

# OPERATION MANUAL

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MODEL 765  
THERMOCOUPLE PANEL THERMOMETER

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**JENCO** ELECTRONICS, LTD.  
MANUFACTURER OF PRECISION INSTRUMENTS

## **GENERAL INTRODUCTION:**

The model 765 digital indicating panel thermometer is a high performance industrial grade readout for types K, J, T, E thermocouple sensors and 3-wire RTD (PT-100). The thermocouple gain, linearization, and cold junction are automatically compensated by internal electronic circuits.

The temperature scale can be easily changed from °C to °F and vice versa by an internal jumper without re-calibration.

An accurate 1 mV per display count analog output is provided to interface the instrument with a recorder, printer, etc.

For rapid changing display, the "HOLD" function may be used to freeze the display.

## **INITIAL INSPECTION:**

Carefully unpack the instrument. Inspect damage in shipment. If any damage is found, notify your JENCO distributor immediately. All packing material should be saved until satisfactory operation is confirmed.

## SPECIFICATION :

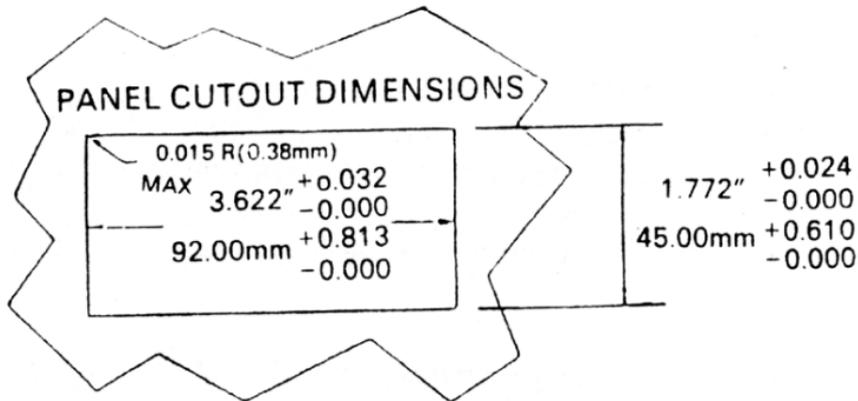
MODEL	TYPE	RANGE	RESOLUTION	ACCURACY
765K	K	-105°C to 1372°C	1°C	±1.5°C, ±1 digit
		-157°F to 1999°F	1°F	±2.7°F, ±1 digit
765	J	-210°C to 760°C	1°C	±1.5°C, ±1 digit
		-346°F to 1400°F	1°F	±2.7°F, ±1 digit
765T	T	-105°C to 400°C	1°C	±1.5°C, ±1 digit
		-157°F to 752°F	1°F	±1.5°F, ±1 digit
765E	E	-105°C to 1000°C	1°C	±1.5°C, ±1 digit
		-157°F to 1832°F	1°F	±2.7°F, ±1 digit
765PT	PT-100	-50.00°C to 199.9°C	0.1°C	±0.1°C, ±1 digit
		-58°F to 199.9°F	0.1°F	±0.2°F, ±1 digit
765PTB	PT-100	-50°C to 850°C	1°C	±1°C, ±1 digit
		-58°F to 1562°F	1°F	±1°F, ±1 digit

## GENERAL :

Analog Output (linearized)	1 mV/count
Analog Output Accuracy (accuracy specified at 23°C, +5°C)	+0.2% of reading , +1 mV
T/C Resistance	100 $\Omega$ (min)
Sensor Break indication	Positive over range (upscale)
Display	0.56" High efficiency LED
Power	115V AC, 230V AC, $\pm 10\%$ , 50/60 Hz
Dimensions	48mm x 96mm x 110mm

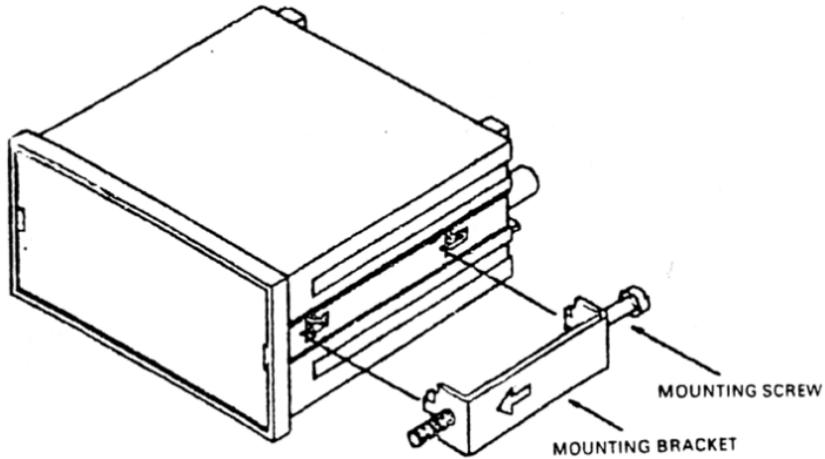
## MOUNTING PROCEDURE:

1. Make a cutout on any panel, with a thickness of 1/16 inch (1.5 mm) to 3/8 inch (9.5 mm) Refer to DRAWING 1.



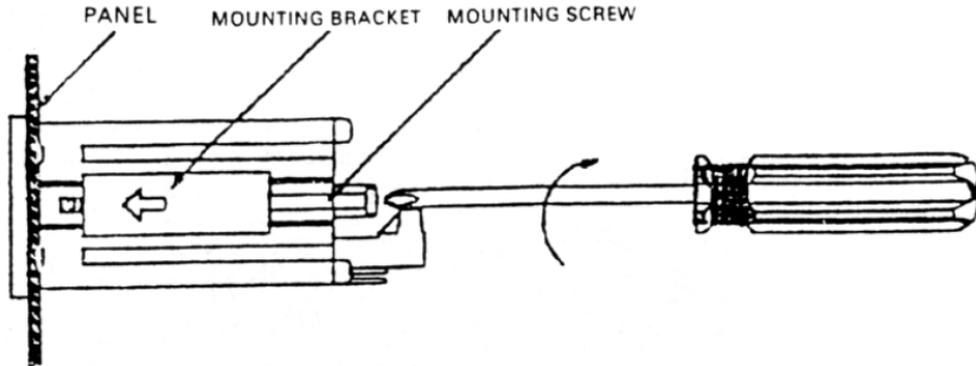
**PANEL CUTOUT  
DRAWING 1**

2. Remove the mounting brackets assembly from the panel meter and insert the panel meter to



**PANEL METER WITR MOUNTING BRACKET AND SCREW  
DRAWING 2**

3. Replace the mounting brackets assembly into the panel meter and fasten the mounting screws to secure the panel meter to the mounting panel. Refer to DRAWING 3.



**MOUNTING METHOD  
DRAWING 3**

## **ANALOG VOLTAGE OUTPUT:**

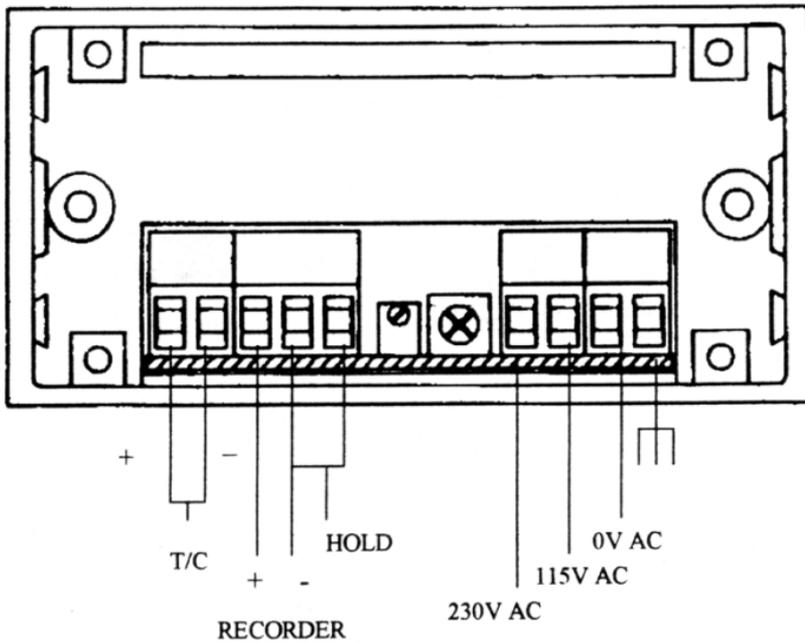
The analog voltage output can be used to interface with other instruments such as recorder, printer, remote indicator, 4-20 mA converter, etc.

The following rule must be observe in order to avoid reading inaccuracies or possible damage to the instrument.

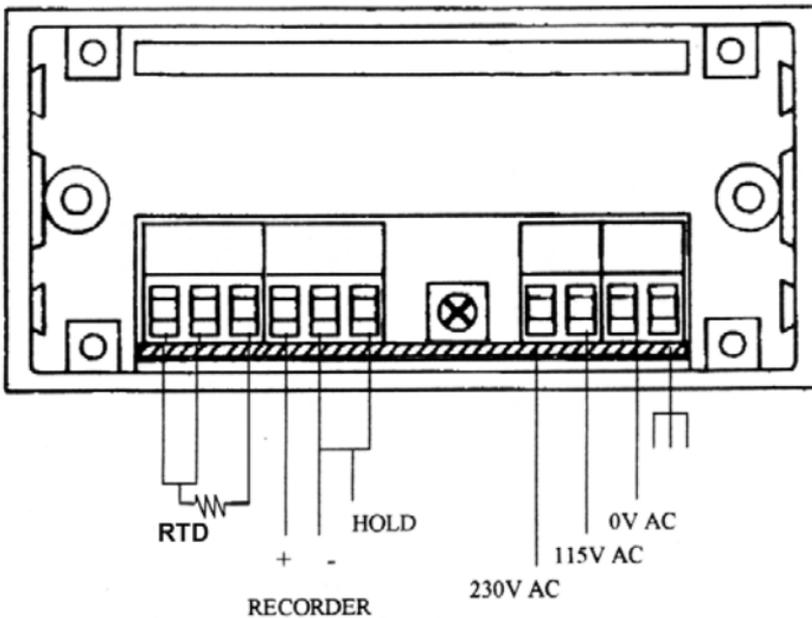
1. If grounded or naked thermocouple is used, the interface device's circuit common must not be connected to earth ground.
2. The input impedance of the interface device must be greater than 10K
3. Be sure that the AC line voltage is never connected to analog output.

## **WIRING DIGRAM:**

1. Connect the AC line to the rear of instrument. The model 765 can be used with 115V AC or 230V AC, 50/60 Hz. Refer to DRAWING 4 and DRAWING 5.
2. Connect the two thermocouple leads to the rear of instrument and be sure to observe the correct polarity of thermocouple leads. Refer to DRAWIN 4 and DRAWING 5.
3. The "HOLD" function is activated by connecting the "HOLD" terminal to ANALOG GND TERMINAL



**WIRING DIAGRAM FOR T/C MODEL  
DRAWING 4**



**WIRING DIAGRAM FOR RTD MODEL  
DRAWING 5**



**°C TO °F JUMPER  
DRAWING 6**

## **WARRANTY**

Jenco Instruments, Ltd. Warrants this product to be free from significant deviations in material and workmanship for a period of 1 year from date of purchase. If repair or adjustment is necessary and has not been the result of abuse or misuse, within the year period, please return-freight-prepaid and the correction of the defect will be made without charge. If you purchased the item from our Jenco distributors and it is under warranty, please contact them to notify us of the situation. Jenco Service Department alone will determine if the product problem is due to deviations or customer misuse.

Out-of –warranty products will be repaired on a charge basis.

## **RETURN OF ITEMS**

Authorization must be obtained from one of our representatives before returning items for any reason. When applying for authorization, please have the model and serial number handy, including data regarding the reason for return. For your protection, items must be carefully packed to prevent damage in shipment and insured against possible damage or loss. Jenco will not be responsible for damage resulting from careless or insufficient packing. A fee will be charged on all unauthorized returns.

**NOTE:** Jenco Instruments, Inc reserves the right to make improvements in design, construction, and appearance of our products without notice.

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