TR

FORCE TRANSDUCER FOR MEASURING THE TENSION ON FIXED OR ROTATING SPINDLES

Main features

- *Range of measurement: from 100 N to 1kN*
- *Accuracy class: 0,5%*
- *Corrosion resistant*
- *Internally generated calibration signal*
- *Orientation of the axis of maximum sensitivity for 35° independently from the position of the fixing holes*
- *Grade of protection: IP65 (DIN 40050)*
- *Integrated protection against overloads*

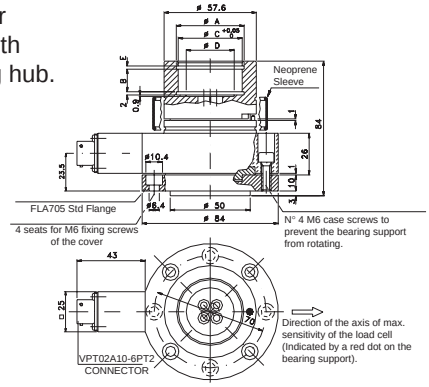
TR series force transducers are used to measure the tension that plastic films or tapes exert on the guide rollers of the machinery used to coil them.
Mounted at the ends of a fixed or transmission shaft on the machine chassis, they perform the function of force sensors and bearing for the ends of the shaft.
They are used on both fixed and rotating shafts.
TR transducers are supplied with the adaptor flange for fixing, with 4 M6 screws or with one central M10 or M12 screw.

TECHNICAL DATA

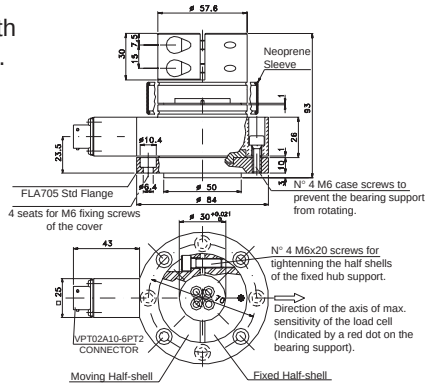
Accuracy		0,5%
Nominal full scale load (Ln)		100N...1kN
Nominal output at FSO		2mV/V
Output tolerance at Ln		<± 1% FSO
Combined errors: Non linearity Histeresis, Repeatibility		< ± 0,5% FSO
Creep (after 30 min. at Ln)		< ± 0,06% FSO
Zero load out of balance signal		< ± 1% FSO
Thermal drift in compensated range	Sensitivity	< ± 0,005% FSO°C
	Zero	< ± 0,01% FSO°C
	Calibration	-
Nominal bridge resistance		350 Ohm
Isolation resistance		> 10 GOhm
Nominal supply voltage		10V
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		100% Ln
Maximum applicable load		300% Ln
Rupture load		> 500% Ln
Maximum static lateral load		150% Ln
Maximum elastic deformation at Ln		< 0,5 mm
Grade of protection (DIN40050)		IP65
Electr. connections: Connector		VPT02A10-6PT2
Elastic element material		Anodised aluminium
Case material		Anodised aluminium (Flange and bearing in AISI 303)

MECHANICAL DIMENSIONS

Model for rollers with revolving hub.



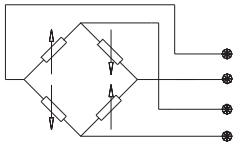
Model for rollers with fixed hub.



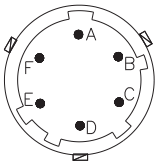
Bearing	øA	B	øC	øD	E
35x15 H11	37	14,5	35	20	1,6
40x17 H12	42,5	14,25	40	30	1,85

Dimensions mm. (± 0,1)
Recommended torque for M6 fixing screws: **7Nm**

ELECTRICAL CONNECTIONS



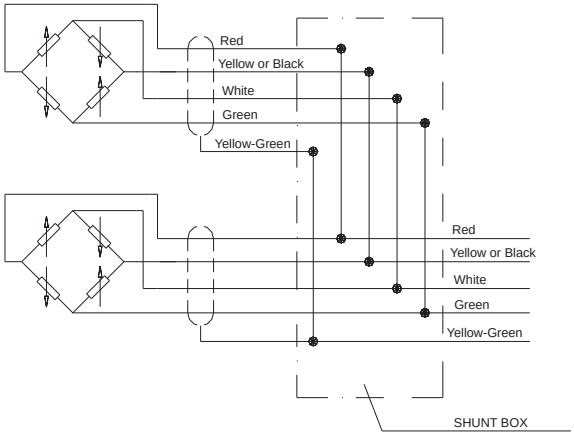
	CABLE OUTPUT	CABLE CONNECTION
SIGNAL +	A	Red
SIGNAL −	B	Yellow or Black
EXCITATION +	C	White
EXCITATION −	D	Green



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



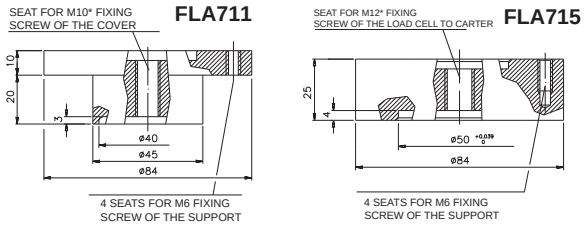
In systems that use several cells, the parallel connection automatically sums the loads on each individual cell.
Using this method of measurement, the maximum load will be the sum of the loads on the individual cells and the sensitivity will be the average value of these cells.
It is important that the user ensures that no cell is stessed beyond its maximum rating under any load condition.

CONVERSION TABLE

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

FLANGE

Standard adaptor flange (see mechanical dimensions drawing) **FLA705**
Central fixing **FLA711**
Central fixing **FLA715**



***** Recommended torque **75Nm**

OPTIONAL ACCESSORIES

Radial bearing with stop ring (UNI7437-75)
and spacer 35 mm **PKIT 602**
40 mm **PKIT 600**

Female cable connector
Grade of protection IP65 **CON 300**
TR application manual **DOC467**

ORDER CODE

Force transducer **TR** ☐☐☐☐

MEASUREMENT RANGE (N)	
0 - 100	**N1C**
0 - 200	**N2C**
0 - 350	**N3.5C**
0 - 500	**N5C**
0 - 750	**N7.5C**
0 - 1000	**N1M**

EXTERNAL DIAMETER	
35 mm bearing	**C35**
40 mm bearing	**C40**
30 mm shaft spindle	**P30**

FLANGE	
FLA 705 (standard)	**1**
FLA711	**2**
FLA715	**3**

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

Ex.: TR-N3.5C-C40-1
TR force transducer, measurement range 350N, external bearing diameter of 40mm with normal mounting and standard flange.

GEFRAN

LEADER Electronic Co., Ltd
116, Jianghuali, Jianghua Road, Jiangmen City, GD, PRC
Tel: + 86 750 3101711, 3379183
Fax: + 86 750 3388669
Website: www.leadersensors.com
E-mail: leader@leadersensors.com

CSQ UNI EN 29001 - ISO 9001 Certificato nr. 9115.GEF1

cod. 84723 - 10/99