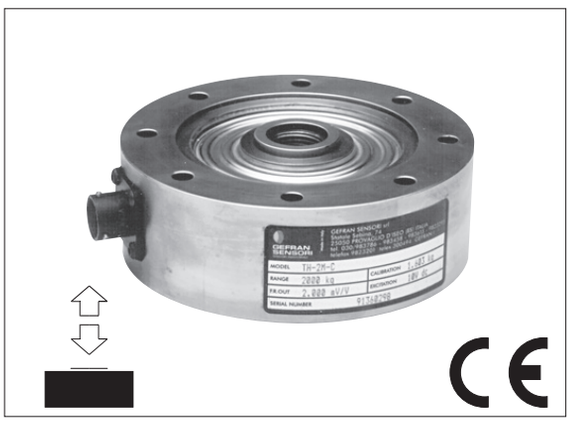
GEFRAN

TH

FORCE TRANSDUCER FOR TENSION/COMPRESSION APPLICATIONS



Main features

- *Range of measurement: from 10 to 100 kN*
- *Accuracy class: 0,2%*
- *All stainless steel construction*
- *Corrosion resistant*
- *Internally generated calibration signal*
- *Grade of protection: IP65 (DIN 40050)*

The TH series force transducers are ideal for systems that measure tension or compression force in industrial applications, where accuracy and reliability are important, even in harsh environments.

The disposition of the (8) strain gauges of the measurement bridges uses the deformation produced by the shear force of the applied load. It is thus possible to make accurate force transducers that are rugged and insensitive to lateral loads.

The transducer is machined from a solid block of stainless steel and contains no welds or joints.

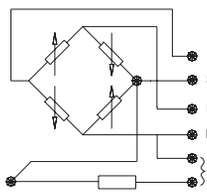
The electrical circuit is protected by sealed formed stainless steel plates.

TECHNICAL DATA

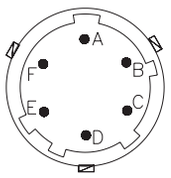
Accuracy
0,2%
Nominal full scale load (Ln)
10...100 kN
Nominal output at FSO
2mV/V
Output tolerance at Ln
<± 1% FSO
Combined errors: Non linearity, Histeresis, Repeatibility
< ± 0,2% FSO
Creep (after 30 min. at Ln)
< ± 0,06% FSO
Zero load out of balance signal
< ± 1% FSO
Calibration signal *
80%FSO ± 1%
Thermal drift in compensated range
Sensitivity: < ± 0,02% FSO°C Zero: < ± 0,02% FSO°C Calibration: < ± 0,02% FSO°C
Nominal input resistance
700 Ohm
Nominal output resistance
> 10 GOhm
Nominal supply voltage
10 V
Maximum supply voltage
18 V
Compensated temperature range
-20...+50°C
Maximum temperature range
-20...+60°C
Storage temperature range
-30...+80°C
Permitted static load
130% Ln
Maximum applicable load
150% Ln
Rupture load
> 300% Ln
Carico statico laterale max.
150% Ln
Maximum elastic deformation at Ln
< 0,1 mm
Grade of protection (DIN40050)
IP65
Electr. connections
Connector: VPT02A10-6PT2
Elastic element material
Stainless steel
Case material
Stainless steel

***** The exact value is indicated on the instrument nameplate.

ELECTRICAL CONNECTIONS



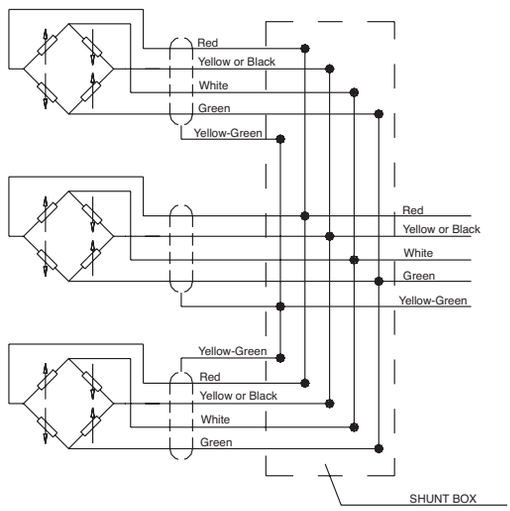
	CONNECTOR OUTPUT	CABLE OUTPUT
	A	Red
	B	Black
	C	White
	D	Green
	E – F	Blue-Orange



VPT02A10-6PT2 CONNECTOR

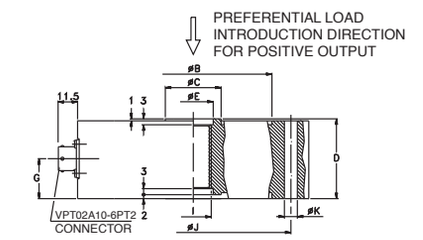
If the transducer is supplied complete with prewired connection cable, the colour code is that indicated in the table.

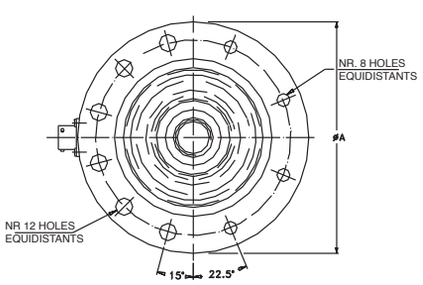
Cells connected in parallel



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.

MECHANICAL DIMENSIONS





	Ln (kN)				
	10	**20**	**30**	**50**	**100**
ø A		116		154	
ø B		79		110	
ø C		28		59	
D		40		45	
ø E		20		35	
I		M18x1,5		M30x2	
ø J		98		130	
ø K		6,5		11	
Screws nr.		8xM6		12xM10	
Nm*		20		90	

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

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**

ORDER CODE

Force transducer **TH** ☐☐

MEASUREMENT RANGE (kN)	
0 - 10	**KN1D**
0 - 20	**KN2D**
0 - 30	**KN3D**
0 - 50	**KN5D**
0 - 100	**KN1C**

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

EX: TH - KN5D
TH force transducer, with measurement range 0 - 50 kN.

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