

# MODEL 1120T SIGNAL ISOLATOR FOR THERMOCOUPLES

## FEATURES

- \*\* Automatic CJ
- \*\* Sink or Source
- \*\* On Board PSU
- \*\* Compact Size
- \*\* Low Cost
- \*\* Plug In

The model 1120T is a signal isolator designed to eliminate ground loop problems in 4-20mA control loops. It can be specified for all thermocouple types, or DC mV signals, with a minimum span of 4mV. Automatic cold junction compensation is provided as standard for thermocouple input.

The unit is a compact, mains powered 11 pin plug-in module. A 24V DC power supply for the output loop enables the model 1120 sink or source a 4-20mA signal. The output power supply is current limited at 30mA.

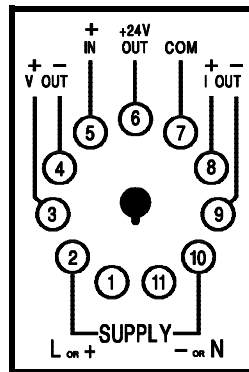
Isolation is achieved by the use of an optocoupler current mirror circuit with a breakdown voltage of 750 volts. Two separate mains transformers are used to ensure maximum isolation between input and output.

This unit is recommended for use with grounded tip thermocouples and other applications where the thermocouple is not totally isolated from ground.

The output current tracks the input voltage with an accuracy of better than 0.5%. A voltage output (normally 1-5V DC) is also available which tracks the current output. This voltage can be used alone or simultaneously with the current output when a voltage signal is required. This voltage is derived from a 250Ω resistor in the current output circuit. Connecting a load of less than 10KΩ across this output will degrade the performance of the current output.



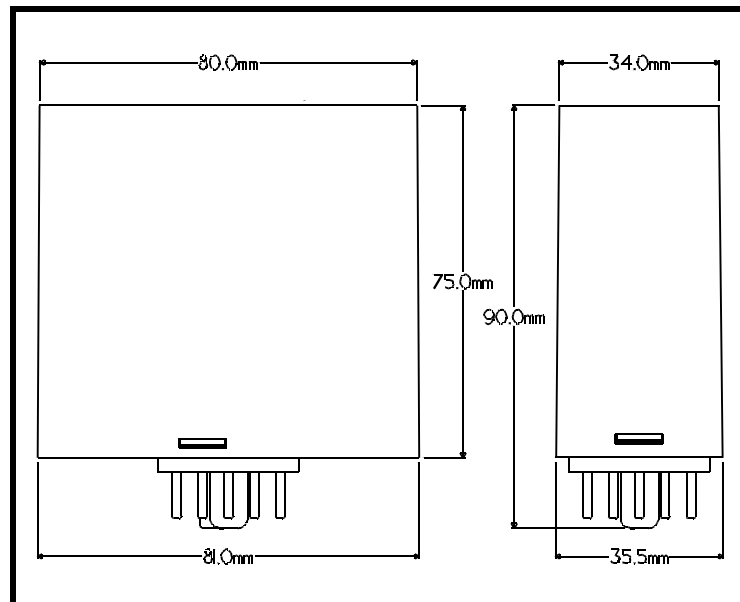
## CONNECTIONS



## SPECIFICATIONS

INPUT SIGNAL Options	Thermocouple or mV To customer order Minimum span 4mV
OUTPUT SIGNAL Options	0-1mA, 0-10mA, 4-20mA, 0-20mA, 1-5V, 0-10V To customer order
POWER SUPPLY Options	110V 50 Hz 220V 50 Hz
POWER CONSUMPTION	6VA max
THERMOCOUPLE BREAK PROTECTION	Upscale (22 - 30mA) standard Downscale (<4mA) to order
CJ ACCURACY 0-50°C ambient	±0.5°C Type J, K, N ±1°C Type R, S, T Enquire about others
OUTPUT IMPEDANCE	250ohm for 20mA/5V 500ohm for 20mA/10V
TRACKING ACCURACY	< 0.5% FS
ISOLATION VOLTAGE	110V AC/DC max. continuous

## DIMENSIONS



IMC. QUANTA INSTRUMENTS CC  
P.O. Box 1411 RANDBURG 2125

9 Fountaingate, 84 Maria St.  
Fontainebleau Randburg

Tel. (011) 792 1210 Fax. (011) 793 6863

E-mail: sales@iqinstruments.com

Home Page: <http://www.iqinstruments.com>