



Instruction Sheet

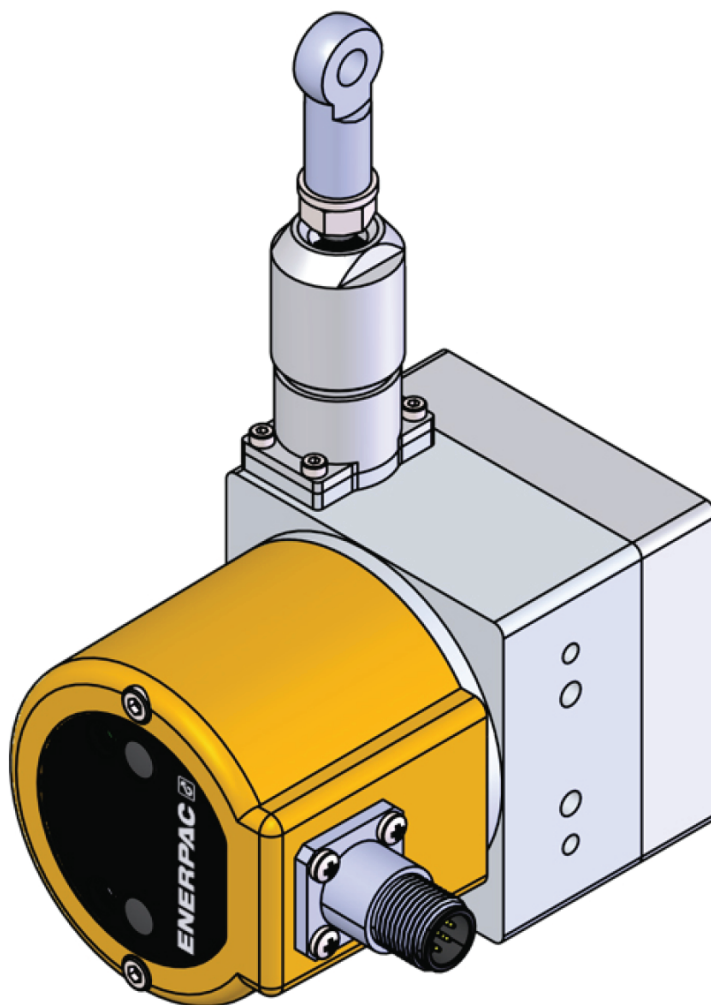
Enerpac EVO Wire Stroke Sensor EVO-WSS-500, EVO-WSS-1000, EVO-WSS-ADJ

Document Number: L4901

Document Revision: A

Document Revision Date: 14-FEB-2025

Document Language: ENGLISH EN



To reduce the risk of injury, user must read and understand this document before use.

ABOUT US

Enerpac is a global market leader in high pressure hydraulic tools, controlled force products, portable machining, on-site services and solutions for precise positioning of heavy loads. As a leading innovator with a 110-year legacy, Enerpac has helped move and maintain some of the largest structures on earth. When safety and precision matters, elite professionals in industries such as aerospace, infrastructure, manufacturing, mining, oil & gas and power generation rely on Enerpac for quality tools, services and solutions. For additional information, visit www.enerpac.com.



www.facebook.com/enerpac



www.youtube.com/enerpac



www.linkedin.com/company/enerpac



www.twitter.com/enerpac

WARRANTY

Refer to the Enerpac Global Warranty document for terms and conditions of the product warranty. Such warranty information can be found at www.enerpac.com.

NAMEPLATE



Contents

1. SAFETY	3
1.1 SAFETY PRECAUTIONS	3
2. COMPLIANCE STATEMENT	4
2.1 EU DECLARATION OF CONFORMITY	4
3. TECHNICAL PRODUCT DATA	4
3.1 DIMENSIONAL CHART	4
3.2 MECHANICAL SPECIFICATION	5
3.3 ELECTRICAL SPECIFICATION	5
4. OPERATION	6
4.1 LED STATUS	6
4.2 MEASURING RANGE BY BUTTONS	7
4.3 MEASURING RANGE BY CABLE	7
5. ELECTRICAL TROUBLESHOOTING	7

1. Safety

Read all instructions carefully. Follow all recommended safety precautions to avoid personal injury as well as damage to the product and / or damage to other property. Enerpac cannot be responsible for any damage or injury from unsafe use, lack of maintenance, or incorrect operation. Do not remove warning labels, tags, or decals. In the event that any questions or concerns arise, contact Enerpac or a local Enerpac distributor for clarification.

Save these instructions for future use.

If you have never been trained on high-pressure hydraulic safety, consult your distributor or service center for information about Enerpac Hydraulic Safety Courses.

This manual follows a system of safety alert symbols, signals, words, and safety messages to warn the user of specific hazards. Failure to comply with these warnings could result in death or serious personal injury, as well as damage to the equipment or other property.



The Safety Alert Symbol appears throughout this manual. It is used to alert you to potential physical injury hazards. Pay close attention to Safety Alert Symbols and obey all safety messages that follow this symbol to avoid the possibility of death or serious injury.

Safety Alert Symbols are used in conjunction with certain Signal Words that call attention to safety messages or property damage messages and designate a degree or level of hazard seriousness. The Signal Words used in this manual are DANGER, WARNING, CAUTION, and NOTICE.

▲ DANGER Indicates a hazardous situation that, if not avoided, will result in death or serious personal injury.

▲ WARNING Indicates a hazardous situation that, if not avoided, could result in death or serious personal injury.

▲ CAUTION Indicates a hazardous situation that, if not avoided, could result in minor or moderate personal injury.

NOTICE Indicates information considered important, but not hazard related (e.g. messages related to property damage). Please note that the Safety Alert Symbol will not be used with this signal word.

1.1 Safety Precautions



Failure to observe and comply with the following precautions could result in death or serious personal injury. Property damage could also occur.

- Read and completely understand safety precautions and instructions in this manual before operating an EVO pump or preparing it for use. Always follow all safety precautions and instructions, including those that are contained within the procedures of this manual.

- Wear personal protective gear when operating hydraulic equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hats, gloves or hearing protection (used as appropriate) will reduce personal injuries.
- Immediately replace worn or damaged parts. Use only genuine Enerpac parts from approved distributors or service centers. Standard grade parts will break causing personal injury and property damage. ENERPAC parts are designed to fit properly and withstand high loads.
- To minimize risk of personal injury keep hands and feet away from the tool and work piece during operation.



Failure to observe and comply with the following precautions could result in minor or moderate personal injury. Property damage could also occur.

- Ensure components are protected from external sources of damage, such as moving machine parts, sharp edges, weld spatter, corrosive chemicals and excessive heat or flame. Excessive heat will soften packings and seals, resulting in fluid leaks. Heat also weakens hose materials and packings. For optimum performance do not expose equipment to temperatures of 65°C [150°F] or higher.
- Do not use electric pumps in an explosive atmosphere. Adhere to all local and national electrical codes. A qualified electrician must perform installation and modification.
- Take care to avoid sharp bends and kinks in hydraulic hoses. Bends and kinks can cause severe back-up pressure and cause hose failure. Protect hoses from dropping objects; a sharp impact may cause hoses internal damage. Protect hoses from crush risks, such as heavy objects or vehicles; crush damage can cause hose failure.
- Do not lift hydraulic equipment by the parts which are not designated to that purpose. Use only designated carrying handles.
- Lubricate tools as directed in this manual prior to operation. Use only approved lubricants of high quality, following the lubricant manufacturers instructions.



Failure to observe and comply with the following precautions could result in property damage and/or void the product warranty.

- Hydraulic equipment must only be serviced by a qualified hydraulic technician. For repair service, contact the nearest Enerpac Authorized Service Centre.
- To help ensure proper operation and best performance, the use of Enerpac oil is strongly recommended.

2. Compliance Statement

2.1 EU Declaration of Conformity

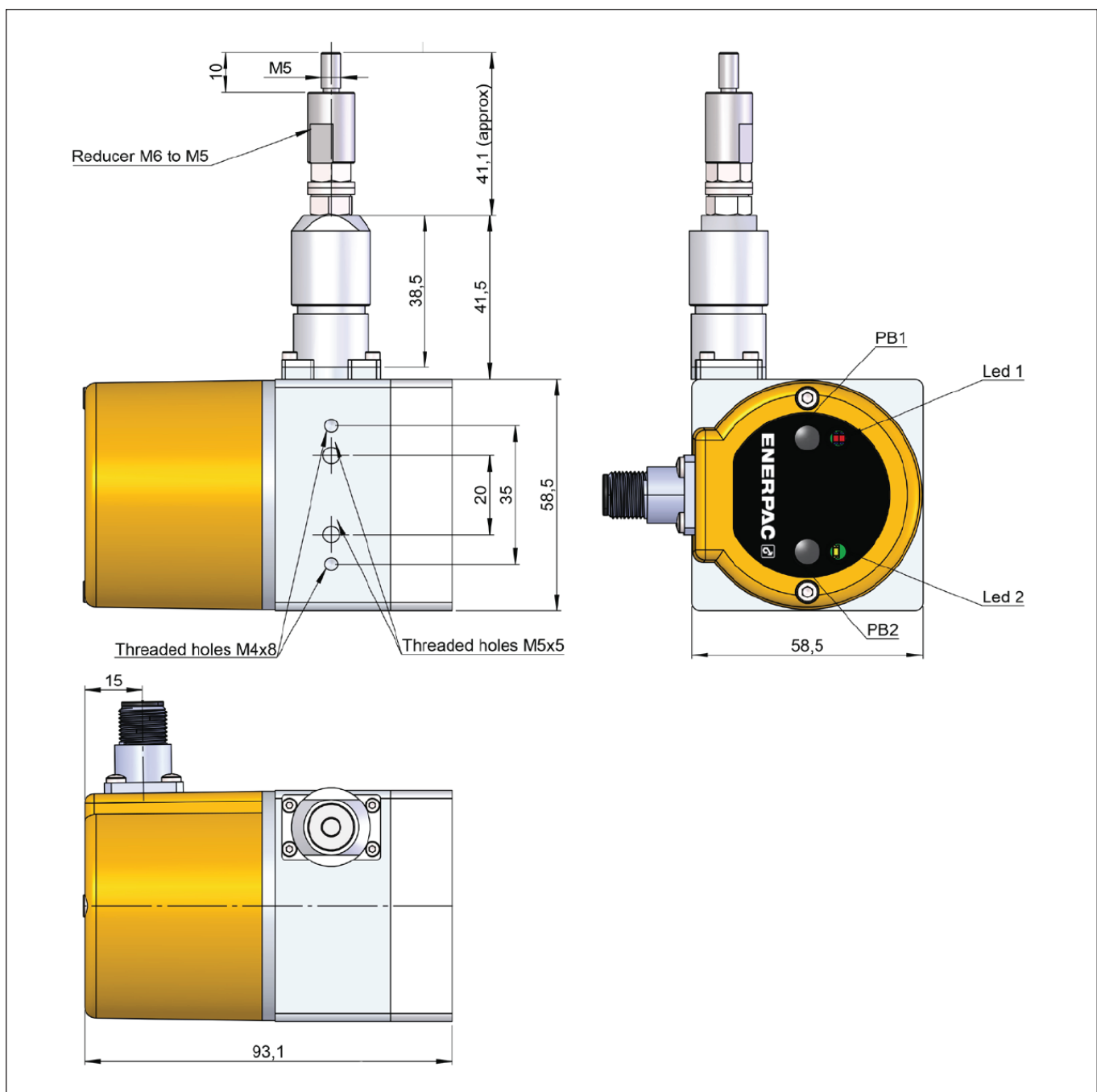


Enerpac declares that these products have been tested and conforms to applicable standards and the products are compatible to all EU and UK Requirements.

Copies of the EU Declaration as well as the UK Self-Declaration are enclosed with each shipment.

3. Technical Product Data

3.1 Dimensional Chart



3.2 Mechanical Specification

Materials	Cover: Aluminium Housing: Aluminium Shaft: Stainless Steel
Travel	125 mm +/- 0,05mm/ per turn
Cable (*)	Ø 0,61 stainless steel AIS316
Measurement range, up to (mm)	1250 mm
Maximum cable extension (mm)	1260 mm
Minimum cable static tension	3 N
Maximum cable static tension	9 N
Maximum extension acceleration	35 m/s ²
Maximum recovery acceleration	10 m/s ²
Maximum speed	1 m/s ²
Protection against dust and splashes according to DIN EN 60529	IP51
Operating temperature range	-40°C to +85°C
Weight	0,9 kg
Vibration according to DIN EN 60068-2-6	100m/s ² (10Hz...2000Hz)
Shock according to DIN EN 60068-2-27	1000 m/s ²

3.3 Electrical Specification

Model Size	500	1000	ADJ
Interface	Analog	Analog	Analog
Electronic output	4..20mA	4..20mA	4..20mA
Power supply (VCC)	7-30V	7-30V	7-30V
Consumption	≤ 100 mA	≤ 100 mA	≤ 100 mA
Resolution	12 bits	12 bits	12 bits
Range	1250 mm	1250 mm	1250 mm
Configurable parameters	Range, Direction and Preset		
Frequency	100 kHz	100 kHz	100 kHz
Short circuit protection	Yes	Yes	Yes
Protection polarity inversion	Yes	Yes	Yes

4. Operation

4.1 LED Status

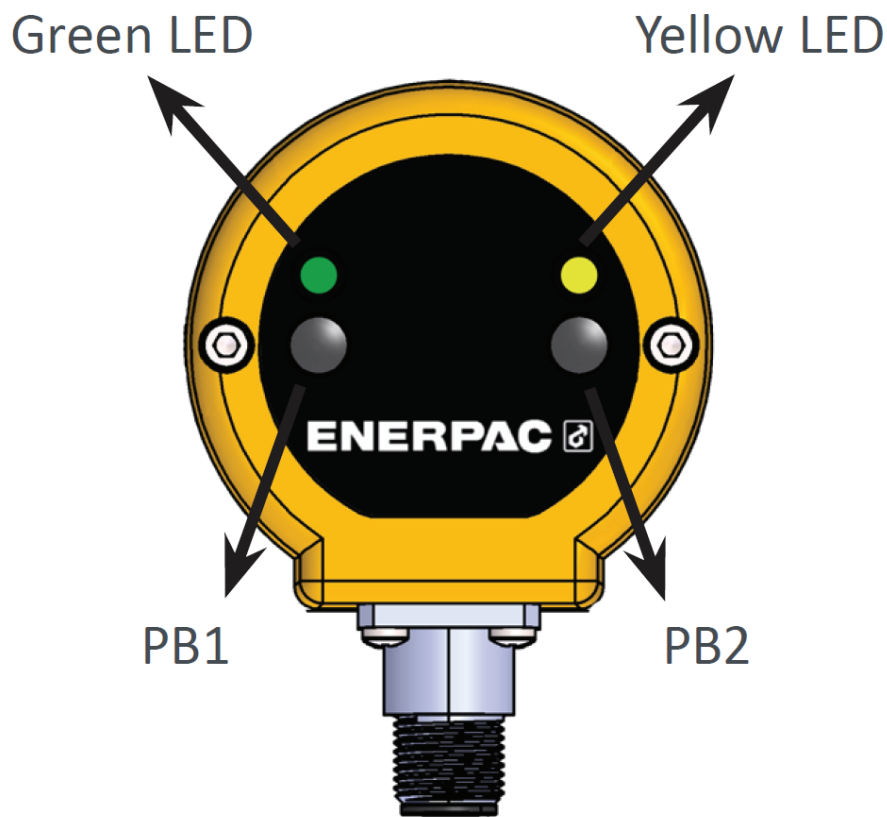


Figure 1: Control Configuration

Green LED	Yellow LED	Description	During setup process
ON	OFF	Operation with user configured settings.	
OFF	ON	Operation with factory settings.	
BLINK	BLINK	Waiting for any push button press.	
ON	BLINK	SET1 pressed first, initial measurement position set.	
BLINK	ON	SET2 pressed first, end measurement position set.	
BLINK	BLINK	Alternate blink, error. Start again the configuration process.	
ON	ON	One LED lights solidly and then the other LED. The configuration is completed.	

4.2 Measuring Range by Buttons

- Press PB1 and PB2 together for 5 sec. to enter programming mode.
- Pull the draw wire on the sensor to the start measuring position.
- Press PB1 (minimum) and PB2 (maximum) for 2 seconds, then the LED of the pressed PB stays fixed while the other LED still blinks.
- Pull the draw wire on the sensor to the shaft to the end measuring position.
- Press the other PB for 2 seconds, then both LEDs green and yellow light solidly.

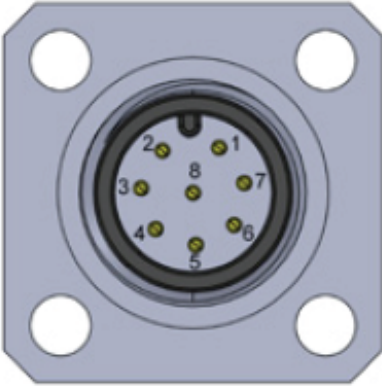
4.3 Measuring Range by Cable

- Turn the shaft to the start measuring position.
- Connect SET1 (minimum) or SET2 (maximum) with +V for at least 1 second.
- Connect the other SET not configured for at least 1 second.

NOTICE In case the new measuring range results lower than minimum scalable range, factory settings are applied and LEDs indicate the **normal operation with factory settings**.

NOTICE During configuration, do not use the pins/wires SET1 and SET2 along with the push buttons at the same time.

5. Electrical Troubleshooting

		Connector M12 8p CCW
GND	3	
VCC	1	
SET1	4	
SET2	5	
I _{OUT}	2	
Not connected	6	
Not connected	7	
Not connected	8	

NOTES

[illegible]

NOTES

[illegible]

