

## AWP 512

“High strength stainless steel wire”



- Different stroke (measuring) lengths between 0...8000 mm and 0...12000 mm
- $\pm 1\%$  FS linearity
- Potentiometric, 0-10 VDC, 4-20 mA or CANopen output options
- IP54 protection class (Optional IP67)
- Compact design and easy installation
- 2 m/s maximum speed
- Shock/vibration resistant
- Aluminum body

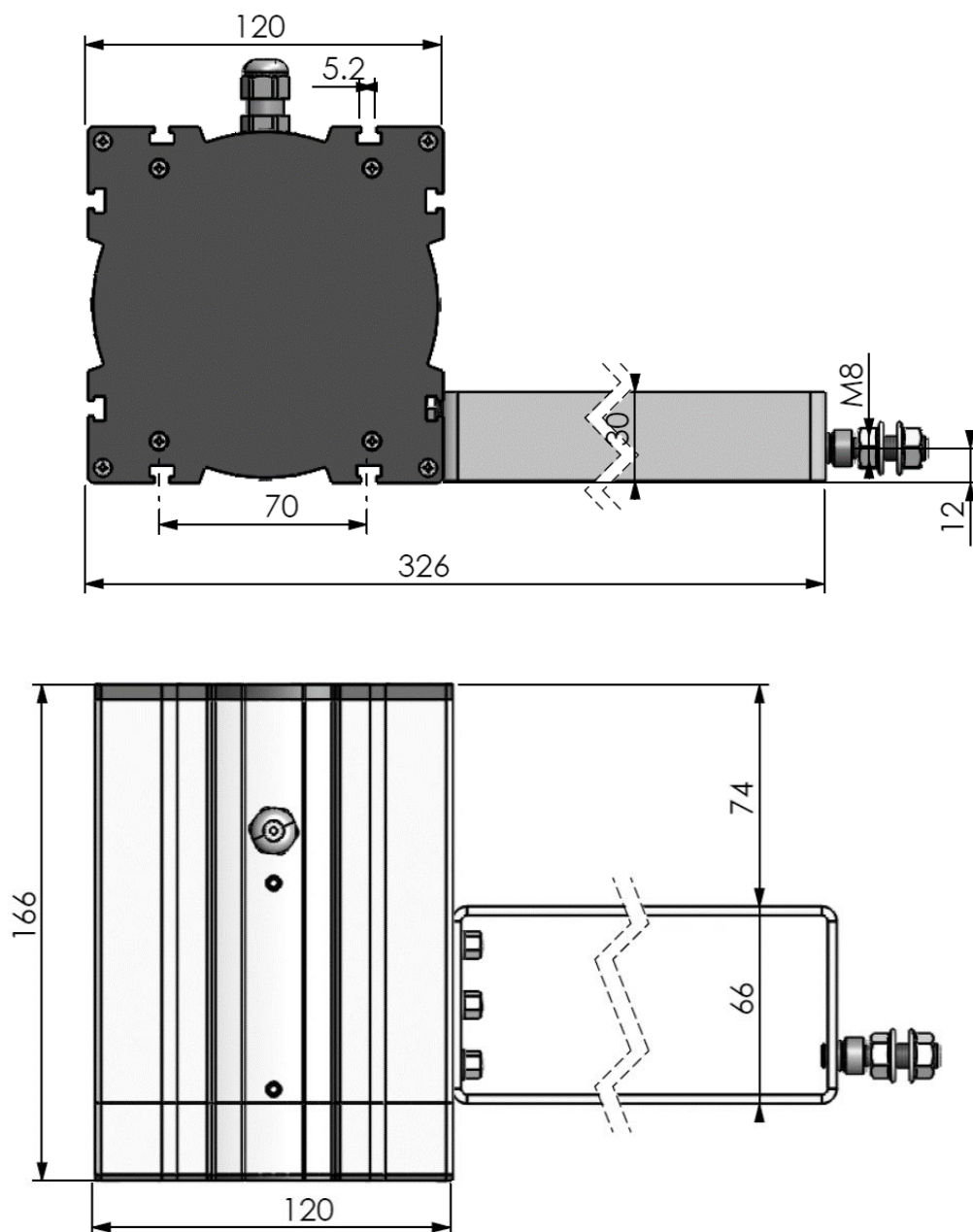
AWP 512 series draw wire sensors; consists of a rotary potentiometer which is controlled by stainless steel wire. They make measurement by pulling and rewinding stainless steel wire. They convert linear motion to potentiometric, analog or CANopen output.

## MECHANICAL DATA

### Mechanical and Environmental Data

<b>Stroke (measuring) Length</b>	Different measuring lengths between 0...8000 mm and 0...12000 mm	
<b>Linearity</b>	±1% FS	
<b>Maximum Speed</b>	2 m/s	
<b>Required Force</b>	12N	
<b>Protection Class</b>	IP54 (Optional IP67)	
<b>Operating Temp.</b>	-25°C ... +85°C	
<b>Relative Humidity</b>	%95	
<b>Materials</b>	Body	Aluminum/plastic
	Measuring Wire	Stainless steel

### MECHANICAL DIMENSIONS (mm)



## ANALOG OUTPUT

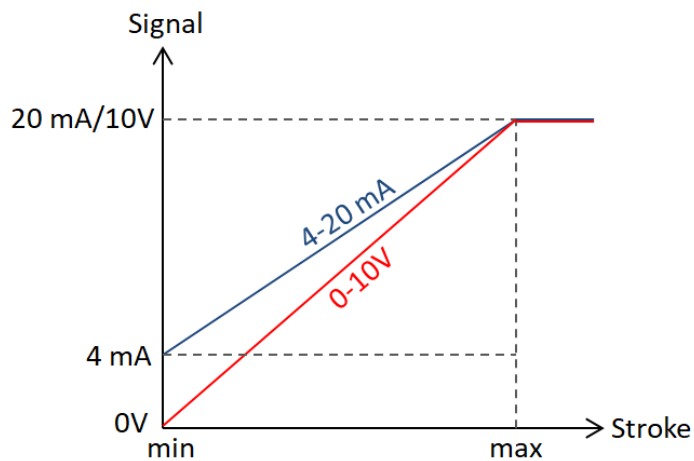
<b>Measuring Type</b>	Potentiometric		
<b>Output Signals</b>	Potentiometric	0 ... 10 V	4 ... 20 mA
<b>Resistance</b>	5 K $\Omega$ (standard), 10 K $\Omega$	-	-
<b>Supply Voltage</b>	42V max.	12...30 VDC	12...30 VDC
<b>Reverse polarity protection</b>	Yes		
<b>Short circuit protection</b>	Yes		
<b>Electrical Connection</b>	3x0,14 mm <sup>2</sup> shielded cable or M12 connector (optional others)		

0-10V or POTENTIOMETER Connection		
Signal	Cable Color	M12 5 pin male connector
Earth	Silver	Pin 1
+V	Red	Pin 2
0V	Black	Pin 3
0-10V / Pot	Yellow	Pin 4
-	-	Pin 5

4-20 mA Connection		
Signal	Cable Color	M12 5 pin male connector
Earth	Silver	Pin 1
+V	Red	Pin 2
-	-	Pin 3
4-20 mA	Yellow	Pin 4
-	-	Pin 5

\* 1 pcs M12 5 pin male connector is used as standard for single output models

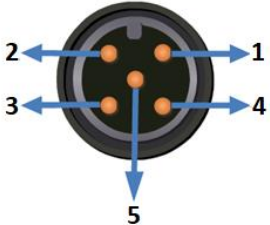
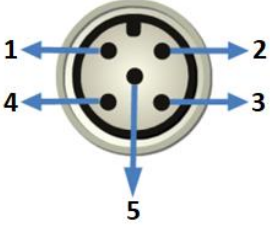
\* Different socket models can be requested optionally.



## CANopen OUTPUT

<b>Measuring Type</b>	Potentiometric
<b>Device Type</b>	CANopen, CiA DS406
<b>Communication profile</b>	CiA 301
<b>Node ID</b>	Between 1 and 127, it can be adjusted with LSS or SDO
<b>Baud Rate</b>	10 kBit/s, 20 kBit/s, 50 kBit/s, 100 kBit/s, 125 kBit/s, 250 kBit/s, 500 kBit/s, 800 kBit/s, 1
<b>PDO Data Rate</b>	500 ms
<b>Error Control</b>	Heartbeat, Emergency Message
<b>PDO</b>	2 Tx PDO
<b>PDO Modes</b>	Event/Time triggered, Synch/Asynch
<b>SDO</b>	1 server
<b>Position Information</b>	Object Dictionary 6004
<b>Termination Resistance</b>	Optional, specify at the order stage.
<b>Supply Voltage</b>	10...30 VDC
<b>Reverse polarity protection</b>	Yes
<b>Short circuit protection</b>	Yes
<b>Electrical Connection</b>	6x0,34 mm <sup>2</sup> twisted shielded cable or M12 5 pin male + M12 5 pin female connector

\*Click for CANopen EDS file.

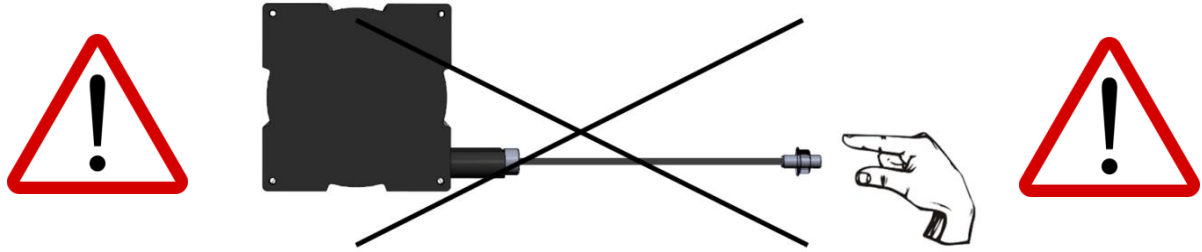
Signal	Cable Color	M12 5 pin male connector	M12 5 pin female connector
			
CAN_SHIELD	Silver (mesh)	Pin 1	
+V (10...30 VDC)	Red	Pin 2	
GND (0V)	Black	Pin 3	
CAN_H	Yellow	Pin 4	
CAN_L	Green	Pin 5	

\* CANopen models have 2 outputs. 1 pcs M12 5 pin male and 1 pcs M12 5 pin female sockets are used as standard.

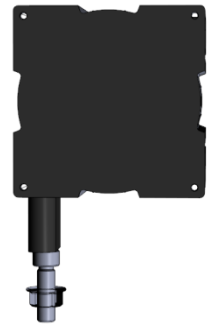
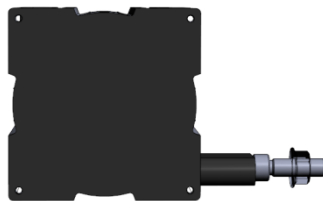
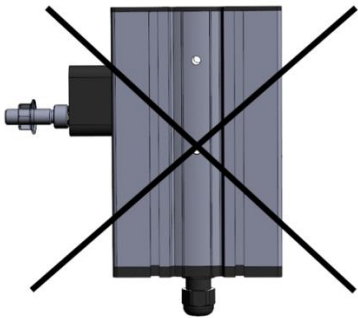
\* Different socket models can be requested optionally.

## MOUNTING AND WARNINGS

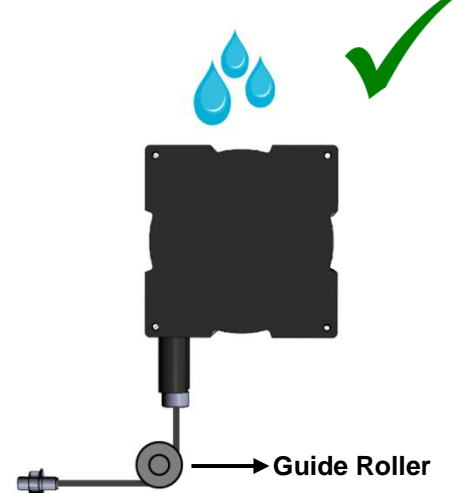
1. Never release the wire after pulling. Otherwise, the coil spring will be damaged.



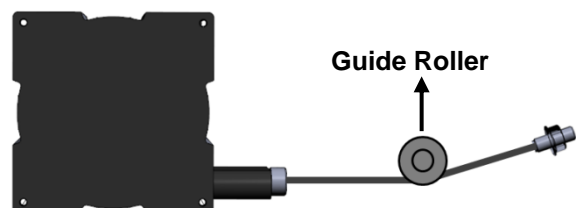
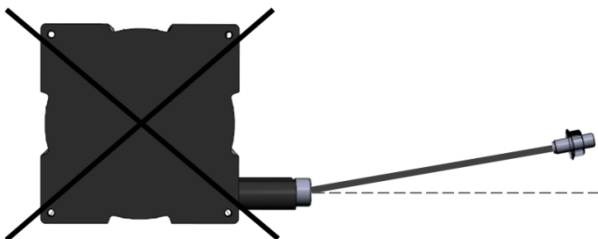
2. Mount the sensor according to the mounting directions shown below.



3. If there is a trickle of water (like a rain), the wire outlet must not be a drip of water upstream. If needed please use guide rollers.



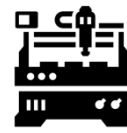
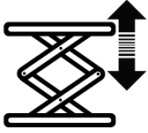
4. The wire should not be pulled in angular. If needed, please use guide rollers.



**Important Note(!):** Failure to comply with these recommendations, the malfunctions that may occur will not be under the warranty.

## SAMPLE APPLICATION FIELDS

- Elevators
- Press machines
- Crane systems
- Wood processing machines
- Marble processing machines
- Storage positioning
- Dam protections
- Sluice gate control
- Air compressors
- Glass processing machines
- Lifting platforms
- Applications in medical technologies (operating table etc.)
- Forklifts
- Screw machines
- Paper machines
- Sewing machines
- Hydraulic machines
- Sheet metal machines
- Printing machines
- Horizontal control equipments
- Construction machines
- Industrial robots
- Injection machines
- X-Y axis displacement
- Liquid level measurements and position control



## ORDER CODE

Model									
Resistance <sup>(1)</sup>									
No Code: Analog or CANopen output									
5K: 5 KΩ (standard)									
10K: 10 KΩ									
Cable or Socket Direction									
B : From backside									
S : From side									
Protection Class									
No code : IP54 (std)									
E067 : IP67									
AWP 512	-	XXXX	-	XXX	-	XXX	-	X	-
Stroke Length				Electrical Connection <sup>(2)</sup>				Output Signals	
Different measuring lengths between 0...8000 mm and 0...12000 mm				3M : 3 m cable				No Code : Potentiometric	
				5M : 5 m cable				V : 0-10 VDC	
				10M : 10 m cable				A : 4-20 mA	
				S13F : M12 5 pin female conn.				C : CANopen	
				S13M : M12 5 pin male conn.					
				S13FM: M12 5 pin female + M12 5 pin male					
				Conn.(available on CANopen models)					

(1) For products with analog or CANopen output, resistance value is not selected. Please contact for other resistance options for potentiometric output products.

(2) The product can be requested with cable or socket.

As standard;

For analog output models, 1 pcs M12 5 pin male socket (S13M) is used.

For CANopen output models, 1 pcs M12 5 pin female + 1 pcs M12 5 pin male socket (S13FM) is used.

However, different socket combinations may be requested as in the examples below.

Please contact us for any other socket model other than M12.

**Sample 1 (Potentiometric output):** AWP 512-8000-5K-S13M-S

AWP 512 series, 8000 mm stroke, 5K resistance, **M12 5 pin male socket**, side socket outlet, potentiometric output

**Sample 2 (CANopen output):** AWP 512-8000-S13FM-B-C

AWP 512 series, 8000 mm stroke, **1 pcs M12 5 pin female + 1 pcs M12 5 pin male socket**, backside socket outlet, CAN output

**Sample 3 (Analog output):** AWP 512-8000-3M-S-A

AWP 512 series, 8000 mm stroke, **3 meters cable output**, side cable outlet, current output