

Cost-effective Dual-axis Inclination Sensor: BWM826-30-485

The power tower is an important facility for carrying power supply. Its safety needs to be guaranteed reliably. However, the tower is usually installed outdoors, widely distributed, and many are installed in remote areas, which are vulnerable to natural and human impacts and damage. Therefore, it is necessary to use auxiliary methods to monitor the status of communication tower in real time, realize early warning of possible problems and protect the tower.

In recent years, power accidents caused by inclined collapse of transmission line towers due to natural disasters and man-made damages are on the rise. According to the characteristics of the tower monitoring, Bewis sensing design BWM826 inclinometer, which is used to monitor tower tilted condition, ensure the stability of the electric energy security. The data collected by the front-end sensor, such as the actual situation of the tower, are transmitted to the central monitoring via wireless network in real time for analysis. The monitoring center can carry out online monitoring and early warning of foundation sliding, subsidence deformation, tower tilting, breaking or even overall collapse due to weather reasons, and timely notify the person in charge of on-site treatment if any abnormality occurs.



Production picture



Product Advantages:

- measurement accuracy up to 0.005°
- resolution up to 0.0007°
- high accuracy monitor function of horizontal roll and pitch
- all A passed the test of state grid power academy
- many implementation cases and good effect
- high data stability and minimal temperature drift
- sensor layout is convenient and construction time is reduced
- small size, light weight, long life
- IP67 protection, can be installed directly outside
- various power supply schemes, ultra-low power consumption, intelligent wake up

Cost-effective Dual-axis Inclination Sensor: -Technical indicators

Mechanical Characteristic :

Connector	Metal connector (standard cable is 1.5m)
Protection level	IP67
Shell material	Magnesium alloy anodizing
Installation	Four M4 screws

Electrical Specifications :

Parameters	Conditions	Min	Typical	Max	Units
Power supply		9	12	35	V
Operating current	Non-loaded	20	30	40	mA
Operating temperature		-40	25	+85	°C
Store temperature		-55	25	+100	°C

Performance Specifications

Parameters	Conditions	BWM826-5	BWM826-15	BWM826-30	Units
Measuring range		±5	±15	±30	°
Measuring axis		X-Y	X-Y	X-Y	
Accuracy	Indoor	0.005	0.008	0.01	°
Resolution		0.001	0.001	0.001	°
Zero temperature drift	-40~85°C	±0.001	±0.001	±0.001	°/°C
Cross axis error	25°C	0.005	0.008	0.01	°
Frequency response		100	100	100	Hz
MTBF	≥90000 hours/time				
Electromagnetic compatibility	according to GBT17626				
Insulation resistance	≥100 MΩ				
Shock resistance	2000g,0.5ms,3times/axis				
Weight (g)	150(package excluded)				

Cost-effective Dual-axis Inclination Sensor: Successful Case

Wuhan nass system technology co. LTD , Transmission line all-day intelligent monitoring system

Tower inclinometer have roll, pitch, shaking(X/Y) axial monitoring with high accuracy(as high as 0.01°), monitoring the structural status of power towers in real-time. When the tower deformation, distortion and tilt or shaking angle exceed the configured warning threshold, alarm information can be sent to the background and mobile phone, and the tilt and twist state of the detected object can be simulated in real time through 3D model.

Tower inclinometer has a variety of power supply and data transmission modes, which can be widely used in the field of iron tower without public network coverage or external power support. The warning information will be sent to the operation and maintenance personnel via SMS, WeChat, platform, and telephone.



Case Features

High reliability design, passed the EMC functional test of state grid power academy with full A rating;

Up to nine axial full monitoring ;

Real-time web page, mobile phone, client alarm, real-time equipment positioning, support efficient emergency decision-making;

A variety of power supply schemes, supporting solar power independent power supply, 200V AC power, battery, network line POE power supply, etc;

Intelligent wake, ultra-low power consumption design brings super long battery life, three years free maintenance;

No tools to be firmly dismantled and installed, support remote equipment maintenance upgrade, maintenance simple, easy and efficient.

Installation Site

