Strain Gauge
Reinforcing Bar (REBAR)

LOAD CELL

Re-Bar Series

- **Diameters 10mm to 32mm**
- **3000 kg/cm² Capacity**
- **Manufactured from High Tensile Steel**
- **Triple Environmental Sealing to IP68 (10 bar)**
- **Robust Construction**
- **3 YEAR WARRANTY**

Options Available

Other Ranges Available on request

Different (non-standard) sizes available on request

Different cable lengths available (consult factory)

DESCRIPTION

The REBAR series of load cells have seen specifically designed to measure the forces imposed on reinforcing bars used in concrete construction. Each transducer is welded between successive lengths of the appropriate diameter reinforcing bar during steel fixing prior to pouring of concrete.

Precision strain gauges are bonded to the prepared surface of the REBAR and wired in a wheatstone bridge configuration. Forces applied to the REBAR give an electrical output that is directly proportional to the applied force.

Measuring stresses of up to 3000kg/cm², the REBAR is available in 6 standard sizes ranging between Ø10mm and Ø32mm to comply with all industry standard reinforcing bar sizes. The sensing area and armoured cable have triple environmental sealing to IP68 to withstand water pressures up to 10bar.

The device meets an increasing requirement to monitor forces within concrete structures such as dams, motorways, bridges, buildings etc. particularly those in potential earthquake areas and on difficult soil structures.

The REBAR load cell is supported with Applied Measurements standard 3 year warranty.

Transducer Specialists...

APPLIED MEASUREMENTS LIMITED
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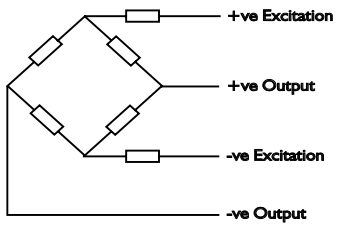
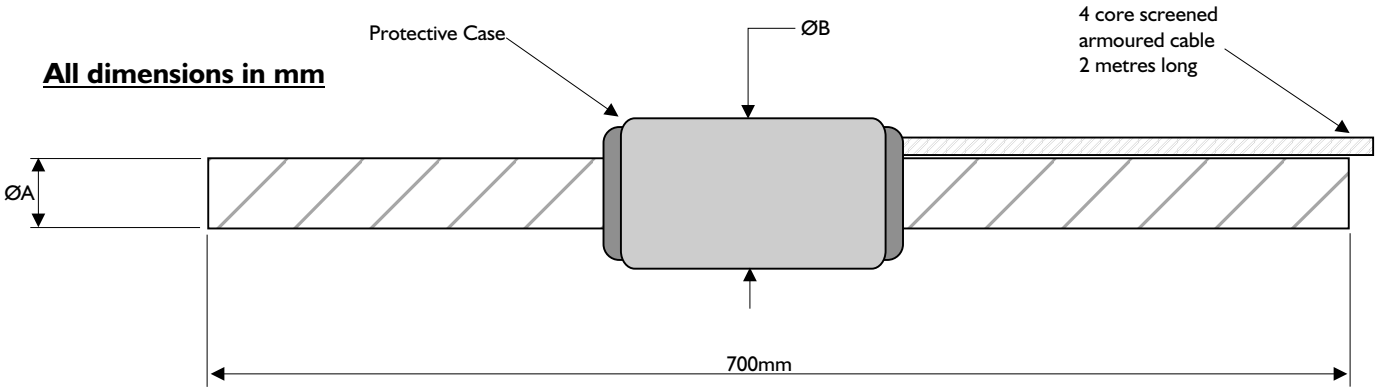
SPECIFICATION

Wiring Schematic Diagram



CHARACTERISTICS	REBAR	UNITS
Capacity:	3000	**kg/cm²**
Rated Output:	2.0 nominal	**mV/V**
Non Linearity::	<0.25	**±% of Rated Output**
Temperature Range: Operating	-20 to +70	**°C**
Compensated	-10 to +60	**°C**
Temperature Effect: On Output	<0.010	**±% of Applied Load/ °C**
On Zero	<0.040	**±% of Rated Load/ °C**
Safe Overload:	140	**% of Rated Capacity**
Ultimate Overload:	300	**% of Rated Capacity**
Excitation: Recommended	10	**Volts AC or DC**
Maximum	12	**Volts AC or DC**
Input Impedance:	350 nominal	**Ohms**
Output Impedance:	350 nominal	**Ohms**
Insulation Impedance:	500	**Megaohms @ 50vdc**
Construction:	High Tensile Steel	
Environmental Protection:	IP68 (to 10 bar)	
Cable:	2 metre 4 core screened (armoured)	

All dimensions in mm



TYPE/RANGE	ØA	ØB (Protective case)	WEIGHT (kg)
REBAR - 10	10	40	1.0
REBAR - 12	12	40	1.4
REBAR - 16	16	40	2.0
REBAR - 20	20	50	3.0
REBAR - 25	25	60	4.0
REBAR - 32	32	60	6.0