



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

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www.appmeas.co.uk

CDFM3 Miniature Button Load Cell

Key Features:

- Capacities 0-100N to 20kN
- Sealed to IP65
- Only 30mm in Diameter and 12mm in Height
- Integral Load Button
- Output 2mV/V nominal (1.5mV/V on 0-100N)
- Accuracy $<\pm 0.5\%/RC$
- Robust Construction
- 3 Year Warranty



For the measurement of compressive forces when space is limited.

The CDFM3 miniature button load cells are designed for the measurement of compressive forces where space is a limiting factor. Its compact size means it can be fitted in the smallest of spaces and is often retrofitted, while the M3 threads in its base make fixing the load cell in position a simple task. It is suited for both force measurement and weighing applications alike. It is used in many industrial process measurement applications for monitoring and control purposes.

The CDFM3 is the second smallest button load cell we offer only 30mm in diameter and 12mm in height. For a smaller button load cell see our [CDF miniature button load cell](#).

The CDFM3 series of load cells can be supplied with a range of our transducer instrumentation such as digital indicators, signal conditioners, digitisers or telemetry systems and can be supplied calibrated as a complete system, please [contact our technical team](#).

Options:

- Full Range of Mounting Options Available
- Special Sizes Available on Request
- Other Ranges Available on Request
- Different Temperature Compensation Ranges Available
- Shunt Calibration Facility
- High Temperature Versions
- Vacuum Application Versions
- TEDS (Transducer Electronic Data Sheet)
- TEDS Allows Plug & Play with TEDS Enabled Instrumentation.
- USB Versions (via DSC-USB)
- Single or Multi-Channel PC-Based Monitoring & Data Logging System
- Wireless Version (via T24 instrumentation)

Applications:

- Force Measurement
- Weighing Applications
- Industrial Process Measurement Applications
- Research & Development Applications
- Press Force Monitoring



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Specification:

Rated Capacity (RC)	N	0-100, 0-250, 0-500, 0-1000, 0-2000, 0-5000, 0-10k, 0-20k
Operating Modes	Compression Only	
Sensitivity (RO)	mV/V	2 nominal (1.5 nominal on 100N)
Zero Balance/Offset	±%/Rated Output	<1.0
Non-Linearity	±%/Rated Output	<0.5
Hysteresis	%/Rated Output	<0.25
Repeatability	%/Rated Output	<0.2 typical
Temperature Effect on Zero	±%/Rated Output/ °C	<0.030
Temperature Effect on Sensitivity	±%/Applied Load/ °C	<0.005
Input Resistance	Ohms	375 typical
Output Resistance	Ohms	350 typical
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	0 to +70
Storage Temperature Range	°C	-20 to +80
Safe Overload	% of Rated Capacity	125
Ultimate Overload	% of Rated Capacity	150
Deflection @ Rated Capacity		0.02 (20kN) to 0.07 (100N) typical (depending on capacity)
Fundamental Resonant Frequency*	kHz	4 (100N) to 50 (20kN) *
IP Rating (Environmental Protection)		IP65
Weight	grams	50 (excluding cable)
Fatigue Life		10 ⁸ cycles typical (10 ⁹ cycles on fatigue-rated version)
Cable Length (as standard)	metres	2
Cable Type		4-core screened, PVC sheath
Construction Material		Stainless Steel, Nickel-Plated Brass, NBR, PVC
Resolution		1 part in 250,000 (with appropriate instrumentation)

*The resonant frequency is calculated with the body of the load cell attached to a large plate, ensuring that only the sensing element oscillates: This is vital to achieve the highest natural frequency and subsequent frequency response.

Wiring Diagram:

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



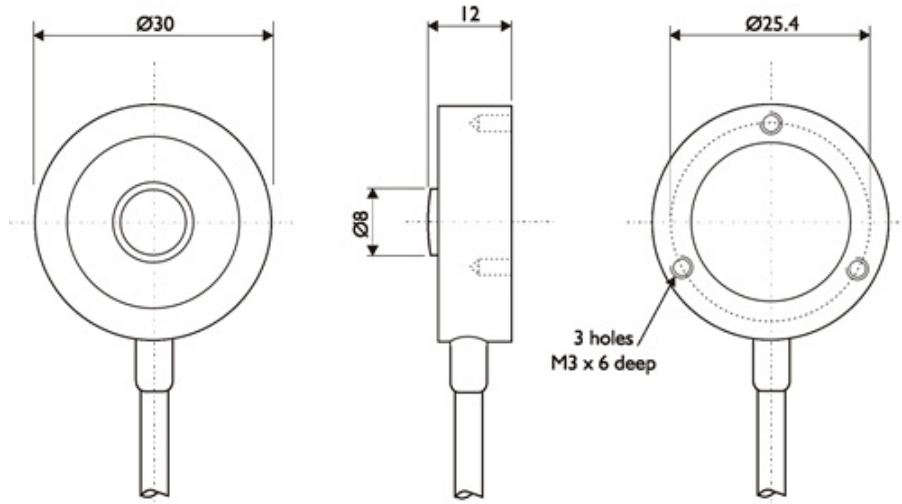
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Dimensions (mm):



For a smaller versions of the CDFM3 look at our [CDF](#) which is available in capacities from 0-500N up to 0-2kN

Ordering Codes:

Core Product	Capacity (inc Engineering Units)	Cable Length (m)	Specials Code	Example Result
CDFM3	100N	002	000	CDFM3-100N-002-000
CDFM3	250N	002	000	CDFM3-250N-002-000
CDFM3	500N	002	000	CDFM3-500N-002-000
CDFM3	1000N	002	000	CDFM3-1000N-002-000
CDFM3	2000N	002	000	CDFM3-2000N-002-000
CDFM3	5000N	002	000	CDFM3-5000N-002-000
CDFM3	10,000N	002	000	CDFM3-10,000N-002-000
CDFM3	20,000N	002	000	CDFM3-20,000N-002-000

Associated Products:



[TR150 Handheld Indicator](#)



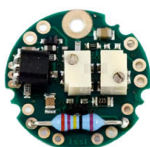
[T24 Wireless Telemetry Range](#)



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



[DSC-USB USB Signal Digitiser](#)



[ICA Miniature Strain Gauge Amplifier](#)



[SGA Signal Conditioner/Amplifier](#)