

LCDT Digital TATTLETALE[®] by Murphy SELECTRONIC[®]



- Monitor Engine or Motor Driven Pumps and Compressors
- 47 Normally Open (N.O.) or Normally Closed (N.C.) Sensor Inputs
- CSA* and Factory Mutual** Listed
- Rated for Hazardous Locations

Description

The LCDT SELECTRONIC[®] TATTLETALE[®] is a compact fault annunciator with an electronic alarm/shutdown control system. It was designed to protect engine-driven or motor-driven compressors and pumps. The TATTLETALE[®] indicates the sensor, and hence the parameter, that causes an alarm or shutdown. In addition, a means is provided for testing the operation of each sensor without initiating an alarm or shutdown. Employing a liquid crystal display, the LCDT gives a digital reading of the tripped sensor and the lockout timer countdown.

As the heart of the system, the LCDT's basic annunciator component has two variations: the Model LCDT-NO, which accommodates normally open sensors, and the Model LCDT-NC, which accommodates normally closed sensors. These units are enclosed in an aluminum box having a brush finish. The LCDT accommodates 47 sensor inputs, 15 of which may be locked out during start-up by the start/run timer delay.

A separate power supply is provided with the model LCDT. Power may be supplied by CD ignition, a 120 VAC line, or by 12 or 24 VDC battery.

Intended for use with all SWICHGAGE[®] instruments without "OS" option.

Features

- System alarm or shutdown for up to 47 sensors.
- Timed start-up override for up to 15 sensors.
- Liquid Crystal Display of tripped sensors and the lockout timer countdown.
- Test timer for shutdown override during sensor test.
- Intrinsically safe annunciator unit; Class I, Division 1, Group D Hazardous Locations.
- Explosion-proof power supply.
- A battery maintains the electronics while the engine is not running.
- 3-second time delay allows a fuel valve to close before grounding the ignition.

Specifications

Power: Supplied by CD ignition of an engine, 120 VAC line, or by 12 or 24 VDC battery.

Power Inputs (Operating Voltage):

LCDT-PS-CD (R)-P: 90-250 VDC, CD ignition, positive ground.

LCDT-PS-CD-N: 90-250 VDC CD ignition, (one or two) negative ground.

LCDT-PS-120/24/12: 120 VAC (6 VA), 24 VDC (1 watt), 12 VDC (0.5 watts).

Sensor Inputs: Accepts up to 47 sensors via a ribbon cable. The LCDT was designed to be used with sensor switches having normally open or normally closed contacts such as Murphy SWICHGAGE[®]. **NOTE:** An approved isolation barrier such as the LCDT-ISB barrier for normally open sensors or a thermocouple type barrier for normally closed sensors, must be used between sensor switch and input terminals if sensor outputs come from any energy storing device such as a relay or transistor.

Relay Outputs Ratings:

LCDT-PS-CD (R)-P Contact rating: 4A, 1/20 HP, 125/250 VAC/3A, 30 VDC.

LCDT-PS-120/24/12 Contact Rating: 5A, 28 VDC, 120 VAC (resistive).

FET Outputs: LCDT-PS-CD-N rating (for fuel valve and ignition ground): 0.5A @ 250 V.

Alarm Relay Contact Rating: 4A, 1/20 HP, 125/250 VAC/3A, 30 VDC.

Operating Temperature: Module (head): -40 to 185°F (-40 to 85°C). Power Supply: 0 to 158°F (-18 to 70°C)

Storage Temperature: -40 to 302°F (-40 to 150°C).

Case: LCDT-NO/NC (module): anodized aluminum.

Power Supply (all models): Explosion-proof aluminum.

Multiplexer Scan Rate: Scans all 47 sensors in 0.7 sec.

Start-Run/Test Timer: Standard 5 minutes, specify other, up to 7 minutes maximum.

Laboratory Approvals: CSA* and Factory Mutual System** Listed for Class I, Division 1, Group D, Hazardous Locations.

* When used with approved ignition. Contact Murphy for details.

** When installed per Murphy drawings HC-9450-A or HC-9450-AA.

LCDT System

The basic **LCDT** system consists of **(1)** the LCDT module, **(2)** the terminal strip and cable assembly, **(3)** the power supply, and **(4)** (optional) barrier for non-intrinsically safe (normally open) sensors.

LCDT Module—described on front page.

Terminal Strip and Cable Assembly

The plug-in type Terminal Strip has 50 screw-type connections for normally open sensors and 100 connections for normally closed sensors. The terminal strip can be connected to the LCDT module with the 36 in. (914 mm) long flat ribbon cable.

Power Supply

You have a choice of input power supplies: LCDT-PS-CD (R)-P and LCDT-PS-CD-N for CD ignition or LCDT-PS-120/24/12 for 120 VAC or 12 or 24 VDC. Each power supply includes control Inputs/Outputs and an intrinsically safe barrier. They were designed for Class I, Divisions 1 and 2, Group D Hazardous Locations. FM and CSA listed.

Barrier for Non-intrinsically safe sensors

An optional barrier is designed to accept non-intrinsically safe normally open inputs and convert them to intrinsically safe outputs.

NOTE: Each barrier accommodates 2 sensor inputs.

How to Order

To order complete LCDT system, specify **each** component as follows:

(1) LCDT Module: Specify **LCDT-**

- NO:** For normally open applications
- NC:** For normally closed applications

(2) Terminal Strip and Cable Assembly: Specify **LCDT-**

- 50CA-36:** Normally open
- 100CA-36:** Normally closed

(3) Power Supply: Specify **LCDT-**

- PS-CD (R)-P:** CD ignition positive ground
- PS-CD-N:** CD one or two ignitions negative ground
- PS-120/24/12:** Voltage: 120 AC, 12/24 DC

(4) Barrier: Specify **LCDT-**

- ISB:** Optional, for non intrinsically safe circuits. Cl. I, Div.1, Gr. D.

Shipping Dimensions:

LCDT-NO/NC module: 8-1/2 x 9-1/2 x 5-1/2 in. (216 x 241 x 140 mm).

LCDT-PS-CD-N and LCDT-PS-CD (R)-P: 4-1/2 x 15-1/2 x 5-1/2 in. (114 x 394 x 140 mm).

LCDT-PS-120/24/12: 11-1/2 x 18-1/4 x 13-1/2 in. (291 x 464 x 343 mm).

LCDT-NO and NC-50CA-36 or 100CA-36: 7-1/4 x 12 x 5-1/2 in. (184 x 305 x 140 mm).

LCDT-ISB: 9 x 10 x 6 in. (229 x 254 x 152 mm).

Shipping Weights:

LCDT-NO/NC Head: 5 lb. (2.2 kg.).

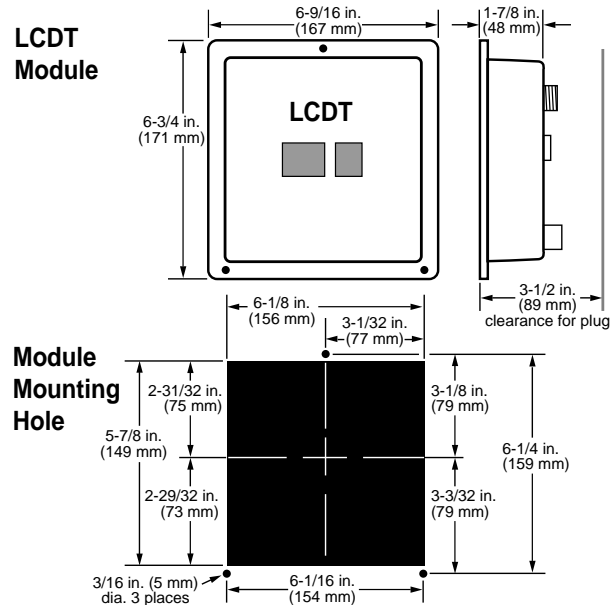
LCDT-PS-CD (R)-P: 9 lb. (4.08 kg.).

LCDT-PS-120/24/12: 21 lb. (9.5 kg.).

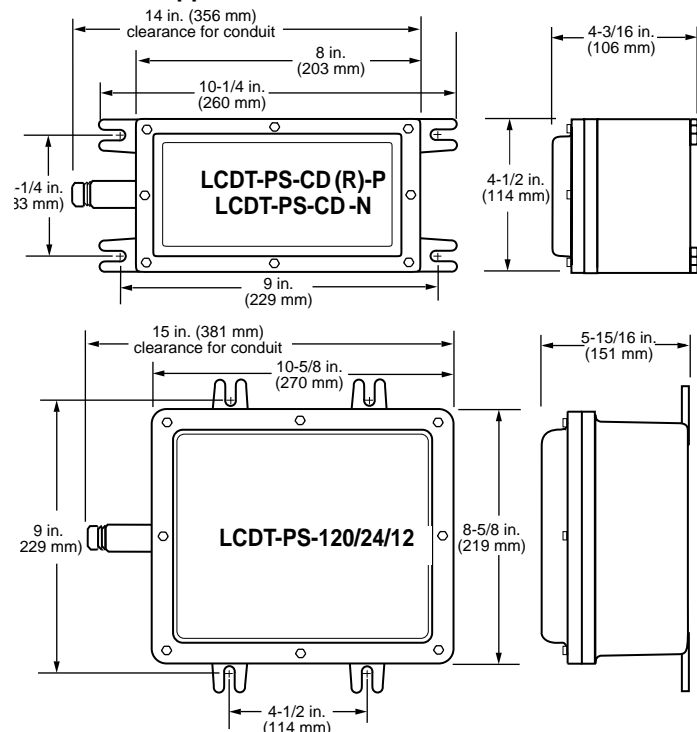
LCDT-NO and NC-50CA-36 or 100CA-36: 3 lb. (1.3 kg.).

LCDT-ISB: 3 lb. (1.3 kg.).

Dimensions



Power Supplies



Warranty

A two-year limited warranty on materials and workmanship is provided with this Murphy product. Details are available on request and are packed with each unit.