

INSTALLATION GUIDE

Draw wire sensors series VX

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 VX50/80/120 is usually installed by using the regular mounting plate. By disassembling the mounting plate, threads will become visible in the sensor housing for alternative installation. Sensors with option rope outlet S2 and S3 have a modified base plate.
- The sensor VX135-8/135 can be installed in two ways, by using the supplied T-slot nuts, or the clamp brackets. You will find a detailed description of both installation methods in the next section.
- 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

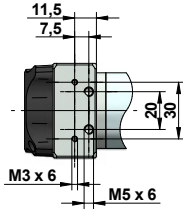
- When installing or operating the sensor, take care not to let the rope snap back by mistake or extract the rope over the specified measurement range, as this might destroy the sensor.
- The rope must be extracted from the sensor vertically. The maximum variation from the vertical is 3°. Avoid extracting 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.

MONTAGE VX50/80/120

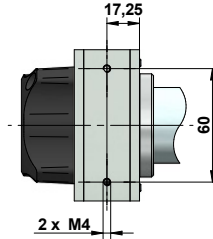
Mounting standard rope outlet, rope outlet sideways top (S1)

The sensor is usually installed by using the regular mounting plate. By disassembling the mounting plate, there are threads in the sensor housing for alternative installation:

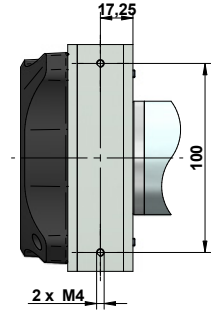
VX50: 2 x M3 und 2 x M5



VX80: 2 x M4



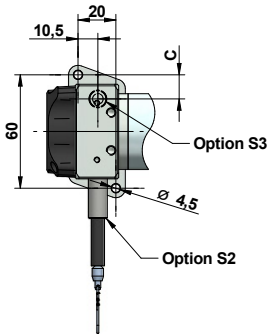
VX120: 2 x M4



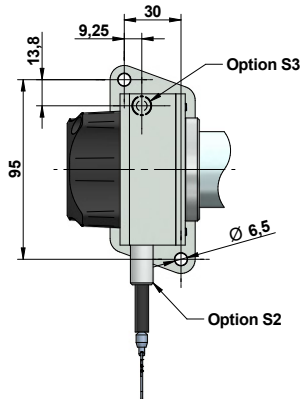
Mounting rope outlet sideways bottom (S2), rope outlet bottom (S3)

Sensors with option rope outlet S2 and S3 have a modified base plate:

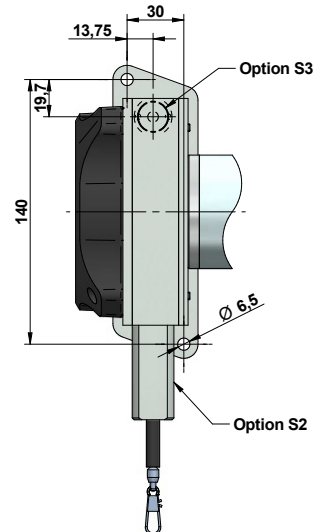
VX50



VX80



VX120

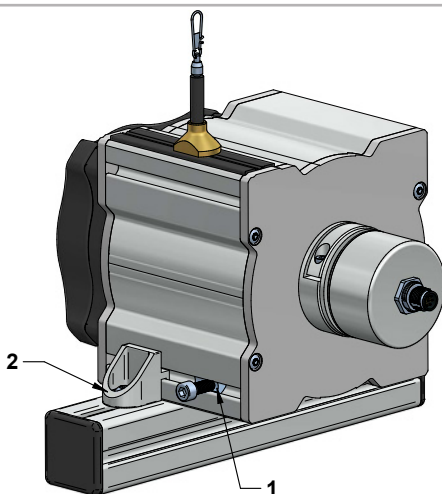
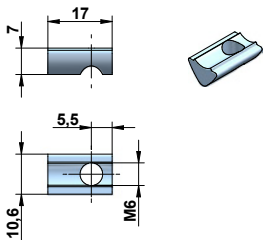


Measurement range [mm]	Option	C
1250	Standard	10,3

1. Mounting via T-slot nuts

The included T-slot nuts can be easily inserted into the grooves of the sensor housing. The nuts have a metric thread M6.

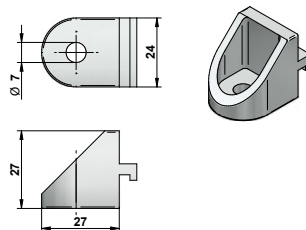
Two (up to 20 m measurement range) or four (more than 25 m measurement range) T-slot nuts are included in the delivery.



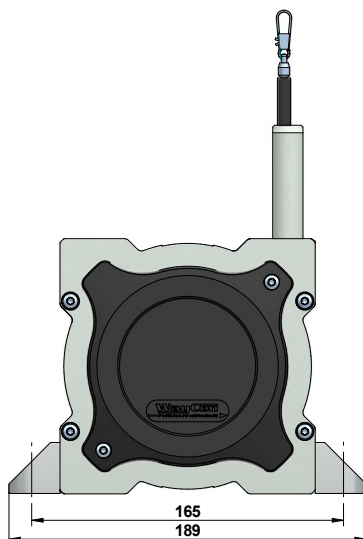
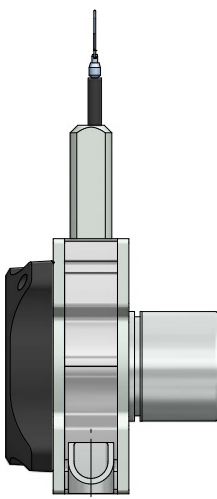
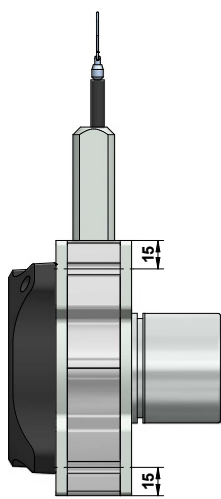
2. Mounting via angle clamp brackets

The angle clamp brackets feature a bore for M6 screws to fix it on a plate, slab or a profile.

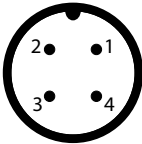
Two (up to 20 m measurement range) or four (more than 25 m measurement range) angle clamp brackets are included in the delivery.

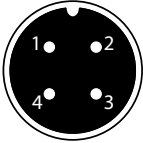


Position of the grooves and angle clamp brackets



ELECTRICAL CONNECTION AND CABLE

Cable output cable colours	Connector output M12, male	V/m/s	
BN	Pin 1	Signal+	
WH	Pin 2	n.c.	
BU	Pin 3	Signal-	
BK	Pin 4	n. c.	

Cable with mating connector M12 (female), 4-polig			Pin	cable colour
K4PXM-S-M12	X m, straight connector, IP67, shielded		1	BN
K4PXM-SW-M12	X m, angular connector,, IP67, shielded		2	WH
			3	BU
			4	BK

WARNING NOTICES AND MAINTENANCE

- 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.


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, Mehlbeerenstr. 4, 82024 Taufkirchen
Classification	draw wire sensors
Product series	VX
	fulfill the current request of the following EC-directives:
	EMV-directive 2004/108/EG (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, 12.04.2021

 Andreas Täger
Geschäftsführung