Franklin Electric
FUELING SYSTEMS

ELECTRONIC LINE LEAK DETECTION

Electronic Line Leak Detection (ELLD) is an optional EVO™ Series software feature that allows you to connect your fuel management system with your pipework system to detect leaks through a transducer device installed in the submersible pump.

HIGHLIGHTS

- ELLD is a pressure-based system that uses line information to monitor changes in pressure. It determines if a line is tight or if there is a leak and will provide 3.0 gph hourly, 0.2 gph monthly, and 0.1 gph annual precision line leak detection.

- With ELLD, Auto-Learn® technology automatically learns the pressure characteristics of each pipeline for precision leak detection.

- No pipe type and length programming required.

- Monitors flexible, steel, and/or fiberglass pipelines in any combination up to certified maximum values.

- Works with submersible pumps generating 25 psi or more.

- Automatically performs 3.0 gph, 0.2 gph, and 0.1 gph line tests, as well as other line pressure checks.

- Includes the industry's only statistical line leak detection (SLLD) which allows busy sites with high fuel sales volume and very few quiet periods of no dispensing to achieve 0.2 gph leak testing.

- Positive submersible pump shutdown in the event of a leak.

- Optional feature of EVO™ 550, EVO™ 5000, EVO™ 600, and EVO™ 6000.

- Intrinsically safe and explosion-proof options.

- Dispenser hook isolation and turbine pump interface (TPI) pump control options.

- Remote access to line pressure, test, and alarm information.

SPECIFICATIONS

Dimensions	6¼" × 2" NPT
Operating temperature	-40 °F to 149 °F (-40 °C to 66 °C)
Operating pressure	0 to 100 psi (0 to 689 kPa)
Probe cable	Belden™ cable #9363-22 AWG, #9364-20 AWG or #9365-18 AWG
Max cable length	500' (152.4 m) maximum sensor to EVO™ distance
Sensor port fitting	2" female NPT
Sensor material	Anodized aluminum body and stainless steel sensor
Fuel Compatibility	Diesel with or without biodiesel blends up to 5% (B5), diesel with biodiesel blends between 6% - 20% (B6 - B20), diesel with biodiesel blends between 97% - 100% (B99 - B100), gasoline with ethanol blends up to 10% (E10), mid-range ethanol/gasoline blends of (E15-20), high-range ethanol/gasoline blends (E51-83) commercially sold as E85

SPECIFICATIONS CONTINUED

Capabilities

- Performs a 3.0 gph leak and pressure test after every dispense cycle or 45 min. Positive shutdown of the affected turbine(s) on test failure.

- Performs a 0.2 gph monthly and 0.1 gph annual precision leak test during the thermally stable periods of dispensing. Optional positive shutdown of the affected turbine(s) on test failure.

- Performs pressure up, catch pressure, and other additional checks. Alarm only on test failure.

Approvals

- TS-LSU500: UL, cUL, ATEX, IECEx

- TS-LSU500E: UL, cUL

- Third party certification of leak detection capabilities.

ORDERING INFORMATION

Minimum ATG Requirements

- EVO™ 550, EVO™ 5000, EVO™ 600, and EVO™ 6000

- TS-ELLD software options (TS-ELLD-G software option for generator-specific applications)

- TS-ACI, TS-420IB or TS-420EXP, *TS-RLY modules

TS-RLY module is not required when utilizing turbine pump interface (TPI) communications. Franklin Fueling Systems intelligent controllers required.

Intrinsically Safe

For new installations where separate low voltage conduits can be used. Use TS-420IB module.

Model	Description
TS-LS500/2	2-line transducer kit
TS-LS500/3	3-line transducer kit
TS-LS500/4	4-line transducer kit

Explosion Proof

For retrofit installations where only a high voltage conduit can be used. Use TS-420EXP module.

Model	Description
TS-LS500E/2	2-line transducer kit, explosion proof
TS-LS500E/3	3-line transducer kit, explosion proof
TS-LS500E/4	4-line transducer kit, explosion proof

Alternative Fuels Accessories

For new installations where separate low voltage conduits can be used. Use TS-420IB module.

Model	Description
TS-AFALNIP	Leak generator needle valve kit required for E85 installations