# TBT1

Rotating Speed Sensor

## Product Overview

TBT1 rotation speed sensor is a magnetoelectric rotation speed sensor, and it is installed to the case or case cover of transmission gear, the tested rotary object is magnetic conductibility gear which has two signaling hole with diameter 4 mm(depth 3 mm). It is composed of permanent-magnet steel, electrical inductance coil, stainless shell, shield cable, connector, etc. Output signal is similar to sine wave, adapting operation with other speed measuring control equipment in the various transport facilities. The sensor can detect the rotational speed of transmission gear and the speed of transport, applicable to various transport facilities.

## Features

Wide temperature accommodation
Wide speed measuring range
Strong shock resistance
Good tightness
Non-contact with tested gear, without abrasion
Convenient installation, simple and reliable

**Semic Trade**, s.r.o., Volutová 2521/18, 158 00 Praha 5
Telephone: +420 251 625 331, 251 625 332, 251 625 377
GSM: +420 605 999 994 Fax:+420 251 626 252, 251 626 393
www.semic.cz
semic@semic.cz

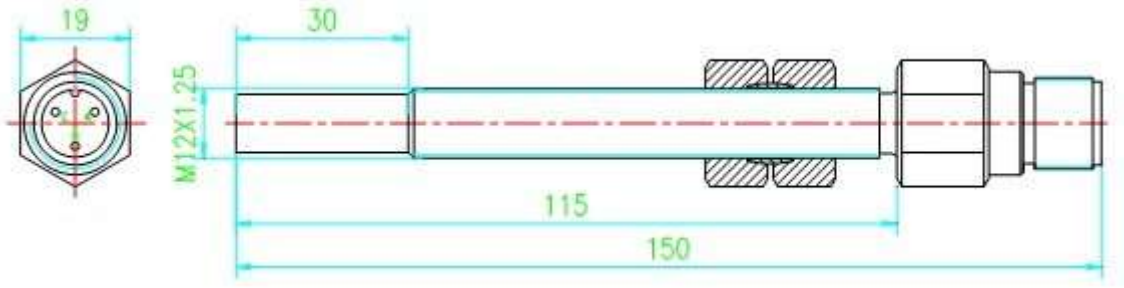
## Main Technical Data

Supply Voltage : 12VDC~30VDC
Frequency range: 1.83Hz~2500Hz
Operating temperature: -25℃~+100℃
Speed measuring range: 1000rpm~33000rpm
Signaling hole: 2×Φ4, depth 3 mm
Operating air gap: 1mm
Output waveform: Similar to sine wave
Output channel: 1
Coil resistance:850?±10%
Output feature: Load resistance 10K? 0.5V≤Vp-p≤40V
Insulation resistance: ≥500M?(500V Megohmmeter) (REV. 01)
Insulation strength: 500V/50Hz/60s
Output short - circuit protection: Available 2 2
Vibration and shock: Vibration 5.9 m/s ; Shock 30 m/s
Interface: YA3102E10SL-3P

The definition of cable & connector output function
S/N Shield cable Connector Output function
Output polarity
1 White wire Pin A
(-) minus
Output polarity
2 Red wire Pin B
+ (plus)
3 Gray wire Pin C Shield

Installation\operation and malfunction disposal. Forbidden contact between terminals; otherwise the permanent-magnet would be demagnetized greatly, even damaged. Output wire distribution as per the definition strictly, and ensure it correct, without short and open circuit; Strong recommend the air gap between gear and the head of sensor is adjusted to 1.0 mm, after adjusting the air gap, tighten locknut; When check the sensor, use the multimeter to measure DC resistance (connector pin C and pin A), the resistance should comply to 850?±10%, which shows the sensor work normally.

## Outline and instal. drawing




**Semic Trade**, s.r.o., Volutová 2521/18, 158 00 Praha 5
Telephone: +420 251 625 331, 251 625 332, 251 625 377
GSM: +420 605 999 994 Fax:+420 251 626 252, 251 626 393
www.semic.cz
semic@semic.cz