Modular, Multi-Tank Gauging System w/Color Touch Screen Suitable for Indoor and Outdoor Applications, EPA-Compliant In-Tank and Secondary Containment Leak Detection

Product Description

The TMS4000 Tank Management System is the latest generation of the TMS family, and the first touchscreen-based system in the industry available for both indoor and outdoor use without requiring a secondary enclosure, supplemental heating or cooling. The large, 10.4" color, SVGA display provides an extremely easy-to-use graphical interface with real-time tank measurement data presented in three distinct formats; easy-to-read meters, detailed spreadsheet and quick-view bar graphs. Each format is user-configurable, and the spreadsheet display prioritizes active or alarming tanks to the top of the window. Standard communications interfaces include Ethernet TCP/IP (e-mail/SMS alerts included), USB host and client, RS232 (2 standard, expandable to 6) and RS485. Single, dual or quad ModBus, 4-20ma and other industrial protocols are supported. Hardcopy reports are provided via optional internal thermal or impact printer in portrait and 116-character landscape modes, Ethernet-connected printer, or PDF to flash drive via front-panel weatherproof USB port. Extensive system security settings allow the administrator to assign users with widely varying degrees of accessibility. Localization features include operation in English, Spanish or French, with Metric(LT/mm) or English(Gal/in) units of measure, and an auto-switching universal power supply that will operate with any line voltage between 95-250VAC, 50/60Hz.

Console

- Dimensions (W x H x D):   14.3" x 11.8" x 7.9" (363 mm x 300 mm x 200 mm)
- Weight: 21 lb (9.6 kg) (4-Tank w/ Printer), 23.5 lb (10.7 kg) (12-Tank w/ Printer)
- Operating Temperature: -22 ºF to 160 ºF (-30 ºC to 70 ºC) w/o Printer (Consult factory for applications below -22 °F)
  -5 ºF to 140 ºF (-20 ºC to 60 ºC) w/ Printer
- Humidity: 95% Non-condensing
- Enclosure Rating: Locking NEMA 12 (IP52) or NEMA 4X (IP56) (304 SS)
- Power Requirements: 115/230 VAC ±15% Autoswitching, 50-60 Hz, 30 W Max.
  8-16 VDC or 16-60 VDC Optional
- Memory: Configuration/Setup Data – SD Card, 50 year data retention, no batteries
  Log Reports – Removable SD Card, 50 year data retention, no batteries
  Real-Time Clock – Lithium Battery-Backed
- Audible Alarm: 85 db

- Display: 10.4" (264 mm) Diagonal SVGA LCD w/Integral 7H Hardness Touch Panel – Glove Touchable
  Dedicated High Brightness POWER, NORMAL, ALARM LEDS, Visible from 75' (22.9 m)
- Communications: Two (2) RS-232 Included Standard, RJ-13 Jack, Optional Expansion to six(6), four of which are field-selectable for RS232 or RS485
  Single RS485 Included Standard, RJ-13 Jack (For Pneumercator Peripherals)
  Ethernet TCP/IP Port Included Standard
  USB Host and Client Included Standard
  Internal, Secured Modem, Fax / Modem, Single/Multi-Channel ModBus Optional
- Probe/Sensor Capacities: Probe/Sensor Card Options (3 slots available) All Sensor Inputs Supervised-Wiring-Ready
  4 Probe/8 Sensor, 16 Probe, 16 Sensor (Max 48 Tanks)
- I/O, Non-Haz.: Expansion Options (2 slots 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
  32 Relays, 1 Form A, Rated 1 A@24 VDC
  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

Probes

- Technology: Magnetostrictive, Dual Float, w/ reflection resolution doubling
- Accuracy (Minimum):

	MP45xS:		MP46x:
Product Level:	0.0005" (0.013 mm)	Product Level:	0.01" (0.25 mm)
Water Level:	0.001" (0.025 mm)	Water Level:	0.01" (0.25 mm)
Temperature:	0.001 ºF (0.0006 ºC)	Temperature:	0.001 ºF (0.0006 ºC)

- Materials: Shaft: 316 SS or PVDF
  Floats: 316 SS, Buna-N, Urethane, or PVDF
- Mounting: In-Tank Leak Testing: 4" (102mm) diameter riser
  Inventory Only: 2" (51 mm) minimum riser or direct bushing / flange mount
- Temperature Sensing: 5 Thermistors in shaft, 1 in probe head
- Location Approval: UL Class I, Div 1, Groups C and D; cUL Class I, Zone 0, Group IIB
- Operating Temperature: -40 ºF to 175 ºF (-40 ºC to 80 ºC)
- Operating Pressure: 150 PSIG (1034 kPa) 316SS, 50 PSIG (345 kPa) PVDF
- Field Wiring: 22AWG, 2-Conductor twisted pair w/ shield
  Belden 8441, 8761, Alpha 1736C or equiv., max. length 3000' to 4600' (914 m to 1402 m)
- Models: MP45xS Series rigid SS max. length 24' (7.3 m)
  MP46xS Series flex. PVDF max. length 70' (21.3 m)

Sensors

- ES825-200F — Electronic, Discriminating - Containment, Manway and Piping Sumps, Dispenser Pan, Dry Annular, Includes Fault Detection Feature as Standard
- ES825-100F — Electronic, Non-Discriminating - Containment, Manway and Piping Sumps, Dispenser Pan, Dry Annular, Includes Fault Detection Feature as Standard
- 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
- HS100D — Polymer / Float – Wet Well, 10' to 20' (3.1 m to 6.1 m) depth
- HS100ND — Polymer – Dry Containment, 1' to 45' (0.3 m to 13.7 m) length

Most sensors are available with Fault-Detect Supervised sensor and wiring option. Add "F" Suffix to Model Number

Remote Displays

- ETD1000 — Addressable (up to 16), Multi-Drop, Remote Electronic Tank Display Panel
- RA400 — Addressable (up to 16), Multi-Drop, Programmable Remote Audible/Visual Alarm Panel
- 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 Approved, File #E139464