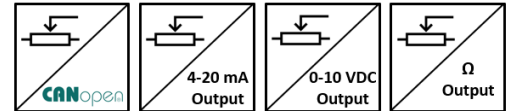




### GENERAL FEATURES

- Different stroke (measuring) lengths between 0...6000 mm and 0...8000 mm
- ±0.25% FS linearity
- Potentiometric, 0-10 VDC, 4-20 mA analog output or CANopen output options
- Redundant output model option
- Stainless steel measuring wire
- IP65 protection class
- Compact design
- Easy installation
- 2 m/s maximum speed
- Shock/Vibration resistant
- Aluminum anodized body



AWP 820 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. Different stroke (measuring) lengths between 0...6000 mm and 0...8000 mm are available. They convert linear motion to potentiometric output.

The “A” series gives of 4-20 mA analog output with the help of the converter card.  
 The “V” series gives of 0-10 VDC analog output with the help of the converter card.  
 The “C” series gives of CANopen signal output with the help of the converter card.

Optionally, redundant output, different non-standard measuring lengths, cable length or socket model can be requested.

### TECHNICAL SPECIFICATIONS

<b>*Stroke (measuring) Length</b>	Different measuring lengths between 0...6000 mm and 0...8000 mm	<b>Maximum Speed</b>	2 m/s
<b>*Connection Cable Length</b>	3m (standard), 5m, 10m	<b>Required Force</b>	12N
<b>*Supply Voltage</b>	“A” and “V” models: 12...30 VDC	<b>*Resistance</b>	5 KΩ (standard), 10 KΩ
	CANopen output model: 10...30 VDC	<b>Measuring Type</b>	Potentiometric
	Potentiometric output model: 42V max.	<b>Materials</b>	Housing: Aluminum/steel /plastic Measuring Wire: Stainless steel
<b>*Output Signals</b>	Potentiometric	<b>IP Protection Class</b>	IP65
	0-10 VDC	<b>Operating</b>	-25°C ... +85°C
	4-20 mA CANopen (Optionally Redundant Output)	<b>Relative Humidity</b>	%95
<b>Linearity</b>	±0.25% FS	<b>Weight</b>	≈3200 gr

**Note:** The technical specifications indicated by (\*) vary according to the selected model. The detailed code table is shown on page 4.

### CANopen SPECIFICATIONS

<b>Resolution</b>	23 Bit
<b>Communication profile</b>	CiA 301
<b>Device Type</b>	CANopen, CiA DS406
<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 Mbit/s
<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.

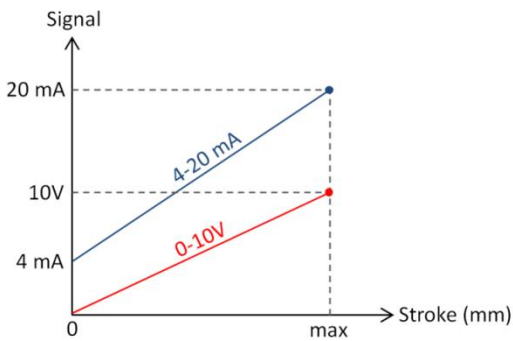
## ELECTRICAL CONNECTION

### Analog

0-10V or POTENTIOMETER Connection		
Signal	Cable Color	M12 5 pin socket
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 socket
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
- \* Redundant models have two 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.

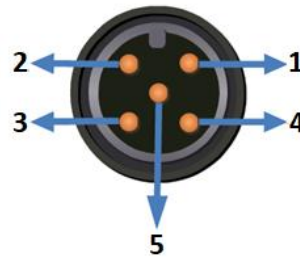


### CANopen

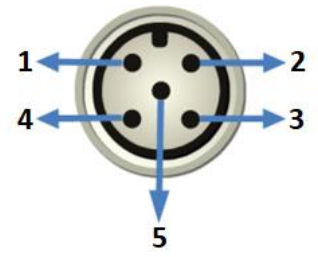
Signal	Cable Color	M12-5 Pin Socket
CAN_SHIELD	Silver (mesh)	Pin 1
+V (10...30 VDC)	Red	Pin 2
GND (0V)	Black	Pin 3
CAN_H	Yellow	Pin 4
CAN_L	Green	Pin 5

- \* 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.

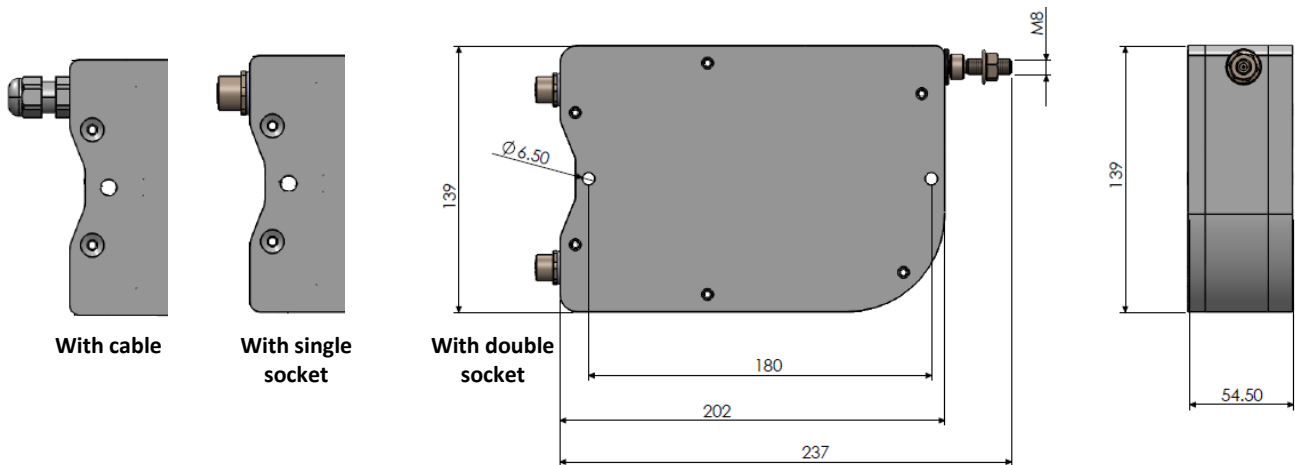
**M12 5 Pin Male Socket**



**M12 5 Pin Female Socket**

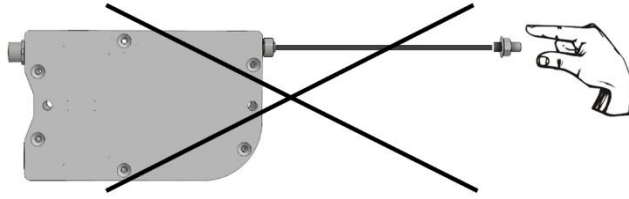


## MECHANICAL DIMENSIONS (mm)

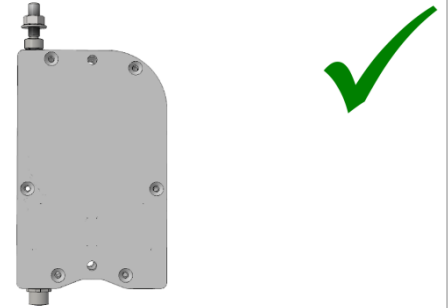
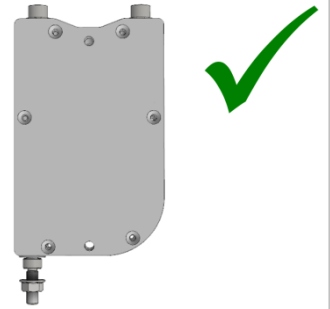
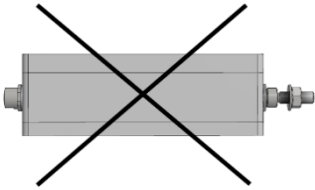


## MOUNTING AND WARNINGS

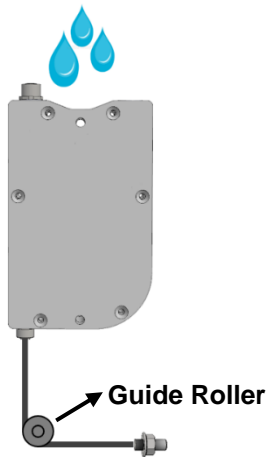
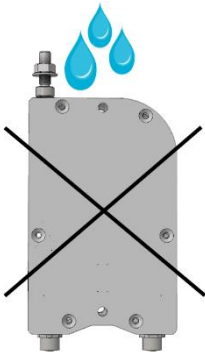
1. Never release the wire after pulling. Otherwise, the coil spring will be damaged.



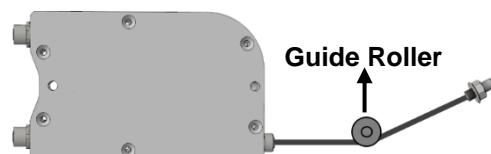
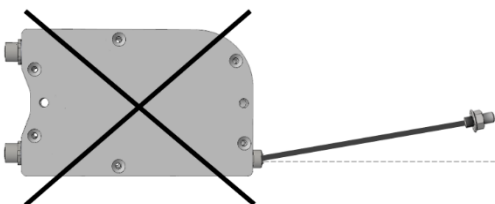
2. Mount the sensor according to the mounting directions shown below.



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.



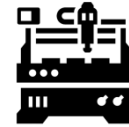
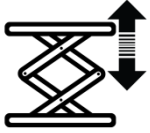
4. The wire should not be pulled in angular. If needed, please use guide rollers.



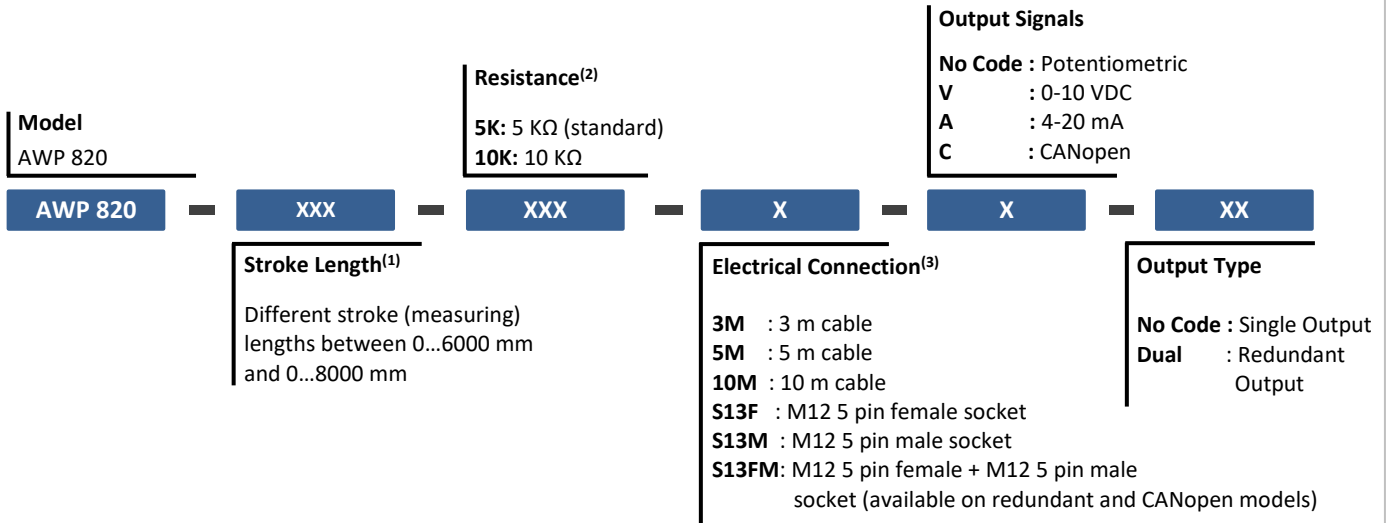
**Important Note(!): Failure to comply with these recommendations, the malfunctions that may occur will not be under the warranty.**

## 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



## PRODUCT CODE



(1) For other (special production) stroke lengths, please contact us.

(2) For other resistance options, please contact us.

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

As standard;

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

For redundant and 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:** AWP-820-8000-5K-S13M-A-DUAL

AWP 820 series, 8000 mm stroke, 5K resistance, **2 pcs M12 5 pin male socket**, current output, redundant

**Sample 2:** AWP-820-8000-5K-S13FM-C-DUAL

AWP 820 series, 8000 mm stroke, 5K resistance, **1 pcs M12 5 pin female + 1 pcs M12 5 pin male socket**, CAN output, redundant

**Sample 3:** AWP-820-8000-5K-3M-A-DUAL

AWP 820 series, 8000 mm stroke, 5K resistance, **3 meters cable output**, current output, redundant

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