



EtherNet/IP™

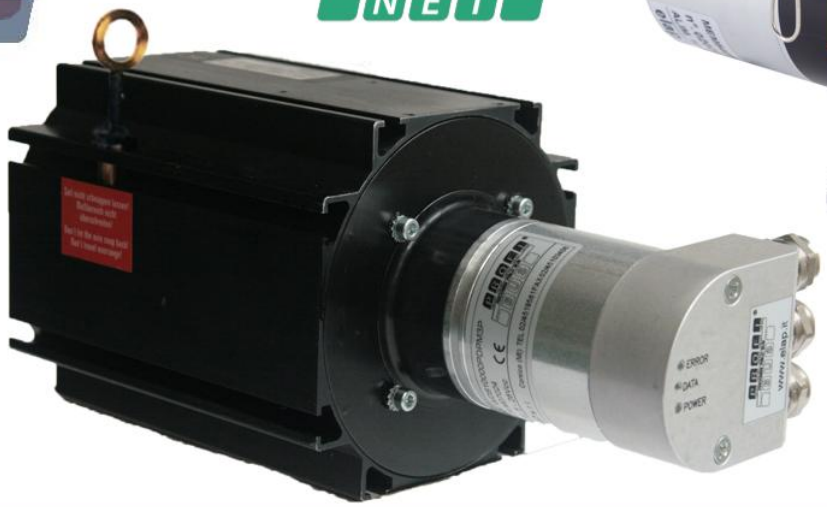
EtherCAT®

PROFI®
NET



PROFI®
BUS

CANopen®



ABSOLUTE WIRE ENCODERS

elap



► WIRE TRANSDUCERS SERIES WPS · WDS

Accurate and stout, wire transducers are the ideal solution for industrial applications requiring long strokes and high precision: typical applications are: X-Y tables, hydraulic and pneumatic cylinders, packing machines, wood-, glass-, marble-, sheet-working machineries.

The **transducer** consists of an **encoder** operated by means of a wire-reel mechanism; the wire is out of stainless steel covered with nylon. The inside spring keeps the wire tightened, ensuring accurate measures. The **encoder** output signal is proportional to the linear displacement of the wire.

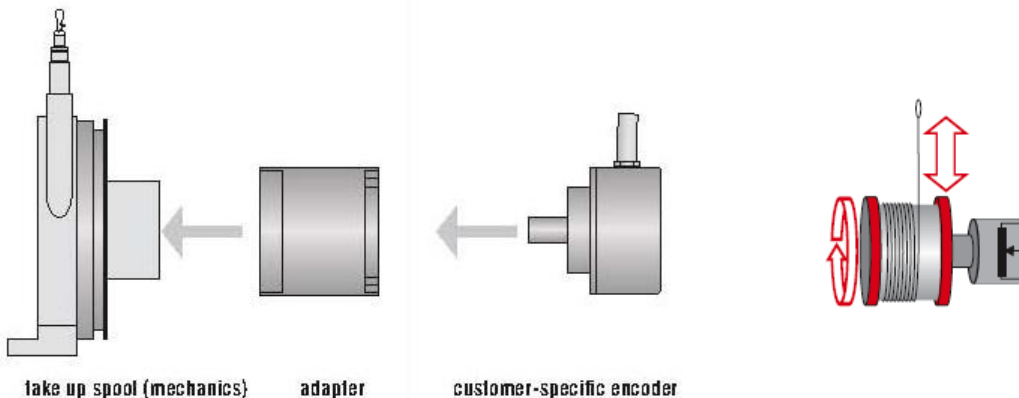
Wire transducers **WPS** and **WDS** enclose the **draw-wire mechanics** and **Elap multiturn absolute high-resolution encoder** with communication protocol – **EtherNet/IP, EtherCAT, PROFINET, Profibus, CANopen** or **SSI**.



► ENCODERS to be coupled

<p>MEM520-BUS EtherNet/IP</p> <p>MEM520-BUS EtherCAT</p> <p>MEM520-BUS PROFINET</p>	<p>Multiturn, 29 bit max resolution (13+16 bit), shaft Ø 6 mm, 3 M12 connectors</p>	 <p>UL US</p>	<p>EtherNet/IP[™] ODIYA[®] CONFORMANT</p> <p>EtherCAT[™] Conformance tested</p> <p>PROFINET[®]</p> <p>PIV[®] CERTIFIED PROFIBUS · PROFINET</p>
<p>MEM520-BUS Profibus DP</p> <p>MEM520-BUS CANopen</p>	<p>Multiturn, 29 bit max resolution (13+16 bit), shaft Ø 6 mm, 2/3 cable presses</p>		<p>PROFINET[®]</p> <p>CANopen[®]</p>
<p>MEM520 SSI</p>	<p>Multiturn, 28 bit max resolution (13+15 bit), shaft Ø 6 mm, cable or connector outlet</p>		<p>SSI[®] SYNCHRONOUS SERIAL INTERFACE</p>

WDS/WPS MECHANICS + ELAP ENCODER



► **TRANSDUCER WPS**

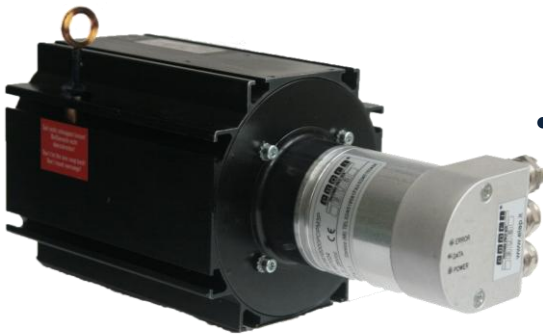


- **Strokes 2300 - 5000 mm**
- **Glass fiber reinforced nylon housing**
- **Coated poliamide stainless steel wire**
- **Compact and rugged**



	WPS 2300	WPS 5000
Draw wire mechanics	MK88-M	MK88-M
Stroke	2300 mm	5000 mm
Travel per encoder revolution	238.80 ±0.3 mm	240 ±1 mm
Materials: housing	aluminium	
draw wire	Coated poliamide stainless steel	
Wire diameter	0.45 mm	
Wire acceleration	5 g	
Wire retraction force (min.)	3 N	
Wire extension force (max)	9 N	
Mechanical shock (10 ms)	50 G 10 ms	
Vibration (20÷2000 Hz)	20 g 20 Hz 2KHz	
Operating temperature	-40 ÷ +85°C	
Stocking temperature	-40 ÷ +85°C	

► **TRANSDUCER WDS**



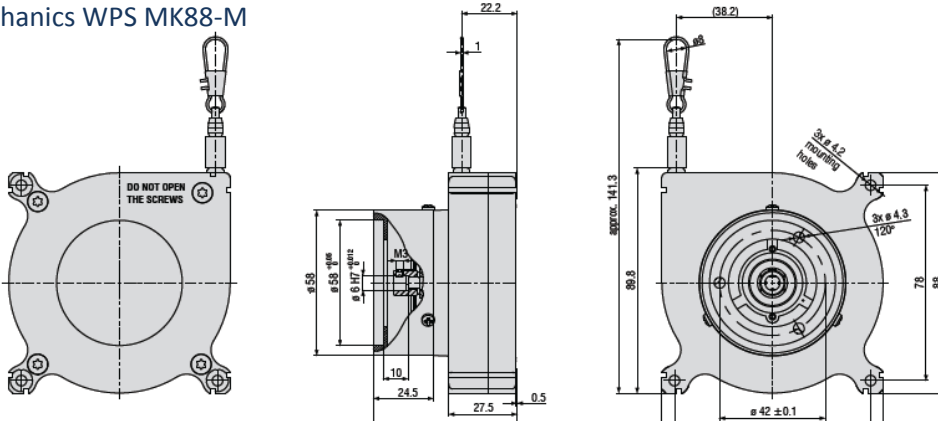
- **Strokes: 3000 to 15000 mm**
- **Aluminium housing**
- **Coated poliamide stainless steel wire**
- **Two sizes available**



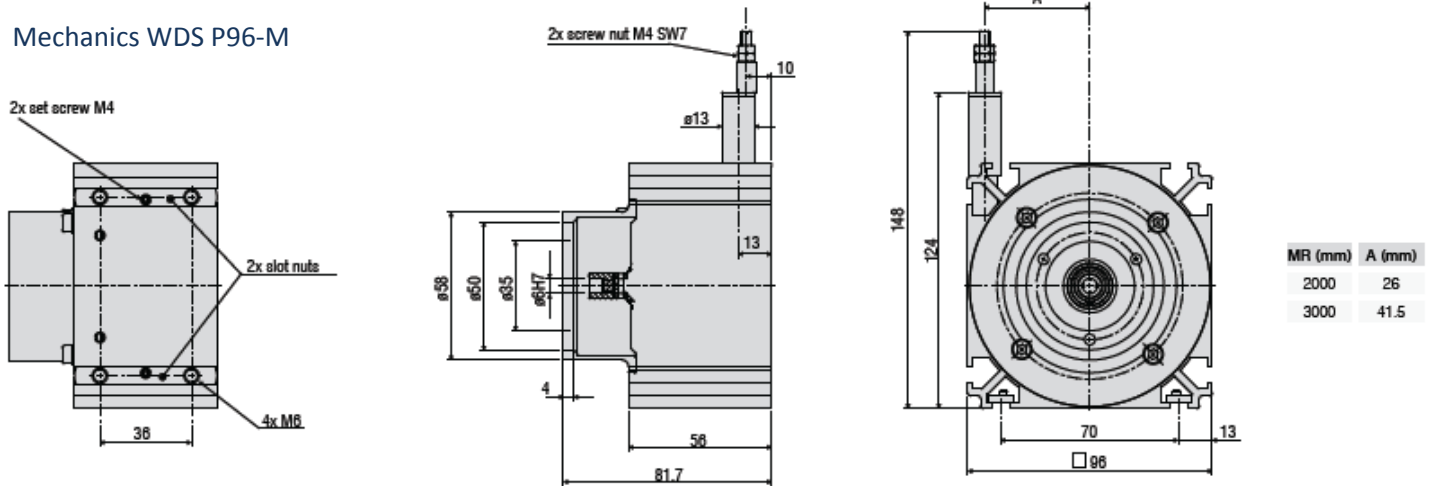
	WDS 3000	WDS 5000	WDS 7500	WDS 10000	WDS 15000
Draw wire mechanics	P96-M	P115-M	P115-M	P115-M	P115-M
Stroke	3000 mm	5000 mm	7500 mm	10000 mm	15000 mm
Weight	1.1 Kg.	1.4 Kg.	1.9 Kg.	2.8 Kg.	3.2 Kg.
Travel per encoder revolution	260.09 mm	315.07 mm			
Materials: housing	aluminium				
draw wire	coated poliamide stainless steel				
Wire diameter	0.8 mm	1 mm			
Wire acceleration	7 g	5 g	6 g	3 g	3 g
Wire retraction force (min.)	5 N	4 N	8 N	8 N	8 N
Wire extension force (max)	10 N	16 N	24 N	21 N	25 N
Mechanical shock (10 ms)	50 G				
Vibration (20÷2000 Hz)	20 g				
Operating temperature	-20 ÷ +80°C				
Stocking temperature	-40 ÷ +80°C				

▶ DIMENSIONS

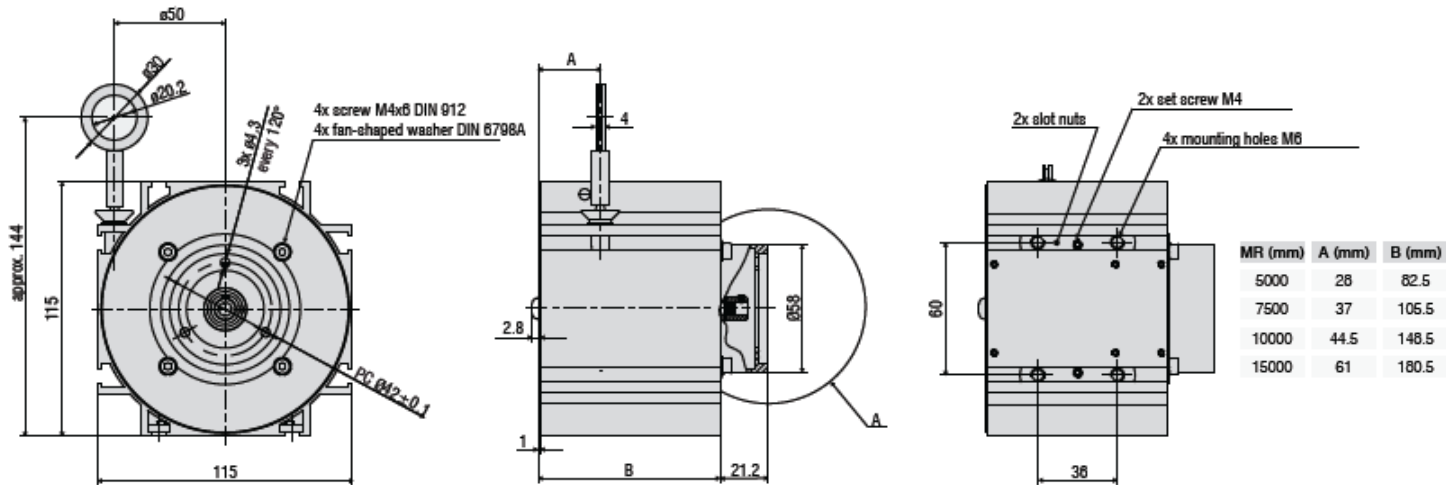
Mechanics WPS MK88-M



Mechanics WDS P96-M



Mechanics WDS P115-M



▶ ORDERING INFO

Type	Stroke	Bus	Revolutions	Connection outlet
WDS	- 3000	- PDP	- M	- 3P
WDS/WPS	2300 ÷ 15000	EIP/ECT/PNT/ PDP/CAN/ SSI	Multiturn	3 connectors M12 2/3 cable presses Axial/radial cable Axial/radial connector

▶ REFERENCES

Encoder WPS

<https://www.elap.it/wire-transducers/wire-absolute-encoder-wps/>



Encoder WDS

<https://www.elap.it/wire-transducers/wire-absolute-encoder-wds/>



ELAP VIA VITTORIO VENETO, 4 • I-20094 CORSICO (MI) • TEL. +39.02.4519561
FAX +39.02.45103406 • E-MAIL INFO@ELAP.IT • SITE WWW.ELAP.IT