

# DISCONTINUED!!!!!!!!!!!!!!!!!!!!!! SEE MODEL: NTM-F

VDC & mADC INPUT 4½ DIGIT, HIGH ACCURACY LED  
DIGITAL PANEL METER  
"Flat Pack" No Panel Cut Out Required  
(NEMA 3 or NEMA 4X)

MODEL  
523



FLATPACK

### Features

- 9 Ranges
- Lowest Component Count
- High Common Mode Voltage
- Low Power Requirements
- Auto Zero-Bipolar
- Splash Proof
- Display Hold
- 100,000 Hours MTBF



SANITARY

D.C. VOLTS/AMPS

**DESCRIPTION:** The 523 requires no cutout for panel mounting. Its stylish case blends perfectly on any panel without the need of additional bezel. Its 0.4" bright LED display is viewable at 15 feet (5M). Combined with a single chip A-D Convertor makes the 523 the most advanced instrument of its kind at low cost. Its  $\pm 2V$  CMV on any range eliminates ground loop problems and its ratiometric capabilities make the 523 ideal for load cells and XDCR applications. Its internal clock was designed to reject both 50-60Hz noise but other sampling rates are available. Negative signals are indicated by "-".

**HOUSING:** Otek's Flat Pack requires no panel cut out. Just drill a 10mm (3/8") 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. Sanitary Housing is Wall, Pipe or Panel Mount & can include up to 2 flat packs, please specify.

**POWER SUPPLIES:** Externally mounted. Two types are available, the "Open Frame" style accepts 120/240VAC and delivers 5VDC at up to 400mADC. The "Power Pack" is a wall plug in module available only for 120VAC input and delivers 5VDC at up to 200mADC.

### SPECIFICATIONS AT 25°C

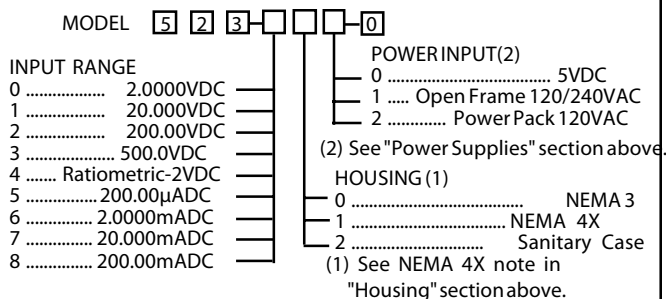
Accuracy and Linearity .....	$\pm 0.008\% \pm 1$ Digit
Drift vs. Temperature .....	$\pm 0.003\%$ °C
Sampling Rate .....	3/Sec. Nominal
CMV .....	$\pm 2V$ Any Range
Input Impedance .....	>1000 Meg. on 2V Range
Input Bias Current .....	5pA Typical
Input Voltage Protection .....	$\pm 700V$
Input Current Protection .....	$\pm 200\%$ of Range
CMRR .....	90dB
Operating /Storage Temperature .....	-10° to +60°C/-20° to +70°C
Power Consumption .....	+5VDC $\pm 5\%$ at 180mA
Display Type .....	0.4" Red LED
MTBF .....	100,000 Hours
Sanitary Case .....	NEMA 4X up to 250 F Steam Cleaning

### LEAD COLOR

### TERMINAL DESCRIPTION

VIOLET	HOLD: When this lead is connected to Black, the 523 will hold the last reading. Open for normal operation.
YELLOW	+ SIGNAL INPUT: The most positive side of the signal input to indicate a positive reading with respect to - in.
BLUE	DECIMAL POINT SELECT: This energizes the desired decimal point (one only).
RED	+ 5VDC IN: Connect a +5VDC $\pm 10\%$ power source with a 200mA source capability.
GREEN	- SIGNAL INPUT: Connect the most negative side of the input signal to it.
BLACK	GROUND: Return for +5VDC power source.
ORANGE	DECIMAL POINT 1.XXXX: This decimal point will illuminate when connected to Blue.
BROWN	DECIMAL POINT 1X.XXX: This decimal point will illuminate when connected to Blue.
WHITE	DECIMAL POINT 1XX.XX: This decimal point will illuminate when connected to Blue.
GRAY	DECIMAL POINT 1XXX.X: This decimal point will illuminate when connected to Blue.

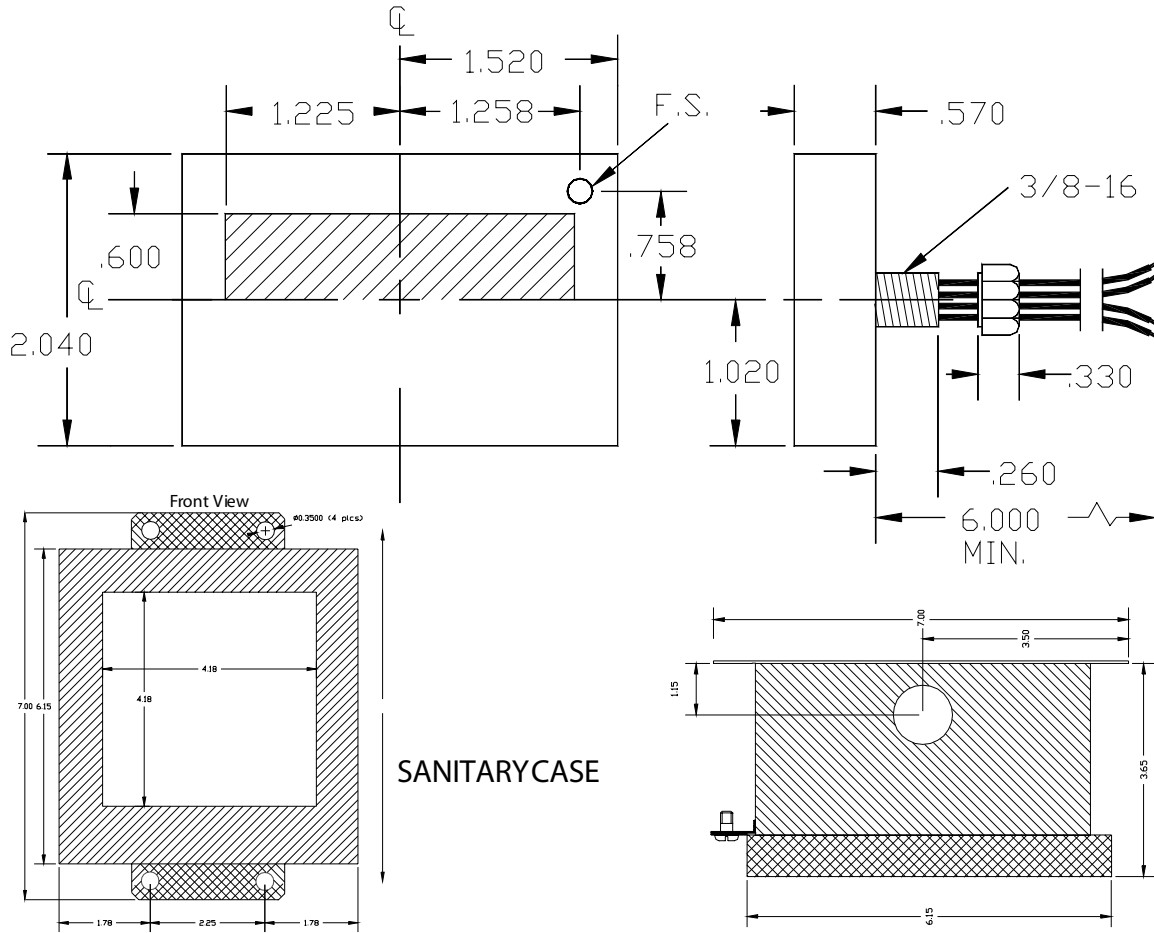
### ORDERING INFORMATION (8/2/05)



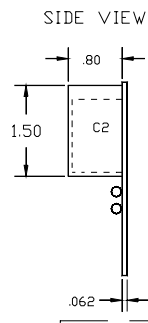
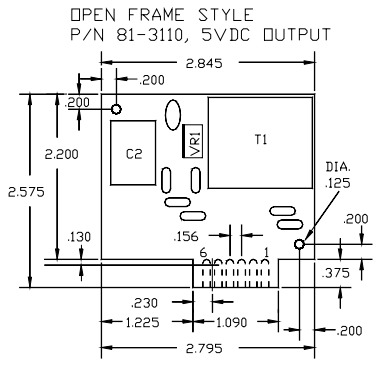
ONLY ONE DECIMAL POINT CAN BE ENERGIZED AT A TIME

# DISCONTINUED!!!!!!!!!!!!!!!!!!!!!! SEE MODEL: NTM-F

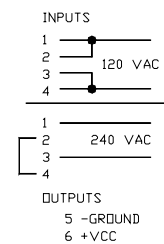
## FLAT PACK W/WIRES



### MECHANICALS FOR POWER SUPPLIES



### OPEN FRAME POWER SUPPLY TYPICAL CONNECTIONS

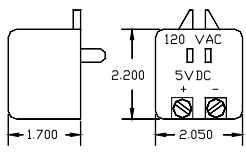


### 523 TYPICAL CONNECTIONS

DIFFERENTIAL INPUT  
CMV ≤ ±2 VOLTS  
SINGLE ENDED INPUT  
\* CONNECT -IN TO GND

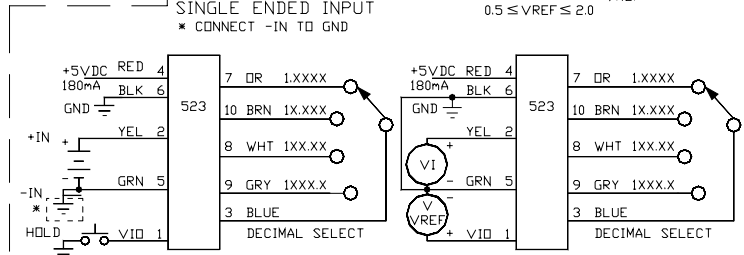
RATIO METRIC  
DISPALY = 1000  $\frac{V_I}{V_{REF}}$   
0.5 ≤ VREF ≤ 2.0

### POWER PACK STYLE



ORDER P/N 75-3110 FOR 5VDC

F#87MC523.DWG



FAX: 520-790-2808  
E-MAIL: sales@otekcorp.com  
TOLL FREE 877-227-6835  
**520-748-7900**

**OTEK**™  
CORP.  
SINCE 1974

4016 E. TENNESSEE ST.  
TUCSON, AZ. 85714 U.S.A.  
MADE IN USA

