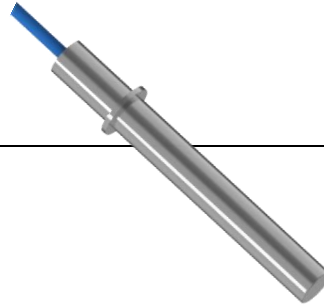


FSD-TMR1006

Temperature Detection Rotational Speed Sensor



DESCRIPTION

FSD-TMR1006 is a fast frequency response, low power consumption, moisture and water proof temperature detection rotational speed sensor, incorporating high sensitivity tunneling magnetoresistive (TMR) sensor, Pt1000 temperature sensor, signal processing circuit and stainless-steel housing. It is an ideal solution for industrial turbine meter and lobed impeller flow meter applications which requires low power consumption, fast frequency response and harsh operating environment.

FSD-TMR1006 temperature detection rotational speed sensor measures the flow rate by detecting rotational velocity of turbine rotor in turbine meter or impeller in lobed impeller flow meter. The integrated temperature sensor enables real time temperature probing for subsequent compensation process. FSD-TMR1006 provides rotational velocity measurement, temperature measurement, and external magnetic field interference detection functions. It outputs TTL digital square wave signal with the frequency proportional to the rotation speed, and temperature signals (resistance). It also outputs alarm signal when detecting external magnetic field interference.

FEATURES AND BENEFITS

- Class A high accuracy temperature measurement (Tolerance: $\pm(0.15+0.002 |t|)$)
- Low power consumption ($I_{CC} \leq 50\mu A @ 5.0 Vdc$)
- High frequency response (10 kHz)
- Stable TTL output (50% duty cycle)
- External magnetic field interference detection
- Harsh environment resistance
- Robust design, long life span
- Easy to install
- High accuracy, good stability

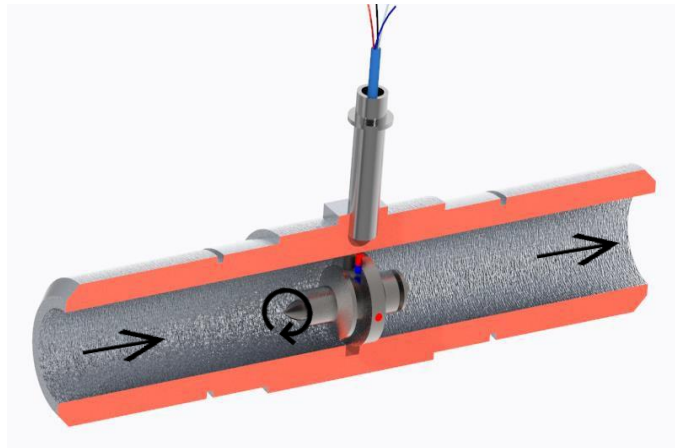
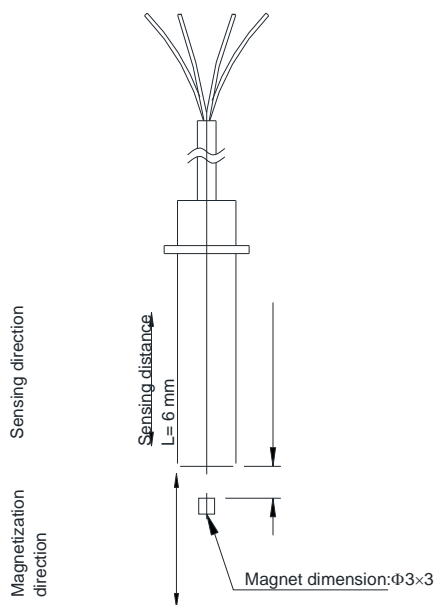
FSD-TMR1006

Temperature Detection Rotational Speed Sensor

SPECIFICATIONS

Parameters	Value
Supply voltage	2.7 Vdc ~ 5 Vdc
Current consumption	≤50 μA
Operating magnetic field	OP~10 Gs, RP~ -5 Gs
Response frequency	0 Hz ~10 kHz
Temperature coefficient	TCR = 3850 ppm/K
Operating current of temperature resistor	0.1~0.3 mA
Output interface	TTL
Duty cycle	50% ± 20%
External magnetic field interference signal	High – No Interference
	Low – Interference detected
Operating ambient temperature	-40 ~ 100 °C
Housing Dimensions	Customizable

APPLICATION EXAMPLE



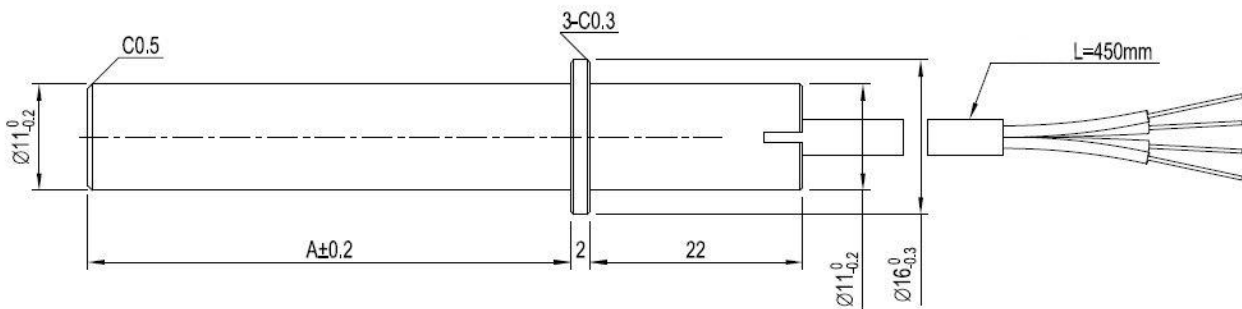
PIN CONFIGURATION

Yellow	Temperature signal 1
Green	Temperature signal 2
Red	Vdc
Black	Ground
Blue	TTL signal
White	magnetic interference signal

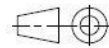
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Temperature Detection Rotational Speed Sensor

DIMENSIONS (mm)



ITEM	MODEL	A
1	FSD_TMR1005_DN50	63
2	FSD_TMR1005_DN80	50
3	FSD_TMR1005_DN100	61
4	FSD_TMR1005_DN150	94
5	FSD_TMR1005_DN200	113



CASE: STAINLESS STEEL
UNIT: mm

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Temperature Detection Rotational Speed Sensor

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