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[www.newportUS.com/pdf/M5460N.pdf](http://www.newportUS.com/pdf/M5460N.pdf)

## PLATINUM™ Series



### PtDP32, PtDP16, PtDP8 Temperature & Process Meters



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ISO 9001 Certified

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MQS5460/N/0415

## 1. Safety Considerations

This device is marked with the international caution symbol. It is important to read this manual before installing or commissioning this device as it contains important information relating to Safety and EMC (Electromagnetic Compatibility).

This instrument is a panel mount device protected in accordance with EN 61010-1:2010, electrical safety requirements for electrical equipment for measurement, control, and laboratory use. Installation of this instrument should be done by qualified personnel.



**In order to ensure safe operation, the following instructions must be followed and warnings observed:**

This instrument has no power-on switch. An external switch or circuit-breaker must be included in the building installation as a disconnecting device. It must be marked to indicate this function, and it must be in close proximity to the equipment within easy reach of the operator. The switch or circuit-breaker must comply with the relevant requirements of IEC 947-1 and IEC 947-3 (International Electrotechnical Commission). The switch must not be incorporated in the main supply cord.

Furthermore, to provide protection against excessive energy being drawn from the main supply in case of a fault in the equipment, an overcurrent protection device must be installed.

- Do not exceed the voltage rating on the label located on the top of the instrument housing.
- Always disconnect the power before changing the signal and power connections.
- Do not use this instrument on a work bench without its case for safety reasons.
- Do not operate this instrument in flammable or explosive atmospheres.
- Do not expose this instrument to rain or moisture.
- Unit mounting should allow for adequate ventilation to ensure that the instrument does not exceed the operating temperature rating.
- Use electrical wires with adequate size to handle mechanical strain and power requirements. Install this instrument without exposing the bare wire outside the connector to minimize electrical shock hazards.



### **EMC Considerations**

- Whenever EMC is an issue, always use shielded cables.
- Never run signal and power wires in the same conduit.
- Use signal wire connections with twisted-pair cables.
- Install Ferrite Beads on signal wires close to the instrument if EMC problems persist.



**Failure to follow all instructions and warnings is at your own risk and may result in property damage, bodily injury and/or death. NEWPORT Electronics is not responsible for any damages or loss arising or resulting from any failure to follow any and all instructions or observe any and all warnings.**

## 2. Wiring Instructions

### 2.1 Back Panel Connections

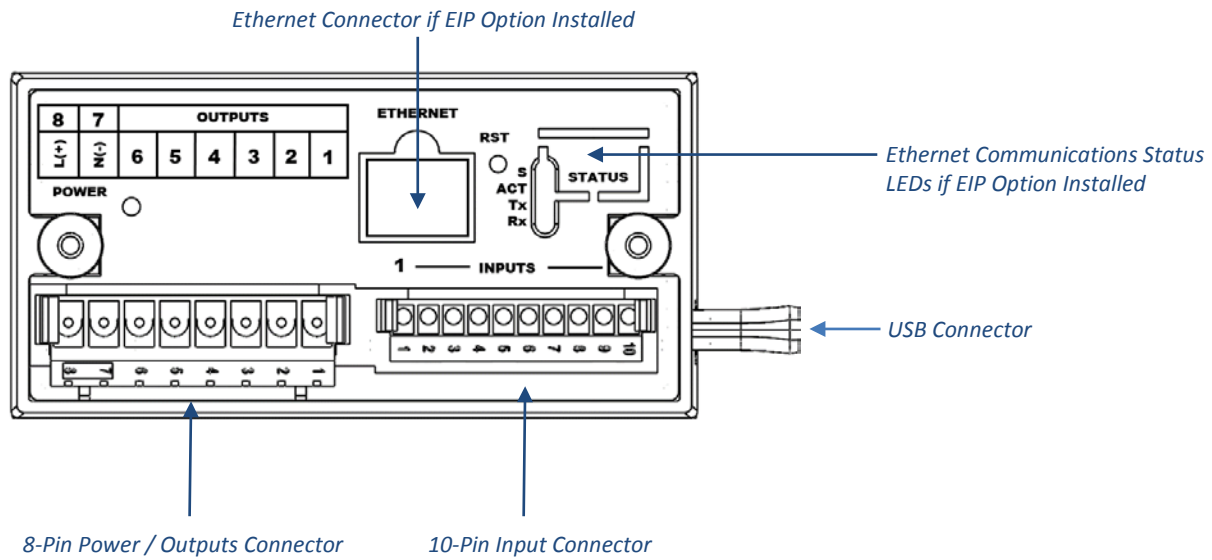


Figure 1 – PtDP8 Models: Back Panel Connections

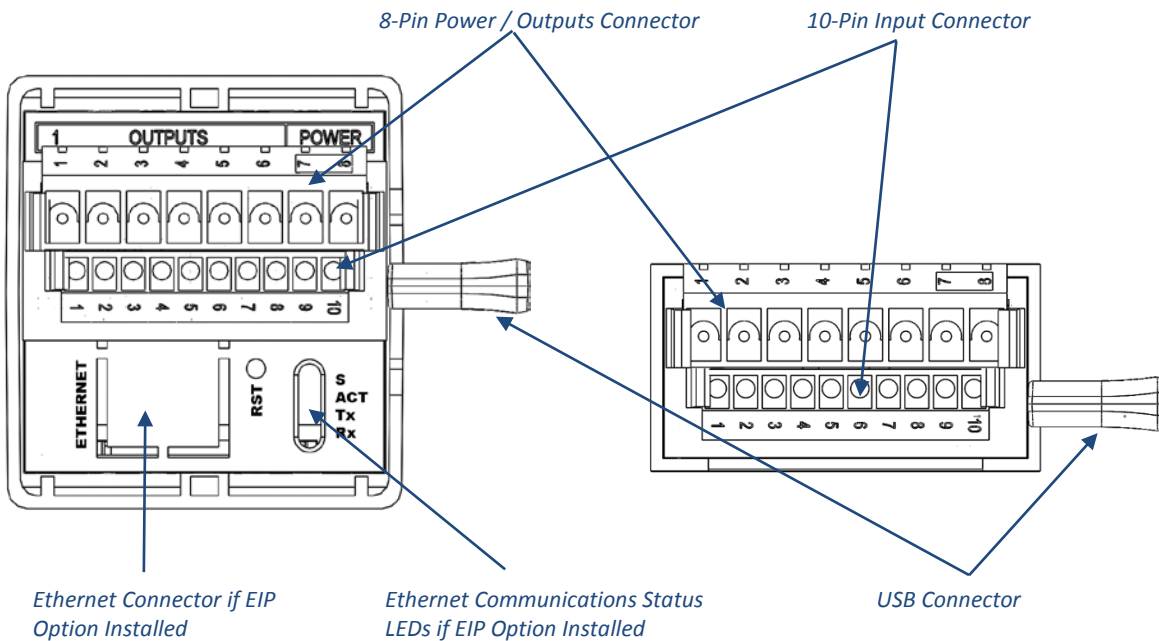
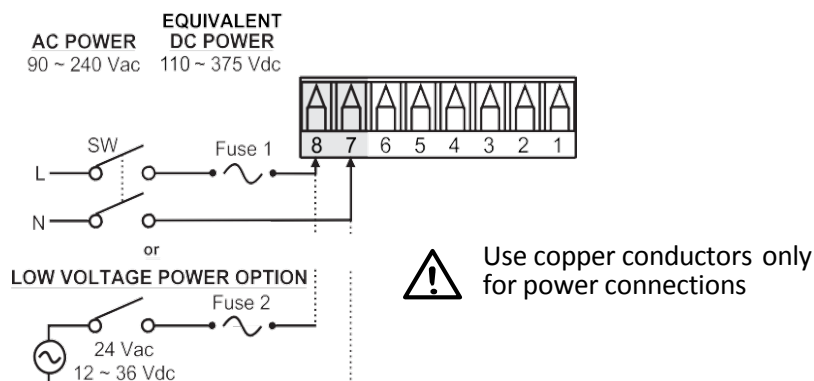


Figure 2 – PtDP16 and PtDP32 Models: Back Panel Connections

## 2.2 Connecting Power

Connect the main power connections to pins 7 and 8 of the 8-pin power / output connector as shown in Figure 3.



**Caution:** Do not connect power to your device until you have completed all input and output connections. Failure to do so may result in injury!

**Figure 3 – Main Power Connections**



For the low-voltage power option, maintain the same degree of protection as the standard high-voltage input power units (90–240 Vac) by using a Safety Agency Approved DC or AC source with the same Overvoltage Category and pollution degree as the standard AC unit (90–240 Vac).

The Safety European Standard EN61010-1 for measurement, control, and laboratory equipment requires that fuses must be specified based on IEC127. This standard specifies the letter code “T” for a Time-lag fuse.

## 2.3 Connecting Inputs

The 10-pin input connector assignments are summarized in Table 1. Table 2 summarizes the universal input pin assignments for different sensor inputs. All sensor selections are firmware-controlled and no jumper settings are required when switching from one type of sensor to another. Figure 4 provides more detail for connecting RTD sensors. Figure 5 shows the connection scheme for process current input with either internal or external excitation.

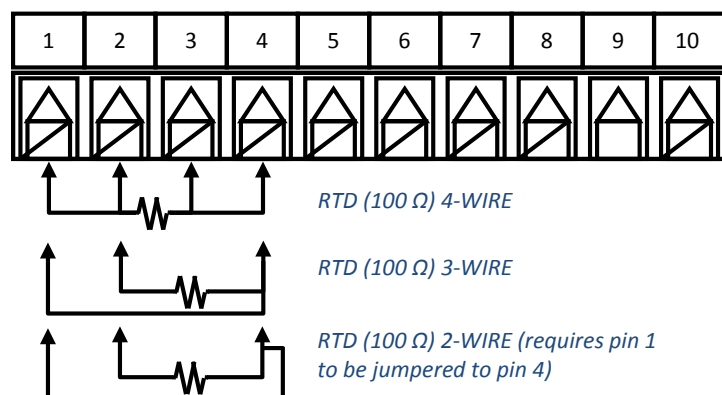
| Pin No. | Code    | Description  |
|---------|---------|--|
| 1       | ARTN    | Analog return signal (analog ground) for sensors                         |
| 2       | AIN+    | Analog positive input  |
| 3       | AIN-    | Analog negative input  |
| 4       | APWR    | Analog power currently only used for 4-wire RTDs                         |
| 5       | AUX     | Only used with controller models   |
| 6       | EXCT    | Excitation voltage output referenced to ISO GND                          |
| 7       | DIN     | Digital input signal (latch reset), Positive at > 2.5V, ref. to ISO GND  |
| 8       | ISO GND | Isolated ground for serial communications, excitation, and digital input |
| 9       | RX/A    | Serial communications receive  |
| 10      | TX/B    | Serial communications transmit   |

**Table 1 – 10-Pin Input Connector Wiring Summary**

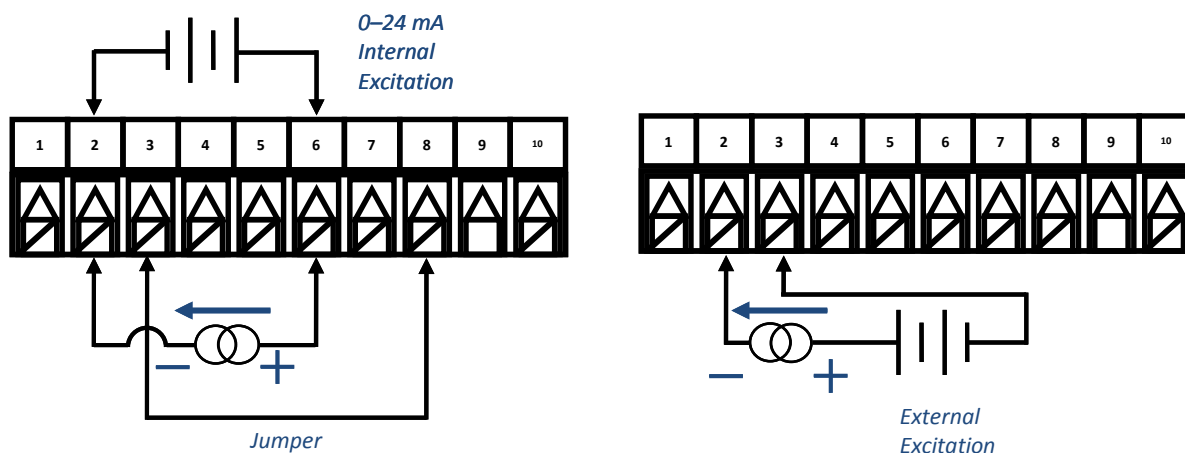
| Pin Number | Process Voltage | Process Current | Thermo-couple | 2-Wire RTD | 3-Wire RTD | 4-Wire RTD | Ther-mistor |
|------------|-----------------|-----------------|---------------|------------|------------|------------|-------------|
| 1          | Rtn             |                 |               | **         | RTD2-      | RTD2+      |             |
| 2          | Vin +/-         | I+              | T/C+          | RTD1+      | RTD1+      | RTD1+      | TH+         |
| 3          |                 | I-              | T/C-          |            |            | RTD2-      | TH-         |
| 4          |                 |                 |               | RTD1-      | RTD1-      | RTD1-      |             |

\*\* Requires external connection to pin 4

**Table 2 – Interfacing Sensors to the Input Connector**



**Figure 4 – RTD Wiring Diagram**



**Figure 5 – Process Current Wiring Hookup with Internal and External Excitation**

## 2.4 Connecting Outputs on Units with Alarm Relays

The PLATINUM™ Series Meters can be configured with two alarm only Single Pole Double Throw Mechanical Relays. This is the “-330” option and these SPDT relays have snubbers built in but only on the normally open contact side.

| Config. | Description             | Power            |                  | Output Pin Number |     |     |     |     |     |
|---------|-------------------------|------------------|------------------|-------------------|-----|-----|-----|-----|-----|
|         |                         | 8                | 7                | 6                 | 5   | 4   | 3   | 2   | 1   |
|         | Base Meter – No Outputs | AC+<br>or<br>DC+ | AC-<br>or<br>DC- |                   |     |     |     |     |     |
| -330    | SPDT, SPDT              |                  |                  | N.O               | Com | N.C | N.O | Com | N.C |

**Table 3 – 8 Pin Output/Power Connector Wiring Summary by Configuration**

| Code | Definition                   | Code | Definition               |
|------|------------------------------|------|--------------------------|
| N.O. | Normally open relay/SSR load | AC-  | AC power neutral in pin  |
| Com  | Relay Common/SSR AC power    | AC+  | AC power hot in pin      |
| N.C. | Normally closed relay load   | DC-  | Negative DC power in pin |
|      |                              | DC+  | Positive DC power in pin |

**Table 4 – Definitions for Abbreviations in Table 3**

## 3. PLATINUM™ Series Navigation

### 3.1 Description of Button Actions



The UP button moves up a level in the menu structure. Pressing and holding the UP button navigates to the top level of any menu (**oPER**, **PRoG**, or **INIt**). This can be a useful way of reorienting yourself if you get lost in the menu structure.



The LEFT button moves across a set of menu choices at a given level (up in the Section 4 menu structure tables). When changing numerical settings, press the LEFT button to make the next digit (one digit to the left) active.



The RIGHT button across a set of menu choices at a given level (down in the Section 4 menu structure tables). The RIGHT button also scrolls numerical values up with overflow to 0 for the flashing digit selected.



The ENTER button selects a menu item and goes down a level, or it enters a numerical value or parameter choice.

### 3.2 Menu Structure

The menu structure of the PLATINUM™ Series is divided into 3 main Level 1 groups, which are Initialization, Programming, and Operating. They are described in Section 3.3. The complete menu structure for levels 2-8 for each of the three Level 1 groups is detailed in Section 4.1, 4.2, and 4.3. Levels 2 through 8 represent sequentially deeper levels of navigation. Values with a dark box around them are default values or submenu entry points. Blank lines indicate user-provided information.

### 3.3 Level 1 Menu

- INIt** Initialization Mode: These settings are rarely changed after initial setup. They include transducer types, calibration, etc. These settings can be password-protected.
- PRoG** Programming Mode: These settings are frequently changed. They include Setpoints, Control Modes, Alarms, etc. These settings can be password-protected.
- oPER** Operating Mode: This mode allows users to switch between Run Mode, Standby Mode, Peak/ Valley, etc.

### 3.4 Circular Flow of Menus

The following diagram shows how to use the LEFT and RIGHT buttons to navigate around a menu.

Press the ENTER button on **oPER** to select and enter RUN Mode.

Press the LEFT and RIGHT buttons to navigate around the Operating Mode options.

Press the UP button to navigate back up a level.

It is possible to cycle through any menu in both directions.

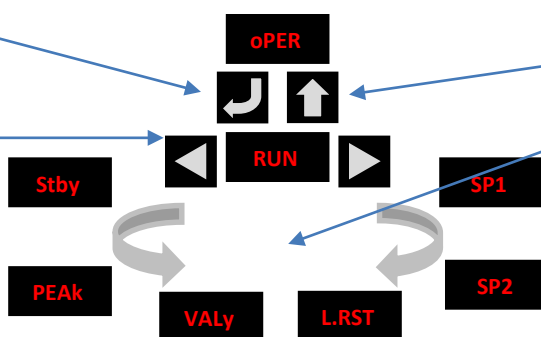


Figure 6 – Circular Flow of Menus

## 4. Complete Menu Structure

### 4.1 Initialization Mode Menu (INIt)

The following table maps the Initialization Mode (**INIt**) navigation:

| Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Level 7 | Level 8 | Notes               |
|---------|---------|---------|---------|---------|---------|---------|---------------------|
| INPt    | t.C.    | k       |         |         |         |         | Type K thermocouple |
|         |         | J       |         |         |         |         | Type J thermocouple |
|         |         | t       |         |         |         |         | Type T thermocouple |
|         |         | E       |         |         |         |         | Type E thermocouple |
|         |         | N       |         |         |         |         | Type N thermocouple |
|         |         | R       |         |         |         |         | Type R thermocouple |
|         |         | S       |         |         |         |         | Type S thermocouple |
|         |         | b       |         |         |         |         | Type B thermocouple |
|         |         | C       |         |         |         |         | Type C thermocouple |
|         | Rtd     | N.wIR   | 3 wl    |         |         |         | 3-wire RTD          |
|         |         |         | 4 wl    |         |         |         | 4-wire RTD          |

| Level 2 | Level 3 | Level 4 | Level 5   | Level 6 | Level 7 | Level 8 | Notes                                 |
|---------|---------|---------|---|---------|---------|---------|---------------------------------------|
|         |         |         | 2 wI  |         |         |         | 2-wire RTD                            |
|         |         | A.CRV   | 385.1   |         |         |         | 385 calibration curve, 100 $\Omega$   |
|         |         |         | 385.5   |         |         |         | 385 calibration curve, 500 $\Omega$   |
|         |         |         | 385.t   |         |         |         | 385 calibration curve, 1000 $\Omega$  |
|         |         |         | 392   |         |         |         | 392 calibration curve, 100 $\Omega$   |
|         |         |         | 3916  |         |         |         | 391.6 calibration curve, 100 $\Omega$ |
|         | tHRM    | 2.25k   |   |         |         |         | 2250 $\Omega$ thermistor              |
|         |         | 5k      |   |         |         |         | 5000 $\Omega$ thermistor              |
|         |         | 10k     |   |         |         |         | 10,000 $\Omega$ thermistor            |
|         | PRoC    | 4-20    |   |         |         |         | Process input range: 4 to 20 mA       |
|         |         |         | <b>Note:</b> This Manual and Live Scaling submenu is the same for all <b>PRoC</b> ranges. |         |         |         |                                       |
|         |         |         | MANL  | Rd.1    | _____   |         | Low display reading                   |
|         |         |         |   | IN.1    | _____   |         | Manual input for Rd.1                 |
|         |         |         |   | Rd.2    | _____   |         | High display reading                  |
|         |         |         |   | IN.2    | _____   |         | Manual input for Rd.2                 |
|         |         |         | LIVE  | Rd.1    | _____   |         | Low display reading                   |
|         |         |         |   | IN.1    | _____   |         | Live Rd.1 input, ENTER for current    |
|         |         |         |   | Rd.2    | _____   |         | High display reading                  |
|         |         |         |   | IN.2    | _____   |         | Live Rd.2 input, ENTER for current    |
|         |         | 0-24    |   |         |         |         | Process input range: 0 to 24 mA       |
|         |         | +10     |   |         |         |         | Process input range: -10 to +10 mA    |
|         |         | +1      |   |         |         |         | Process input range: -1 to +1 mA      |
|         |         | +0.1    |   |         |         |         | Process input range: -0.1 to +0.1 mA  |
| RdG     | dEC.P   | FFF.F   |   |         |         |         | Reading format -999.9 to +999.9       |
|         |         | FFFF    |   |         |         |         | Reading format -9999 to +9999         |
|         |         | FF.FF   |   |         |         |         | Reading format -99.99 to +99.99       |
|         |         | F.FFF   |   |         |         |         | Reading format -9.999 to +9.999       |
|         | °F°C    | °F      |   |         |         |         | Activates degrees Fahrenheit          |
|         |         | °C      |   |         |         |         | Degrees Celsius annunciator           |
|         |         | NoNE    |   |         |         |         | Default for <b>INPt</b> = <b>PRoC</b> |
|         | FLtR    | 8       |   |         |         |         | Readings per displayed value: 8       |
|         |         | 16      |   |         |         |         | 16                                    |
|         |         | 32      |   |         |         |         | 32                                    |
|         |         | 64      |   |         |         |         | 64                                    |
|         |         | 128     |   |         |         |         | 128                                   |
|         |         | 1       |   |         |         |         | 2                                     |
|         |         | 2       |   |         |         |         | 3                                     |
|         |         | 4       |   |         |         |         | 4                                     |



| Level 2  | Level 3 | Level 4 | Level 5 | Level 6 | Level 7 | Level 8 | Notes                                    |
|--|---------|---------|---------|---------|---------|---------|--|
|  | NCLR    | GRN     |         |         |         |         | Default display color: Green             |
|  |         | REd     |         |         |         |         | Red                                      |
|  |         | AMbR    |         |         |         |         | Amber                                    |
|  | bRGt    | HIGH    |         |         |         |         | High display brightness                  |
|  |         | MEd     |         |         |         |         | Medium display brightness                |
|  |         | Low     |         |         |         |         | Low display brightness                   |
| ECtN   | 5 V     |         |         |         |         |         | Excitation voltage: 5 V                  |
|  | 10 V    |         |         |         |         |         | 10 V                                     |
|  | 12 V    |         |         |         |         |         | 12 V                                     |
|  | 24 V    |         |         |         |         |         | 24 V                                     |
|  | 0 V     |         |         |         |         |         | Excitation off                           |
| CoMM   | USb     |         |         |         |         |         | Configure the USB port                   |
| <b>Note:</b> This <b>PRot</b> submenu is the same for USB, Ethernet, and Serial ports. |         |         |         |         |         |         |  |
|  |         | PRot    | oMEG    | ModE    | CMD     |         | Waits for commands from other end        |
|  |         |         |         |         | CoNt    | _____   | Transmit continuously every ###.# sec    |
|  |         |         |         | dAt.F   | StAt    | No      |  |
|  |         |         |         |         |         | yES     | Includes Alarm status bytes              |
|  |         |         |         |         | RdNG    | yES     | Includes process reading                 |
|  |         |         |         |         |         | No      |  |
|  |         |         |         |         | PEAk    | No      |  |
|  |         |         |         |         |         | yES     | Includes highest process reading         |
|  |         |         |         |         | VALy    | No      |  |
|  |         |         |         |         |         | yES     | Includes lowest process reading          |
|  |         |         |         |         | UNIt    | No      |  |
|  |         |         |         |         |         | yES     | Send unit with value (F, C, V, mV, mA)   |
|  |         |         |         | _LF_    | No      |         |  |
|  |         |         |         |         | yES     |         | Appends line feed after each send        |
|  |         |         |         | ECHo    | yES     |         | Retransmits received commands            |
|  |         |         |         |         | No      |         |  |
|  |         |         |         | SEPR    | _CR_    |         | Carriage Return separator in <b>CoNt</b> |
|  |         |         |         |         | SPCE    |         | Space separator in <b>CoNt</b> Mode      |
|  |         |         | M.bUS   | RtU     |         |         | Standard Modbus protocol                 |
|  |         |         |         | ASCI    |         |         | Omega ASCII protocol                     |
|  |         | AddR    | _____   |         |         |         | USB requires Address                     |
|  | EtHN    | PRot    |         |         |         |         | Ethernet port configuration              |
|  |         | AddR    | _____   |         |         |         | Ethernet “Telnet” requires Address       |
|  | SER     | PRot    |         |         |         |         | Serial port configuration                |
|  |         | C.PAR   | bUS.F   | 232C    |         |         | Single device Serial Comm Mode           |

| Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Level 7 | Level 8 | Notes   |
|---------|---------|---------|---------|---------|---------|---------|---|
|         |         |         |         | 485     |         |         | Multiple devices Serial Comm Mode                     |
|         |         |         | bAUd    | 19.2    |         |         | Baud rate: 19,200 Bd                                  |
|         |         |         |         | 9600    |         |         | 9,600 Bd  |
|         |         |         |         | 4800    |         |         | 4,800 Bd  |
|         |         |         |         | 2400    |         |         | 2,400 Bd  |
|         |         |         |         | 1200    |         |         | 1,200 Bd  |
|         |         |         |         | 57.6    |         |         | 57,600 Bd   |
|         |         |         |         | 115.2   |         |         | 115,200 Bd  |
|         |         |         | PRty    | odd     |         |         | Odd parity check used                                 |
|         |         |         |         | EVEN    |         |         | Even parity check used                                |
|         |         |         |         | NoNE    |         |         | No parity bit is used                                 |
|         |         |         |         | oFF     |         |         | Parity bit is fixed as a zero                         |
|         |         |         | dAtA    | 8bIt    |         |         | 8 bit data format                                     |
|         |         |         |         | 7bIt    |         |         | 7 bit data format                                     |
|         |         |         | StoP    | 1bIt    |         |         | 1 stop bit  |
|         |         |         |         | 2bIt    |         |         | 2 stop bits gives a “force 1” parity bit              |
|         |         | AddR    | _____   |         |         |         | Address for 485, placeholder for 232                  |
| SFty    | PwoN    | dSbL    |         |         |         |         | Turn on: in <b>oPER</b> Mode, ENTER to run            |
|         |         | ENbL    |         |         |         |         | Turn on: program runs automatically                   |
|         | RUN.M   | dSbL    |         |         |         |         | ENTER in <b>Stby</b> , <b>PAUS</b> , <b>StoP</b> runs |
|         |         | ENbL    |         |         |         |         | ENTER in modes above displays RUN                     |
|         | SP.LM   | SP.Lo   | _____   |         |         |         | Low Setpoint limit                                    |
|         |         | SP.HI   | _____   |         |         |         | High Setpoint limit                                   |
|         | LPbk    | dSbL    |         |         |         |         | Loop break timeout disabled                           |
|         |         | ENbL    | _____   |         |         |         | Loop break timeout value (MM.SS)                      |
|         | o.Crk   | ENbI    |         |         |         |         | Open Input circuit detection enabled                  |
|         |         | dSbL    |         |         |         |         | Open Input circuit detection disabled                 |
| t.CAL   | NoNE    |         |         |         |         |         | Manual temperature calibration                        |
|         | 1.PNt   |         |         |         |         |         | Set offset, default = 0                               |
|         | 2.PNt   | R.Lo    |         |         |         |         | Set range low point, default = 0                      |
|         |         | R.HI    |         |         |         |         | Set range high point, default = 999.9                 |
|         | ICE.P   | ok?     |         |         |         |         | Reset 32°F/0°C reference value                        |
| SAVE    | _____   |         |         |         |         |         | Download current settings to USB                      |
| LoAd    | _____   |         |         |         |         |         | Upload settings from USB stick                        |
| VER.N   | 1.00.0  |         |         |         |         |         | Displays firmware revision number                     |
| VER.U   | ok?     |         |         |         |         |         | ENTER downloads firmware update                       |
| F.dFt   | ok?     |         |         |         |         |         | ENTER resets to factory defaults                      |
| I.Pwd   | No      |         |         |         |         |         | No required password for <b>INIt</b> Mode             |

| Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Level 7 | Level 8 | Notes                             |
|---------|---------|---------|---------|---------|---------|---------|-----------------------------------|
|         | yES     | _____   |         |         |         |         | Set password for <b>INIt</b> Mode |
| P.Pwd   | No      |         |         |         |         |         | No password for <b>PRoG</b> Mode  |
|         | yES     | _____   |         |         |         |         | Set password for <b>PRoG</b> Mode |

## 4.2 Programming Mode Menu (PRoG)

The following table maps the Programming Mode (**PRoG**) navigation:

| Level 2 | Level 3   | Level 4 | Level 5 | Level 6 | Notes   |
|---------|---|---------|---------|---------|---|
| SP1     | _____   |         |         |         | Process goal for PID, default goal for <b>oN.oF</b>                     |
| SP2     | ASbo  |         |         |         | Setpoint 2 value can track <b>SP1</b> , <b>SP2</b> is an absolute value |
|         | dEVI  |         |         |         | <b>SP2</b> is a deviation value   |
| ALM.1   | <b>Note:</b> This submenu is the same for all other Alarm configurations. |         |         |         |   |
|         | tyPE  | oFF     |         |         | ALM.1 is not used for display or outputs                                |
|         |   | AboV    |         |         | Alarm: process value above Alarm trigger                                |
|         |   | bELo    |         |         | Alarm: process value below Alarm trigger                                |
|         |   | HI.Lo.  |         |         | Alarm: process value outside Alarm triggers                             |
|         |   | bAND    |         |         | Alarm: process value between Alarm triggers                             |
|         | Ab.dV   | AbSo    |         |         | Absolute Mode; use <b>ALR.H</b> and <b>ALR.L</b> as triggers            |
|         |   | d.SP1   |         |         | Deviation Mode; triggers are deviations from <b>SP1</b>                 |
|         |   | d.SP2   |         |         | Deviation Mode; triggers are deviations from <b>SP2</b>                 |
|         | ALR.H   | _____   |         |         | Alarm high parameter for trigger calculations                           |
|         | ALR.L   | _____   |         |         | Alarm low parameter for trigger calculations                            |
|         | A.CLR   | REd     |         |         | Red display when Alarm is active  |
|         |   | AMbR    |         |         | Amber display when Alarm is active                                      |
|         |   | GRN     |         |         | Green display when Alarm is active                                      |
|         |   | dEFt    |         |         | Color does not change for Alarm   |
|         | HI.HI   | oFF     |         |         | High High / Low Low Alarm Mode turned off                               |
|         |   | oN      | _____   |         | Offset value for active High High / Low Low Mode                        |
|         | LtCH  | No      |         |         | Alarm does not latch  |
|         |   | yES     |         |         | Alarm latches until cleared via front panel                             |
|         |   | botH    |         |         | Alarm latches, cleared via front panel or digital input                 |
|         |   | RMt     |         |         | Alarm latches until cleared via digital input                           |
|         | CtCL  | N.o.    |         |         | Output activated with Alarm   |
|         |   | N.C.    |         |         | Output deactivated with Alarm   |
|         | A.P.oN  | yES     |         |         | Alarm active at power on  |
|         |   | No      |         |         | Alarm inactive at power on  |

| Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Notes  |
|---------|---------|---------|---------|---------|--|
|         | dE.oN   | _____   |         |         | Delay turning off Alarm (sec), default = 1.0   |
|         | dE.oF   | _____   |         |         | Delay turning off Alarm (sec), default = 0.0   |
| ALM.2   |         |         |         |         | Alarm 2  |
| DTR1    |         |         |         |         | Double Throw Relay 1 with “–330” units         |
|         | ModE    | oFF     |         |         | Output does nothing                            |
|         |         | ALM.1   |         |         | Output is active under <b>ALM.1</b> conditions |
|         |         | ALM.2   |         |         | Output is active under <b>ALM.2</b> conditions |
| DTR2    |         |         |         |         | Double Throw Relay 2 with “–330” units         |
|         | ModE    | oFF     |         |         | Output does nothing                            |
|         |         | ALM.1   |         |         | Output is active under <b>ALM.1</b> conditions |
|         |         | ALM.2   |         |         | Output is active under <b>ALM.2</b> conditions |
|         |         | RE.oN   |         |         | Activate during Ramp events                    |
|         |         |         |         |         |  |

### 4.3 Operating Mode Menu (oPER)

The following table maps the Operating Mode (oPER) navigation:

| Level 2 | Level 3 | Level 4 | Notes  |
|---------|---------|---------|--|
| RUN     |         |         | Normal Run Mode, process value displayed, <b>SP1</b> in optional secondary display |
| SP1     | _____   |         | Shortcut to change Setpoint 1, current Setpoint 1 value in main display            |
| SP2     | _____   |         | Shortcut to change Setpoint 2, current Setpoint 2 value in main display            |
| L.RSt   |         |         | Clears any latched Alarms; Alarms menu also allows digital input reset             |
| VALy    |         |         | Displays the lowest input reading since the <b>VALy</b> was last cleared           |
| PEAk    |         |         | Displays the highest input reading since the <b>PEAk</b> was last cleared          |
| Stby    |         |         | Standby Mode, outputs, and Alarm conditions disabled, displays <b>Stby</b>         |

Note: For Warranty information see the complete product manual at:

[www.newportUS.com/pdf/M5460N.pdf](http://www.newportUS.com/pdf/M5460N.pdf)