SD6050

Compressed air meter

SDR12DGXFPKG/US-100

Article to be discontinued
Discontinuation date: 12/31/2024

Alternative articles: SD6020
When selecting an alternative article and accessories please note that technical data may differ!
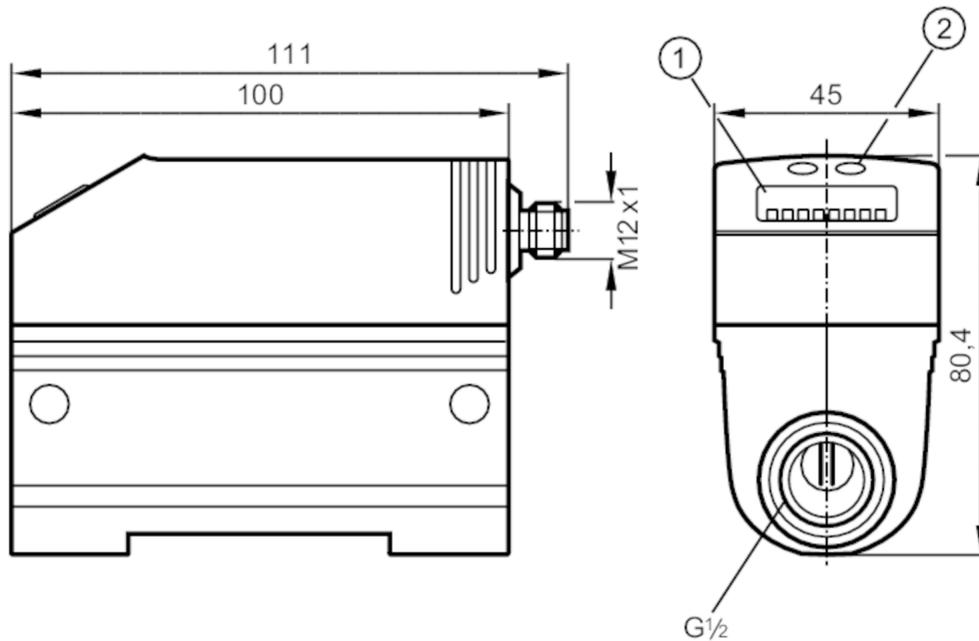
1   alphanumeric display 4-digit
2   Programming buttons

Product characteristics			
Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Measuring range	10...1250 l/min	0.3...103.6 m/s	0.2...75 m³/h
Process connection	threaded connection G 1/2 DN15		

Application	
Application	for industrial applications
Media	compressed air
Medium temperature [°C]	0...60
Pressure rating [bar]	16
Pressure rating [MPa]	1.6

Electrical data	
Operating voltage [V]	18...30 DC; (to SELV/PELV)
Current consumption [mA]	< 110
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 analog outputs: 1

SD6050

Compressed air meter

SDR12DGXFPKG/US-100

Outputs	
Total number of outputs	2
Output signal	switching signal; analog signal; pulse signal; IO-Link; (configurable)
Electrical design	PNP
Number of digital outputs	2
Output function	normally open / closed; (configurable)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	250; (per output)
Number of analog outputs	1
Analog current output [mA]	4...20; (scalable)
Max. load [Ω]	500
Pulse output	consumed quantity meter
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes

Measuring/setting range			
Measuring range	10...1250 l/min	0.3...103.6 m/s	0.2...75 m³/h
Display range	0...1500 l/min	0...124.3 m/s	0...90 m³/h
Set point SP	10...1250 l/min	0.8...103.6 m/s	0.6...75 m³/h
Reset point rP	4...1244 l/min	0.3...103.1 m/s	0.2...74.6 m³/h
Analog start point ASP	0...938 l/min	0...77.7 m/s	0...56.3 m³/h
Analog end point AEP	312...1250 l/min	25.9...103.6 m/s	18.7...75 m³/h
In steps of	1 l/min	0.1 m/s	0.1 m³/h
Volumetric flow quantity monitoring			
Pulse value	0.001...1000000 m³		
In steps of	0.001 m³		
Pulse length [s]	0,02...2		
Temperature monitoring			
Measuring range [°C]	0...60		
Display range [°C]	-12...72		

Accuracy / deviations	
Flow monitoring	
Repeatability [% of the measured value]	± 1,5
Accuracy (in the measuring range)	± (15 % MW + 1,5 % MEW); (maximum value to be achieved for air quality class 344 (DIN 8573-1); when using pipes of tolerance class T3/T4; inlet and outlet pipe lengths without edges and abrupt diameter changes; inner surface of the pipe free of burrs)
Temperature monitoring	
Accuracy [K]	± 2; (medium flow in the limit area of the flow measurement range)

Reaction times	
Flow monitoring	
Response time [s]	0.1; (dAP = 0)

SD6050

Compressed air meter

SDR12DGXFPKG/US-100

Damping process value 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; Temperature monitoring; hysteresis / window; normally open / closed; current/pulse output; display can be rotated and switched off; Display unit; totalizer	

Interfaces

Communication interface		IO-Link	
Transmission type		COM2 (38,4 kBaud)	
IO-Link revision		1.1	
SDCI standard		IEC 61131-9 CDV	
Profiles		no profile	
SIO mode		yes	
Required master port class		A	
Process data analog		3	
Process data binary		2	
Min. process cycle time	[ms]	4.1	
Supported DeviceIDs		**Type of operation**	**DeviceID**
		default	262

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	
CPA approval		model number	004TG
		accuracy class	-
		maximum allowable error	± 16,5 % FS
		Q (min)	0,2 m³/h
		Q (t)	-
		Q (max)	75 m³/h
Vibration resistance		DIN EN 68000-2-6	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]	579
Material		PBT-GF20; NBR; PC; stainless steel (1.4301 / 304); PTFE; brass coated; FKM; aluminum powder-coated
Materials (wetted parts)		stainless steel (1.4301 / 304); FKM; ceramics glass passivated; PEEK GF30; polyester; aluminum
Tightening torque	[Nm]	50
Process connection		threaded connection G 1/2 DN15

SD6050

Compressed air meter

Displays / operating elements		
Display	Display unit	5 x LED, green (Nl/min, Nm³/h, Nm/s, Nm³, °C)
	Function display	1 x LED, green
	Switching status	2 x LED, yellow
	Measured values	alphanumeric display, 4-digit
	Programming	alphanumeric display, 4-digit

Remarks	
Remarks	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.
	For information about installation and operation please see the operating instructions.
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A

Connection
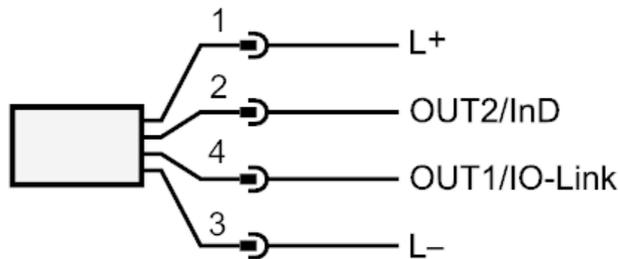
OUT1/IO-Link: Switching output Volumetric flow quantity monitoring
Pulse output quantity meter
signal output Preset counter
OUT2/InD: Switching output Volumetric flow quantity monitoring / Temperature monitoring
analog output Volumetric flow quantity monitoring / Temperature monitoring
Input counter reset