

S12C

Submersible Level Transmitter with Ceramic Sensor and SDI-12



- Accuracy: $<\pm 0.1\%$ FS Total Error
- Ranges from 10mWG to 100mWG
- Gauge, Sealed Gauge or Absolute reference
- Stainless steel or Marine Bronze materials
- Level and Temperature output as standard

DESCRIPTION

The S12C hydrostatic submersible level transmitter, has a piezo-resistive ceramic pressure sensor. The ceramic sensor is suitable for fresh water, seawater, brackish and saline applications. The housing is made from stainless steel as standard with the option of high grade Duplex stainless steel or Marine Bronze. Every device is temperature compensated and calibrated and supplied with a traceable serial number and calibration certificate. The electronics incorporate a microcontroller based electronics circuit, this means there are no adjusting pots and therefore the electronics are very stable. Every device is compensated and calibrated to a thermal error band of $<\pm 0.1\%$ over -5 to $+45^{\circ}\text{C}$. As well as the level measurement the device outputs the temperature value also.

Options Available

- Pressure range and engineering units
- Pressure reference (G, SG or Abs)
- Housing material
- Cable material in PUR, PVC, FEP or TPE
- O ring seal material

Suitable Applications

- River and reservoir level
- Tank and vessel level
- Seawater and estuary level
- Borehole and aquifer level
- Tsunami monitoring systems
- Tidal monitoring systems
- Wave height measurement
- Environmental monitoring
- V-notch weir flow measurement



S12C

Submersible Level Transmitter with Ceramic Sensor and SDI-12

Input Level Range

Nominal pressure, Gauge	mW	10	15	20	25	40	50	75	100
Nominal pressure, Absolute & SG	mW	-	15	20	25	40	50	75	100
Permissible Overpressure	mW	15	30	30	75	75	75	150	150

Input Temperature Range

Temperature Range -20 to +60°C

Output Signal & Supply Voltage

Wire system	Output SDI-12	Supply Voltage
3-wire	(version 1.3, http://www.sdi-12.org/)	6 - 40V dc

Level Sensor Performance

Accuracy (Non-linearity & hysteresis)	<±0.15% / FS (BFSL)
Setting errors (offsets)	Zero: <±0.25% / FS, SPAN: <±0.25% / FS

Temperature Sensor Performance

Accuracy	<±0.5°C
Temperature sensor resolution	<±0.01°C

Permissible Temperatures & Thermal Effects

Media temperature	-20°C to +60°C (non freezing)
Storage temperature	-20°C to +70°C
Compensated temperature range	20°C ±25°C
Total thermal error band	<±0.1% / FS

Electrical Protection

Supply reverse polarity protection	No damage but also no function
Lightening protection	Internally fitted
Electromagnetic compatibility	CE Compliant

Materials

Housing material	316L Stainless Steel Duplex Stainless Steel, UNS31803 (optional) Marine Bronze CA104 (optional)
'O' ring seals	Viton
Diaphragm	Ceramic Al ₂ O ₃ 96 %
Media wetted parts	Housing, diaphragm and 'O' ring seal
Cable sheath material	PUR PVC (optional) FEP (optional) TPE (optional)

S12C

Submersible Level Transmitter with Ceramic Sensor and SDI-12

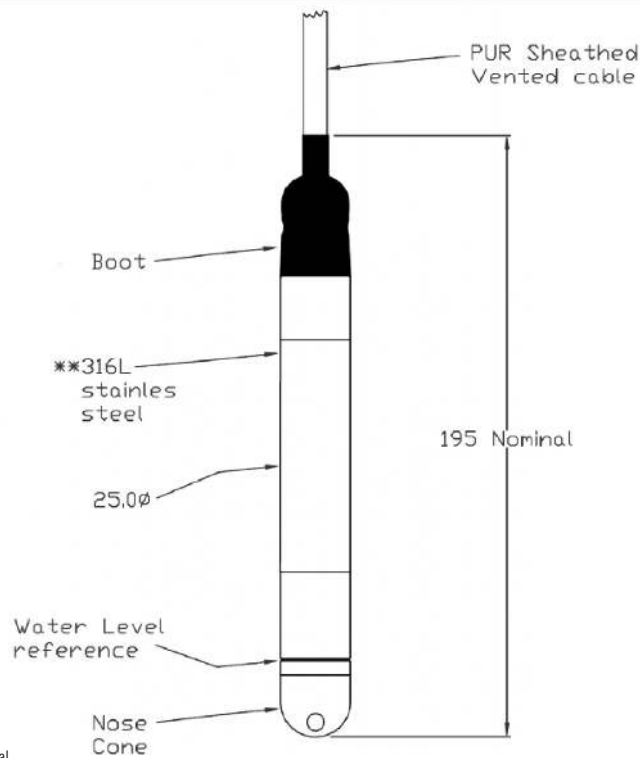
Miscellaneous

Current consumption	<250µA when idle <4mA when active
Weight	Transmitter: 300g including nose cone Cable: 48g per mtr
Installation position	Any

Wiring Designation

Red	Positive Supply
Blue	Negative Supply
Yellow	SDI-12 Output
Green	Cable Screen
White	Transmitter Body

Electrical Connections



**Duplex Stainless Steel (UNS31803) & Marine Bronze CA104 optional

Supported Commands

Devices can be addressed 0 through to 9, refer to SDI-12 spec at <http://www.sdi-12.org/> for further information!