

SHEAR BEAM LOAD CELL FOR INDUSTRIAL WEIGHING

capacities 300kg - 10,000kg




This stainless steel shear beam load cell is available with approval according to OIML R60 Class C3 (3000 divisions) and is calibrated in mV/V/Ω by output current matching, which minimises corner correction time on multi-cell systems.

The T85 is fully welded and hermetically sealed to IP68 and IP69K as standard. It can therefore be used in the harshest industrial environments and it's typically used in weigh platforms, tank and vessel weighing, big bag (FIBC) filling systems, conveyors and machinery using weighing as part of its function. Capacities range from 300kg to 10,000kg.

The Polyurethane cable provides excellent protection against chemicals, UV radiation, rodents and damage from cuts/impacts. ATEX approval for all Gas and Dust zones is available as an option. The certification for dust zones 20, 21 and 22 does not require safety barriers, which creates a large cost saving.

For applications in aggressive environments where stress corrosion or acid attack could be a problem, the T85 can be supplied with an optional Parylene coating.

For high temperature applications, an optional version of the T85 is available for operation in environments up to 150°C (continuous temperature).

- Stainless steel construction
- 3000 divisions (Class C3) OIML R60 approval
- Calibrated in mV/V/Ω
- High integrity stainless steel cable entry
- 5 Year Warranty
- Industry standard dimensions and specifications
- Optional load feet and mounting accessories up to 5,000kg: patented LeverMount® and LA85 anti-vibration mount
- Options of  approval, Parylene coating and high temperature version
- Wide operating temperature range

T85

more information...



ATEX Certification

For applications in hazardous or explosive environments, the T85 load cell has a number of ATEX certification options. The 'ta' mode of protection allows for use without safety barriers, which results in significant cost savings.

Code	Temperature Class	Parameters	Application
II 1 GD	T4	Pi = 1.3W	Gas Zones 0, 1, 2 with safety barriers Dust Zones 20, 21, 22 without safety barriers
Ex ia II C T4..T6 Ga IP68 T85°C	T5	Pi = 0.8W	
Ex ia IIIC T135°C T85°C Da Ex ta IIIC T85°C Da	T6	Pi = 0.53W	

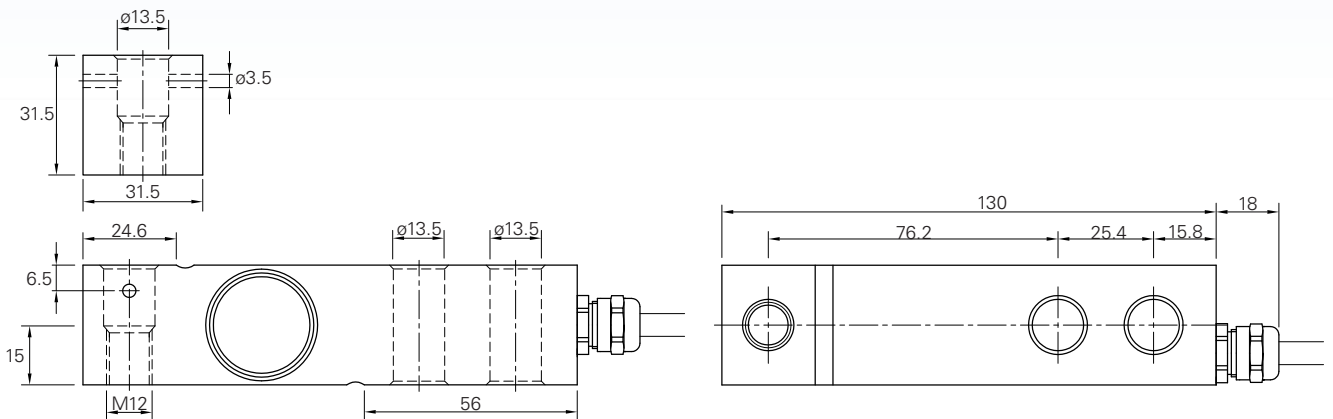
Option: Parylene coating

For applications in aggressive environments where stress corrosion or acid attack could be a problem, the stainless steel T85 load cell can be supplied with a special option of Parylene coating to provide additional environmental protection. Further information on this coating can be found in the Parylene Coating data sheet, available at www.thames-side.com

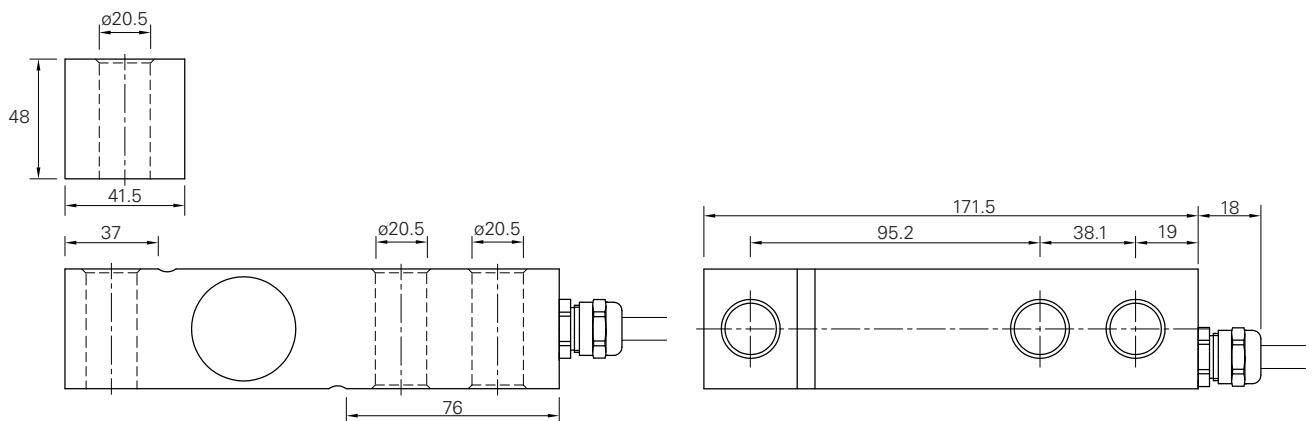
Option: High Temperature version

For high temperature applications, an optional version of the T85 is available for operation in environments up to 150°C (continuous temperature). This version uses different internal components and a PTFE cable to provide temperature resistance.

T85 Capacity range 300 - 2,500kg



T85 Capacity range 3,000 - 5,000kg

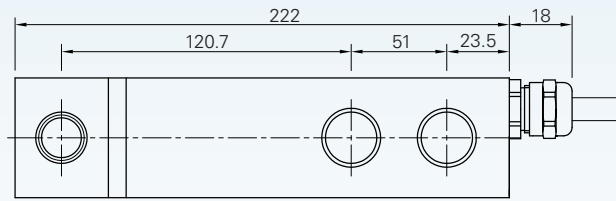
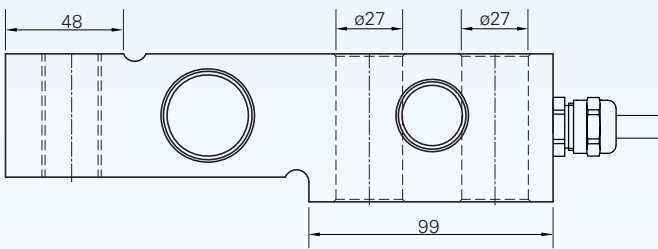
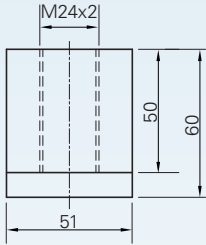


All dimensions in mm

T85

more information...

T85 Capacity range 7,500 - 10,000kg



T85 MOUNTING ACCESSORIES

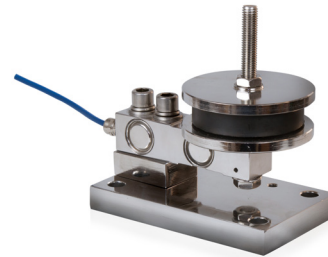
Unique, patented LeverMount® accessory

- Stainless steel grade 316 accessory
- Fast load cell installation/removal without jacking or dummy/false cells, even while vessel is full
- Production does not need to stop in event of changing a load cell
- Stable 3-point base mounting with no need for shims
- Substantial anti-lift protection
- Available up to 5 tonnes, in 3 sizes, according to the load cell capacity



LA85 Anti-Vibration accessory

- For applications with mixing and/or vibration
- Stainless steel and rubber construction
- Separately available baseplate/spacer kit and anti-vibration kit
- Available in 3 sizes according to the load cell capacity: 300kg-2500kg / 3000kg-5000kg / 7500kg-10 000kg
- Anti-lift protection is provided by anti-vibration kit



Stainless steel load feet

- 2 models for 300kg-2500kg capacity
 - T85-LOADFOOT-FT12
 - T85-LOADFOOT-35901 with dust cover
- 1 model for 3000kg – 5000kg capacity
T85-LOADFOOT-35917
- Height of load cell can be adjusted
- Spherical joint on all models



T85 Load Cell

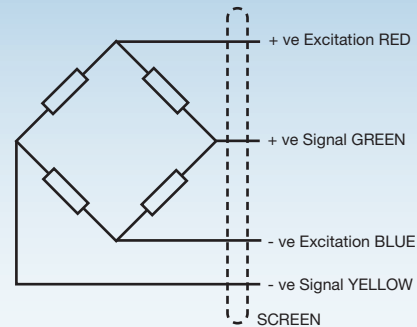
	Load cell specification	Units	
Load Cell Capacity (E_{max})	300, 500, 750, 1000, 1500, 2000, 2500, 3000, 5000, 7500, 10000	kg	
Rated Output (S_n)	2	mV/V*	
Accuracy Class according to OIML R60: number of verification intervals (n)	3000	n.OIML	
Combined Error	$< \pm 0.017$	% S_n	
Non-repeatability	$< \pm 0.015$	% S_n	
Minimum load cell verification interval ($V_{min} = E_{max} / Y$)	$E_{max} / 10000$	kg	
Creep (30 minutes)	$< \pm 0.016$	% S_n	
Temperature Effect on Zero Balance	$< \pm 0.002$	% $S_n / ^\circ C$	
Temperature Effect on Span	$< \pm 0.0012$	% $S_n / ^\circ C$	
Compensated Temperature Range	-10 to +40	$^\circ C$	
Operating Temperature Range	-30 to +70	$^\circ C$	
Safe Load Limit (E_{lim})	200	% E_{max}	
Ultimate Overload	300	% E_{max}	
Zero Balance	$< \pm 2$	% S_n	
Input Resistance	400	$\Omega \pm 20$	
Output Resistance	350	$\Omega \pm 3$	
Insulation Resistance	> 5000	M Ω @ 100V	
Recommended Supply Voltage	5-15	V	
Maximum Supply Voltage	15	V	
Environmental protection according to EN 60529	IP68; IP69K	-	
Cable Length	300 - 5000kg	5	m
	7500 - 10000kg	12	m
Cable Material	Polyurethane	-	-
Maximum deflection at E_{max}	0.2 - 0.4	mm	-
Nominal Shipping Weight	300 - 2500kg	0.9	kg
	3000 - 5000kg	2.2	
	7500 - 10000kg	4.3	

* Pre-corner adjustment optimised at $\pm 0.05\%$ by output current calibration

Also available:

- Stainless steel, T-end, OIML C3 approved, IP68 / IP69K shear beam load cell with blind loading hole (model T85-T)
- Nickel plated alloy steel, OIML C3 approved, IP66 shear beam load cell (model T85-N)

Refer to separate product data sheets



Electrical Connections

Via 4 core, 5.7mm diameter, screened polyurethane cable

Screen not connected electrically to load cell

Construction

Stainless steel

Mounting Options

Refer to page 3

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Our policy is one of continuous product enhancement. We therefore reserve the right to incorporate technical modifications without prior notification.