

Technical Specifications

LD3™ Compression Load Cell

**Low Cost - High Performance Compression Load Cell
Suitable for a Wide Range of Applications**

Utilizing the proven KM semiconductor strain gage technology, the LD3 Compression Load Cell continuously measures the weight of material for in-process and bulk storage vessels. The LD3 is suitable for a wide range of applications from dry, solid material measurement to high-pressure washdown, corrosive or submerged environments and is available in capacities from 1,000 lbs. to 25,000 lbs.

The LD3 incorporates a unique self-leveling feature that actually provides a single-point "trim" while allowing up to a 3° tilt or rotation in all directions. Finally there is a solution for sloped or not quite level environments.

The LD3 is designed to handle off-center forces and therefore significantly reduces installation efforts, time and cost while still delivering optimum performance.

Many competitive load cell designs lend themselves to the entrapment of bacteria, requiring extensive cleaning and maintenance. With its smooth surfaces and hermetically sealed design, the LD3 requires less than 10% of the cleaning needed for beam or pancake-style load cells.

The LD3's monolithic design eliminates the need for restraints or stay rods and provides options for seismic applications.



Features & Benefits

Versatile Load Cell for Dry to Wet Applications

Due to its low cost and high performance, this load cell is suitable for applications ranging from bulk dry solids to sanitary washdown or corrosive environments.

Cleanability and Strength For CIP/SIP

Built-in vessel hold-down eliminates mechanical pivot points, a source of bacteria traps and system errors. This leads to less operator time spent cleaning.

NEMA-6P / IP68 Submersion Rating, 17-4 ph 900 SS Construction

Unsurpassed waterproof protection and corrosion resistance for long life in rigorous CIP wash down and corrosive areas.

Minimal Deflection

Better system performance on tanks with pipes and process plumbing connections versus load cells that need stay rods or check rods.

Specifications

Load Range (Capacities)

1000 lbs (454 kg) to 25000 lbs (11340 kg)

Mechanical

Compression: 4 x rated load

Tension: 1 x rated load

Shear: 0.5 x rated load

Functional Integrity: 2 x rated load (compression)

Electrical

Excitation Voltage - Operating Range:

10 VDC - 30 VDC

Recommended Supply Voltage: 12 VDC

Maximum Current: 3 mA @ 12 VDC excitation (0° F)

Output Resistance: 7.5K Ohms +/-1%

Output

Non-Linearity/Hysteresis Combined:

0.08% Performance: 0.08% rated output
Consult factory for batching accuracy;
typically 0.05% to 0.01% full scale

Return to Zero: 0.05% rated output

Zero Balance: 1% rated output

Rated Output: 30 mV/V +/-1%

Deflection: 0.004"-0.006" for capacities 1000-5000 lbs
0.008"-0.012" for capacities 7500-25000 lbs

Environmental

Temperature Range - Standard:

0° to 100° F (-18° C to 38° C)

Temperature Range - Mid:

50° to 150° F (10° C to 66° C)

Temperature - Zero Shift:

Std/Mid Temp Ranges: 0.006% /° F (0.011% /° C)

Temperature - Sensitivity Change:

0.015% /° F (0.027% /° C) 0° - 100° F

Storage Temp Range: -40° to 176° F (-40° to 80° C)

Humidity: 100%

Physical

Construction: 17-4 PH 900 stainless steel

Connector: Nickel plated brass body with polyimide insert
and neoprene grommet

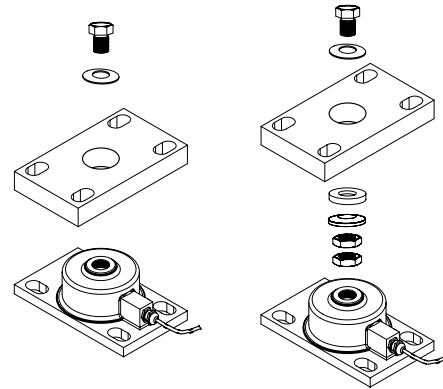
Cable: 22 AWG 3 conductor unshielded with PVC sheath
(15' standard)

Rating: NEMA-6P; IP68 5 Bar; 70 psi

Shipping Weight: 5 lbs. (2.3 kg)

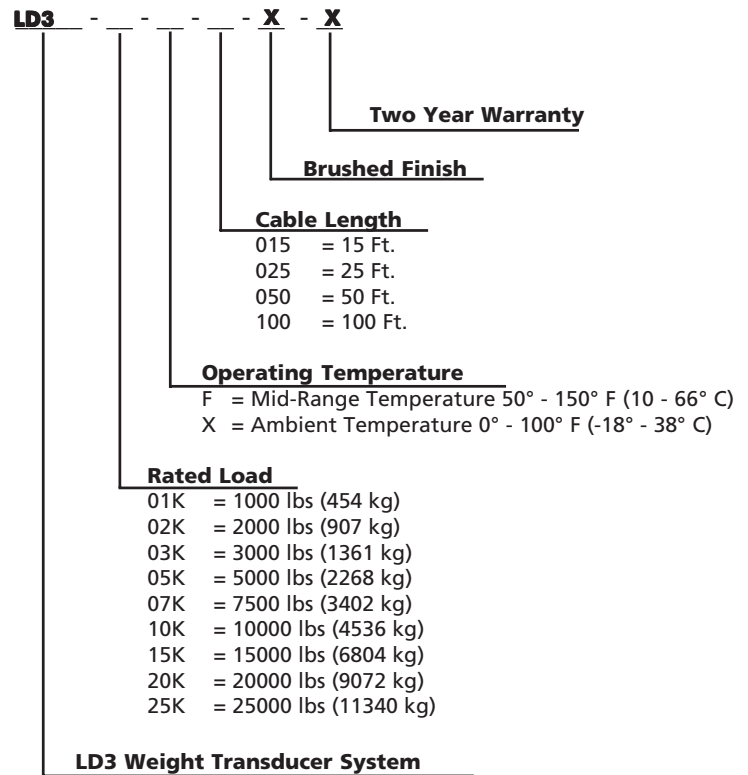
DIMENSIONS

Base Plate Size Length x Width	6.00" [152.4mm] x 3.50" [88.9mm]
Installed Height LD3 W/UA 1K-10K lbs 15K-25K lbs	2.76" [70.1mm] 3.33" [84.6mm]
LD3 W/LT3 1K-7.5K lbs Only	MIN: 4.094" [104mm] MAX: 4.219" [107.2mm] (Adjustable)
LD3 W/AD3 1K-7.5K lbs Only	MIN: 4.094" [104mm] MAX: 4.219" [107.2mm]
Top Plate Size Length x Width	
UA3	6.00" [152.4mm] x 3.50" [88.9mm]
LT3	6.00" [152.4mm] x 3.50" [88.9mm]
AD3	6.00" [152.4mm] x 6.00" [152.4mm]



LD3 with UA3
Top Adapter Plate

LD3 with LT3
Leveling Top Adapter Plate



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Specifications subject to change without notice.
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