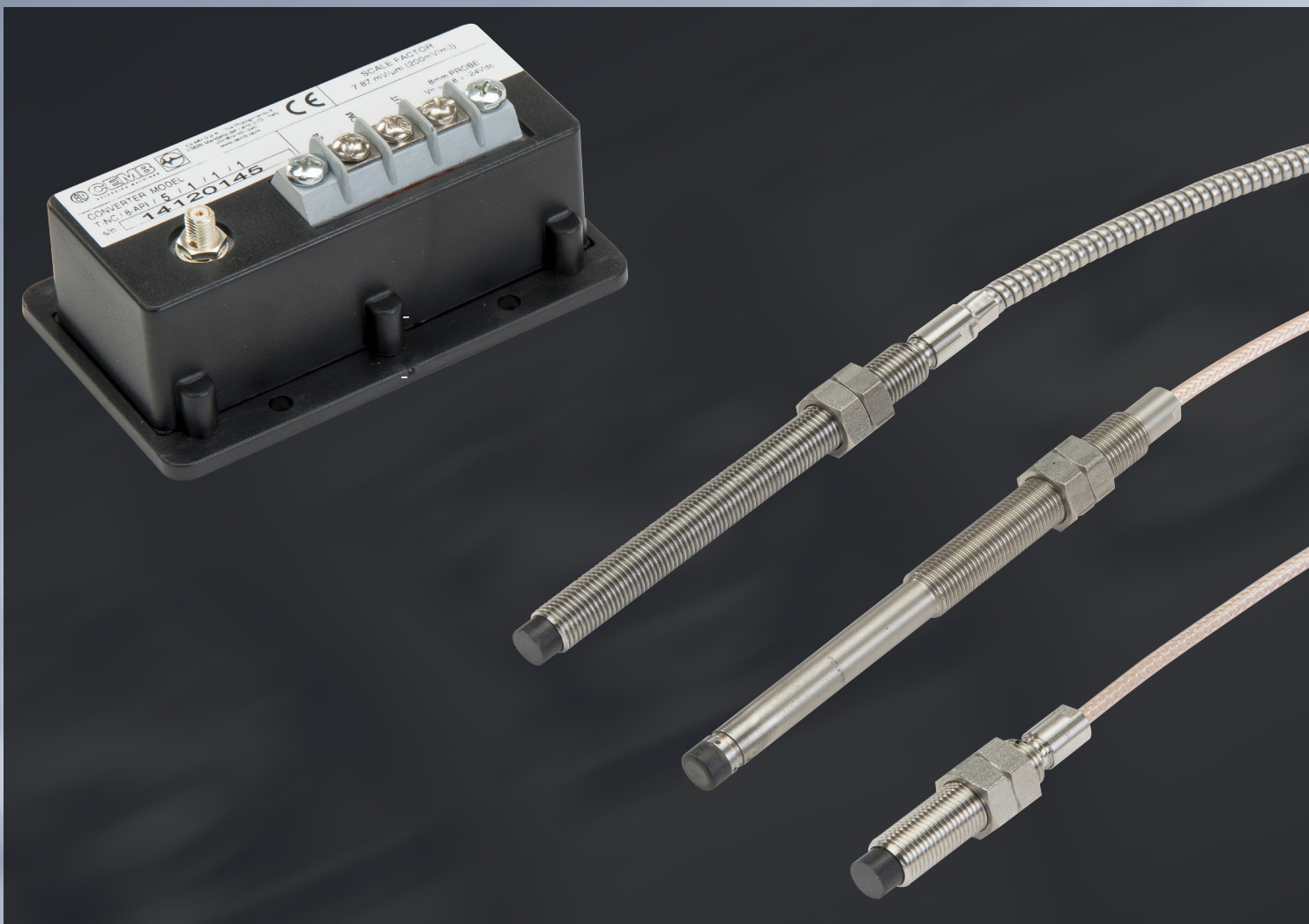


DISPLACEMENT TRANSDUCERS

# T-NC/8-API



# CEMB

BALANCING MACHINES

# T-NC/8-API

## FUNCTION

The T-NC/8-API transducer measures the distance of a ferrous material from the sensor head. The non-contact type measurement can be both dynamic for vibration measurement and static for displacements.


## GENERAL DESCRIPTION

The transducer is normally composed of an ST-NC/8 proximity sensor, a CPT-NC/8 extension cable and a T-NC-8/API converter.

The operating principle is based on the generation of a high-frequency electromagnetic field irradiated by the sensor which induces an eddy current in the target. The intensity of this eddy current depends directly on the distance between the sensor and the target and is converted into an electric signal processed by the converter.

The sensor is composed of a stainless steel body and a Teflon coaxial cable. The die-cast aluminium converter is inserted in a container in insulating material and contains the electronics to power the sensor and signal linearization. It is supplied calibrated for a standard target in AISI 4140 (calibration with other targets are available on request).

The transducer is also available in the certified version for applications in an area classified according to ATEX Directive 94/9/EC.

 II 1 G Ex ia IIC T6 / T5 Ga

## TECHNICAL CHARACTERISTICS

<b>Composition</b>	<ul style="list-style-type: none"><li>• ST-NC/8 sensor in AISI 304 stainless steel</li><li>• CPT-NC/8 extension cable</li><li>• T-NC/8-API converter</li></ul>
<b>Power supplies</b>	<ul style="list-style-type: none"><li>• -24 VDC nominal (-20 to -30 VDC range)</li></ul>
<b>Connections</b>	<ul style="list-style-type: none"><li>• 3-way screw terminal strip</li><li>• Miniature coaxial connector for sensor</li></ul>
<b>Ambient operating range</b>	<ul style="list-style-type: none"><li>• Sensor: -35°C to +175°C</li><li>• Extension cable: -35°C to +175°C</li><li>• Converter: -35°C to +75°C</li></ul>
<b>Measurement type</b>	<ul style="list-style-type: none"><li>• Differential</li></ul>
<b>Measurement range</b>	<ul style="list-style-type: none"><li>• <math>\pm 1</math> mm (0.5 - 2.5 mm)</li></ul>
<b>Dynamic range</b>	<ul style="list-style-type: none"><li>• Frequency: 0 to 10,000 Hz</li></ul>
<b>Output signal</b>	<ul style="list-style-type: none"><li>• Analogue</li></ul>
<b>Linearity</b>	<ul style="list-style-type: none"><li>• <math>\pm 1\%</math> over the entire measurement range and within the operating temperature limits indicated</li></ul>
<b>Nominal sensitivity</b>	<ul style="list-style-type: none"><li>• 200 mV/mil (7.87 mV/<math>\mu</math>m)</li></ul>
<b>Output impedance</b>	<ul style="list-style-type: none"><li>• 500 Ohm</li></ul>
<b>Sensitivity to temperature</b>	<ul style="list-style-type: none"><li>• According to ANSI/API 670</li></ul>
<b>Possible provisions at the time of ordering</b>	<p>SENSOR</p> <ul style="list-style-type: none"><li>• Thread type</li><li>• Body length</li><li>• Total sensor length (body + cable)</li><li>• Unthreaded part length</li><li>• Cable armature</li></ul> <p>EXTENSION CABLE</p> <ul style="list-style-type: none"><li>• Cable length</li><li>• Cable armature</li></ul> <p>CONVERTER</p> <ul style="list-style-type: none"><li>• Total connection length</li><li>• Nominal sensitivity</li><li>• Target type</li><li>• Certification type</li></ul>



## ORDER INFORMATION

### Sensor

ST - NC / 8 /  /  /  /  /

#### A: THREAD TYPE

0	M10x1
1	3/8"-24UNF
S	special

#### B: BODY LENGTH

pitch 10 mm – Minimum 40 mm (04) – Maximum 250 mm (25)

05	50 mm (standard)
----	------------------

#### C: TOTAL SENSOR LENGTH (BODY + CABLE)

Pitch 500 mm – Minimum 500 mm (005) – Maximum 9000 mm (090)

010	1000 mm (standard)
-----	--------------------

#### D: UNTHREADED PART LENGTH (only for M10x1)

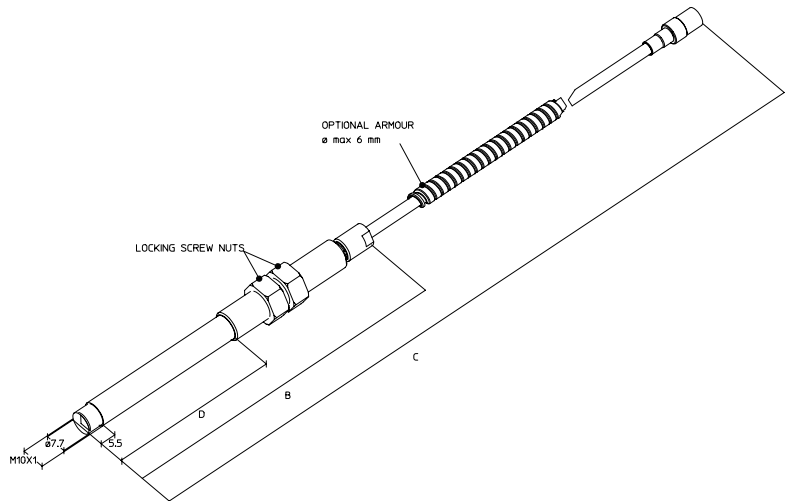
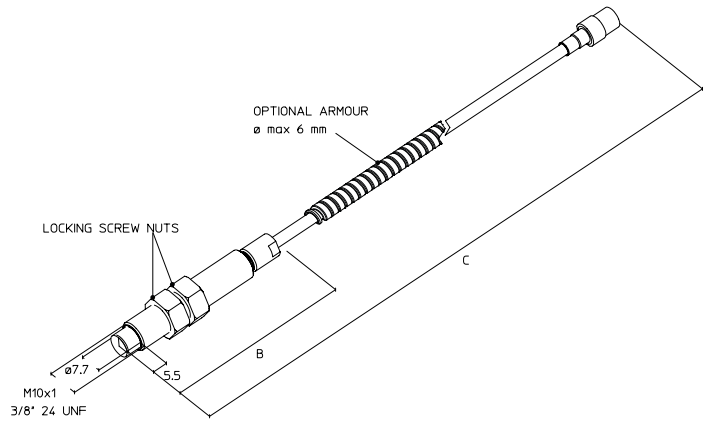
pitch 10 mm – Minimum 0 mm (00) – Maximum 120 mm (12)

00	0 mm (standard)
----	-----------------

#### E: CABLE ARMATURE

0	not armoured
1	armoured

## DIMENSIONS



### Extension cable

CPT - NC / 8 /  /

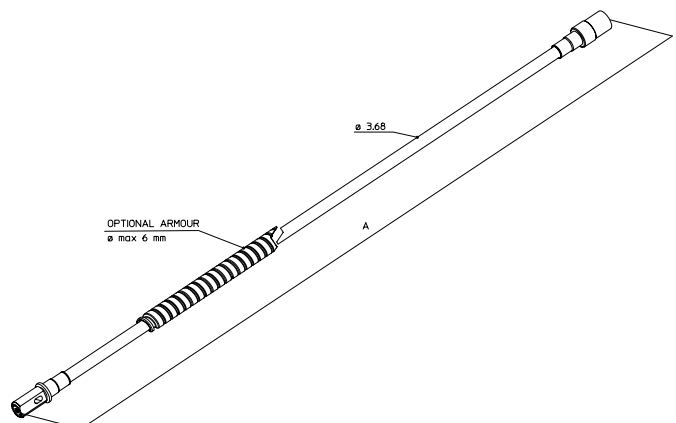
#### A: CABLE LENGTH

pitch 500 mm – Minimum 1500 mm (015) – Maximum 8500 mm (085)

040	4000 mm (standard)
-----	--------------------

#### B: CABLE ARMATURE

0	not armoured
1	armoured



## Converter

T - NC / 8-API /  /  /  /

### A: TOTAL CONNECTION LENGTH

1	1 mt
3	3 mt
5	5 mt
7	7 mt
9	9 mt
S	special

### B: NOMINAL SENSITIVITY

1	standard 7,87	mV/μm
S	special	

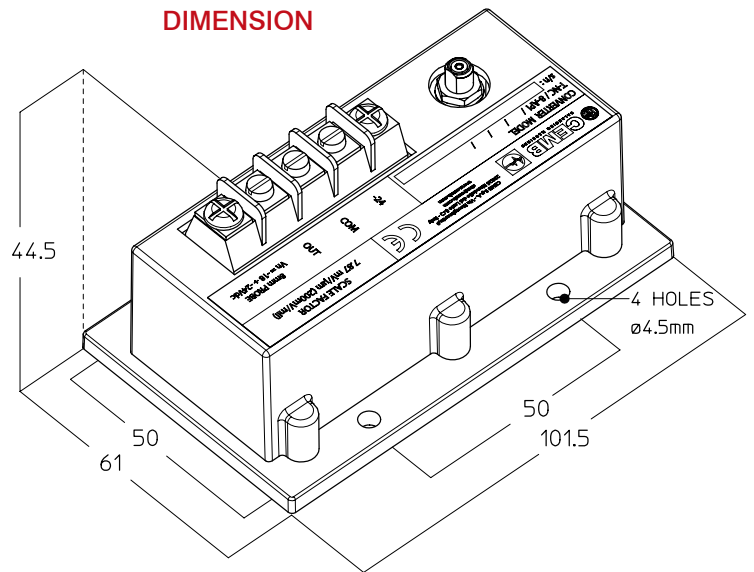
### C: TARGET TYPE

1	AISI 4140
2	AISI 410
S	special

### D: CERTIFICATION TYPE

1	standard
2	Atex II 1G Ex ia IIC T6 / T5 Ga

## DIMENSION



## ORDER EXAMPLE:

ST-NC/8/0/05/010/00/0

0 = M10x1 thread  
 05 = body length 50 mm  
 010 = sensor length (body + cable) 1000 mm  
 00 = unthreaded part length 0 mm  
 0 = cable not armoured

CPT-NC/8/040/0

040 = cable length 4000 mm  
 0 = cable not armoured

T-NC/8-API/5/1/1/2

5 = total connection length 5 m  
 1 = standard sensitivity 7.87 mV/μm  
 1 = AISI 4140 target  
 2 = Atex II 1G Ex ia IIC T6/T5 Ga certification



# CEMB

BALANCING MACHINES

 **CEMB IRAN**

Mobile: +98-912-313-1941

Fax: +98-21-8809-5858

E-Mail: [info@cemb-iran.com](mailto:info@cemb-iran.com)

[www.cemb-iran.com](http://www.cemb-iran.com)

All the data and features mentioned in this catalogue are purely for information and do not constitute any commitment on the part of our company, which reserves the right to make any and all alterations it may consider suitable without notice.