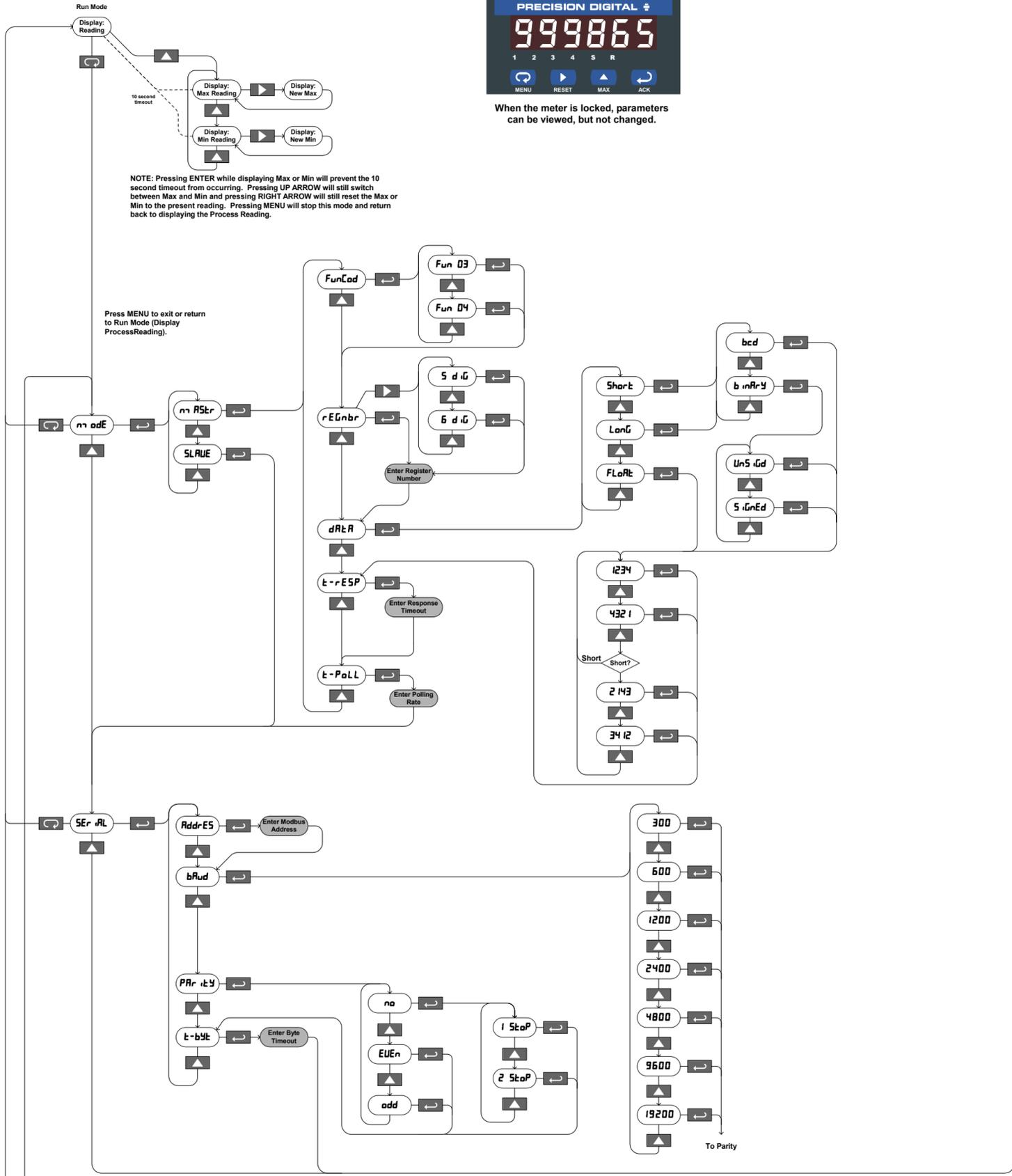


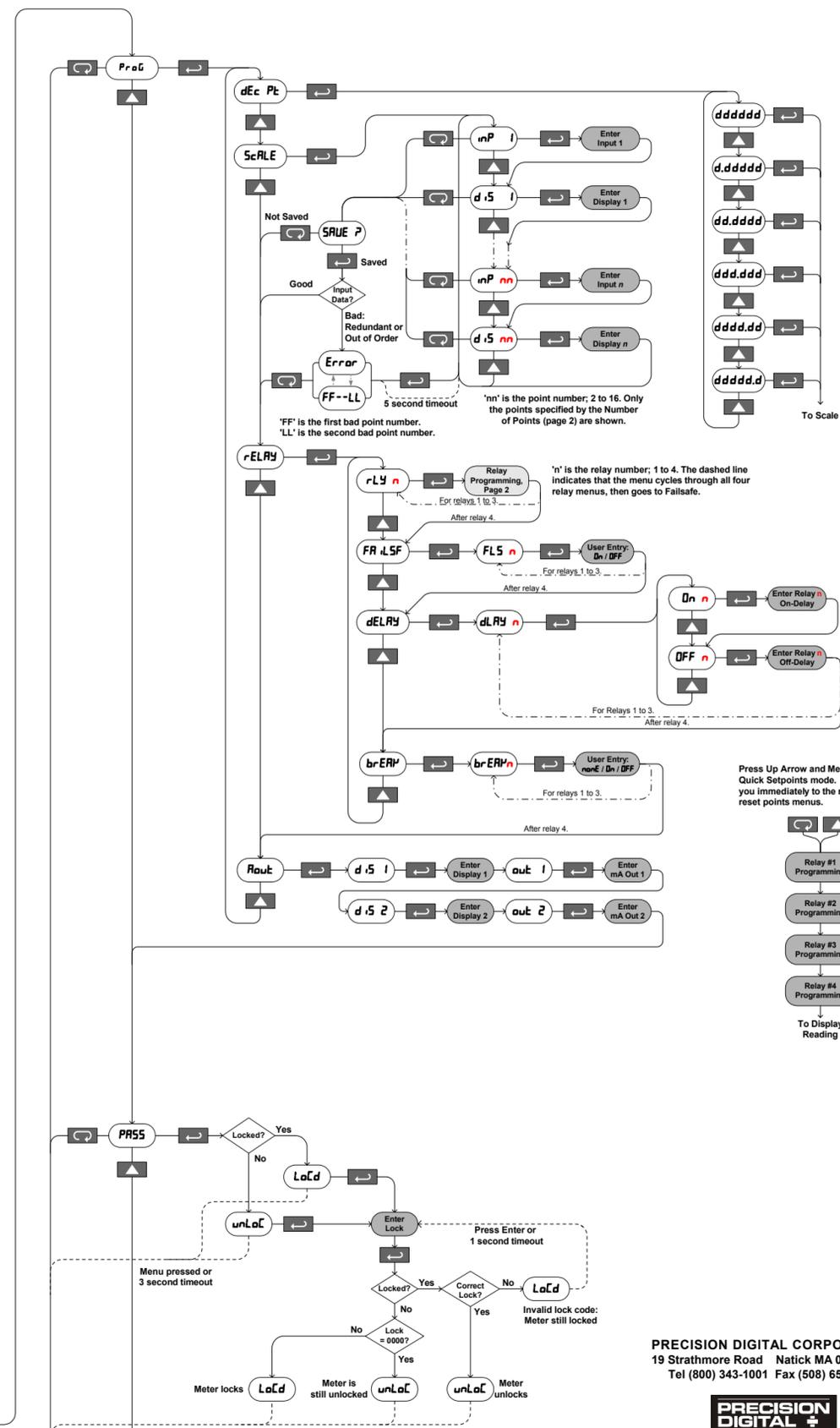


When the meter is locked, parameters can be viewed, but not changed.



NOTE: Pressing ENTER while displaying Max or Min will prevent the 10 second timeout from occurring. Pressing UP ARROW will still switch between Max and Min and pressing RIGHT ARROW will still reset the Max or Min to the present reading. Pressing MENU will stop this mode and return back to displaying the Process Reading.

Press MENU to exit or return to Run Mode (Display ProcessReading).



'FF' is the first bad point number. 'LL' is the second bad point number. 'nn' is the point number; 2 to 16. Only the points specified by the Number of Points (page 2) are shown.

'n' is the relay number; 1 to 4. The dashed line indicates that the menu cycles through all four relay menus, then goes to Failsafe.

Press Up Arrow and Menu to enter Quick Setpoints mode. This takes you immediately to the relay set and reset points menus.

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Snooper PD865 Quick Start Guide

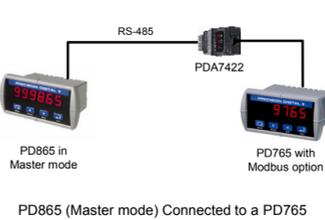
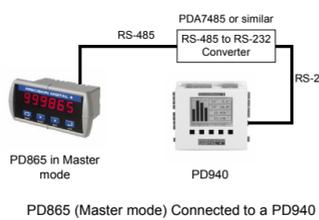
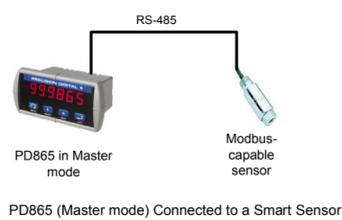
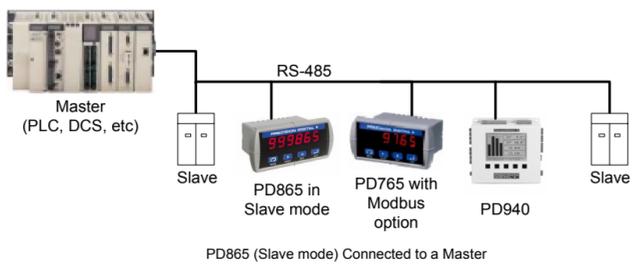


Slave Mode Register Tables

| Register ¹ | | Name | Access | Limits or Range ² | Data Type ³ | Function Code(s) | Comments | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|--|--|-------------------------|--|---|---------------------------------------|---|-------|-----|----|---|---|-----|-----|------|-----|-----|------|-----|------|------|-----|------|-----|-----|-----|-----|--|---|---|---|---|--|---|---|---|---|
| Number | Address (hex) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40001 – 40002 | 0 – 1 (0000 – 0001) | Display value | Read Write | -199999 to +999999 | Long | 03, 04, 16 | Represents the display value without the decimal point. Decimal point setting in 40013. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40003 – 40004 | 2 – 3 (0002 – 0003) | Maximum Display value | Read Write | -199999 to +999999 | Long | 03, 04, 16 | Represents the Maximum display value, excluding the decimal point, since last power up or Max. Value reset. Decimal point setting in 40013. Writing any value will reset the max to the present display value. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40005 – 40006 | 4 – 5 (0004 – 0005) | Minimum Display value | Read Write | -199999 to +999999 | Long | 03, 04, 16 | Represents the Minimum display value, excluding the decimal point, since last power up or Min. Value reset. Decimal point setting in 40013. Can be written to any value between -199999 to +999999. Writing any value will reset the max to the present display value. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40007 | 6 (0006) | Alarm and Relay Status | Read both, Write Relays | 1 = In Alarm 1 = relay energized | Bits | 03, 04, 06 | Read alarm status and energized/non-energized status of relays. Alarms are read only; the upper byte is ignored for writes. Writing to a relay is only possible when the relay is in the Disabled mode. Alm = Alarm, Rly = Relay. <table border="1" style="margin-left: 20px;"> <tr><td>15-12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7-4</td><td>3</td><td>2</td><td>1</td><td>0</td></tr> <tr><td>0000</td><td>Alm</td><td>Alm</td><td>Alm</td><td>Alm</td><td>0000</td><td>Rly</td><td>Rly</td><td>Rly</td><td>Rly</td></tr> <tr><td></td><td>4</td><td>3</td><td>2</td><td>1</td><td></td><td>4</td><td>3</td><td>2</td><td>1</td></tr> </table> | 15-12 | 11 | 10 | 9 | 8 | 7-4 | 3 | 2 | 1 | 0 | 0000 | Alm | Alm | Alm | Alm | 0000 | Rly | Rly | Rly | Rly | | 4 | 3 | 2 | 1 | | 4 | 3 | 2 | 1 |
| 15-12 | 11 | 10 | 9 | 8 | 7-4 | 3 | 2 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0000 | Alm | Alm | Alm | Alm | 0000 | Rly | Rly | Rly | Rly | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | 3 | 2 | 1 | | 4 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40008 | 7 (0007) | Alarm acknowledge | Write Only | 0x0000 to 0x0F00 | Bits | 06 | Clear Relay n alarm condition. Set bit equal to 1 to acknowledge. Only has effect on relays programmed to allow manual acknowledging. Alm = Alarm. <table border="1" style="margin-left: 20px;"> <tr><td>15-12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7-4</td><td>3-0</td></tr> <tr><td>0000</td><td>Alm</td><td>Alm</td><td>Alm</td><td>Alm</td><td>0000</td><td>0000</td></tr> <tr><td></td><td>4</td><td>3</td><td>2</td><td>1</td><td></td><td></td></tr> </table> | 15-12 | 11 | 10 | 9 | 8 | 7-4 | 3-0 | 0000 | Alm | Alm | Alm | Alm | 0000 | 0000 | | 4 | 3 | 2 | 1 | | | | | | | | | | | |
| 15-12 | 11 | 10 | 9 | 8 | 7-4 | 3-0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0000 | Alm | Alm | Alm | Alm | 0000 | 0000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40009 | 8 (0008) | Initialize meter | Write Only | 0xFF00 to initialize. | Integer | 06 | Write 0xFF00 to reinitialize the meter. Writing any other data has no effect. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40010 | 9 (0009) | Lock | Read Write | 0x0000 to 0x9999 | Integer (Packed BCD) | 03, 04, 06, 16 | See note 4. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40011 | 10 (000A) | Mode selection | Read Write | Not applicable | Word; bit flags | 03, 04, 06, 16 | This Register is reserved for future use. Reading returns 0xffff and writing to it has no effect. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40012 | 11 (000B) | Data Type | Read Write | Not applicable | Word; bit flags | 03, 04, 06, 16 | This Register is reserved for future use. Reading returns 0xffff and writing to it has no effect. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40013 | 12 (000C) | Decimal Point | Read Write | 0 to 5 | Integer | 03, 04, 06, 16 | See Bit Assignment Table 1. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40014 | 13 (000D) | Transfer Function | Read Write | 0 to 2 | Integer | 03, 04, 06, 16 | See Bit Assignment Table 2. Selecting Square Root or Exponent forces Register 40015 (number of points) to be 2. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40015 | 14 (000E) | Number of Points | Read Write | 2 to 16 | Integer | 03, 04, 06, 16 | Number of scaling points. This cannot be changed if the Transfer Function is set to Square Root or Exponent. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40016 – 40017 | 15 – 16 (000F – 0010) | Exponent | Read Write | 0.5 to 2.99999 | Long | 03, 04, 16 | If Square Root is selected, this value is ignored. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40018 | 17 (0011) | Byte-to-byte timeout | Read Write | 0 to 2.54 | Integer | 03, 04, 06, 16 | This is the timeout between bytes of a Modbus frame. It is automatically changed to 1.5 * character time when the baud rate is changed. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40019 | 18 (0012) | Slave Response Timeout | Read Write | 0 to 255 | Integer | 03, 04, 06, 16 | Corresponds to 0.0 to 25.5 seconds. Not used in Slave mode. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40020 | 19 (0013) | Poll Time | Read Write | 1 to 255 | Integer | 03, 04, 06, 16 | Corresponds to 0.1 to 25.5 seconds. 0 is not allowed. Polling time has to be greater than or equal to slave response time. Master mode only. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40021 | 20 (0014) | LED brightness | Read Write | 1 to 8 | Integer | 03, 04, 06, 16 | 8 is the brightest level. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40022 | 21 (0015) | Bypass | Read Write | 2 to 999 | Integer | 03, 04, 06, 16 | Corresponds to 0.2 to 99.9%. If the input steps greater than the bypass value, it will be displayed immediately, with no filtering occurring. The number represents percent of full-scale. No effect if filter = 0. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40023 | 22 (0016) | Filter | Read Write | 0, 2 to 199 | Integer | 03, 04, 06, 16 | Display filtering. 0 = no filtering. New = old + ((new - old)/Filter) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40024 – 40025 | 23 – 24 (0017 – 0018) | Cutoff | Read Write | 0 to 999999 | Long | 03, 04, 16 | Represents the display value without the decimal point. A value of 000000 disables the cutoff. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40026 | 25 (0019) | Serial Settings | Read Write | Not applicable | Integer; bits | 03, 04, 06, 16 | See Bit Assignment Table 3. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40027 | 26 (001A) | Unit Address | Read Write | 1 to 247 | Integer | 03, 04, 06, 16 | Master mode: the address of the slave being read. Slave mode: the PD865's address. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40101 To 40107 | 100 – 101 (0064 – 0065) 102 – 103 (0066 – 0067) 104 (0068) 105 (0069) 106 (006A) | Set-point Reset-point Turn-on delay Turn-off delay Mode | Read Write | -199999 to 999999 (Set & Reset) 0 to 199 0 to 199 Bits 4, 2, 1, 0 | Long Long Integer Integer Word; bits | 03, 04, 16 ----- 03, 04, 06, 16 | Relay 1 parameters. Set and reset points represent the display value without the decimal point. See Bit Assignment Table 4 for operating modes and bit assignments. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40108 To 40114 | 107 – 108 (006B – 006C) 109 – 110 (006D – 006E) 111 (006F) 112 (0070) 113 (0071) | Set-point Reset-point Turn-on delay Turn-off delay Mode | Read Write | -199999 to 999999 (Set & Reset) 0 to 199 0 to 199 Bits 4, 2, 1, 0 | Long Long Integer Integer Word; bits | 03, 04, 16 ----- 03, 04, 06, 16 | Relay 2 parameters. Set and reset points represent the display value without the decimal point. See Bit Assignment Table 4 for operating modes and bit assignments. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Register ¹ | | Name | Access | Limits or Range ² | Data Type ³ | Function Code(s) | Comments |
|--------------------------------|--|--|------------|--|---|---------------------------------------|---|
| Number | Address (hex) | | | | | | |
| 40115 To 40121 | 114 – 115 (0072 – 0073) 116 – 117 (0074 – 0075) 118 (0076) 119 (0077) 120 (0078) | Set-point Reset-point Turn-on delay Turn-off delay Mode | Read Write | -199999 to 999999 (Set & Reset) 0 to 199 0 to 199 Bits 4, 2, 1, 0 | Long Long Integer Integer Word; bits | 03, 04, 16 ----- 03, 04, 06, 16 | Relay 3 parameters. Set and reset points represent the display value without the decimal point. See Bit Assignment Table 4 for operating modes and bit assignments. |
| 40122 To 40128 | 121 – 122 (0079 – 007A) 123 – 124 (007B – 007C) 125 (007D) 126 (007E) 127 (007F) | Set-point Reset-point Turn-on delay Turn-off delay Mode | Read Write | -199999 to 999999 (Set & Reset) 0 to 199 0 to 199 Bits 4, 2, 1, 0 | Long Long Integer Integer Word; bits | 03, 04, 16 ----- 03, 04, 06, 16 | Relay 4 parameters. Set and reset points represent the display value without the decimal point. See Bit Assignment Table 4 for operating modes and bit assignments. |
| 40301 | 300 (012C) | 4-20mA out – Mode | Read Write | Not applicable | Integer; bits | 03, 04, 06, 16 | Selects output option and where the data source for the 4-20mA output. See Bit Assignment Table 5. |
| 40302 | 301 (012D) | 4-20mA out – Overrange value | Read Write | 0 to 23999 | Integer | 03, 04, 06, 16 | Corresponds to 0.000 to 23.999 mA. Because of hardware variations, the actual output range is designed to be at least 1.000 to 23.000 mA. |
| 40303 | 302 (012E) | 4-20mA out – Underrange value | Read Write | 0 to 23999 | Integer | 03, 04, 06, 16 | Corresponds to 0.000 to 23.999 mA. Because of hardware variations, the actual output range is designed to be at least 1.000 to 23.000 mA. |
| 40304 | 303 (012F) | 4-20mA out – Maximum value allowed | Read Write | 0 to 23999 | Integer | 03, 04, 06, 16 | Corresponds to 0.000 to 23.999 mA. Because of hardware variations, the actual output range is designed to be at least 1.000 to 23.000 mA. |
| 40305 | 304 (0130) | 4-20mA out – Minimum value allowed | Read Write | 0 to 23999 | Integer | 03, 04, 06, 16 | Corresponds to 0.000 to 23.999 mA. Because of hardware variations, the actual output range is designed to be at least 1.000 to 23.000 mA. |
| 40306 | 305 (0131) | 4-20mA out – Comm. Break value | Read Write | 0 to 23999 | Integer | 03, 04, 06, 16 | Corresponds to 0.000 to 23.999 mA. Because of hardware variations, the actual output range is designed to be at least 1.000 to 23.000 mA. |
| 40307 – 40308 | 306 – 307 (0132 – 0133) | 4-20mA out – Display Value 1 | Read Write | -199999 to +999999 | Long | 03, 04, 16 | 4-20mA output scaling. Represents the display value without the decimal point. |
| 40309 – 40310 | 308 – 309 (0134 – 0135) | 4-20mA out – Display Value 2 | Read Write | -199999 to +999999 | Long | 03, 04, 16 | 4-20mA output scaling. Represents the display value without the decimal point. |
| 40311 | 310 (0136) | 4-20mA out – Output 1 | Read Write | 0 to 23999 | Integer | 03, 04, 06, 16 | 4-20mA output scaling. mA output at Display Value 1. |
| 40312 | 311 (0137) | 4-20mA out – Output 2 | Read Write | 0 to 23999 | Integer | 03, 04, 06, 16 | 4-20mA output scaling. mA output at Display Value 2. |
| 40313 | 312 (0138) | 4-20mA out – Data in mA or Data in bits | Read Write | 0 to 23999 or 0 to 65535 | Integer | 03, 04, 06, 16 | If 4-20mA output mode is set to "Serial Comm., mA" (0x83) this register is in µA. Due to hardware variations, the actual output range is at least 1.000 to 23.000 mA. If 4-20mA output mode is set to "Serial Comm., bits" (0x84), this register is in DAC bits. See Bit Assignment Table 5. |
| 40314 – 40315 | 313 – 314 (0139 – 013A) | 4-20mA out – DAC calibration: Gain | Read Write | Dependent on hardware. Ideal = 2.85. | Float | 03, 04, 16 | 4-20mA output gain calibration factor to convert mA to DAC counts. |
| 40316 – 40317 | 315 – 316 (013B – 013C) | 4-20mA out – DAC calibration: Offset | Read Write | Dependent on hardware. Ideal = 0. | Float | 03, 04, 16 | 4-20mA output offset calibration factor to convert mA to DAC counts. |
| 40401 – 40402 to 40431 – 40432 | 400 – 401 (0190 – 0191) to 40431 – 40432 (01AE – 01AF) | Input 1 to Input 16 | Read Write | -199999 to 999999 | Long | 03, 04, 16 | Input values for the scaling of 2 to 16 data points. Number of points set in Register 40015. |
| 40433 – 40434 to 40463 – 40464 | 432 – 433 (01B0 – 01B1) to 462 – 463 (01CE – 01CF) | Display 1 to Display 16 | Read Write | -199999 to 999999 | Long | 03, 04, 16 | Display values for the scaling of 2 to 16 data points. Number of points set in Register 40015. |
| 49101 To 49104 | 9100 – 9103 (238C – 238F) | Product Identifier | Read Only | Not applicable | ASCII characters | 03, 04 | 8 characters indicating the product firmware number |
| 49105 To 49108 | 9104 – 9107 (2390 – 2393) | Firmware Version | Read Only | Not applicable | ASCII characters | 03, 04 | 8 characters indicating the firmware version number |
| 49109 To 49116 | 9108 – 9115 (2394 – 239B) | Mfg. Serial Number | Read Only | Not applicable | ASCII characters | 03, 04 | 16 (max) characters indicating the manufacturing serial number information. |

Snooper PD865 Typical Installation Diagrams



LM865QS_A
SFT026 Ver 1.0 & up
03/05

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