

# PLC-5000

## Electronic Line Leak Detection

EPA compliant Line Leak Detection for all applications, from standard retail facilities to unique and atypical sites. Ideal for backup generator systems, marinas, train fueling depots, loading racks and more.

- **Automatic 3 GPH Catastrophic Line Leak Detection**
- **Tests volumetrically, not by pressure decay, 0.1, 0.2 gallon per hour annual and monthly testing**
- **Higher precision, less false alarms!**
- **Thermal expansion / contraction detection and compensation**
- **High head pressure and high line resiliency, No Problem!**
- **Line isolation and control through solenoid valves**
  - **Isolation of underground piping removes thermal variables, allowing for more precise, faster performing LLD.**
- **Positive turbine shutdown upon detection of line leak**
- **Alarm override for mission critical fueling applications**

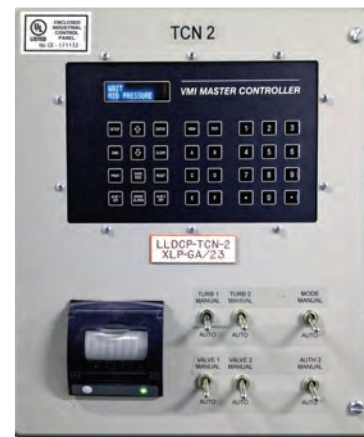


Turbine Control  
Node with  
Printer  
(TCN)

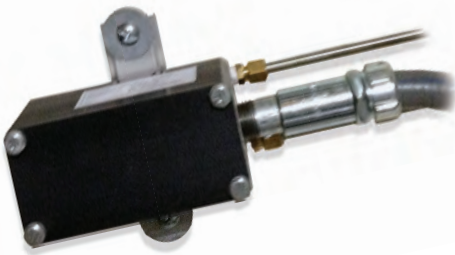
The PLC-5000 system consists of two primary components, a **Turbine Control Node (TCN)**, shown above, and a **Leak Detector Node (LDN)**.

## Turbine Control Node

- Controls the OEM starter coils to start pumps
- Monitors multiple LDNs
- Performs volumetric leak detection calculations
- In the event of a detected leak or other reportable alarm, alarms can be printed, presented on-screen, and output to ATG Systems.
  - Addition of CH-1101 Communications Hub enables alarm and system status reporting to Building Monitoring Systems, including BAS systems, cell phone, email, and other options.



## Leak Detector Node



- Monitors and transmits line pressure management data to TCN
  - Line pressure management includes establishing a specific preset line pressure after authorizations end. This allows the system to continuously monitor for leaks or thermal issues.

## Control Valve Applications

In addition to the normal pump control functions, the PLC-5000 TCN is designed to operate control valves, such as those used in the transition sumps of marinas, between the underground portion of the line and the exposed dock line. This eliminates thermal effects on the underground portion of the fuel line.

Loading racks and other high head pressure situations are applications where a control valve, installed after the delivery line leaves the ground, may be used to isolate the underground pipe. This allows testing of the underground pipe and the ability to isolate head pressure from the leak detection system. By controlling the opening of such valves, the system can monitor for proper line pressure and accurately perform line leak detection on the underground portion of piping systems. Contacts are provided to manage control valves, allowing the underground piping to be tested independently of the line downstream from the control valve.

Line leak detection between the main tank and day tanks used in conjunction with generators, heating oil burners, and associated polishers may be similarly protected. Contact the factory to discuss these applications.

## Staged Turbine Applications

The PLC-5000 TCN provides staged starting of multiple turbines manifolded in to a single fuel distribution line. The lead (fixed or rotating) turbine will be activated upon authorization and will serve as the sole delivery source as long as line pressure is maintained above 24psi. If line pressure falls below this level, a contact closure is provided to authorize the next turbine in the sequence. Additional turbines may be added to the sequence as needed.



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