

## DIN Rail Mount Load Cell Transmitters



### FEATURES

- DIN rail mount digital/analog transmitter
- Push button configuration and calibration (PS-1045)
- 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
- Serial communication and Modbus RTU protocol
- Display (PS-1045) and blind (PS-1040) Versions

### DESCRIPTION

PS-1040/45 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.

Calibration options accommodate front panel data entry or dead load weighing methods.

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

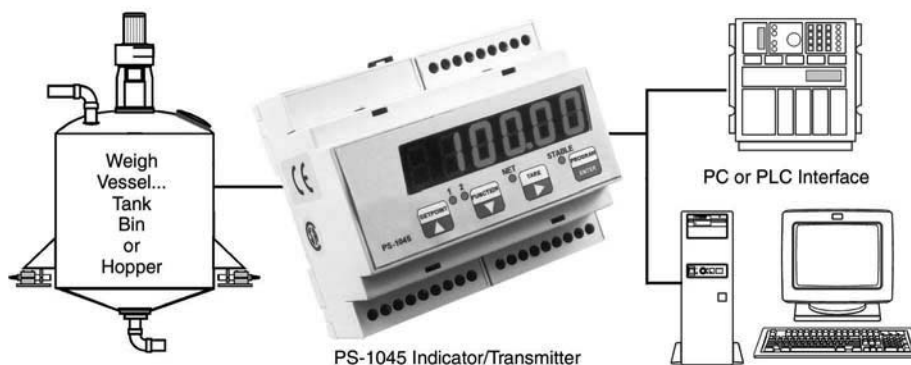
BLH offers the PS-121, 24Vdc Power Supply (data sheet #12155), for PS-1040/45 operations.

NOTE: Model PS-1040 requires Pro-View Software for calibration and system parameter entries.

### 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 (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	5Vdc, short circuit proof
Load Current	85mA (six 350 ohm load cells)
Filter	0.5Hz to 25Hz selectable
Temperature Creep	<0.0011% of full scale/ $^{\circ}$ C (<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 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 (PS-1045)**

Type	6-digit red LED, 7 segment 0.55" 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 (<0.0006% of full scale/ $^{\circ}$ F)

**INPUTS & OUTPUTS**

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

**SERIAL COMMUNICATION**

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

**ENCLOSURE**

Overall Dimensions	105 x 90 x 58mm (L x H x D) (4.13" x 3.50" x 2.25") (L x H x D)
Mounting	DIN rail (35mm x 7.5mm)
Enclosure	NORYL auto extinguishing
Protection (front)	IP20
Weight	250 grams (8 ounces)
Wiring Connections;	terminal blocks pitch = 5.08mm (pitch = 0.196")

**APPROVALS**

CE	EN 50082-2
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BLH is continually seeking to improve product quality and performance. Specifications may change accordingly.