

OnlineSensors

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Model: SLS-A

Submersible level sensor

- Analogue output

Description:

The SLS series of submersible level transmitters have been developed using an isolated diaphragm silicon piezo-resistive sensing element housed in a robust stainless steel housing. It has an integrated moulded cable assembly to provide permanent submersible in liquids up to 100m depth for continuous operation.

The device is available in either a raw millivolt output which is great for low power applications or an internal microprocessor is fitted to provide an amplified output such as 4-20mA, 0-10V, 0.5 to 4.5V ratiometric.

The onboard 16-bit microprocessor enables a high level of linearisation, temperature compensation and calibration to be performed ensuring the highest accuracy, stability and repeatability are met for demanding applications such as environmental monitoring and flood defence systems, river, reservoir or borehole measurement.

Product Highlights:	Applications include, but not limited to:
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- Level ranges from 0.5mWG up to 100mWG
- Accuracy $<\pm 0.25\%$, $<\pm 0.15\%$, $<\pm 0.1\%$
- 316 Stainless steel construction
- High integrity overmolded cable assembly
- Various output configurations available
- Low power consumption millivolt signal
- Temperature output, optional

- Environmental monitoring
- V-notch weir flow measurement
- Rivers, reservoirs and boreholes
- Tank, IBC, Tote level measurement
- Telemetry and data logging
- Flood defence monitoring and research
- Academic research

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Specification:

Submersible Level Sensor, Digital - SLS-A	
Sensor technology	Piezo-resistive Silicon Sensor
Output Versions	4-20mA (2-wire), 0-5V/0-10V (3-wire), 0.5 to 4.5V (3-wire ratiometric)
Supply voltage	4-20mA: 8 - 32V dc / 0-5V/0-10V/: 12 - 32V dc / Ratiometric: 2.7 - 5.5V dc
Pressure reference	Gauge (standard), Sealed Gauge, Absolute
Level ranges	0.5, 1, 2.5, 3.5, 5, 10, 20, 30, 50, 100mWG
Safe over pressure	1.5 times rated pressure
Burst Pressure	3 times rated pressure
Accuracy (NL&H)	$\leq \pm 0.25\%$ / $\leq \pm 0.15\%$ / $\leq \pm 0.10\%$ / % FS (dependant on range)
Long term stability:	$\leq \pm 0.10\%$ FS
Compensated temperature range	20 °C \pm +20 °C
Media temperature	-10 °C to +60 °C, non-freezing
Temperature effects	Typical thermal zero and span coefficients $\pm 0.015\%$ FS/ °C
Supply reverse polarity protection	No damage but also no function
Lightning Protection	Integral GDS (gas discharge tube) for lightning protection
Electromagnetic compatibility	CE Compliant
Media wetted parts	316 Stainless Steel, Viton, PUR (EPDM, NBR seals also available)
Permissible media	All fluids compatible with media wetted parts
Electrical connection	PUR submersible cable, terminated in tails. Internal vent tube

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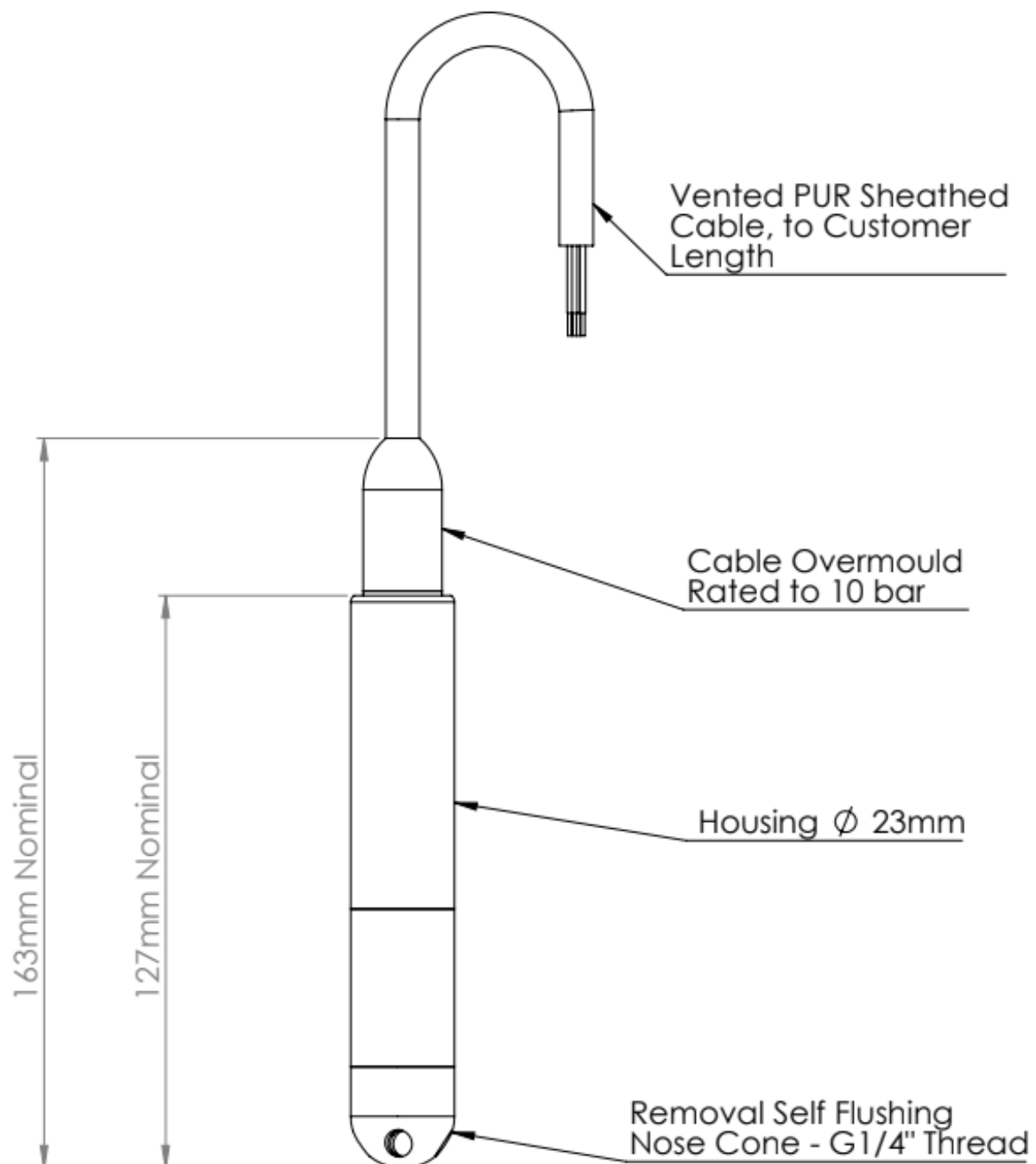
Pressure connection	Nose cone, G1/4" DIN 3852 male when unscrewed
Current consumption	4-20mA: dependant on output signal / 0-5V/0-10V/: 6mA / Ratiometric: 2.5mA
Weight (g)	Transmitter: <270g, Cable: 48g per mtr
Environmental Protection	IP68, Fully submersible up to 100m depth

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Dimensional Drawings:

Submersible level transmitter with moulded cable assembly



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Part Numbering system:

Submersible level transmitter part numbering																			
OS-A - Submersible Level Transmitter - Analogue																			
OS-A - X X - X X X X X - X X - X X X X X X - X X																			
Output Type																			
mV/V	A																		
2mV/V	B																		
10mV/V	C																		
4-20mA (2-wire)	D																		
0-5V (3-wire)	E																		
1-5V (3-wire)	F																		
0-10V (3-wire)	G																		
0.5 to 4.5V (3-wire)	H																		
Accuracy Class																			
0.25%	A																		
0.15%	B																		
0.10%	C																		
Cable Material																			
PUR	A																		
Cable Length (m)																			
3				0	0	3													
5				0	0	5													
10				0	1	0													
15				0	1	5													
20				0	2	0													
25				0	2	5													
30				0	3	0													
40				0	4	0													
50				0	5	0													
100				1	0	0													
Special Length... On request				9	9	9													
Housing Material																			
316 Stainless Steel										B									
Seal Material																			
Viton										V									
(Drinking Water Approved) EPDM										E									
NBR										N									
Level Range																			
0 - 1mWG											0	1	0	0					
0 - 2.5mWG											0	2	5	0					
0 - 3.5mWG											0	3	5	0					
0 - 5mWG											0	5	0	0					
0 - 10mWG											1	0	0	0					
0 - 20mWG											2	0	0	0					
0 - 30mWG											3	0	0	0					
0 - 50mWG											5	0	0	0					
0 - 100mWG											1	0	0	1					
Special Range... On request											9	9	9	9					
Pressure Datum																			
Gauge																		G	
Sealed Gauge																		S	
Absolute																		A	
Special Options																			
None																		0	0