

EVO™ 400

EVO™ 400 provides inventory management, compliance monitoring, and leak detection with advanced automation and remote access for small to mid-size fuel systems. Designed for easy installation and long-term reliability, EVO™ 400 delivers a fully integrated system at a cost-effective price, with the security that you've come to expect from the EVO™ Series.

HIGHLIGHTS

Full monitoring system at the cost of just a console

Highly accurate, real-time fuel inventory monitoring

Automated compliance monitoring, testing, and reporting

Continuous electronic line leak detection (optional)

Advanced pump monitoring and control

Pre-configure software tool for fast, hassle-free setup

Anywhere, anytime access via PRO™ Connect

Includes all install hardware for turnkey installation

Custom security levels, user tracking, & multifactor log-in

Latest TLS/SSL protocols for secure data encryption



Capabilities

- Inventory monitoring
- Inventory reconciliation*
- Tank autocalibration*
- Static tank testing
- Statistical Continuous Automatic Leak Detection (SCALD®)*
- Turbine Pump Interface™ (TPI)
- Containment compliance monitoring
- Electronic Line Leak Detection (ELLD)*
- Generator ELLD with pump shutdown bypass*
- AUTO-LEARN® ELLD line learning*
- Statistical Line Leak Detection (SLLD)*
- Programmable logic conditions (custom applications)
- Dual-sensor (FMP-ULS) connectivity in parallel per input
- Remote access via PRO™ Connect

**Optional capability*

DO MORE WITH EVO™

Leverage the power of an EVO™ to help operate and maintain your fuel system and network operations as efficiently as possible.



**TURBINE PUMP
INTERFACE™**



**INVENTORY
RECONCILIATION**



**ELECTRONIC LINE
LEAK DETECTION**



**FLOW RATE
MONITORING**

HIGHLIGHTS CONTINUED

Inventory Monitoring

Provides real-time tracking of fuel levels within storage tanks. This enables station owners to manage inventory effectively, reducing the risk of runouts or overfilling.

Inventory Reconciliation**

Compares dispensed fuel amounts with actual inventory levels to identify discrepancies. This helps detect potential leaks or theft, ensuring product accountability and environmental compliance.

Tank Autocalibration**

Automatically adjusts tank capacity measurements to reflect actual conditions. This enhances measurement accuracy, leading to more precise inventory management and compliance reporting.

Static Tank Testing*

Conducts scheduled, non-intrusive tests to verify tank integrity. Station owners benefit by ensuring regulatory compliance and preventing environmental contamination.

Statistical Continuous Automatic Leak Detection (SCALD®)*

SCALD® continuously analyzes data to detect tank leaks without requiring shutdowns or interrupting fueling. Ideal for 24/7 sites with minimal quiet periods, it ensures compliance without disrupting operations.

Containment Compliance Monitoring

Monitors containment sumps and tank interstitial for leaks. This ensures early detection of containment failures, protecting the environment and aiding in regulatory compliance.

Programmable Logic Conditions (Custom Applications)

Enables customization of system responses based on specific site conditions. This flexibility allows station owners to automate processes, enhancing operational efficiency.

Electronic Line Leak Detection (ELLD) (Optional)

Utilizes electronic sensors mounted in the submersible pump to detect leaks in fuel lines. Early detection prevents product loss and environmental hazards, ensuring system integrity.

AUTO-LEARN® ELLD Line Learning (Optional)

Automatically learns the characteristics of fuel lines to enhance leak detection accuracy. This ensures precise, customized leak detection, reducing the risk of false alarms and enhancing overall system accuracy.

Statistical Line Leak Detection (SLLD) (Optional)

Analyzes pressure and flow data over time to identify leaks. This allows sites with constant fuel flow to perform 0.2 gph leak testing, even during peak operation, which ensures continuous compliance without disrupting operations.

Dual-Sensor Connectivity in Parallel per Input

Allows two FMP-ULS sensors to connect to a single input channel in parallel. This expands monitoring capabilities without additional hardware, optimizing system resources.

Remote Access via PRO™ Connect

Provides off-site access to system data and controls through a secure web interface. Station owners can monitor and manage their sites remotely, improving response times and operational oversight.

Turbine Pump Interface™ (TPI)

Creates a network between intelligent pump controllers and EVO™ ONE allowing real-time data sharing and intelligent system responses. This enables remote troubleshooting and reduced downtime features like:

- **Pump in Water Automation**
Detect water in tanks and automatically shut off the affected pump, preventing water from being pumped into a customer's vehicle.
- **Clogged Pump Escalation**
Detect, verify, and automate the resetting of a pump to clear clogs and bring them back online faster without a service call.
- **Tank Leveling & Priority**
Balance the levels of multiple tanks with the same fuel type or prioritize one tank for faster, more efficient fuel deliveries.

*Requires the purchase/use of leak detection probes.

**Leak detection probes are recommended to improve accuracy of results.

SPECIFICATIONS

Inputs & Connectivity

Universal Device Protocol inputs	14
Maximum tanks monitored	14
Maximum sensor input capacity	14, 28*
Lines capacity	4
Maximum total device inputs	14, 28*
Maximum AC input channels	4
Dry contact input channels	2
Relay output channels	4
Connectivity	Ethernet, RS-232, RS-485, standard USB, USB Mini-B
Communication protocol support	MQTT, MODBUS®, XML, Veeder-Root®

*Requires connecting two FMP-ULS sensors per channel.

Hardware

Dimensions (L x W x H)	13.75 in x 3.25 in x 8 in (350 mm x 83 mm x 205 mm)
Display type	7 in (17.78 cm) color LCD touch screen
Printer type	External (network or USB)
Alarm	Internal audible alarm
LEDs	Alarm, warning, and power
Power requirements	110 to 240 VAC, 50/60 Hz, 1.0 amp
Operating temperature	32° F to 104° F (0° C to 40° C)
Storage temperature	-4° F to 104° F (-20° C to 40° C)
Humidity	0-90% non-condensing
Approvals	UL, cUL, ATEX, IECEx, GSA IT Security
Certifications	Third-party certification of leak detection capabilities

Security

- Customizable user roles
- User activity tracking
- Multifactor authentication
- Third-party verified security
- GSA IT security approval
- Latest SSL/TLS protocols

Components

- 1

 Cover
- 2

 LCD Touch Screen
- 3

 LED Indicators
- 4

 Annunciator (audible alarm)
- 5

 RS-485 / TPI
- 6

 USB Mini-B Port
- 7

 Ethernet / USB Port (Type-A)
- 8

 RS-232
- 9

 Top and Bottom Knockouts

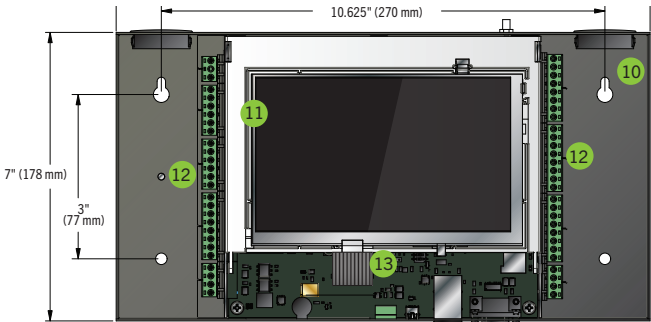
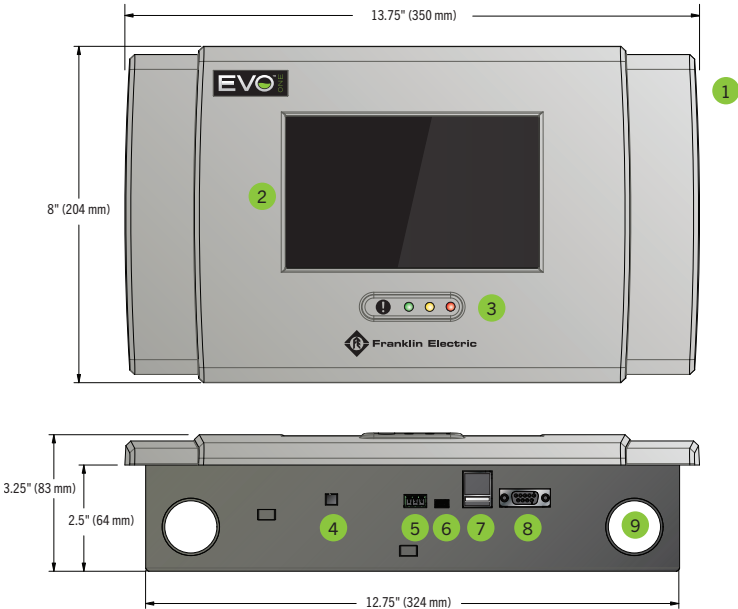
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 Mounting Holes
- 11

 Flip Up Panel (Touch Screen)
- 12

 Termination Blocks
- 13

 Main Board



ORDERING INFORMATION

EVO™ model, software, and hardware options may be listed separately or combined when ordering. Systems shipped from the factory will list the combined part number. Complete part numbers have a specific order and are created using the following guidelines:

EVO401 DW - TRFLGC

EVO401 = EVO™ 400 enhanced base model, up to 14 channels

DW = Hardware Options (choose all that apply)

D = Display (color LCD touch screen)

W = Wi-Fi

TRFCLG = Software Options (choose all that apply)

T = SCALD® 24-hour tank testing

R or F (R) = Reconciliation/Autocalibration or

(F) = Reconciliation/Autocalibration with Flow Rate Monitoring

L or G (L) = Electronic Line Like Detection or

(G) = Generator Electronic Line Leak Detection

C = Enhanced logic conditions including value, counter, value compare, value change, timer, and latch

Example: EVO401DW-TFL = EVO™ 400 enhanced base model, up to 14 channels with display, Wi-Fi, SCALD®, Reconciliation/Autocalibration with Flow Rate Monitoring, and Electronic Line Leak Detection.

External Printer

Model	Description
FMP-ETP	External thermal printer, includes USB cable, power cord, and wall mount hardware
FMP-EPPC	Case of 25 thermal printer paper rolls

Note: The external printer measures 5.6" w x 5.2" h x 8.0" d (142 mm x 132 mm x 204 mm) and can be mounted to wall next to the EVO™ using the included hardware.

Hardware & Software Field Upgrades

The following software and hardware options can be added to customize your EVO™ once it's been installed in the field.

Internal Software Field Upgrades

Model	Description
TS-TT	Statistical Continuous Automatic Leak Detection (SCALD®) 24-hour tank testing
TS-TRAC	Tank inventory reconciliation and autocalibration
TS-TRAC-F	Reconciliation/autocalibration and flow rate monitoring software
TS-FLOW	Flow rate monitoring
TS-CON	Enhanced logic conditions including value, counter, value compare, latch, and DEF/AdBlue® recirculation
TS-ELLD	Electronic line leak detection
TS-ELLD-G	Electronic line leak detection for generator applications

Note: The serial number of the existing EVO™ must be provided when ordering internal software field upgrades.

Hardware Field Upgrades

Model	Description
FMP-LCD	Display upgrade
FMSP-24MBS-W/R	Wi-Fi upgrade, includes new Main Board with Wi-Fi hardware and Wi-Fi antenna
FMP-ETP	External thermal printer, includes USB cable, power cord, and wall mount hardware

Note: The external printer measures 5.6" w x 5.2" h x 8.0" d (142 mm x 132 mm x 204 mm) and can be mounted to wall next to the EVO™ using the included hardware.

Note: The serial number of the existing EVO™ must be provided when ordering the FMSP-24MBS-W/R.

ORDERING INFORMATION CONTINUED

Spare/Replacement Internal Boards

Model	Description
FMSP-24MBS	Spare/Replacement Main Board, no software options
FMSP-24MBS/R	Replacement Main Board, factory programmed with existing software options
FMSP-24MBS-W/R	Replacement Main Board with Wi-Fi hardware and Wi-Fi antenna, factory programmed with existing software options
FMSP-UDP400	Spare/Replacement 14 Channel UDP Input Board

Note: The serial number of the existing EVO™ must be provided when ordering the FMSP-24MBS/R and FMSP-24MBS-W/R.

Spare/Replacement Hardware

Model	Description
FMSP-LCD	Spare/Replacement LCD Display
FMSP-24MBS-W/R	Replacement Main Board with Wi-Fi hardware, factory programmed with existing software options
FMP-24FUSE	Replacement fuse kit
FMP-24TRMBLK	Replacement terminal blocks
FMSP-24CVR	Replacement cover without existing LCD
FMSP-24CVRWD	Replacement cover with existing LCD
FMSP-24CBL1	Ribbon Cable - Display to Main Board

Printer Paper Supplies

Model	Description
FMP-EPPC	Case of 25 thermal external printer paper rolls

Devices

EVO™ Series Electronic Line Leak Detection Kits

Model	Description
FMP-LS500-U/2	2-line ELLD kit, includes (2) pressure transducer, (1) leak generator kit (TS-ALCAL), (1) needle valve kit (TS-ALNIP)
FMP-LS500-U/3	3-line ELLD kit, includes (3) pressure transducer, (1) leak generator kit (TS-ALCAL), (1) needle valve kit (TS-ALNIP)
FMP-LS500-U/4	4-line ELLD kit, includes (4) pressure transducer, (1) leak generator kit (TS-ALCAL), (1) needle valve kit (TS-ALNIP)
TS-ALCAL	Leak generator kit
TS-ALNIP	Needle valve kit for standard fuels
TS-AFALNIP	Needle valve kit for E85 fuel

Additional Compatible Devices

Model	Description
FMP-ULS	Universal liquid sump sensor
FMP-UHS	Universal hydrostatic sensor
FMP-DDS-UD	Discriminating dispenser sump sensor with simple apparatus connection
FMP-DTS-U	Discriminating turbine sump sensor)
FMP-EIS-U	Electro-optic interstitial sensor
FMP-DIS-U	Discriminating interstitial sensor
FMP-HIS-U	Hydrostatic interstitial sensor, 11"
FMP-HIS-XL-U	Hydrostatic interstitial sensor, 21"
FMP-CDS-U	Corrosion Detection Sensor
FMP-DPS-U	Desiccant Pack Sensor with single and multi-pack hanger and installation kit
TSP-DMS-12	Discriminating magnetostrictive sensor, monitors 12" (305 mm) of liquid & measures 22" (559 mm) in length
TSP-DMS-24	Discriminating magnetostrictive sensor, monitors 24" (610 mm) of liquid & measures 34" (864 mm) in length
FMP-LSU500-U	Replacement pressure transducer - UDP protocol
TS-RA1	Standard intensity, tank overfill alarm with light and horn
TS-RA2	High intensity, tank overfill alarm with light and horn
TS-RK	Remote tank overfill alarm acknowledge unit

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