TR150 Portable Loadmeter

The TR150 is a completely portable, precision instrument packaged in a small, robust IP65 (NEMA 4) enclosure, weighing only 260 grams. The TR150 accepts an input range of up to 50mV/V.

For simplified use, the operator only has access to six keys; on/off, gross/net, peak, trough, hold and shunt cal. Calibration and configuration can be performed from the front panel, with protection against accidental or un-intentional changes. The configuration menu is very simple and enables the setting of a tare value, display resolution, filter rate, auto power off and selection of low power mode.

There are 3 calibration options; a single pass auto-calibration, entering of loadcell sensitivity and corresponding display value and entering of offset and gain values for corresponding display values.

Two separate ranges are available, which enable the instrument to read and display two separate parameters; i.e. lbs/kgf, tonnef/kN, high/low resolution, fast/slow response etc. The menu options offer the engineer the ability to tailor the instruments response to the application. In each range all the variables can be set, including zero and filtering.

Annunciators on the display give a constant indication of the

Features

- IP65 / NEMA 4 sealed case
- Storage for 2 input calibrations
- Tactile keypad
- Auto calibration and tare
- Peak and valley hold
- RS232 streaming data output

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operating mode of the TR150.The TR150 features an innovative power saving facility which when enabled can offer up to 450 hours battery life with a 350 ohm bridge connected. In normal power mode up to 35 hours battery life is achieved with a 350 ohm bridge. The TR150 also incorporates an auto power off facility, which can be set during configuration in 1 minute increments up to 99 minutes, or it can be disabled so the instrument is powered on until the off key is depressed.

The TR150 can be supplied with a number of options including a protective case , which enables the full operation of the loadmeter whilst fitted in the case. An RS232 data output option gives a stream of display data in ASCII format at 9600 baud.

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Specifications

Parameter	Value	Unit
Performance		
Input Type	Strain Gauge Full Bridge Sensors	
Input Range	±5mV/V or ±50mV/V	
Non Linearity	±0.005% FSD	
Span Drift	5 ppm/°C	
Excitation Voltage	5Vdc (±4%), 59mA maximum current	
Minimum Bridge Resistance	85Ω (4 x 350Ω sensors in parallel)	
Internal Battery	Two AA size alkaline, access via sealed rear compartment	
Battery Life	Approximately 35 hours, with 350Ω sensor	
Update Rate	Up to 40mS (can be set in configuration menu)	
Indication		
Display Type	7½ digit LCD display, 8.8mm high digits	
Display Resolution	1 part in 250,000 at 1Hz update rate 1 part in 65,000 at 10Hz update rate	
Annunciators	Low Battery warning; peak; trough; hold; net; shunt cal; range	
Control Variables		
Front Panel User Keys	Tactile Keys with recessed rims for: - ON/OFF Switches TR150 power on/off RANGE Selects between two ranges HOLD Hold the current display value, press again to release GROSS/NET Zeroâ€™s display (±100% range) SHUNT CAL Generates simulated input for loadmeter testing PEAK Enables peak hold TROUGH Enables valley/trough hold	
Settable Parameters	Tare/Zero value; display resolution/decimal point position; display update rate; low power mode; auto power off;	

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Mechanical		
Electrical Connection	5 pin Binder socket	
Physical Size	See drawing	
Weight	260 grams	
Legends	Insert legends for engineering unit identification	
Environmental		
Operating Temperature	-10°C to +50°C	
Environmental Rating	IP65 (when mating plug fitted)	
Enclosure Type	ABS, dark grey	

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Order Codes

Code	Description
TR150	Basic meter
TR150-RS232	Meter with RS232 output
TR150-CA	Basic meter with black protective case
TR150-RS232-CA	Meter with RS232 output and black protective case
	If the TR150 is supplied with a loadcell it will normally be calibrated to read the loadcell output in the same force units as the loadcell calibration. A traceable system certificate will be supplied for the loadmeter and loadcell combination.
	CE - This product complies with the requirements of the European EMC directive.

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