

Instruction Manual

Digital Process Indicator

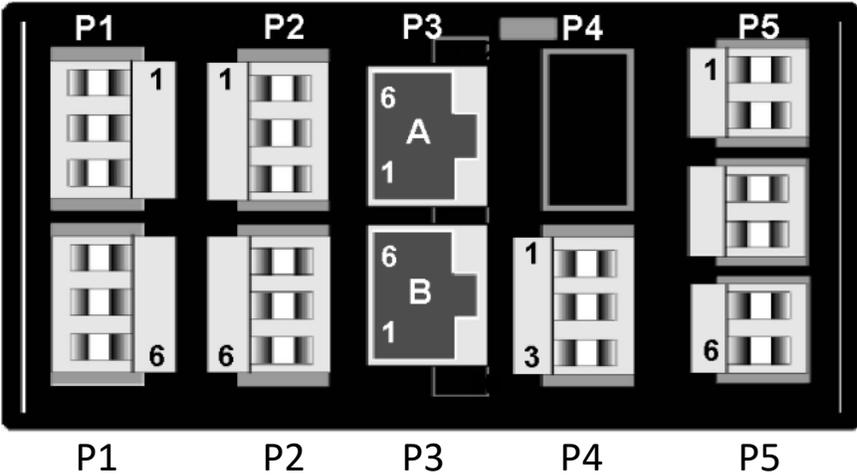


PMD3XT Series

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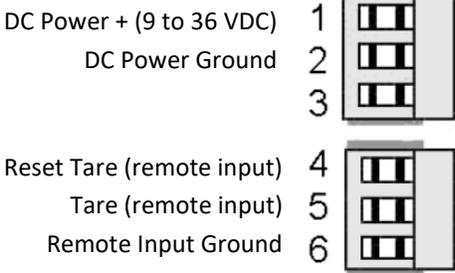
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Connector Wiring Information

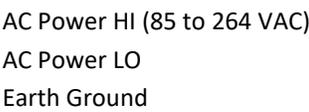


P1 - Power and Digital Controls

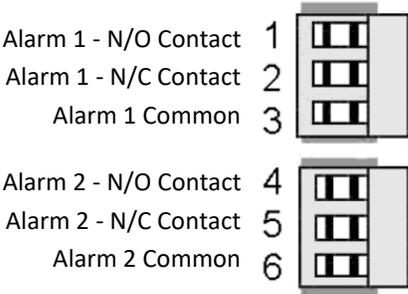
DC POWERED VERISON



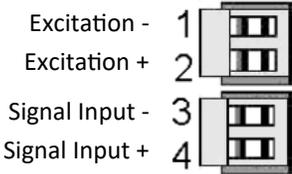
AC POWERED VERISON



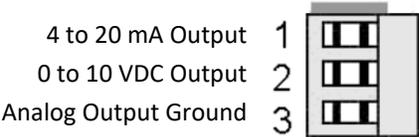
P2 - Dual Mechanical Relay Outputs



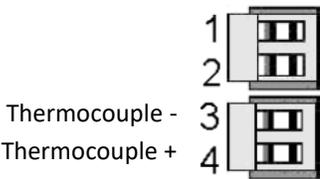
P5 - DC Signal Input



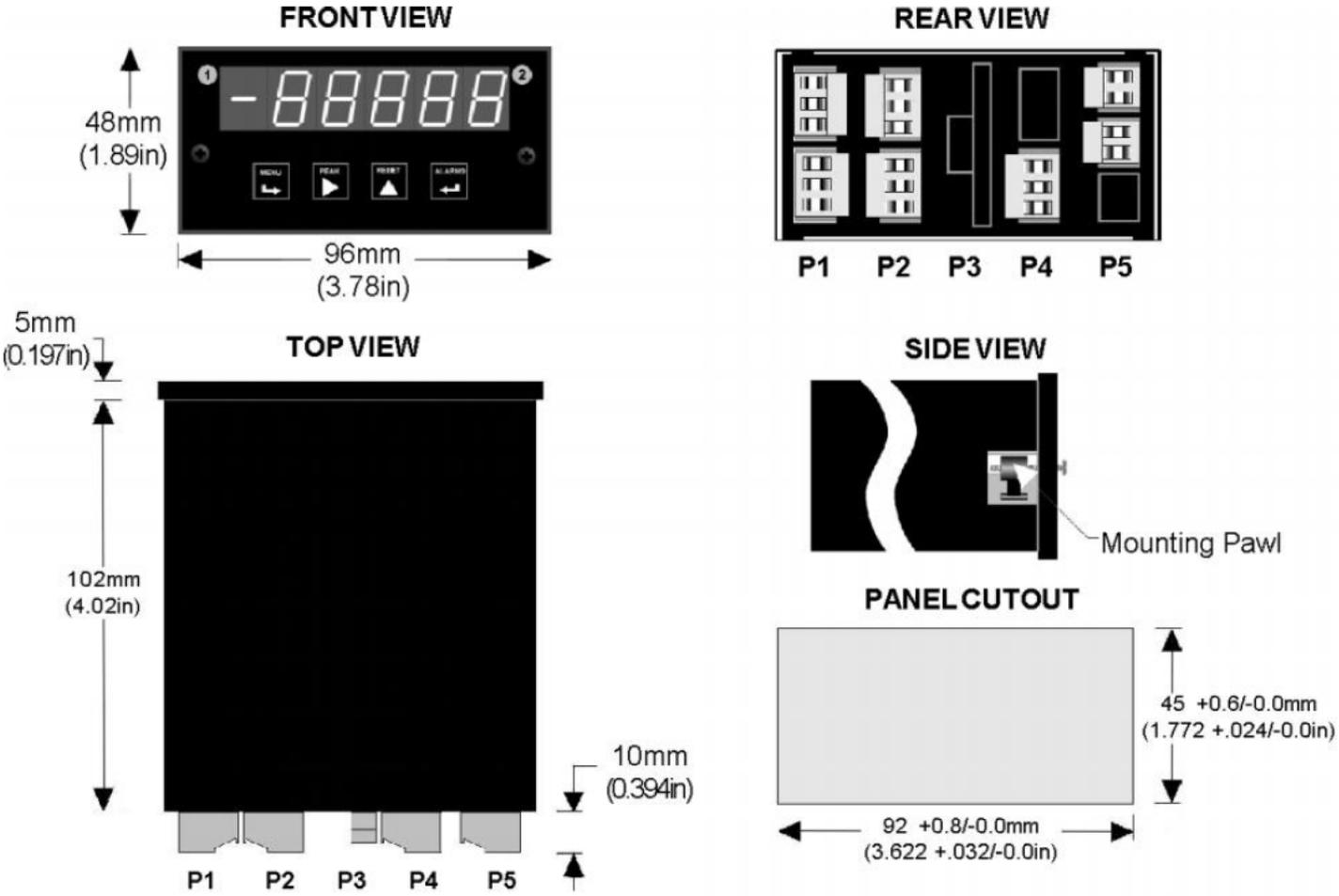
P4 - Analog Output



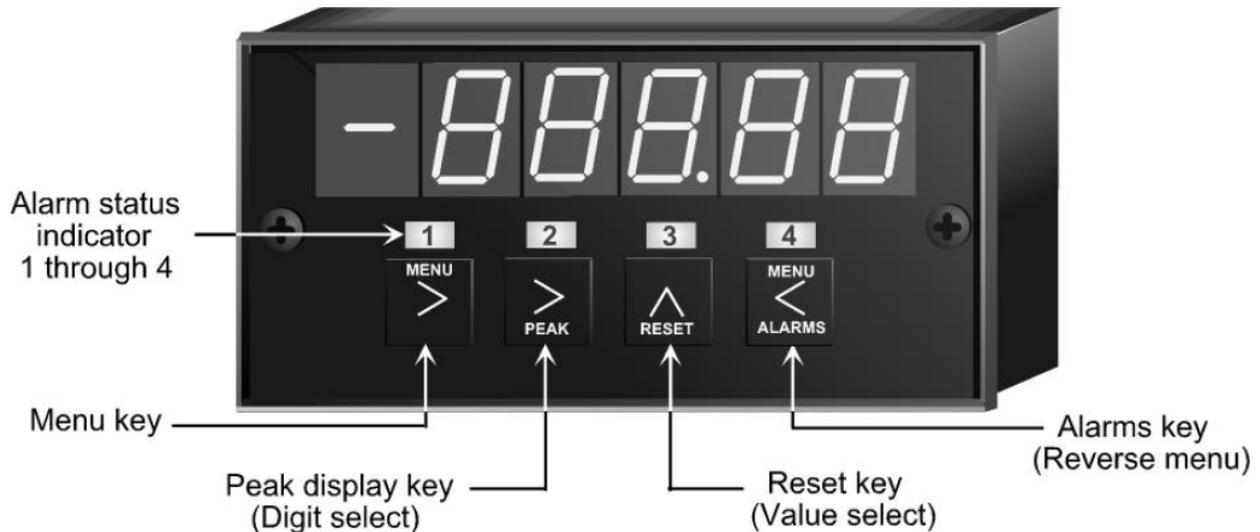
P5 - Thermocouple Input



Panel Mounting Information



Front Panel Keypad Information



KEYS IN RUN MODE



MENU Key. Pressing *MENU* from the Run Mode enters the Menu Mode. Pressing *MENU* repeatedly will step the meter through the various menu items (if these have not been locked out) and then back to the Run Mode.



PEAK Key. Pressing *PEAK* causes the peak value of the input signal to be displayed. The peak display blinks to differentiate it from the normal present value display. Pressing *PEAK* again will return the display to the present value.



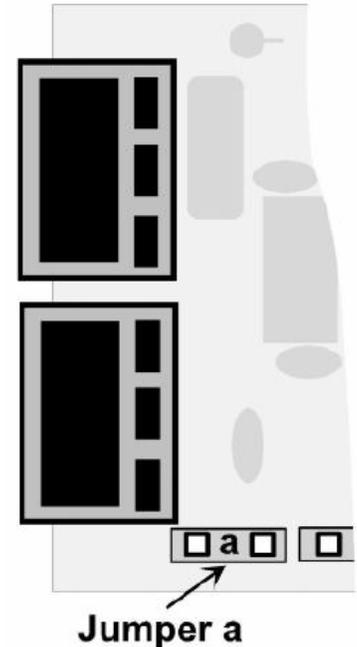
RESET Key. Pressing *RESET* with *PEAK* resets peak and valley values. Pressing *RESET* with *ALARMS* resets latched alarms. Pressing *RESET* with *MENU* performs a meter (same as power on). Pressing and releasing *RESET* without pressing another key, changes the displayed item if the mode has multiple items. For Item 1, the V LED is out. For Item 2, the V LED is on. For Item 3, the V LED is flashing.



ALARMS Key. Pressing *ALARMS* once displays the setpoint for Alarm 1. Pressing it again displays the setpoint for Alarm 2. Pressing it again returns to the present value.

Enabling & Locking Out Menu Items

For security reasons and ease of meter operation, any and all menu items may be disabled or "locked out" so that they are no longer directly accessible from the front panel. Each function to be disabled is set to "1" in menu items *Loc 1*, *Loc 2* or *Loc 3*, and each function to be enabled is set to "0." The top menu items *Loc 1*, *Loc 2* and *Loc 3* can in turn be locked out by installing an internal hardware jumper. With the jumper installed, the operator only has access only to enabled menu items. With the jumper removed, the operator also has access to menu items *Loc 1*, *Loc 2* and *Loc 3*.



SETTING HARDWARE LOCKOUT JUMPER

To access the lockout jumper, remove the rear panel per Section 9 and locate jumper "a" in the lower portion of the power supply board next to the input connectors (see figure at right).

SETTING SOFTWARE LOCKOUTS

When setting up the meter, it may be necessary to enable specific menu items by setting the corresponding lockout digit to 0. Be sure to reset the lockout digit to "1" if you do not want the menu item to be changed by an operator.

Loc 1 **Loc 2** **Loc 3**

Press the $\>$ *MENU* key until *Loc 1*, *Loc 2* or *Loc 3* is displayed, as desired. **Note:** the hardware lockout jumper must be removed (see above).

11111

Press $\>$ to display the lockout status, consisting of 1's and 0's. The left digit will flash. Press $\>$ again to step to the next digit, which will flash.

00000

12345

Press $\>$ to set the flashing digit to "0" to enable the menu item or to "1" to disable. Press *MENU* to enter. See the table to the right for list of menu items that can be enabled or disabled.

Enabled or Disabled Menu Items

Loc 1

- 1 - Input type selection.
- 2 - Meter setup, configuration & decimal pt.
- 3 - Filter selection.
- 4 - Scale or Lo, Hi input.
- 5 - Offset or Lo, Hi reading

Loc 2

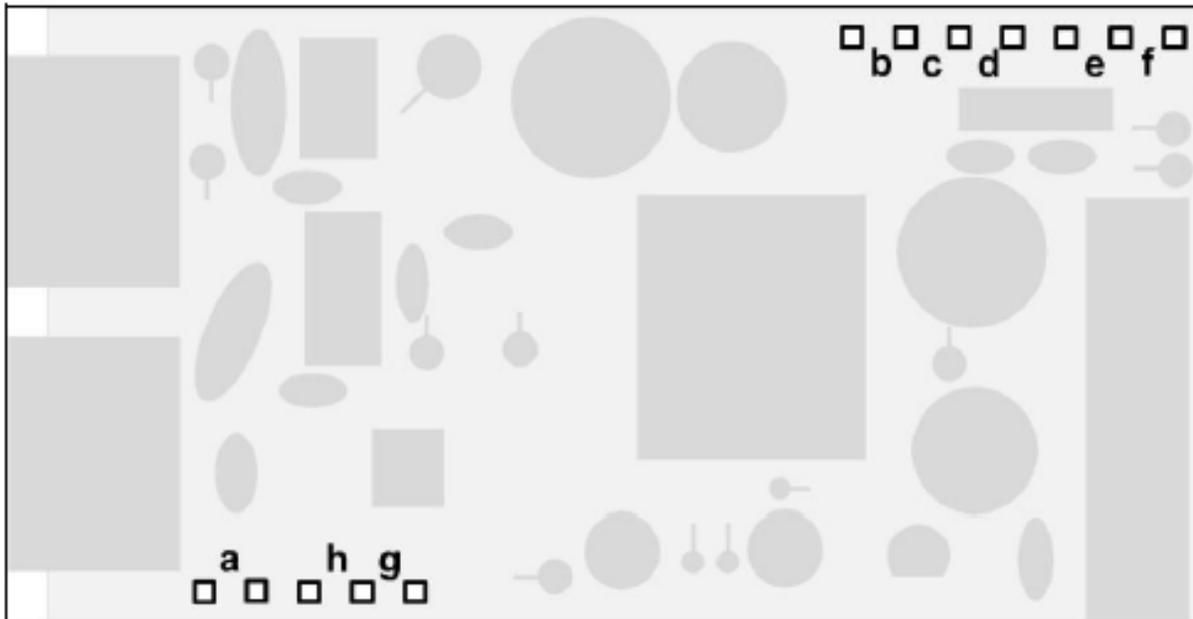
- 2 - Alarm setup.
- 3 - Alarm setpoint value programming.
- 4 - Analog output scaling.
- 5 - Serial interface setup.

Loc 3

- 2 - View peak value
- 3 - View alarm setpoints
- 4 - Reset (peak & latched alarms)
- 5 - Reset (meter reset)

Excitation Output & Transducer Power Supply

Three isolated transducer excitation output levels are available from the power supply board. These are selectable via jumpers b, c, d, e, f in the upper right of the board, as illustrated. In addition, the board provides three jumper positions for special features. The same jumper locations apply to the universal power supply (85-264 Vac) and to the low voltage power supply (12-32 Vac or 10-48 Vdc).



Excitation output	Jumper locations	
5 Vdc \pm 5%, 100 mA max	b, d, e	
10 Vdc \pm 5%, 120 mA max	b, d, f	
24 Vdc \pm 5%, 50 mA max	c	

SELECTION OF OTHER JUMPERS

- Jumper a** - Front panel menu lockout, locked when installed. (See Section 9)
- Jumper g** - Provides +5V power output at P1-4 when installed.
- Jumper h** - Connects "Control Input 2" to P1-4 when installed.

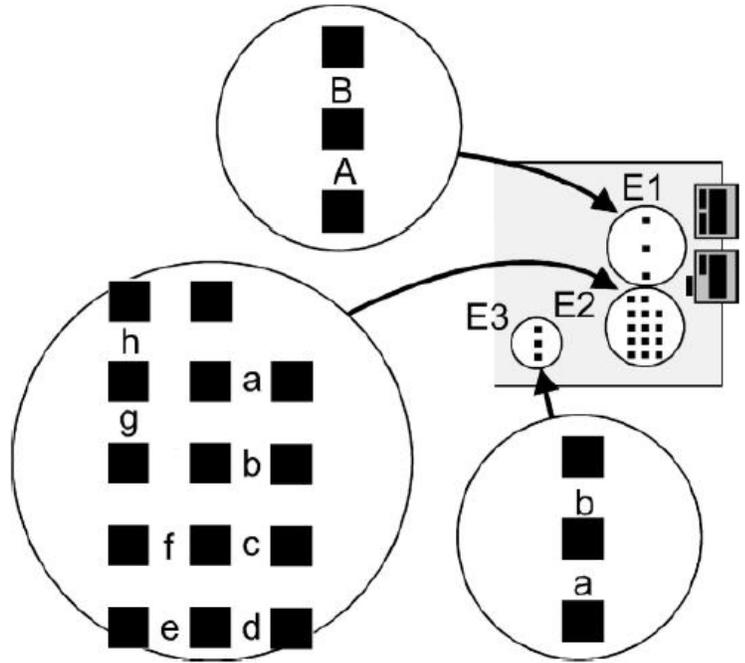
DC Voltage & Amps Input Board Jumpers

Voltage Ranges Jumpers

FS Input	E1	E2	E3
±200.00 mV	A	f	b
±2.0000 V	A	f	a
±20.000 V	B	h	b
±200.00 V	B	h	a
±300V (UL)	B	g	a
±600V (not UL)	B	g	a

Current Ranges Jumpers

FS Input	E1	E2	E3
±2.0000 mA	A	e, g	b
±20.000 mA	A	d, g	b
±200.00 mA	A	c, g	b
±5.000 A	A	a, b, g	b



1. Letters indicate jumper position. Jumpers are installed on pins adjacent to letters.
2. Use 5 mm (0.2") jumpers for locations designated by a capital letter.
3. Use 2.5 mm (0.1") jumpers for locations designated by a lower case letter.
4. Store spare jumpers on an unused jumper post not associated a capital letter.

DC Voltage & Amps Input Board Programming

 Press Menu Select Key	 Press Digit Select Key	 Press Value Select Key
InPut Selection of signal input type & range	dC U DC Volts	0.2U 2.0U 20.0U 200.0U 600.0U 0.2, 2, 20, 200, 660V FS
	dC A DC Amps	2.0a 20.0a 200.0a 5.0a 0.2, 20, 200 mA, 5A FS
	rAtio Strain gauge & ratio	0.2U 2.0U 20.0U 0.2, 2, 20V FS.
SEtUP Meter Setup	00 00 Display selection with scale factor of 1.	0 4-1/2 digits (±20,000) 1 Remote display (±99,999) 2 4-1/2 digits, counts by 10 (±20,000) 3 3-1/2 digits (±2,000)
	00 00 Power line frequency	0 Noise minimized for 60 Hz 1 Noise minimized for 50 Hz
	00 00 Scaling method	0 Scale and offset method 1 Coordinates of 2 points method 2 Reading coordinates of 2 points method
	00 00 Control inputs 1 & 2: True = logic 1 (0V or tied to digital ground) False = logic 0 (5V or open)	0 1 = Reset, 2 = Meter Hold 1 1 = Function Reset, 2 = Peak or Valley 2 1 = Hold, 2 = Peak or Valley Display 3 1 = Hold, 2 = Tare 4 1 = Peak or Valley Display, 2 = Tare 5 1 = Tare, 2 = Reset 6 1 = 1, 2 = 1, decimal point = XXXXX 1 = 0, 2 = 1, decimal point = XXXX.X 1 = 1, 2 = 0, decimal point = XXX.XX 1 = 0, 2 = 0, decimal point = XX.XXX 7 1 = 1, 2 = 1, decimal point = XXXX.X 1 = 0, 2 = 1, decimal point = XXX.XX 1 = 1, 2 = 0, decimal point = XX.XXX 1 = 0, 2 = 0, decimal point = X.XXX.X 8 1 = Function Reset, 2 = Display Blank 9 1 = Hold, 2 = Display Blank A 1 = Peak or Valley, 2 = Display Blank B 1 = Tare, 2 = Display Blank C 1 = Valley Display, 2 = Peak Display D 1 = Tare, 2 = Reset Tare to Zero Both inputs 1 and 2 set to logic 1 for selections 2, 4, A, C = Function Reset Both inputs 1 and 2 set to logic 1 for selections 0, 1, 3, 5, 8, 9, B, D = Meter Reset

Instruction Manual - PMD3XT Digital Indicator

DC Voltage & Amps Input Board Programming (*continued*)

 Press Menu Select Key	 Press Digit Select Key	 Press Value Select Key
ConFG Meter Configuration	000_0 Operation as a rate of change meter. <i>Extended meter only.</i>	0 Not rate of change 1 Rate x 0.1 2 Rate x 1 3 Rate x 10 4 Rate x 100 5 Rate x 1000 6 Rate x 10000
	0_0 Operation of front panel <i>PEAK</i> button and rear connector for Peak or Valley Display	0 Peak Display. Also selects "Peak" in "Peak or Valley" at connector above. 1 Valley Display. Also selects "Valley" in "Peak or Valley" at connector above. 2 Peak (1st push), Valley (2nd push) 3 Front panel Tare
	000_0 Auto-tare	0 Meter comes up in normal run mode. 1 Meter comes up in auto-tare mode
	000_0 Nonlinear input scaling <i>Extended meter only.</i>	0 Linear input 1 Custom curve linearization
FiLtr Filtering	00000 Alarm filtering	0 Unfiltered output 1 Filtered output
	00000 Peak & Valley filtering	0 Unfiltered Peak & Valley 1 Filtered Peak & Valley
	00000 Display filtering	0 Display batch average every 16 readings 1 Display filtered signal
	00000 Adaptive filter threshold	0 Low adaptive filter threshold level 1 High adaptive filter threshold level
	00000 Input signal filtering. <i>Can be applied to display, setpoint, analog output, data output.</i>	0 Autofilter 1 Batch average, 16 readings 2 Moving average, 0.08 sec. 3 Moving average, 0.15 sec. 4 Moving average, 0.3 sec. 5 Moving average, 0.6 sec. 6 Moving average, 1.2 sec. 7 Moving average, 2.4 sec. 8 Moving average, 4.8 sec. 9 Moving average, 9.6 sec. A Unfiltered
dEc.Pt Dec. point selection	d_ddd Decimal point flashes.	d_ddd dd_ddd ddd_dd dddd_d ddddd_ .dddd Press \wedge to shift the decimal point.

Instruction Manual - PMD3XT Digital Indicator

DC Voltage & Amps Input Board Programming (continued)

 Press Menu Select Key	 Press Digit Select Key	 Press Value Select Key
Scaling method "Scale and Offset" if selected under SETUP		
SCALE Scale factor	      Select digit to flash.	Select -9 thru 9 for flashing first digit, 0 thru 9 for other flashing digits. Select decimal point location when decimal point is flashing.
OFFst Offset value	     Select digit to flash.	Select -9 thru 9 for flashing first digit, 0 thru 9 for other flashing digits. Decimal point location is selected by dEC.Pt .
Scaling method "Coordinates of 2 points" if selected under SETUP		
Lo In Low signal input.	     Select digit to flash.	Select -9 thru 9 for flashing first digit, 0 thru 9 for other flashing digits. Decimal point is set by input range chosen.
Lo rd Desired reading at Lo In.	     Select digit to flash.	Select -9 thru 9 for flashing first digit, 0 thru 9 for other flashing digits. Decimal point is set by dEC.Pt .
Hi In High signal input.	     Select digit to flash.	Select -9 thru 9 for flashing first digit, 0 thru 9 for other flashing digits. Decimal point is set by input range chosen.
Hi rd Desired reading at Hi In.	     Select digit to flash.	Select -9 thru 9 for flashing first digit, 0 thru 9 for other flashing digits. Decimal point is set by dEC.Pt .
Scaling method "Reading coordinates of 2 points" if selected under SETUP		
Lo In Low signal input.	0.021 Apply a low reference signal to the meter.	0.021 Press  to store the low signal input in the meter.
Hi In High signal input.	20.094 Apply a high reference signal to the meter.	0.021 Press  to store the high signal input in the meter.
Lo rd Desired reading at Lo In.	     Select digit to flash.	0.0000 Select -9 thru 9 for flashing first digit, 0 thru 9 for other flashing digits. Decimal point is set by dEC.Pt .
Hi rd Desired reading at Hi In.	     Select digit to flash.	6.7500 Select -9 thru 9 for flashing first digit, 0 thru 9 for other flashing digits. Decimal point is set by dEC.Pt .

Thermocouple Input Board Jumpers

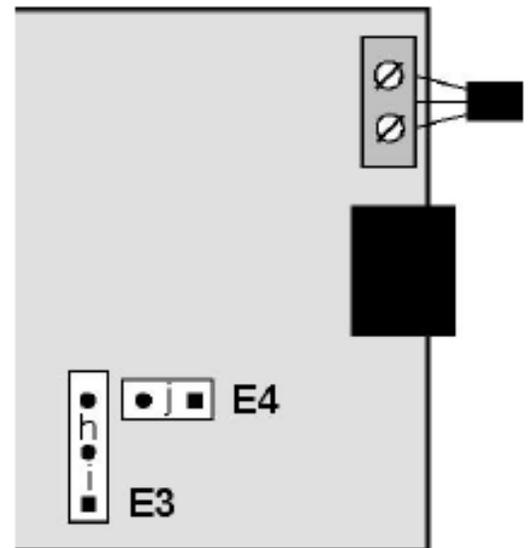
The thermocouple signal conditioner board used for temperature measurement can be configured via jumpers for 7 thermocouple types, each in a single range: J, K, T, E, N, S, R. The meter software recognizes the board and will bring up the appropriate menu items for it; however, it does not recognize the jumper settings. Display in °C or °F and resolution of 1°, 0.1° or 0.01° are user programmable. High resolution should only be used for relative readings, not absolute readings. Although available, 0.01° resolution is not recommended for thermocouples. Offset adjustment is available for thermocouples and is normally set to 0000.0. If °C is selected, entering an offset of 0273.2 will change the display to Kelvin. If °F is selected, entering an offset of 0459.7 will change the display to Rankin.

The addition of a relay output board turns the thermocouple meter from a temperature indicator into an on/off temperature controller. Please see further manual sections for setup of the following features: relay output (Section 16), analog output (17), and communications (18).

SIGNAL CONDITIONER BOARD SETUP VIA JUMPERS

Type	E4 Jumper
J, K, E, N T, R, S	none j
Open Indication	E3 Jumper
Upscale Downscale	h i

1. Letters indicate jumper position.
2. Jumpers are installed on pins adjacent to letters.
3. Use 2.5 mm (0.1") jumpers.
4. Store spare jumpers on an unused jumper post.



Instruction Manual - PMD3XT Digital Indicator

Thermocouple Input Board Programming

 Press Menu Select Key	 Press Digit Select Key	 Press Value Select Key																					
InPut Selection of signal input type & range	tc Thermocouple	<table border="0"> <tr> <td>J °F</td> <td>J °C</td> <td>Type J, °F or °C</td> </tr> <tr> <td>K °F</td> <td>K °C</td> <td>Type K, °F or °C</td> </tr> <tr> <td>n °F</td> <td>n °C</td> <td>Type N, °F or °C</td> </tr> <tr> <td>E °F</td> <td>E °C</td> <td>Type E, °F or °C</td> </tr> <tr> <td>t °F</td> <td>t °C</td> <td>Type T, °F or °C</td> </tr> <tr> <td>S °F</td> <td>S °C</td> <td>Type S, °F or °C</td> </tr> <tr> <td>r °F</td> <td>r °C</td> <td>Type R, °F or °C</td> </tr> </table>	J °F	J °C	Type J, °F or °C	K °F	K °C	Type K, °F or °C	n °F	n °C	Type N, °F or °C	E °F	E °C	Type E, °F or °C	t °F	t °C	Type T, °F or °C	S °F	S °C	Type S, °F or °C	r °F	r °C	Type R, °F or °C
J °F	J °C	Type J, °F or °C																					
K °F	K °C	Type K, °F or °C																					
n °F	n °C	Type N, °F or °C																					
E °F	E °C	Type E, °F or °C																					
t °F	t °C	Type T, °F or °C																					
S °F	S °C	Type S, °F or °C																					
r °F	r °C	Type R, °F or °C																					
SEtUP Meter Setup	00 00 Display selection.	0 0.1 degree resolution 1 Remote display (±99,999) 2 0.01 degree resolution 3 1 degree resolution																					
	00 00 Power line frequency	0 Noise minimized for 60 Hz 1 Noise minimized for 50 Hz																					
	00 00 Scaling method	0 Offset only for thermocouple input.																					
	00 00 control inputs 1 & 2: True = logic 1 (0V or tied to digital ground) False = logic 0 (5V or open)	0 1 = Reset, 2 = Meter Hold 1 1 = Function Reset, 2 = Peak or Valley 2 1 = Hold, 2 = Peak or Valley Display 3 1 = Hold, 2 = Tare 4 1 = Peak or Valley Display, 2 = Tare 5 1 = Tare, 2 = Reset 6 1 = 0, 2 = 0, decimal point 1 = XXXXX 1 = 1, 2 = 0, decimal point 1 = XXXX.X 1 = 0, 2 = 1, decimal point 1 = XXX.XX 1 = 1, 2 = 1, decimal point 1 = XX.XXX 7 1 = 0, 2 = 0, decimal point 2 = XXXX.X 1 = 1, 2 = 0, decimal point 2 = XXX.XX 1 = 0, 2 = 1, decimal point 2 = XX.XXX 1 = 1, 2 = 1, decimal point 2 = X.XXX.X 8 1 = Function Reset 2 = Display Blank 9 1 = Hold 2 = Display Blank A 1 = Peak or Valley 2 = Display Blank B 1 = Tare 2 = Display Blank C 1 = Valley Display 2 = Peak Display D 1 = Tare 2 = Tare Reset																					
Both control inputs 1 & 2 set to 1 for selections 2, 4, A, C = Function Reset. Both control inputs 1 & 2 set to 1 for selections 0, 1, 3, 5, 8, 9, B, D = Meter Reset.																							

Thermocouple Input Board Programming (*continued*)

 Press Menu Select Key	 Press Digit Select Key	 Press Value Select Key
ConFC Meter Configuration	000 0	0 No used.
	00 _ 0 Operation of front panel <i>PEAK</i> button and rear connector for Peak or Valley Display	0 Peak Display. Also selects "Peak" in "Peak or Valley" at rear connector. 1 Valley Display. Also selects "Valley" in "Peak or Valley" at rear connector. 2 Peak (1st push), Valley (2nd push) 3 Front panel Tare
FiLtr Filtering	00000 Alarm filtering	0 Unfiltered output 1 Filtered output
	00000 Peak & Valley filtering	0 Unfiltered Peak & Valley 1 Filtered Peak & Valley
	00000 Display filtering	0 Display batch average every 16 readings 1 Display filtered signal
	00000 Adaptive filter threshold	0 Low adaptive filter threshold level 1 High adaptive filter threshold level
	00000 Input signal filtering. <i>Can be applied to display, setpoint, analog output, data output.</i>	0 Autofilter 1 Batch average, 16 readings 2 Moving average, 0.08 sec. 3 Moving average, 0.15 sec. 4 Moving average, 0.3 sec. 5 Moving average, 0.6 sec. 6 Moving average, 1.2 sec. 7 Moving average, 2.4 sec. 8 Moving average, 4.8 sec. 9 Moving average, 9.6 sec. A Unfiltered
OFFst Offset value	0.0000 0.0000 0.0000 0.0000 0.0000 Select digit to flash.	Select -9 thru 9 for flashing first digit, 0 thru 9 for other flashing digits. Use offset for display in Rankine or Kelvin.

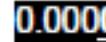
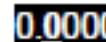
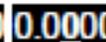
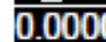
Dual Relay Output Set Point Programming *(if option is installed)*

 Alarms Key	 Press Digit Select Key	 Press Value Select Key
<p>300.24 Press < (Alarms) to display Alarm 1 setpoint.</p>	<p>200.00 Current setpoint 1 value blinks, and Alarm 1 LED indicator lights. Press > to select a digit, which will blink.</p>	<p>295.00 To change setpoint 1 value, press ^ to change selected blinking digits.</p>
<p>395.00 Press < (Alarms) to display Alarm 2 setpoint.</p>	<p>395.00 Current setpoint 2 value blinks, and Alarm 2 LED indicator lights. Press > to select a digit, which will blink.</p>	<p>305.00 To change setpoint 2 value, press ^ to change selected blinking digits.</p>

Dual Relay Output Board Programming *(if option installed)*

 Press Menu Select Key	 Press Digit Select Key	 Press Value Select Key
ALSET Alarm Setup for relays 1 & 2 if detected. Press > until ALSET is displayed.	00000 Relay state when alarm is active.	0 Relay 1 on Relay 2 on 1 Relay 1 off Relay 2 on 2 Relay 1 on Relay 2 off 3 Relay 1 off Relay 2 off
	00000 Alarm latching or non-latching (auto reset).	0 Alarm 1 auto reset Alarm 2 auto reset 1 Alarm 1 latching Alarm 2 auto reset 2 Alarm 1 auto reset Alarm 2 latching 3 Alarm 1 latching Alarm 2 latching
	00000 Alarm operates at and above setpoint (active high) or at and below setpoint (active low).	0 AL1 active high AL2 active high 1 AL1 active low AL2 active high 2 AL1 disabled AL2 active high 3 AL1 active high AL2 active low 4 AL1 active low AL2 active low 5 AL1 disabled AL2 active low 6 AL1 active high AL2 disabled 7 AL1 active low AL2 disabled 8 AL1 disabled AL2 disabled
	00000 Hysteresis mode or band deviation mode	0 AL1 band deviation AL2 band deviation 1 AL1 split hysteresis AL2 band deviation 2 AL1 band deviation AL2 split hysteresis 3 AL1 split hysteresis AL2 split hysteresis 4 No deviation or hysteresis in menu. 5 AL1 span hysteresis AL2 band deviation 6 AL1 span hysteresis AL2 split hysteresis 7 AL1 span hysteresis AL2 span hysteresis
	00000 Number of consecutive readings in alarm zone to cause an alarm.	0 After 1 reading 4 After 16 readings 1 After 2 readings 5 After 32 readings 2 After 4 readings 6 After 64 readings 3 After 8 readings 7 After 128 reading

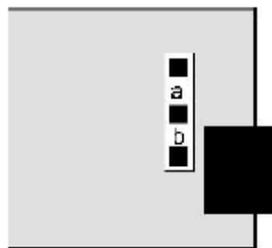
Dual Relay Output Board Programming *(if option installed)*

 Press Menu Select Key	 Press Digit Select Key	 Press Value Select Key
dEU1H Alarm 1 hysteresis	     Select digit to flash.	Select 9 thru 9 for flashing first digit, 0 thru 9 for other flashing digits. Alarms will activate above the setpoint by the value entered and deactivate below the setpoint by the value entered.
DEU2H Alarm 2 hysteresis		
DEU1b Alarm 1 band deviation	     Select digit to flash.	Select 9 thru 9 for flashing first digit, 0 thru 9 for other flashing digits. Alarms will activate above and below the setpoint by the value entered and will deactivate in the middle of the band.
DEU2b Alarm 2 band deviation		

Analog Output Board Jumpers *(if option installed)*

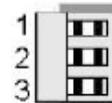
An optional analog board may be installed in the meter at rear panel jack position J4, adjacent to the signal conditioner board. Once installed, this board is recognized by the meter, which will bring up the appropriate menu items for it. These will not be brought up if an analog output board is not installed.

The analog output can be a 0-20 mA, 4-20 mA or 0-10V unipolar signal with respect to isolated ground, or a bipolar -10V to +10V voltage signal with respect to a reference return line. Unipolar or bipolar operation is selected by a jumper. A unipolar current or voltage output is selected at the connector. Unipolar 4-20 mA or 0-20 mA current is selected in software.



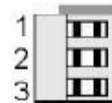
UNIPOLAR CONNECTIONS

4-20 mA or 0-20 mA OUTPUT
0-10V OUTPUT
ISOLATED GROUND



BIPOLAR CONNECTIONS

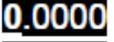
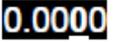
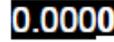
REFERENCE or RETURN
-10V to +10V OUTPUT
N/C



Unipolar current or voltage: Jumper **a**
Bipolar -10 to +10 voltage: Jumper **b**

The low analog output (0 mA, 4 mA, 0V, or -10V) may be set to correspond to any low displayed reading **An Lo**. The high analog output (20 mA, 0V or 10V) may be set to correspond to any high displayed reading **An Hi**. The meter will then apply a straight line fit between these two end points to provide an analog output scaled to the meter reading.

Analog Output Board Programming *(if option installed)*

 Press Menu Select Key	 Press Digit Select Key	 Press Value Select Key
AnSEt Analog Output Setup. Press > until <i>AnSEt</i> is displayed (requires analog output board).	 00 Analog output signal selection.	 0-20 mA current output  1 0-10V voltage output  2 4-20 mA current output  3 -10 to +10V voltage output
	 00 Analog output filtering.	 0 Analog output unfiltered  1 Analog output filtered
An Lo Low displayed value for 0 mA, 4 mA, 0V, or -10V output	 0.0000  0.0000  0.0000  0.0000  0.0000 Select digit to flash.	Select  9 thru  9 for flashing first digit,  0 thru  9 for other flashing digits. Decimal point location is fixed by dEC.Pt selection.
An Hi High displayed value for 20 mA or 10V output	 0.0000  0.0000  0.0000  0.0000  0.0000 Select digit to flash.	Select  9 thru  9 for flashing first digit,  0 thru  9 for other flashing digits. Decimal point location is fixed by dEC.Pt selection.

Default Program Settings

Input (InPut)

DC Volts (dCU): 20V (20.0U)

Setup (SEtuP)

0: 4 1/2 digits

0: 60 Hz

0: Null start

1: Coordinates of 2 points

5: A=Tare B=Reset

Configuration (ConFG)

0: No rate of change

0: Use setup scaling method

0: Unlatched

0: Full duplex mode

0: Linear input

Filter (FILtr)

1: Output is filtered

1: Peak of filtered signal

1: Display filtered signal

0: Low threshold level

0: Autofilter

Decimal Point (dEc.Pt)

dd.ddd

Low Signal Input Value (Lo In)

00.000

Low Displayed Reading at Low Signal Input Value (Lo rd)

0.000 for LPPS series potentiometer

0.000 for ILPS series Inductive, 0 to 5 VDC output

0.000 for ILPS series Inductive, 0 to 10 VDC output

4.000 for ILPS series Inductive, 4 to 20 mA output

High Signal Input Value (HI In)

5.000 for LPPS series potentiometer

5.000 for ILPS series Inductive, 0 to 5 VDC output

10.000 for ILPS series Inductive, 0 to 10 VDC output

20.000 for ILPS series Inductive, 4 to 20 mA output

High Displayed Reading at High Signal Input Value (HI rd)

XX.XXX (NOTE: Enter full scale value of position sensor)

Alarm Operation Setup (ALSEt)

0: Relay 1 ON, Relay 2 ON

0: Alarm 1 non-latching, Alarm 2 non-latching

3: Alarm 1 active high, Alarm 2 active low

4: No deviation or hysteresis in menu

0: After 1 reading

Analog Output Setup (AnSEt)

1: Voltage output

1: Analog output filtered

Displayed Value for 0 Voltage or Current Output (An LO)

00.000

Displayed Value for 10 VDC or 20 mA Output (An HI)

XX.XXX (NOTE: Enter full scale value of position sensor)

Lockout Level 1 Settings (LOC 1)

11111

Lockout Level 2 Settings (LOC 2)

1001

Lockout Level 3 Settings (LOC 3)

0000

Instruction Manual - PMD3XT Digital Indicator

Technical Specifications

Number of Inputs:	1
Input (Thermocouple):	J, K, T, E, N, R, S (user selectable)
Input (Voltage):	+/- 5 VDC, 0 to 5 VDC, +/- 10 VDC, 0 to 10 VDC, 4 to 20 mA (user selectable)
Display Range:	-99999 to 99999
Accuracy:	+/-0.01% of full scale, +/- 2 counts
Display Resolution:	-.99999 to .99999 thru -99999 to 99999 (decimal point is user selectable)
LED Display:	Red, 5-digit, 0.56 inch (14.2 mm high), 0.25 second update rate
Microprocessor Sampling Rate:	60 samples/second
Microprocessor A/D Resolution:	16 bit
A/D Accuracy:	+/- 0.1% FS +/- 1 count
Environment:	0 to 50C, 85% Max. RH (non-condensing)
Operating Temperature:	+32 to +131°F (0 to +55°C)
Storage Temperature:	-40 to 185°F (-40 to +85°C)
Front Bezel Rating:	NEMA-4X (when front panel mounted)
Power:	10 to 48 VDC (95 to 240 VAC powered available upon request)
Current Draw:	< 125 mA @ 24 VDC
Alarm Relay Contact Rating:	8A @ 30VDC, Form C
Case Dimensions:	1.9" x 3.8" x 4.5" (48mm x 96mm x 112mm)
Case Material:	Black polycarbonate
Panel Cutout Dimensions:	1.72" x 3.62" (45 x 92 mm) (1/8 DIN)
Weight:	9.0 ounces

Model	LED Color	Meter Power	Analog Output	Alarm Relays	Digital Interface	Signal Input
PMD3XT	-X	-X	-X	-X	-X	-XXX
	G Green R Red	0 85 to 264 VAC 1 10 to 48 VDC	H None J Analog Output	H None R Dual 8 Amp	H None 2 RS-232	DCV DC Voltage TMP Temperature

Ordering Example

PMD3XT-R-1-J-R-H-DCV: Red LED, DC Power, Analog Output, Alarm Relays, DC Voltage Input

Instruction Manual - PMD3XT Digital Indicator

Danger

- Ensure that the vehicle will remain stationary and turn off the engine before installing this product. Failure to do so could result in a fire, and could make the vehicle move during installation.
- Remove the key from the ignition and disconnect the negative (-) battery terminal prior to installation of this product. Failure to do so could result in a fire caused by an electrical short circuit.
- Take care not to install this product in a way that interferes with safety equipment such as seat belts and air bag systems or vehicle operation equipment such as engine controls, steering wheel or brake systems. Interference with normal operation of the vehicle can result in an accident or fire.
- Solder or use a solderless connector for wiring connections and make sure connections are insulated. In areas where there could be tension or sudden impacts on the wiring, safeguard the wiring with corrugated tubing or other shock absorbent material. Accidental shorts can cause fires.

Warning

- Carefully consider the installation location and driver's operation of the product before installation. Do not install the product where it interrupts driving and the safety devices of vehicle such as the air bag system. Be sure not to install the unit where it could fall. Improper installation or operation could cause the product to fall and damage the vehicle or cause serious danger by impeding driving.
- Do not disassemble or modify this product. Such actions can not only damage or destroy the product but will also void the warranty.
- Do not perform installation of this product immediately after the engine has been switched off. The engine and exhaust system are extremely hot at this time and can cause burns if touched.
- Ensure that the wiring of this product does not have an adverse impact on the other wiring of the vehicle. Any controlling devices or other electronic components of the vehicle could be damaged.
- Please keep children and infants away from the installation area. Children may swallow small parts or be injured in other ways.

Caution

- Insulate any unused wires. If any wires or connectors loosen during installation, please make sure they are correctly reattached.
- Dropping any of the components of this product will result in damage to the product.
- Excessive force on switches/terminals may result in damage to the product.
- Use only the wires provided. If additional wires are required, use the same of quality and gauge wire as is provided with the kit.
- Do not attach wires on the body of the vehicle or engine parts as this may result in damage to the product.
- Install wires away from ignition and also radio signal frequency interference as this could cause the gauges to malfunction.
- Do not place wires near the engine, exhaust pipe or turbine. It may result in damage or fusion of wires.
- Make sure the waterproof processing is done when routing wires in the engine compartment.
- When installing the sensor, do not bend the wire near the sensor body.
- Wear gloves to avoid burns when soldering and cuts when working with wiring.
- Do not share a single fuse with multiple gauges. Every gauge requires an independent fuse.
- Install gauge away from hot or wet places.
- Do not pull the wires out of connectors forcefully. The connectors may be broken and the wires may be cut. When pulling out the wires, press the lock firmly and unclip the locks of connectors.

Instruction Manual - PMD3XT Digital Indicator

12 MONTH LIMITED WARRANTY

Harold G. Schaevitz Industries LLC, The Sensor Connection (TSC) warrants to the consumer that all TSC products will be free from defects in material and workmanship for a period of twelve (12) months from date of the original purchase. Products that fail within this 12 month warranty period will be repaired or replaced at TSC's option to the consumer, when it is determined by TSC that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement of parts in the TSC instruments. In no event shall this warranty exceed the original purchase price of the TSC instruments nor shall TSC be responsible for special, incidental or consequential damages or costs incurred due to the failure of this product. Warranty claims to TSC must be transportation prepaid and accompanied with dated proof of purchase. This warranty applies only to the original purchaser of product and is non-transferable. All implied warranties shall be limited in duration to the said 12 month warranty period. Breaking the instrument seal, improper use or installation, accident, water damage, abuse, unauthorized repairs or alterations voids this warranty. TSC disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured or supplied by TSC.

FOR SERVICE SEND TO:

The Sensor Connection

42690 Woodward Avenue, Suite 200, Bloomfield Hills, MI 48304 USA

(248) 636-1515

email us at: sales@hgsind.com

www.hgsind.com