

# Magnetostrictive Displacement Sensors Operating Manual

M Series  
MH Structure  
Analog interface



 **400-809-1101**  
Customer Service Hotline



## ■ Use Regulations

Magnetostrictive displacement sensor is used to detect the displacement of motion mechanism. According to the selection regulations, the magnet ring (block) matched with magnetostrictive displacement detection electronic components is selected for detection applications in different occasions. Please ensure that the cable, connector, magnet ring (block) and sensor body are the original parts of the manufacturer when using. Please do not open the shell of the sensor without authorization, so as not to affect the normal warranty period of the product.

## ■ Safety matters

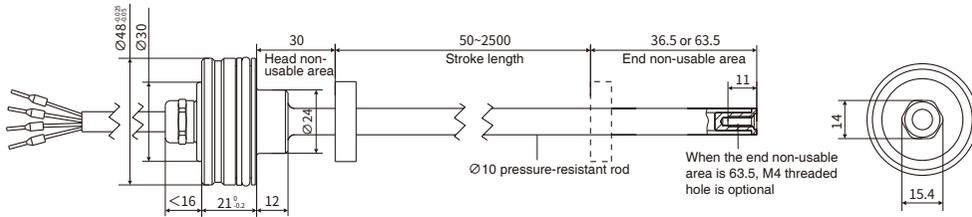
Please read the operating manual carefully before powering up the sensor. Firstly, confirm the outgoing mode and pin signal definition, and make correct electrical connection to prevent power-on from damaging the sensor or causing misoperation of the equipment.

During the construction and use of the sensor, the current of high-power equipment such as welding machine should be avoided from entering the working circuit of the sensor.

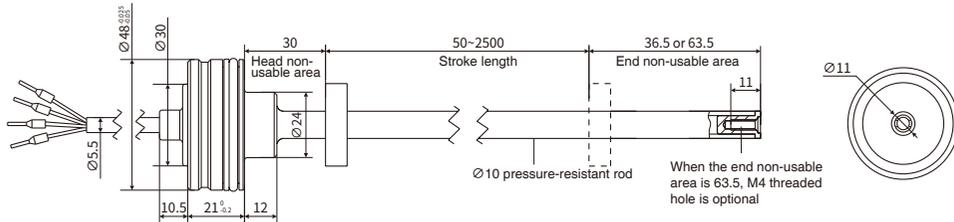
If you find abnormal sensor data or obvious changes in appearance (such as bumping deformation), please stop using it immediately, and contact the manufacturer to confirm the current state of the sensor before continuing to use it.

## ■ Installation Dimensions

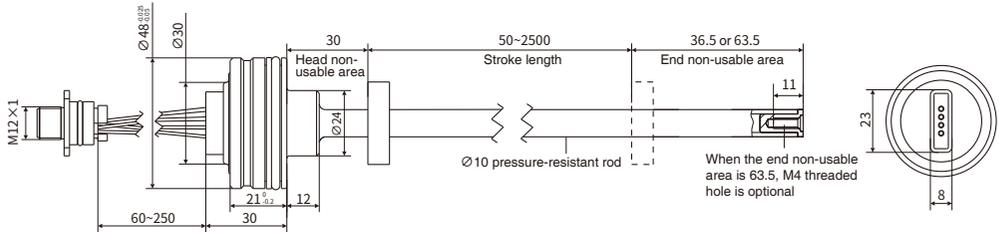
External dimensions of cable outlet (fastening mode DM)



External dimensions of cable outlet (fastening method QM)



Head non-usable area

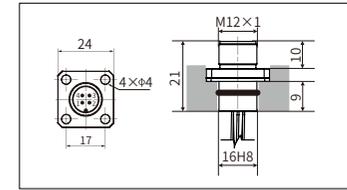


## ■ Electric interface

### • Analog (connector)

M12-4Pin Definition	No.	PA	PB	PC
	1	Power supply	Do not connect	Power supply
	2	Signal	Power supply	Do not connect
	3	Ground	Ground	Ground
	4	Do not connect	Signal	Signal

### • M12-4 pin socket



### • Analog output (Cable color definition of female connector)

M12-5 pin female connector	Definition	PA	PB	PC
	Power supply	Brown	White	Brown
	Ground	Blue	Blue	Blue
	Signal	White	Black	Black

### • Analog output (scattered output)

Scattered output	PT	
	Definition	Cable color
	Power supply	Brown
	Ground	White
	Signal	Green

### • Analog output (Cable color definition of right angle female connector)

M12-5 pin right angle female connector	Definition	PA	PB	PC
	Power supply	Brown	White	Brown
	Ground	Blue	Blue	Blue
	Signal	White	Black	Black

### • Analog output (cable outlet)

Cable code: 511806	Definition	Cable color
	Power supply	Brown
	Ground	White
	Signal	Green

## ■ Application environment

Magnetostrictive displacement sensor is a kind of magnetic measurement sensor. Make sure there is no strong magnetic field around the sensor, which may interfere with the data. The displacement output signal cable of magnetostrictive displacement sensor should be away from the power cable or large current or strong pulse interference source. Confirm the environmental parameters including temperature, vibration, etc., and ensure that the working conditions are within the nominal working parameters of the sensor.

## ■ Installation

The installation of magnetostrictive displacement sensor mainly includes sensor body, magnet and cable fixing.

The installing forms of the sensor body are: thread installing, clamp installing and matching fixing installing. Before installation, make sure that the packaging is in good condition, and the sensor body has no obvious bending and bumping. The sensor body should be assembled according to the specific installation form.

When installing magnets, please use matching magnetic insulation gaskets to ensure normal magnetic field circuit.

When installing plugs or cables, please connect them accurately according to the electrical interfaces in the instructions.

## ■ After-sales support

If the sensor malfunctions, please contact the after-sales department of the company in time. Do not attempt to repair it yourself.