

## Panel Mount Load Cell Indicator/Transmitter



### FEATURES

- Push-button configuration and calibration
- 10-Point load cell linearization
- Selectable 0-10Vdc or 4-20mA isolated analog output
- Peak hold functions for dynamic/historic measurement
- Keypad entry or conventional dead load calibration
- Selectable/adjustable digital filtering
- Serial communication and Modbus RTU protocol

### DESCRIPTION

PS-1050 digital/analog transmitters provide signal conditioning, amplification, and a corresponding digital or isolated analog output signal for tank/bin/hopper weighing systems. Front panel configuration and calibration streamlines system installation and operation.

Calibration and configuration parameters also can be downloaded via PC based Pro-View Software. In either case, no dip switch or potentiometer adjustments are required.

An isolated 0-10V or 4-20mA analog output provides factory floor communication for a data logger, remote panel meter, or PLC

input. High level serial communication is available in RS-232, RS-422, or RS-485 format with Modbus RTU protocol. Up to 32 PS-1050's can be connected point-to-point using the RS-485 serial output.

Convenient 1/8 DIN size panel mounting and removable terminal block connectors simplify installation procedures.

BLH offers the PS-121, 24Vdc Power Supply (data sheet #12155), for PS-1050 operation.

### APPLICATIONS

- Storage tank, bin, and hopper weighing
- Silo and inventory measurement systems
- Loss-in-weight feeders
- Floor and bench scale indication

### CONFIGURATION



## SPECIFICATIONS

### PERFORMANCE

|                     |  |
|---------------------|--|
| Resolution          | 60,000 counts  |
| Conversion Speed    | 50 updates/second<br>(no filtering)  |
| Sensitivity         | 0.2 $\mu$ V/count  |
| Full Scale Range    | -0.5mV/V to +3.5 mV/V  |
| Linearity           | <0.01% of full scale   |
| Excitation Voltage  | 5 volts fixed, short circuit<br>proof  |
| Load Current        | 85mA (six 350 ohm load cells)  |
| Filter              | 0.5Hz to 25Hz selectable   |
| Temperature Creep   | <0.0011% of full scale/ $^{\circ}$ C<br>(<0.0006% of full scale/ $^{\circ}$ F) |
| A/D Converter       | 24 bits  |
| Increment Size      | x1, x2, x5, x10, x20, x50  |
| Decimal Point       | 0.0, 0.00, 0.000   |
| Calibration Methods | computer interface or via front<br>panel                                       |

### ENVIRONMENTAL

|                       |  |
|-----------------------|--|
| Operating Temperature | -4 to +40 $^{\circ}$ C (+14 to +104 $^{\circ}$ F)  |
| Storage Temperature   | - 20 to +50 $^{\circ}$ C (-4 to +122 $^{\circ}$ F) |
| Relative Humidity     | 85% non-condensing                                 |

### DISPLAY

|              |  |
|--------------|--|
| Type         | 6-digit red LED, 7 segment 0.55"<br>high |
| Status LED's | (4) red LED's                            |
| Keyboard     | (4) keys (tactile feedback)              |

### ELECTRICAL

|               |                 |
|---------------|-----------------|
| Input Voltage | 24Vdc $\pm$ 15% |
| Power         | 7.5 Watts       |
| Isolation     | class II        |
| Category      | category II     |

### ANALOG OUTPUT (ISOLATED)

|                   |  |
|-------------------|--|
| Type              | 16 bit D/A conversion  |
| Voltage           | 0-10Vdc (10K ohms min load)  |
| Current           | 4-20mA (300 ohm max)   |
| Linearity         | <0.012% of full scale  |
| Temperature Creep | <0.0011% of full scale/ $^{\circ}$ C<br>(<0.0006% of full scale/ $^{\circ}$ F) |

### INPUTS & OUTPUTS

|                   |  |
|-------------------|--|
| (2) Logic Inputs  | opto-isolated, 24Vdc PNP<br>(requires ext. power supply) |
| (2) Logic Outputs | solid-state relays, (maximum<br>load 24Vdc/100mA each)   |

### SERIAL COMMUNICATION

|                      |   |
|----------------------|---|
| Serial Output        | RS-232, RS-422 or RS-485                            |
| Baud Rate            | 2400, 9600, 19200, 38400, or<br>115200 - selectable |
| Standard Protocols   | ASCII, Modbus RTU                                   |
| Maximum Cable Length | 50 feet RS-232, 3200 feet for<br>RS-422 and RS-485  |

### ENCLOSURE

|                    |  |
|--------------------|--|
| Overall Dimensions | 96 x 48 x 160mm (L x H x D)<br>(3.75" x 1.87" x 5.90") (L x H x D)<br>panel mount cutout = 91 x 44mm<br>(cutout = 3.58" x 1.72") |
| Mounting           |  |
| Enclosure          | ABS Plastic  |
| Protection (front) | IP20   |
| Weight             | 300 grams (9.6 ounces)   |
| Wiring Connections | removable terminal blocks<br>pitch = 5.08mm<br>(pitch = 0.196")  |

### APPROVALS

|    |                   |
|----|-------------------|
| CE | EN 50082-2, 55011 |
|----|-------------------|

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