

Tank Gauging System with Two or Four Analog 4-20 mA Level Transducer Inputs and Secondary Containment Leak Detection



Product Description

The TMS2000A1 utilizes most of the functionality and all of the proven reliability of the TMS2000 magnetostrictive Tank Management System in a console designed to accept level data in 4-20 mA format, a typical output for ultrasonic and hydrostatic pressure transducers. Ultrasonic gauging is ideal for many non-contact liquids or grease, as well as powder or granular dry goods, all unsuitable for magnetostrictive, float-based technology. The TMS2000A1 is available in either 2 Transducer/2 Leak Sensor or 4 Transducer/4 Leak Sensor configurations, with all of the I/O, communications and enclosure options of the TMS2000 series.

Console

- Dimensions (W x H x D): 11.8" x 11.5" x 4.75" (300 mm x 292 mm x 121 mm)
- Weight: 14 lb (6.4 kg) (w/ Printer)
- Operating Temperature: -40 °F to 160 °F (-40 °C to 70 °C) w/o Printer
-5 °F to 140 °F (-20 °C to 60 °C) w/ Printer
- Humidity: 95% Non-condensing
- Enclosure Rating: Locking NEMA 12 (IP52), NEMA 4 (IP56) or NEMA 4X (IP56) (304 SS)
- Power Requirements: 115/230 VAC ±15% (w/o Printer) Switchable, 50-60 Hz, 20 W Max.
8-16 VDC or 16-60 VDC Optional
- Memory: Configuration / Setup Data – EEPROM, 50 year data retention, no batteries
Log Reports and Real-Time Clock – Lithium Battery-Backed RAM, 5-10 year data retention
- Audible Alarm: 85 db
- Display: 9-Character, Super Bright LED Data Display, Readable from 25' (7.6 m)
Ultra-High Intensity Alarm LEDS, Visible from 75' (22.9 m)
Display data includes Product Level, Gross Volume, % Volume, and Ullage
- Communications: RS-232 Included Standard, RJ-13 Jack
RS-485 Included Standard, RJ-13 Jack (For Pneumercator Peripherals)
Internal, Secured Modem, Fax / Modem, Network Interface, or ModBus Optional
- Probe / Sensor Capacities: 2 or 4 Two-Wire, 4-20 mA Input Level Sensors (Ultrasonic, Pressure, Etc.)
2 or 4 Dry Contact Leak/Point Level Sensor Inputs
- I/O, Non-Haz.: Standard: 2 Relays, 1 Form C, Rated 10 A@120 VAC, 6 A@240 VAC, w/ 2 Opto-Isolated Inputs
Expansion Options: (1 slot available)
4 Relays, 1 Form C, Rated 10 A@120 VAC, 6 A@240 VAC, w/ 4 Opto-Isolated Inputs
8 Relays, 1 Form A, Rated 5 A@120 VAC, 5 A@240 VAC w/ 8 Opto-Isolated Inputs
16 Relays, 1 Form A, Rated 5 A@120 VAC, 5 A@240 VAC
6 or 12-Ch. Programmable Analog Outputs:
0-1 mA, 0-20 mA, 0-24 mA, 4-20 mA, 0-5 VDC, 1-5 VDC

Transducer (If supplied by Pneumercator)

- Technology: Air Ultrasonic, Two-Wire 4-20 mA Current Loop
- Accuracy (Minimum): UT420-360:
Product Level: 0.125" (3 mm)
Water Level: N/A
Temperature: N/A
- Sensor Body Materials: Valox 420, UV Stabilized
Mounting: 2" NPT Bung Opening
- Location Approval: UL Class I, Div 1, Group D; cUL Class I, Zone 0, Group IIB
- Operating Temperature: -40 °F to 158 °F (-40 °C to 70 °C)
- Operating Pressure: -10 to 50 PSIG (-69 kPa to 345 kPa)
- Field Wiring: 22AWG, 2-Conductor twisted pair w/ shield
Belden 8441, Belden 8761, Alpha 1736C or equiv., maximum length 1000' (305 m)
- Models: UT420-360 max. tank height 30' (9.1 m)

Sensors

- LS600LD Float, Containment, Manway and Piping Sumps, Dispenser Pan
- LS600xx Multi-Float, High / Low Level and Pump Control
- RSU800 Float, Wet Annular / Reservoir
- LS610 Float, Dry Annular

Remote Displays/Annunciators

- ETD1000 Addressable (up to 16), Multi-Drop, Remote Electronic Tank Display Panel
- TD1000 Tandem Remote Display
- RA200KR Remote Audible Horn/Visual Strobe Alarm
- ETD1000W Wireless Remote Electronic Tank Display Panel*
- RA400W Wireless Programmable Remote Audible/Visual Alarm Panel*

*Note: MPX200 Master Peripheral Expansion Module required.

Certifications / Approvals

- UL/cUL – System designed in accordance with UL/cUL, but not presently listed. Availability with approval in 2013.
- FCC Part 15B, Part 68

Model Numbers

- TMS2000A11 – Two 4-20 mA Inputs / Two Sensor Inputs
- TMS2000A12 – Four 4-20 mA Inputs / Four Sensor Inputs