

# **XGZR6191** (MAGNETOELECTRICITY) ROTATIONAL SPEED SENSOR

Datasheet

Version: V1.0

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**Revision History**

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Revision	Description	Date
V1.0	Original	2022.06.13

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## 1. FEATURE

Using small-volume, low-cost samarium cobalt magnets as the magnetic field source of the product; Using electromagnetic pure iron with low coercivity and high permeability to improve the utilization rate of permanent magnet magnetic field and response time; The glazed wire resistant to high pulse voltage is used as the source of the product signal.



Finally, the coils, permanent magnets and magnetically conductive pure iron are assembled and injection-molded. The process is simple, the product injection molding consistency is good, the size is small, and the cost is low.

## 2. APPLICATION

The sensor are mainly aimed at the commercial vehicle and passenger vehicle markets, and are applied to the engine power system, measuring the speed and position of the engine camshaft, crankshaft, and ABS wheel speed detection in the braking system.

## 3. DESCRIPTION

XGZR6191 is a mature and reliable passive speed sensor product launched by CFSensor for the automotive market. The product has no circuit module and is mainly composed of coils, permanent magnets, magnetically conductive pure iron, terminals, flange gaskets, sealing rings plus outsourced injection molding and other components. The product have simple structure and perfect consistency injection.

## 4. PERFORMANCE PARAMETER

Referred Temperature: 20°C

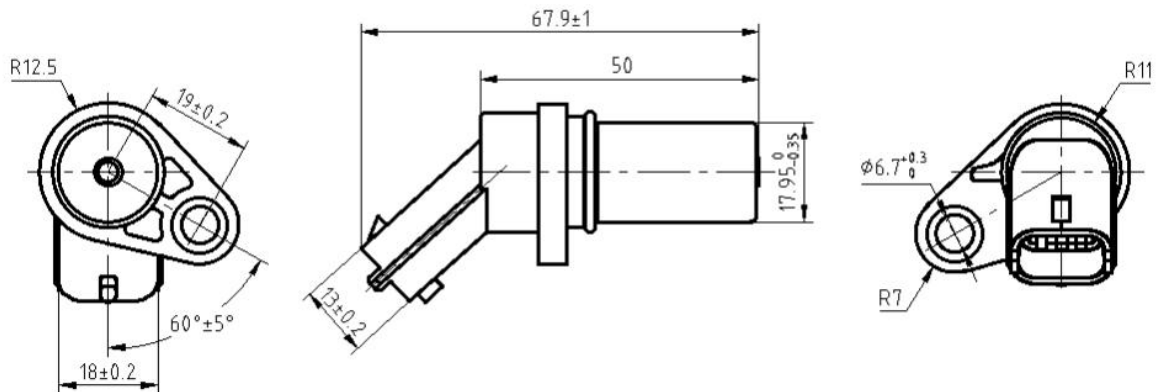
Figure 1. Performance Parameter

Subject	Value	Unit
Resistance	860±86	Ω
Inductance	370±60	mH
Low speed performance	≥0.25	Vp
High speed performance	≤100	Vp
Protection Grade	IP67	
Insulating resistance	≥10MΩ/500VDC	MΩ
Working Temp.	-40 ~ 150	°C
Store Temp.	-40 ~ 160	°C

## 5.ELECTRICAL SPECIFICATION

N/A

## 6.DIMENSION (UNIT: mm)



## 7. ELECTRICAL CONNECTION

The recommended model of the female terminal of the electrical connector:

AMP 936059 or BOSCH 1 928 403 874

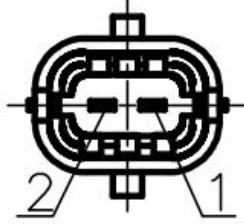
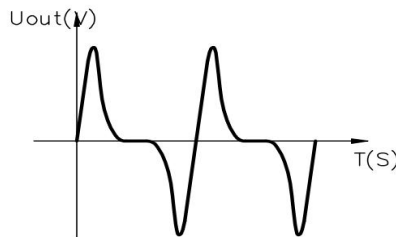


Image 1. PIN Schema

Figure 2. PIN Definition

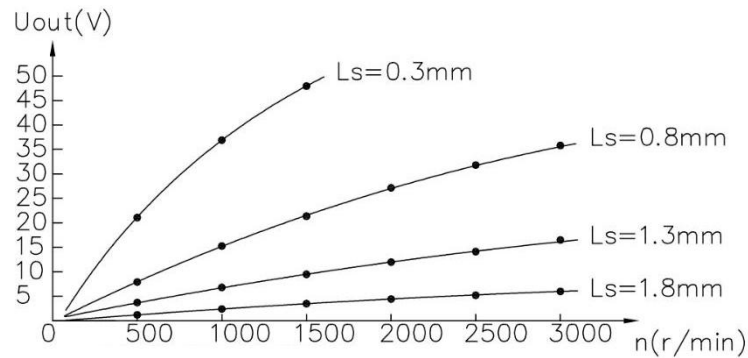
No.	Description	Remark
1	V-	AC Output signal, no positive or negative itself, and the signal pin is defined according to the application needs
2	V+	

## 8. OUTPUT CURVE



Signal sequence: When the signal wheel changes from concave teeth to convex teeth, a positive half wave appears on pin 2

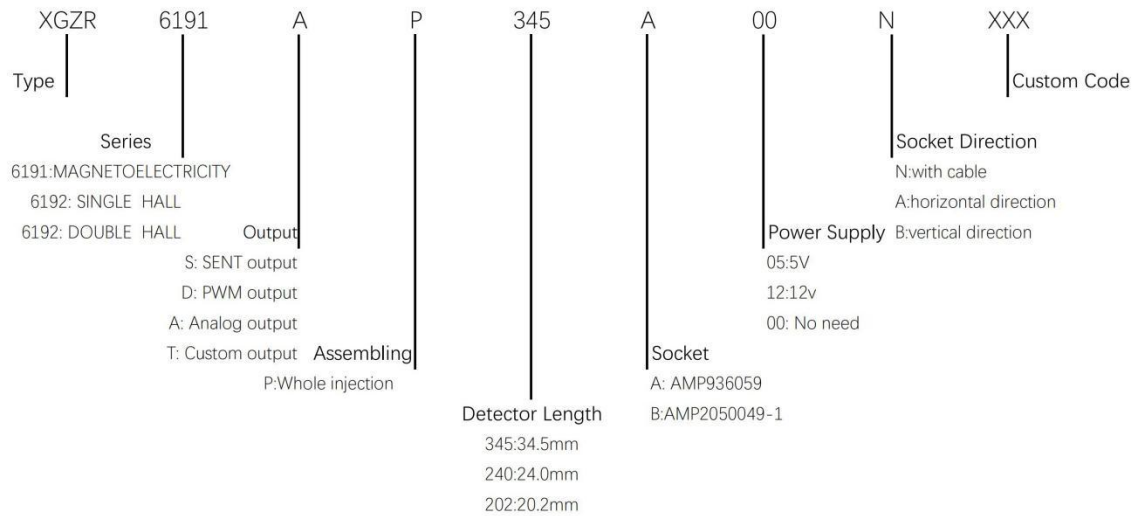
Image 2 Output Wave



Note: Ls as gap distance between sensor magnetic head and signal wave

Image 3: Output signal VS Rotating Speed

## 9. ORDER GUIDE



## 10 ORDER NOTE:

Contact CFSensor if you have special requirements on the performance parameters and functions of the product,

## 11. NOTICE & ATTENTION

- 1) The sensor can only be unpacked before being installed on the engine
- 2) The sensor is designed to measure the fuel tank pressure of the internal-combustion engine using gasoline, diesel, LNG or CNG as fuel, and is not allowed to be used in other occasions;
- 3) Sensor installation torque  $8 \pm 2 \text{ N.m}$  (when use 8.8 grade M6×12 screw bolt)
- 4) The normal packaged pressure sensor can be transported by ordinary conveying means.  
Please Note: Product is protected from moisture, shock, sunburn and stress during shipping.
- 5) If you have any questions, please contact CFSensor

■ Since this specification is a single product specification, in order to improve the reliability in actual use, please confirm the performance and quality in the actual use state.

**SAFETY NOTES**

Using these sensors products may malfunction due to external interference and surges, therefore, please confirm the performance and quality in actual use. Just in case, please make a safety design on the device (fuse, circuit breaker, such as the installation of protection circuits, multiple devices, etc.), so it would not harm life, body, property, etc even a malfunction occurs. To prevent injuries and accidents, please be sure to observe the following items:

- The driving current and voltage should be used below the rated value.
- In order to ensure safety, especially for important uses, please be sure to consider double safety circuit configuration.
- Be careful when fixing the product and connecting the pressure inlet. Otherwise, accidents may occur due to sensor scattering and the blowing out of the media.