

# 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 H<sub>2</sub>O, 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.

**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

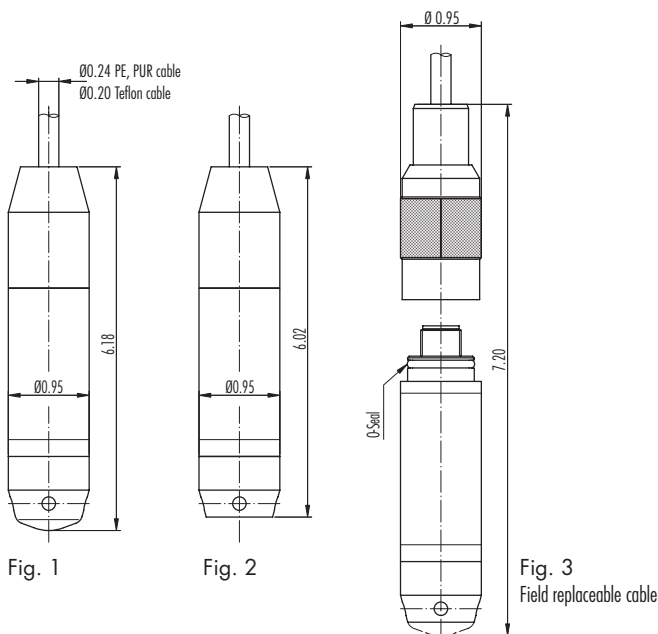
- Alternate seals i.e. EPDM, Kalrez

- 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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