DISPLACEMENT TRANSDUCERS

T-NC/8-API

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.

The measuring chain is composed by a proximity sensor, an extension cable and a converter. The converter is inserted in a box and contains the electronics to power the sensor and signal linearization. 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.

TECHNICAL CHARACTERISTICS

Measuring Chain	■ ST-NC/8 sensor in AISI 304 stainless steel *(To be ordered separately, see page 3)* ■ CPT-NC/8 extension cable *(To be ordered separately, see page 3)* ■ T-NC/8-API converter
Power supplies	■ -24 VDC nominal (-20 to -30 VDC range)
Connections	■ 3-way screw terminal strip ■ Miniature coaxial connector for sensor
Ambient operating range	■ Sensor: -55°C to 180°C (ATEX: -55°C to 175°C) ■ Extension cable: -55°C to 180°C (ATEX: -55°C to 175°C) ■ Converter: -40°C to 80°C (ATEX: -30°C to 80°C)
Measurement type	■ Differential or linear displacement
Measurement range	■ Standard: ± 1mm (0,5 ÷ 2,5mm) @ 7.87 mV/um ■ Special: ± 2mm (0,5 ÷ 4,5mm) @ 3.93 mV/um
Dynamic range	■ Frequency: 0 to 10,000 Hz
Output signal	■ Analogue
Linearity	■ ± 1% (range 0,5 ÷ 2,5mm; T=100°C)
Nominal sensitivity	■ 7.87 mV/µm (200 mV/mil) or 3.93 mV/µm (100mV/mil)
Output impedance	■ 500 Ohm
Sensitivity to temperature	■ According to ANSI/API 670

CEMB
BALANCING MACHINES

T-NC/8-API TRANSDUCER

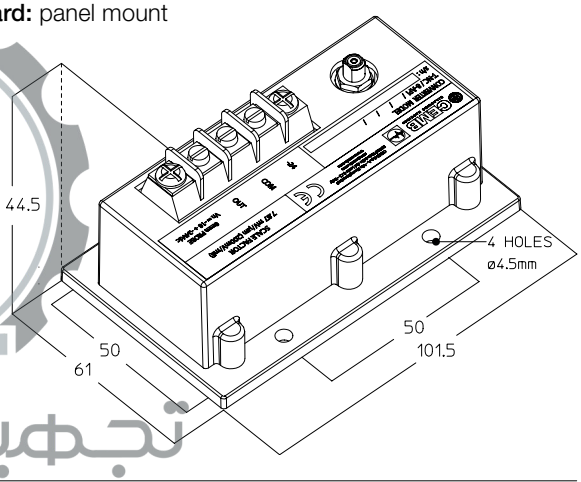
The transducer is also available as ATEX certified for classified area application

II 1G Ex ia IIC T6,T5 Ga (ATEX)
Ex ia IIC T6,T5 Ga (IECEx)

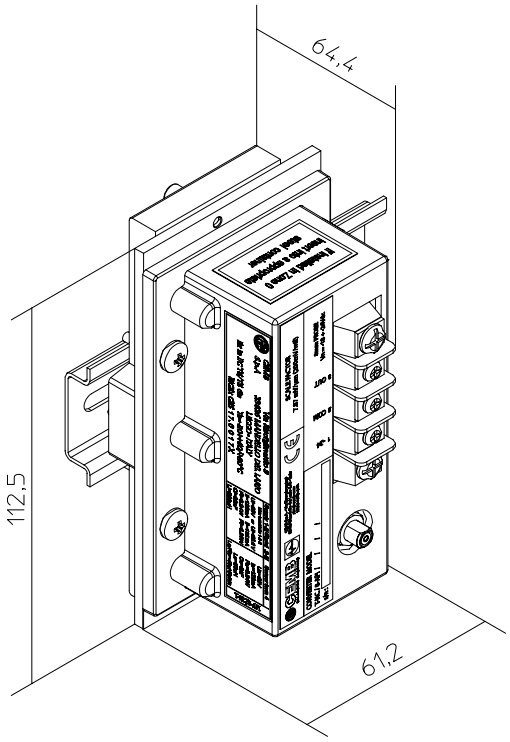
Power supply:	- 24Vdc
Target:	AISI 4140 (default)
	Other materials (optional)
Dynamic field:	0 ÷ 10KHz
Output signal:	analogue
DIN rail:	optional

TRANSDUCER

Standard: panel mount



Opzionale: DIN - Din rail mount



T - NC / 8-API / A ☐ / B ☐ / C ☐ / D ☐

A: CALIBRATION LENGTH

1	1 m
3	3 m
5	5 m
7	7 m
9	9 m

B: NOMINAL SENSITIVITY

1	standard 7,87 mV/µm (200mV/mil)
2	special: 3.93 mV/µm (100mV/mil)

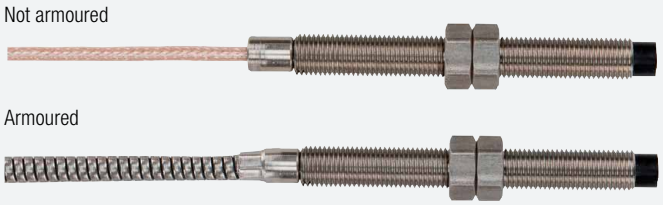
C: TARGET TYPE

1	AISI 41408
2	AISI 410
3	AISI 304
4	AISI 630
5	C45
6	INCOLOY
7	ER7T-ER8
8:	ASTM 276 SDX
9:	ASTM 668 UST-52-3
10:	UNI 18CrNi Mo
11:	UNI 21CrMoV5-7
12:	UNI 23CrMoNiWv88
13:	UNI26NiCvMoV14-5
14:	UNI 35NiCrD15
15:	UNI 36NiCrMo16
16:	DIN 1.4571
17:	DIN 1.4462
18:	DIN 1.7225
S:	speciale

D: CERTIFICATION TYPE

1	Standard
2	II 1G Ex ia IIC T6,T5 Ga (ATEX)
3	Ex ia IIC T6,T5 Ga (IECEx)

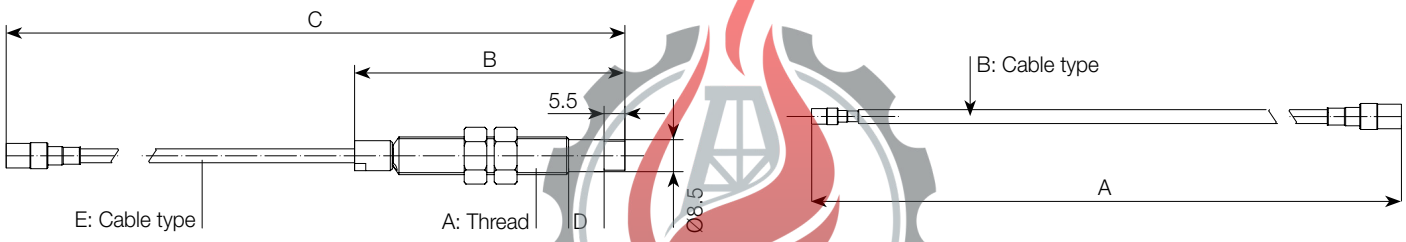
INTEGRATED CABLE TYPES



Material:	Stainless steel
Thread:	M10 o 3/8” - UNF
Body:	40 mm ÷ 250 mm
Oil proof:	Yes
Stainless steel armour cable:	Optional

EXTENSION CABLE (optional)

Stainless steel armour cable:	Optional



PROBE

ST - NC / 8 / A ☐ / B ☐ / C ☐ / D ☐ / E ☐ *

A: THREAD TYPE

0	M10x1
1	3/8”-24UNF

B: BODY LENGTH
pitch 10 mm – minimum 40 mm (4) – maximum 250 mm (25)

5	50 mm (standard)

C: TOTAL LENGTH (BODY + CABLE)
pitch 500 mm – minimum 500 mm (5) – maximum 9000 mm (90)

10	1000 mm (standard)

D: UNTHREADED PART LENGTH (ONLY FOR M10X1)
pitch 10 mm – Minimum 0 mm (0) – Maximum 120 mm (12)

0	0 mm (standard)

E: CABLE ARMATURE

0	not armoured
1	armoured

EXTENSION CABLE (optional)

CPT - NC / 8 / A ☐ / B ☐ *

A: CABLE LENGTH
pitch 500 mm – minimum 1500 mm (15) – maximum 8500 mm (85)

40	4000 mm (standard)

B: CABLE ARMATURE

0	not armoured
1	armoured

* In the old coding, number zero “0” could be present before the code number.

Example:
ST-NC/8/0/05/010/00/0 (old code)
Equivalent to:
ST-NC/8/0/5/10/0/0 (new code)

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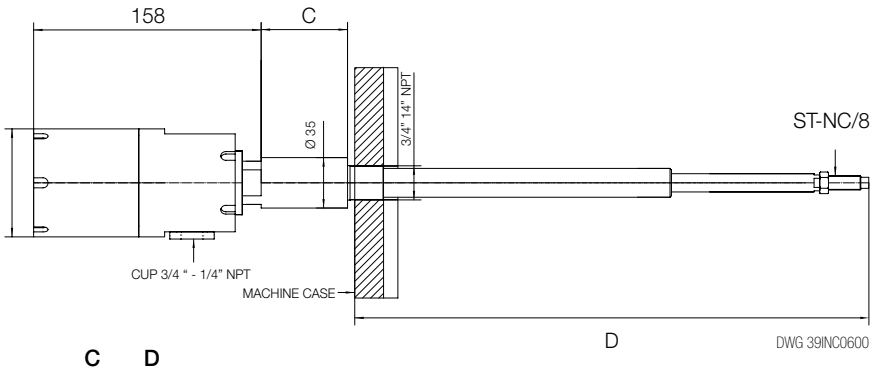
OPTIONAL ACCESSORIES

SR-6*

Probe Adapter allowing the installation on the rotor and easy setting of the probe on the field.



SR-6 / C ☐ / D ☐

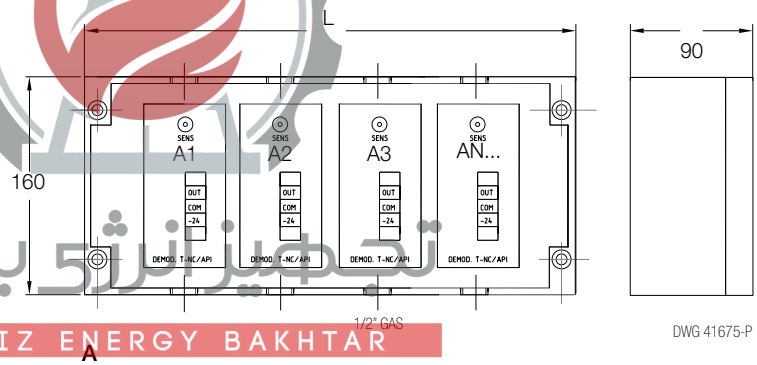
C: **DISTANCE BETWEEN MACHINE CASING AND HOUSING PROBE ADAPTER**
pitch 15 mm - minimum 0 mm - maximum 225 mm

D: **DISTANCE BETWEEN MACHINE CASING AND ROTOR**
pitch 5 mm - minimum 100 mm - maximum 750 mm

* others adapters are also available under request

JB-1

Alu Junction Box IP65 container for T-NC/8 API.



JB-1 / A ☐

A:	NUMBER OF MODULES	
1	1 Module	L= 160mm
2	2 Modules	L= 260mm
4	4 Modules	L= 360mm
6	6 Modules	L= 560mm

DIN RAIL ADAPTER
440555960+667003132

ZENER BARRIER Z896 (FOR HAZARDOUS AREA)
800208896

PLASTIC TAG
040STR000

B5MAG10 CY002

STAINLESS STEEL TAG
980710835

B5MAG10 CY002

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BALANCING MACHINES

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