

Sensors for Positive Displacement Flow Meter

S2000D Series - Dual-sensor

1). Single Pulse Output with 4 X Pulse Resolution



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 -												

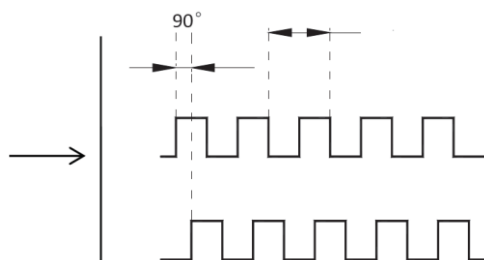
2). Dual-pulse Output (Quadrature signal with 90° phase shift)



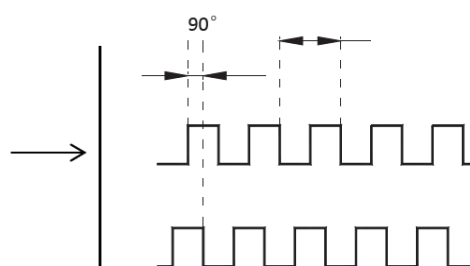
Specifications

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

90° phase shift between two pulse outputs



Output 1 is 90 degree ahead of the output 2



Output 1 is 90 degree behind of the output 2

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>2</td><td>White</td><td>Pulse</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 +	2	White	Pulse	4	Black	Pulse	3	Blue	Power -		
Pin	Color	Signal															
1	Brown	Power +															
2	White	Pulse															
4	Black	Pulse															
3	Blue	Power -															

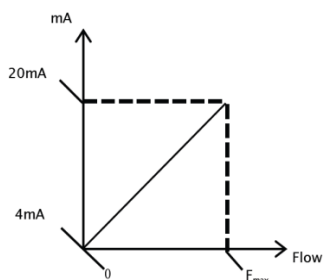
3). 4...20mA Output with Flow Directional Detection (Switch Signal)



Specifications

Power supply	10...30VDC
No load current	<9mA
Output	4...20mA + switch signal (for flow direction)
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

Output: 4...20mA with flow directional detection



Output 4...20mA is for flow rate
Switch output is for flow direction

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>2</td><td>White</td><td>4...20mA</td></tr> <tr> <td>4</td><td>Black</td><td>Switch output</td></tr> <tr> <td>3</td><td>Blue</td><td>Power -</td></tr> </tbody> </table>	Pin	Color	Signal	1	Brown	Power +	2	White	4...20mA	4	Black	Switch output	3	Blue	Power -		
Pin	Color	Signal															
1	Brown	Power +															
2	White	4...20mA															
4	Black	Switch output															
3	Blue	Power -															

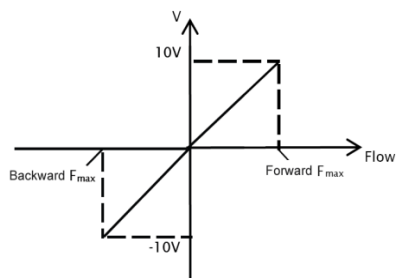
4). -10...10V Output (Flow Direction by Output Section)



Specifications

Power supply	10...30VDC
No load current	<9mA
Output	-10...10V
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

Output: -10...10V

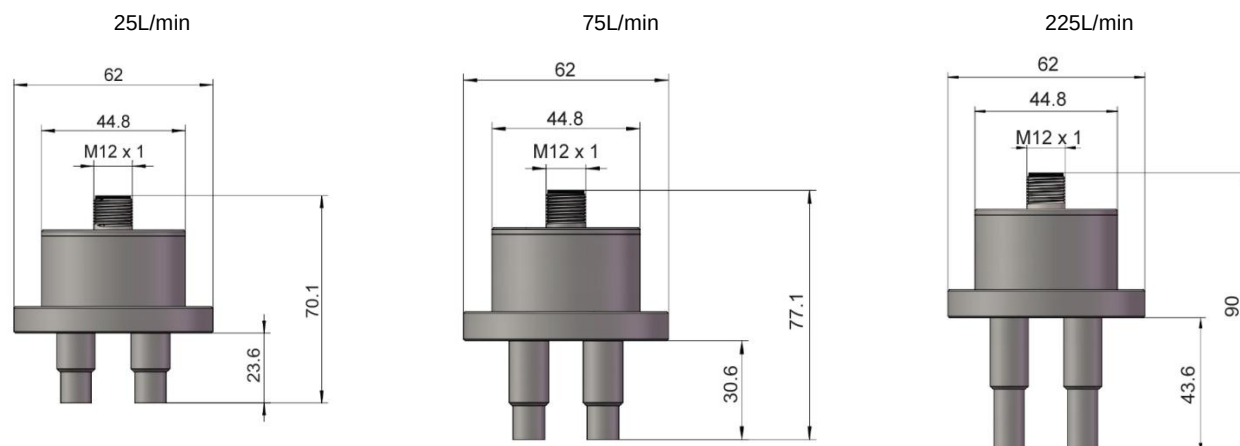


Output -10...0V is for backward flow
Output 0...10V is for forward flow

Wiring

M12 plug			-10...10V	
	Pin	Color	Signal	
	1	Brown	Power +	
	2	White	Output	
	3	Blue	Power -	

Dimensions in mm



Order code

1. Model

S2000D- Dual-sensor for positive displacement flow meter

2. Output

- P1 Single pulse output with 4 x pulse resolution
- P2 Dual-pulse Output
(Quadrature signal with 90° phase shift)
- A 4...20mA with Flow Directional Detection
(Output 4...20mA for flow rate; Switch output for flow direction)
- V -10...10V
(-10...0V for backward flow; 0...10V for forward flow)

3. Temperature

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