

VR1 hand-held indicator



product description

The VR1 is a portable, hand-held indicator that connects to load cells and strain gauges. It offers a convenient way to monitor and calibrate your device in the field, running on battery power and offering exceptionally high resolution.

The device features a tactile six-button interface, with functions that include:

- Range Selection
- Display Hold/Freeze
- Gross/Net indication selection
- Peak Hold selection
- Trough Hold selection
- Shunt Cal check

The indicator's microprocessor is designed to interface with any full bridge sensor with an output sensitivity of up to 50mV/V. Bridge resistances from 85Ω upwards can be used with the VR1. The indicator can drive up to four strain gauge bridges.

The VR1 is lightweight and small, with a water-resistant enclosure.

applications

General test & measurement, silo weighing, process weighing

key features

7-digit LCD display

Microprocessor based

Single-pass calibration (direct mV/V) with dual range for values such as kg and lb

TEDS enabled

Powered by 2xAA batteries (battery life of up to 450h)

Drive up to 4x strain gauge bridges

Compact and lightweight (250g)

Environmental protection to IP65



RoHS
compliant



specifications

	Units	Min	Typical	Max
Non-linearity	% FR	-	0.001	0.005
Internal resolution	Bits	-	24	-
Resolution at 1 Hz sample rate	Counts /Divisions	-	250,000	-
Resolution at 10 Hz sample rate	Counts /Divisions	-	65,000	-
Temperature effect on zero	±%/FC/°at2.5mV/V	-	0.0002	0.0007
Temperature effect on span	±%/°C	-	0.0002	0.0005
Offset stability (from original offset at any time)	±%FR	-	0.002	0.008
Gain stability	% per annum	-	0.003	0.01
Excitation voltage	Vdc	4.8	5	5.2
Strain gauge impedance	Ω	85	350	5,000
Sensitivity full range, setting 1	mV/V	-5	-	+5
Sensitivity full range, setting 2	mV/V	-50	-	+50
Input type	Strain gauge full bridge sensors			
Internal battery	2 x AA Alkaline, access via sealed rear compartment, please note batteries are not included			
Battery life	With 350Ω sensor continuously on 35hrs, or up to 450hrs in low-power mode			
Update rate strain gauge full	10ms to 2s including Peak/Valley Hold capture rate			

Indication

Display type	7 digit LCD display, 8.8mm high digits
Display resolution	1 part in 250,000 at 1s update
Annunciators	Low battery warning peak, trough, hold, net, shunt cal, range, by LCD annunciators

Mechanical

Electrical connection	5-pin Binder socket (mating plug supplied)
Physical size	152x90x34mm
Weight	250g
Legends	Insert legends for engineering unit identification (supplied)

Control Variables

Front panel user keys	<p>Tactile Keys for:-</p> <p>ON/OFF/TROUGH Switches PSD power on/off/displays trough reading</p> <p>RANGE Selects between two ranges,</p> <p>PEAK displays peak reading</p> <p>HOLD Switches Hold on/off</p> <p>GROSS/NET Toggles between gross and net readings</p> <p>SHUNT CAL Puts PSD units shunt calibration mode (100k resistor)</p>
Settable parameters	<p>Display Resolution</p> <p>Rate 0.5, 1, 3, 10, 25Hz</p> <p>Low power modes</p>
Calibration	By front panel keypad buttons protected by key sequence

Environmental

Storage temperature	-40 to +65°C (excluding batteries)
Operating temperature	-10 to +50°C (excluding batteries)
CE environmental approvals	European EMC Directive 2004/1108/EC, Low Voltage Directive 2006/95/EC

product dimensions (mm)

Specifications and dimensions are subject to change without notice.

