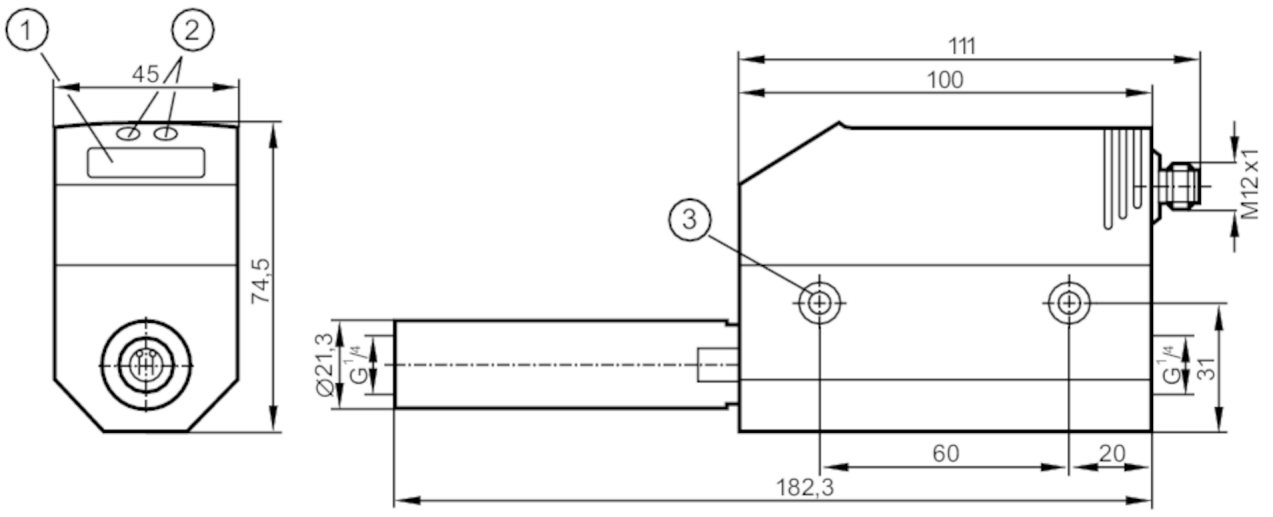
SD5100

Flow rate meter for gases

SDR14DGXFPKG/US-100



1 alphanumeric display 4-digit
2 programming buttons
3 hole for fixing screw M5

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; (according to EN 50178 SELV/PELV)
Current consumption	[mA]	< 100
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	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]	< 0.26
Measuring dynamics		1:300
Ar		
Measuring range	[m³/h]	0.08...24.04
Display range	[m³/h]	0...28.84
Resolution	[m³/h]	0.02
Set point SP	[m³/h]	0.22...24.04
Reset point rP	[m³/h]	0.12...23.94
Analogue start point ASP	[m³/h]	0...19.24
Analogue end point AEP	[m³/h]	4.8...24.04
In steps of	[m³/h]	0.02
CO2		
Measuring range	[m³/h]	0.04...14.36
Display range	[m³/h]	0...17.24
Resolution	[m³/h]	0.02
Set point SP	[m³/h]	0.14...14.36
Reset point rP	[m³/h]	0.08...14.3
Analogue start point ASP	[m³/h]	0...11.48
Analogue end point AEP	[m³/h]	2.88...14.36
In steps of	[m³/h]	0.02
volumetric flow quantity monitoring		
Pulse value		0.001...1 000 000 m³
In steps of		0.001...1000 m³
Pulse length	[s]	0,062...2

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N2		
Measuring range	[m³/h]	0.04...15
Display range	[m³/h]	0...18
Resolution	[m³/h]	0.02
Set point SP	[m³/h]	0.14...15
Reset point rP	[m³/h]	0.08...14.94
Analogue start point ASP	[m³/h]	0...12
Analogue end point AEP	[m³/h]	3...15
In steps of	[m³/h]	0.02
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)
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		263 d / 00 01 07 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		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	
Pressure Equipment Directive		Sound Engineering Practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data			
Weight	[g]	970.2	
Materials		PBT-GF20; PC; PC; stainless steel (1.4301 / 304); FKM	
Materials (wetted parts)		stainless steel (1.4301 / 304); ceramics glass passivated; PEEK; polyester; FKM; aluminium anodised	
Process connection		threaded connection G 1/4 DN8	
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.	
		For information about installation and operation please see the operating instructions.	
Pack quantity		1 pcs.	

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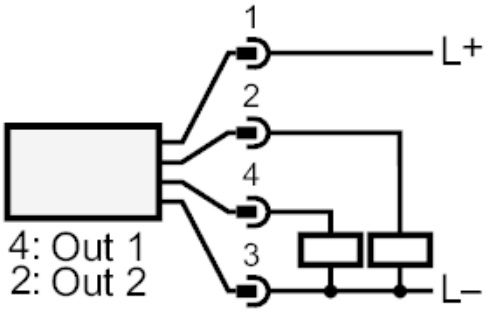
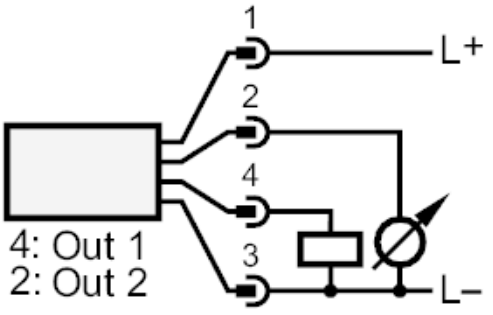
Electrical connection

Connector: 1 x M12

Connection





OUT1:	switching output
	Pulse output quantity meter
	signal output Preset counter
OUT2:	switching output
	analogue output