

4-20 mA TRANSMITTER



MODEL T420

FEATURES

- Loop powered
- Offset adjustable from 0-90% of input range
- Span adjustable from 10-100% of input range
- Integral level simulation for
 - system testing
 - ranging adjustments
- Selectable Damping
- 3 levels of transient protection
- Test points to measure the loop current without interrupting the loop
- UL Listed

APPLICATIONS

- Teamed with the SLX 100, it provides robust options for 4-20 mA process control
- 0-5 Volt to 4-20 mA conversion

CONTEGRA's T420 4-20 mA transmitter provides convenient signal spanning and offsetting, manual level simulation for easy range adjustment and process simulation, damping adjustment, and three levels of transient protection on the loop.

In addition to its numerous electrical distinctives, the T420 has clear artwork for ease-of-use and adjustment for the installing technician.

The T420 accepts a nominal 0-5 VDC input (or portion thereof) and provides convenient calibration to produce a 4-20 mA output proportional to that input.

The T420 is loop powered, 12-40 VDC. It provides three levels of transient protection on the 4-20 mA loop: a gas tube arrestor for suppression of high voltages, transorbs, and varistors for fast clamping of lower voltage transients.

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MODEL T420

The 4-20 mA loop is measurable without interrupting the circuit by inserting the meter's probes into two jacks on the face of the transmitter. (The meter needs a burden voltage of 10 mV/mA or less.)

The T420 provides up to 3.8 mA at 5 VDC to power the sensor.

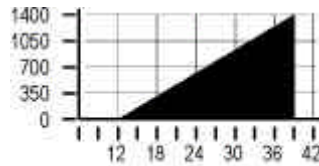
Offset is adjustable from 0-90% and Span is adjustable from 10-100% of the 5 Volt range for a turn-down of 10:1.

The damping function has three selectable time constants of 0.1, 2 and 5 seconds.

The input simulation function provides for convenient process simulation for system testing and commissioning and can be used for "desktop calibration" of the SLX 100 submersible level sensor for prior to field installation for fast and convenient installation.

Specifications

Input/Output: Loop powered 4-20 mA output, 12-40 VDC Class 2 supply into 0-1400 ohms.



$$\text{Max Load} = (\text{Supply Voltage} - 12) \times 50$$

Provides 5 V supply to sensor: 3.8 mA maximum, 1.5 minimum.

Span Adjustment: From 10-100% of range. Non interactive with offset adjustment.

Offset Adjustment: From 0-90% of range.

Damping: Selectable time constant of 0.1, 2 or 5 seconds

Dimensions:

Height: 4 inches

Width: 3 inches

Depth: 1.7 inches

Between Mtg. Holes:
3.5 inches

Electrical Connections:

Cage clamp-type barrier terminals for AWG #12-22

Approvals: UL Listed

Engineering Specifications

A 4-20 mA transmitter shall be provided to convert the sensed process variable from a nominal 0-5 VDC to 4-20 mA. The transmitter shall be 2 wire, 12 to 40 VDC loop-powered with its output proportional to the sensor input. The transmitter shall be UL Listed.

The transmitter shall provide easily accessible calibration and ranging adjustments. Offset shall be adjustable from 10-100% and Span shall be adjustable from 10-100% of the 5 Volt range.

The transmitter shall contain integral level simulation for ranging adjustments and system test purposes. The transmitter shall provide adjustable signal damping time constants of 0.1, 2 and 5 seconds.

The transmitter shall provide three levels of transient protection on the 4-20 mA loop: a gas tube arrestor for suppression of high voltages, transorbs, and varistors for fast clamping of lower voltage transients. The transmitter's output shall be measurable without disconnecting the loop power. The transmitter shall be a CONTEGRA Model T420.

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