



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

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<https://appmeas.co.uk>

OBU Series Single Point Compression Load Cells

Key Features:

- Capacities 0-0.25kg up to 1000kg
- Output: 2mV/V
- Environmental Protection IP65
- High Accuracy: $<\pm 0.03\%$ /Rated Capacity
- Sense Wire Facility
- Excellent Performance/Price Ratio
- Robust Construction
- OIML R60 Approved (3kg and over only)
- 3 Year Warranty



For Low Force Measurement Applications

View the product video

The OBU series of single point compression load cells are designed for use in weighing scales and a wide selection of low range force measurement applications such as manufacturing, testing, research and development.

Their dual cantilever beam design makes them insensitive to bending moments and also offers extremely high accuracy and stability, while their aluminium construction ensures light weight and low cost.

Capacities range from as low as 0-250g (designated OBUG) up to 0-1000kg (OBUH), as follows:

OBUG ranges from 0-250g up to 0-35kg

OBUC ranges from 0-5kg up to 0-100kg

OBUH ranges from 50kg up to 1000kg

For customised versions to allow direct retro-fit in place of obsolete products (including dimension changes and different fixings) or versions to suit specific applications, please [contact our technical sales team](#).

Options:

- Different Capacities
- Built Into Platforms
- ATEX Certificate: II 1 GD Ex ia IIC T4 (3kg and over only)
- Fold Back Arms
- Equivalent to Other Manufacturers Available
- IP67 Sealing on OBUC and OBUH
- Integration into Finished Weighing Platform
- Stainless Steel Versions Available on Request
- Can be Supplied Calibrated as a System with any of our Instrumentation Range
- USB Version (via DSC-USB)
- Vacuum Environment Versions
- Pressurised Environment Versions
- High Temperature Versions
- Single or Multi-Channel PC-Based Monitoring & Data Logging System.
- Wireless Version (via T24 instrumentation)
- TEDS (Transducer Electronic Data Sheet)
- TEDS Allows Plug & Play with TEDS Enabled Instrumentation.

Applications:

- Conveyor Weighing Machines
- Industrial and Laboratory Scales
- Low Range Force Measurement Applications
- Manufacturing
- Testing
- Research and Development



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Specification:

CHARACTERISTICS	UNITS	OBUG	OBUC	OBUH
Rated Capacity (RC)	kgf	0-0.25, 0-0.5, 0-1, 0-2, 0-3, 0-5, 0-7, 0-10, 0-15, 0-20, 0-30, 0-35	0-5, 0-7, 0-10, 0-15, 0-20, 0-30, 0-50, 0-75, 0-100	0-50, 0-75, 0-100, 0-150, 0-200, 0-300, 0-500, 0-635, 0-1000
Operating Modes	Compression Only			
Sensitivity (RO)	mV/V	2±10% (1.5 nom below 2kg)	2.0 ±10%	
Maximum Platform Dimensions	mm	200 x 200 (0.5 to 1kg) 350 x 350 (3 to 35kg)	400 x 400	600 x 600
Zero Balance/Offset	±%/Rated Output	<1	<10	
Zero Return (Creep)	±%/Rated Capacity	<0.03		
Non-Linearity	±%/Rated Capacity	<0.03		
Hysteresis	%/Rated Capacity	<0.02		
Repeatability	±%/Rated Capacity	<0.02		
Temperature Effect on Zero	±%/Rated Capacity/°C	<0.002	<0.006	
Temperature Effect on Sensitivity	±%/Applied Load/°C	<0.002	<0.015	
Effect of Eccentricity	±%/Rated Capacity/cm	<0.006		
Input Resistance	Ohms	400 nominal		
Output Resistance	Ohms	350 nominal		
Insulation Resistance	Megohms	>2000 @ 50Vdc		
Excitation Voltage	Volts AC or DC	10 recommended (2-15 acceptable)		
Operating Temperature Range	°C	-20 to +70		
Compensated Temperature Range	°C	-10 to +40		
Storage Temperature Range	°C	-20 to +70		
Safe Overload	% of Rated Capacity	150		
Ultimate Overload	% of Rated Capacity	300		
Deflection @ Rated Capacity	mm	<0.5 nominal		
Resonant Frequency		Consult Sales Team		
IP Rating (Environmental Protection)		IP65		
Weight (excluding cable)		See dimension table		
Fatigue Life		10 ⁸ cycles typical (10 ⁹ cycles on fatigue-rated version)		
Cable Length (as standard)	metres	0.5	1	3
Cable Type		4 core screened, PVC sheath,	6 core screened, PVC sheath,	6 core screened, PUR sheath,
Construction		Aluminium Alloy		
Resolution		1 part in 250,000 (with appropriate instrumentation)		



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Wiring Diagram:

OBUG 2kg and lower only

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

OBUG 3kg to 35kg

Wire	Designation
Green	+ve excitation
Black	-ve excitation
Red	+ve signal
White	-ve signal
Screen	To ground – not connected to load cell body

OBUC and OBUH

Wire	Designation
Green	+ve excitation
Black	-ve excitation
Red	+ve signal
White	-ve signal
Blue	+ve sense
Brown	-ve sense
Screen	To ground – not connected to load cell body

Note: Sense wires on OBUC & OBUH only (as standard)

Associated Products:



[TR150 Handheld Indicator](#)



[T24 Wireless Telemetry Range](#)



[Intuitive4-L Panel-Mount Indicator](#)



[DSC-USB USB Signal Digitiser](#)



[ICA Miniature Strain Gauge Amplifier](#)



[SGA Signal Conditioner/Amplifier](#)



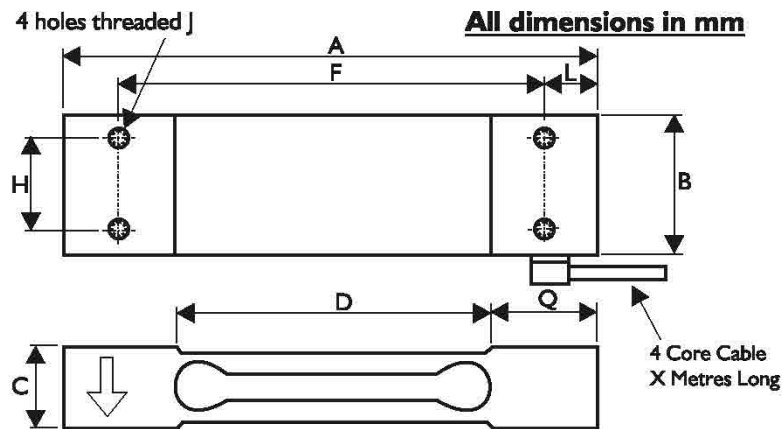
[How To Improve Aerodynamics With Our Single Point Load Cells And Digital Indicators](#)
Challenge – To Evaluate the Aerodynamics of Scale Models.
[Read how](#) they did it.



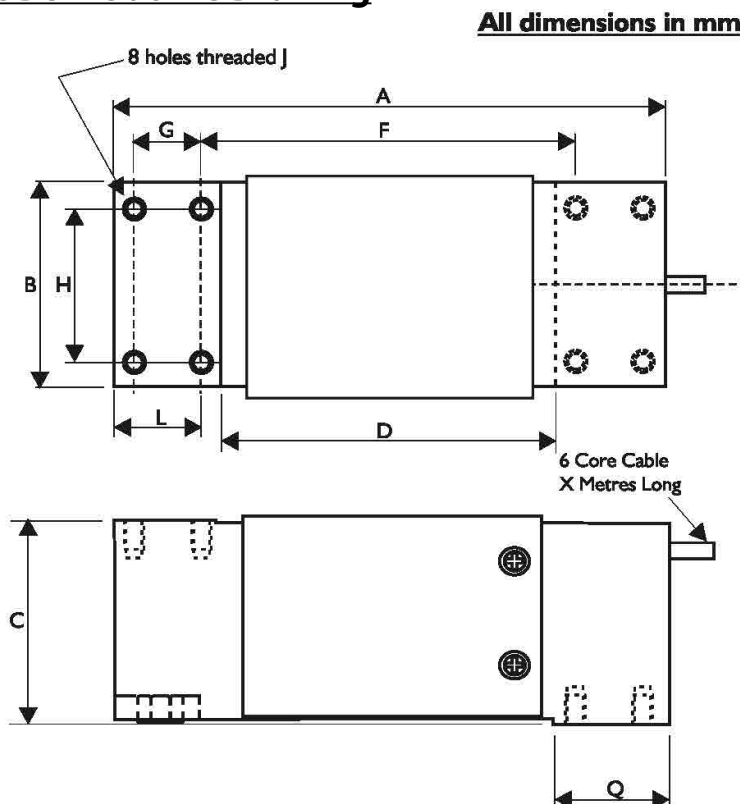
Dimensions (mm):

MODEL (kg)	CAPACITY (kg)	A	B	C	D	F	G	H	L	Q	V	X	J	WEIGHT
OBUG	0-0.25, 0-0.5, 0-1, 0-2	70	15	22	46	58	-	7	6	12	-	0.5	M3x0.5-22 deep	0.07
OBUG	0-3, 0-5, 0-7	130	25.4	22	80	106	-	15	12	25	-	0.5	M6x1-22 deep	0.20
OBUG	0-10, 0-15, 0-20, 0-30	130	30	22	80	106	-	15	12	25	-	0.5	M6x1-22 deep	0.24
OBUG	0-35	130	40	22	80	106	-	15	12	25	-	0.5	M6x1-22 deep	0.32
OBUC	0-5, 0-10, 0-15, 0-20, 0-30, 0-50, 0-75, 0-100	150	25.4	40	82	100	19.05	-	25	34	10.5	1.0	M6x1-10 deep	0.42
OBUH	0-50, 0-75, 0-100, 0-200, 0-300, 0-500, 0-1000	191	76.2	75	111	125	25	60	33	40	-	3.0	M8x1.25-15 deep	2

OBUG Outline Drawing



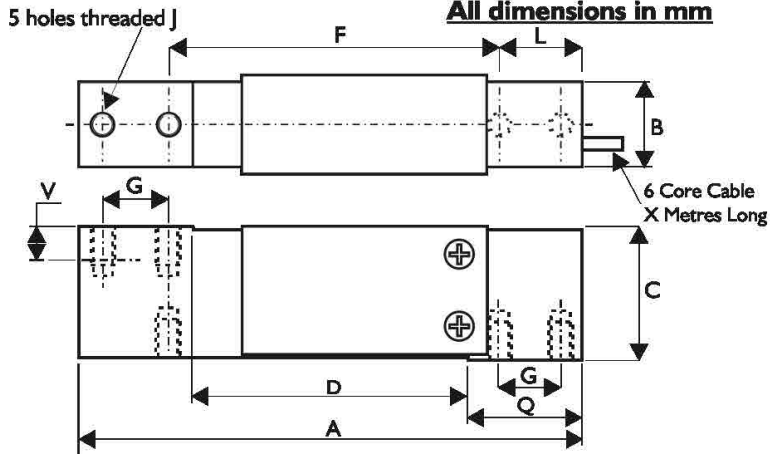
OBUH Outline Drawing





OBUC Outline Drawing

All dimensions in mm



Ordering Codes:

Core Product	Capacity (inc Engineering Units)	Cable Length (m)	Specials Code	Example Result
OBUG	0.25kg	0.5	000	OBUG-0.25kg-0.5-000
OBUG	0.5kg	0.5	000	OBUG-0.5kg-0.5-000
OBUG	1kg	0.5	000	OBUG-1kg-0.5-000
OBUG	2kg	0.5	000	OBUG-2kg-0.5-000
OBUG	3kg	0.5	000	OBUG-3kg-0.5-000
OBUG	5kg	0.5	000	OBUG-5kg-0.5-000
OBUG	7kg	0.5	000	OBUG-7kg-0.5-000
OBUG	10kg	0.5	000	OBUG-10kg-0.5-000
OBUG	15kg	0.5	000	OBUG-15kg-0.5-000
OBUG	20kg	0.5	000	OBUG-20kg-0.5-000
OBUG	30kg	0.5	000	OBUG-30kg-0.5-000

Core Product	Capacity (inc Engineering Units)	Cable Length (m)	Specials Code	Example Result
OBUC	5kg	1	000	OBUC-5kg-001-000
OBUC	10kg	1	000	OBUC-10kg-001-000
OBUC	15kg	1	000	OBUC-15kg-001-000
OBUC	20kg	1	000	OBUC-20kg-001-000
OBUC	30kg	1	000	OBUC-30kg-001-000
OBUC	50kg	1	000	OBUC-50kg-001-000
OBUC	75kg	1	000	OBUC-75kg-001-000
OBUC	100kg	1	000	OBUC-100kg-001-000

Core Product	Capacity (inc Engineering Units)	Cable Length (m)	Specials Code	Example Result
OBUH	50kg	3	000	OBUH-50kg-003-000
OBUH	75kg	3	000	OBUH-75kg-003-000
OBUH	100kg	3	000	OBUH-100kg-003-000
OBUH	200kg	3	000	OBUH-200kg-003-000
OBUH	300kg	3	000	OBUH-300kg-003-000
OBUH	500kg	3	000	OBUH-500kg-003-000
OBUH	1000kg	3	000	OBUH-1000kg-003-000