

## The Gemco 950IS 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.

**Consult Factory if installing  
950IS into 950MD Housing**

The 950IS is designed to work with Gemco style magnets. If installing in a hydraulic cylinder a Gemco style magnet must be used.



950IS

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

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950IS

9501445

0120

**950IS  
Intrinsically  
Safe LDT**

### Stroke Length

Insert stroke length to 0.1 inch. Enter as a four-place number. Example: A 12.0" stroke enters as 0120. To convert metric strokes, multiply millimeter value by 0.03937 for inch value.

9501446

24

0120

**Analog  
Transceiver for  
950IS LDT**

### Input Voltage

<b>24</b>	24 VDC
<b>115</b>	115 VAC
<b>230</b>	230 VAC

### Stroke Length

Insert stroke length to 0.1 inch. Enter as a four-place number. Example: A 12.0" stroke enters as 0120. To convert metric strokes, multiply millimeter value by 0.03937 for inch value.

**NOTE 1:** A complete system consists of an LDT, a Gemco Magnet, a Transceiver and IS Barrier. IS Barrier and Panel Mount Bracket are ordered separately. IS Barrier P/N 04517039. Panel Mount Bracket for Barrier P/N 04517214.

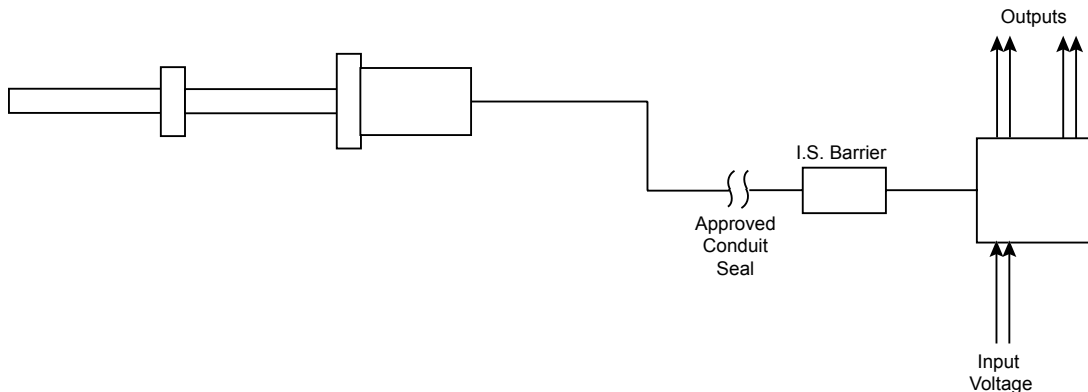
**NOTE 2:** This 950IS model transducer must use a Gemco style magnet. See pages 60-62 for magnet options.

**NOTE 3:** All Intrinsically Safe LDTs include a 6 ft. cable with a straight connector, P/N 04521210. Consult the factory for longer lengths and right angle versions.

**NOTE 4:** Specify magnet style desired as separate line item. Model number SD0400800 is standard.

**NOTE 5:** The 950IS is NOT compatible with competitive style magnets. The 950IS MUST use Gemco style magnets.

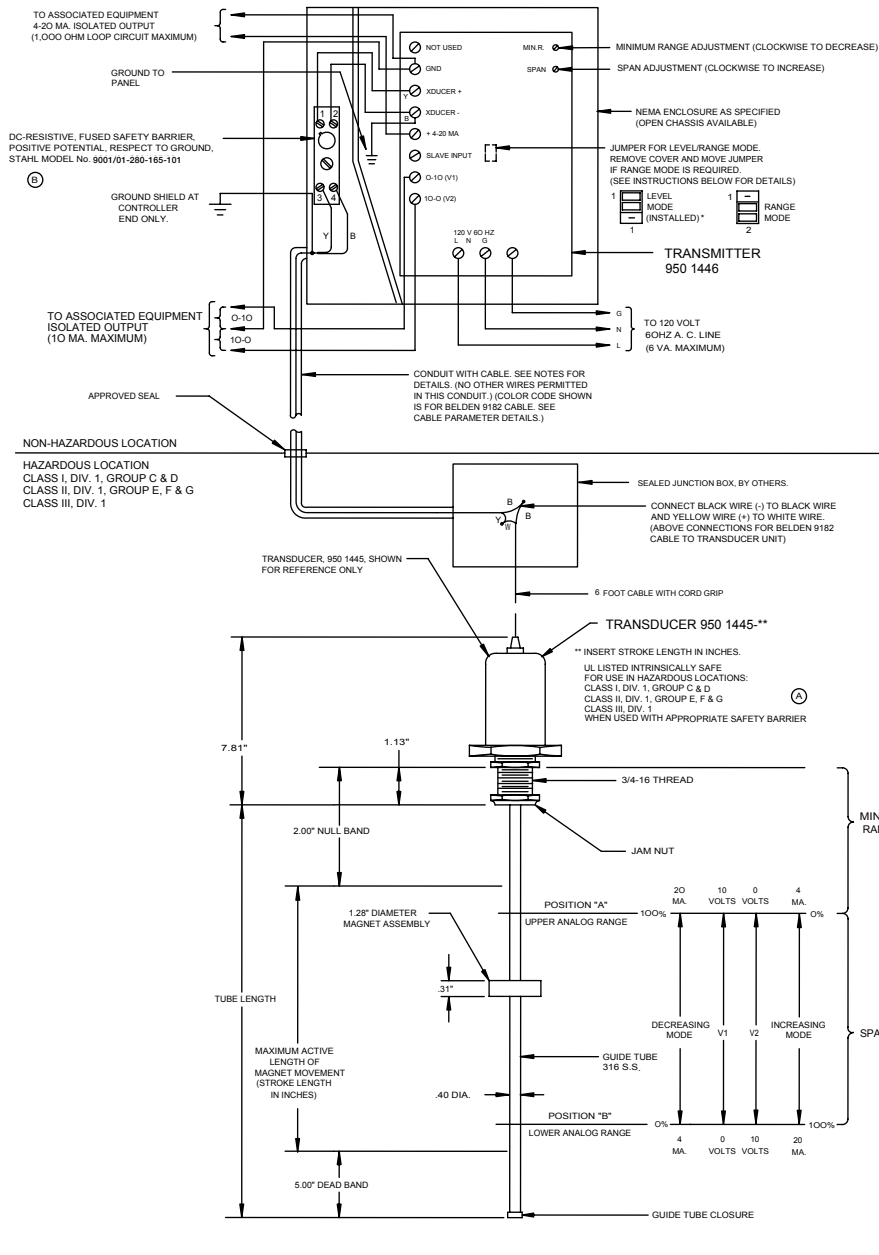
9501445 Configuration



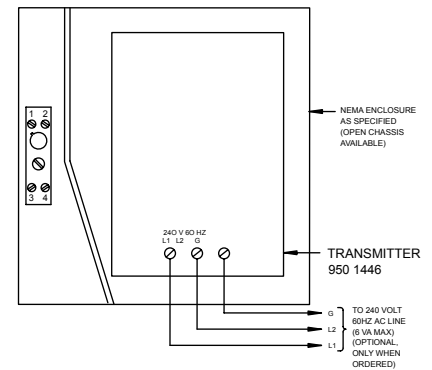
## The Gemco 950IS Intrinsically Safe LDT

### Dimensions & Wiring Diagram

#### 120 VOLT 60 HZ APPLICATION



#### 240 VOLT 60 HZ APPLICATION (Optional)



#### NOTES

##### CABLE PARAMETERS

- USE CONDUIT WITH CABLE INSIDE.
- NO OTHER WIRES TO BE IN CONDUIT.
- UP TO 1000 FEET- #22 AWG OR GREATER, TWISTED SHIELDED CABLE, CAPACITY LESS THAN 60 PICO FARAD PER FOOT, INDUCTANCE LESS THAN 2 MICROHENRIES PER FOOT.
- UP TO 2500 FEET- TWIN AXIAL BELDEN 9182 OR EQUAL. (8.8 PICO FARADS PER FOOT).

##### CALIBRATION INSTRUCTIONS

- 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.R." ADJUSTMENT SCREW TO READ 10.00 VOLTS.
- CHANGE POSITION OF THE MAGNET TO THE LOWER LIMIT OF THE ANALOG SPAN (POSITION B). WHILE STILL READING V1, TURN THE "SPAN" ADJUSTMENT SCREW TO READ 0.00 VOLTS.
- IF THE 4 TO 20mA OUTPUT IS REQUIRED, DETERMINE WHICH MODE OF OPERATION IS REQUIRED AND SELECT THE REQUIRED POSITION OF THE MODE JUMPER. LEVEL MODE - CURRENT INCREASES ON RISING LEVEL. RANGE MODE - CURRENT INCREASES ON FALLING LEVEL. THE 0 TO 10 OR 10 TO 0 VOLT OUTPUTS ARE ALWAYS PRESENT.
- 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.\*

\*LEVEL MODE - JUMPER ACROSS THE UPPER TWO PINS - POSITION 1.  
RANGE MODE - JUMPER ACROSS THE LOWER TWO PINS - POSITION 2.

24 VDC (AT TERMINAL "NOT USED") WILL NOT SUPPORT ANY  
ADDITIONAL LOADS.

##### GENERAL INFORMATION

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

SEE DRAWING E0198300-B WHEN UL APPROVAL IS REQUIRED ON  
TRANSDUCER UNIT.

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