PRINCO™

Model S975

Digital Loop Powered LED Indicator

Features

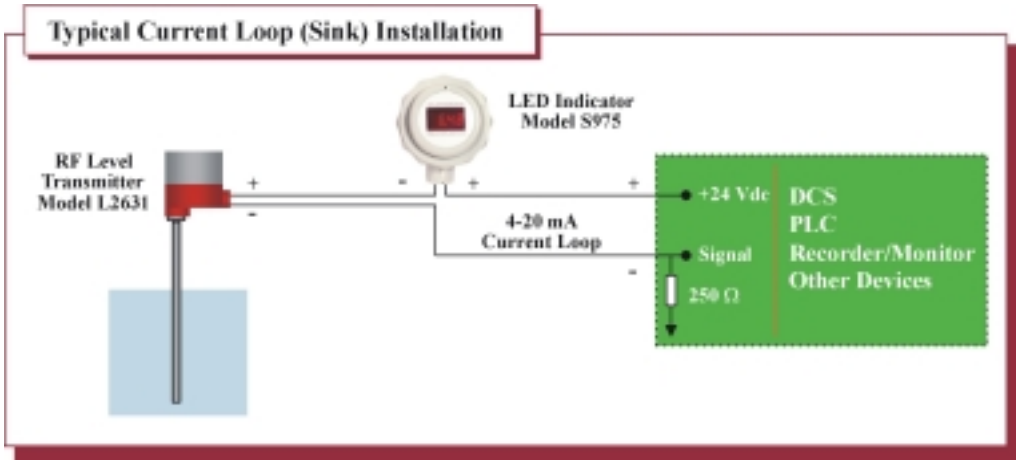
- Industry's first standard 4-20 mA loop powered LED device
- Large, easy to read red LED display
- High intensity 3-1/2 digit, 7 segment display
- Programmable engineering unit output display
- Compact NEMA 4X rated housing, ABS plastic construction with 1/2 inch F-NPT connection
- Multi positional display bezel
- Selectable decimal point position
- Reverse voltage and over current protected

Description

Princo's innovative model S975 3-1/2 digit, loop powered LED indicator offers a large, easy-to-read display with outstanding performance and flexibility while powered by a 4-20 mA current loop. This device accepts a standard 4-20 mA process signal that can be scaled to precisely indicate the percentage of range or programmed for one of many engineering units.

The electronic module is housed in a NEMA 4X enclosure with a single 1/2 inch female NPT connection. Front bezel orientation flexibility allows the display readout to be rotated to any position (from zero to 360 degrees). The large, high intensity, 3-1/2 digit LED display provides outstanding visibility for both daylight and night time operation.

This device can be used with any PRINCO RF level transmitter or other manufacturing process related devices that produce a 4-20 mA output signal.



Model S975 Specifications

Display	
Type	3 1/2 digit red LED
Size	0.37 inches / 9.4mm
Polarity Indication	"-" for negative readings
Overrange Indication	"-1 _ _ _ " negative inputs " 1 _ _ _ " positive inputs

Current Loop Input	
Full Scale Range	4-20 mA
Input Impedance	250 Ω
Voltage Drop	5 Vdc (Max)
Overcurrent Protection	±40 mA (Max)

Performance	
Sample Rate	2.5 readings/second
Accuracy	±0.05% FS ±1 count
Temperature Drift (0-60°C)	±0.3 Cnts/°C (Max)

Physical/Environmental	
Operating Temperature	-20 to 60°C
Storage Temperature	-40 to 75°C
Humidity (Non-condensing)	0 to 95% RH
Housing	NEMA 4X, ABS plastic
Weight	4.0 oz

Operation & Setup

Model Princo Model S975 is normally factory calibrated to read 00.0 for a 4 mA input and 100.0 for a 20 mA input, or for other parameters as specified by the customer. In this case, the unit may be simply installed in series at any point in the current loop according to the terminal block polarity shown in Figure 1.

If re-calibration for another range is desired, perform the following procedure, referring to Figure 1 for switch, adjustment, and terminal block locations:

1. Refer to Table 1 for the desired display range. Set dip switches 1, 2, & 3 accordingly. NOTE: If the desired display reading can be achieved with either of two different switch settings, try performing the adjustments with both settings to determine which offers the best settability.
2. Refer to Table 2 for desired display decimal point position. Set dip switches 4, 5, & 6 accordingly.
3. Set Span and Zero pots fully clockwise (approx. 22 turns).
4. Apply a precision 4 mA input, with proper polarity, and adjust Zero pot for display reading of 000 (disregarding decimal point).
5. Apply a precision 20 mA input and adjust Span pot for the desired full scale reading.
6. Repeat steps 4 and 5 until no further adjustment is necessary.

NOTE: Zero offsets are possible, but limited in range. For example, the highest display range can be set up to read 4.00 to 19.99 for direct reading of a 4 to 20 mA signal. Only through experimentation can one determine whether the unit has enough offset range for a desired display range.

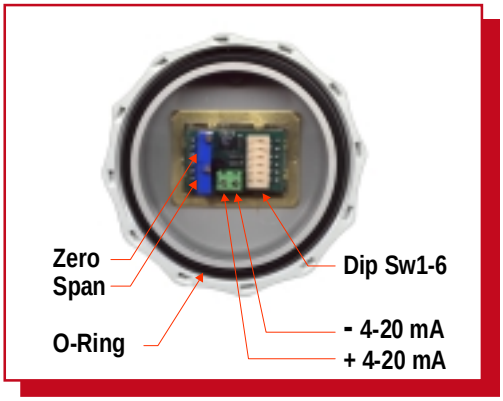


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Table 1 - Display Range Dip Switch Settings

Display Reading Range	DP SW 1	DP SW 2	DP SW 3
000 to 1050-1999	Off	Off	Off
000 to 650-1350	On	Off	Off
000 to 450-800	Off	On	Off
000 to 300-500	Off	Off	On
000 to 200-300	On	On	On

Table 2 - Decimal Point Dip Switch Settings

Decimal Point Settings	DP SW 4	DP SW 5	DP SW 6
X X X	Off	Off	Off
X X . X	On	Off	Off
X . X X	Off	On	Off
. X X X	Off	Off	On

Table 3 - Dip Switch Range and Decimal Point Examples

4 to 20 mA Range	Display Reading	DP SW 1	DP SW 2	DP SW 3	DP SW 4	DP SW 5	DP SW 6
At 4 mA, At 20 mA,	display = 0.00 display = 6.00	Off	On	Off	Off	On	Off
At 4 mA, At 20 mA,	display = 000 display = 800	On	Off	Off	Off	Off	Off
At 4 mA, At 20 mA,	display = .000 display = .250	On	On	On	Off	Off	On