

RANGEABLE RS485/4-20 mA
DEPTH/LEVEL TRANSMITTER
PTM/N/RS485
WITH TEMPERATURE OUTPUT



44

Features

- Fully submersible, 1" diameter
- Accuracy: $\leq \pm 0.1\%$ FS or $\leq \pm 0.25\%$ FS
- Ranges 40" WC to 360 psi
- Rangeable to 25% of FS
- Polyurethane cable - PE/Teflon option
- RS485, 4-20 mA & temperature outputs

Product overview and applications

The PTM/N/RS485 series 44 is an outstanding transmitter and part of a range specifically designed for the measurement of depth and level in water, wastewater and tanks. The series 44 offers RS485 (Modbus) protocol together with a 4-20 mA, 2-wire configuration for both level and temperature. It is rangeable to 25% of the specified FS. Features such as Kevlar strengthened cable, titanium, ballast weights, dataloggers, etc. broaden the installation opportunities.

Examples of applications include:

- Tank level measurement
- Deep wells, lakes, dams, bore holes and reservoirs
- Surface water, irrigation canals and rivers
- Wastewater and sewage treatment plants

Specification

Measurement

Pressure ranges

Any range from 1 to 360 psi FS available, in any engineering units such as psi, Pa, inches H₂O, bar.

Absolute or gauge types available

Proof pressure

FS up to 15 psi: 45 psi

FS > 15 psi up to 360 psi: 3 x FS, (max. 360 psi)

Consult factory for higher proof pressure

Operating temperature range

25 to 125°F (process media)

Compensated temperature range

25 to 125°F

Performance

Without active compensation:

(supplied as standard)

Temperature effects

±1.5% total for 25 to 125°F, > 30 psi FS

±2% total for 25 to 125°F, 7 to 30 psi FS

Prorated for ranges below 7 psi

With active compensation option:

Total Error Band includes linearity, hysteresis, repeatability, thermal effects and Zero and Span set.

≤± 0.15% FS for 25 to 125°F, ≥ 7 psi FS

≤± 0.3% FS for 25 to 125°F, < 7 psi FS

Accuracy

Combined linearity, hysteresis, repeatability, Zero and Span set

≤±0.1% FS (≥ 7 psi FS)

≤±0.25% FS (< 7 psi FS)

Long term stability

0.1% FS/yr for pressure ranges > 30 psi

Prorated for ranges below 30 psi

Under standard conditions

Supply voltage

9 - 30 VDC

Influence of supply voltage < 0.1% FS

Specification continued

Max. load resistance

$RL \leq (V_{supply} - 6V)/0.02A$

1kOhm max.

Output signal

RS485 & 4 - 20 mA (Pressure signal)

RS485 & 4 - 20 mA (Pressure & Temperature signal, with option active compensation)

Temperature accuracy ±1.8°F

Surge (lighting) protection (option)

Interface-Box and Software

Interface-Box (VART199) and Software

(VART244) Required for zero, span, response time adjustments and to re-range. One box is needed for unlimited number of transmitters.

Temperature accuracy ±1.8°F

Resolution:

≤± 0.025% FS for analog output

≤± 0.01% FS for digital output

Output at 4 mA and 20 mA:

adjustable between -5% FS and 105% FS

Span:

adjustable between 25% FS and 110% FS, minimum 1 psi

Adjustable response time:

30 ms, 100 ms, 1s, 10s (default 30 ms)

Insulation resistance

> 50 megohms @ 500 VDC (@ 68°F)

Construction

Pressure media compatibility

Stainless steel 316L, Viton seals

Other seal materials available

Titanium version available

Pressure connection

Closed (Fig. 1) POM nose cone

(supplied as standard)

Open (Fig.2) POM nose cone with ø0.59" opening available as option

Other connections available

Electrical connection

Polyurethane, polyethylene or teflon cable

Fixed or demateable cable connections available

Specification continued

Weight

6 oz approximate (not including cable)

Vibration

10 g, 10 to 2000 Hz

Mechanical shock

100 g / 6 ms

Ordering information

Please specify the following:

1) Model number - PTM/N/RS485 44

2) Electrical connection

15 - Polyurethane cable

13 - Polyethylene cable

21 - Teflon cable

3) Pressure range, including eng. units, type

4) Accuracy

5) Output signal

6) Cable length

7) Interface-Box (VART199) complete with cable and Software (VART244) (if required)

8) Any special feature:i.e. active compensation

Example ordering format:

PTM/N/RS485 44 - 15 - 10 psig - 0.1% -

4 - 20 mA - 30 feet cable

Options

STS offers a wide range of options for these and other similar transmitters. Please consult the factory for any special requirements.

Examples include:

- Alternate electrical configurations

i.e. 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA

- Lightning protection

- Intrinsic safety certification

- Special oil filling for food application etc.

- Alternate construction i.e titanium, hastelloy

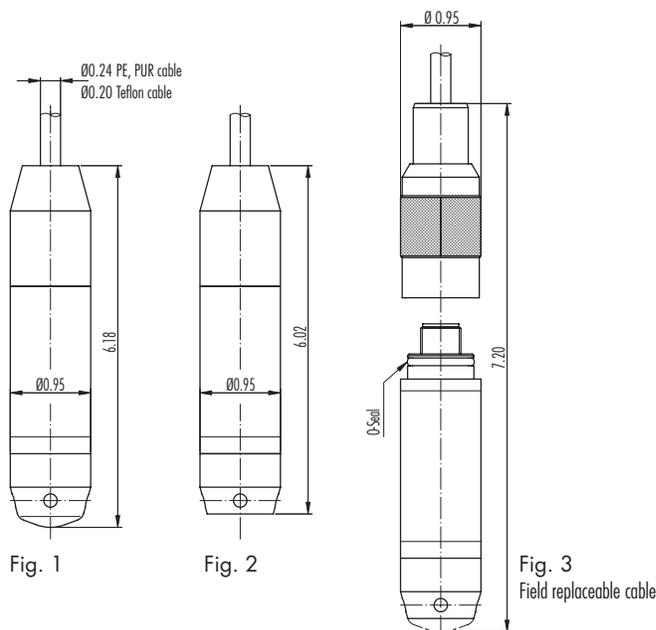
- Alternate seals i.e. EPDM, Kalrez

- Wide range of pressure connectors

- Wide range of electrical connectors

- Datalogging

Dimensions (inches)



Specifications may change without notice.

STS is registered ISO 9001-2000

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