The Load Disc II™ weight transducer has the lowest profile for its load ranges in the industry. Utilizing the proven KM semiconductor strain gage technology, the Load Disc II™ continuously measures the weight of material for in-process and bulk storage vessels. Its sealed, stainless steel construction – fully potted in NEMA-6P enclosure with watertight cable system and cable entry – makes the Load Disc II™ transducer ideal for use in high-pressure wash down, corrosive or submerged environments. It is particularly suitable for use on mixing and blending vessels, surge hoppers, and vessels with agitators. Standard load ranges are from 150 to 100,000 pounds (68 to 45,360 kg) per vessel support with system performance accuracies of 0.1% and 0.2%.

Low-profile design for low clearance installations also keeps the vessel’s center of gravity low and stable. Vessel tipping, walking or overturning while agitating is eliminated. Installation and setup is simplified with less hardware. No external vessel hold-downs are necessary, even in areas of high wind or seismic activity. There are no moving parts that can wear out or require replacement. The high output of the semiconductor sensor provides immunity to industrial electrical noise and allows longer load cell to signal processor runs.

Features & Benefits

Single Footprint & Low Profile Height Range
For 150 to 25K and 35K to 100K pound rated output, a single system design and installation keeps the vessel locked down and secure from tipping, even in Zone 4 seismic areas.

Minimal Deflection
Only 0.004 inch at rated output minimizes piping & plumbing influences for reliable results.

NEMA-6P Stainless Steel Submersion Rating
Incorporates NEMA-4 & -4X in a stainless steel hermetically sealed package for protection in high pressure, caustic wash downs.

High Output Rugged Design
Greater electrical noise immunity provides long term reliability under a wide range of operating conditions with cable runs to 2000 feet.

FM Approved
For use in hazardous areas with or without barriers.
**Specifications**

**Mechanical**

**Compression:**
- 150 to 25,000 lbs. 4 x rated load
- 35,000 to 100,000 lbs. 2.5 x rated load

**Tension:** 1 x rated load

**Shear:** 0.5 x rated load

**Functional Integrity:** 2.0 x rated load (compression)

**Electrical**

**Excitation Voltage - Operating Range:** 10-30 VDC

**Recommended Supply Voltage:** 12 VDC

**Maximum Current:** 4 mA at 12 VDC excitation (0°F)

**Output Resistance:** 7.5K ohms, +/-1%

**Output**

**Nonlinearity/Hysteresis Combined:**
- 0.2% Performance: 0.2% rated output
- 0.1% Performance: 0.1% rated output

Consult factory for batching accuracy; typically 0.05% to 0.01% full scale

**Return to Zero:** 0.05% rated output

**Zero Balance:** 6.9% rated output

**Rated Output:**
- Temperature Range - Std/Mid: 30 mV/V +/- 1.4%
- Temperature Range - High: 20 mV/V +/- 1.25%

**Environmental**

**Temperature Range - Standard:** 0° to 100°F (-18° to 38°C)

**Temperature Range - Mid:** 50° to 150°F (10° to 66°C); up to 300°F during CIP/SIP

**Temperature - Sensitivity Change:** 0.015%/°F (0.027%/°C) 0° to 100°F (-18° to 38°C)

**Temperature - Zero Shift:** Std/Mid-Temperature Ranges: 0.008%/°F  (0.015%/°C)

**High Temperature Range:** 0.012%/°F (0.022%/°C)

**Humidity:** 100%

**Physical**

**Construction:** 17-4 PH 900 heat-treated stainless steel; all welds full penetration weldment in accordance with Uniform Building Code (UBC) criteria per specification AWS B2.1.009-90

**Cable:** 3-conductor, 22 gage unshielded, 10 ft (3m) long, with tinned pigtail termination

**Signal Cable Armor:** 12 in (305 mm) sanitary food-grade tubing

**Conduit Fitting:** 304 stainless steel 1/2-inch female NPT

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**Rating:** NEMA-6P (includes NEMA-4, NEMA-4X and NEMA-6); hermetically sealed for high-pressure caustic washdown and prolonged submergence in water (watertight conduit provided by customer)

**Shipping Weight:**
- 150 to 25,000 lbs. rated load: 5 lbs. (2.3 kg)
- 35,000 to 100,000 lbs. rated load: 17 lbs

**Approvals:** Factory Mutual (FM) approved for hazardous locations when installed per KM specifications; intrinsically safe, Class I, II and III, Division 1, Groups C, D, E, F and G; non-incendive, Class I, Division 2, Groups A, B, C and D; suitable for Class II, Division 2, Groups F and G, and suitable for Class III, Divisions 1 and 2