



# 950IS Intrinsically Safe

## The Gemco Intrinsically Safe LDT

The 950IS can be used in hazardous environments when connected to an approved safety barrier. The LDT is UL & CSA listed for Class I, Group C & D, Class II, Groups E, F, & G and Class III hazardous locations, when properly installed.

The term 'Intrinsically Safe' is used to describe electronic equipment that has the ability to be mounted directly in explosive atmospheres without chance of an explosion. The term 'Intrinsically Safe' pertains to a device's inability to produce an electrical spark of enough significance to cause ignition.

How does an Intrinsically Safe LDT work? A Gemco Transmitter (950-1446) is located in a "safe" or "non-explosive" area which accepts the system's supply voltage (115 VAC, 230 VAC, or 24 VDC) and generates the LDTs positional output signal in voltage or current. The transmitter also generates and accepts the LDT signals. These signals are driven through an approved intrinsically safe barrier assuring the safety of the system. Custom 950 Mill Duty enclosures are available for this LDT.



950

Specifications	
Input Voltage/ Current Draw	24 VDC @ 85 mA max. 115 VAC 50/60 Hz @ 6 VA 230 VAC 50/60 Hz @ 6 VA
Output	0 - 10 VDC or 10 - 0 VDC 4 - 20 mA or 20 - 4 mA
Non-linearity/Accuracy	.01"
Repeatability	+/- 0.01% of Full Stroke
Operating Temperature	
1) Head Electronics	-10° to 180° F (-23° to 82° C)
2) Guide Tube	-40° to 185° F (-40° to 85° C)
Operating Pressure	3000 psi Operational, 8000 psi Spike
Span Length	1" - 300"
Null Zone	2"
Dead Zone	5"
Connectors	2 Pin 12mm
Enclosure	IP65
Specifications are subject to change without notice.	

## Part Numbering

**9501446** ——— **24** ——— **0120**

**Analog Transceiver For 950IS LDT**

**Input Voltage**  
 24 = 24 VDC Input Power  
 115 = 115 VAC Input Power  
 230 = 230 VAC Input Power

**Stroke in Inches**  
 Insert stroke in inches to 0.1 inch. Enter as a four-place number. **Example:** 12.0 in stroke entered as 0120. To convert a metric stroke in millimeters, multiply millimeter value by 0.03937 to arrive at inch value.

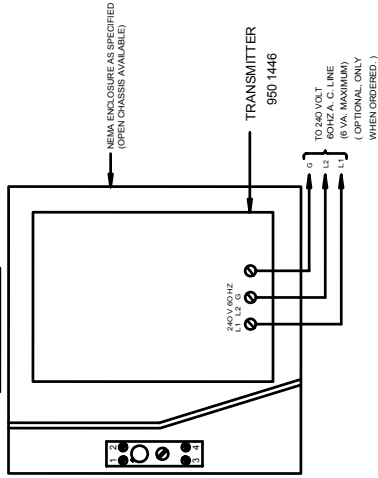
**9501445** ——— **0120**

**Series 950IS Intrinsically Safe LDT**

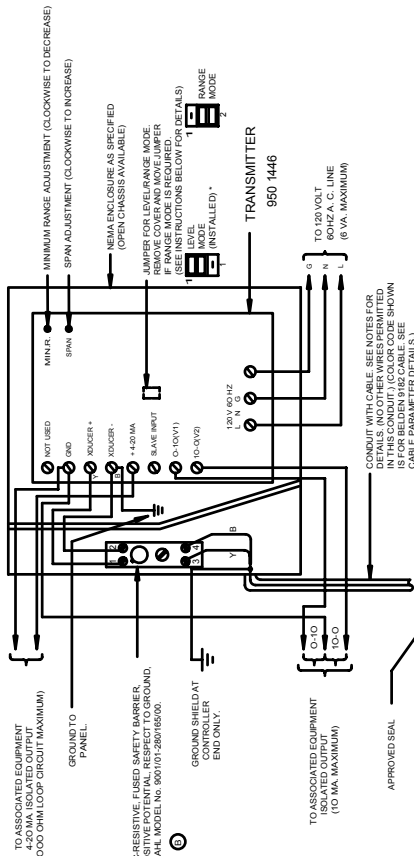
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## Dimensions & Wiring Diagram

### 240 VOLT 60 HZ APPLICATION (OPTIONAL)



### 120 VOLT 60 HZ APPLICATION



### NOTES:

1. CABLE PARAMETERS:  
A. NO OTHER WIRES TO BE IN CONDUIT.  
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C. UP TO 1000 FT. OF CABLE MAY BE USED. TWISTED SHIELDED CABLE IS RECOMMENDED. MAXIMUM CABLE LENGTH PER FOOT, INDUCTANCE LESS THAN 2 MICROHENRIES PER FOOT, CAPACITANCE LESS THAN 20 PICO FARADS PER FOOT.  
D. UP TO 2500 LB. FT. WEIGHT OF CABLE PER FOOT OR EQUAL (8.8 PICO FARADS PER FOOT).

### CALIBRATION INSTRUCTIONS:

1. POSITION THE MAGNET AT THE UPPER LIMIT OF THE ANALOG SPAN REQUIRED (POSITION A), WHILE READING OUTPUT V1 (i.e. 0-10 TO GROUND). ADJUST THE "MIN." ADJUSTMENT SCREW TO READ 10.00 VOLTS.
2. CHANGE POSITION OF THE MAGNET TO THE LOWER LIMIT OF THE ANALOG SPAN REQUIRED (POSITION B), WHILE READING OUTPUT V1 (i.e. 0-10 TO GROUND). ADJUST THE "SPAN" ADJUSTMENT SCREW TO READ 10.00 VOLTS.
3. IF THE A TO 20 MILLIAMPERE OUTPUT IS REQUIRED, DETERMINE WHICH MODE OF OPERATION IS REQUIRED AND SELECT THE REQUIRED POSITION OF THE MODE JUMPER. RANGE MODE CURRENT INCREASES ON FALLING LEVEL. RANGE MODE CURRENT INCREASES ON RISING LEVEL. THE 0 TO 10 VOLT OR 10 TO 0 VOLT OUTPUTS ARE ALWAYS PRESENT.
4. THE 950 TRANSMITTER IS NORMALLY SHIPPED WITH THE JUMPER IN LEVEL MODE. THE COVER MUST BE REMOVED BY FIRST REMOVING 4 STAND-OFF SCREWS AND COVER BEFORE CHANGING THE MODE JUMPER.

### GENERAL INFORMATION

PRIOR TO INSTALLATION, POWER UP THE SYSTEM TO VERIFY OPERATION AND TO FAMILIARIZE YOURSELF WITH THE UNIT.

SEE DRAWING E-C FOR CABLES. WIREMULL APPROVAL IS REQUIRED ON TRANSDUCER UNIT.

THE TRANSDUCER SHOULD BE HANDLED WITH CARE DURING STORAGE AND INSTALLATION.

