Rotational Speed Sensor TQG19E

The TQG19E consists of a Hall element, amplification circuit, waveform conversion circuit, housing, and cable connector. It outputs a square wave signal and measures rotational speed by detecting the change between the tooth peaks and valleys of a ferromagnetic gear. The product offers excellent performance and strong stability, and is widely used in various types of urban rail transit locomotives.

Parameters

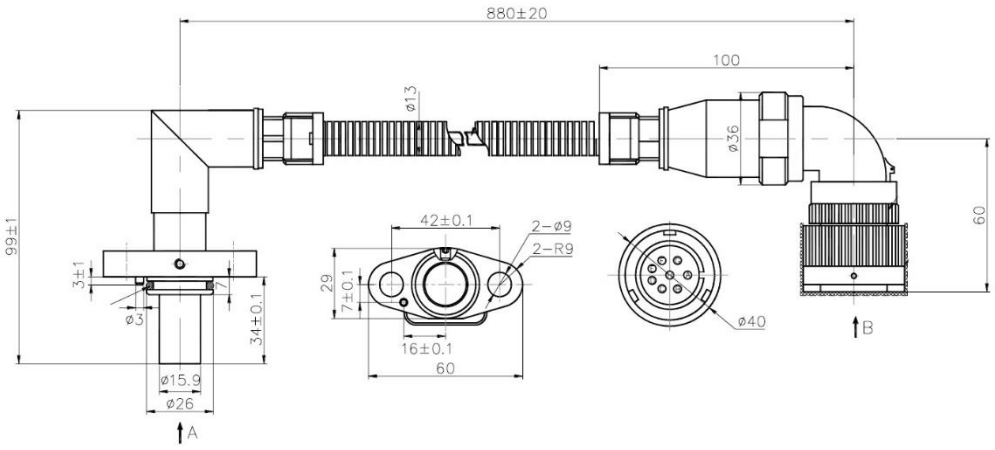
Operating Parameters

- Measuring Range: 0~10kHz
- Output Channels: 2
- Output Waveform: Square wave
- Pulse Amplitude: HL≥Vcc-2.5V
  LO≤1.0V
- Duty Cycle: 50%±20%
- Phase difference: 90°±30°
- Supply Voltage: 10~30VDC
- Current Consumption: ≤60mA
- Test Gear: Low-carbon ferromagnetic steel, module M=2, teeth Z=60
- Operating Gap: 0.1mm~1.5mm (typical 0.8mm)
- Operating Temperature: -40℃~+100℃
- Insulation Resistance: ≥100MΩ@500VDC
- Dielectric Strength: 500V/50Hz/1min

General Data

- Equipped with power polarity protection and output short-circuit protection
- Vibration and shock resistance compliant with GB/T 21563 national standard

Outline & Interface



- Electrical Interface: 8-pin connector

PIN Configuration

PIN-A	Vcc
PIN-H	GND
PIN-B	Channel 1
PIN-G	Channel 2
PIN-E	Shield
PIN-C/D/F	Not Connected

Notes

- Wiring must be configured strictly according to the instructions to avoid short circuits or open circuits.
- Before installation, power on the sensor and use a ferromagnetic material to approach or leave the sensor head — if both signal channels show a change in output level, the sensor is functioning normally.
- Do not allow sensor ends to strike each other, as this will cause severe demagnetization of the permanent magnet and damage the sensor.