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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

Composition	■ ST-NC/8 sensor in AISI 304 stainless steel ■ CPT-NC/8 extension cable ■ 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: -20°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

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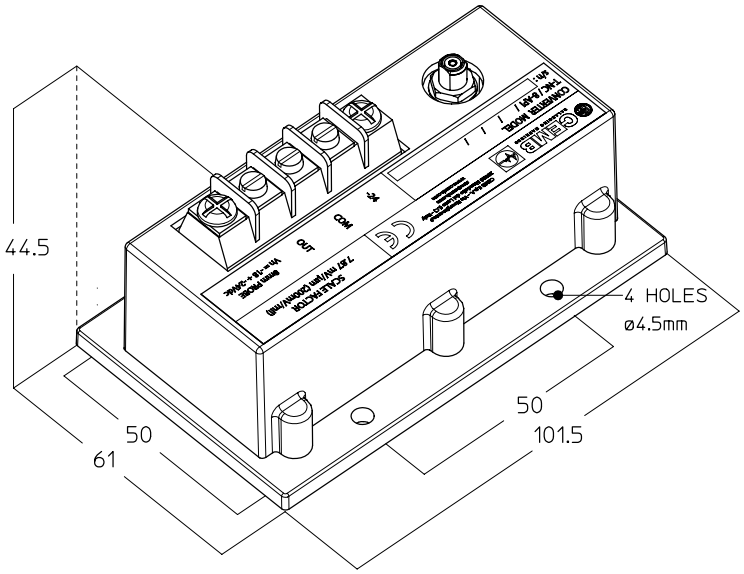
BALANCING MACHINES

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

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

A: TOTAL CONNECTION LENGTH

1	1 m
3	3 m
5	5 m
7	7 m
9	9 m
S	special

B: NOMINAL SENSITIVITY

1	standard 7,87 mV/µm (200mV/mil)
2	special: 3.93 mV/µm (100mV/mil)
S	other to be specified

C: TARGET TYPE

1	AISI 4140
2	AISI 410
3	AISI 304
4	AISI 630
5	C45
6	INCOLOY
7	ER7T-ER8
S	special

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

Not armoured

Armoured

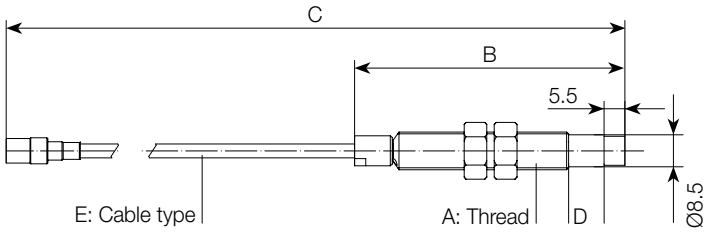
Material:	Stainless steel
Thread:	M10 o 3/8” - UNF
Body:	40 mm ÷ 250 mm
Oil proof:	Yes
Stainless steel armour cable:	Optional

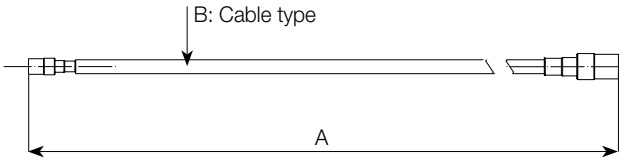
EXTENSION CABLE (optional)

Not armoured

Armoured

Stainless steel armour cable:	Optional





PROBE

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

A: THREAD TYPE

0	M10x1
1	3/8”-24UNF
S	special

B: BODY LENGHT

pitch 10 mm – minimum 40 mm (4) – maximum 250 mm (25)

5	50 mm (standard)

C: TOTAL SENSOR 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 LENGHT

pitch 500 mm – minimum 1500 mm (15) – maximum 8500 mm (85)

40	4000 mm (standard)

B: CABLE ARMOUR

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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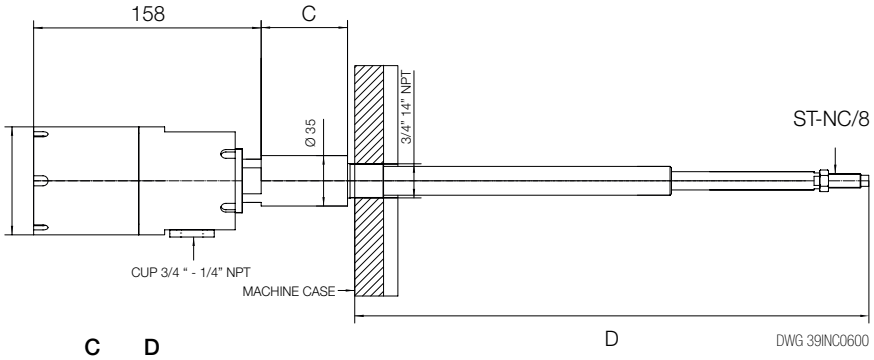
SR-6

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

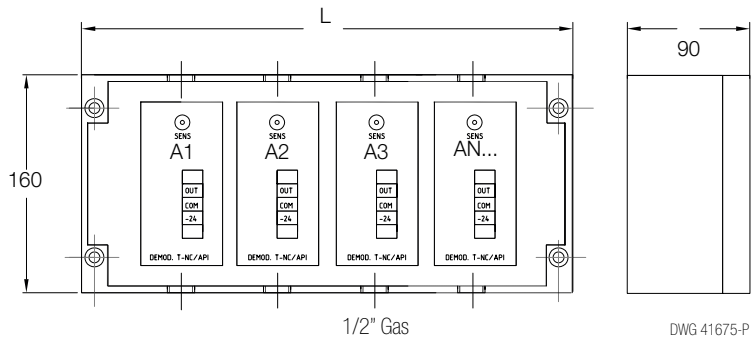
0	0 mm (standard)

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

250	250 mm (standard)

JB-1

Alu Junction Box IP65 container for TR-NC/8 transmitters.



JB-1 / A ☐

A: **NUMBER OF TRANSMITTER MODULES**

1	1 Module	L= 160mm
2	2 Modules	L= 260mm
4	4 Modules	L= 360mm
6	6 Modules	L= 560mm

ZENER BARRIER Z896 (FOR HAZARDOUS AREA)

DIN RAIL ADAPTER

PLASTIC TAG
040STR000

STAINLESS STEEL TAG
980710835

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