

## Advantages

- Standalone ISD system.
- Approved by the California Air Resources Board EO VR-202 & VR-208.
- Includes TS-VRM vapor recovery monitoring software and optional secondary containment monitoring.
- Dispenser-based disabling prevents the entire site from shutting down in the event of an EVR failure.
- Wired-less Flow Meter and Pressure Sensor interface option.
- Ethernet-ready, web-based remote access provides the user with remote access to VRM status information, reports and alarm information using any web browser.
- Create custom rules to send e-mails and text messages on alarms and events directly from the console to service and compliance personnel.
- User-friendly touch screen interface with icon-based navigation.
- Scalable open architecture for easy and cost-saving future upgrades.

## TS-EMS Environmental Monitoring System

The TS-EMS environmental monitoring system can perform in-station diagnostic vapor recovery monitoring (VRM) and secondary containment monitoring (SCM) and interface to an existing tank gauge.



### Specifications

- Number of dispensers monitored: 16.
- Input channels: 2.
- Output only channels: 2.
- Display type: touch screen LCD.
- Printer type: impact.
- Volume units: gallons or liters.
- Display size: 320 × 240 pixels.
- Power requirements: 110 to 220 VAC, +15%, -10%, 150 Watt maximum, 1½ Amps.
- Operating temperature: 32° to 104 °F (0° to 40 °C).
- Storage temperature: -4° to 140 °F (-20° to 60 °C).
- Intrinsic safety rating:  
US - Class I, Div. I, Group D.  
Europe - Group IIA, Zone 0.
- LCD backlight contains mercury, dispose of properly.

### Applications

The flexible architecture of the TS-EMS allows multiple applications to run concurrently, satisfying multiple monitoring needs.

- The vapor recovery monitoring application gauges the effectiveness of a station's vapor recovery equipment

through continuous monitoring of gasoline vapors during fueling operations.

- Secondary containment monitoring application continuously monitors the interstitial spaces of double wall tanks, lines and sumps, and notifies station owners when a release of product into the environment has occurred.

### Capabilities

The TS-EMS is built on an established open-system software platform.

- Standard Ethernet connection allows easy integration to existing wide area networks.
- XML-based software allows remote access to data without additional software.
- Graphical touch screen LCD allows text to be displayed in native language.
- Generic interface modules give flexibility in configuring station monitoring requirements.
- E-mail notification gives station owners real-time status information.
- Multiple printing options give flexibility in style and format of reports.

# Environmental & Tank Monitoring

Model	Description
TEMSDPI/V	TS-EMS console with display, printer, DIM, VRM software and one TS-PRB, TS-420IB and TS-10ARLY
TEMS2DPI/V	TS-EMS console with display, printer, DIM, VRM software, one TS-PRB and TS-420IB, and two TS10ARLY
TEMS3DPI/V	TS-DTU ready TS-EMS console with display, printer, DIM, VRM software, and one TS-10ARLY module
TEMSDPI/VS	TS-EMS console with display, printer, DIM, VRM and SCM software, and one TS-PRB, TS-420IB and TS-10ARLY
TEMS2DPI/VS	TS-EMS console with display, printer, DIM and SCM software, one TS-PRB and TS-420IB, and two TS-10ARLY
TEMSDPI/B	TS-EMS console for balance sites with display, printer, DIM, VRM (1.1) software and one TS-PRB, TS-ACI, TS-420IB and TS-10ARLY
TEMS2DPI/B	TS-EMS console for balance sites with display, printer, DIM, VRM (1.1) software, one TS-PRB and TS-420IB, two TS-ACI and TS-10ARLY

- Notes:
1. Appropriate DIM cable must be ordered separately.
  2. TEMS and TEMS3 systems can support up to six dispensers. TEMS2 systems can support up to twelve dispensers. All models can be expanded to support up to 16 dispensers with additional modules.
  3. The appropriate number of TS-VFM vapor flow meters and one TS-VPS vapor pressure sensor must be ordered separately to perform vapor recovery monitoring.
  4. TS-ACI modules and hook signal wiring are only required for balance site installs.

## TS-EMS Console Hardware and Software Options

TS-EMS consoles come standard with the ability to perform vapor recovery monitoring. The following software and hardware options can be added to customize your console. The internal hardware options will be factory installed when ordered with the console.

### Internal Hardware Options

Part Number	Description
TS-MDMIB	(M) Internal modem, includes fax and data software capability

### Internal Software Options

Part Number	Description
TS-SCM	(S) Secondary containment monitoring

## TS-EMS Fuel Management System Console Interface Modules

TS-EMS consoles come standard with a power supply module, a controller module and a model dependent set of interface modules that can support up to 6 or 12 dispensers. In some situations non-standard module configurations may be required. Additional modules will be shipped separately from the EMS console. Six total modules can be installed with a maximum of four intrinsically safe modules and a maximum of three of any one kind of module.

### Intrinsically Safe Modules

Part Number	Description
TS-PRB	12 input probe module, VFM flow meters
TS-420IB	8 input 4-20 mA module, VPS and SCCM pressure sensors

### Non-Intrinsically Safe Modules

Part Number	Description
TS-RLY	8 output relay module, low power dispensers and SCCM solenoids
TS-10ARLY	6 output 10 Amp relay output module, high power dispensers and SCCM solenoids

### External Modules

Part Number	Description
TS-DTU/P	Data transfer unit for wired-less VFM and VPS communications

Note: Order one TS-DTU/P and one TS-DRK/x install kit per dispenser. Order one additional TS-DTU/P for the console.

## Dispenser Interface Module Cables

Part Number	Description
TSP-WDCBL	Wayne cable
TSP-TDCBL	Tokheim cable
TSP-GDCBL	Gilbarco cable
TSP-GSDCBL	Gilbarco G-Site cable
TSP-BDCBL	Bennett 512 cable



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## TS-EMS Environmental Monitoring System Ordering Guide

The TS-EMS environmental monitoring system comes standard with display, printer and dispenser interface module. An internal TS-MDMIB modem can be added as a hardware option. Order the TEMSDPI/VS if the secondary containment monitoring software option is required.



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