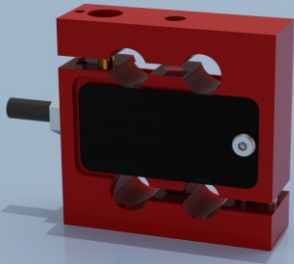




## TYPE: STA-7



# STA-7 Aluminium Alloy S Type Low Range Tension/Compression Load Cell

## Description

The STA-7 load cell series is ideal for measuring both tensile and compressive forces. The standard metric threads at each end of the load cell are designed to accept standard spherical seating rod-end bearings.

The STA-7 is suitable for many applications where a tension and compression load cell is required for high accuracy measurements, including material test machines, weighing and general force measurement. Tension and compression overload stops are supplied as standard on all ranges up to 5kg. This feature helps to protect the load cell against accidental damage up to 500% of the load cell range.

The STA-7 series can be supplied on its own or combined with our extensive range of instrumentation to provide a complete load monitoring system.

## Features

- Ranges: 1, 2, 5, 10, 25, 50kg
- High accuracy
- Aluminium alloy
- Weighs only 300g
- Integral overload stops on 1, 2 & 5kg versions

## Specification

Rated load (kg/tonne)	1, 2, 5, 10, 25, 50					
Nominal sensitivity	2mV/V at rated load					
Sensitivity tolerance	<±0.1%					
Temperature effect on zero	± 0.0025% per °C					
Temperature effect on sensitivity	± 0.0021% per °C					
Linearity	<±0.03% of rated load					
Hysteresis	<±0.03% of rated load					
Repeatability	<±0.01% of rated load					
Input resistance	440Ω ±20Ω					
Output resistance	350Ω ±2Ω					
Insulation resistance	>5GΩ @50VDC					
Zero balance	±1% of rated load					
Recommended supply voltage	10V (1-15V nominal, 18V maximum)					
Service load	120%					
Maximum permissible load	150%					
Breaking load	>300%					
Maximum transverse load	50%					
Maximum permissible dynamic load	50%					
Displacement at nominal load	~0.3mm					
Temperature nominal range	-10 to +40°C					
Service temperature	-20 to +70°C					
Storage temperature	-20 to +80°C					
Natural frequency	1kg	2kg	5kg	10kg	25kg	50kg
	220Hz	500Hz	750Hz	1kHz	1.5kHz	2kHz
Environmental protection level	IP20					
Connection type	3 metres PVC screened cable, via gland cable					
Wiring connections	+supply: Red			-supply: Black		
	+signal: White			-signal: Yellow		

## Typical Applications

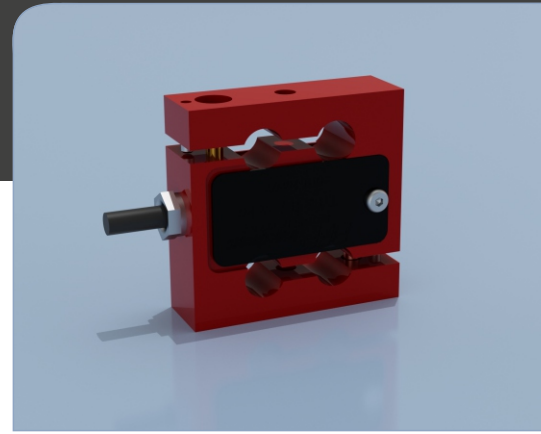
- Hanging scales
- Material test machines
- Engine/motor dynamometers
- Process weighing
- General force measurement

## Available Options

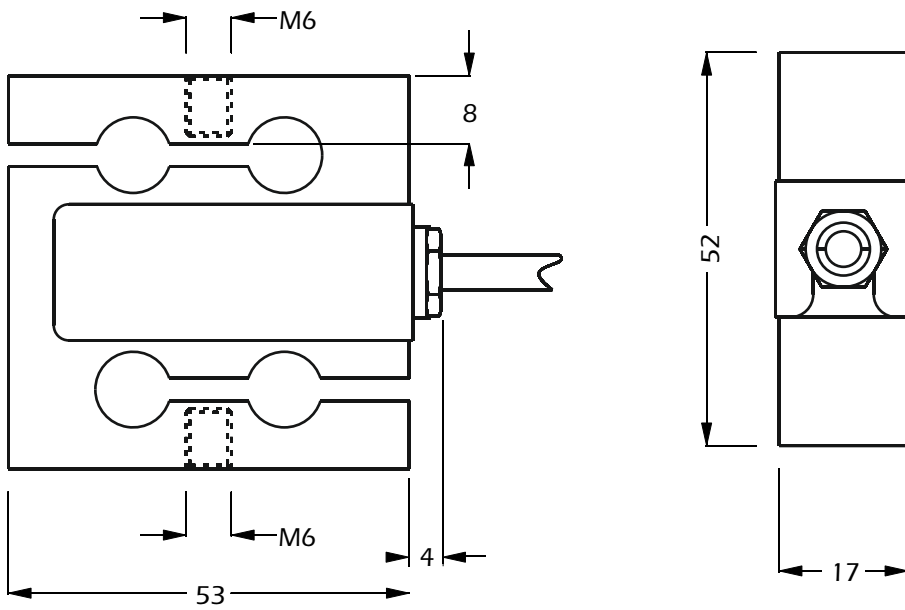
- Spherical seating rod end bearings
- Compression load button
- TEDS option (when used with TR150 handheld display)



# STA-7 Aluminium Alloy S Type Low Range Tension/Compression Load Cell



## Dimensions



All dimensions are in mm

Rating (kgs)	Part Number	Weight (g)	Resolution (kgs)
1	STA-7-1	300	0.0002
2	STA-7-2	300	0.0002
5	STA-7-5	300	0.001
10	STA-7-10	300	0.002
25	STA-7-25	300	0.005
50	STA-7-50	300	0.01

**Note:** default calibration of these load cells will be in tension. If you require calibration in compression or both tension & compression, please state at time of order (additional charges will apply).

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Due to continual product development, LCM Systems Ltd reserves the right to alter product specifications without prior notice.

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