

# Vibration/Inclinometer Sensor



## Triaxial Measurement

- Simultaneous measurement of XYZ in three directions
- Support 485 communication
- 316L stainless steel housing

P.L-02



## Multi-range

- Strong structure, low power consumption, excellent deviation stability
- Voltage / current / digital RS232 / 485 / TTL output optional
- $\pm 2/4/8/10/16/20/30 / 50g$  measurement range optional

P.L-03



## Dual Axis Measurement

- Wide voltage input, 9~36V DC
- Resolution is 0.05°
- Biaxial inclination measurement

P.L-04



Appearance	
Operating voltage	24V DC $\pm$ 20%
Power consumption	<1W
Operating range	$\pm$ 16(MAX)
Resolution/Range	15.62mg @ $\pm$ 2g 31.25mg @ $\pm$ 4g 62.50mg @ $\pm$ 8g 125mg @ $\pm$ 16g (Rang can be set)
Detection axis	3 ( X, Y, Z )
Frequency range	0~400HZ
Technology	MEMS (Micro Electro-Mechanical Systems)
Digital output	RS-485 (addressable) 57600 Baud rate-1 bit stop-parity
Resolution digital output	16 bit@RS-485 12 bit@ analogue output
Voltage analogue output	0.5V/0~10V (programmable)
Current analogue output	4.20mA/0.20mA/0~24mA (programmable)
Load resistor (voltage)	1k~1M $\Omega$
Load resistor (current)	100~500 Ohm
Ambient Humidity	<80% RH, No condensation
Operating temperature	-25°C~+70°C
Storage temperature	-30°C~+90°C, No freezing
Protective circuit	Reverse polarity, Surge protection
Degree of protection	IP67 ( EN60529 )
Housing material	AISI316L Pa12
Connections	5-core cable   M12,5 Pin connector (20cm lead)
Size	M18
Weight	100g
Model No.	<b>MJD18-W</b>   <b>MJD18-P</b>

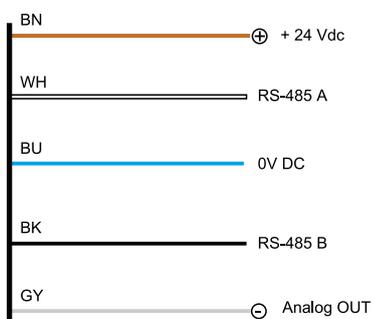
- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic
- Contact
- Area
- Ultrasonic
- Vision
- Vibration**
- Temperature
- Annexes

#### Guidance

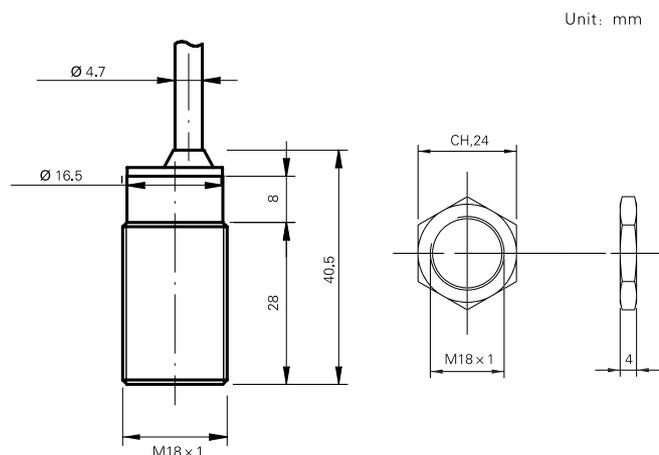
- Vibration
- Triaxial Measurement**
- Multi-range

- Inclinometer
- Dual axis measurement

### Wiring diagram



### Dimensions



Unit: mm

# Multi-range

## MJA Series

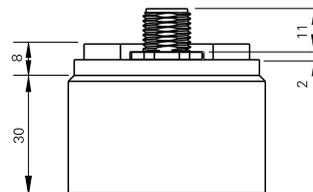
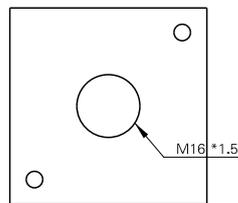
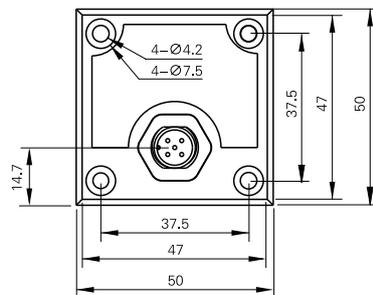


Appearance

Measuring range	± 2/4/8/10/16/20/30/50G
Deviation calibration	< 5mg
48h deviation stability	< 2mg ( Typical value )
Measuring axis	X,Y,Z
Annual deviation stability	7.5Mg Typical value ( < 25 )
power on/off repeatability	< 10mg ( MAX )
Deviation temp. coefficient	0.5mg/°C Typical value ± 2mg/°C MAX
Annual scale factor stability	300 ( < 1000 ) ppm Typical value
Resolution/threshold(@1Hz)	< 5mg(MAX)
Nonlinear	< 0.5% FS(MAX) < 0.09g(MAX)
Bandwidth(4)	1 ~ ≥ 400Hz
Resonance frequency	6.7kHz
Output resistance/load	Min 10K Ω , as Vout(Pin 32)& VAGND (Pin 38)max 50pF,as Vout (pin 32);& max 100F,as VAGND (pin 38)
Shock(g)	20g rms,20~2000Hz(Random noise, o, p, I each shaft effect 30min)
Reliability	MIL-HDBK-217,Grade two
Operating current consumption	< 3mA@12V DC
Scale factor temp. coefficient	100ppm/°C ( Typical value ) -50/250 ( Min/Max value )
Impact resistant	100g@11ms,Times/Axis(half sinusoid)
Recovery time	< 1ms ( 1000g,1/2 sin 1ms,impact in/shaft )
Output current consumption	4~20mA@12V DC input voltage ( %FS )
Operating temperature	-40°C~+85°C
Output rate	5Hz, 15Hz, 35Hz, 50Hz, 100Hz can be set
Output signal	Voltage / current /RS232/RS485/TTL
Output voltage range	0~5V DC@12V DC
LCC sealed	Meet MIL-STD-883-E
Input(VDD-CSS)	9~36V DC
Weight	100g
Dimension	L50*W50*H38mm

**MJA39□B-□□**

Output signal	Measurement range
0: Voltage	02: ± 2G
8: Current	04: ± 4G
2: RS232	
4: RS485	
T: TTL Level	



### Dimensions

unit: mm



Appearance				
Measuring range	$\pm 10^\circ$	$\pm 30^\circ$	$\pm 60^\circ$	$\pm 90^\circ$
Measuring axis	X,Y	X,Y	X,Y	X,Y
Resolution	0.05°	0.05°	0.05°	0.05°
Absolute precision	0.1°	0.1°	0.2°	0.2°
Long-term stability	0.2	0.2	0.25	0.25
Zero temperature drift(-40~85°C)	$\pm 0.01^\circ / ^\circ\text{C}$	$\pm 0.01^\circ / ^\circ\text{C}$	$\pm 0.01^\circ / ^\circ\text{C}$	$\pm 0.01^\circ / ^\circ\text{C}$
Sensitivity temperature coefficient(-40~85°C)	$\leq 150 \text{ ppm}/^\circ\text{C}$	150 ppm/°C	$\leq 150 \text{ ppm}/^\circ\text{C}$	$\leq 150 \text{ ppm}/^\circ\text{C}$
Power-on startup time	0.5S	0.5S	0.5S	0.5S
Response time	0.02S	0.02S	0.02S	0.02S
Operating voltage	9~36V			
No load current	40mA			
Operating temperature	-40~+85°C			
Storage temperature	-55~+100°C			
Vibration resistant	10grms 10~1000Hz			
Insulation resistance	$\geq 100\text{M}$			
Degree of protection	IP67			
Mean time between failures(MTBF)	$\geq 45000\text{Hour/time}$			
Output rate	5Hz, 15Hz, 35Hz, 50Hz Can be set			
Electromagnetic compatibility	According to En61000 and GBT17626			
Weight	90g (without cable)			
Impact resistance	100g@11ms, Triaxial and identical(Half sine wave)			
Output signal	RS232/RS485/RS422/TTL/CAN			
Cable	1M standard wear resistant, wide temperature, shielded cable (direct lead)			
Model No. 4~20mA	<b>MJL326T-10-A1</b>	<b>MJL326T-30-A1</b>	<b>MJL326T-60-A1</b>	<b>MJL326T-90-A1</b>
0~10V	<b>MJL326T-10-V3</b>	<b>MJL326T-30-V3</b>	<b>MJL326T-60-V3</b>	<b>MJL326T-90-V3</b>
RS232	<b>MJL326T-10-23</b>	<b>MJL326T-30-23</b>	<b>MJL326T-60-23</b>	<b>MJL326T-90-23</b>
RS485	<b>MJL326T-10-48</b>	<b>MJL326T-30-48</b>	<b>MJL326T-60-48</b>	<b>MJL326T-90-48</b>

Fiber Optic

Slot Sensors

Photoelectric

Laser

Proximity

Displacement

Magnetic

Contact

Area

Ultrasonic

Vision

**Inclinometer**

Temperature

Annexes

Guidance

Vibration

Triaxial Measurement

Multi-range

**Inclinometer**

Dual axis measurement

## Dimensions

Unit: mm

