



Low Profile Button Load Cell | CBES

Compact, Accurate, Adaptable, Superior Compression Measurement

- **Lead Time:** Up to 2000kg: stock
5000kg to 20,000kg: 4-5 weeks
30,000 and 50,000kg: 10 weeks
- **Buy online:** <https://appmeas.co.uk/shop/load-cells/cbes/>



AT A GLANCE

- Capacities: 0-50kg up to 0-50,000kg
- Output: 2mV/V
- Environmental Protection: IP65
- Accuracy: $<\pm 0.15\%$
- Integral load button
- Option: IP67 or IP68 Submersible

- **Low Height & Compact** – Easily fit where space is limited
- **Fast and Simple Installation** – With built-in location holes
- **Superior Accuracy Guaranteed** – From its integral load button
- **Submersible Versions Available** – For marine and underwater applications
- **Customisation Available to Suit Your Application**
- **Instrumentation for Complete System Available**

DESCRIPTION

The CBES low profile button load cell is designed for use in compression measurement applications where height is at a premium such as press force measurement and vessel weight measurement. Request pricing (<mailto:info@appmeas.co.uk?subject=Quote me for a CBES>) today.

They come with standard capacities from 0-50kg up to 0-50,000kg, with other capacities and special sizes available on request.

This button load cell has an integral load button to deliver optimum performance. Plus, its built-in location holes offers you a fast and easy installation.

The CBES button load cell has an environmental protection rating of IP65, totally dust tight and low-pressure water jets protection from any direction. The IP65 rating would be ideal for most industrial applications. The IP65 rating comes as standard but can be increased to IP67 and even IP68 for long-term immersion to suit an underwater application.



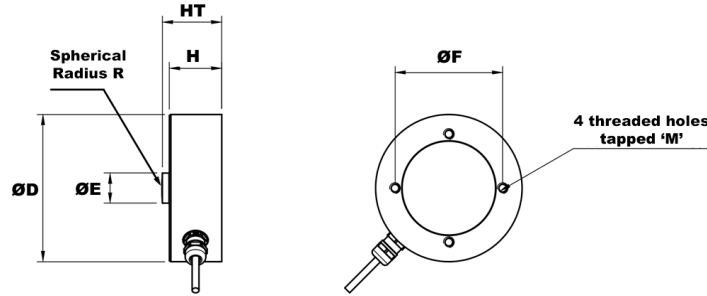
We have previously designed special versions of the CBES low profile button load cell tailored to brake pedal force measurement and also for vessel weighing where the cells were permanently submerged. If you need a customised button load cell for your application please contact our technical sales team (mailto:salesteam@appmeas.co.uk) who will be pleased to discuss your application in detail.

All of our button load cells can be supplied with load cell instrumentation (<https://appmeas.co.uk/products/instrumentation/?cats=load-cells-strain-gauges>) including digital indicators, signal conditioners, digitisers or wireless telemetry systems from our full range of load cell instrumentation.

TECHNICAL SPECIFICATIONS

Rated Capacity (RC)	kgf	0-50, 0-100, 0-200, 0-500, 0-1000, 0-2000, 0-5000, 0-10000, 0-20000, 0-30000, 0-50000
Operating Modes	Compression Only	
Sensitivity (RO)	mV/V	2 nominal
Zero Balance/Offset	±%/Rated Output	<1.0
Non-Linearity	±%/Rated Output (BFSL)	<0.15
Hysteresis	%/Rated Output	<0.15
Repeatability	±%/Rated Output	<0.10
Temperature Effect on Zero	±%/Rated Output/ °C	<0.010
Temperature Effect on Sensitivity	±%/Applied Load/ °C	<0.010
Input Resistance	Ohms	750 nominal
Output Resistance	Ohms	700 nominal
Insulation Resistance	Megohms	>5000 @ 50Vdc
Excitation Voltage	Volts AC or DC	10 recommended (2-15 acceptable)
Operating Temperature Range	°C	-20 to +80
Compensated Temperature Range	°C	-10 to +70
Storage Temperature Range	°C	-20 to +80
Safe Overload	% of Rated Capacity	150
Ultimate Overload	% of Rated Capacity	300
Deflection @ Rated Capacity	mm	<0.1 typical
IP Rating (Environmental Protection)	IP65 (IP67 & IP68 optional)	
Weight	kg	See dimensions table
Fatigue Life	10 ⁸ cycles typical (10 ⁹ cycles on fatigue-rated version)	
Cable Length (as standard)	metres	3
Cable Type	4-core screened, PUR sheath, Ø5 nominal	
Construction	Stainless Steel, Nickel-Plated, Brass, NBR, PUR	
Resolution	1 part in 250,000 (with appropriate instrumentation)	

Product Dimensions



CAPACITY (kgf)	ØD	ØE	ØF	H	HT	R	M	Weight
50,100, 200, 500	59	10	42	21	25	50	M5 x 0.8 (7 deep)	0.35kg
1000, 2000	59	10	42	21	25	50	M5 x 0.8 (7 deep)	0.35kg
5000, 10000, 20000	98	20	72	35	40	150	M6 x 1.0 (8 deep)	2.3kg
30000	115	32	90	47.5	60	250	M12 x 1.75 (16 deep)	3.7kg
50000	150	44	125	65	80	400	M16 x 2.0 (20 deep)	7.5kg

All dimensions are in mm

Wiring Details

Wire	Designation
Red	+ve excitation
Blue	-ve excitation
Green	+ve signal
Yellow	-ve signal
Screen	To ground - not connected to load cell body

ORDERING CODES & OPTIONS

Core Product	Capacity (inc Engineering Units)	Cable Length (m)	Specials Code	Example Result
CBES	50kg	003	000	CBES-50kg-003-000
CBES	100kg	003	000	CBES-100kg-003-000
CBES	200kg	003	000	CBES-200kg-003-000
CBES	500kg	003	000	CBES-500kg-003-000
CBES	1000kg	003	000	CBES-1000kg-003-000
CBES	2000kg	003	000	CBES-2000kg-003-000
CBES	5000kg	003	000	CBES-5000kg-003-000
CBES	10,000kg	003	000	CBES-10,000kg-003-000
CBES	20,000kg	003	000	CBES-20,000kg-003-000
CBES	30,000kg	003	000	CBES-30,000kg-003-000
CBES	50,000kg	003	000	CBES-50,000kg-003-000



CASE STUDIES



5 Reasons This May Be the Best Load Cell for Plate Bearing Tests

Micro Geotechnical, an in-situ testing company, needed to accurately monitor the bearing capacity of the ground under a given load, to determine the safe bearing capacity of the soil. The measuring instruments would need to be accurate and precise, with the ability to withstand the harsh outdoor environments of their in-situ plate bearing tests. So, we offered them Applied Measurements button load cell CBES and our handheld indicator and here's why...

Read more... (<https://appmeas.co.uk/blog/plate-bearing-tests/>)

Array

View this page in a browser:



<https://appmeas.co.uk/products/load-cells-force-sensors/low-profile-button-load-cell-cbes/>