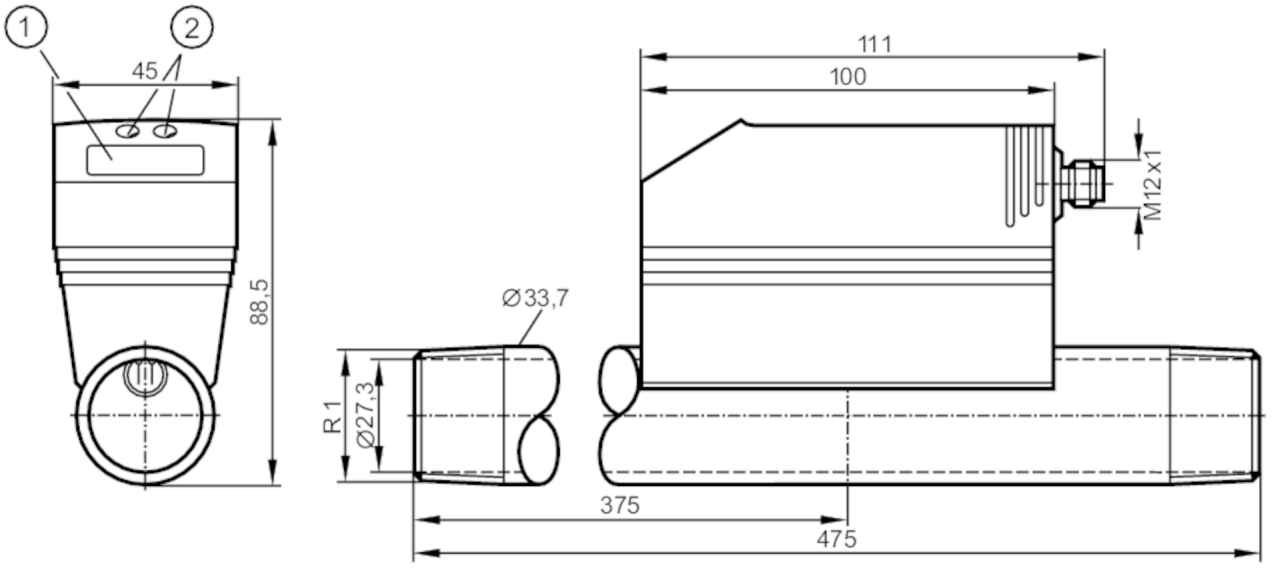
SD8100

Flow rate meter for gases

SDR11DGXFPKG/US-100



1 alphanumeric display 4-digit
2 programming buttons

Product characteristics		
Number of inputs and outputs		Number of digital outputs: 2; Number of analogue outputs: 1
Process connection		threaded connection R 1 DN25
Ar		
Measuring range	[m³/h]	1.2...366.6
CO2		
Measuring range	[m³/h]	0.8...223.6
N2		
Measuring range	[m³/h]	0.8...225
Application		
Application		for industrial applications
Media		Argon (Ar); carbon dioxide (CO2); nitrogen (N2)
Medium temperature	[°C]	0...60
Pressure rating	[bar]	16
Electrical data		
Operating voltage	[V]	18...30 DC
Current consumption	[mA]	< 100
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	1
Inputs / outputs		
Number of inputs and outputs		Number of digital outputs: 2; Number of analogue outputs: 1

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Outputs		
Total number of outputs		2
Output signal		switching signal; analogue signal; pulse signal; IO-Link; (configurable)
Electrical design		PNP
Number of digital outputs		2
Output function		normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC	[V]	2
Permanent current rating of switching output DC	[mA]	250; (per output)
Number of analogue outputs		1
Analogue current output	[mA]	4...20; (scalable)
Max. load	[Ω]	500
Pulse output		consumed quantity meter
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes
Measuring/setting range		
Low flow cut-off LFC	[m³/h]	< 3.8
Ar		
Measuring range	[m³/h]	1.2...366.6
Display range	[m³/h]	0...440
Resolution	[m³/h]	0.2
Set point SP	[m³/h]	3.4...366.6
Reset point rP	[m³/h]	1.8...365
Analogue start point ASP	[m³/h]	0...293.2
Analogue end point AEP	[m³/h]	73.4...366.6
In steps of	[m³/h]	0.2
CO2		
Measuring range	[m³/h]	0.8...223.6
Display range	[m³/h]	0...268.2
Resolution	[m³/h]	0.2
Set point SP	[m³/h]	2...223.6
Reset point rP	[m³/h]	1...222.6
Analogue start point ASP	[m³/h]	0...178.8
Analogue end point AEP	[m³/h]	44.8...223.6
In steps of	[m³/h]	0.2
Volumetric flow quantity monitoring		
Pulse value		0.001...3 000 000 Nm³
In steps of		0.001...1000 Nm³
Pulse length	[s]	0,004...2

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N2		
Measuring range	[m³/h]	0.8...225
Display range	[m³/h]	0...270
Resolution	[m³/h]	0.2
Set point SP	[m³/h]	2.2...225
Reset point rP	[m³/h]	1...224
Analogue start point ASP	[m³/h]	0...180
Analogue end point AEP	[m³/h]	45...225
In steps of	[m³/h]	0.2
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
Analogue start point	[°C]	0...48
Analogue end point	[°C]	12...60
In steps of	[°C]	0.2
Accuracy / deviations		
Flow monitoring		
Repeatability	[% of the measured value]	± 1,5
Accuracy (in the measuring range)		± (6 % MW + 0,6 % MEW); (conditions: installation to DIN ISO 2533; installation in pipes: DN25)
Temperature monitoring		
Accuracy	[K]	± 2; (medium flow in the limit area of the flow measurement range)
Response times		
Flow monitoring		
Response time	[s]	0.1; (dAP = 0)
Damping for the switching output dAP in steps	[s]	0 - 0,2 - 0,4 - 0,6 - 0,8 - 1
Software / programming		
Parameter setting options		Flow monitoring; quantity meter; Preset counter; hysteresis / window; normally open / normally closed; current/pulse output; display can be rotated and switched off; Display unit; medium selection

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Interfaces			
Communication interface		IO-Link	
Transmission type		COM2	
IO-Link revision		1.1	
SDCI standard		IEC 61131-9	
IO-Link device ID		443 d / 00 01 bb h	
Profiles		Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis	
SIO mode		yes	
Required master port type		A	
Process data analogue		3	
Process data binary		2	
Min. process cycle time	[ms]	4.1	
Operating conditions			
Ambient temperature	[°C]	0...60	
Storage temperature	[°C]	-20...85	
Max. relative air humidity	[%]	90	
Protection		IP 65	
Tests / approvals			
EMC		DIN EN 61000-6-2	
		DIN EN 61000-6-3	
Vibration resistance		DIN EN 68000-2-6	5 g (55...2000 Hz)
MTTF	[years]	224	
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data			
Weight	[g]	2029	
Materials		PBT-GF20; NBR; PC; stainless steel (1.4301 / 304); PTFE; brass coated; FKM; aluminium powder-coated	
Materials (wetted parts)		stainless steel (1.4301 / 304); FKM; ceramics glass passivated; PEEK-GF30; polyester; aluminium	
Process connection		threaded connection R 1 DN25	
Displays / operating elements			
Display		Display unit	4 x LED, green (Nl/min, Nm³/h, Nm³, °C)
		function display	1 x LED, yellow
		switching status	2 x LED, yellow
		measured values	alphanumeric display, 4-digit
		programming	alphanumeric display, 4-digit
Display unit		Nl/min; Nm³/h; Nm³; °C	
Remarks			
Remarks		MW = measured value	
		MEW = Final value of the measuring range	
		Measuring, display and setting ranges refer to the standard volume flow according to DIN ISO 2533.	
Pack quantity		1 pcs.	
Electrical connection			
Connector: 1 x M12			

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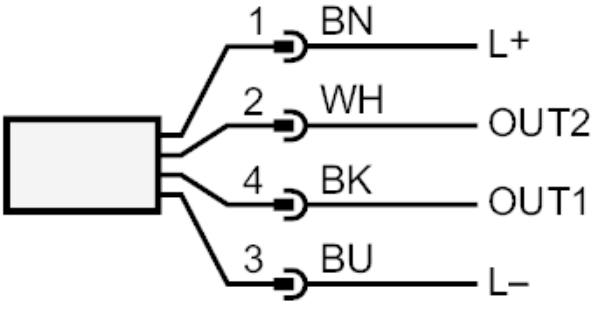
Connection



OUT1:	switching output
	Pulse output
OUT2:	switching output
	analogue output
	colours to DIN EN 60947-5-2
	Core colours :
BK =	black
BN =	brown
BU =	blue
WH =	white