

Electronics for Turbine Flow Meters

S1000 Series

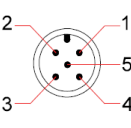
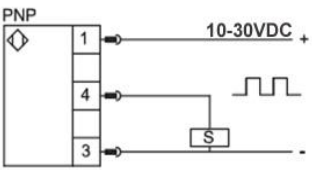
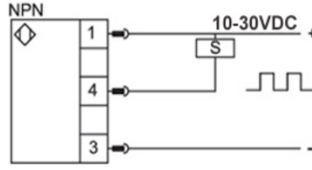
1. Pulse output



Specifications

Power supply	10...30VDC
No load current	<9mA
Output	Push-Pull (PNP / NPN)
Reverse polarity protection	Yes
Short circuit protection	Yes
Probe operating temperature	-40...212°F (Optional -40...302°F / -40...446°F) -40...100°C (Optional -40...150°C / -40...230°C)
Ambient temperature	-40...185°F (-40...85°C)
Electrical connection	M12 x 1 plug
Protection class	M12 x 1 plug: IP67

Wiring

M12 plug	PNP	NPN												
 <table border="1"> <thead> <tr> <th>Pin</th><th>Color</th><th>Signal</th></tr> </thead> <tbody> <tr> <td>1</td><td>Brown</td><td>Power +</td></tr> <tr> <td>4</td><td>Black</td><td>Pulse</td></tr> <tr> <td>3</td><td>Blue</td><td>Power -</td></tr> </tbody> </table>	Pin	Color	Signal	1	Brown	Power +	4	Black	Pulse	3	Blue	Power -		
Pin	Color	Signal												
1	Brown	Power +												
4	Black	Pulse												
3	Blue	Power -												

Dimensions in mm



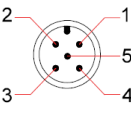
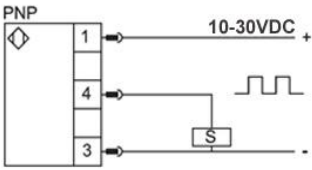
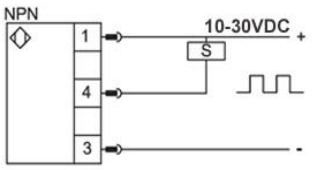
2. Linearized pulse output



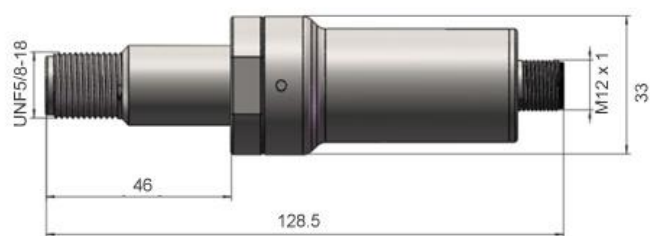
Specifications

Power supply	12...30VDC
No load current	<20mA
Output	Push-Pull (PNP / NPN)
Reverse polarity protection	Yes
Short circuit protection	Yes
Probe operating temperature	-40...212°F (Optional -40...302°F / -40...446°F) -40...100°C (Optional -40...150°C / -40...230°C)
Ambient temperature	-40...185°F (-40...85°C)
Electrical connection	M12 x 1 plug
Protection class	M12 x 1 plug: IP67

Wiring

M12 plug	PNP	NPN												
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Dimensions in mm



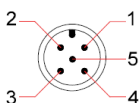
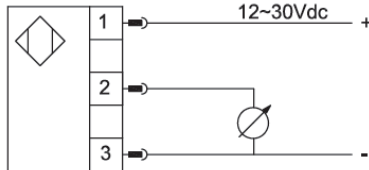
3. Linearized analog output (4...20mA)



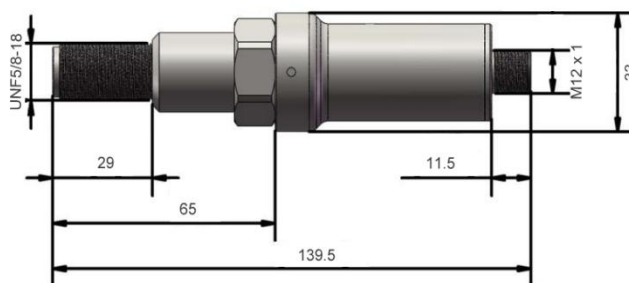
Specifications

Power supply	10...30VDC
No load current	<12mA
Output	3-wire 4...20mA
Reverse polarity protection	Yes
Short circuit protection	Yes
Probe operating temperature	-40...212°F (Optional -40...302°F / -40...446°F) -40...100°C (Optional -40...150°C / -40...230°C)
Ambient temperature	-40...185°F (-40...85°C)
Electrical connection	M12 x 1 plug
Protection class	M12 x 1 plug: IP67

Wiring

M12 plug			4...20mA											
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Pin	Color	Signal												
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3	Blue	Power -												

Dimensions in mm



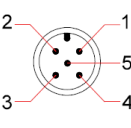
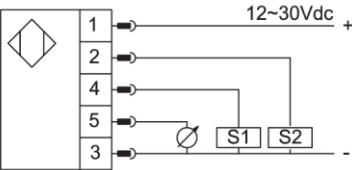
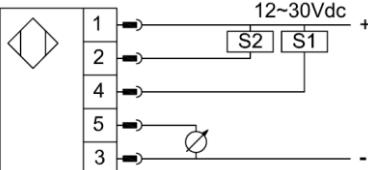
4. Intelligent transmitter with digital display



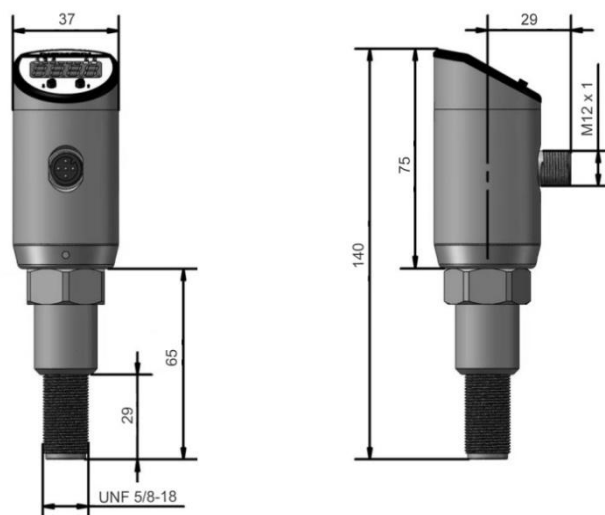
Specifications

Power supply	10...30VDC
No load current	<12mA
Switching output	Push-Pull (compatible to PNP / NPN) Switching capacity: 500mA (24VDC)
Analog output	2-wire 4...20mA Load $R_A(\Omega) \leq (U_s - 10)V / 0.02A$ Linearity: $\leq 0.01\%$ of reading
Accuracy	$\leq 0.02\%$ of reading
Ambient temperature	-40...185°F (-40...85°C)
Probe operating temperature	-40...212°F (Optional -40...302°F / -40...446°F) -40...100°C (Optional -40...150°C / -40...230°C)
Display	4-digit LED
Material	Stainless steel 304
Electrical connection	M12 x 1 plug
Protection class	IP67

Wiring

M12 plug	Analog + 2 x PNP	Analog + 2 x NPN																		
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5	Gray	Analog																		

Dimensions in mm



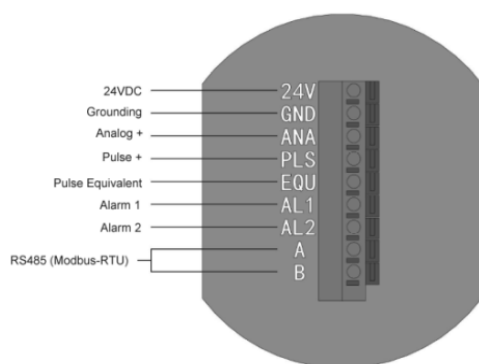
5. Ex-proof intelligent transmitter



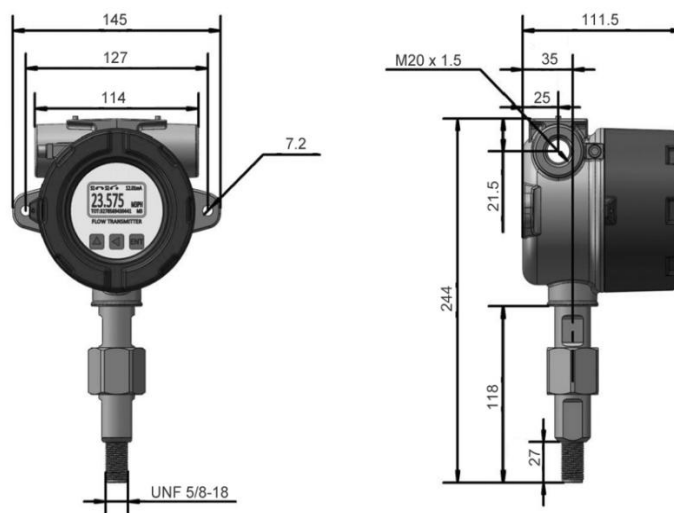
Specifications

Power supply	10...30VDC / 95...240VAC, Max. 2.2W
No load current	<12mA
Analog output	2-wire 0...20mA / 4...20mA
Pulse output	Switching capacity: 500mA (24VDC)
Switching output	Push-Pull (compatible to PNP / NPN)
Display	5-bit for instantaneous flow rate
	13-bit for total flow rate
	Volume unit: m ³ / L / gal / FT ³
	Time unit: day, hr, min, sec
	Refresh: 1s
Conversion Accuracy	0.01%
Probe operating temperature	-40...212°F (Optional -40...302°F / -40...446°F)
	-40...100°C (Optional -40...150°C / -40...230°C)
Ambient temperature	-40...140°F (-40...60°C)
Ex-proof	EX d IIC T6
Material	Stainless steel 304
Electrical connection	M20 x 1 plug
Protection class	IP65

Wiring



Dimensions in mm



Order code**1. Model**

S1000- Electronics for Turbine Flow Meter

2. Pickup

M Magnetic (standard)
H Hall effect
R RF

3. Output

P1 Pulse output
P2 Linearized pulse output
A 4...20mA
D Intelligent transmitter with digital display
E Ex-proof transmitter

4. Temperature

T1 -40...212°F (-40...100°C)
T2 -40...302°F (-40...150°C)
T3 -40...446°F (-40...230°C)