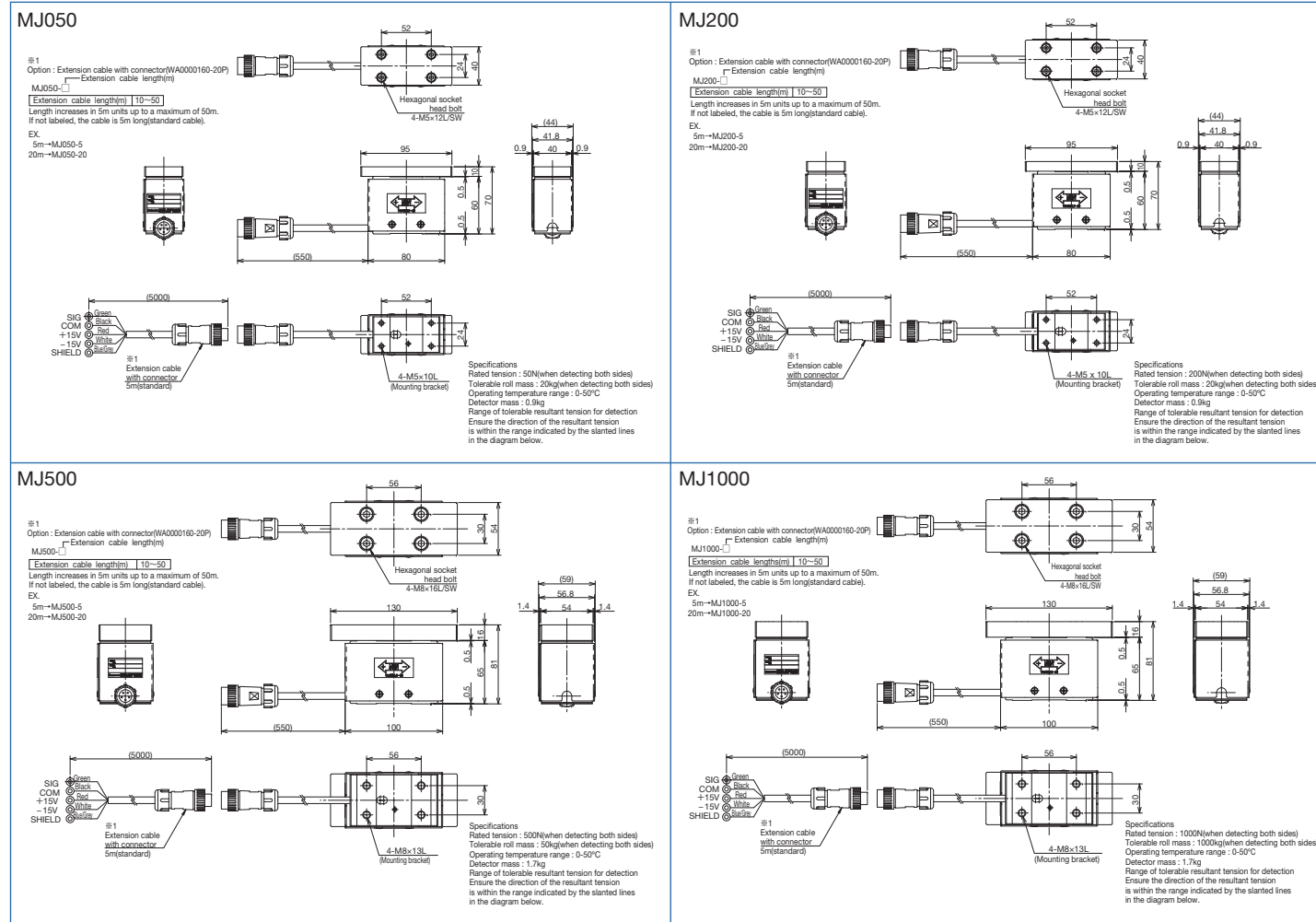
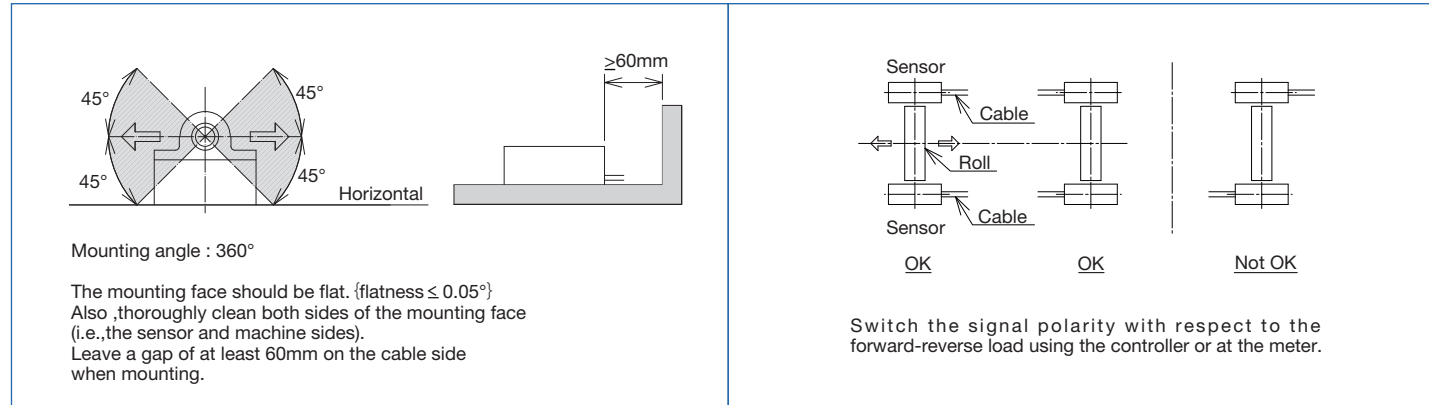


External Dimensions



Installation Method



High-Performance Tension Sensor

Introducing a sensor that is robust enough to handle water when cleaning a production line.

Can be splashed with water

**IP66**  
 Drip-proof/dust-proof version available



We reserve the right to change the specifications in this catalog without prior notice to improve and update our products.



# MJ

## The birth of a high-performance sensor that supports leading-edge industries.

The MJ tension sensor is the ideal high-performance tension sensor for producing sophisticated plastic films. It is essential for tension control of sophisticated plastic films used in leading-edge industries, including flat-screen TVs, rechargeable batteries, thin and light solar cells, and organic EL lighting, which is expected to become the next generation of lighting.



Stainless steel version (drip-proof and dust-proof)

Steel version (standard)

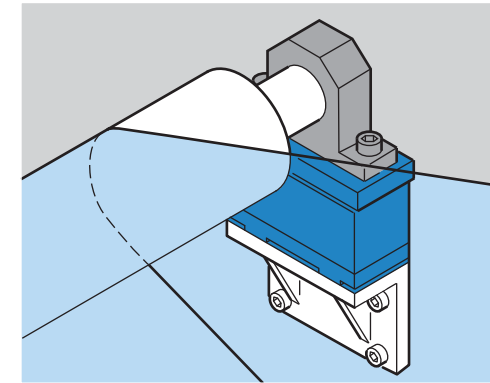
### A tough tension sensor

The MJ tension sensor has an IP66-compliant, highly-durable protective housing.

We maximized robustness to enable tension to be stably detected even under the harshest conditions. The high-precision protective housing makes it difficult for water droplets and dust to penetrate, allowing the sensor to be washed with water without constraint when washing a production line.



## The Successor to the MC type, with improved stability and robustness



### High Spring-Steel Rigidity

The high spring-steel rigidity of the MJ tension sensor provides a high resonance point, making it ideal for high-speed lines.

### Effective for Thin Webs

The load displacement of the MJ tension sensor is extremely low, making it effective for thin web lines (i.e., film, foil, etc.).

### IP66-Compliant Protective Housing (Option)

The stainless version has an IP66-compliant protective housing that can handle being splashed with water when cleaning a production line.

### Simple Construction

The use of a mono-block structure provides outstanding linearity and hysteresis.

### Compact Design

The MJ sensor is compact but highly robust.

The MJ tension sensor is the successor to the MC tension sensor which has proven popular since it was launched in 1993. While inheriting the performance of its predecessor, the MJ Tension sensor is even more robust, and can be used stably for long periods, even in harsh environments that contain water and dust. The MJ tension sensor is suited to high-precision and high-speed lines.

### MJ Series Specifications

	Model	MJ050	MJ200	MJ500	MJ1000
	Diagram number	MD0000320	MD0000330	MD0000340	MD0000350
*1	Rated tension (N)	50	200	500	1000
*1,4	Maximum roll load (N)	200	200	500	1000
*1,4,5	Maximum overload	700	2000	5000	10000
	Roll displacement (μm-N)	0.36	0.12	0.05	0.03
*2	Resonance frequency (Hz)	105.0	143.8	140.9	128.6
*3	Frequency response (Hz)	300			
	Main unit mass (kg)	0.9		1.7	
	Direction of resultant tension force	Forward or reverse			
	Mounting angle	Any desired angle			
	Supply voltage	±15VDC ±1V (+15V/50mA, -15V/10mA)			
	Ambient temperature/humidity	0 to +50°C, 35 to 85%RH (No condensation permitted)			
	IP Protection Rating	IP30			

#### Notes:

- \*1. The figures for rated tension, maximum roll load, and maximum overload are for double-sided detection. For single-sided detection the above figures should be halved.
- \*2. The resonance frequency figures are for the tension load during double-sided detection and at maximum roll load.
- \*3. The frequency response figure is with respect to a change of 1/10 in the rated tension.
- \*4. For the MJ050, the maximum roll load is not equal to the rated tension (double-sided load). The maximum roll load is 200 N. Consequently, the maximum overload = the rated tension × 10 + the maximum roll load.
- \*5. The maximum overload represents the maximum value of the force exerted in the direction of the resultant force.