Rotational Speed Sensor TQG19F

The TQG19F 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

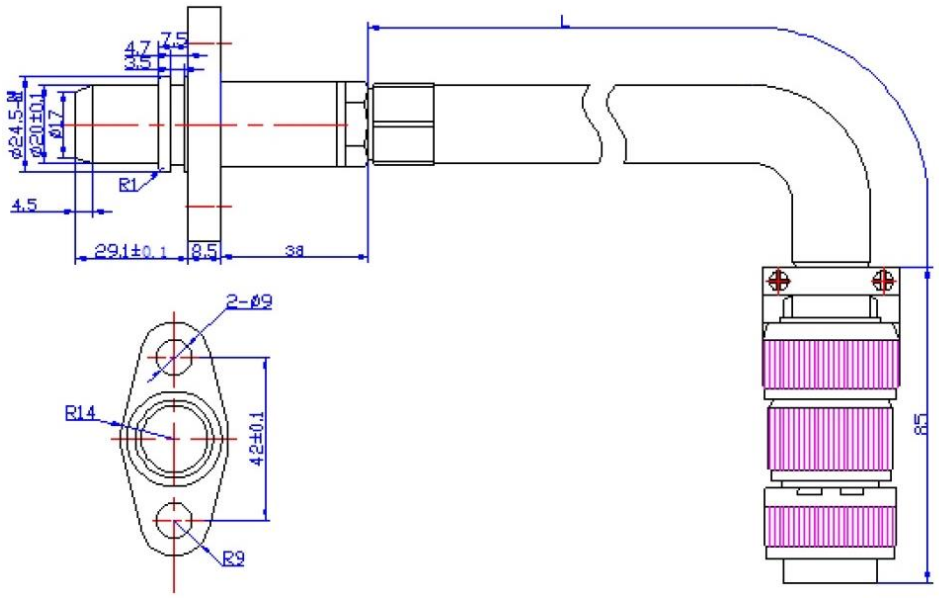
Operating Parameters

- Measuring Range: 0~10kHz
- Output Channels: 1
- 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: ≤40mA
- Load Resistance: ≥950Ω
- Test Gear: Low-carbon ferromagnetic steel, module M≥1.5
- Operating Gap: 0.1mm~1.5mm (typical 0.8mm)
- Operating Temperature: -40℃~+85℃
- 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: 7-pin connector

PIN Configuration

PIN1	Not Connected
PIN2	Signal Output
PIN3	Vcc
PIN4	Not Connected
PIN5	Shield
PIN6	Not Connected
PIN7	GND

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.