

# Instruction Manual



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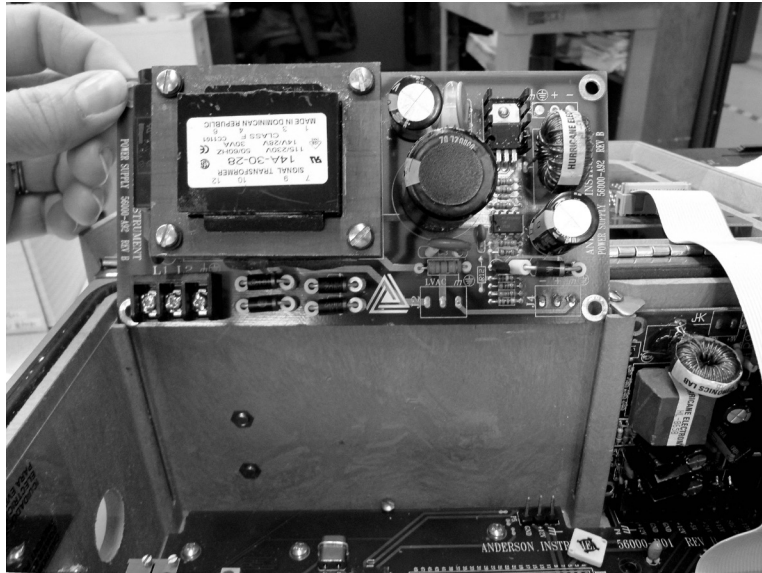
## Pulse 100 Liquid Level Monitor

Form Number AIC1007  
Revised: January 2012  
Supersedes: March 2006



## I. Power Wiring

110 V power wiring is performed by removing the power supply board from the separate box and locating the L1, L2 and GND terminals. Once wired, slide the supply back into the slot. Orientate board so L1, L2 and GND terminals are facing downward, making sure that the board plugs into its associated connector. (See picture for reference.) Use small lock tab to hold the supply in the card slot.



## II. Signal Wiring

Wiring connections are located on the main circuit board, with row J4 being Sensor Input Wiring Terminal, and row J5 being Retransmission Wiring Terminals. Terminal Strips J6 and J7 are dedicated to the Relay Output Connections.

**A.** SL Level Sensor Input connections should be wired to the +EX and the +IN terminals. This will provide 15 VDC which will power the transmitter.

|                                   |                          |
|-----------------------------------|--------------------------|
| 4-20 mA Transmitter (Unpowered) : | SHD (clear) ----- GND    |
|                                   | LOOP + (red) ----- +EX   |
|                                   | LOOP - (black) ----- +IN |

**B.** The retransmission signal is accessed by wiring to the (+) and (-) OUT terminals. This will provide a 4-20mA proportional signal that is powered by 15 VDC.

|                             |      |
|-----------------------------|------|
| (-) mA output (black) ----- | -OUT |
| (+) mA output (red) -----   | +OUT |

### III. Process Data

The Pulse 100 Level Monitor comes pre-calibrated. The programmed data is recorded for reference, with the label located on the inside of the door. New data may be entered using four momentary contact switches located on the inside door. These switches are labeled as S1, S2, S3, and S4. These switches are used in conjunction with the DIP Switch bank S1. This switch bank is located in the upper right corner of the main circuit board. Data programming sequence is as follows.

Note: D1-D2, D3-D4, and D5-D6 refer to the digits on the front LED Display

| <u>DIP Switch Number</u> | <u>Description</u>  |
|--------------------------|---|
| 1-5 Closed<br>6 Open     | Normal Operation  |
| 1 Open                   | Specific Gravity: S4-Up(D1-D2), S3-Up(D3-D4)<br>S2-Up(D5-D6), S1-Minus                                |
| 2 Open                   | Decimal Point Location: S4  |
| 1,2 Open                 | Span: S4-Up(D1-D2), S3-Up(D3-D4)<br>S2-Up(D5-D6), S1-Minus  |
| 3 Open                   | Offset: S4-Up(D1-D2), S3-Up(D3-D4)<br>S2-Up(D5-D6), S1-Minus  |
| 1,3 Open                 | R1 Setpoint: S4-Up(D1-D2), S3-Up(D3-D4)<br>S2-Up(D5-D6), S1-Minus<br>(Relay energizes above setpoint) |
| 2,3 Open                 | R2 Setpoint: S4-Up(D1-D2), S3-Up(D3-D4)<br>S2-Up(D5-D6), S1-Minus<br>(Relay energizes above setpoint) |
| 1,2,3 Open               | R3 Setpoint: S4-Up(D1-D2), S3-Up(D3-D4)<br>S2-Up(D5-D6), S1-Minus<br>(Relay energizes below setpoint) |
| 4 Open                   | R4 Setpoint: S4-Up(D1-D2), S3-Up(D3-D4)<br>S2-Up(D5-D6), S1-Minus<br>(Relay energizes below setpoint) |
| 1,4 Open                 | Max Specific Gravity: S4-Up(D1-D2), S3-Up (D3-D4)<br>S2-Up(D5-D6), S1-Minus                           |
| 2,4 Open                 | Physical Offset: S4-Up  |
| 1,2,4 Open               | Tank Type: S4 (0 or 1)  |
| 3,4 Open                 | Station #: S4 (1-31)  |
| 1,3,4 Open               | Baud Rate: S4 Selects 300, 1200, 2400, or 9600  |
| 2,3,4 Open               | Hysteresis: S4 selected 0-50%   |
| 1,2,3,4, Open            | Allows RS-232 Communications Link   |

| <u>DIP Switch Number</u> | <u>Description</u>  |
|--------------------------|---|
| 5                        | Must Remain Closed For Normal Operation   |
| 6                        | Open: No values below offset displayed<br>Closed: Values below offset will be displayed |
| 7                        | Open: Display in Liters/Kilograms<br>Closed: Display in Pounds/Gallons                  |
| 8                        | Open: Display in weight<br>Closed: Display in volume                                    |

Programming sequence is as follows:

1. Flip associated dip switch, per above chart
2. Press RESET button, located in upper right corner of main circuit board
3. View front display, and make changes using momentary contact switches on inside of door
4. Once correct value is on display, move DIP Switch back to original position, and hit RESET button.

All data is stored in EEPROM memory, and will not be erased or lost in the event of a power interruption.



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