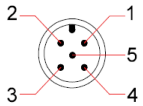
Electronics for Positive Displacement Flow Meter
S2000 Series

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

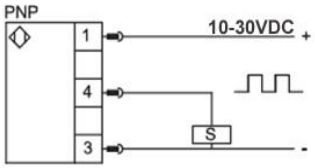
Wiring

M12 plug

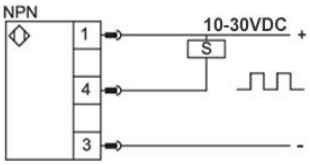


Pin	Color	Signal
1	Brown	Power +
4	Black	Pulse
3	Blue	Power -

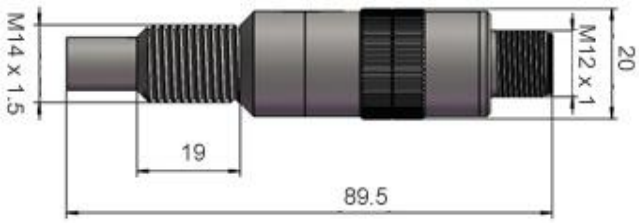
PNP



NPN



Dimensions in mm

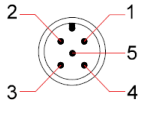


2. Linearized pulse output

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

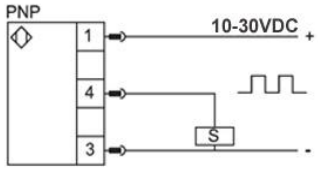
Wiring

M12 plug

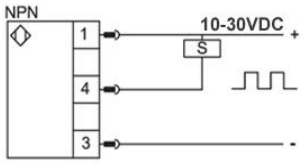


Pin	Color	Signal
1	Brown	Power +
4	Black	Pulse
3	Blue	Power -

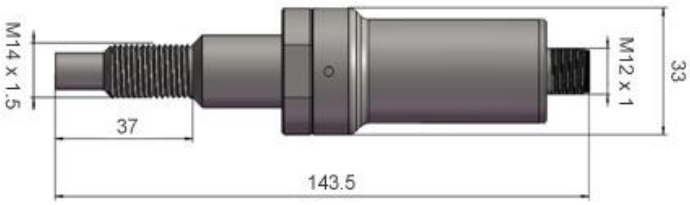
PNP



NPN



Dimensions in mm

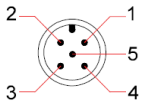


3. Linearized Analog output (4…20mA)

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

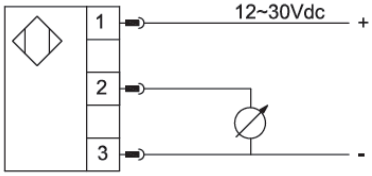
Wiring

M12 plug

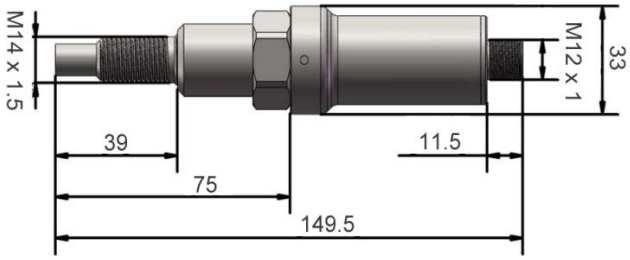


Pin	Color	Signal
1	Brown	Power +
2	White	Analog output
3	Blue	Power -

4…20mA



Dimensions in mm

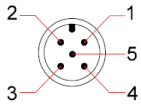


4. Intelligent transmitter with digital display

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 RA(Ω) ≤ (Us-10)V/0.02A
	Linearity: <=0.01% of reading
Accuracy	<=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

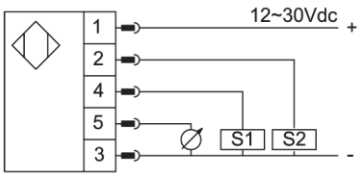
Wiring

M12 plug

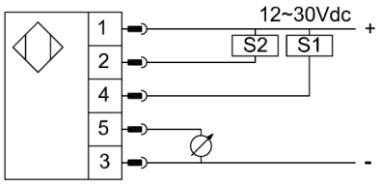


Pin	Color	Signal
1	Brown	Power +
3	Blue	Power -
4	Black	Switching S1
2	White	Switching S2
5	Gray	Analog

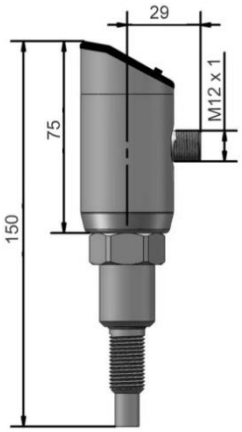
Analog + 2 x PNP



Analog + 2 x NPN



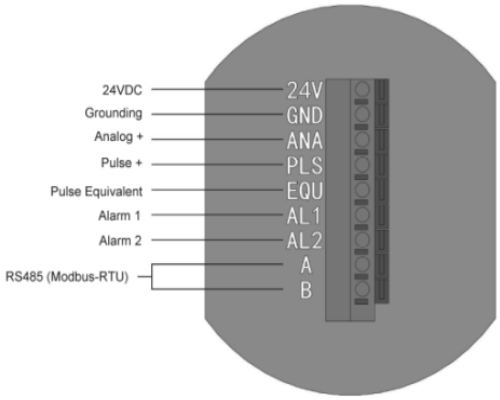
Dimensions in mm



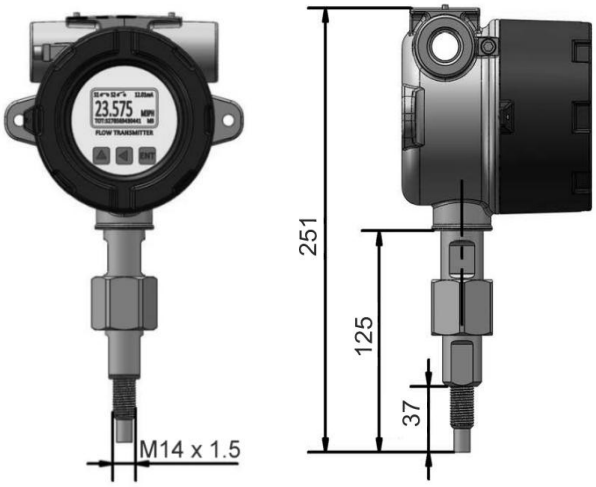
5. Ex-proof intelligent transmitter

Specifications	
Power supply	10…30VDC / 95…240VAC, Max. 2.2W
No load current	<12mA
Analog output	2-wire 4…20mA
Pulse output	Switching capacity: 500mA (24VDC)
Switching output	Push-pull (compatible to PNP / NPN)
Display	5-bit for instanteous flow rate
	13-bit for total flow rate
	Volume unit: m^3/ L / gal / FT^3
	Time unit: day, hr, min, sec
	Refresh: 1s
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 inch (mm)



Order code

1. Model	
S2000-	Sensor for or positive displacement flow meter

2. Output	
P1	Pulse output
P2	Linearized pulse output
A	4…20mA
D	Digital transmitter
E	Ex-proof transmitter

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