

1: 4-digit alphanumeric display  
2: Programming buttons



Product characteristics

Flow rate meter for gases

Quick disconnect

Process connection: R<sup>1/2</sup> (DN15)

Function programmable

2 outputs

OUT1 = flow monitoring (binary), flow rate meter (pulse), preset meter (binary)

OUT2 = flow monitoring (analog or binary)

Application

Application argon (Ar), carbon dioxide (CO<sub>2</sub>), nitrogen (N<sub>2</sub>)

Pressure rating [bar] 16

Medium temperature [°C] 0...60

Electrical design DC PNP

Operating voltage [V] 18...30 DC \*)

Current consumption [mA] < 100

Protection class III

Reverse polarity protection yes

Outputs  
Output function OUT1: normally open / closed programmable or pulse  
OUT2: normally open / closed programmable or analog (4...20 mA scaleable)

Current rating [mA] 2 x 250

Voltage drop [V] < 2

Short-circuit protection yes (non-latching)

Overload protection yes

Analog output 4...20 mA

Max. load [Ω] < 500

Pulse output consumed quantity meter

Measuring / setting range

Flow monitoring

Measuring range [Nm<sup>3</sup>/h] □  
N<sub>2</sub>: 0.2...75.0  
Ar: 0.4...122.0  
CO<sub>2</sub>: 0.2...74.7 |

# SD6100 - Flow rate meter for gases - eclass: 27273101 / 27-27-31-01

Display range	[Nm <sup>3</sup> /h]	□ N2: 0.0...90.0 Ar: 0.0...146.4 CO2: 0.0...89.7
Resolution	[Nm <sup>3</sup> /h]	□ N2: 0.1 Ar: 0.1 CO2: 0.1
Set point, SP	[Nm <sup>3</sup> /h]	□ N2: 0.7...75.0 Ar: 1.1...122.0 CO2: 0.7...74.7
Reset point, rP	[Nm <sup>3</sup> /h]	□ N2: 0.4...74.7 Ar: 0.6...121.5 CO2: 0.4...74.4
Analog start point, ASP	[Nm <sup>3</sup> /h]	□ N2: 0.0...60.0 Ar: 0.0...97.60 CO2: 0.0...59.8
Analog end point, AEP	[Nm <sup>3</sup> /h]	□ N2: 15.0...75.0 Ar: 24.4...122.0 CO2: 14.9...74.7
Low flow cut-off, LFC	[Nm <sup>3</sup> /h]	0.25...1.3
in steps of	[Nm <sup>3</sup> /h]	□ N2: 0.1 Ar: 0.1 CO2: 0.1
Measuring dynamics		1:300
Volumetric flow quantity monitoring		
Pulse value		0.001...1 000 000 m <sup>3</sup>
in steps of		0.001...1000 m <sup>3</sup>
Pulse length	[s]	0.012...2
Temperature monitoring		
Measuring range	[°C]	0...60
Display range	[°C]	-12...72
Resolution	[°C]	0.2
Set point, SP	[°C]	0.4...60
Reset point, rP	[°C]	0...59.8
Analog start point, ASP	[°C]	0...48
Analog end point, AEP	[°C]	12...60
in steps of	[°C]	0.2
Accuracy / deviations		
Flow monitoring		
Accuracy		± (6% MW + 0.6% MEW) ***)
Repeatability[% of the measured value]		± 1.5
Temperature monitoring		
Accuracy	[K]	± 2 **)
Reaction times		
Power-on delay time	[s]	1
Flow monitoring		
Response time	[s]	< 0.1 (dAP = 0)
Damping, dAP	[s]	0 - 0.2 - 0.4 - 0.6 - 0.8 - 1
Software / programming		
Programming options		hysteresis / window function; NO / NC; current / pulse output; display can be rotated / deactivated; display unit, medium
Interfaces		
IO-Link Device		
Transfer type		COM2

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IO-Link revision	1.1
SDCI standard	IEC 61131-9
IO-Link Device ID	265 d / 00 01 09 h
Profiles	Smart Sensor: Process Data Variable; Device Identification; Device Diagnosis
SIO mode	yes
Required master port class	A
Process data analogue	3
Process data binary	2
Min. process cycle time [ms]	4.1
Environment	
Ambient temperature [°C]	0...60
Storage temperature [°C]	-20...85
Max. relative air humidity [%]	90
Protection	IP 65
Tests / approvals	
Pressure equipment directive	article 3, section 3 - sound engineering practice
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
Vibration resistance	DIN IEC 68-2-6: 5 g (55...2000 Hz)
MTTF [Years]	227
Mechanical data	
Process connection	R $\frac{1}{2}$ (DN15)
Materials (wetted parts)	stainless steel (304S15); ceramics glass passivated; PEEK (polyether ether ketone); polyester; Viton; aluminum anodized
Housing materials	PBT-GF 20; PC (APEC); Makrolon; stainless steel (304S15); Viton
Tightening torque [Nm]	50
Weight [kg]	1.178
Displays / operating elements	
Display	Display unit 4 x LED green (NI/min, Nm <sup>3</sup> /h, Nm <sup>3</sup> , °C) Function display 1 x LED yellow Switching status 2 x LED yellow Measured values 4-digit alphanumeric display Programming 4-digit alphanumeric display
Electrical connection	
Connection	M12 connector
<b>Wiring</b>	

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## Programming of the output function

### -----OUT1-----

- Switching output

Hno = hysteresis / normally open

Hnc = hysteresis / normally closed

Fno = window function / normally open

Fnc = window function / normally closed

- ImP = pulse output for flow rate meter / signal output for preset meter

### -----OUT2-----

- Switching output

Hno = hysteresis / normally open

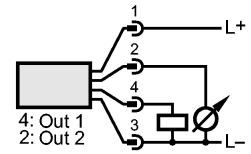
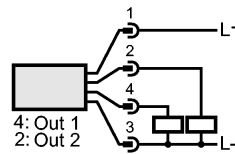
Hnc = hysteresis / normally closed

Fno = window function / normally open

Fnc = window function / normally closed

- Analog output

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



Remarks

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\*) to EN50178, SELV, PELV

\*\*\*) medium flow in the limit area of the flow measurement range

\*\*\*) under conditions acc. to DIN ISO 2533 and when installed in DN15 pipes

MW = measured value

MEW = final value of the measuring range

Measuring, display and setting ranges refer to standard volume flow according to DIN ISO 2533.

Pack quantity [piece]

1