Atek

AWP 508

"High strength stainless steel wire"

LONG SERVICE LIFE | **POTENTIOMETRIC MEASUREMENT** | **CANopen OUTPUT** | **ANALOG OUTPUT**
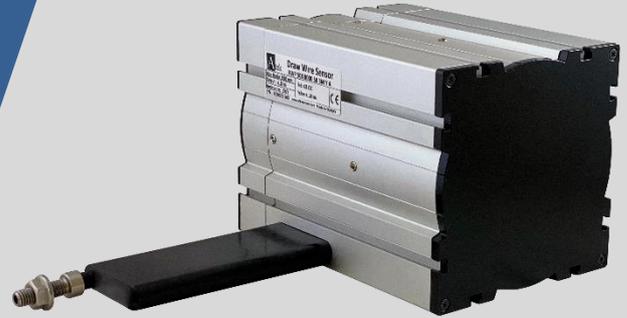
- Different stroke (measuring) lengths between 0...4000 mm and 0...8000 mm
- ±0.5% FS linearity
- Potentiometric, 0-10 VDC, 4-20 mA or CANopen output options
- Redundant output option
- IP54 protection class (Optional IP67)
- Compact design and easy installation
- 2 m/s maximum speed
- Shock/vibration resistant
- Aluminum body

AWP 508 series draw wire sensors; consists of a rotary potentiometer which is controled by stainless steel wire. They make measurement by pulling and rewinding stainless steel wire. They converts linear motion to potentiometric, analog or CANopen output.

Optionally, redundant output, different cable length or socket model can be requested.

MECHANICAL DATA

Mechanical and Environmental Data

|		
Stroke (measuring) Length	Different measuring lengths between 0…4000 mm and 0…8000 mm	
Linearity	±0.5% FS	
Maximum Speed	2 m/s	
Required Force	10N	
Protection Class	IP54 (Optional IP67)	
Operating Temp.	-25°C … +85°C	
Relative Humudity	%95	
Materials	Body	Aluminum/plastic
	Measuring Wire	Stainless steel

MECHANICAL DIMENSIONS (mm)

M12 Connector Output From Backside
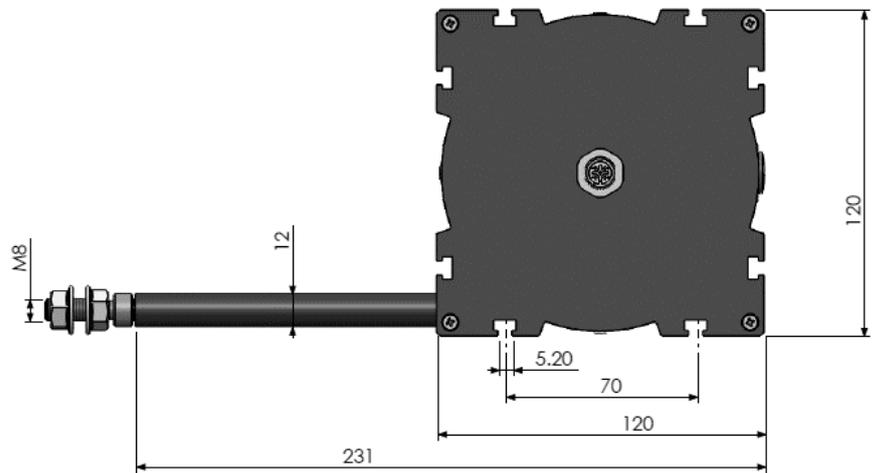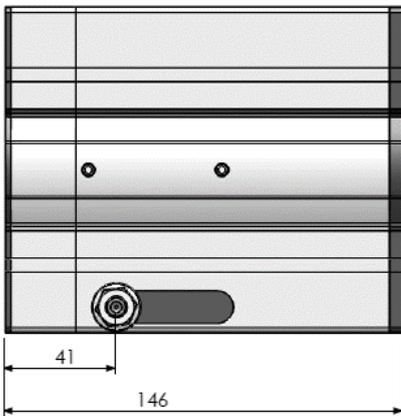
## M12 Connector Output From Side

Cable Output From Backside

PG7

41

146

M8

12

5.20

70

120

231

120

Cable Output From Side

PG7

41

146

M8

12

5.20

70

120

231

120
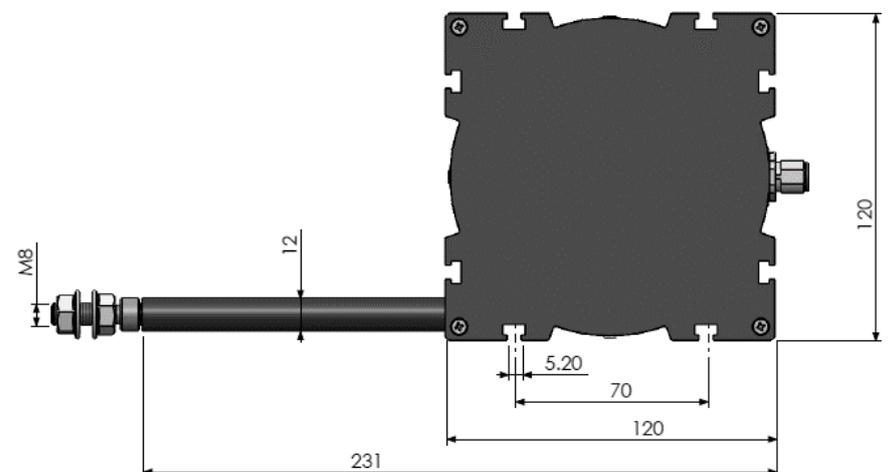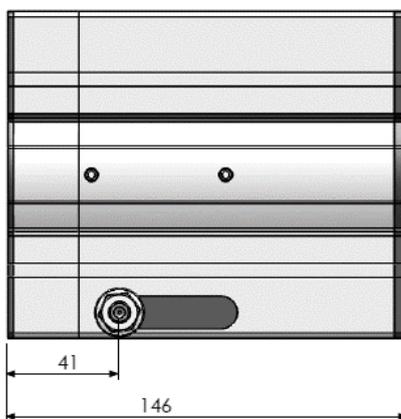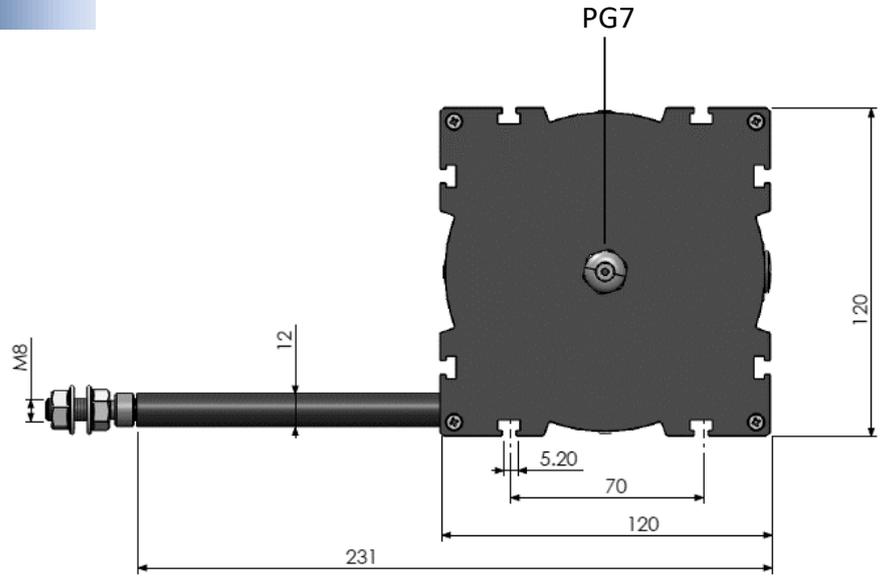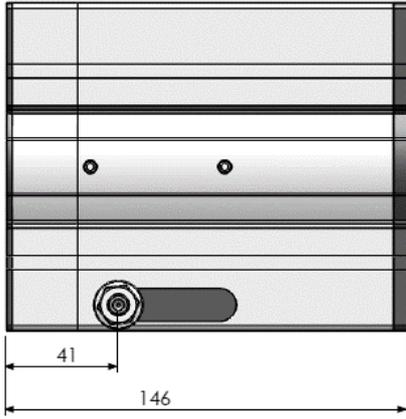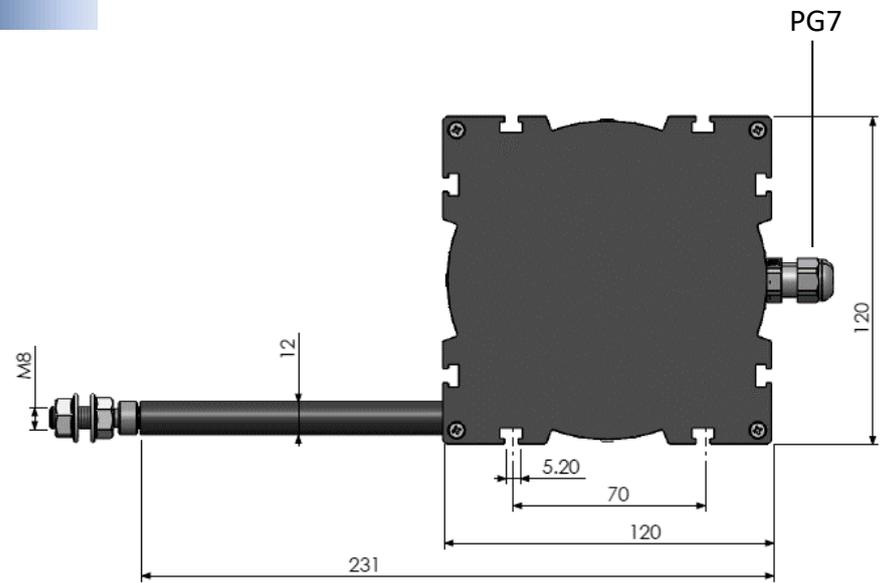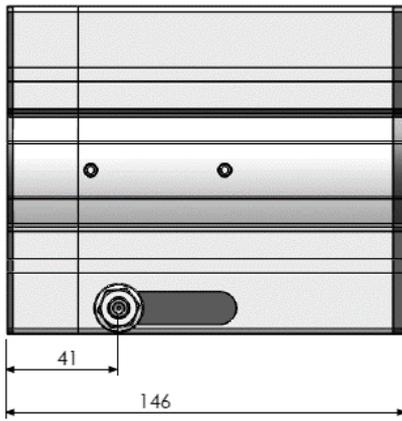
ANALOG OUTPUT

Measuring Type	Potentiometric		
Output Signals	Potentiometric	0 … 10 V	4 … 20 mA
Resistance	5 KΩ (standard), 10 KΩ	-	-
Supply Voltage	42V max.	12…30 VDC	12…30 VDC
Reverse polarity protection	Yes		
Short circuit protection	Yes		
Electrical Connection	3x0,14 mm^2 shielded cable or M12 connector (optional others)		

0-10V or POTENTIOMETER Connection

M12 5 pin male connector

Signal	Cable Color	
Earth	Silver	Pin 1
+V	Red	Pin 2
0V	Black	Pin 3
0-10V / Pot	Yellow	Pin 4
-	-	Pin 5

4-20 mA Connection

M12 5 male connector

Signal	Cable Color	
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.

Measuring Type	Potentiometric
Device Type	CANopen, CiA DS406
Communication profile	CiA 301
Node ID	Between 1 and 127, it can be adjusted with LSS or SDO
Baud Rate	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
PDO Data Rate	500 ms
Error Control	Heartbeat, Emergency Message
PDO	2 Tx PDO
PDO Modes	Event/Time triggered, Synch/Asynch
SDO	1 server
Position Information	Object Dictionary 6004
Termination Resistance	Optional, specify at the order stage.
Supply Voltage	10…30 VDC
Reverse polarity protection	Yes
Short circuit protection	Yes
Electrical Connection	6x0,34 mm^2 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	
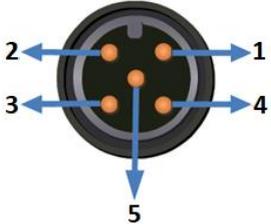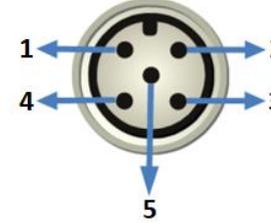
* CANopen models have 2 outputs. 1 pcs M12 5 pin male and 1 pcs M12 5 pin female sockets are used as standard.
***** Different socket models can be requested optionally.

MOUNTING AND WARNINGS

1. Never release the wire after pulling. Otherwise, the coil spring will be damaged.
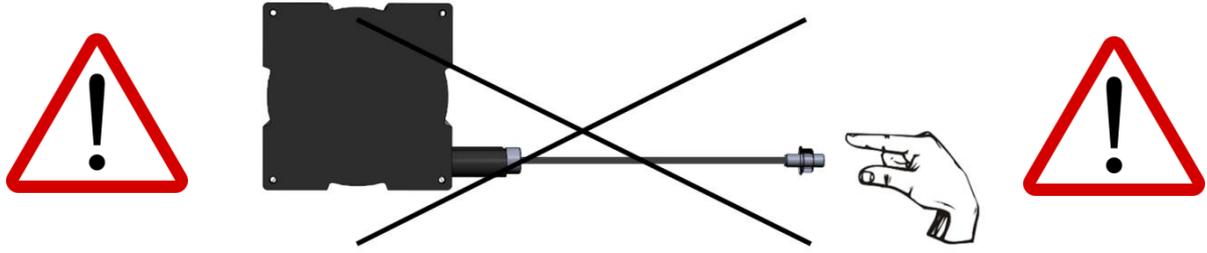
2. Mount the sensor according to the mounting directions shown below.
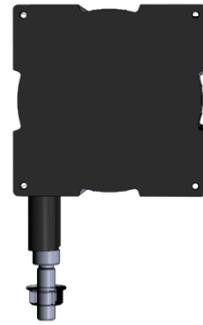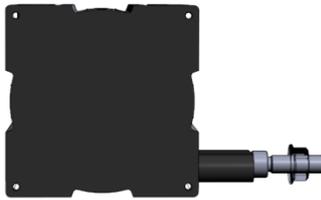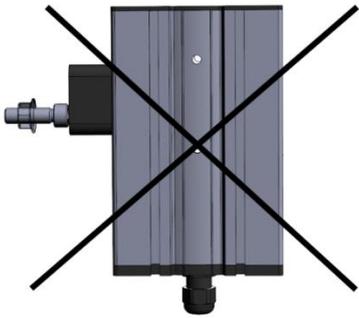
3. If there is a trickle of water (like a rain), the wire outlet must not be a drip of water upstream. If needed please use guide rollers.

Guide Roller
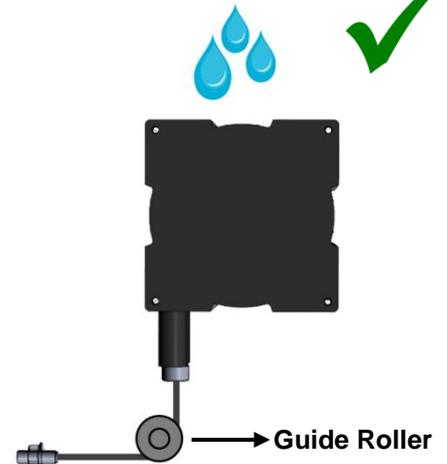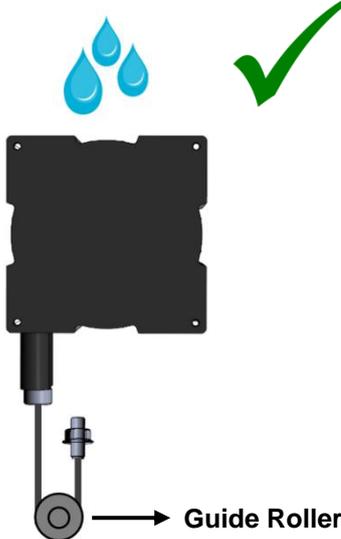
Guide Roller

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


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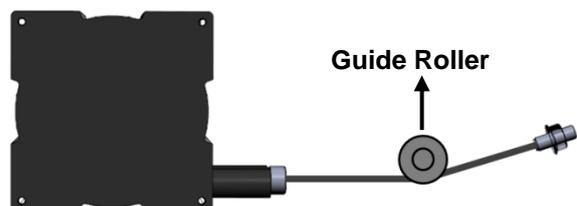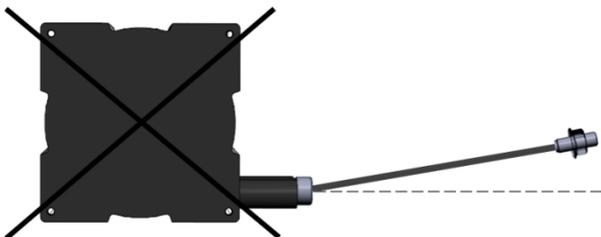
Important Note(!): Failure to comply with these recommendations, the malfunctions that may occur will not be under the warranty.

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

Resistance [1]

No Code: Analog or CANopen output
5K: 5 KΩ (standard)
10K: 10 KΩ

Cable or Socket Direction

B : From backside
S : From side

Output Type

No Code : Single Output
Dual : Redundant Output)

Model

| AWP 508 | - | XXXX | - | XXX | - | XXX | - | X | - | X | - | XXXX | - | XXXX |

Stroke Length

Different measuring lengths between 0...4000 mm and 0...8000 mm

Electrical Connection [2]

3M : 3 m cable
5M : 5 m cable
10M : 10 m cable
S13F : M12 5 pin female conn.
S13M : M12 5 pin male conn.
S13FM: M12 5 pin female + M12 5 pin male Conn.(available on redundant and CANopen models)

Output Signals

No Code : Potentiometric
V : 0-10 VDC
A : 4-20 mA
C : CANopen

Protection Class

No code : IP54 (std)
IP67 : IP67

(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 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 (Potentiometric output): AWP 508-5000-5K-**S13M**-S
    AWP 508 series, 5000 mm stroke, 5K resistance, **M12 5 pin male socket**, side socket outlet, potentiometric output
Sample 2 (CANopen output): AWP 508-5000-**S13FM**-B-C-DUAL
    AWP 508 series, 5000 mm stroke, **1 pcs M12 5 pin female + 1 pcs M12 5 pin male socket**, backside socket outlet, CAN output, redundant
Sample 3 (Analog output): AWP 508-5000-**3M**-S-A-DUAL
    AWP 508 series, 5000 mm stroke, **3 meters cable output**, side cable outlet, current output, redundant