

Model 910 Operating Instructions

The Model 910 Analog Peak Indicator is a battery-powered, hand-held instrument for reading the output of conventional strain gage transducers. The Model 910 can read and display transducer output on a 3 ½-digit display. The 910 can capture and record up to 5 readings. It can also display readings in a track mode.

CAUTION

To avoid damage, charge the battery as soon as possible when the CHARGE indicator light is lit. The battery typically holds an eight-hour charge or more but can be damaged if allowed to drain completely.

Instructions

Use the following procedure to set up and use the Model 910 Peak Indicator.

1. Attach the DB15 connector of the transducer cable to the DB15 receptacle on the top end of the Model 910. **NOTE:** Make sure the cable is connected on the transducer end, if necessary.
2. Secure the correct calibration resistor to the binding posts on the top end of the Model 910. The correct transducer value should be indicated on the Calibration Certificate included with the transducer.
3. Turn the Model 910 power on by sliding the on/off switch up. The digital display should be lit.
4. Select the desired decimal point position using the DECIMAL POINT switch.
5. Select the transducer signal direction using the CW/CCW toggle switch.
6. Place the unit in the TRACK mode using the MEMORY selector switch.
7. Adjust the ZERO potentiometer so that the display reads zero.
8. Hold the RESET/CAL switch in the CAL position and observe the display.
9. Adjust the SPAN potentiometer as needed to show the transducer calibration value on the display. **NOTE:** The calibration value can be located on the Calibration Certificate provided by the manufacturer

or calibration laboratory. If the cal value cannot be found, contact the manufacturer or the cal lab.

10. Release the RESET/CAL switch and observe the displayed value. If the displayed value is not zero, repeat Steps 7 through 9 until zero is displayed when the RESET/CAL switch is released. **NOTE:** Some additional adjustment of the ZERO and SPAN potentiometers may be necessary, especially if the SPAN required a lot of adjustment.
11. To take peak readings, select the desired memory number and hold the RESET/CAL switch in the RESET position momentarily to clear any previous reading. Apply the torque or force to the transducer as needed. The Model 910 displays the peak value recorded. Select other memory positions as desired.
12. To observe transducer output in the track mode, simply leave the MEMORY selector switch in the TRACK position and apply the torque or force as needed.
13. Other analog recording devices can be plugged into the ANALOG OUTPUT connector.

Specifications

The following specifications apply to the Model 910 Peak Indicator.

Accuracy	±0.5% FS Peak Mode ±0.25% FS Track Mode
Input Signal Sensitivity	0.8 to 5.0 mV/V
Bridge Excitation	10 vdc
Frequency Response	DC to 3.2 kHz
Meter Update	2 ½ times per second
Display	LED 3 ½-digit 1999 max display
Number of Memories	5
Battery Life	8 hours
Battery Charging Time	8 hours

Controls

The Model 910 has the following controls.

Table 1. Controls		
Name	Description	Function
CCW/CW	Toggle Switch	Sets direction for torque transducers.
DECIMAL POINT	Toggle Switch	Places the decimal point as 10.00, 1000, or 100.0.
SPAN	Dial Adjustment Potentiometer	Used to adjust the span of the instrument when calibrating with a transducer.
ZERO	Dial Adjustment Potentiometer	Used to adjust the zero reading of the transducer.
RESET/CAL	Switch	Clears the selected memory position when held momentarily in the RESET position; brings the attached calibration resistor into the transducer circuit when momentarily held in the CAL position.
MEMORY	Dial Selector Switch	Selects one of five memories when placed in the 1, 2, 3, 4, or 5 position to either read or obtain peak values; places instrument in track mode when placed in TRACK position.
On/Off	Switch	Turns instrument on or off. Located on the bottom end of the instrument.

Wiring Code

The Model 910 uses the following wiring code for the transducer connector.

Table 2. Wiring Code			
Pin	Function	Pin	Function
1	-Signal	9	+ Excitation
2	+Signal	10	- Excitation
3	GS1	11	GS3
4	GS2	12	GS4
5	Analog Ground	13	(Shunt)
6	(Transducer Type)	14	(Encoder A)
7	(Encoder 5V)	15	(Encoder B)
8	(Digital Ground)		

Indicators

The Model 910 has the following indicators.

Table 3. Indicators		
Name	Description	Function
Display	3 ½-digit Display	Indicates transducer input as recorded in one of five memory positions or current transducer output when instrument is operating in track mode.
LOW BATT	Indicator, Red	Indicates that battery requires recharging. NOTE: To avoid damage to battery, the Model 910 should be recharged as soon as possible when this indicator is lit.
CHARGE	Indicator, Red	Indicates that the battery is recharging.

Connections

The Model 910 has the following connections.

Table 4. Connections		
Name	Description	Function
Transducer	DB15 Connector	Accepts the DB15 connector of the transducer cable. Located on the top end of the Model 910.
Calibration Resistor	Binding Posts	Accepts the leads of the precision calibration resistor associated with the attached transducer. Located on the top end of the Model 910.
Analog Output		Provides an analog output signal for use with oscilloscopes, strip chart recorders, etc. Located on the front panel.
Charger		Accepts the connector from the battery charger. Located on the bottom end of the Model 910.

Accessories

The following accessories are available.

Battery Pack	PN 21170-000960
Charger	PN 21130-001000