

TRANSPAK™ T761 MODEL



Benefits

- Eliminates Ground Loops
- Easy Field Configurable Switch Selectable Input Ranges
- Wide Ranging Zero and Span Adjustability (80%)
- Protects Equipment with 600V Input-to-Output Isolation
- Three Year Warranty



AC Input Isolating, Field Configurable Two-Wire Transmitter

Provides an Isolated Current Loop in Proportion to an AC Input

DESCRIPTION

The T761 offers the user a choice of 12 widely adjustable input ranges and 2 output ranges, which are field selectable via top-accessed DIP switches (see Table 1). The T761 provides 600 VDC of isolation with outputs of either 4-20mA or 10-50mA. Current outputs are in proportion to selected AC voltage or current input.

Model T761 measures the average value of the AC input signal and is calibrated for sine wave signals over a frequency range of 20Hz to 3KHz. For other wave forms, the calibration may be different, but the T761 will remain linear for the same wave form. For example, if the unit is calibrated using a square wave, the calibration will be valid for all square wave inputs in that range. The maximum DC component of the input signal is 50% of the range (e.g., 75VDC is half of a 0-150VAC range).

A major advantage of the T700 Series is their truly wide ranging capability. The T761 enables 80% zero and span adjustability within most user-selected input ranges. For example, Range 3 of Table 1 specifies 0 to 25V with a minimum span of 5V (25V-5V = 20V, or 80%). This 80% adjustability factor allows the user to field-calibrate the unit for the maximum (0 to 25V) down to any minimum (5V) span (e.g. 10V to 15V)--as long as that adjusted span remains within the selected 0 to 25V range.

APPLICATION

Model T761 is useful in any application requiring an isolated two wire loop current from an AC signal source. Typical applications include AC motor status and energy management. The output of the T761 can be used to drive a digital meter for direct display or interface with a computer for monitoring and control.



*Protecting the
Integrity of
Industrial
Process Signals*



OPTION

- U Urethane coating of internal circuitry for protection from corrosive atmospheres
- C620 Factory calibration to customer's specifications

CALIBRATION

1. Open the access lid on the top of the unit (see Top View Diagrams).
2. Select the output range using switch S1. The CLOSED position selects a 10-50mA output. The OPEN position selects a 4-20mA output.
3. Select input range from Table 1 and configure switches S2 through S6.
4. Connect the input to a calibrated AC voltage or current source. Connect the output loop to a voltage supply and monitor the output current (refer to terminal wiring).
5. Set the calibrator to the desired minimum.
6. Adjust the coarse zero rotary switch to obtain an output of either 4mA or 10mA. Adjust the fine zero for exact calibration. Note

Table 1: T761 Input Ranges

Input Range	Input Limits	Minimum Span	Range Selection Switch Position				
			S2	S3	S4	S5	S6
1	0-250VAC	100VAC	OPEN	CLOSED	OPEN	OPEN	CLOSED
2	0-100VAC	20VAC	OPEN	CLOSED	OPEN	OPEN	OPEN
3	0-25VAC	5VAC	OPEN	CLOSED	OPEN	CLOSED	CLOSED
4	0-5VAC	1VAC	OPEN	CLOSED	OPEN	CLOSED	OPEN
5	0-1VAC	0,2VAC	OPEN	OPEN	CLOSED	OPEN	CLOSED
6	0-200mVAC	40mVAC	OPEN	OPEN	CLOSED	OPEN	OPEN
7	0-50mVAC	10mVAC	OPEN	OPEN	CLOSED	CLOSED	CLOSED
8	0-10mVAC	2mVAC	OPEN	OPEN	CLOSED	CLOSED	OPEN
9	0-2A AC	0,4A AC	CLOSED	OPEN	CLOSED	OPEN	CLOSED
10	0-4mA AC	80mA AC	CLOSED	OPEN	CLOSED	OPEN	OPEN
11	0-100mA AC	20mA AC	CLOSED	OPEN	CLOSED	CLOSED	CLOSED
12	0-20mA AC	4mA AC	CLOSED	OPEN	CLOSED	CLOSED	OPEN

that it may become necessary to switch coarse zero up or down one position.

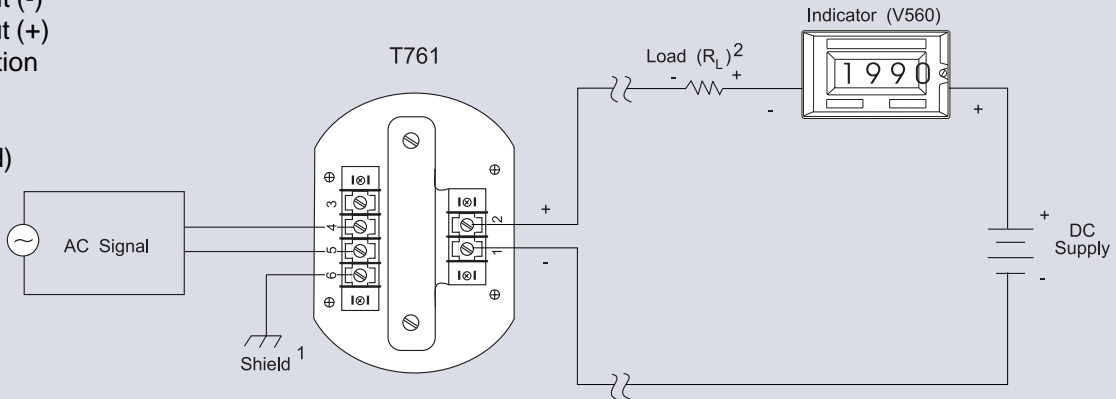
7. Set the calibrator to the desired maximum and adjust the fine span to obtain an output of either 20mA or 50mA. Repeat steps 5-7, if necessary for best accuracy.

FACTORY ASSISTANCE:

For additional information on calibration, operation and installation please contact Technical Services Group. **800-783-6664**

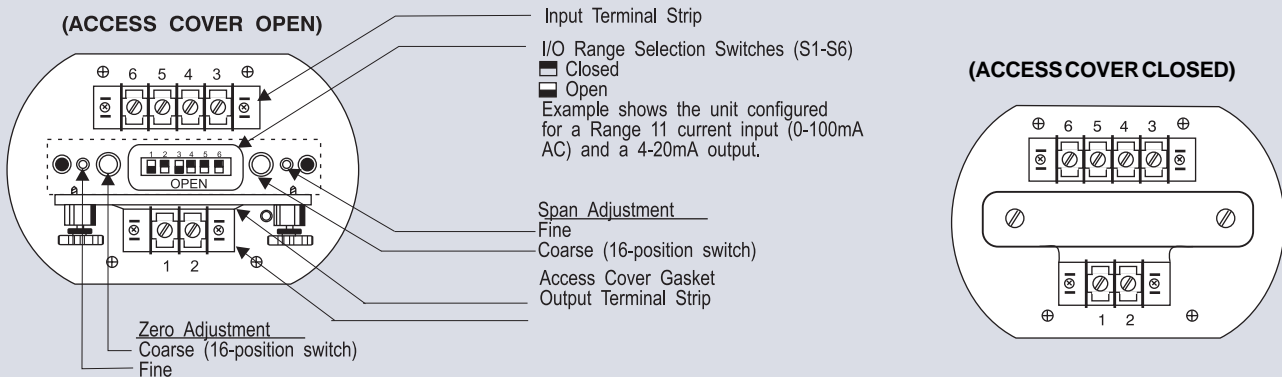
TERMINAL CONNECTIONS

- 1 Loop Output (-)
- 2 Loop Output (+)
- 3 No Connection
- 4 Input
- 5 Input
- 6 Shield (Gnd)



- 1 Note: For best RF & common mode rejection ground the case (pin 6).
- 2 Note: R_L represents any other device loads in the current loop.

TOP VIEW DIAGRAM

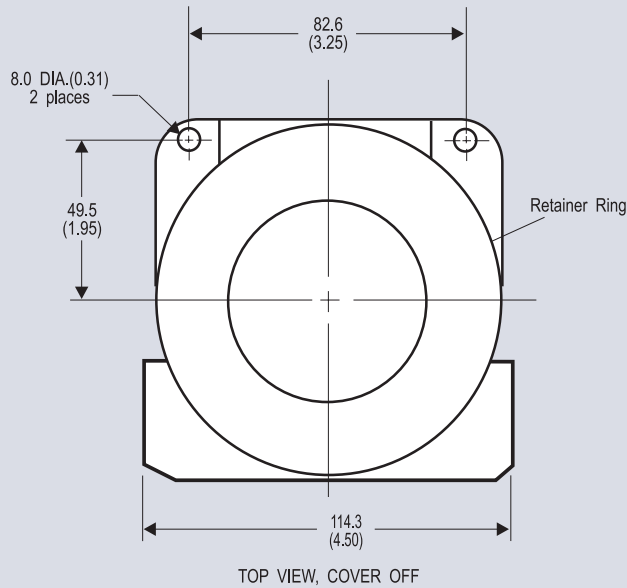


SPECIFICATIONS

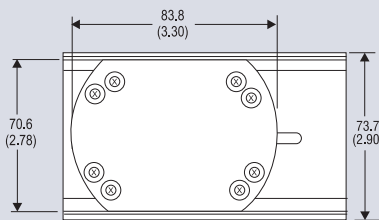
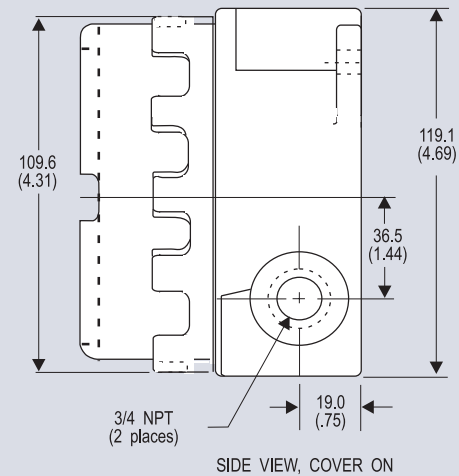
Input Span Range (Max/Min)	See table 1
Leadwire Resistance Effect	< 0.25 $\mu\text{V}/\Omega$
Input Impedance	Ranges 1-8: > 1M Ω Ranges 9-12: 0.5 Ω shunt
Output Span	4-20mA/10-50mA, switch selectable
Minimum Output Current	3.3mA, typical
Maximum Output Current	4-20mA: 24mA, typical 10-50mA: 58mA, typical
Supply-Voltage Range	4-20mA: 12 to 80VDC 10-50mA: 12 to 60VDC
Maximum Change in supply Voltage Effect	0.05% of span
Maximum Change in Load Effect	0.05% of span
Loop Voltage Drop	12VDC @ 20mA

Stability	Zero: $\pm 0.02\%$ of span/ $^{\circ}\text{C}$, typical, or 10 $\mu\text{V}/^{\circ}\text{C}$, whichever is greater Span: $\pm 0.02\%$ of span/ $^{\circ}\text{C}$, typical
Overall Accuracy (Includes Linearity, Hysteresis, Stability)	$\pm 0.5\%$ of any adjusted span (50-400Hz sine wave input), max.
Frequency Response ($\pm 0.5\text{dB}$)	20Hz to 3KHz; average reading calibrated to sine wave input
Maximum DC Input Component Zero and Span Adjustability	50% of range 80% of any selected range
Repeatability	$\pm 0.05\%$ of span, typical
Response Time	500ms, typical
Output Ripple	0.5% of span, rms, typical
RFI Effect (5W, 470MHz at 3 Ft.)	< 1% of span error
Isolation	600V DC maximum, input to output
Temperature Range	Operating: -40 to 80 $^{\circ}\text{C}$ (-40 to 176 $^{\circ}\text{F}$)
Weight	0.64lbs

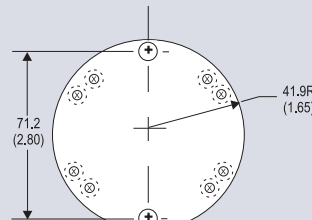
MOUNTING HARDWARE



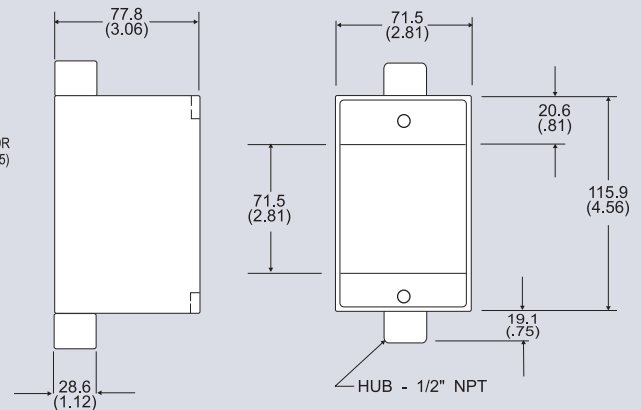
T805 Field Mountable Housing (EP, NEMA 4 rated) 3/4" Hub
(Includes T903 Retainer Ring and NEMA 4 Gasket)



T902 MOUNTING PLATE
(For snap-track mounting;
includes snap track)
Aluminum Alloy #6061 (0.06in, thick)



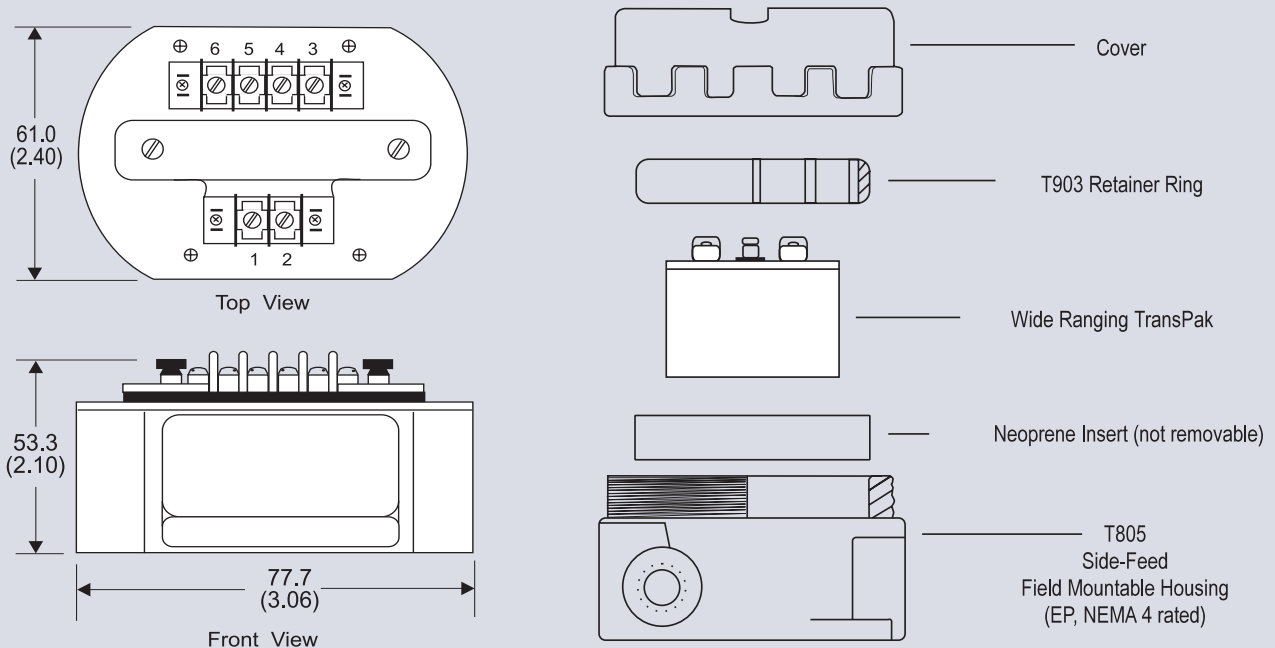
T910 MOUNTING PLATE
(For bulkhead mounting)
Aluminum Alloy #6061 (0.06in, thick)



T804 Conduit Device Housing

DIMENSIONS/ASSEMBLY DIAGRAM

Dimensions are in Millimeters (Inches)



FIELD-MOUNTING

The T761 is designed for installation in industrial field environments. A sealed, die-cast aluminum housing protects against corrosion, moisture, dust and electrical noise such as radio-frequency (RFI) and electromagnetic (EMI) interference.

For protection against extreme moisture, hose-directed water (NEMA 4) or hazardous environments, use Action's T805 explosion-proof housing. The T805 provides ready-to-install plumbing ports for easy hook-up and operation in harsh process environments. Model T805 is FM and CSA certified for use in Class I, Groups B, C & D and Class II, Groups E, F & G hazardous locations.

MODELS & ACCESSORIES

Accessories

Model	Description
M004	Snap-in Channel Track, 4 feet.
T902	Mounting plate for M004, includes 4" track.
T910	Bulkhead (flat surface) Mounting plate.
T804	Conduit device housing.
T805	Side feed field-mountable housing (EP & NEMA 4 rated), uncoated (specify Option P for white polyester powder coat).
C006	0.1W, 5W, 1% shunt resistor
AP9046	Action Pak 24/40VDC 65mA Power Supply.
T609	24V, 600mA Loop Power Supply.
V565	3-1/2 digit remote loop-powered indicator, wide-ranging display, NEMA 4X enclosure, CSA & FM approval standard, specify Option C to house TransPak.

Ordering Information

Specify:

1. Model: **T761-0000**
2. Options: U (Urethane coating)
3. Optional Custom Factory Calibration: Specify **C620** with desired input and output range.