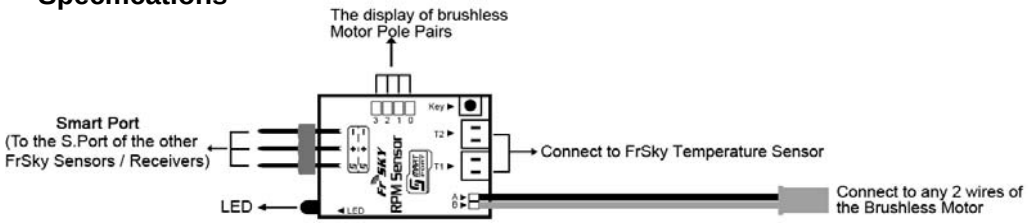
FrSky Electronic Co., Ltd.
Smart Port RPM Sensor
Instruction Manual

Thank you for purchasing the Smart Port RPM Sensor. In order to make the best use it, please read this manual carefully. If you have any difficulties while using this product, please consult the manual, your hobby dealer, or FrSky technical support.

This product is designed for FrSky Smart Port enabled system, which can work with different kinds of brushless motor and most speed control systems in market. Two Temperature sensors (TEMS-01) are accompanying with this product for measure the temperature. In order to fully enjoy the benefit of this product, please read the instruction manual carefully and set up the device as described below.

Specifications

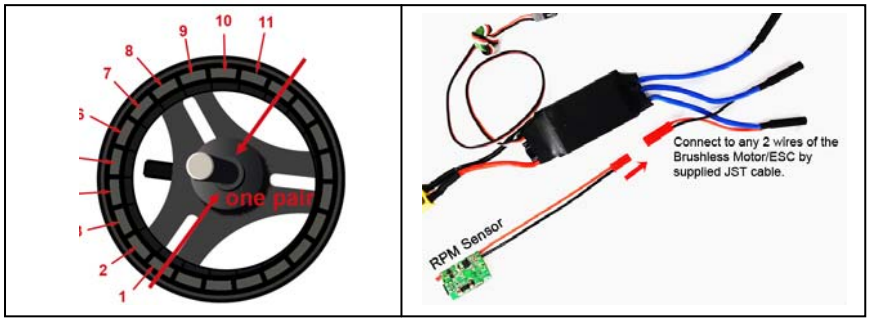


Dimension: 29×20×2mm Weight: 6.7g
Operational Voltage: DC 4 -10 V Current consumption: 25mA@5V
Voltage range of the motor wires: 2 to 12S
RPM range (for 2 poles brushless motor): 1000rpm to 300000rpm
Measurement Range: -20~250 degrees Celsius/ -4~482 degrees Fahrenheit
Compatibility: FrSky Smart Port enabled receivers, such as X8R, X6R, X4R, etc.

Set Up

Following the steps below to finish the setting procedures:

1. Check the number of brushless motor Pole Pairs.
2. Connect the RPM sensor to the receiver via Smart Port, and connect battery to receiver.



3. Long pressing the Key until the RED LED Soiled ON to enter Pole Pairs setting mode. Set the number on the RPM sensor by push the key repeatedly until you've got the correct number **(The Digital number is Binary value, see below chart for details)**. Power off the receiver after set.

The display of brushless motor pole pairs:

Pole Pairs		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Indicator displays	0	√	×	√	×	√	×	√	×	√	×	√	×	√	×	√
	1	×	√	√	×	×	√	√	×	×	√	√	×	×	√	√
	2	×	×	×	√	√	√	√	×	×	×	×	√	√	√	√
	3	×	×	×	×	×	×	×	√	√	√	√	√	√	√	√

The "Blades" Number should (Telemetry Setting Page of X9D Taranis) set to 1 if set successfully follow the above chart.

Temperature sensor

This sensor is used to read temperatures of model accessories, such as electric motor, ESC, glow and gas engine cylinder head, battery, muffler, voltage regulator, BEC, tailpipe and ambient air.
Measurement Range: -20~250 degrees Celsius/ -4~482 Fahrenheit
Accuracy: 1 degree Celsius/ 1 degree Fahrenheit

Install FrSky Smart Port RPM Sensor and Temperature sensor on any appropriate surface of the airframe that stays away from water, vibration, or fuel.

ID Set up

Each type of FrSky Smart Port enabled sensor has its unique physical ID. The default physical ID for this sensor is 05. The ID number could be changed by FrSky Servo Channel Changer. Please refer to the instruction manual of FrSky Servo Channel Changer for details.

All FrSky Smart Port enabled sensors could daisy chain with each other through their Smart Port.

LED Status

LED Status	Smart Port Connection	Brushless motor running
Flash Fast	NO	NO
Flash Middle	NO	YES
Flash Middle	YES	NO
Flash Slow	YES	YES