

INSTALLATION GUIDE

Draw wire sensors series SX50, SX80, SX120

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

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 is usually installed by using the regular mounting plate. By disassembling the mounting plate, 4 threads (2 x M3, 2 x M5) will become visible in the sensor housing for alternative installation. Sensors with option rope outlet S2 and S3 have a modified base plate.
- Open the rope clip after the sensor is fully mounted and carefully extract the measuring rope. Hook the rope clip on the measuring target and close the bracket of the clip. For safety reasons put a screw driver through the clip to extract the rope.

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 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.

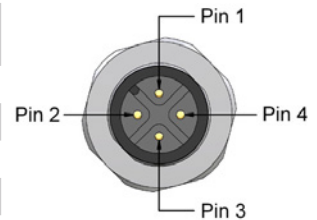
ANALOG OUTPUT

Cable output SX50, SX80, SX120

Cable colour	0...10 V	0...5 V, 0...10 V (teachable)	4...20 mA	1 kOhm
brown	V +	V +	V +	V +
white	Signal	Signal	n. c.	Cursor
blue	GND	GND	Signal	GND
black	GND Signal	MFL*	n. c.	n. c.

Connector output SX50, SX80, SX120

Pin	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.

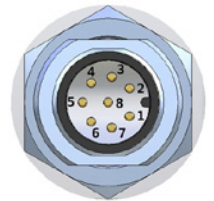


*Multi-functional line

DIGITAL OUTPUT INCREMENTAL

Connector output M12, 8 poles: SX50, SX80, SX120

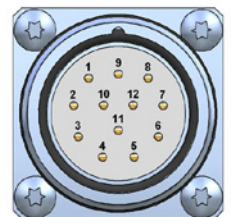
Signal	0V	+V	A	A _{not}	B	B _{not}	Z	Z _{not}
Pin	1	2	3	4	5	6	7	8



Connector output M23, 12 poles: SX80, SX120

Signal	0V	+V	0V _{sens} *	+V _{sens} *	A	A _{not}	B	B _{not}	Z	Z _{not}
Pin	10	12	11	2	5	6	8	1	3	4

* only for Linedriver L



Cable output (Linedriver L: 10 wires, Push-Pull G: 8 wires): SX50, SX80, SX120

Signal	0V	+V	A	A _{not}	B	B _{not}	Z	Z _{not}	0V _{sens} *	+V _{sens} *
Cable colour	white	brown	green	yellow	gray	pink	blue	red	black	violet

* only for Linedriver L

ACCESSORY CABLE ANALOG OUTPUT

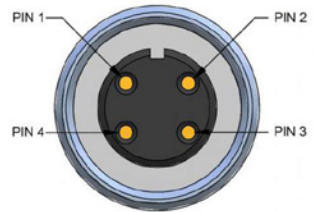
Cable with mating connector M12, 4 pole, shielded

K4P2M-S-M12	2 m, straight connector, IP67
K4P5M-S-M12	5 m, straight connector, IP67
K4P10M-S-M12	10 m, straight connector, IP67
K4P2M-SW-M12	2 m, angular connector, IP67
K4P5M-SW-M12	5 m, angular connector, IP67
K4P10M-SW-M12	10 m, angular connector, IP67



PIN Cable colour

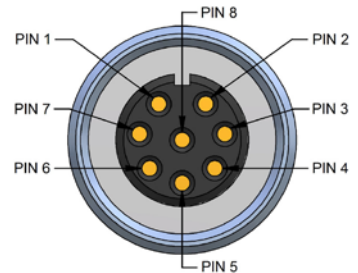
PIN 1	brown
PIN 2	white
PIN 3	blue
PIN 4	black



ACCESSORY CABLE INCREMENTAL OUTPUT

Cable with mating connector M12, 8 pole, shielded

K8P2M-S-M12	2 m, straight connector, IP67
K8P5M-S-M12	5 m, straight connector, IP67
K8P10M-S-M12	10 m, straight connector, IP67
K8P2M-SW-M12	2 m, angular connector, IP67
K8P5M-SW-M12	5 m, angular connector, IP67
K8P10M-SW-M12	10 m, angular connector, IP67



PIN	1	2	3	4	5	6	7	8
Cable colour	white	brown	green	yellow	gray	pink	blue	red



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.
- When operating the sensor in a humid environment, install the sensor with the rope outlet downwards. Otherwise water will gather inside the housing, which leads to corrosion. Where applicable use option S3.

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 SX
fulfill the current request of the following EC-directives:
EMC-directive 2004/108/EC (until April 19th, 2016)
2014/30/EU (from April 20th, 2016)
applied harmonized standards:
IEC 61326-1:2013

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

Taufkirchen, 24.02.1016

Andreas Täger
CEO