



# LD3™ Compression Load Cell

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

## TECHNICAL SPECIFICATIONS



### FEATURES AND 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. Less 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

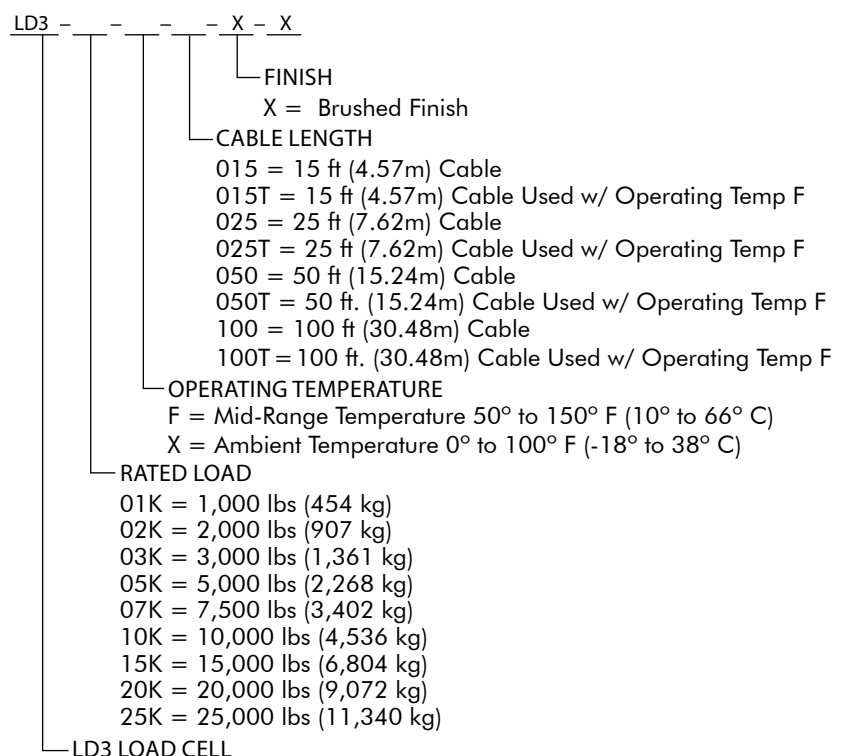
Better system performance on tanks with pipes and process plumbing connections versus load cells that need stay rods or check rods.

Utilizing the proven KM semiconductor strain gage technology, the rugged 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 design of the LD3™ keeps the vessel's center of gravity low and stable. Vessel tipping, "walking", or overturning is eliminated, protecting your valuable product. Violent agitation is also no match for its integral hold-down design. Installation is simple. Unlike conventional load cells, no extra external hardware, turnbuckles, or specific cell orientation is needed, even in areas of seismic activity or winds (outdoor vessels). This lock-down design eliminates the moving pivot points, bearing surfaces and "floating" hardware that can cause long term maintenance and accuracy problems as well as provide a home for bacteria.

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 cleaning compared to 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.

### HOW TO ORDER

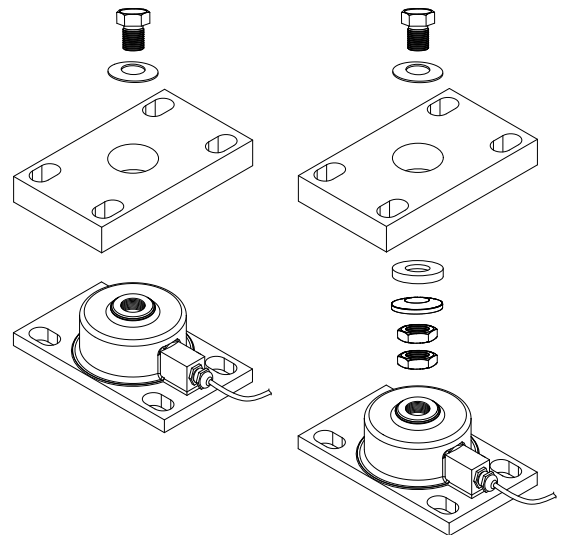


## SPECIFICATIONS

| FUNCTIONAL                           |   |
|--------------------------------------|---|
| Excitation Voltage - Operating Range | 10 VDC - 30 VDC   |
| Excitation Current                   | 3 mA @ 12 VDC excitation (0° F) max   |
| Output Resistance                    | 7.5K ohms ± 1%  |
| Recommended Supply Voltage           | 12 VDC  |
| Compression                          | 4 x rated load  |
| Functional Integrity                 | 2 x rated load (compression)  |
| PERFORMANCE                          |   |
| Non-linearity/Hysteresis Combined    | 0.08% performance   |
| Return to Zero                       | 0.05% rated output  |
| Zero Balance                         | 1% rated output   |
| Rated Output                         | 360 mV DC @ 12 VDC ± 1%   |
| Deflection                           | 0.004" - 0.006" for capacities 1,000 - 5,000 lbs                            |
|                                      | 0.008" - 0.012" for capacities 7,500 - 25,000 lbs                           |
| PHYSICAL                             |   |
| Temperature Range                    | Standard: 0° to 100° F (-18° to 38° C)<br>Mid: 50° to 150° F (10° to 66° C) |
|                                      | Effects - Sensitivity Change:<br>0.015% /° F (0.027% /° C)                  |
|                                      | Effects - Zero Shift: Std/Mid Temp Ranges:<br>0.006% /° F (0.011% /° C)     |
|                                      | Storage Temp Range:<br>-40° to 176° F (-40° to 80° C)                       |
| Humidity                             | 100%  |
| Rating                               | NEMA - 6P   |
| 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)                |
| Shipping Weight                      | 5 lbs. (2.3 kg)   |

## DIMENSIONS

|                                |   |
|--------------------------------|---|
| Base Plate Size Length x Width | 6.0" x 3.5" (152.4 mm x 88.9 mm)  |
| Installed Height               | LD3™ W/UA:<br>1K to 10K lbs: 2.7" (70.1 mm)<br>15K to 25K lbs: 3.33" (84.6 mm)                              |
|                                | LD3™ W/LT3:<br>1K to 7.5 lbs Only:<br>Minimum 4.094" (104 mm),<br>Maximum 4.219" (107.2 mm)<br>(Adjustable) |
| Top Plate Size Length x Width  | UA3: 6.0" x 3.5"<br>(152.4 mm x 88.9 mm)  |
|                                | LT3: 6.0" x 3.5"<br>(152.4 mm x 88.9 mm)  |



LD3™ with UA3  
Top Adapter Plate

LD3™ with LT3  
Leveling Top Adapter Plate