Electromagnetic flowmeter SM4000

URL:https://www.sxplc.com/electromagnetic-flowmeter-sm4000

Product data sheet

Product Characteristics

Total number of inputs and outputs

Number of digital outputs: 2; Number of analog outputs: 1

Measuring range

5.... .3000 ml/min

0.005... .3 l/min .3 l/min

System connections

Threaded connection G 1/4 DN6 flat seal

Applications

Special properties

Gold-plated contacts

Applications

Adder function; for industrial applications

Mounting

Pipe connection via adapter

Medium

conductive liquids; water; water as basic medium

Description of the medium

Conductivity: ≥ 20 µS/cm

Viscosity: < 70 mm²/s (40 °C)

Temperature of the medium [°C]

0.... .60

Compressive strength [bar]

10

Compressive strength [MPa]

1

Maximum permissible working pressure (for applications complying with CRN standards) [bar]

7.3

Electrical data

Operating voltage [V]

18.... .30 DC; (according to SELV/PELV)

Current loss [mA]

< 80

Protection class

III

Inverted phase protection

yes

Power-on delay time [s]

5

Total inputs/outputs

Total number of inputs and outputs

Number of digital outputs: 2; Number of analog outputs: 1

Inputs

Inputs

Counter reset

Outputs

Number of outputs

2

Output signals

Switch signal; Analog signal; Pulse signal; IO-Link; (Configurable)

Electrical design

PNP/NPN

Number of digital outputs

2

Output Function

Normally open/closed; (parameterizable)

Switching output DC voltage drop maximum value [V]

2

Continuous current load of switching output DC [mA]

200

Number of analog outputs

1

Analog current output [mA]

4.... .20; (adjustable range)

Maximum load value [Ω]

500

Analog voltage output [V]

0.... .10; (adjustable range)

Minimum load resistance [Ω]

2000

Pulse output

Flow meter

Short-circuit protection

yes

Short-circuit protection type

Pulse

Overload protection

Yes

Measuring/setting range

Measuring range

5.... .3000 ml/min

0.005.... .3 l/min

Display range [ml/min]

-1999.... .3600

Resolution [ml/min]

1

Switching point, SP [ml/min]

20.... .3000

Recovery point, rP [ml/min]

5.... .2984

Starting point of the measured value, ASP [ml/min]

0.... .2400

Measured value end point, AEP [ml/min]

600.... .3000

Lesser flow cut-off, LFC [ml/min]

< 60

Flow monitoring

Pulse value

1.... .3000 ml

Pulse length [s]

0,008.... .2

Temperature monitoring

Measuring range [°C]

-20.... .80

Resolution [°C]

0.2

Switching point, SP [°C]

-19.2.... .80

Recovery point, rP [°C]

-19.6.... .79.6

Measured value starting point [°C]

-20.... .60

Measured value end point [°C]

0.... .80

Setting step [°C]

0.2

Accuracy / Deviation

Flow monitoring

Accuracy (in the measuring range)

± (2 % MW + 0,5 % MEW)

Repeatability

± 0,2 % MEW

Temperature monitoring

Accuracy [K]

± 2,5 (Q > 0,5 l/min)

Reaction time

Flow rate monitoring

Reaction time [s]

0.15; (dAP = 0, T19)

Programmable delay time dS, dr [s]

0.... .50

Damping process value dAP [s]

0.... .5

Temperature monitoring

Response time T05 / T09 [s]

T09 = 40 (Q > 1 l/min)

Software / Programming

Parameterization

Flow monitoring; Quantity meter; Preset capacity meter; Temperature monitoring; Hysteresis/window; Normally open/closed; Output polarity; Current/voltage/pulse output; Start-up delay; Display can be switched off; Display units

Interfaces

Communication interfaces

IO-Link

Transmission type

COM2 (38,4 kBaud)

IO-Link revision

1.1

SDCI standards

IEC 61131-9

Shape

Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis

SIO Mode

Yes

Required mater port type

A

Analog process data

3

2-digit output process data

2

Process cycle min.

4

Supported DeviceID

Operation mode

DeviceID

default

671

Operating conditions

Ambient temperature [°C]

-10.... .60

Storage temperature [°C]

-25.... .80

Enclosure protection class

IP 67

Certificates/Tests

EMC Electromagnetic Compatibility

DIN EN 60947-5-9

CPA certified

Model

007MI

Accuracy class

-Tolerances

Maximum permissible error

± 2,5 % FS

Q (min)

0,0003 m³/h

Q (t)

-Q (t)

Q (max)

0,18 m³/h

Shock resistance

DIN IEC 68-2-27

20 g (11 ms)

Vibration

DIN IEC 68-2-6

5 g (10.... .2000 Hz)

MTTF [years]

144

Pressurized Equipment Directive

Good engineering practice; can be used for Group 2 fluids; on demand fluids Group 1 fluids

Mechanical Technical Data

Weight [g]

536.5

Material

Stainless steel (1.4404 / 316L); PBT-GF20; PC; FKM; TPE

Material (liquid-containing parts)

Stainless steel (1.4404 / 316L); PEEK; FKM

System connections

Threaded connection G 1/4 DN6 Flat seal

Display/operating parts

Display

Display units

6 x LED, green (ml/min, l/h, l, m^3, °C, 10^3)

Switching status

2 x LED, yellow

Measured values

Alphanumeric display, 4 digits

Programming

Alphanumeric display, 4 digits

Comments

Comments

MW = Measured value

MEW = Final value of the measuring range

Packaging unit

1 piece

Electrical connection

Connector: 1 x M12; Translator: A; Contacts: gold-plated