

## Cost-effective Dual-axis Inclinometer: BWM826-30-485

The cracking deformation of building structure is a common technical problem at home and abroad. The destruction and collapse of most structures is caused by the deformation of the building from the crack. Structural tilt deformation is the main feature that causes the building to collapse and collapse. Especially for houses with poor integrity or damage, the internal stress distribution is uneven. Once the deformation is inclined, the internal stress will change rapidly. When the partial load-bearing structure fails, the other parts will collapse quickly.

Although the house can be detected and observed according to the conventional method, the period of manual monitoring is long, the error is large, and the collection of dynamic data cannot be analyzed, which makes it difficult to effectively guarantee the safety of the house. These problems can be avoided with an automated acquisition scheme, and the inclinometer notation is currently the most advanced monitoring method. The inclinometer has continuous reading, automatic recording and digital transmission. When monitoring the slope of the upper level of the building, the sensors can be placed on the floor of the building or on the floor which to be observed. When monitoring the foundation tilt, the sensor can be placed on the base surface to reflect and analyze the degree of change of the building tilt with the measured value of the horizontal inclination of the measured floor or base surface.



Product real shot

### Product Highlights:

- House measurement accuracy up to  $0.005^\circ$
- Resolution up to 0.0007
- Dual-axis inclination measurement with small cross error
- Real-time monitoring of building geometry
- More implementation cases and better results
- High data stability and minimal temperature drift
- Easy to install sensors, shorten construction time
- Small size, light weight and long life
- IP67 protection for outdoor installation
- Suitable for pre-buried hardware facilities for housing health diagnosis

## Cost-effective Dual-axis Inclinometer - 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 Inclinometer - Success Cases

Wuhan Zhongyan Technology Co., Ltd.  
Housing safety monitoring system



Hangzhou Zhuocheng Building  
Reinforcement Engineering Co., Ltd.  
Housing safety monitoring system



Guizhou Provincial Construction Science Testing Center  
Guizhou Provincial comprehensive information  
monitoring platform for dangerous old houses in



Zhejiang University Zhengcheng Technology Co., Ltd.  
Urban and rural housing safety  
monitoring system & management platform



Beijing Zhufu International Engineering Technology Co., Ltd.  
House tilt deformation encryption dynamic monitoring system

Hangzhou Haochi Technology Co., Ltd.  
Building safety monitoring IoT platform

