MODEL T9224

FORM AND FIT REPLACEMENT
FOR THE PRIME TECHNOLOGY
9224 MIL-SPEC BARGRAPH METER

- Anodized Aluminum Machined Housing
- 51 or 101 Segment Bargraph
- 4 (0.3"H) Digits with Decimal Points
- DC Analog Input with support for Strain-Gage, RTD, Potentiometer, Volts and Amps
- Programmable Excitation
- Communications of RS232C, RS422, or RS485
- High Density, D-SUB 15 Pin Gold Plated Male Connector
- Annealed Glass Front Lens
- EMI/RFI Front Panel Gasket
- Conformal Coated Boards

ORDERING INFORMATION

A Display Style
101 Segment Bar and 4 Digit Numeric ...0
51 Segment Bar and 4 Digit Numeric.....1

B Temperature Range
Standard 0-60C.....0
Extended -40 to +85C.....E

C Power Input
9-36VDC.....0

D Serial Interface (See note 1)
RS232C Communications.....232
RS422 Half Duplex Communications.....422
RS485 Half Duplex Communications.....485

E Analog Input (See note 2)
Not required.....0
DC Volts and Amps, 1 Channel.....DC1

F External Intensity Control
Not required.....0
PWM, TTL Level Signal.....P
Voltage Input Intensity Control.....V

T9224 - A B C - D - E F

Part Number Example
T9224-000-485-00 calls for a single 101 segment tri-color bargraph display with a 4 digit numeric, standard 0-60 deg C operating temperature range, 9-36VDC power input and RS485 half duplex communications.
Analog input and external intensity control are not included.

Note 1:
RS422 serial input version is receive only. Unit will not echo commands.

Note 2:
DC analog inputs support ranges from mVDC to 300VDC and from 0.01mADC to 1 AMP DC (including 1-5VDC, 4-20mADC) as well as RTD and Strain-Gage, Excitation is standard.

SPECIFICATIONS

POWER INPUT

- 9-36VDC, Isolated to 500VDC, 3 Watts Maximum
- External fuse should be installed, Rated 4 Amps

ENVIRONMENTAL

- Operating Temp 0 to 60 Degrees C Standard
- Operating Temp -40 to 85 Degrees C Optional
- Storage Temp -55 to 95 Degrees C
- Humidity to 95% Non-Condensing

DISPLAY

- 4 Red LED Digits with Decimal Point 8.8.8.8.
- Display Range: -1999 to 9999
- 51 or 101 Segment Tri-Color LED Bargraph

EMI CHARACTERISTICS (Pending qualification)

- Radiated Emissions EN55022 Class B
- Radiated Susceptibility EN61000-4-3 Criteria A;10V/m
- Conducted Emissions EN55022 class B
- Conducted Susceptibility EN61000-4-6 Criteria A; 3VRMS
- EFT ; EN61000-4-4 +/- 4KV
- Surge ; EN61000-4-5 to +/- 2KV
- ESD ; EN61000-4-2 Criteria B +/- 4KV

ANALOG INPUT (Typical at 25C)

- 24 BIT Low Noise Delta-Sigma A/D converter
- ANSI C39.1 standard Field selectable inputs support mADC, mVDC, VDC, RTD, Strain-Gage and Thermocouples. Input impedance is 1 Meg ohm minimum for voltage inputs
- Field selectable Excitation of 5V, 10V, 12V or 24VDC with 50mA source current as well as a constant current source up to 1.5mADC with 2VDC of maximum compliance voltage
- Isolation 500 VDC to all other I/O
- Accuracy 0.05% +/- 2 counts for DC voltage or current
- Accuracy 0.2 deg C for RTD (10 ohm copper 0.00427, pt100 0.00385 and 0.00392, pt1000 0.00385, 120 ohm nickel 0.00672)
- Accuracy 0.8 deg C for Thermocouple inputs
- Linearity 0.01%
- Drift Approximately +/- 100 ppm per degree C from -40 to +85C
- Concurrent 50Hz and 60Hz noise rejection
- Programmable gain up to 128 for those really small signals
- Programmable sampling rate and smart filtering
- User programmable 9th order Polynomial and 25 point X-Y table Linearization
- Thermocouple Cold Junction Compensation accuracy +/- 0.5C
- Protected from external Transients to ANSI/IEEE C37.90.1

POWER ON SEQUENCE

Power on

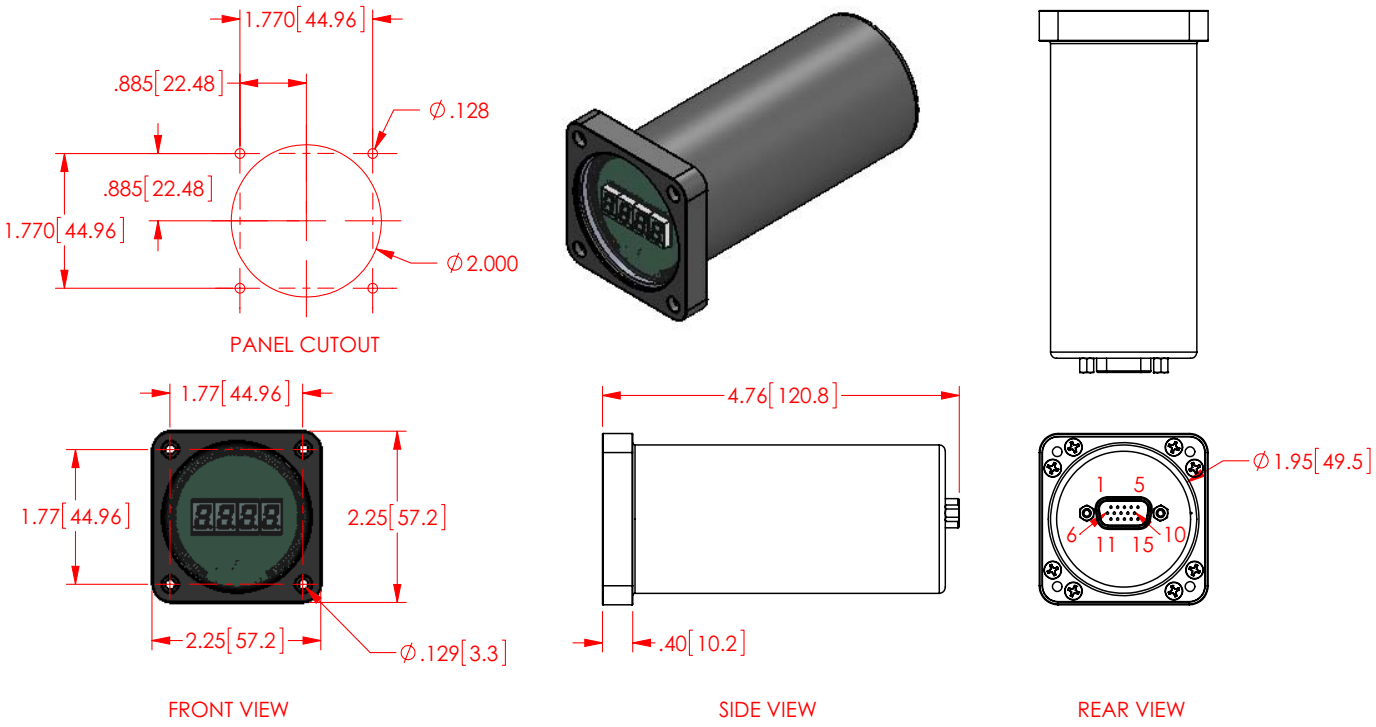
Perform lamp test (all segments on) and read eeprom data/checksum, compare. If good then use stored settings. If not good, retry read up to 3 times to insure corruption

After 4 unsuccessful reads force unit to default mode CA=001, CB=9600, CI=100, mode PI bus, CR=OFF, CT=0 then display Err1 on numeric LED's. For the Bargraph settings, DT=1, DP=3, BM=E, BS=0, BE=0.1, BC=A, BC=N, BA=OFF, BO=D, AC=N, ACn=A for all four alarms and A1-A4 values are all set to 0.

If checksum match is successful, turn on all DP's to indicate a power on state. Note this will be affected by the CT command if no data is received within the timeout period

MECHANICAL

All dimensions in Inches [mm]



D15 PIN DESCRIPTION

Unit is shipped with the male connector installed CONEC P/N 15-002193 or equal

1. Intensity Control	6. Intensity Control GND	11. Clean GND
2. NC	7. NC	12. NC
3. 9-36VDC Power Input	8. Power GND	13. Communications GND
4. + Excitation	9. - Excitation	14. TXD / DO-
5. Channel 1 +Signal	10. Channel 1 - Signal	15 RXD / DO+

Note: Add terminating resistors to last unit if applicable

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