KTA-366 4-20mA Loop Current Simulator/ Generator

KTA-366

- Loop Powered
- 4-20mA Injector
- 40V Maximum Loop Voltage
- 24 VDC Jack Connection
- Banana Sockets
- Backlit Display (KTA-366)
- Standard Display (KTB-366)

The KTA-366 is a 4-20mA loop powered current calibrator designed to make testing and measuring 4-20mA loops simple.
The KTA-366 is suitable for testing 2 and 3 wire transducers; it has two operating modes, Simulate and Generate mode.
The KTA-366 consists of a circuit board mounted in an enclosure with two selector switches, potentiometer and a display all mounted in the enclosure lid.

The three-position rotary switch selects between the operating modes:

1. 4 mA – used to inject 4 mA into the loop.
2. ADJ – used in conjunction with the potentiometer to inject between 4 mA and 20 mA into the loop.
3. 20 mA – used to inject 20mA into the loop.

The two-position switch selects between Simulate mode and Generate mode:

- Simulate mode: Simulates 2-wire, loop-powered transducer. This mode uses an existing power supply or excitation connection on the PLC/DAQ equipment.

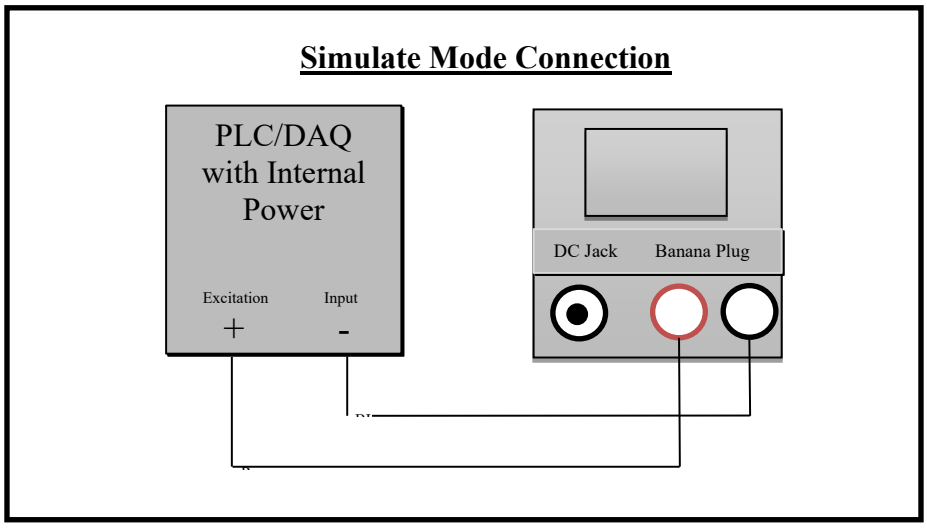
- Generate mode: Generates a 4-20mA powered signal that can drive the input on a PLC/DAQ.
  In this mode, the KTA-366 is more like a 3-wire transducer or a signal conditioner. This mode requires power to be fed to the KTA-366 via its DC power jack.

SPECIFICATIONS	KTA-366
Power Supply	12-40 VDC
Input Voltage Drop	6V
Display Accuracy (Full Scale)	0.05% +/- 1 digit
Display Range	-19.999 to 99.999
Display	5 digits, 8.6 mm height (Backlit red on black LCD)
Operating Range	0 to 50°C
Maximum Loop Voltage	40V
Display, Internal Battery	No

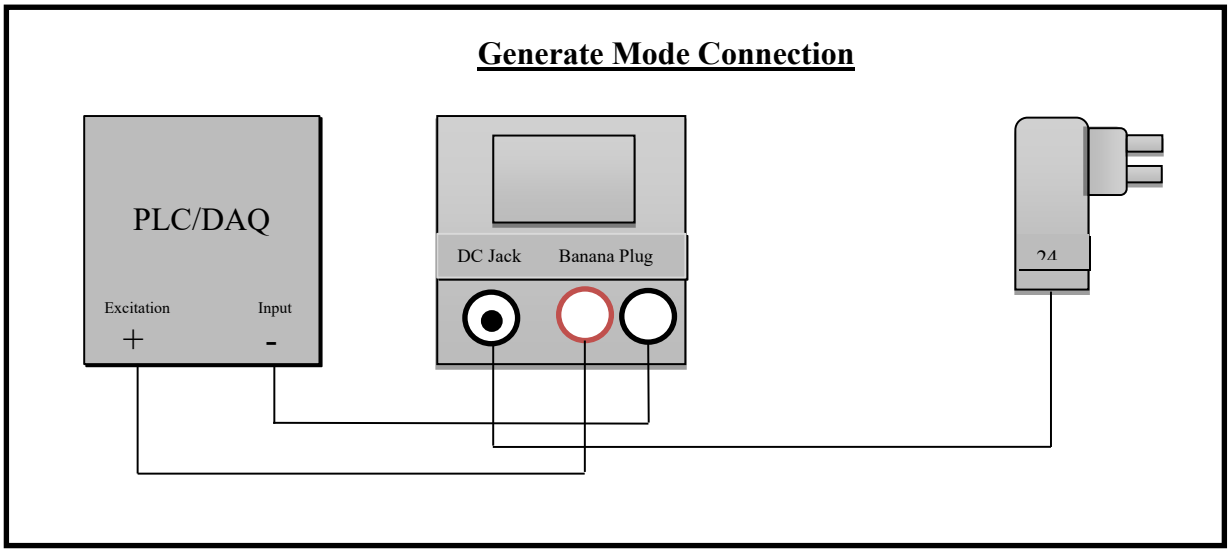
Connections:

Switch Position	Description
Simulate	Uses existing power Supply
Generate	Requires external power connection on DC jack (24VDC typical)

Simulate:



Generate:



Power Supply Considerations:

The minimum power supply voltage for the current loop depends on the burden voltage of each of the items in the loop.
The KTA-366 has a burden voltage of 14V on the current loop. The KTB-366 is supplied with a battery powered LCD Panel meter (AXI-005) which gives the advantage of reducing the burden voltage to 11V.
To determine the maximum load that the device can drive with the available power supply use the following formula.

$$MaxLoad(ohm) = \frac{Vpowersupply - Vburden}{0.02}$$

To determine the minimum power supply voltage for a given load, use the following formula.

$$Vpowersupply = [Load(ohm) \times 0.02] + Vburden$$

Display Calibration:

The display on the KTA-366 can be calibrated to show different calibrated values, for instance if it was desired to show 0-100 instead of 4-20 then this could be done. To modify the display parameters, see the manual for the display which can be downloaded here:

https://oceancontrols.com.au/files/datasheet/hnx/HNI-020_HLP1_manual.pdf