



Main features

- Range of measurement: from 100 to 50.000 Kg
- Accuracy class: 0,1%
- All stainless steel construction
- Corrosion resistant
- Internally generated calibration signal
- Grade of protection: IP67 (DIN 40050)

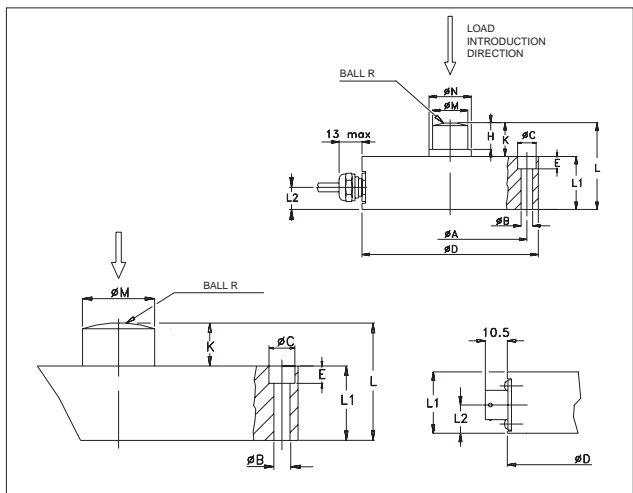
CM series load cells are strain gauge transducers used to measure loads in static and dynamic applications, in compression, with high accuracy. They are machined from a single block of metal, so the primary sensing element, the mountings and the case contain no welds allowing smaller dimensions and an enhanced grade of protection. The configuration of the point of measurement, with 8 strain gauges, reduces errors caused by imperfect applications of the load. Typical applications of load cells connected in parallel are: silos, hoppers, large weighing platforms. The stainless steel construction is suitable for use in aggressive environments in the chemical and petrochemical industries.

TECHNICAL DATA

| | |
|---|---|
| Accuracy | 0,1% |
| Nominal full scale load (Ln) | 100...50.000 Kg |
| Nominal output at FSO | 2mV/V |
| Output tolerance at Ln | <± 0,2% FSO |
| Combined errors: Non linearity Hysteresis, Repeatability | < ± 0,1% FSO |
| Creep (after 30 min. at Ln) | < ± 0,06% FSO |
| Zero load out of balance signal | < ± 1% FSO |
| Calibration signal * | 80%FSO ± 1% |
| Thermal drift in compensated range | Sensitivity Zero Calibration |
| | < ± 0,01% FSO°C < ± 0,01% FSO°C < ± 0,01% FSO°C |
| Nominal input resistance | 700 Ohm |
| Nominal output resistance | 700 Ohm |
| Isolation resistance | > 10 GOhm |
| Nominal supply voltage | 10 V |
| Maximum supply voltage | 15 V |
| Compensated temperature range | -10...+50°C |
| Maximum temperature range | -20...+60°C |
| Storage temperature range | -30...+80°C |
| Permitted static load | 130% Ln |
| Permitted dynamic load | 100% Ln |
| Maximum applicable load | 150% Ln |
| Rupture load | > 300% Ln |
| Maximum elastic deformation at Ln | < 0,2 mm |
| Grade of protection (DIN40050) | Cable: IP67 Connector: IP65 |
| Electr. connections: Connector Screened cable | VPT02A10-6PT2 6x0,25 / 5 m. |
| Elastic element material | Stainless steel |

* The exact value is indicated on the instrument nameplate

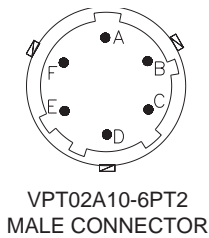
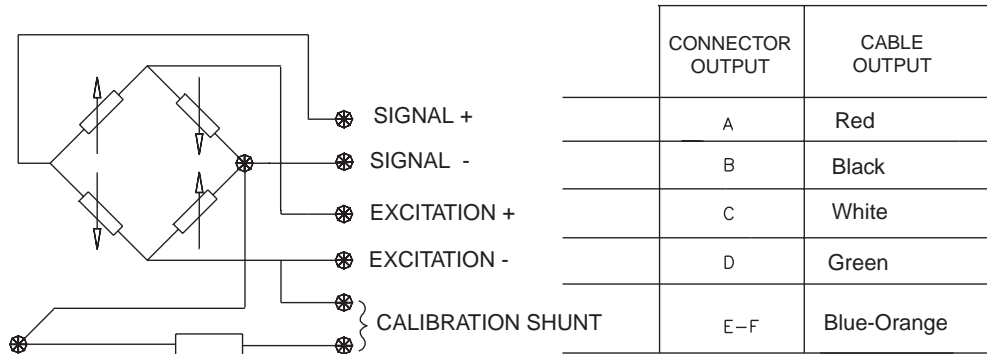
MECHANICAL DIMENSIONS



| | Ln (Kg) | | | |
|------|-------------|--------------|----------------|-------|
| | 100 2000 | 3500 7000 | 10000 30000 | 50000 |
| ø A | 87 | 98,5 | 102,2 | 125 |
| ø B | 6,5 | 10,5 | 13 | 17 |
| ø C | 10,5 | 16,5 | 19 | 25 |
| ø D | 100 | 120 | 126 | 155 |
| E | 6 | 10 | 12,5 | 16,5 |
| H | 11,7 | 17,5 | - | - |
| K | 15,7 | 21,5 | 14 | 16 |
| L | 45,7 | 51,5 | 54 | 77 |
| L1 | 30 | 30 | 40 | 61 |
| L2 | 13,5 | 13,5 | 17 | 27 |
| ø M | 20 | 24 | 35 | 45 |
| ø N | 24 | 30 | - | - |
| R | 30 | 30 | 50 | 100 |
| VITI | 6XM6 | 6XM10 | 6XM12 | 6XM16 |
| Nm* | 9 | 60 | 100 | 200 |

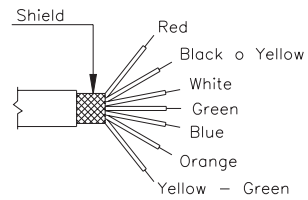
Dimensions mm. (± 0,1) * Recommended torque with UNI 5931 screws of resistance class 10.9 according to UNI 3740.

ELECTRICAL CONNECTIONS



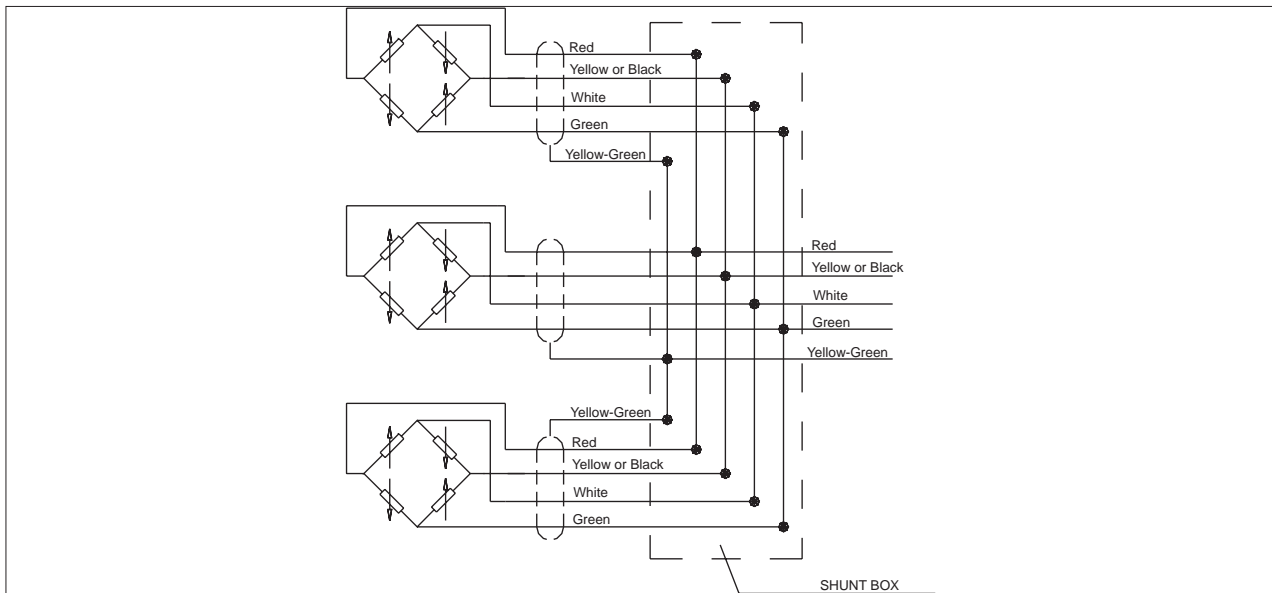
If the transducer is supplied complete with prewired connection cable, the colour code is that indicated in the table.

6x0.25 Screened cable



* The screen is isolated from the transducer body.
It is recommended that the ground is connected at the instrument end.

Cells connected in parallel



In systems that use several cells, the parallel connection automatically sums the loads on each individual cell. Using this method of measurement, the maximum load will be the sum of the loads on the individual cells and the sensitivity will be the average value of these cells.

It is important that the user ensures that no cell is stressed beyond its maximum rating under any load condition.

CONVERSION TABLE

| Kg | N | Lb |
|-------|-------|-------|
| 1 | 9.807 | 2.205 |
| 0.102 | 1 | 0.225 |
| 0.454 | 4.448 | 1 |

OPTIONAL ACCESSORIES

Female cable connector Grade of protection IP65

6-pin connector with 8m (25ft) cable

6-pin connector with 15m (50ft) cable

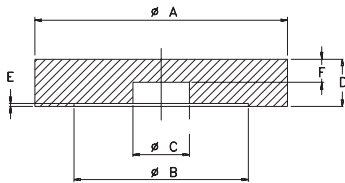
6-pin connector with 25m (75ft) cable

6-pin connector with 30m (100ft) cable

Other lengths

Self alignment plate

(Max. inclination 3°)



| NOMINAL LOAD Kg | | | | |
|-----------------|--------|--------|---------|---------|
| | ≤ 2000 | ≤ 7000 | ≤ 30000 | ≤ 50000 |
| ∅ A | 100 | 120 | 126 | 155 |
| ∅ B | 74 | 100 | 105 | 130 |
| ∅ C | 24 | 28 | 37 | 47 |
| D | 20 | 25 | 32 | 50 |
| F | 11 | 12 | 22 | 39 |
| E | 1,25 | 1,5 | 2 | 3 |
| COD | PIA700 | PIA701 | PIA702 | PIA703 |

Dimensions mm. (± 0,1)

CON 300

C08W

C15W

C25W

C30W

consult factory

| Cable colour code | |
|-------------------|--------|
| Conn. | wires |
| A | Red |
| B | Black |
| C | White |
| D | Green |
| E | Blue |
| F | Orange |

ORDER CODE

Load cell

CM

| MEASUREMENT RANGE (Kg) | |
|------------------------|--------------|
| 0 - 100 | K1C |
| 0 - 200 | K2C |
| 0 - 350 | K3.5C |
| 0 - 500 | K5C |
| 0 - 700 | K7C |
| 0 - 1000 | K1M |
| 0 - 2000 | K2M |
| 0 - 3500 | K3.5M |
| 0 - 5000 | K5M |
| 0 - 7000 | K7M |
| 0 - 10000 | K10M |
| 0 - 20000 | K20M |
| 0 - 30000 | K30M |
| 0 - 50000 | K50M |

| ELECTRICAL CONNECTIONS | |
|--------------------------|----------|
| 6x0,25 5m screened cable | F |
| VPT02A10-6PT2 connector | C |

If request, it is possible to supply models with non-standard mechanical and/or electrical features.

| SENSITIVITY | |
|-------------|---|
| S | 2mV/V version |
| R | 3mV/V version (range 500...5000Kg) only |

Ex.: **CM - K10M - F - S**

CM load cell, range 0 - 10.000 kg, cable connection and 2mV/V standard sensitivity.

GEFRAN spa reserves the right to make any kind of design or functional modification at any moment without prior notice.

GEFRAN

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