### A. Specifications
- **Power Supply:** 16 to 30 VDC
- **Power Consumption:** < 2W
- **Sampling Rate:** 4 samples/second
- **Accuracy:** ±0.2% full scale ±1
- **Display Range:** -1999 ~ 9999
- **Relay Contact Rating:** 1A @ 30VDC
- **Case Dimensions:** 48 x 24 x 75 mm
- **Mounting Cutout Dimension:** 45 x 22 mm
- **LED Display:** 0.28” (7 mm)
- **Operating Temperature:** 0 ~ 50°C, <85% RH

### B. Front Panel

#### A. Specifications
1. Alarm & relay J1 indicator
2. Up key
3. Shift key
4. Set Key
5. Maximum & Minimum value indicator
6. Display Window

1. AL on indicates alarm is on & J1 relay is pulled in (closed)
2. MAX(MIN) on when display window shows the maximum value or the time of the MAX. MAX(MIN) blinking when display window shows the minimum value or the time of MIN.
3. “>” Shift key: In the parameter setting mode, press this key to select the digit to be changed. In the normal operation mode, press this key to change the display in the sequence shown in the diagram below.
4. “^” Up key: In the parameter setting mode, press this key to increase the displayed value. When displaying Max/Min, press & hold it for 3 seconds to clear the Max/Min stored. In normal function, this key has two functions, Show Operation Time & Change Display Brightness. Press & hold this key down to show the Operation Time since on. Release the key to display the current temperature (process value). Each time the key is pressed, the display brightness will also be changed from bright to dim or from dim to bright.

### C. Parameter Setting

#### 1. Basic Parameter
See [Fig3] for programming flow chart (Press “SET” key then input code 0089 to enter)

#### Table 1: Input Type Options

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Input type</th>
<th>Description</th>
<th>Setting range</th>
<th>Res.</th>
<th>Aacy</th>
<th>Impedance</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>TC, Type T</td>
<td>200~600°C</td>
<td>1°C/0.5°F</td>
<td>0.3%</td>
<td>100K</td>
<td></td>
</tr>
<tr>
<td>r</td>
<td>TC, Type R</td>
<td>-50~100°C</td>
<td>1°C/0.5°F</td>
<td>0.3%</td>
<td>100K</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>TC, Type J</td>
<td>200~120°C</td>
<td>1°C/0.5°F</td>
<td>0.2%</td>
<td>100K</td>
<td></td>
</tr>
<tr>
<td>B x E</td>
<td>TC, BiMetal</td>
<td>0~200°C</td>
<td>1°C/0.5°F</td>
<td>0.2%</td>
<td>100K</td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>TC, Type S</td>
<td>-50~100°C</td>
<td>1°C/0.5°F</td>
<td>0.3%</td>
<td>100K</td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>TC, Type K</td>
<td>200~150°C</td>
<td>1°C/0.5°F</td>
<td>0.2%</td>
<td>100K</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>TC, Type E</td>
<td>200~90°C</td>
<td>1°C/0.5°F</td>
<td>0.2%</td>
<td>100K</td>
<td></td>
</tr>
<tr>
<td>P I/D</td>
<td>RTD, Pi100</td>
<td>199.9~600.0°C</td>
<td>0.1°C/0.2°F</td>
<td>0.2%</td>
<td>(0.2mΩ)</td>
<td></td>
</tr>
<tr>
<td>E x/D</td>
<td>RTD, Cu50</td>
<td>50.0~100.0°C</td>
<td>0.1°C/0.2°F</td>
<td>0.2%</td>
<td>(0.2mΩ)</td>
<td></td>
</tr>
</tbody>
</table>

#### 2. Alarm Parameter

(Press “SET” key then input code 0001 to enter)
Alarm Parameter setting is similar to the Basic Parameters setting in [Fig3] except the access code is 0001 instead of 0089

Note 4: Relay action setting (PMD-0 meter does not contain J2 relay. Its settings AH2 & AL2 can be ignored).
1) Set AH1=AL1, relay is disabled
2) Set AH1>AL1, relay is for high alarm limit. See [Fig1]
3) Set AH1<AL1, relay is for low limit alarm. See [Fig2]

[Fig3] Basic Parameter setting flow chart

3. Peak Value
(Press “SET” key then input code 0037 to enter)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Name</th>
<th>Description</th>
<th>Range</th>
<th>Initial</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR</td>
<td>MA</td>
<td>Maximum value</td>
<td>on/off</td>
<td>on</td>
<td>5</td>
</tr>
<tr>
<td>ARt</td>
<td>MA-t</td>
<td>Time of maximum</td>
<td>on/off</td>
<td>off</td>
<td></td>
</tr>
<tr>
<td>AL</td>
<td>MI</td>
<td>Minimum value</td>
<td>on/off</td>
<td>off</td>
<td></td>
</tr>
<tr>
<td>ALt</td>
<td>MI-t</td>
<td>Time of minimum</td>
<td>on/off</td>
<td>off</td>
<td></td>
</tr>
<tr>
<td>Ed</td>
<td>End</td>
<td>End</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note 5: Peak function is interlocked.
1) When MA is turned off, MA-t can’t be set
2) When MI is turned off, MI-t can’t be set

Peak Value setting is similar to the Basic Parameters setting in [Fig3] except the access code is 0037 instead of 0089

Reset the Peak value:
The peak values are stored in the memory even after the meter is powered off. To reset them, change the display to show MA, MA-t, MI, or MI-t. Then, press & hold “×” key for 3 seconds. The display will show “——” indicating the memory (for all four parameters) is reset. The meter will start to catch the new peak after 2 seconds.

D. Terminal Assignment

1) 1 & 2 are for power input
2) 4 & 5 are for alarm relay output. When alarm is turned on, terminals 2 & 5 are internally connected. To drive a 24V buzzer, connect one lead of the buzzer to the +24V. Connect the other lead to terminal 5.
3) 3 is for display brightness control. When connecting the illumination signal (+12V) to it, the brightness will be synchronized with headlight. If not connected, the brightness can still be controlled by “×” key.
4) 6, 7, 8 & 9 are for different type of signal input. Example: Use 6 & 7 for EGT thermocouple probe.
5) 10 outputs a regulated 5VDC for powering a pressure transducer or other type of sensor requiring power.

E. Application Example

Exhaust Gas Temperature Measurement

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