GEFRAN

CM

LOAD CELL FOR COMPRESSION APPLICATIONS



Main features

- *Range of measurement: from 100 to 50.000 Kg*
- *Accuracy class: 0,2%*
- *All stainless steel construction*
- *Corrosion resistant*
- *Internally generated calibration signal*
- *Grade of protection: IP67 (DIN 40050)*

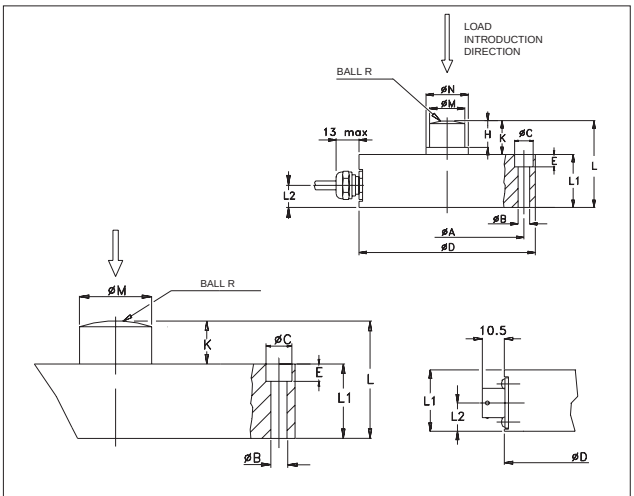
CM series load cells are strain gauge transducers used to measure loads in static and dynamic applications, in compression, with high accuracy.
They are machined from a single block of metal, so the primary sensing element, the mountings and the case contain no welds allowing smaller dimensions and an 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		0,2%
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 Histeresis, Repeatibility		< ± 0,2% 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	< ± 0,01% FSO°C
	Zero	< ± 0,01% FSO°C
	Calibration	< ± 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 dinamic 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

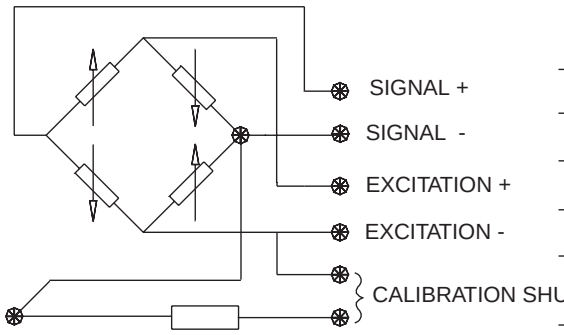
MECHANICAL DIMENSIONS



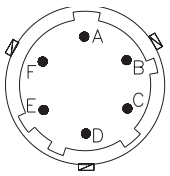
	Ln (Kg)			
	100 2000	**3500 7000**	**10000 30000**	**50000**
ø A	87	98,5	102,2	125
ø B	6,5	10,5	13	17
ø C	10,5	16,5	19	25
ø D	100	120	126	155
E	6	10	12,5	16,5
H	11,7	17,5	-	-
K	15,7	21,5	14	16
L	45,7	51,5	54	77
L1	30	30	40	61
L2	13,5	13,5	17	27
ø M	20	24	35	45
ø N	24	30	-	-
R	30	30	50	100
VITI	6XM6	6XM10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



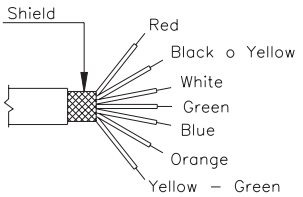
	CONNECTOR OUTPUT	CABLE OUTPUT
	A	Red
	B	Black
	C	White
	D	Green
	E–F	Blue-Orange



VPT02A10-6PT2
MALE CONNECTOR

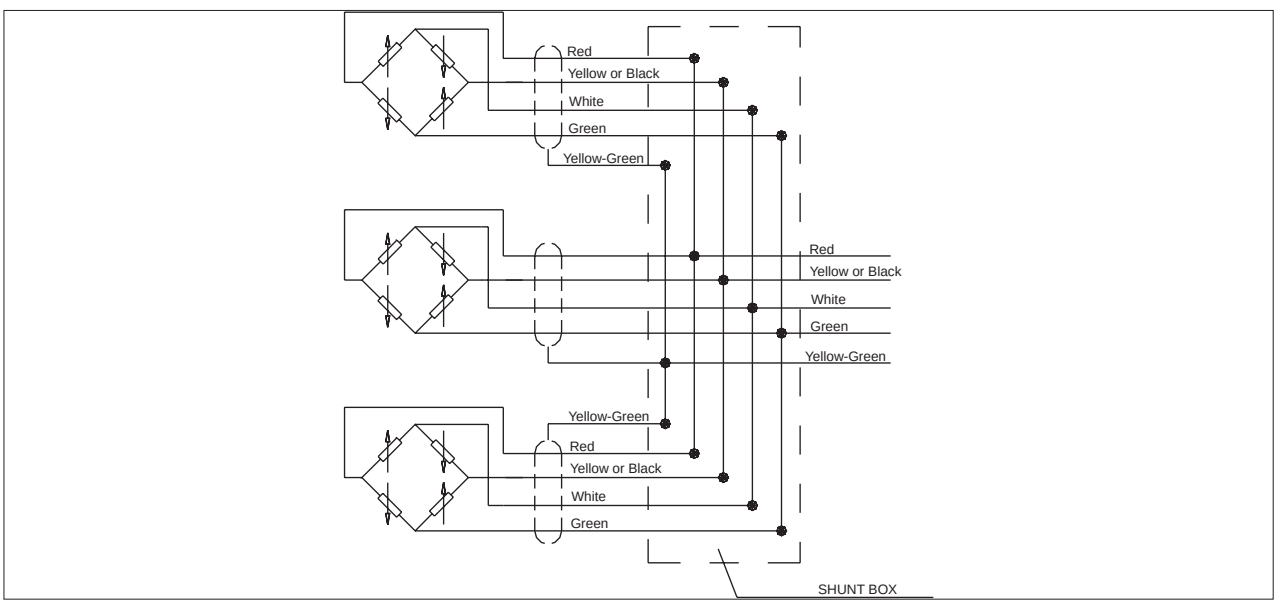
If the transducer is supplied complete with prewired connection cable, the colour code is that indicated in the table.

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 stessed beyond its maximum rating under any load condition.

CONVERSION TABLE

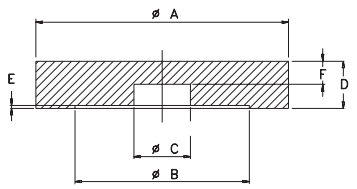
Kg	N	Lb
1	9.807	2.205
0.102	1	0.225
0.454	4.448	1

OPTIONAL ACCESSORIES

Female cable connector Grade of protection IP65	**CON 300**
6-pin connector with 8m (25ft) cable	**C08W**
6-pin connector with 15m (50ft) cable	**C15W**
6-pin connector with 25m (75ft) cable	**C25W**
6-pin connector with 30m (100ft) cable	**C30W**
Other lengths	**consult factory**

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

Self alignement plate
(Max. inclination 3°)



NOMINAL LOAD Kg				
	≤ **2000**	≤ **7000**	≤ **30000**	≤ **50000**
ø A	100	120	126	155
ø B	74	100	105	130
ø 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)

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.

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