MEMS Tilt Switch with alarm for Tower Crane and Aerial Lifts

Product Model :	DPF215L2-SQS-A1G-4007
Measuring Range :	±15 °
Output :	Switch
Power :	Voltage(8～30V)
Measuring Axis :	Dual Axis
Accuracy :	0.1 °-0.5°
Resolution :	0.04°
Application :	Machinery
IP Degree :	IP67

Description：

DPF215L2-SQS-A1G-4007 This product is based on the 32-bit high-performance microprocessor, which is calibrated to the zero deviation and sensitivity deviation of the sensor to ensure the reliability and consistency. The sensor comes with its own blister, by looking at the water bubble position and setting the zero button, so as to meet the requirements of the site and be convenient to the user.
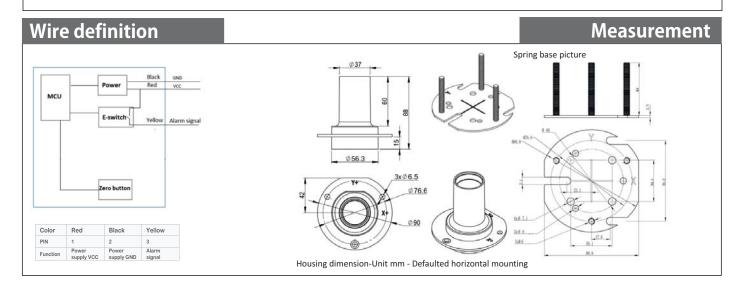
Features:

Built-in 32-bit microprocessor, faster operation speed.

Non-contact sensitive components, longer life.

Application:

Tower crane tilt monitoring

Electric wheelchair automatic leveling tilt monitoring

Aerial work platform tilt monitoring

Wire definition

Color	Red	Black	Yellow
PIN	1	2	3
Function	Power supply VCC	Power supply GND	Alarm signal

Measurement

Spring base picture

Housing dimension-Unit mm - Defaulted horizontal mounting

Item	Condition	Min.	Typical	Max.	Unit
Supply Voltage	DC	8	24	30	V
Static working current	Horizontal non-load Vcc=12V		25	35	mA
	Horizontal non-load Vcc=24V		20	30	
Alarm output	Within alarm angle range	Electronic switch on, output voltage slightly smaller than VCC, max current 1A.			
	Beyond alarm angle range	Electronic switch off, high-impedance state;			

Typical values is under room temperature 25▯, unless special marked

Item	Condition	Min.	Typical	Max.	Unit
Measure range			. . .		°
Alarm angle	Defaulted		X:2, Y:3		°
	Can be customized	1	Customized	15	
Resolution[1]	Room temp. 25°	0.03	0.04	0.05	°
Accuracy[2]	Room temp. 25°		±0.1		°
Absolute zero point deviation	Room temp. 25°		±0.2	±0.5	°
Zero drift	Working temp. range		±0.5	±0.86	°
Alarm delay	Defaulted		1.5		S
	Can be customized		Customized		
Recovery delay	Defaulted		0		S
	Can be customized		Customized		
Storage temp. range		-40		+85	℃
Working temp. range		-30		+60	℃
IP grade	IP67				
Housing material	Plastic				
Cable length	Defaulted	0.15	0.2	0.25	M

(1): Resolution is the minimum amount of change that the sensor can detect in the measurement range.
(2): Accuracy is the difference between the output value of the sensor and the true corresponding input value.

Instruction

1) Status indication

When the product powered on first time, the indicator light flashes red and green twice alternatively, then green or red light normally on. (Green light on indicates the tilt angle is under non-alarm state, electrical switch on; when red light on indicates the tilt angle is under alarm state, electrical switch off.)

After tilt angle is continuously larger than the preset alarm angle for 1.5s (alarm delay 1.5s), the inside electrical switch off, alarm signal cable output is high-impedance state. After green light flashes, the green light off, red light on.

Once the tilt angle is smaller than the preset alarm angle (Recovery delay 0s), inside electrical switch on, alarm signal cable output is close to supply voltage. (Due to overload protection device inside, the output voltage is always slightly smaller than supply voltage) Now the green light is stays on, red light stays off.

2) Zero point

Cooperate with blister status, user can set relative zero point by zero button. After press zero button, indicator light flashes between red and green alternatively, last 4 second, the indicator light turns to orange, which means zero set success. Release the button, the green light stays on, red light stays off.