

THERMOCOUPLE INPUT 3½ DIGIT LED DPM

"Flat Pack" No Panel Cut Out Required

(NEMA 3 or NEMA 4X)

MODEL
515



FLAT PACK

Features

- Types K, J & T
- °F or °C Ranges
- Burn-up Detector
- Cold Junction Compensation
- .6" LED 3½ Digit Display
- NEMA 3 or NEMA 4X Case
- Only ½" Thick
- MTBFC: 100,000 Hours



SANITARY

DESCRIPTION: Model 515 requires 5VDC power and it's available for most TC types (J, K, R, S, T, C). TC burn-up or burn-down detection (over-range) and cold junction compensation is included. **Linearization is not available, consequently customer is urged to specify the most important operating range (within 300°), if any, for best accuracy.**

CALIBRATION: To check the 515 series simply short out the TC inputs (3 & 5) and the 515 will read the ambient temperature at the rear connector where the cold junction compensator is installed.

All units shipped out have been fully tested & calibrated per range selected and no recalibration is required, but if you must, use a reliable μ V source or TC calibrator. If using μ V source, the ambient temperature mV equivalent must be subtracted from the tables to compensate for the 515's internal C.J.C. If using TC calibrator just dial the temperature at "0", adjust the zero pot behind the filter, dial F.S. signal, adjust the span pot and replace the filter. **Always use the same TC extension wires as the 515 was ordered for. Do not use Cu wires!**

HOUSING: Otek's Flat Pack requires no panel cut out. Just drill a 10mm (3/8") \varnothing hole, pass the wires through, attach the provided double-sided tape (to prevent rotation), align the flat pack, tighten the nut and make the connections to the wires. No connector or tools required! No behind the panel space needed! The case is U.L. approved ABS Polycarbonate 94VO rated. **NEMA 4X housing option does not have access to the adjustments. If other than Otek's standard setting is required, please specify at the time of ordering.** Our New Sanitary housing is wall, pipe or panel mount and can include 2 flat packs, please specify.

ORDERING INFORMATION (11/1/00)

MODEL **5** **1** **5** **□** **□** **□** **□** **-0**

INPUT RANGE

- 0 "K" 0° to 1000°C
- 1 "K" -100.0° to +100.0°C
- 2 "K" 32° to 2000°F
- 3 "K" -200.0° to +200.0°F
- 4 "J" 0° to 760°C
- 5 "J" -100.0° to +100.0°C
- 6 "J" 32° to 1400°F
- 7 "J" -200.0° to +200.0°F
- 8 "T" -200 to +200°C
- 9 "T" 32° +750°F
- X Specify for "R" "S" "B" & "E" Types.

POWER INPUT(2)

- 0 5VDC
- 1 Open Frame 120/240VAC
- 2 Power Pack 120VAC

HOUSING (3)

- 0 NEMA 3
- 1 NEMA 4
- 2 Sanitary

(2) See "Power Supplies" section above.

(3) See NEMA 4X note in "Housing" section above.

Note:(1) The 515 **DOES NOT LINEARIZE** the TC Signal. Please specify temperature range in 300° increments for best accuracy.

DECIMAL POINTS: Externally selectable.

POWER SUPPLIES: Externally mounted. Two types are available, the "Open Frame" style accepts 120/240VAC and delivers 5VDC up to 400mADC. The "Power Pack" is a wall plug in module available only for 120VAC input and delivers 5VDC up to 400mADC.

SPECIFICATIONS AT 25°C

Accuracy of instrument (see note 1 in ordering info.) ... $\pm 1^\circ \pm 1$ digit	Drift vs. Temperature	$\pm 0.005\% / ^\circ\text{C}$
Samples/Second	4	Nominal
Operating/Storage Temp	-10° to 60°C/-20° to +70°C	
Decimal Points	Selectable	
Power Requirements	160mA at 5VDC	
Display Type LED	3½ Digit .6" Red LED	
MTBF	100,000 Hours	
Linearity	Same as TC used	
Configuration	Single ended (+TC connected to ground)	
Cold Junction Range	-25°C to 75°C	
Zero & Span	Adjustable $\pm 20^\circ\text{C}$	
Open TC Indication	+1 (burn up)	
Open TC Current	5 μ A	
Full Scale Response	1 second	
Warm up to Rated Accuracy	5 minutes	
Sanitary Case	NEMA 4X up to 250°F Steam Cleaning	

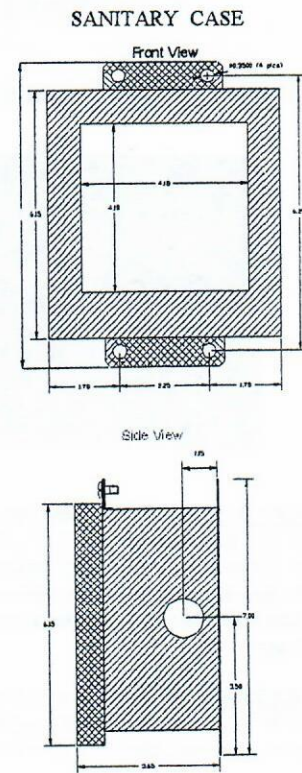
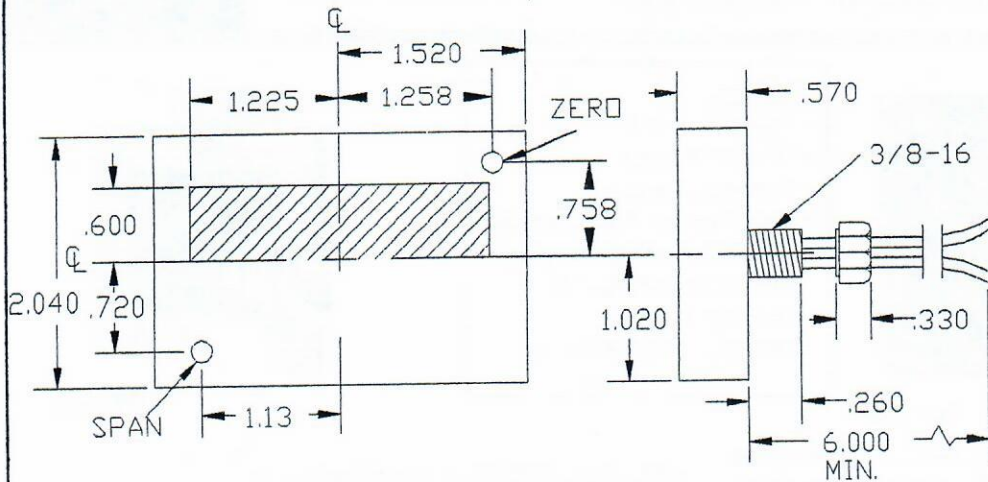
LEAD COLOR

TERMINAL DESCRIPTION

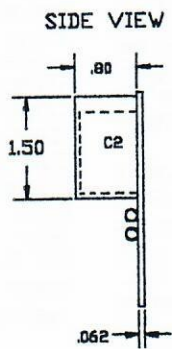
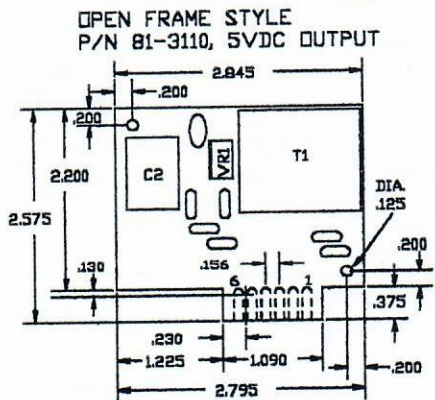
BROWN	IXX.X Decimal Point, connect to Black to energize
YELLOW	+ Analog Output
GRAY	Cold Junction Compensator's Output
RED	+5VDC Power Input
WHITE	- Analog Output (An. Ground)
BLACK	Power Ground (+5V Return)
GREEN	Signal Common
ORANGE	- TC Input (Red lead of thermocouple)
BLUE	+ Reference Out/In
VIOLET	+ TC Input (White or Yellow lead of thermocouple)

TEMPERATURE TC

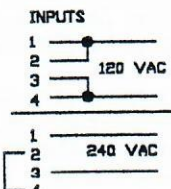
515 FLATPACK MECHANICALS & TYPICAL CONNECTIONS
 FLAT PACK W/WIRES



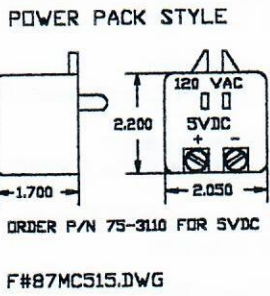
MECHANICALS FOR POWER SUPPLIES



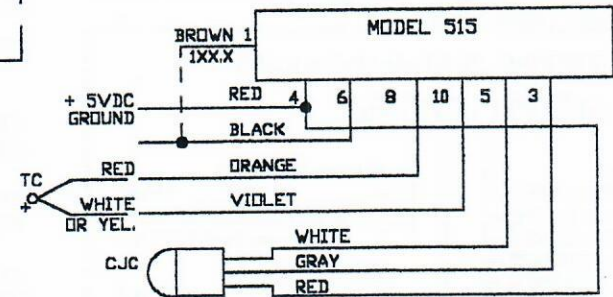
OPEN FRAME POWER SUPPLY
 TYPICAL CONNECTIONS



P/N 81-3110, 5VDC OUT



TYPICAL CONNECTIONS



NOTE: MOUNT COLD JUNCTION COMPENSATOR (CJC) PHYSICALLY NEXT TO THE JUNCTION OF THE T.C. & 515'S WIRES. CJC INCLUDED

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