

Compression Load Cell



DESCRIPTION

The CSP-M is a multi-column, low profile, stainless steel compression load cell. The unique four column design offers excellent insensitivity to eccentric loads whilst maintaining accuracy.

This product is, without doubt, one of the most successful compression cells ever produced and is suitable for use in road and rail weighbridges and process weighing applications..

The fully leak-tested welded construction, advanced cable entry and built-in surge protection tubes ensure that this product can be used successfully in harsh environments.

This product meets the stringent Weights and Measures requirements throughout Europe.

FEATURES

- Capacities: 10 - 100t
- Low profile, multi column stainless steel construction
- Hermetically sealed, IP66 and IP68
- Certified to OIML R-60, 4000d and NTEP class IIIIL 10000 divisions
- Built-in surge protection tubes (GDTs)
- Current calibration output (SC version) ensures easy and accurate parallel connection of multiple load cells

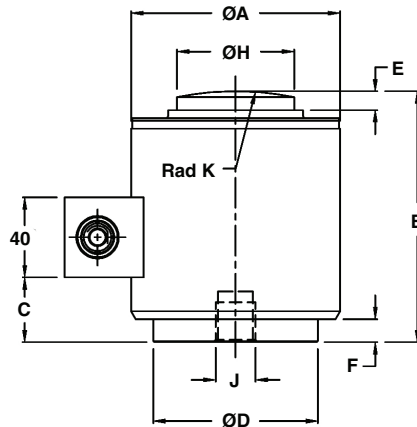
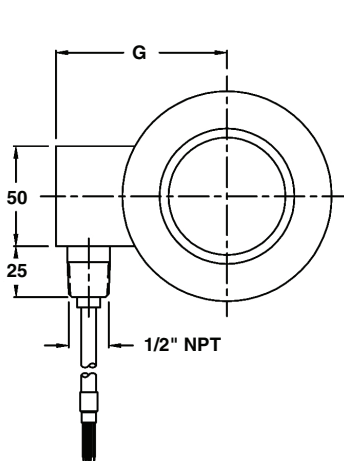
OPTIONAL FEATURE

- ATEX and FM certified versions are available for use in potentially explosive atmospheres
- Digital version available (model SCC)
- Multi-interval and multiple range versions available
- Imperial capacities (25K, 50K, 100K, 200Klbs) not OIML approved

APPLICATIONS

- Truck and rail weighbridges
- Silo and hopper weighing
- Process weighing

OUTLINE DIMENSIONS in millimeters



| Capacity | 10, 25 | 40, 60 | 100 |
|----------|----------------------|----------------------|-------|
| A | 72.0 | 105.0 | 150.0 |
| B | 83.0 | 127.0 | 185.0 |
| C | 13.0 | 35.0 | 70.0 |
| D | 58.0 | 82.5 | 123.8 |
| E | 6.5 | 8.0 | 23.6 |
| F | 1.8 | 11.0 | 21.8 |
| G | 63.0 | 83.0 | 107.0 |
| H | 32.0 | 59.0 | 80.0 |
| J | M12x1.75 (8 Deep) | M20x2.5 (15 Deep) | |
| K Rad | 150.0 | 150.0 | 430.0 |

Cable specifications:

Cable length: 20m (10m for 10t version)

Excitation+ Green
 Excitation- Black
 Output+ White
 Output- Red
 Shield Transparent

Cable screen is not connected to load cell body. Performance may be affected if load cell cables are shortened.

| SPECIFICATIONS | | | | | |
|--|------------------------------------|--------------|------------------|------------------|------------------------|
| PARAMETER | VALUE | | | | UNIT |
| Standard capacities (E_{max}) | 10, 25, 40, 60, 100 ⁽¹⁾ | | | | ton |
| Accuracy class according to OIML R-60 /NTEP | NTEP IIIIL | Non-Approved | C3 | C4 | |
| Max. no. of verification intervals | 10000 | | 3000 | 4000 | |
| Min. verification interval ($V_{min}=E_{max}/Y$) | | | $E_{max}/12,500$ | $E_{max}/12,500$ | |
| Min. verification interval, type MR | | | $E_{max}/17,500$ | $E_{max}/17,500$ | |
| Rated output ($=S$) | 2 | | | | mV/V |
| Rated output tolerance | 0.02 | | | | \pm mV/V |
| Zero balance | 1.0 | | | | \pm % FSO |
| Combined error | 0.0200 | 0.050 | 0.0200 | 0.0170 | \pm % FSO |
| Non-repeatability | 0.0100 | 0.020 | 0.0100 | 0.0090 | \pm % FSO |
| Minimum dead load output return | 0.0250 | 0.050 | 0.0167 | 0.0125 | \pm % applied load |
| Creep error (30 minutes) | | 0.060 | 0.0245 | 0.0184 | \pm % applied load |
| Creep error (20 - 30 minutes) | 0.0300 | 0.0200 | 0.0053 | 0.0039 | \pm % applied load |
| Temp. effect on min. dead load output | (0.0008) | 0.0250 | 0.0056 | 0.0056 | \pm % FSO/5°C (°F) |
| Temp. effect on min. dead load output, type MR | | | 0.0040 | 0.0040 | \pm % FSO/5°C |
| Temperature effect on sensitivity | (0.0010) | 0.0250 | 0.0050 | 0.0035 | \pm % applied load/5 |
| Minimum dead load | 0 | | | | %E _{max} |
| Maximum safe over load | 150 | | | | %E _{max} |
| Ultimate over load | 400 | | | | %E _{max} |
| Maximum safe side load | 10 | | | | %E _{max} |
| Deflection at E _{max} | 0.36 max. | | | | mm |
| Excitation voltage | 5 to 20 | | | | V |
| Maximum excitation voltage | 25 | | | | V |
| Input resistance | 450 \pm 4.5 | | | | W |
| Output resistance | 480 \pm 4.8 | | | | W |
| Insulation resistance | ≥5000 | | | | MW |
| Compensated temperature range | -10 to +40 | | | | °C |
| Operating temperature range | -40 to +80 | | | | °C |
| Storage temperature range | -50 to +90 | | | | °C |
| Element material | Stainless steel 1.4542 | | | | |
| Sealing (DIN 40.050 / EN60.529) | IP66 & IP68 | | | | |

Notes

⁽¹⁾ 100t only has C1 grade of OIML

FSO - Full Scale Output

SC-version: The rated output and the output resistance are balanced in such a way, that the output current is calibrated to within 0.05% of a reference value. This allows easy parallel connection of the load cells.

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