

TAG37D | Speed Sensor



Product Overview

- * Magnetoelectric principle, passive sensor
- * Non-contact speed test, mechanical parts, no internal electronic elements, high reliability
- * Restricted by principle, inaccurate speed test under low speed

Environmental parameters

Service conditions	
Altitude	≤2500m
Operating temperature	-40°C~+120°C
Relative humidity	≤100%
Impact and shock	meet the installation requirements of class 3 axle in GB/T 21563-2008
Protection grade	IP68
Salt spray resistance	meet the requirements of 96h in GB/T 2423.17-2008

Performance parameter

Electrical Parameters	
Working frequency	31Hz ~2591Hz
Working air gap	0.7mm~1.3mm, standard air gap 1.0mm
Number of output channels	Single channel
Output waveform	Approximate sine wave
Direct current resistance	When the temperature is 20°C, direct current resistance is $61 \times (1 \pm 10\%) \Omega$
Load resistance	1kΩ
Output signal amplitude	When frequency is 31Hz, signal voltage root mean square V _{r.m.s} : 0.6V ≤ V _{r.m.s} ≤ 8.5V; When frequency is 100Hz, signal voltage root mean square V _{r.m.s} : 2.06V ≤ V _{r.m.s} ≤ 12.9V; When frequency is 290Hz, signal voltage root mean square V _{r.m.s} : 2.98V ≤ V _{r.m.s} ≤ 25.0V; When frequency is 500Hz, signal voltage root mean square V _{r.m.s} : 4.0V ≤ V _{r.m.s} ≤ 25.0V; When frequency is 1500Hz, signal voltage root mean square V _{r.m.s} : 5.0V ≤ V _{r.m.s} ≤ 25.0V; When frequency is 2591Hz, signal voltage root mean square V _{r.m.s} : 5.0V ≤ V _{r.m.s} ≤ 25.0V

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Electrical Parameters

Insulation resistance	A 500V megger is used for testing. Insulation resistances between cable core and shielded wire and between all leading wire (including shielded wire) and shell should be no less than 50MΩ
Insulating strength	AC2000V/50Hz/1s
Electrostatic discharge	GB/T 17626

Mechanical Parameters

Weight	2.3kg±0.5kg
Speed measuring gear	Modulus: 3; number of teeth: 60; width of gear: 16mm, carbon structural steel; standard involute tooth
External dimension	Referring to figure 1, line length can be customized according to customer
Connector	GTC6L-20-M1SC-74B1-(20)L, Can be also customized according to customer requirements

Outline Drawing

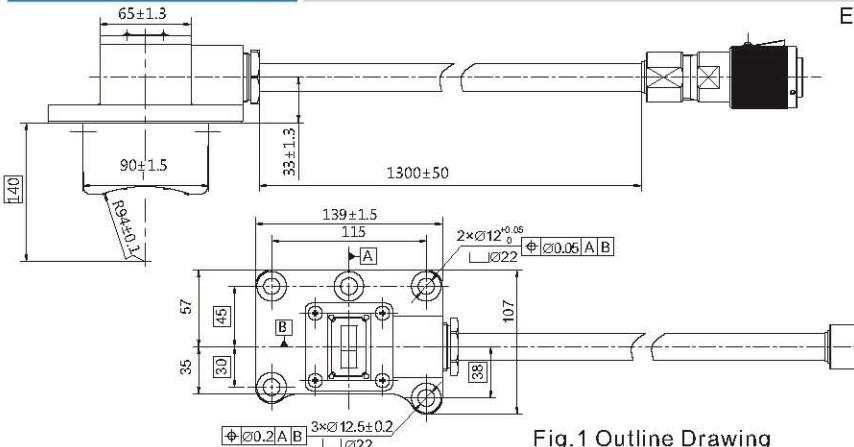


Fig.1 Outline Drawing

Electrical wiring diagrams

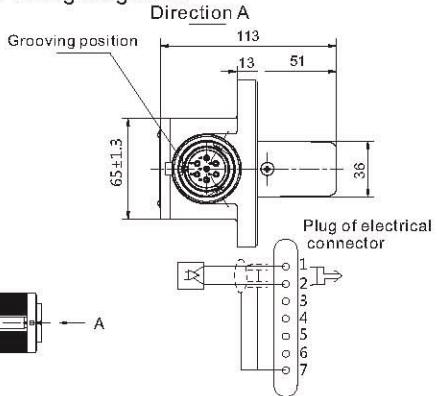


Fig. 2 Electrical wiring diagrams

Mounting Requirements

- * Cable laying requirements: sensor conductors and subsequent connecting lines should keep away from large-scale electrical equipment and power lines, and are forbidden to be wound with power lines or transmit in the same pipeline;
- * Wire according to the definition of the electrical interface strictly, make sure of right wiring without short circuit and break circuit;
- * Grounding way of shielded wire: recommended to be grounded on the control system through one end.

Standards

- * GB/T 2423.1-2008 Environmental Testing for Electric and Electronic Products - Part 2 : Test Methods - Test A: Low Temperature (IEC 60068-2-1:2007 , IDT)
- * GB/T 2423.2-2008 Environmental Testing for Electric and Electronic Products - Part 2 : Test Methods - Test A: High Temperature (IEC 60068-2-2:2007 , IDT)
- * GB/T 2423.4-2008 Environmental Testing for Electric and Electronic Products - Part 2:Test Methods - Tes t Db: Alternating Temperature and Humidity (12h+12h cycle) (IEC 60068-2-30:2005 , IDT)
- * GB/T 2423.17-2008 Environmental Testing for Electric and Electronic Products - Part 2: Test Methods - Test Ka:Salt mist (IEC 60068 - 2 - 11: 1981 , IDT)
- * GB 4208-2008 Degrees of protection provided by enclosure(IP code) (IEC 60529:2001 , IDT)
- * GB/T 17626.4-2008 Electromagnetic compatibility - Testing and measurement techniques - Electrical fast transient / burst immunitytest (IEC 61000-4-4:2004 , IDT)
- * GB/T 17626.5-2008 Electromagnetic compatibility-Testing and measurement techniques - Surge immunity test (IEC 61000-4-5:2005 , IDT)
- * GB/T 17626.6-2008 Electromagnetic compatibility- Testing and measurement techniques - Immunity to conducted disturbances induced conducted disturbances induced by radio-frequency fields (IEC 61000-4-6:2006 , IDT)
- * TB/T 2760.3-2010 Revolution meter for locomotive. Part 3:Magntoelectricity speed sensor

Main Application Fields

ATPsystem