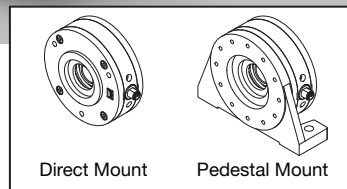


F-Series

Compact Load Cells



IP54



Montalvo F-Series Compact Load Cells

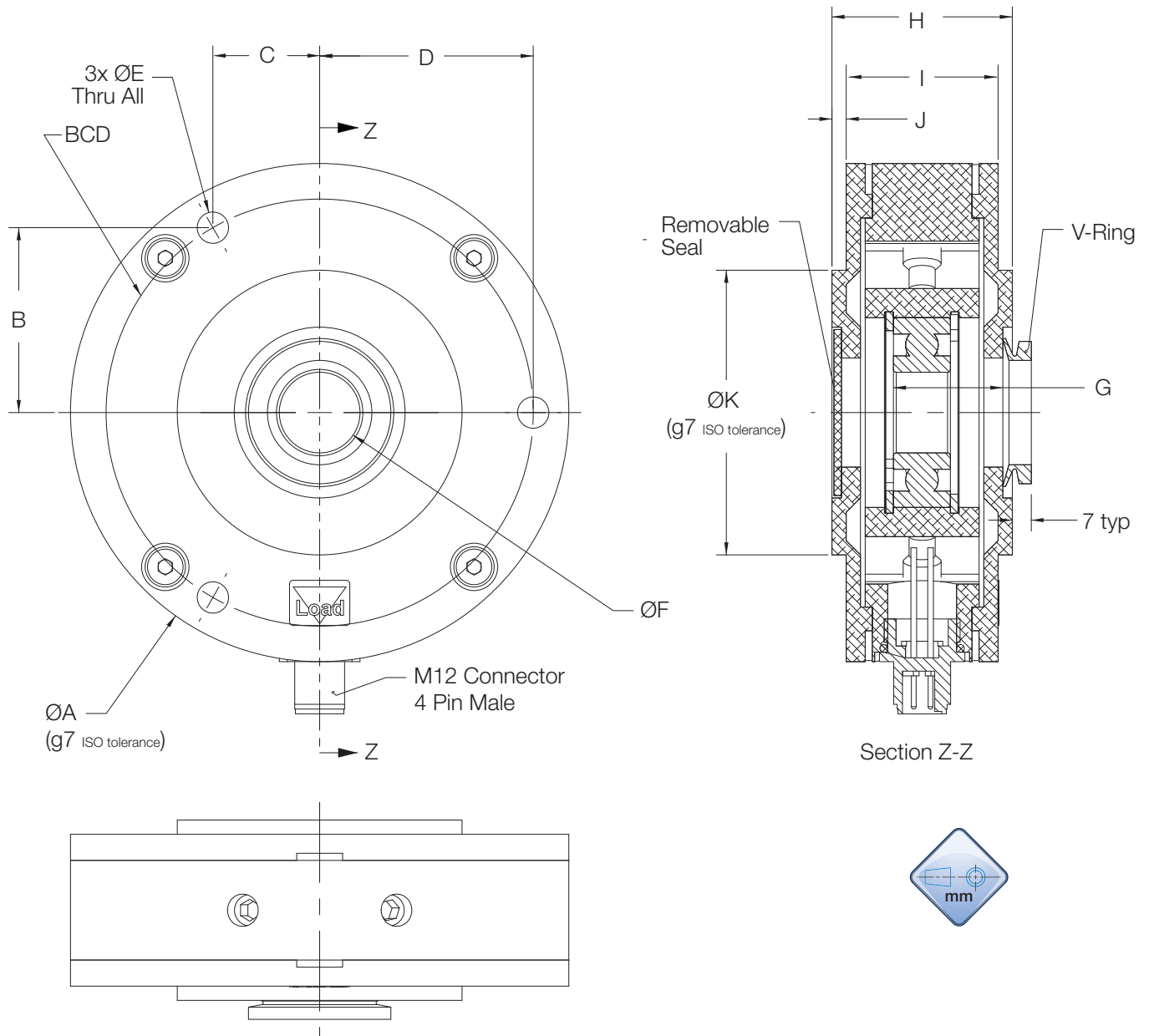
Ultra-slim series tension sensing load cells designed to fit limited space applications. They provide safe, secure support of a roller. The F-Series is available in multiple load ranges, two mounting options and three body sizes.

Features

- ▶ Versatile and compact - they mount directly inside or outside machine frame or using mounting supports
- ▶ Unique adjustable hard stops - factory set for optimum protection and repeatability
- ▶ Overload protection 10+ times nominal load
- ▶ New high tensile aluminum construction
- ▶ High degree of linearity and repeatability
- ▶ Wide load ranges



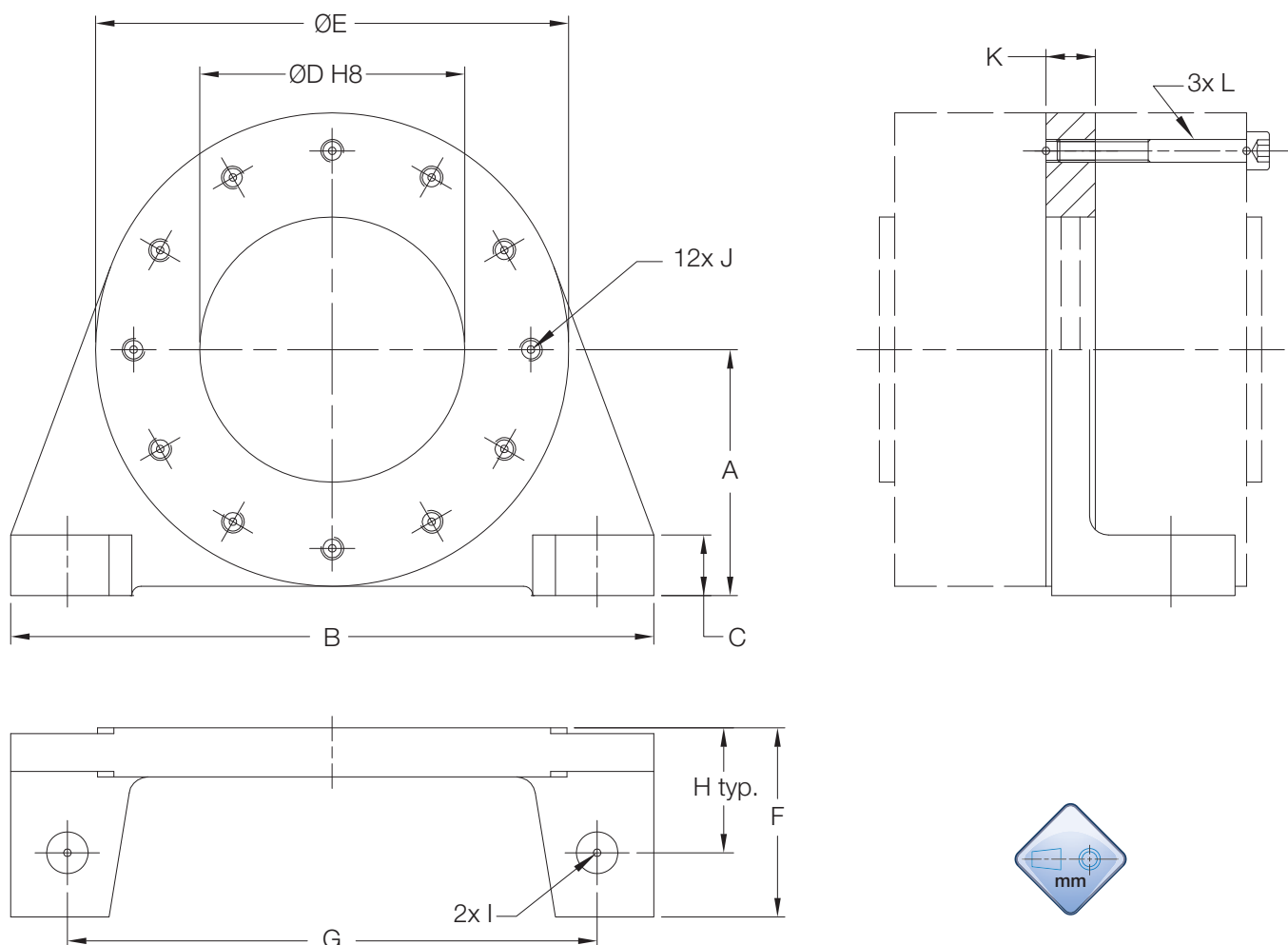
Dimensions - Load Cell



	A*	B	C	D	E	F	G	H	I	J	K*	BCD	V-Ring
F17	105	39	23	45	6.60	17 ^{+0.0210} / _{+0.0008}	23	38	32	3	60	90	VA22
F25	125	45.5	26.25	52.5	6.60	25 ^{+0.024} / _{+0.011}	25.5	48	40	4	70	105	VA32
F35	175	64.95	37.5	75	9	35 ^{+0.029} / _{+0.013}	40	65	57	4	100	150	VA45

* Note that g7 is an ISO tolerance.

Dimensions - Pedestal



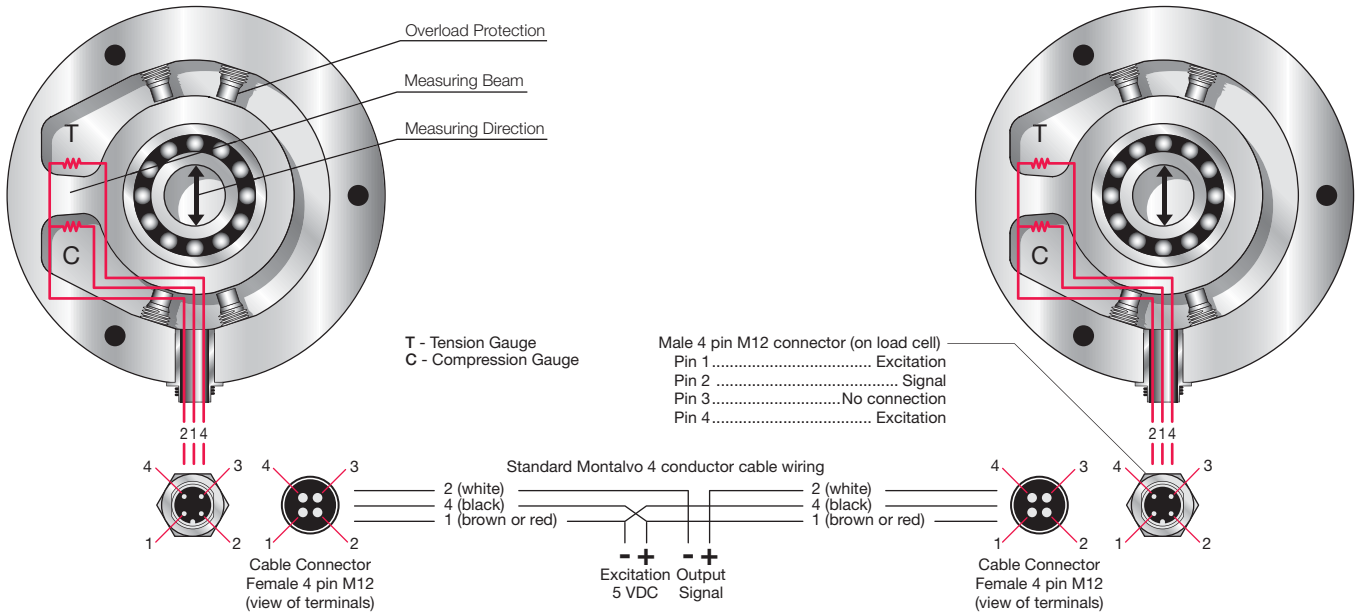
	A	B	C	D	E	F	G	H	I	J	K	L
F17	55	140	12	60	105	40	115	26	9	M6x1.0	10	M6x1.0x40
F25	65	170	16	70	125	50	140	33	11	M6x1.0	13	M6x1.0x50
F35	90	240	22	100	175	71	195	47	18	M8x1.0	18	M8x1.0x70

F-Series

Compact Load Cells

How They Work

The Montalvo F-Series Load Cell is a one piece tension measuring transducer equipped with a spherical bearing which takes up both misalignment and axial movement of a sensing roller. Semiconductor strain gauges are mounted on each side of the measuring beam and connected in a half bridge configuration. The force acting in the direction of the connector transforms into a torque that bends the beam slightly thus stretching gauges on one side and compressing gauges on the other side. This produces an analog output proportional to the web tension. The load cell output is zero and gain calibrated. Adjustable overload stops are factory set to 110% to protect gauges and beam from overloading, ensuring the highest degree of precision and reliability without the need for recalibration.



Specifications

Electrical

Excitation5 VDC
Output..... 250 mV, nominal @ full load
Gauge Resistance..... 80 - 130 Ω
Type semi-conductor
Non-Repeatability..... ±1/4% full span
Non-Linearity and Hysteresis (combined) ±1/2% full span

Connector

Type..... Male 4 pin M12
Pin 1 Excitation
Pin 2 Signal
Pin 3 No connection
Pin 4 Excitation

Nominal Force F_{nom} N

F17..... 100 / 200 / 500 / 1000
F25..... 150 / 300 / 750 / 1500
F35..... 300 / 750 / 1500 / 3000

Note: It is recommended that Montalvo be contacted to ensure proper sizing.

Overload..... tested @ 300% max. of rated
Overload Stops 110% of full load

Environmental

Classification IP54
Temperature
Operating range..... -20 to +70°C
Coefficient (% per degree) 0.01 typ.

Mechanical

Deflection..... 0.1 to 0.3(mm) typ.
Alignment..... 1° max.

Related Montalvo Products

The **NEW** S4 Digital Tension Controller
The **NEW** A4 Digital Load Cell Amplifier
The **NEW** i4HD Tension Indicator
and... Cables