

# ST-56 LOOP POWERED INDICATOR & TOTALIZER WITH GRAPHIC LCD & LED's

## FEATURES:

- Easily adds a large sophisticated graphic LCD readout to any 4-20mA loop. Readout includes Eunits, bar-graph & trend
- Operating power is derived from the 4-20mA current loop. Only 4.0 volts consumed from the loop
- ST-54T Totalizer option available to display up to 10-digit totals
- Linearizer table allows entry of square-root and custom curves
- Magnetic keypad allows non-intrusive operator interface
- Alarm 1, Alarm 2 & FAIL alarm level adjustable trip points flash LED's during alarm conditions
- Real Time Clock & Calendar time & date stamps alarm events
- User defined range, resolution, decimal points, Eunits & tag ID
- NRTL certified Explosion-Proof NEMA 4/7 enclosure. Alternate packaging is available



ST-56XP and non-intrusive magnetic wand shown

The ST-56 / ST-56T Loop Powered Indicators are offered to display 4-20mA variables in their correct engineering units (Eunits), as 30-minute trends and as bar-graphs. The ST-56T adds a maximum 10-digit totalizer function. Both models have 4 full active digits plus two "dummy 0" least significant digits available to provide full scale Eunit readouts as high as 999900. Decimal points between the digits may also be displayed.

All configuration is via user friendly menus accessed through the non-intrusive magnetic keypad making the ST-56 ideal for hazardous area installations. There are no potentiometers or DIP switch settings required to configure the ST-56.

ST-56's are wired into the current loop with a "plug in" two position terminal strip. The removable plug side of the

terminal strip contains a 6.8 volt zener diode which allows the ST-56 to be removed without interrupting the loop. Voltage consumption from the loop is only 4.0 volts.

Alarm 1, Alarm 2 & FAIL alarm level adjustable trip points flash LED's during alarm conditions (see our ST-48EC-I product offering for applications that also require alarm relays). An on-board *Real Time Clock & Calendar* time & date stamps alarm events and stores each in nonvolatile memory.

A 10-segment linearization menu allows entry of square-root, "S" shaped and many other complex curve transfer functions.

Standard enclosure is NRTL certified for Division 1 & 2 Groups B,C,D Explosion Proof NEMA 7 and NEMA 4 installations. Other packaging is available.

# SPECIFICATIONS

## SIGNAL INPUT:

4-20mA is active standard measurement range  
 2.5mA is minimum input for correct operation  
 22.5mA is maximum input before readings saturate

## VOLTAGE DROP:

4.0 VDC max at 20mA

## DISPLAY:

64 x 128 pixel graphic LCD (approximately 1.1" x 1.8")

## PROTECTION:

Resettable solid-state fuse trips at approximately 100mA  
 The ST-56 will survive 24VDC applied across input

## ACCURACY:

ST-56 with 10-bit A-D =  $\pm 0.1\%$  of full scale  $\pm$  one count  
 ST-56T with 12-bit A-D =  $\pm 0.03\%$  of full scale  $\pm$  one count

## TEMPERATURE RANGE:

-30 to +60 degrees C

## TEMPERATURE DRIFT:

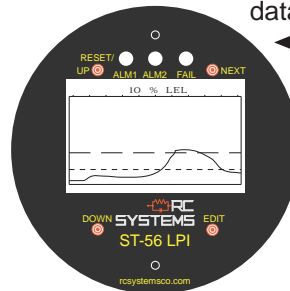
$\pm 0.01\%$  of full scale per degree C  $\pm$  one count

## ORDERING INFORMATION:

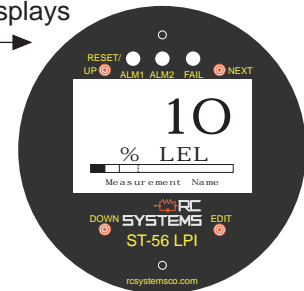
ST-56\*PC; OEM printed circuit assembly less housing  
 ST-56\*XP; NEMA 7 explosion proof  
 Class 1, Groups B,C,D Class 2, Groups E,F,G  
 Also meets NEMA 4 with included 'O' ring  
 \* Add "T" suffix to include Totalizer functions

## ST-56PC 3" PANEL ASSEMBLY

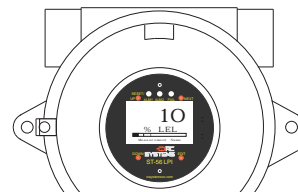
"NEXT" key toggles data displays



Eunits & 30-minute trend data display



Eunits, bar-graph & tag name data display

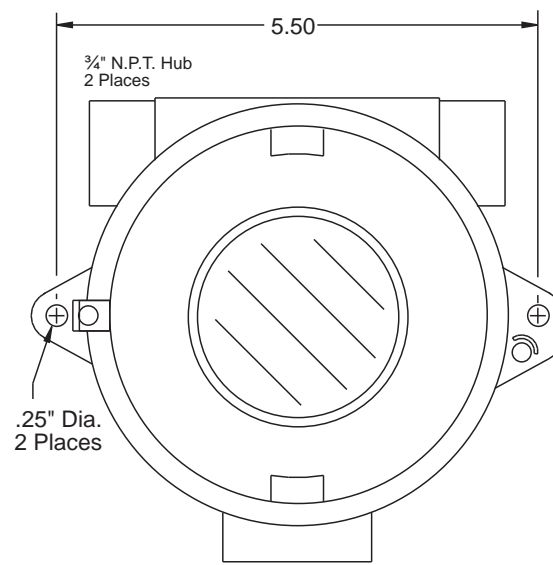
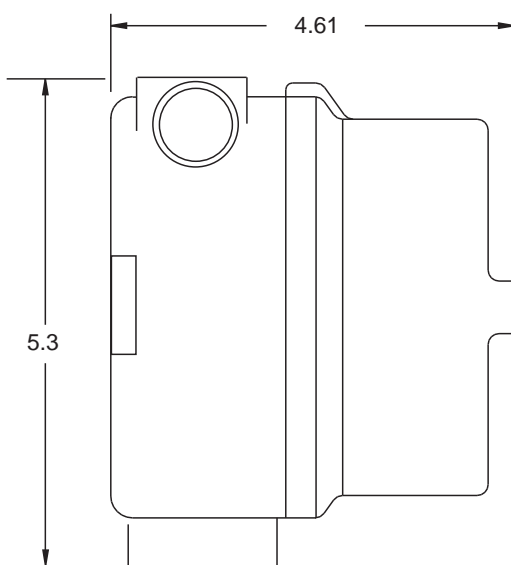


TYPICAL ST-56 LOOP POWERED INDICATOR INSTALLATION



Model ST-56 process loop indicators may be added to existing 4-20mA installations without the addition of any new wiring. Since the meter is powered by the loop, simply install it in series with either of the 2 loop wires.

## ALL DIMENSIONS IN INCHES



ST-56XP NEMA 7 / NEMA 4 (EXPLOSION PROOF)