Rotational Speed Sensor TQG19D7

The TQG19D7 is composed 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 transition between the teeth and valleys of a ferromagnetic gear. Featuring excellent performance and high stability, it is widely used in various types of diesel locomotives.

Parameters

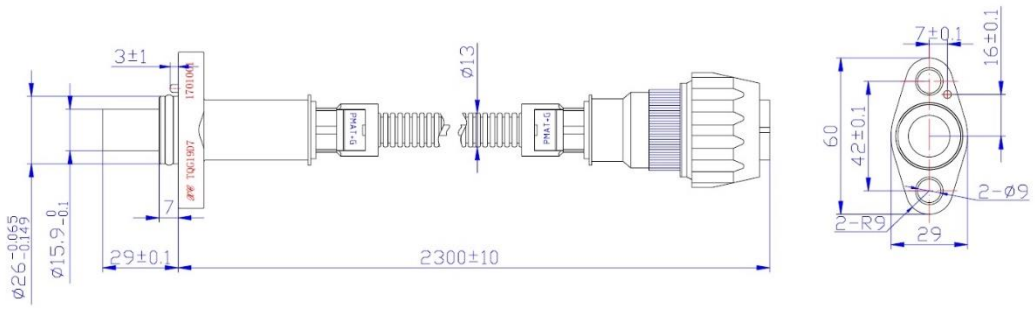
Operating Parameters

- Measuring Range: 0~10kHz
- Output Channels: 2
- Output Waveform: Square wave
- Pulse Amplitude: HL≥0.8Vcc
  LO≤1.0V
- Rise/Fall Time: <10μs
- Duty Cycle: 50%±20%
- Phase difference: 90°±30°
- Supply Voltage: 10~30VDC
- Current Consumption: ≤35mA
- Load Resistance: ≥1000Ω
- Test Gear: Low-carbon ferromagnetic steel, module≥2
- Mounting Gap: 0.1mm~1.5mm (typical 0.8mm)
- Operating Temperature: -40℃~+125℃
- Insulation Resistance: ≥100MΩ@500VDC between cable cores and shield, and between all leads and housing
- Dielectric Strength: 500Vrms/50Hz/1min between cable cores and shield, and between all leads and housing

General Data

- Ingress Protection: IP68
- Housing Material: SUS304 stainless steel
- Protection Features: Supply polarity protection & output short-circuit protection
- Vibration & Shock Resistance: Compliant with GB/T 21563
- Electromagnetic Compatibility (EMC): Compliant with IEC 61000

Outline & Interface



- Electrical Connector: FRCIR06RGG18-20S-F80-V0-M20-1.5F connector, model 27963T12

PIN Configuration

PIN-A	V+
PIN-H	GND
PIN-B	Channel 1
PIN-G	Channel 2
PIN-E	Shield

Notes

- Ensure usage conditions remain within specified limits.
- Installation environment should avoid direct exposure to wind, sand, rain, or snow,
  Recommended Environmental Conditions:
  Ambient Temperature: -40℃~+150℃
  Locomotive Surface Temperature: ≤+65℃
  Relative Humidity: ≤95%
  Altitude: ≤2500m