SENTRAN

QA

PRECISION CANISTER LOAD CELL

applications

- Compression Measurements
- Truck & Railroad Track Scales
- Tank & Silo Weighing
- General High Capacity Weighing

features

- 10,000 to 500,000 lbs. Capacities
- Compact Low Profile Design
- Up to 0.05% Accuracy Class
- Multi-Column Construction
- IP66/67 Environmental Sealing
- Steel or Stainless Construction
- 30 Foot Integral Cable
- Two Year Warranty

Application Tip: *The Model QA Series is robust and versatile, designed for precision, high capacity compression measurements.*

The QA Series is a high performance, compact, bonded foil strain gage load cell constructed of alloy tool steel (QA1) or stainless steel (QA3). The QA Series is designed to accurately measure compression forces in capacities ranging from 10,000 lbs. to 500,000 lbs. The multiple column sensing design and precision ground base combine to produce excellent performance in a very compact size, with reduced sensitivity to eccentric and side loading effects. To achieve a sealing rating of IP67 (thoroughly sealed against airborne particles and the effects of immersion up to 1 meter.) proprietary, composite environmental barriers are integrated to protect the load cell. A sealing rating of IP 66 (high pressure wash down) is available with the QA Series using suitable conduit and the standard cable conduit adapter. The QA1 is epoxy enamel painted, while the QA3 is elctropolished for corrosion resistance. Optional cable assemblies are available with mating connectors, including durable polyurethane jacketed cables featuring a braided, tinned-copper shield for mechanical protection and to minimize the effects of common industrial electrical noise, e.g. RFI and EMI. Other options include surface ground mounting plates and weigh module assemblies. The attributes of the QA Series make it ideal for measurements weight measurements where a rugged, low profile precision load cell solution is needed.

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Innovative Measurement Solutions

specifications

SENTRAN

QA

performance

Rated capacities (RC)[1] (lbs.)	10K, 25K, 50K, 100K, 200K, 300K & 500K
Rated output (FSO)	2 mV/V (nominal)
Combined error	≤ 0.05 FSO
Non-linearity	≤ 0.05 FSO
Hysteresis	≤ 0.02 FSO
Non-repeatability	≤ 0.01 FSO
Creep (30 minutes)	≤ 0.03 % of load
Zero balance	≤ 1 % FSO
Zero Return (30 minutes)	Better than 0.03 % FSO

[1] ("K" = thousand)

mechanical

Material:	Alloy tool steel (PA1) Stainless steel (PA3)
Finish:	Epoxy enamel paint (PA1) Electro-polished (PA3)
Safe sideload:	30% RC
Safe overload	Compression: 150% RC Tension: 150% RC
Ultimate overload	Compression: 300% RC
Deflection	10K-50K—.003" (nominal) 100K-500K—.006" (nominal)

electrical

Input impedance	450 ohms (nominal)
Output impedance	480 ohms (nominal)
Insulation resistance	>1000 Megohms @ 50VDC
Excitation Voltage	10 V AC/DC (15 V maximum)
Cable Color code:	+ Excitation (Green) - Excitation (Black) + Output (White) - Output (Red) Shield (Bare)
Cable type	4-conductor, 22 AWG, tin-copper braided shield, polyurethane jacket
Cable termination	Finished conductors

environmental

66 67 IP

Temperature, operating	4 to +140 °F (-20 to +60°C)
Temperature, compensated	14 to +104 °F (-10 to +40°C)
Temperature effects:	Zero < 0.0015% FSO/°F < 0.0026% FSO/°C Output < 0.0008% of Rdg./°F < 0.0014% Rdg./°C
Sealing	IP66/67; Multi-redundant

options

Surface Ground Mounting Plates, Mating MS Connectors and Custom Cable Assemblies

dimensions

100% CUSTOMER SATISFACTION GUARANTEED

Lb	A	B	C	D
10K - 50K	1.25	2.87	3.25	½-20
100K	2.31	4.12	5.00	3/4-16
200K - 300K	3.13	6.00	7.25	3/4-16
500K	3.69	6.53	9.00	3/4-16