

## ROTATION SPEED TRANSMITTER KEY PHASOR

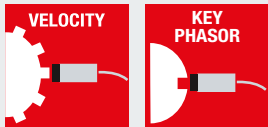
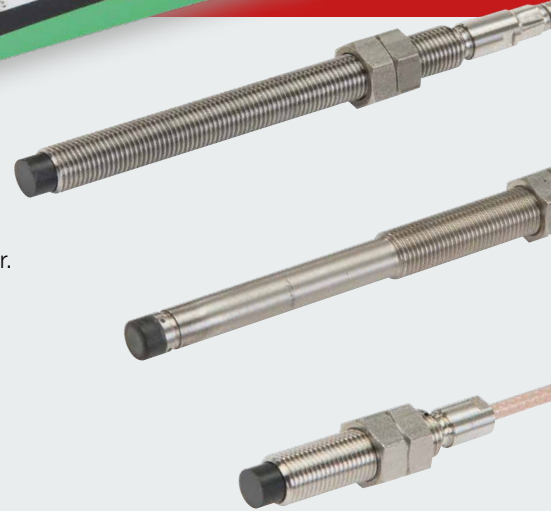
# TR-NC/8V



The TR-NC/8V transmitter measures the rotation speed of a shaft and it is able to interface directly in 2 wires technique (current loop 4 ÷ 20 mA) to an acquisition system (PLC or DCS). The device is also able to work as Key Phasor if properly connected to the acquisition system (0÷10 V)

The measuring chain is composed by a proximity sensor, an extension cable and a transmitter. It is supplied complete with:

- No. 4 contacts: two for the 24 Vdc connection of the power supply and two for the voltage gap for key phasor or probe positioning
- BNC socket for the connection to a portable analyser
- Coaxial connector for the sensor connection



### TECHNICAL CHARACTERISTICS

Composition	<ul style="list-style-type: none"> <li>■ ST-NC/8 sensor</li> <li>■ Extension cable</li> <li>■ TR-NC/8 transmitter</li> </ul>
Power supply	<ul style="list-style-type: none"> <li>■ 24 Vdc (18 ÷ 32 Vdc); 4 ÷ 20 mA (2 wires) current loop for rotation speed measurement only</li> <li>■ Maximum load see figure 1</li> </ul>
External connection	<ul style="list-style-type: none"> <li>■ Bipolar shielded cable to the terminals POWER +/-</li> </ul>
Environmental field	<ul style="list-style-type: none"> <li>■ Sensor: -55°C to 180°C (ATEX: -55°C to 175°C)</li> <li>■ Extension cable: -55°C to 180°C (ATEX: -55°C to 175°C)</li> <li>■ Transmitter: -40°C to 80°C (ATEX: -20°C to 70°C)</li> </ul>
Measurement type	<ul style="list-style-type: none"> <li>■ Rotation speed (4÷20mA current loop)</li> <li>■ Key Phasor (0÷10V)</li> </ul>
Dynamic field	<ul style="list-style-type: none"> <li>■ 100 ÷ 10000 RPM</li> </ul>
Linearity	<ul style="list-style-type: none"> <li>■ ± 2% (range 0,5 ÷ 2,5mm; T=100°C)</li> </ul>
Insulation	<ul style="list-style-type: none"> <li>■ ≥10<sup>8</sup> Ω between signal and container</li> </ul>
Possible arrangements to the order	<ul style="list-style-type: none"> <li>■ Cable length</li> <li>■ Measuring range</li> <li>■ Type of certification</li> <li>■ Number of teeth of the polar wheel</li> </ul>

# TR-NC/8V TRANSMITTER

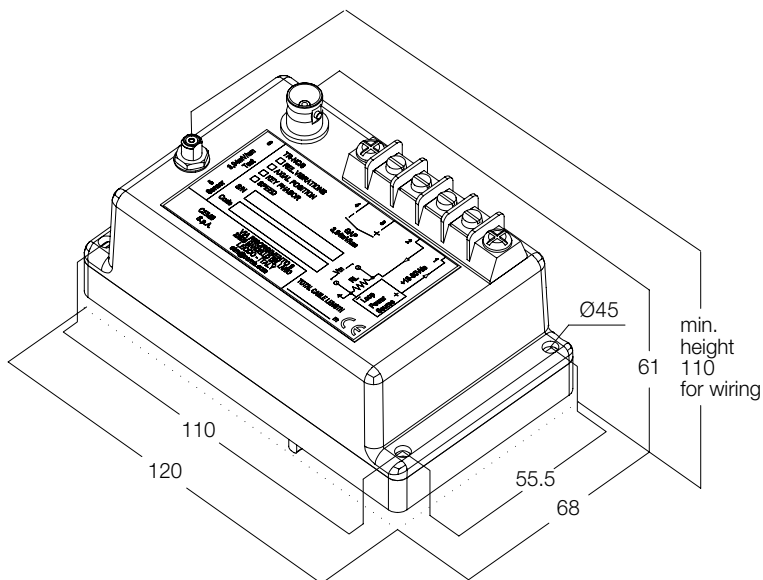
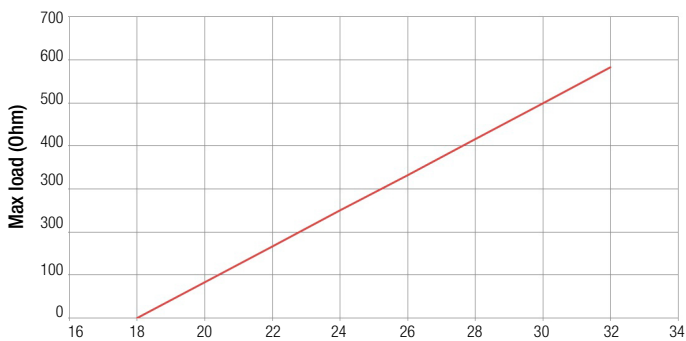
The transmitter is also available as ATEX certified for classified area application

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



Power supply:	24Vdc
Dynamic field:	100 ÷ 10000 RPM
Environmental field:	-20°C ÷ +70°C
DIN Rail:	Yes

Maximum load on current loop for rotation speed measure



## CONVERTER

TR-NC/8 /  /  /  /  /

### A: MEASUREMENT TYPE

V rotation speed and key phasor

### B: CABLE TOTAL LENGHT

1	5 m
2	7 m
3	9 m
S	special

### C: MEASURING RANGE FOR ROTATION SPEED

01	100 RPM
02	500 RPM
03	1000 RPM
04	1500 RPM
05	2000 RPM
06	2500 RPM
07	3000 RPM
08	4000 RPM
09	6000 RPM
10	10000 RPM
SP	special

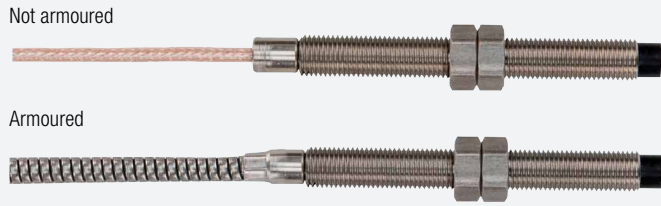
### D: CERTIFICATION

1	Standard
2	<b>Ex</b> II 1G Ex ia IIC T6,T5 Ga (ATEX)
3	Ex ia IIC T6,T5 Ga (IECEX)

### E: NUMBER OF TEETH OF THE POLAR WHEEL

000	1 hole
001	1 tooth
XXX	number of teeth

## INTEGRATED CABLE TYPES

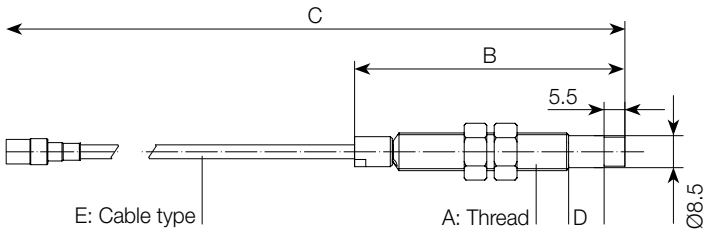


Material:	Stainless steel
Thread:	M10 o 3/8" - UNF
Body:	40 mm ÷ 250 mm
Oil proof:	Yes
Stainless steel armour cable:	Optional

## EXTENSION CABLE (optional)



Stainless steel armour cable: Optional



### PROBE

ST - NC / 8 /  /  /  /  /  \*

#### A: THREAD TYPE

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

#### 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)
----	--------------------

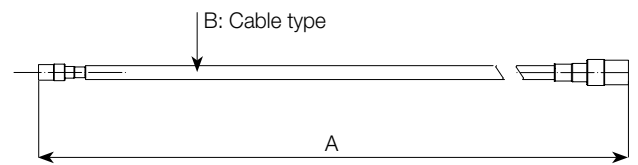
#### D: UNTHREADED PART LENGTH (ONLY FOR M10X1)

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: CABLE LENGTH

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

40	4000 mm (standard)
----	--------------------

#### B: CABLE ARMOUR

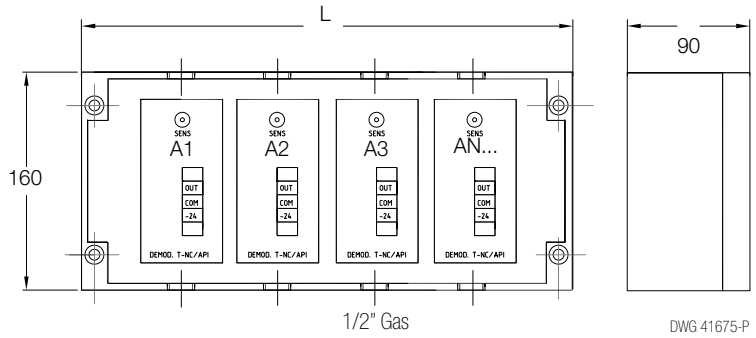
0	not armoured
1	armoured

\* 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)

**JB-1**

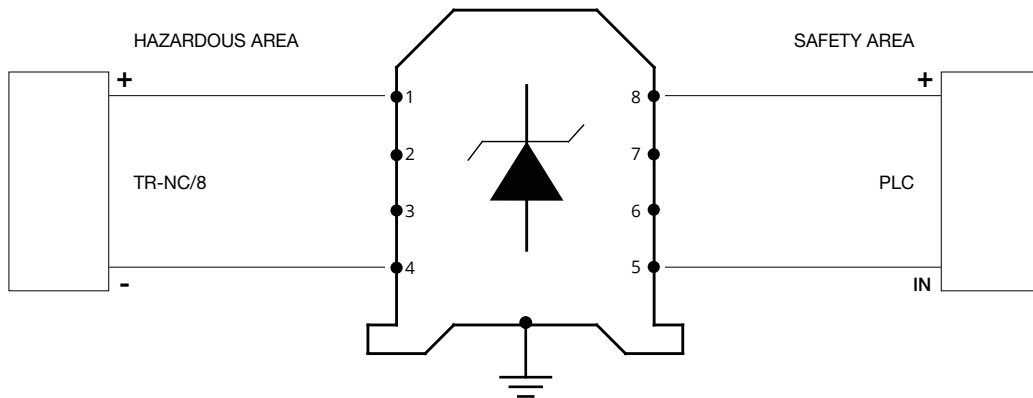
Alu junction box Junction Box IP65 container for TR-NC/8V transmitter.



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 Z787 (FOR HAZARDOUS AREA)**



**PLASTIC TAG**  
040STR000

B5MAG10 CY002

**STAINLESS STEEL TAG**  
980710835

B5MAG10 CY002



**CEMB S.p.A.** - Via Risorgimento, 9  
23826 Mandello del Lario (LC) - Italy  
[www.cemb.com](http://www.cemb.com)



**Vibration analysis division:**  
Phone +39 0341 706111  
e-mail: [stm@cemb.com](mailto:stm@cemb.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.