Analogue output

4...20 mA; 0...10 V

SA3010

SAD18BBD FRKG/W/US-100-IPF

Flow sensors

Max. load	[Ω]	500
Min. load	[Ω]	2000

Measuring / setting range

Flow monitoring		
Measuring range	[l/min]	0...10 (NW15) 0...20 (NW19) 0...40 (NW24)
Display range	[l/min]	0...12 (NW15) 0...24 (NW19) 0...48 (NW24)
Set point, SP	[l/min]	0.1...12.0 (NW15) 0.2...24.0 (NW19) 0.4...48.0 (NW24)
Reset point, rP	[l/min]	0.0...11.9 (NW15) 0.0...23.8 (NW19) 0.0...47.6 (NW24)
Analogue start point, ASP	[l/min]	0.0...8.0 (NW15) 0.0...16.0 (NW19) 0.0...32.0 (NW24)
Analogue end point, AEP	[l/min]	4.0...12.0 (NW15) 8.0...24.0 (NW19) 16.0...48.0 (NW24)
in steps of	[l/min]	0.1 0.1 0.1

Accuracy / deviations

Flow monitoring		
Accuracy	[% of the final value]	max. ± 10
Repeatability	[% of the measured value]	3 (Q < 30%) / 7 (Q < 100%)
Max. temperature gradient of medium	[K/min]	200

Reaction times

Power-on delay time	[s]	10
Flow monitoring		
Start-up delay	[s]	0...50
Response time	[s]	5 (10%...90%)

Software / programming

Programming options	hysteresis / window function; N.O. / N.C; output polarity; current / voltage output; inside pipe diameter; start-up delay; calibration of displayed values; display can be rotated / deactivated; display unit	
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Environment

Pressure rating	[bar]	30
Ambient temperature	[°C]	-20...60
Protection		IP 67

Tests / approvals

EMC	EN 61000-4-2 ESD: 4 kV CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m EN 61000-4-4 Burst: 2 kV EN 61000-4-6 HF conducted: 10 V	
MTTF	[Years]	184

Mechanical data

Materials (wetted parts)	stainless steel 316L / 1.4404; O-ring: FKM 16 x 1.5 gr 70° Shore A	
Housing materials	stainless steel 316L / 1.4404; PBT (Pocan); PC (Makrolon); PA; EPDM/X (Santoprene); FPM (Viton)	
Weight	[kg]	0.256

Displays / operating elements

Display	Switching status 2 x LED Red Measured values 7-segment LED display Programming 7-segment LED display	
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Electrical connection

Connection	M12 connector; Gold-plated contacts	
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Wiring

SA3010

SAD18BBDFRKG/W/US-100-IPF

Flow sensors

Programming of the output function
(OUT1 / OUT2):

Hno = hysteresis / normally open

Hnc = hysteresis / normally closed

Fno = window function / normally open

Fnc = window function / normally closed

Complementary outputs:

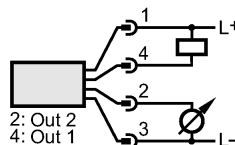
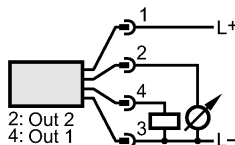
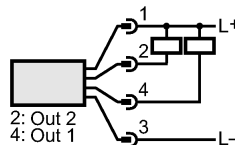
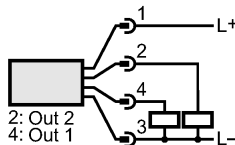
output 1: = Hno, output 2: = Hnc

(with the same SP / rP)

Programming of the analogue output (OUT2):

I = current output (4...20 mA)

U = voltage output (0...10 V)



Remarks

Remarks

NW = nominal diameter

*) Clean water without contamination and additives.

Dirt/build-up on the sensor tip affects the measurement accuracy.

Recommended maintenance: Check the sensor tip for build-up from time to time.

If necessary, clean it with a soft cloth and a vinegar cleansing agent.

Pack quantity

[piece]

1