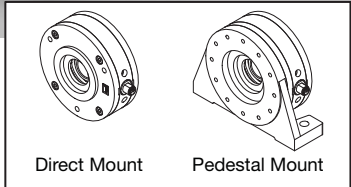


F-Series

Compact Load Cells



IP54



Montalvo F-Series Compact Load Cells

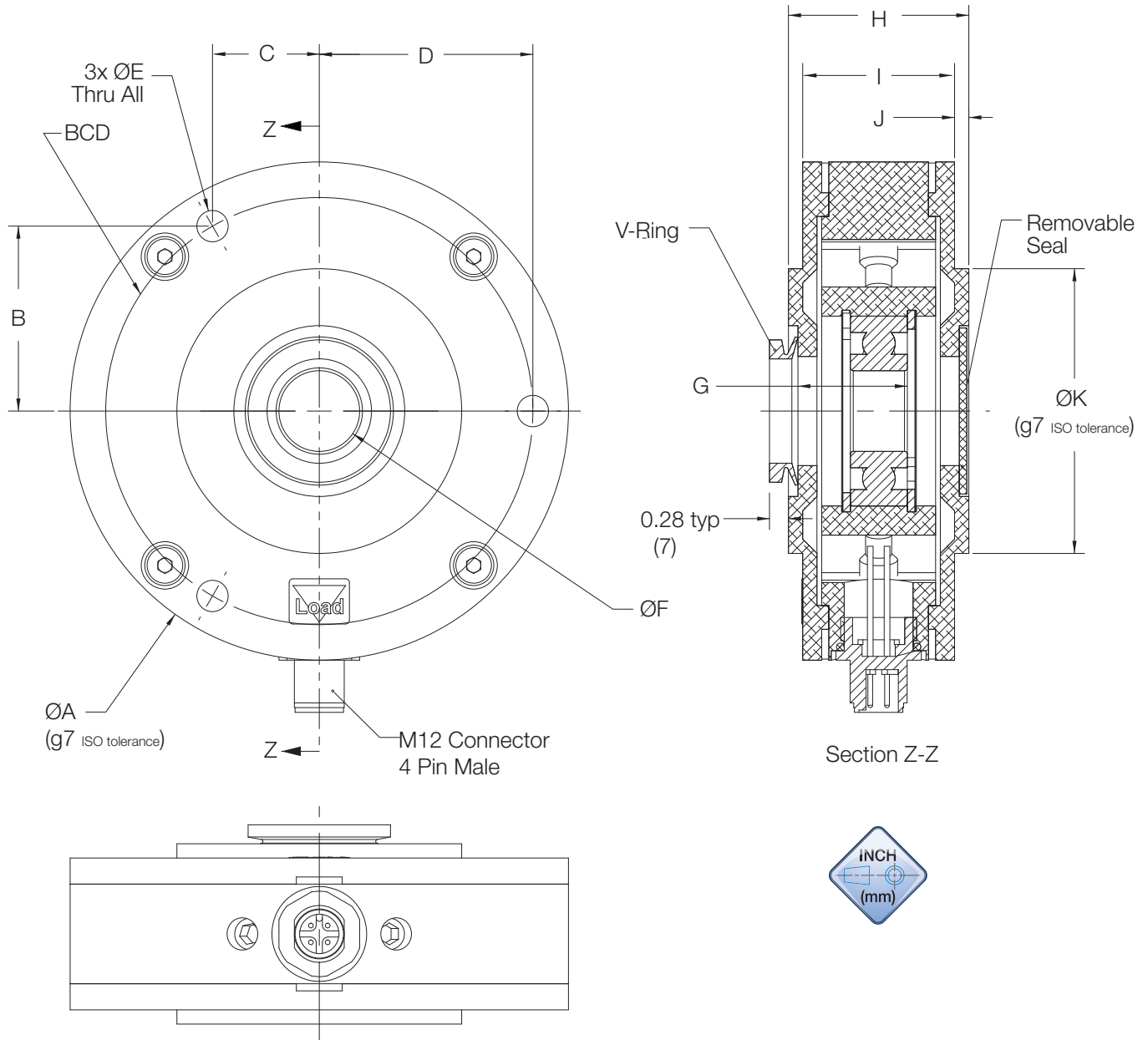
Ultra-slim series tension sensing load cells designed to fit limited space applications. They provide safe, secure support of a roller. The F-Series is available in multiple load ranges, two mounting options and three body sizes.

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



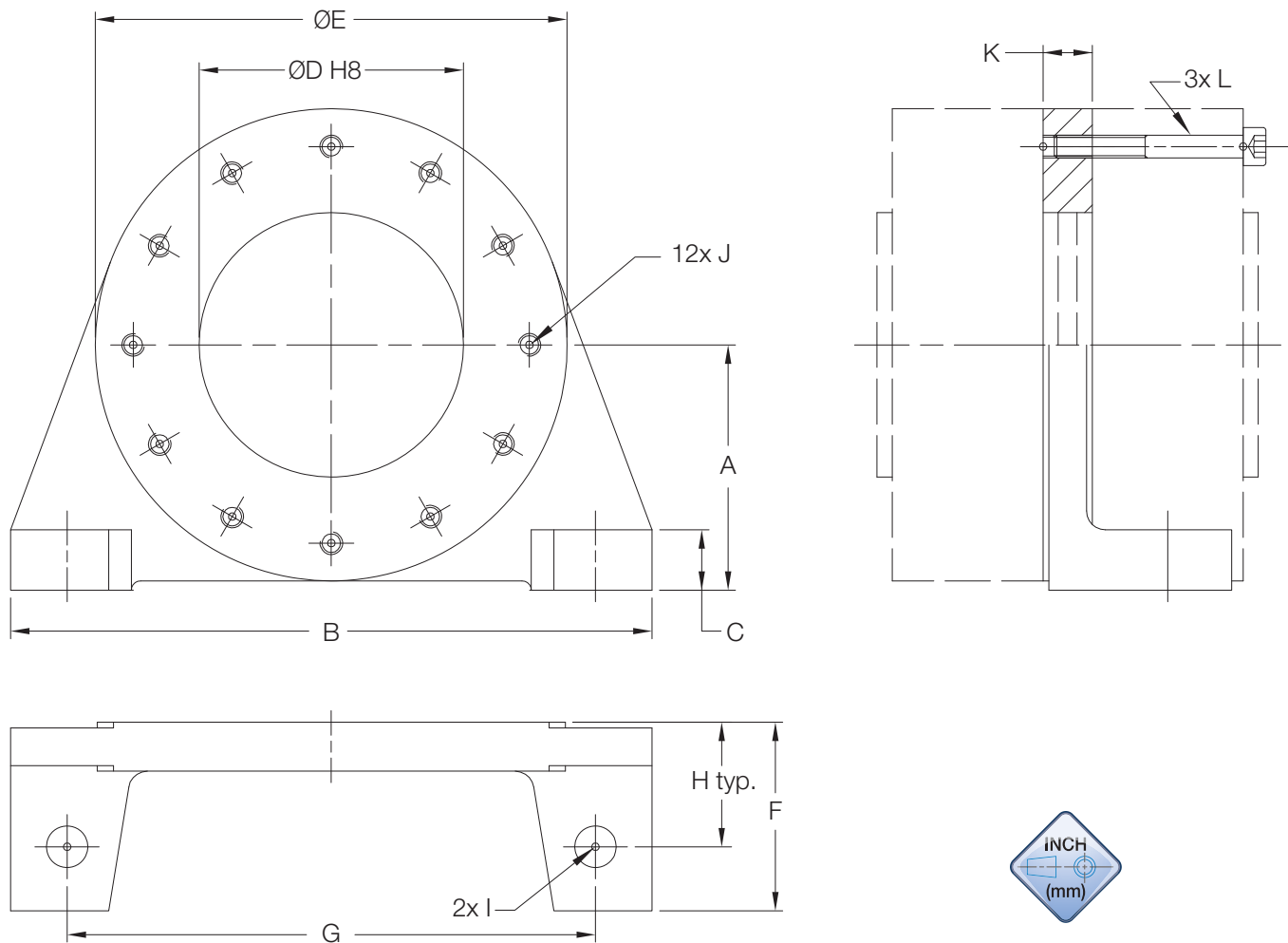
Dimensions - Load Cell



	A*	B	C	D	E	F	G	H	I	J	K*	BCD	V-Ring
F17	4.1339 (105)	1.534 (39)	0.886 (23)	1.772 (45)	0.260 (6.60)	0.6693 ^{+0.0008} / _{+0.0000} (17) ^{+0.0210} / _{+0.0008}	0.907 (23)	1.496 (38)	1.260 (32)	0.118 (3)	2.3622 (60)	3.5430 (90)	VA22
F25	4.9213 (125)	1.790 (45.5)	1.033 (26.25)	2.067 (52.5)	0.260 (6.60)	0.9843 ^{+0.0009} / _{+0.0004} (25) ^{+0.024} / _{+0.011}	1.002 (25.5)	1.890 (48)	1.575 (40)	0.157 (4)	2.7559 (70)	4.134 (105)	VA32
F35	6.890 (175)	2.557 (64.95)	1.476 (37.5)	2.953 (75)	0.354 (9)	1.3780 ^{+0.0011} / _{+0.0005} (35) ^{+0.029} / _{+0.013}	1.573 (40)	2.559 (65)	2.244 (57)	0.157 (4)	3.9370 (100)	5.905 (150)	VA45

* Note that g7 is an ISO tolerance.

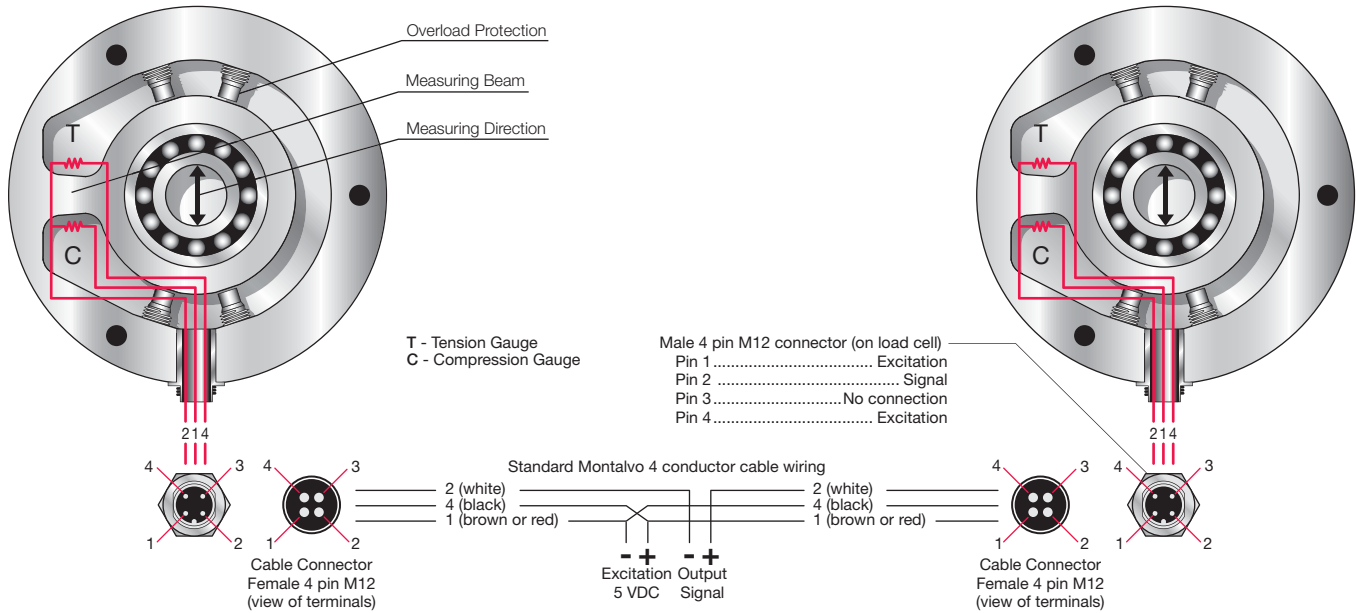
Dimensions - Pedestal



	A	B	C	D	E	F	G	H	I	J	K	L
F17	2.165 (55)	5.512 (140)	0.472 (12)	2.3622 (60)	4.134 (105)	1.614 (40)	4.528 (115)	1.024 (26)	0.354 (9)	M6x1.0	0.394 (10)	M6x1.0x40
F25	2.559 (65)	6.693 (170)	0.630 (16)	2.7559 (70)	4.921 (125)	1.969 (50)	5.512 (140)	1.299 (33)	0.433 (11)	M6x1.0	0.512 (13)	M6x1.0x50
F35	3.543 (90)	9.449 (240)	0.866 (22)	3.9370 (100)	6.890 (175)	2.756 (71)	7.677 (195)	1.851 (47)	0.709 (18)	M8x1.0	0.709 (18)	M8x1.25x70

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
 Excitation 5 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} lb (N)
 F17 25 (100) / 50 (200) / 125 (500) / 225 (1000)
 F25 35 (150) / 70 (300) / 175 (750) / 350 (1500)
 F35 70 (300) / 175 (750) / 350 (1500) / 700 (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 °F (°C)
 Operating range -4 to +150 (-20 to +70)
 Coefficient (% per degree) 0.02 (0.01) typ.

Mechanical
 Deflection in (mm) 0.004 to 0.012 (0.1 to 0.3)
 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

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