

# Level Indicating Transmitter

with Non-Contacting Ultrasonic Sensor  
for Tank Inventory, Level Monitoring and Control

*Level Indicating  
Transmitter*

**Model LIT25**

for Chemical Storage Tanks,  
Sumps, Reservoirs and Lagoons



## Low Cost, Non-Contacting Level Transmitter

### Transmits

The LIT25 Level Indicating Transmitter features a 4-20mA output rated up to 1000 ohms. This output is isolated and ready for direct connection to your PLC or Controller.

### Displays

Mount the watertight display enclosure at a convenient location where the large, 4-digit LCD Display is visible to Operators. Use the built-in Keypad for calibration without climbing the Tank.

### Controls

Use the LIT25 signal Relay output to control pumps and alarms. Calibrate for level, echo loss or temperature alarm.

**GREYLINE**  
*instruments inc.*

RELIABLE MEASUREMENT AND CONTROL

# LIT25 Level Indicating Transmitter

- ✓ Simple Calibration with 2-button keypad
- ✓ Large 4-digit LCD display
- ✓ Non-Contacting, no maintenance sensor
- ✓ Isolated 4-20mA output (1000 ohm)
- ✓ Relay for alarm or control
- ✓ Automatic temperature compensation
- ✓ Watertight, dust tight enclosure
- ✓ Low Cost – High accuracy ( $\pm 0.25\%$ )



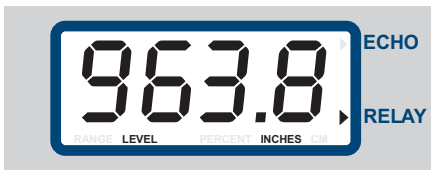
*Calibrate without climbing tanks!*

## NON-CONTACTING SENSOR

The LIT25's ultrasonic, echo-ranging sensor mounts at the top of the tank to continuously monitor level. No maintenance is required.

A built-in temperature sensor is included to automatically compensate for changes in speed of sound due to temperature. Level and temperature signals share a single coaxial cable which can be run up to 500 ft (152 m) to the electronics enclosure. The standard Sensor is rated for tank sizes up to 32 ft. (10 m) high, and is made with PVC and Teflon (an optional all-Teflon model is also available). The sensor and cable is rated intrinsically safe (with optional intrinsic safety barrier) for installation in hazardous rated tanks.

## EASY CALIBRATION WITHOUT CLIMBING TANKS



Use the 2-button keypad built into the LIT25 display enclosure to directly enter the measurement span and relay

set-points in inches or cm. No calibration targets or level simulations are required. Calibration values are stored through power interruptions and no battery is required.

## DESIGNED FOR OPERATOR CONVENIENCE

Mount the LIT25 Display enclosure at a convenient location for operators. The large LIT25 digital display indicates that it is calibrated in percent, inches or cm, and in RANGE or LEVEL mode. Relay status is also displayed and the ECHO symbol flashes to indicate that echos are being received normally.

Special LIT25 features like OUTPUT SIMULATION allow operators to test calibration, loop wiring, and relay set-points directly from the LIT25 keypad. Simplify calibration or tank measurement with the LIT25's RANGE display – instantly display distance in inches or cm from the sensor to the target or liquid surface.

Use the LIT25 keypad to increase or decrease DAMPING and control the instrument's response to turbulence, wave action or agitators. Increase damping to completely reject agitator blades or other moving obstructions even when they travel through the sensor sound path.

## LEVEL or TEMPERATURE CONTROL

Calibrate the versatile LIT25 relay for your choice of level alarm, pump control, temperature alarm or echo loss alarm. Relay ON and OFF set-points are independently adjustable through the LIT25 calibration keypad. You can even control the LIT25's response to an echo loss condition – Hold the last reading, output 20mA or output 4mA.

# LIT25 Specifications

## General Specifications: LIT25 Level Indicating Transmitter

|                                      |  |
|--------------------------------------|--|
| Electronics Enclosure:               | Watertight, dust tight NEMA4X (IP 66) polycarbonate with clear, shatterproof cover   |
| Accuracy:                            | $\pm 0.25\%$ of Range or 2 mm (0.08"), whichever is greater  |
| Display:                             | Large (3/4 in, 19 mm high) 4 digit LCD   |
| Calibration:                         | Selectable Level or Range mode. Enter min. and max. distance in inches or cm   |
| Programming:                         | Built-in 2-button keypad with Menu selection. Calibration parameters are permanent when Stored (even through a power interruption) |
| Power Input:                         | 100-130VAC 50/60Hz, 5 watts maximum  |
| Output:                              | Isolated 4-20mA, 1000 ohm load maximum   |
| Signal Relay:                        | Qty 1, rated 120/240VAC or 24VDC, 1 ampere, programmable for level alarm, echo loss alarm, pump control or temperature alarm       |
| Temperature Compensation:            | Temperature probe inside level sensor for high accuracy in changing temperatures   |
| Electrical Surge Protection:         | Sensor, 4-20mA and AC power input  |
| Operating Temperature (electronics): | -13 to 140°F (-25 to 60°C)   |
| Approximate Shipping Weight:         | 6 lbs. (2.7 kg)  |

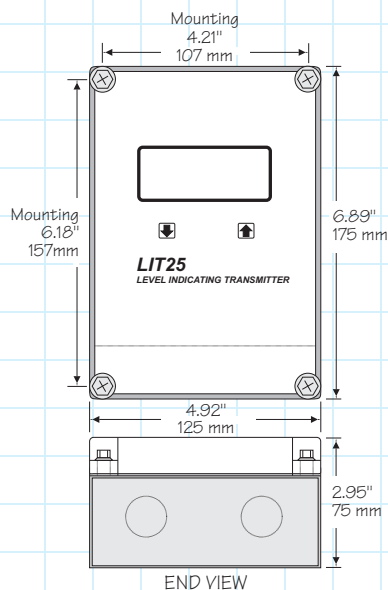
## Sensor Specifications:

|                        |  |
|------------------------|--|
| Maximum Range:         | 32 ft (10 m)   |
| Deadband (Blanking):   | Programmable, Minimum 12 in (305 mm)                                   |
| Beam Angle:            | 8° Locate 1 ft (300 mm) from tank sidewall for every 10 ft (3 m) depth |
| Operating Frequency:   | 42 KHz   |
| Exposed Materials:     | PVC and Teflon™  |
| Operating Temperature: | -40 to 150°F (-40 to 65°C)   |
| Operating Pressure:    | 20 psi (1.35 bar) maximum  |
| Sensor Cable:          | RG62AU coaxial, 25 ft (7.6 m) standard length (See Options)            |

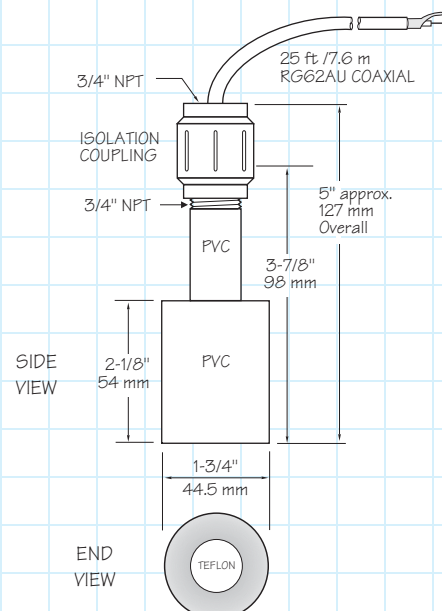
## Options:

|                            |  |
|----------------------------|--|
| Sensors:                   | All Teflon construction / flange mount / 50 ft (15.6 m) range                      |
| Hazardous Locations:       | Intrinsically safe Sensors CSA rated Class I,II,III, Div. I,II, Groups C,D,E,F,G   |
| Sensor Cable:              | 50 ft (15 m) RG62AU coaxial continuous from Sensor, or splice up to 500 ft (150 m) |
| Sensor Cable Junction Box: | watertight NEMA4 steel with connection terminal strip                              |
| Power Input:               | 200-250VAC 50/60Hz, 12VDC or 24VDC   |
| Enclosure Panel Mount:     | Flange assembly mounts standard enclosure  |

## Dimensions

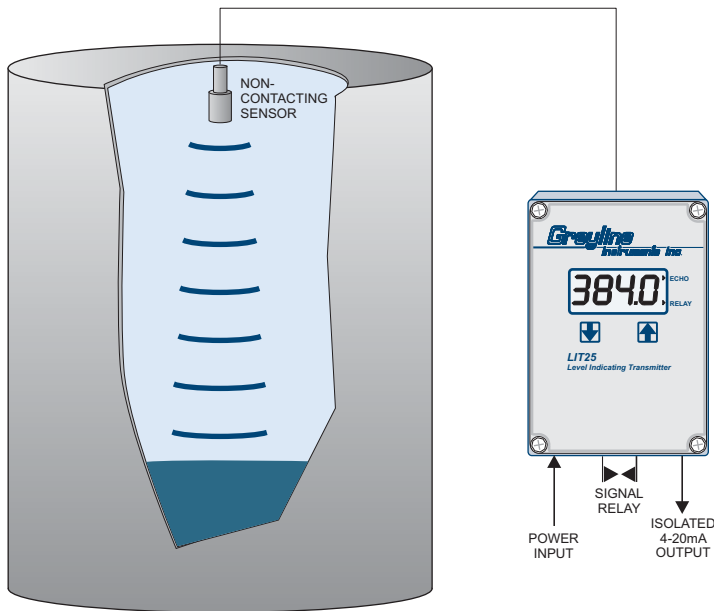


ELECTRONICS ENCLOSURE



SENSOR MODEL PZ32T

# Simple, Reliable and Accurate LIT25 Level Indicating Transmitter



- ✓ Non-contacting, temperature compensated ultrasonic sensor
- ✓ Remote Display enclosure for keypad-calibration without climbing the tank
- ✓ 4-20mA output is isolated ready for connection to PLC's or process computers
- ✓ Level and Temperature signals share a single cable up to 500 ft (152 m) length
- ✓ Optional Intrinsically Safe Sensor and Cable
- ✓ Optional Pressure Sensors
- ✓ Signal relay is programmable for ON/OFF pump control, level, temperature or echo-loss alarm
- ✓ 115VAC, 230VAC or 24VDC power input

## ***Display, Transmit and Control Level for Chemical Tank Inventory, Sumps, Pump Stations or Lagoons***

### ***How to Order***

Contact a Greyline sales representative in your area or phone one of our sales engineers. Describe your requirements and receive our prompt quotation.

### ***Applications Support***

Take advantage of Greyline's applications experience. Phone toll free 1-888-473-9546 for advice and information on applications, installation or service for Greyline instruments.

### ***No Risk Appraisal***

The Greyline LIT25 must meet your requirements. Discuss your application with a Greyline representative to arrange a 30-day trial.

### ***The Greyline Guarantee***

Quality of Materials and Workmanship - Each instrument manufactured by Greyline is warranted against defects in materials and workmanship for a period of one year from date of purchase. Refer to our limited warranty included with each product.

***GREYLINE***  
***instruments inc.***

Canada: 16456 Sixsmith Dr., Long Sault, Ont. K0C 1P0  
Tel: 613-938-8956 / 888-473-9546 Fax: 613-938-4857  
USA: 105 Water Street, Massena NY 13662  
Tel: 315-788-9500 / 888-473-9546 Fax: 315-764-0419  
Internet: [www.greyline.com](http://www.greyline.com) E-mail: [info@greyline.com](mailto:info@greyline.com)

RELIABLE MEASUREMENT AND CONTROL