



Transmitter
Technical data

	ADM 8027 (type SIL: F800SR-A1)	F801SR-A1
		
design	explosion proof field device zone 1 SIL2	explosion proof offshore device zone 1 SIL2
supported transducer frequencies	K, M, P, Q on request: G	
measurement		
measurement principle	transit time difference correlation principle, automatic NoiseTrek selection for measurements with high gaseous or solid content	
flow velocity	m/s	0.01...25
repeatability	0.15 % of reading \pm 0.01 m/s	
fluid	all acoustically conductive liquids with < 10 % gaseous or solid content in volume (transit time difference principle)	
temperature compensation	corresponding to the recommendations in ANSI/ASME MFC-5.1-2011	
accuracy¹		
with standard calibration	\pm 1.6 % of reading \pm 0.01 m/s	
with advanced calibration (optional)	\pm 1.2 % of reading \pm 0.01 m/s	
with field calibration ²	\pm 0.5 % of reading \pm 0.01 m/s	
transmitter		
power supply	<ul style="list-style-type: none"> • 100...230 V/50...60 Hz or • 20...32 V DC 	
power consumption	W	<10 <8
number of measuring channels	1, optional: 2	
damping	s	0...100 (adjustable)
measuring cycle	Hz	100...1000 (1 channel)
response time	s	1 (1 channel), option: 0.07
housing material	cast aluminum, powder coated	stainless steel 316/316L (1.4401, 1.4404, 1.4432)
degree of protection	IP66	
weight	kg	6 6.6
fixation	wall mounting, 2" pipe mounting	
ambient temperature	°C	-20...+60 -20...+50
display	2 x 16 characters, dot matrix, backlight	
menu language	English, German, French, Dutch, Spanish	
explosion protection		
• ATEX/IECEX		
marking	CE 0637 (Ex) II2G Ex db eb IIC T6 Gb T _a -20...+60 °C	CE 0637 (Ex) II2G II2D Ex de IIC T6 Gb Ex tb IIC T 100 °C Db T _a -20...+60 °C
certification ATEX	IBExU01ATEX1064	IBExU05ATEX1078
certification IECEX	-	IECEX IBE 12.0020

¹ for transit time difference principle, reference conditions and $v > 0.15$ m/s

² reference uncertainty < 0.2 %

³ connection of the interface RS232 outside of explosive atmosphere (housing cover open)

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measuring functions			
physical quantities		volumetric flow rate, mass flow rate, flow velocity	
totalizer		volume, mass	
calculation functions		average, difference, sum (2 measuring channels necessary)	
diagnostic functions		sound speed, signal amplitude, SNR, SCNR, standard deviation of amplitudes and transit times	
communication interfaces			
service interfaces		<ul style="list-style-type: none"> • RS232³ • USB (with adapter)³ 	
accessories			
serial data kit		<ul style="list-style-type: none"> • cable • adapter 	
		RS232 RS232 - USB	
software		<ul style="list-style-type: none"> • FluxDiagReader: download of measured values and parameters, graphical presentation • FluxDiag (optional): download of measurement data, graphical presentation, report generation • FluxSubstanceLoader: upload of fluid data sets 	
data logger			
loggable values		all physical quantities, totalized values and diagnostic values	
capacity		> 100 000 measured values	
outputs			
		The outputs are galvanically isolated from the transmitter.	
• current output			
number		2 (1 (SIL2), 1 (diagnosis))	
range	mA	0/4...20	
accuracy		0.1 % of reading ±15 µA	
active output		R _{ext} < 500 Ω	
• binary output			
number		0...2 (diagnosis)	
open collector		24 V/4 mA	
binary output as alarm output			
• functions		limit, change of flow direction or error	
binary output as pulse output			
• functions		mainly for totalizing	
• pulse value	units	0.01...1000	
• pulse width	ms	1...1000	

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