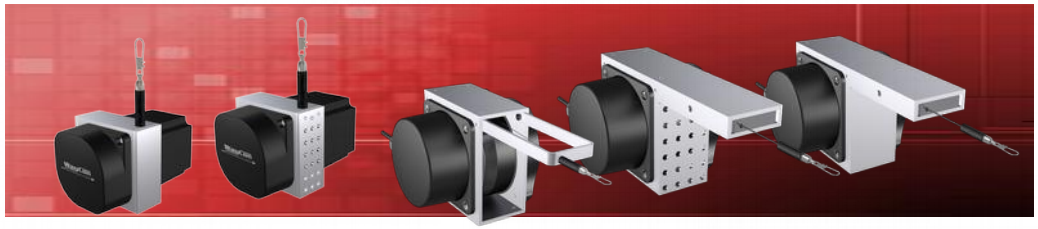


INSTALLATION GUIDE

Draw wire sensors series MH

For further information please see the data sheet at www.waycon.biz/products/draw-wire-sensors

WARNING NOTICES

Do not try to open the device. The stored energy of the spring drive may lead to injuries when being mishandled.

Do not touch the rope when operating the sensor.

When mounting outdoors protect the sensor and the rope from icing at temperatures below 0 °C. The usage of a deflection pulley may help defrosting the wire rope.

Standard version with open housing: the free turning of the rope drum must be ensured. In case the rope drum gets blocked there is a serious danger of injury and the sensor may get destroyed.

MAINTENANCE

The devices are maintenance-free. If however, the rope is soiled due to adverse environmental conditions, it can be cleaned with a cloth drenched in resin-free machine oil.

DECLARATION OF EC-CONFORMITY

Manufacturer	WayCon Positionsmesstechnik GmbH Mehlbeerenstrasse 4 82024 Taufkirchen / Germany
	This is to certify that the products
Classification	draw wire sensors
Product series	MH120, MH60
	fulfill the current request of the following EC-directives: EMC-directive 2014/30/EU applied harmonized standards: EN 61326-1: 2013

The declaration of conformity loses its validity if the product is misused or modified without proper authorisation.

Taufkirchen, 24.02.2016

Andreas Täger
CEO

FIRST STEPS

WayCon Positionsmesstechnik GmbH would like to thank you for the trust you have placed in us and our products. This manual will make you familiar with the installation and operation of our draw wire sensors. Please read this manual carefully before initial operation!

Unpacking and checking:
Carefully lift the device out of the box by grabbing the housing. Do not pull the rope. After unpacking the device, check it for any visible damage as a result of rough handling during the shipment. Check the delivery for completeness.
If necessary consult the transportation company, or contact WayCon directly for further assistance.

MOUNTING OF THE SENSOR

Mount the sensor at the designated place by using the fixing holes before extracting the rope and before attaching the rope to the measuring target.

The sensor MH120 can be fixed by using the 4 x M4 threaded holes (max. depth 5 mm). These holes are located on 2 sides of the sensor housing, so that 2 different mounting positions are available. The sensor MH160 can be fixed by using the 2 x M4 threaded holes (max. depth 10 mm). Additionally, the MH60 can be attached via a base plate with 2 holes (ø 4.5 mm)

The perforated plate covering is not suitable for both sensors.Carefully extract the measuring rope now and attach it to the measuring target. Do not let the rope go while extracting it from the sensor and pay attention not to bend or buckle the rope during the procedure.

HANDLING THE WIRE ROPE

When installing or operating the sensor, take care not to let the rope snap back by mistake or extract the rope over the specified measurement range, as this might destroy the sensor.

The rope must be extracted from the sensor vertically. The maximum variation from the vertical is 3°. Avoid carefully extracting the rope at an inclination, since the durability of the instrument would shorten considerably. If it is not possible to keep the limit of 3°, a deflection pulley has to be used.

Guide the rope preferably in corners or guarded in channels to prevent pollution or accidental touch.

Avoid guiding the rope over edges or corners. Use a deflection pulley instead.

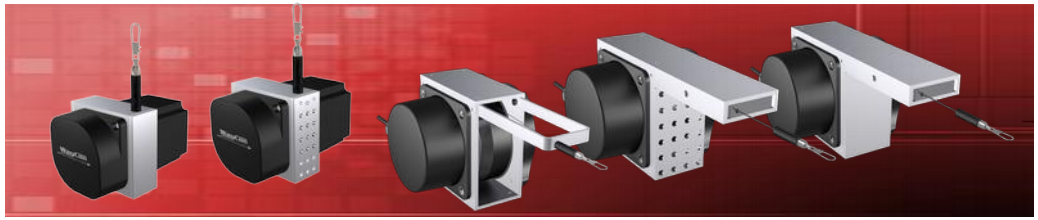
Do not operate the sensor if the rope is buckled or damaged. A ripping of the rope may lead to injuries or a damaging of the sensor.

WayCon Positionsmesstechnik

ELECTRICAL CONNECTION

Draw wire sensors series MH

For further information please see the data sheet at www.waycon.biz/products/draw-wire-sensors



CABLE OUTPUT

Cable output, single output signal

Cable type	TPE, flexible
Direction	radial
Length	2 m standard (others on request)
Diameter	ø 4.5 mm
Wire	0.25 mm²
Temperature	fixed installation -30...+85 °C, flexible installation -20...+85 °C

Cable colour	5V, 10V	5VT, 10VT	420A	1R
BN	V +	V +	V +	V +
WH	Signal	Signal	n. c.	Cursor
BL	GND	GND	Signal	GND
BK	GND Signal	MFL *	n. c.	n. c.

* Multi-functional line

Cable output redundant output signal

Cable type	TPE, flexible
Direction	radial
Length	2 m standard (others on request)
Diameter	ø 4.5 mm
Wire	0.25 mm²
Temperature	fixed installation -30...+85 °C, flexible inst. -20...+85 °C

Cable colour	0...5 V, 0...10 V	4...20 mA	1 kOhm
WH	V1 +	V1 +	V1 +
BN	Signal1	n. c.	Cursor1
GN	GND1	Signal1	GND1
YE	GND1 Signal	n. c.	n. c.
GY	V2 +	V2 +	V2 +
PK	Signal2	n. c.	Cursor2
BU	GND2	Signal2	GND2
RD	GND2 Signal	n. c.	n. c.

CONNECTOR OUTPUT

Connector output

- radial
- M12, 4 poles

Pin	0...5 V, 0...10 V	0...5 V, 0...10 V (teachable)	4...20 mA	1 kOhm
1	V +	V +	V +	V +
2	Signal	Signal	n. c.	Cursor
3	GND	GND	Signal	GND
4	GND Signal	MFL *	n. c.	n. c.

* Multi-functional line

Connector output redundant output signal

- radial
- M12, 8 poles

Pin	0...5 V, 0...10 V	4...20 mA	1 kOhm
1	V1 +	V1 +	V1 +
2	Signal1	n. c.	Cursor1
3	GND1	Signal1	GND1
4	GND1 Signal	n. c.	n. c.
5	V2 +	V2 +	V2 +
6	Signal2	n. c.	Cursor2
7	GND2	Signal2	GND2
8	GND2 Signal	n. c.	n. c.

CANopen

For the assignment of the digital output CANopen (WCAN) please refer to the CANopen manual.