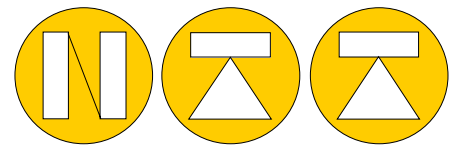


# TC8-TM EN ISO376 Class 1.0



**NORDIC TRANSDUCER**



- Capacities from 5kN to 1 MN for use in:
  - High accuracy test systems
  - Other force measuring applications
  - Classification according to : EN ISO376 or ASTM E74 on request.

- EN ISO376 Class 1.0 from 500kN to 1000kN in compression

The TC8TM is a low profile hermetically sealed load cell made in stainless steel with IP67 protection . Their compact size makes them ideally suited for applications where space also is limited & where high side forces or dynamic loads are present.

They can together with our high accuracy instruments be used as reference load cells for many types of factory verification.

## SPECIFICATIONS TC8-TM:

NOMINAL LOAD in KN	5-10-25-50-100-200-300-500-750-1000		
ACCURACY EN ISO 376	Class "1.0"	RELATIVE ERROR ( on reading *)	
Repeatability ( 0° - 120° - 240°)*	< +/- 0.145%		
Interpolation ( 2° equation )*	< +/- 0.090%		
Zero*	< +/- 0.030%		
Reversitivity *	< +/- 0.240%		
Non linearity F.S.	< +/- 0.03%		
Hysteresis F.S.	< +/- 0.03%		
Temp. effect on zero per 10°C	< +/- 0.028 %		
Temp. effect on span per 10°C	< +/- 0.024 %		
NOMINAL SENSITIVITY +/-0.1%	2mV/Volt		
Input/Output resistance	800/705 Ohm	DISPLACEMENT N.LOAD mm	0.06, 0.17, 0.23
Resistance for 500-750-1000kN	430/352 <sup>(1)</sup> Ohm	NOMINAL TEMP. RANGE	-10/+40 °C
Zero balance	0.5% F.S	SERVICE TEMP. RANGE	-20/+70 °C
Supply voltage nominal 10V	2 - 15 Volt	STORAGE TEMP. RANGE	-20/+80 °C
MECHANICAL VALUES RELATED TO NOMINAL LOAD		PROTECTION CLASS	IP67
a) minimum load	0%	WEIGHT	2.45-5.80-16.5kg
b) service load	120%	CELL MATERIAL	Stainless IP67
c) max. permissible load	150%	CABLE LENGTH	5 meter
d) breaking load	>300%	FIXING SCREWS class 12.9	
e) max. side load	100%	Diameter M	M10 - M16 - M24
f) max. dynamic load *4	75%	Tightening torque	70 368 460

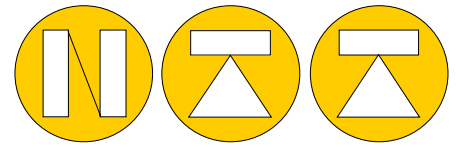
\* min 1/10 of nominal load. (1) Related to 500-1000kN capacity

\*3 Test and calibration performed in Compression with load cell mounted on a bearing support with correctly tightened clamping bolts

\*4 The Dynamic load must be applied to the load cell central thread and not to the external fixing ring

**Nordic Transducer** Als Oddevej 85 DK-9560 Hadsund Danmark

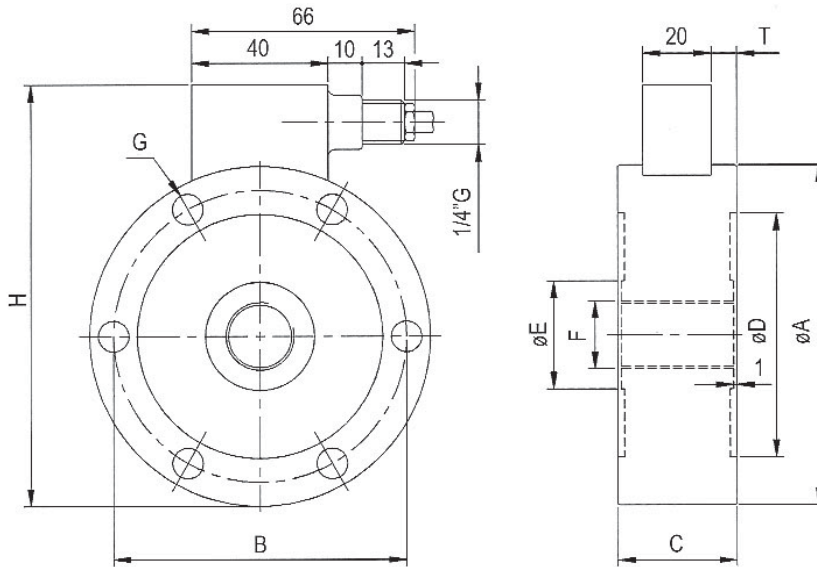
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**NORDIC TRANSDUCER**

## DIMENSIONS TC8-TM

Precision class 1.0 EN ISO 376



CODE	LOADS	øA	øB	C	øD	øE	øF	øG	Holes	H	T	kHz <sup>(2)</sup>
CTC8TM5KNI15	5kN	127	110	35	92	47	M30x2	10.5	8	149	7.5	2.5
CTC8TM10KNI15	10kN	127	110	35	92	47	M30x2	10.5	8	149	7.5	2.5
CTC8TM25KNI15	25kN	127	110	35	92	47	M30x2	10.5	8	149	7.5	4.8
CTC8TM50KNI15	50kN	127	110	35	92	47	M30x2	10.5	8	149	7.5	3.8
CTC8TM100KNI15	100kN	165	138	60	110	62	M42x2	17.0	12	188	15	22.1
CTC8TM200KNI15	200kN	165	138	60	110	62	M42x3	17.0	12	188	15	22.1
CTC8TM300KNI15	300kN	165	138	60	110	62	M42x3	17.0	12	188	15	22.1
CTC8TM500KNI15	500kN	230	185	80	147	96	M60x3	25.0	12	254	15	18.2
CTC8TM750KNI15	750kN	230	185	80	147	96	M60x3	25.0	12	254	30	18.2
CTC8TM1MNI15	1000kN	230	185	80	147	96	M60x3	25.0	12	254	30	18.2

<sup>(2)</sup> Natural frequency

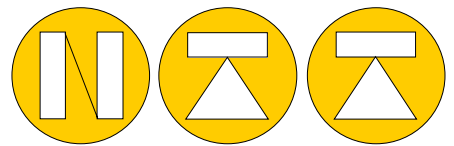
**LOAD CELL WIRING**

INPUT+	RED
INPUT-	BLACK
OUTPUT+	WHITE
OUTPUT-	YELLOW
SHIELD:	CONNECTED TO LOAD CELL BODY

**Cable:** PVC 105°C Ø5.2mm with 4 tinned conductors Ø 0.35mm<sup>2</sup> and tinned shield

All specifications subject to change without notice

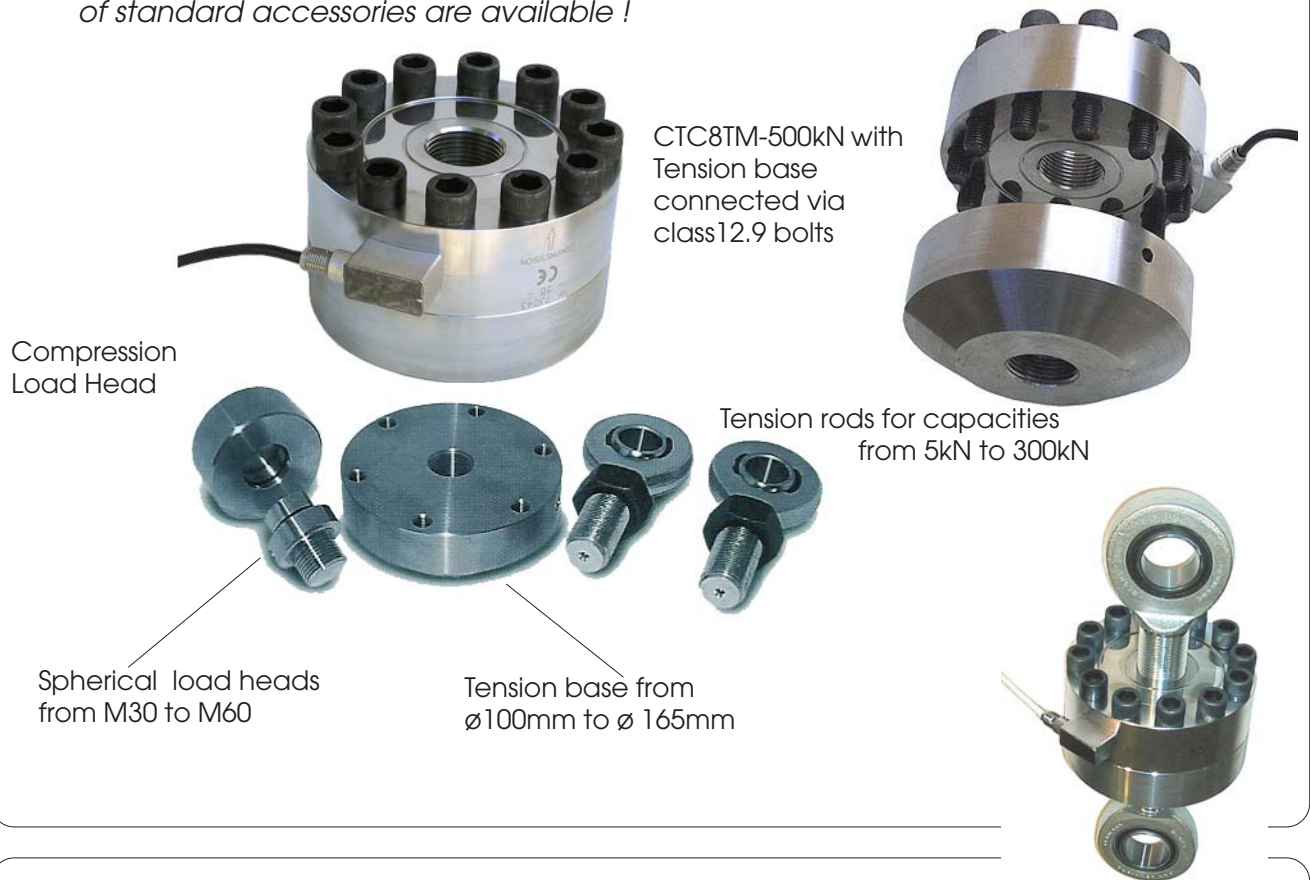
**NordiC Transducer** Als Oddevej 85 DK-9560 Hadsund Danmark  
 Tel. +45 98 58 14 44 Fax. +45 98 58 18 66 e-mail: [ntf@ntf.dk](mailto:ntf@ntf.dk) WEB: [www.ntf.dk](http://www.ntf.dk)



**NORDIC TRANSDUCER**

## TC8-TM accessories

For correct usage of TC8-TM load cells a range of standard accessories are available !



Compression Load Head

CTC8TM-500kN with Tension base connected via class 12.9 bolts

Tension rods for capacities from 5kN to 300kN

Spherical load heads from M30 to M60

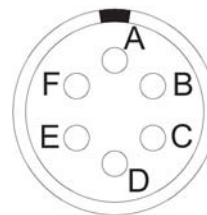
Tension base from  $\varnothing 100\text{mm}$  to  $\varnothing 165\text{mm}$

TC8 shown here with M42 Tension Rods

### Other options:



Mill connector 6 pole



Picture seen from soldering side

### INDUSTRIAL STANDARD OUTPUT

#### 4-20mA - 0..5Volt or 0..10Volt 3wire system

Calibration tolerance is  $\pm 0.1\%$   
 Nominal power supply is 12-24Vdc max. 28 Volt  
 Max. absorption is 30mA ( without load applied )  
 A 5 point test report can also be supplied as a option at order time.  
 4-20mA only for one direction.  
 M12 connector can also be supplied.

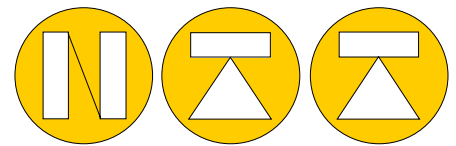
#### AMP Mill connector for 4-20mA output:

Power supply 12-24VDC = A ( RED )  
 0V/ -Signal = B ( BLACK )  
 Signal Output + = D ( WHITE )  
 Earth / shield = F connected to Body

#### AMP

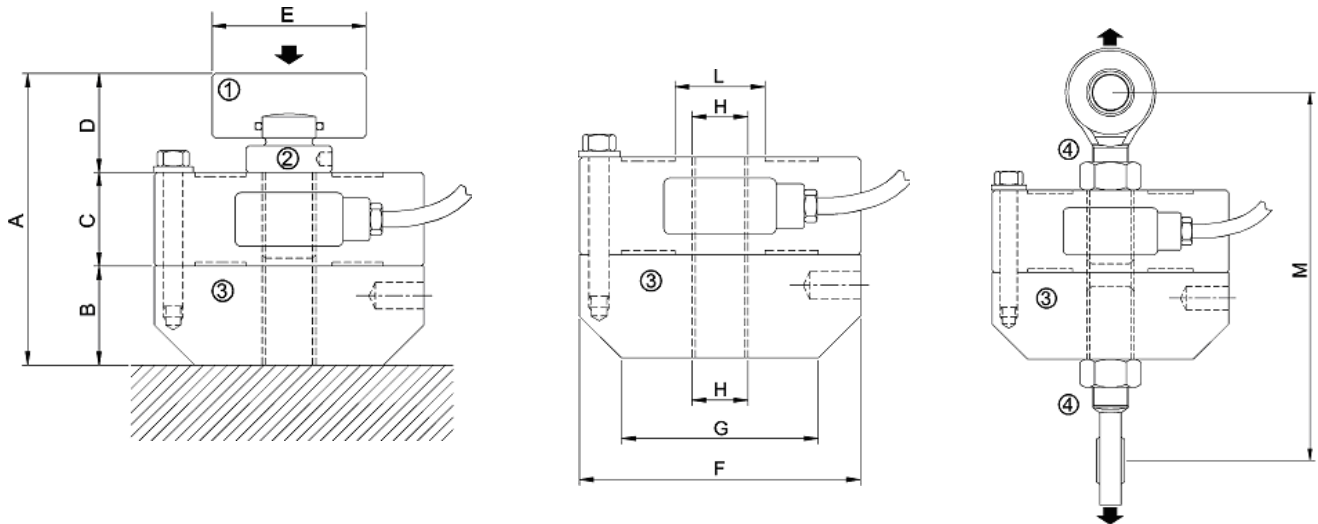
If supplied with Connector & mounted with cable, the cable length is 5m as standard.

# TC8-TM accessories



**NORDIC TRANSDUCER**

- 1) Loading head
- 2) Spherical loading head
- 3) Mounting base for compression and tension
- 4) Rod end Bearings



TC8-TM	A	B	C	D	E	F	G	H	L	M
5, 10, 25, 50kN	110	37	35	38	∅ 76	∅ 127	∅ 100	M 30 X 2	∅ 47	~ 200
100,200, 300kN	158	60	50	48	∅ 76	∅ 165	∅ 100	M 42 X 3	∅ 62	~ 224
500,750, 1000 kN	253	85	80	88	∅ 126	∅ 230	∅ 180	M 60 X 3	∅ 96	/

## TC8-TM:

## CODE

## ACCESSORIES (optional):

5, 10, 25, 50kN

CTIC28  
CTC445M30  
CPBTC4D127  
CACCEM30

- ① Loading head.
- ② Spherical loading head M30X2.
- ③ Mounting plate ∅ 127 mm.
- ④ Rod end Bearing

100, 200, 300kN

CTIC35  
CTS62M42  
CPBTC4D165  
CACCEM42

- ① Loading head.
- ② Spherical loading head M42X3.
- ③ Mounting plate ∅ 165 mm.
- ④ Rod end Bearing

500,750, 1000 kN

CTIC60  
CTS96M60  
CPBTC4D230

- ① Loading head.
- ② Spherical loading head M60X3.
- ③ Mounting plate ∅230

## Fixing bolt in class 12.9 steel

### Tightening torque ( Nm)

M10	M16	M24
70	368	460

Accessories material:  
from 5-200kN:  
from 300 1000kN:

Stainless Steel  
Rm> 90kg/mm<sup>2</sup>  
Rm> 130kg/mm<sup>2</sup>