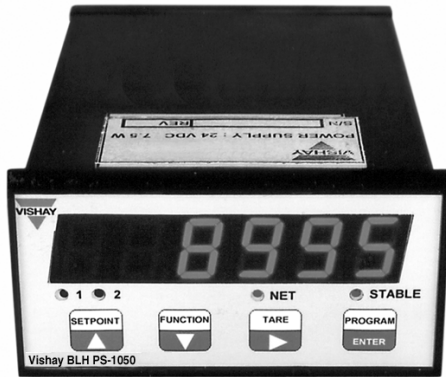VISHAY
PRECISION GROUP

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

PS-1050 Indicator/Transmitter

SPECIFICATIONS

PERFORMANCE

Resolution	60,000 counts
Conversion Speed	50 updates/second (no filtering)
Sensitivity	0.2µV/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 proof
Load Current	85mA (six 350 ohm load cells)
Filter	0.5Hz to 25Hz selectable
Temperature Creep	<0.0011% of full scale/°C (<0.0006% of full scale/°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°C (+14 to +104°F)
Storage Temperature	- 20 to +50°C (-4 to +122°F)
Relative Humidity	85% non-condensing

DISPLAY

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±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/°C (<0.0006% of full scale/°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	96 x 48 x 160mm (L x H x D) (3.75" x 1.87" x 5.90'') (L x H x D)
Mounting	panel mount cutout = 91 x 44mm (cutout = 3.58" x 1.72")
Enclosure	ABS Plastic
Protection (front)	IP20
Weight	300 grams (9.6 ounces)
Wiring Connections	removable terminal blocks pitch = 5.08mm (pitch = 0.196")

APPROVALS

CE	EN 50082-2, 55011

is continually seeking to improve product quality and performance. Specifications may change accordingly.