

Features

- Capacities 100KG – 5000KG.
- Linearity $\pm 0.20\%$ RO.
- IP67 rating.
- Optional built-in 4-20mA amplifier.

Applications

- Test Machines.
- Process Control.
- Miniature Weighing Projects.
- Harsh Environments.



Description

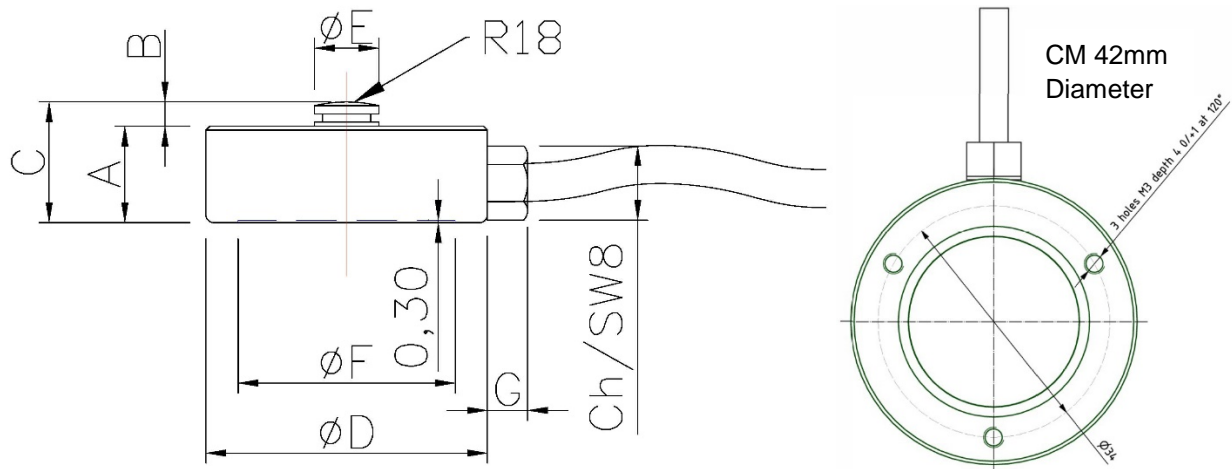
The C-CM is a low profile load cell suitable for the measurement of static and dynamic loads in compression. The CM is produced from stainless steel, completely laser welded and is sealed to IP67. This load cell has been designed for test rig applications.

The C-CM load cell range has two diameter options available, either 35mm (standard) or 42mm and there's also an optional 4-20mA built-in amplifier – see Page 3 of this datasheet.

Typical Specification

PARAMETER	VALUE		UNITS
	35mm Ø	42mm Ø	
Capacities Range	100, 250, 500, 1000, 2500	2500, 3500, 5000	KG
Rated Output	2 $\pm 0.2\%$		mV/V
Linearity & Hysteresis	0.20		$\pm\%$ of Rated Output
Repeatability	0.05		$\pm\%$ of Rated Output
Input Impedance	400 ± 20		Ω
Output Impedance	350 ± 2		Ω
Insulation Resistance	>5		G Ω
Zero Balance	1		$\pm\%$ of Rated Output
Temperature Effect: On Zero	0.030		$\pm\%$ of Rated Output/ $^{\circ}\text{C}$
Temperature Effect: On Output	0.025		$\pm\%$ of Rated Output/ $^{\circ}\text{C}$
Temperature Range: Compensated	-20 to +70		$^{\circ}\text{C}$
Temperature Range: Operating	-20 to +80		$^{\circ}\text{C}$
Mechanical Limit: Safe Overload	150		% of Rated Output
Mechanical Limit: Ultimate Overload	>300		% of Rated Output
Mechanical Limit: Safe Transverse Load	50		% of Rated Output
Mechanical Limit: Safe Dynamic Load	50		% of Rated Output
Displacement at Nominal Load	~0.2		mm
Excitation: Recommended	10		Volts AC or DC
Excitation: Maximum	18		Volts AC or DC
Weight	0.13	0.20	KG
Cable	3		m
Sensor Construction Material	Stainless Steel		-
Environmental Protection	IP67		-

Outline Dimensions in millimetres



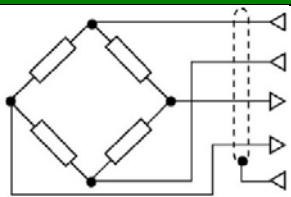
A	B	C	ØD	ØE	ØF	G
12	3	15	35	8	27	5
15	5	20	42	10	28	14

Ordering Codes

LOAD (KG)	35mm Ø	42mm Ø	4-20mA OUTPUT
100	CCM100K3	CCM42100K3	CCMAMP100K3
250	CCM250K3	CCM42250K3	CCMAMP250K3
500	CCM500K3	CCM42500K3	CCMAMP500K3
1000	CCM1T3	CCM421T3	CCMAMP1T3
2500	CCM2T53	CCM422T53	CCMAMP2T53
3500	-	CCM423T53	CCMAMP3T53
5000	-	CCM425T3	CCMAMP5T3

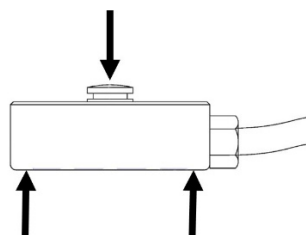
If the dimensions or specification do not suit, PCM has an in-house design team that should be able to satisfy your requirements.

Electrical Connections

2mV/V OUTPUT	OUTPUT	CABLE
	EXCITATION +	RED
	EXCITATION -	BLACK
	OUTPUT +	WHITE
	OUTPUT -	YELLOW
	-----	SHIELD

PVC 70°C shielded cable, 4.2mm Ø with 4 tinned 0.14mm² Ø conductors. Shield connected to the body of the transducer.

Loading Mode



Compression Load Cell with Built-In Amplifier

Description

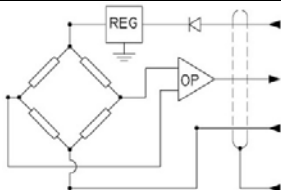
The C-CM-AMP offers optional 4-20mA output. The dimensions of this load cell are the same as the 42mm diameter version of this load cell shown on Page 2 of this datasheet.

If you are interested in a C-CM-AMP load cell, please choose the ordering code relevant to the capacity required, again referring to Page 2 of this datasheet – please state amplified output on enquiring and we can include this product in our offer.

Typical Specification

PARAMETER	VALUE	UNITS
	42mm Ø WITH AMPLIFIER	
Capacities Range	100, 250, 500, 1000, 2500, 2500, 3500, 5000	KG
Rated Output	4-20 (2-wire)	mA
Sensitivity Tolerance	0.1	±% of Rated Output
Zero Balance	1	±% of Rated Output
Nominal Power Supply	12-24	Volts DC
Maximum Absorption	30	mA
Loading Resistance	0-470	Ω

Electrical Connections

4-20mA OUTPUT	OUTPUT	CABLE
	EXCITATION +	RED
	EXCITATION -	BLACK
	N/A	WHITE
	N/A	YELLOW
	-----	SHIELD

PVC 70°C shielded cable, 4.2mm Ø with 4 tinned 0.14mm² Ø conductors. Shield connected to the body of the transducer.

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