

MC1 mini-beam load cell



product description

The MC1 is a high-performance, cost-effective miniature beam load cell designed for test and measurement applications where space is limited.

It is available in capacities ranging from 5lb to 250lb, with all models offering accuracy within $\pm 0.03\%$ non-linearity of rated output. At rated output, the MC1 provides high-resolution performance with minimal deflection.

Constructed from aerospace-grade 2024 aluminium, all models incorporate Flintec-designed and manufactured strain gauges, ensuring higher output and superior thermal performance.

For an overload-protected version of the MC1 in 5lb and 10lb capacities, see the MC4.

applications

Medical devices, test and measurement and general weighing applications.

accessories

A comprehensive range of electronic modules and accessories available

key features

Compact miniature beam design

High performance with $\pm 0.03\%$ non-linearity

High output of 3mV/V

Low profile with a height of 25.4mm (1 inch)

Cost-effective solution

Durable protective cover

options

Range of cable lengths

Flying leads or cable connectors



RoHS
compliant



specifications

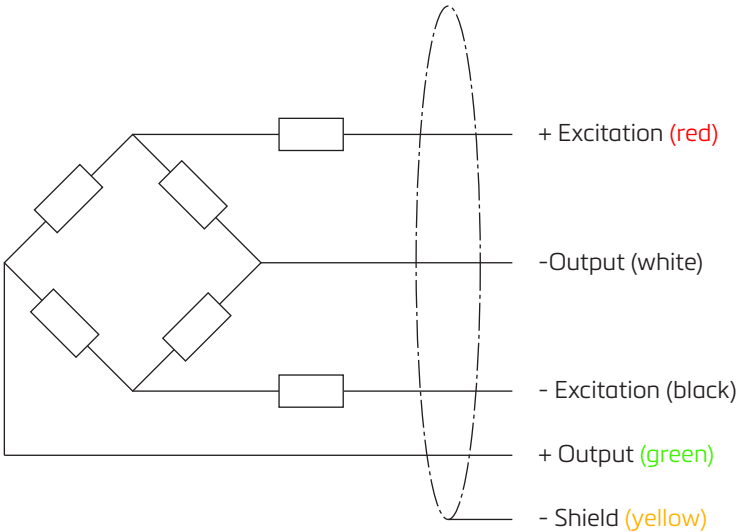
Maximum capacity E _{max}	lb	5	10	25	50	75	100	150	250
Metric equivalents (1lb=0.45359kg) 2dp	kg	2.27	4.54	11.34	22.68	34.02	45.36	68.04	113.40
Non-linearity	%*RO	±0.03							
Hysteresis	%*RO	±0.02							
Non-repeatability	%*RO	±0.01							
Creep error (20 mins)	%*RO	±0.025							
Compensated temperature range	°C (°F)	-18 to 65 (0 to 150)							
Operating temperature range	°C (°F)	-54 to 93 (-65 to 200)							
Temperature effect on Output	%*RO / °C Max (°F)	±0.00144 (±0.0008)							
Temperature effect on Zero	%*RO / °C Max (°F)	±0.0027 (±0.0015)							
Rated output (Nominal)	mV/V	3							
Zero balace	%*RO	±1							
Bridge Resistance (Nominal)	Ω	350							
Excitation voltage (Nominal)	VDC or VAC Max	15							
Insulation resistance	MΩ	5,000							
Calibration	-	Compression							
Safe Overload	%*RO	±150							
Cable Length	m (ft)	1.5 (5)							
Sensor Element	-	Aerospace-grade 2024 aluminium							

wiring

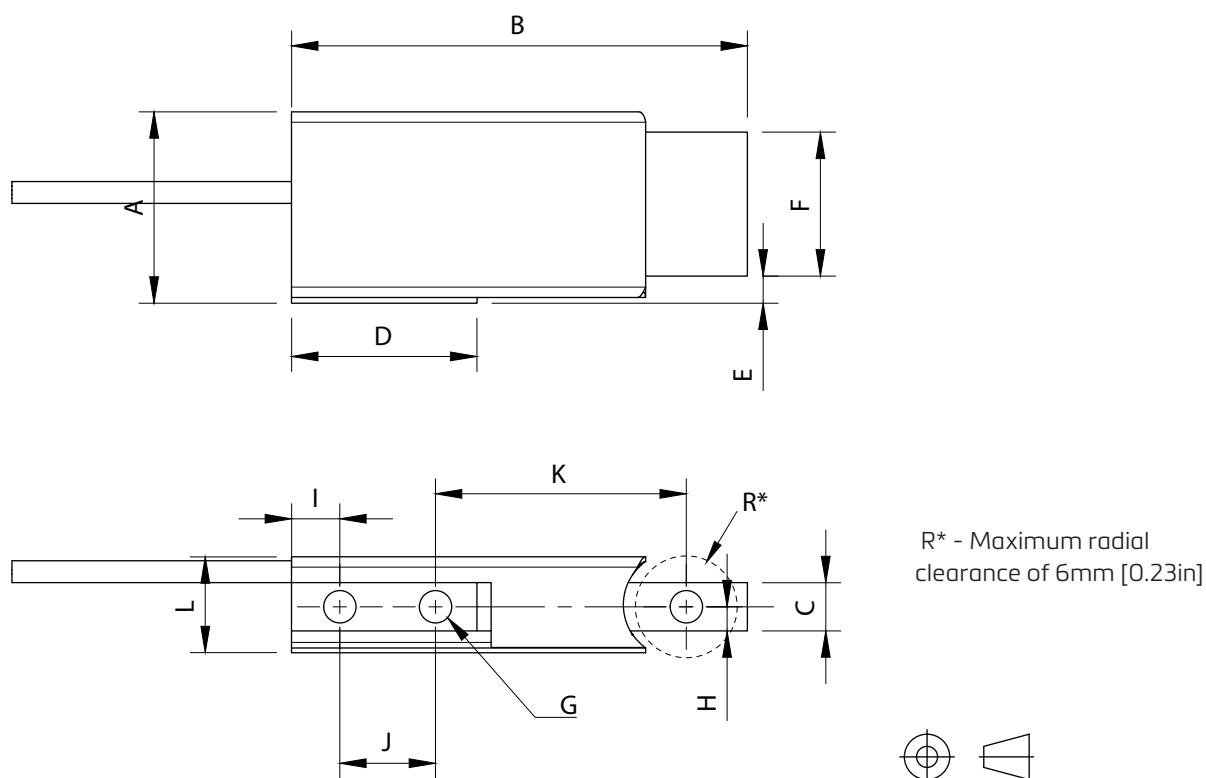
The sensor is provided with a 28AWG 4-conductor cable with a braided shield.

Standard cable jacket: PVC

Standard cable length: 1.5m (5ft)



product dimensions (mm)



dimensions table

Model (lb)	Dimensions [mm (in)]																	
	A	B	C	D	E	F	G (x3)	H	I	J	K	L						
5	25.40 (1.00)	60.50 (2.38)	6.4 (0.25)	24.6 (0.97)	3.6 (0.14)	19.1 (0.75)	Ø 4.30 (Ø 0.17)	3.2 (0.13)	6.4 (0.25)	12.7 (0.5)	33.3 (1.31)	12.7 (0.5)						
10																		
25																		
50					3.3 (0.13)	19.8 (0.78)												
75																		
100																		
150					2.5 (0.1)	20.8 (0.82)												
250																		

Specifications and dimensions are subject to change without notice.