

13 Technical data

13.1 Input

Measured variables	<ul style="list-style-type: none"> ▪ Volume flow ▪ Temperature ▪ Conductivity
Measuring range	DN 15 (½"): 0.05 to 35 l/min (0.013 to 9.2 gal/min)
Volume flow measurement	DN 20 (¾"): 0.1 to 75 l/min (0.026 to 19.8 gal/min)
	DN 25 (1"): 0.2 to 150 l/min (0.052 to 39.6 gal/min)
	DN 50 (2"): 1.5 to 750 l/min (0.4 to 198.1 gal/min)
Measuring range	-10 to +70 °C (+14 to +158 °F)
Medium temperature measurement	
Measuring range	DN 15 (½"): 20 to 30 000 µS/cm
Conductivity measurement	DN 20 (¾"): 20 to 30 000 µS/cm
	DN 25 (1"): 20 to 30 000 µS/cm
	DN 50 (2"): 20 to 10 000 µS/cm
Digital input	<ul style="list-style-type: none"> ▪ High or low active ▪ Switch-on level 15 V ▪ Switch-off level 5 V ▪ Internal resistance 7.5 kOhm

13.2 Output

Output	Max. load
Current output	500 Ω Load must not be greater
Voltage output	600 Ω Load must not be smaller
Pulse output	Max. pulse rate: 10 000 Pulse/s
Signal on alarm	<ul style="list-style-type: none"> ▪ Status signal (as per NAMUR Recommendation NE 107) ▪ Plain text display with remedial action
Switch output	<ul style="list-style-type: none"> ▪ Switching behavior: PNP or NPN ▪ Max. load 250 mA

13.3 Power supply

Supply voltage range	18 to 30 V _{DC} (SELV, PELV, Class 2)
Power consumption	Maximum 3 W <ul style="list-style-type: none"> ▪ Without outputs IO1 and IO2: 120 mA ▪ With outputs IO1 and IO2: 120 mA plus the effective load currents

13.4 Performance characteristics

Volume flow measurement	
Reference operating conditions	Water, +15 to +45 °C, 2 to 6 bar
Maximum measured error	±0.8 % o.r. ±0.1 % o.f.s.
Repeatability	±0.2 % o.r.
Medium temperature measurement	
Maximum measured error	±2.5 °C
Repeatability	±0.5 °C
Conductivity measurement	
Repeatability	±5 % o.r. ±5 µS/cm

Maximum measured error, current output

Additional error	$\pm 20 \mu\text{A}^{1)}$
Repeatability	$\pm 10 \mu\text{A}$
Response time T90	Typically 200 ms

1) At a device temperature of 25 °C.

Maximum measured error, voltage output

Additional error	$\pm 60 \text{mV}^{1)}$
Repeatability	$\pm 10 \text{mV}$
Response time T90	Typically 200 ms

1) At a device temperature of 25 °C.

i The response time T90 is the time a measuring system needs to display 90% of the change of the measured value.

13.5 Installation

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13.6 Environment

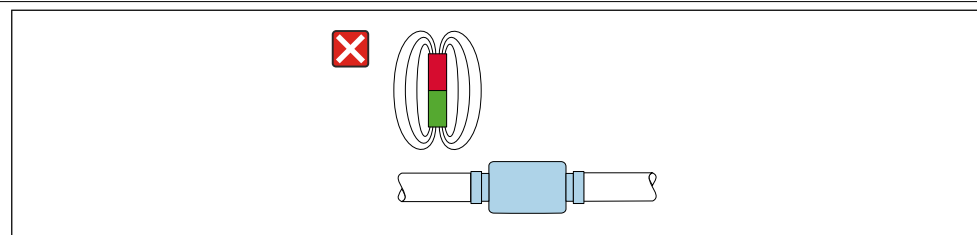
Ambient temperature range	-10 to +60 °C (+14 to +140 °F)
Storage temperature	-25 to +85 °C (-13 to +185 °F)
Degree of protection	IP65/67, pollution degree 3
Humidity and moisture	Suitable for indoor environments with up to 100% rh (wet and damp locations)
Operating altitude	up to 2 000 m
Shock resistance	20 g (11 ms) in accordance with IEC/EN60068-2-27
Vibration resistance	Acceleration up to 5 g (10 to 2 000 Hz) in accordance with IEC/EN60068-2-6
Electromagnetic compatibility (EMC)	According to IEC/EN61326 and/or IEC/EN55011 (Class A)

13.7 Process

Medium temperature range	<ul style="list-style-type: none"> ▪ -10 to +70 °C (+14 to +158 °F) ▪ Permissible short-term temperature: maximum one hour 85 °C (185 °F) every 4 hours. ▪ Permissible short-term temperature with electronics switched off: maximum one hour 100 °C (212 °F) every 4 hours.
Medium properties	Liquid, conductivity $\geq 10 \mu\text{S/cm}$
Pressure	Max. 16 bar _{rel}

i Avoid cavitation in the process.

Magnetism and static electricity



8 Avoid magnetic fields

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