

**Strain Gauge Based Submersible**

# **LOAD CELL**

**For use in Triaxial Chambers**

**STALC3  
Series**



- **Capacities 0-1kN to 0-100kN**
- **Fully submersible to an external pressure of up to 70bar**
- **Pressure Compensated Design**
- **Robust Construction**
- **Simple Installation**
- **High Performance**
- **High Sideload Tolerance**
- **3 YEAR WARRANTY**

**Options Available**

Other Ranges Available on request

Equivalents to other manufacturers' available

Different Cable Lengths

## **DESCRIPTION**

The STALC3 series of submersible load cells has been designed for measuring compressive loads from 0-1kN to 0-100kN and can be fitted into new or existing triaxial chambers. Tension loads can also be measured if required; for capacities up to 5kN tension loads up to the cell's rated capacity can be applied, while for higher capacities tension capacity is limited to 5kN.

The design features an internal pressure compensation system that eliminates zero offset changes when the load cell is subjected to external pressure changes. Being insensitive to cell confining pressure, the load cell can be used inside the triaxial chamber - measuring the load from within the chamber also eliminates the effects of piston friction.

The use of specially selected heat treated stainless steel and precision strain gauges ensure

*Transducer Specialists...*

**APPLIED MEASUREMENTS LIMITED**

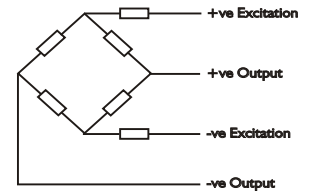
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# SPECIFICATION

Wiring Schematic Diagram



CHARACTERISTICS	STALC3	UNITS
Rated Capacities:	1, 3, 5, 10, 25, 50, 100	kN
Rated Output:	2.0 nominal	mV/V
Non-linearity:	<0.05	±% of Full Scale
Hysteresis:	<0.1	±% of Full Scale
Temperature Range: Operating	-20 to +80	°C
Compensated	0 to 50	°C
Temperature Effect: On Output	<0.01	±% of FSO/ °C
On Zero	<0.02	±% of FSO/ °C
Safe Overload:	150	% of Rated Capacity
Ultimate Overload:	300	% of Rated Capacity
Excitation: Recommended	10	Volts AC or DC
Maximum	15	Volts AC or DC
Input Impedance:	750 nominal	Ohms
Output Impedance:	700 nominal	Ohms
Insulation Impedance:	>2000 (bridge to ground) & > 1000 (shield to ground)	Megaohms
Deflection at Rated Capacity:	<0.05	mm
Weight:	0.85	kg
Construction:	Stainless Steel (note: 1kN capacity version utilises a chromic anodised HE15 aluminium sensing element)	
Environmental Protection:	Fully submersible to 7000kPa	
Cable:	3 Metre 4 Core Screened	

All dimensions in mm

