

Compact Low-Profile Load Cell



Product Description

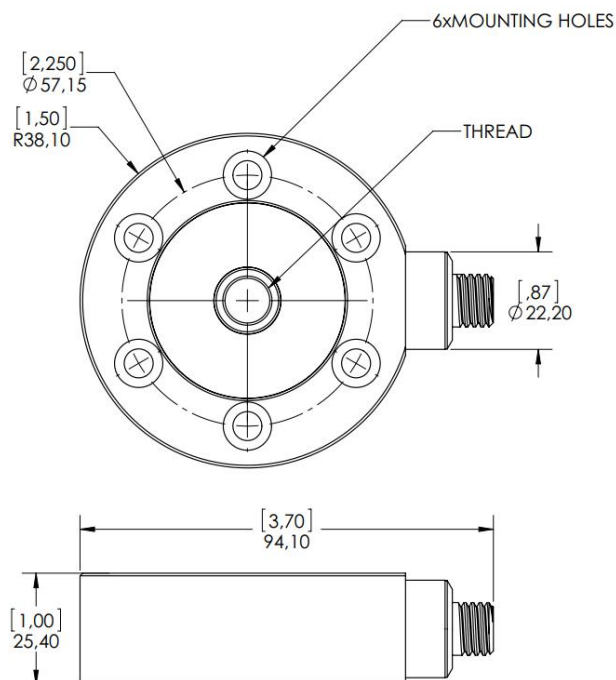
Compact Low-Profile load cells are fully stainless steel, hermetically sealed load cells with a multi-beam internal structure, and fully integrated electronics to provide high level analog or digital outputs. This type of load cell is easy to use for measuring tension or compression loads from 200N (50lb) to 5kN (1000lbf) and is capable of rejecting side forces that would otherwise affect accuracy. This type also offers the user the ability to set the gain and offset (span and zero) electronically, to provide maximum flexibility for the user application.

Specification

Parameter	Range	Notes
Rated load	200, 500, 1000, 2000 & 5000N	
	50, 100, 200, 500 & 1000lbf	
Proof load	150% of rated load	No effect on calibration
Ultimate load	200% of rated load	No structural failure (deformation only)
Deflection	<0.05 mm	Depends on rated load
Natural frequency	>1000 Hz	Depends on rated load
Output at rated load (RO)	1-9 V or 4-20mA or CAN or RS485 or mV/V	Select when ordering
Non-linearity	$\leq 0.1\%$ RO	
Hysteresis	$\leq 0.1\%$ RO	
Repeatability	$\leq 0.03\%$ RO	
Creep over 20 minutes	$\leq 0.03\%$ RO	
Output (span) tolerance	factory setting $\pm 0.1\%$ range $\pm 50\%$ RO	Adjustable via electronic interface. See user manual for details
Offset (zero balance)	factory setting $\pm 1.0\%$ range $\pm 50\%$ RO	Adjustable via electronic interface. See user manual for details
Output (span) temp coefficient	$\pm 0.005\%$ load / °C	
Offset (zero) temp coefficient	$\pm 0.005\%$ RO / °C	
Compensated temp range	-10°C to +50°C	
Operating temp range	-40°C to +85°C	
Power supply	12 to 24 VDC, <40mA	
Insulation resistance	≥ 5 Gohm @ 50 VDC	
Connector	Analog O/P: 8-pin M12 male, hermetic Digital O/P: 5-pin M12 male, hermetic	ESD safe, EMC compliant with EN61326-2-3:2006, CE marked.
Protection class	IP68	Fully stainless-steel construction, laser welded.
Weight	750 g	
Bridge resistance	700 Ohms Nom.	

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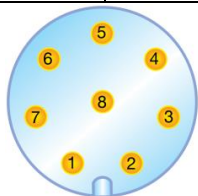
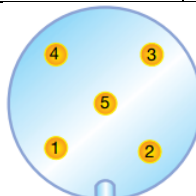
Dimensions – mm [inch]



Capacity (N)	Centre thread size (through)	Outer bolt size
200, 500	M8 x1.25	M6 Socket Head Screw
1000, 2000, 5000	M12 x1.75	

Capacity (lbf)	Centre thread size (through)	Outer bolt size
50, 100, 200, 500, 1000	3/8-24 UNF-2B	1/4" Socket Head Screw

Wiring Codes

Pin	Voltage Output	Current Output	CAN	RS485	mV/V
1	Supply (+)	Supply (+)	Shield	Supply (+)	Supply (+)
2	Supply (-), TEDS GND	Supply (-), TEDS GND	Supply (+)	RS485_A	Supply (-)
3	Signal (+)	Current loop (+)	Ground	Ground	Signal (+)
4	Signal (-)	Current loop (-)	CAN_H	RS485_B	Signal (-)
5	TEDS DATA/ Shunt calibration (Optional)	TEDS DATA/ Shunt calibration (Optional)	CAN_L	Shield	N/A
6	Calibration interface A	Calibration interface A	N/A	N/A	N/A
7	Calibration interface B	Calibration interface B	N/A	N/A	N/A
8	Calibration interface C	Calibration interface C	N/A	N/A	N/A
M12 pin layout					

Consult the user manual for further details and recommended wiring schemes.

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Order Details

Model	Capacity (N)	Description
1010-10	200	1 mV/V Output. With M12H connector (hermetic)
1020-10	500	1 mV/V Output. With M12H connector (hermetic)
1030-10	1,000	1 mV/V Output. With M12H connector (hermetic)
1040-10	2,000	1 mV/V Output. With M12H connector (hermetic)
1050-10	5,000	1 mV/V Output. With M12H connector (hermetic)
1010-20	200	Amplified Output (4-20mA). With M12H connector.
1020-20	500	Amplified Output (4-20mA). With M12H connector.
1030-20	1,000	Amplified Output (4-20mA). With M12H connector.
1040-20	2,000	Amplified Output (4-20mA). With M12H connector.
1050-20	5,000	Amplified Output (4-20mA). With M12H connector.
1010-30	200	Amplified Output (1-9V). With M12H connector
1020-30	500	Amplified Output (1-9V). With M12H connector
1030-30	1,000	Amplified Output (1-9V). With M12H connector
1040-30	2,000	Amplified Output (1-9V). With M12H connector
1050-30	5,000	Amplified Output (1-9V). With M12H connector
1010-40	200	Amplified Output (CAN/RS485). With M12H connector
1020-40	500	Amplified Output (CAN/RS485). With M12H connector
1030-40	1,000	Amplified Output (CAN/RS485). With M12H connector
1040-40	2,000	Amplified Output (CAN/RS485). With M12H connector
1050-40	5,000	Amplified Output (CAN/RS485). With M12H connector

Model	Capacity (lb)	Description
1110-10	50	1 mV/V Output. With M12H connector (hermetic)
1120-10	100	1 mV/V Output. With M12H connector (hermetic)
1130-10	200	1 mV/V Output. With M12H connector (hermetic)
1140-10	500	1 mV/V Output. With M12H connector (hermetic)
1150-10	1000	1 mV/V Output. With M12H connector (hermetic)
1110-20	50	Amplified Output (4-20mA). With M12H connector.
1120-20	100	Amplified Output (4-20mA). With M12H connector.
1130-20	200	Amplified Output (4-20mA). With M12H connector.
1140-20	500	Amplified Output (4-20mA). With M12H connector.
1150-20	1000	Amplified Output (4-20mA). With M12H connector.
1110-30	50	Amplified Output (1-9V). With M12H connector
1120-30	100	Amplified Output (1-9V). With M12H connector
1130-30	200	Amplified Output (1-9V). With M12H connector
1140-30	500	Amplified Output (1-9V). With M12H connector
1150-30	1000	Amplified Output (1-9V). With M12H connector
1110-40	50	Amplified Output (CAN/RS485). With M12H connector
1120-40	100	Amplified Output (CAN/RS485). With M12H connector
1130-40	200	Amplified Output (CAN/RS485). With M12H connector
1140-40	500	Amplified Output (CAN/RS485). With M12H connector
1150-40	1000	Amplified Output (CAN/RS485). With M12H connector