

## FS231-I Over Speed Protection Switch

- FS231-I over speed protection switch is suitable for speed measurement and over speed protection of high-speed shafts, low-speed shafts, and pitch systems of wind turbines. By monitoring the pulses sent back by the speed sensor, and outputting the current speed with an isolated active 4-20 mA current loop, when the frequency set by the panel is exceeded, the dry contact of FS231-I will act to give an alarm signal, so as to realize the over speed protection of the wind turbine.
- FS231-I is designed based on the company's long-term control experience in wind turbines, and has passed the relevant tests of the electromagnetic compatibility immunity standard GB/T17626 ( IEC61000-4 ), which is stable and reliable in long-term operation in wind farms.
- FS231-I directly sets the alarm frequency point, the average number of pulses, and the percentage of alarm hysteresis directly through the rotary switch, which is intuitive and fast, and does not require a computer connection for configuration software settings.
- FS231-I has a parameter protection function, when the parameter setting on the panel is changed, if the user does not confirm it, even if it is reset or power-off, will not apply the setting and send a parameter modification signal.



### ✧ Key Features

- ▶ Ultra-thin appearance design, standard 35mm Rail card slot to save installation space.
- ▶ The alarm hysteresis frequency range can be set to 0 % ~ 99.9%.
- ▶ It has the function of parameter protection to prevent abnormal modification of parameters.
- ▶ LED shows the current operating status instantly.
- ▶ Combined plug-in terminals, easy to install and wiring.
- ▶ With watchdog function.
- ▶ Compatible with a variety of electromagnetic eddy current speed sensors.
- ▶ 4~20mA current loop outputs the current speed.
- ▶ The power supply, dry contact, speed sensor and current loop are isolated at all ends.

## ✧ Technical Data

Specifications	Parameters
Power Supply	20 ~ 28Vdc
Power	2W
Measurement Error	± 0.2%
Alarm Trigger Frequency	F <sub>SET</sub> Hz
Alarm Hysteresis Percentage	0% ~ 99.9%
Relay Contact Capacity	30Vdc, 2A
The Input Pulse Amplitude is Low	<5V
The Input Pulse Amplitude is High	>15V
Input Pulse Current (24V pulse)	14.7 mA Type
Alarm Frequency F <sub>SET</sub> Setting Range	0.1 ~ 999Hz
Alarm Cancellation Frequency	F <sub>SET</sub> × Alarm Hysteresis Percentage Hz
4~20 mA Current Loop Output Range	0~F <sub>SET</sub> × 1.5 Hz
4~20 mA Current Loop Load Capacity	300Ω
Each Circuit is Isolated and Withstand Voltage	1500 Vdc
Operating Temperature Range	-30°C to +70°C
Storage Temperature Range	-40°C to +75°C
Weight	150g
Dimensions	22.5mm × 75mm × 105mm