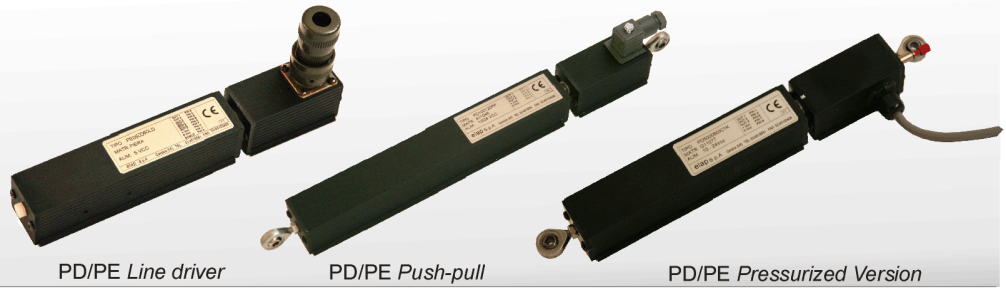

PD/PE *Line driver* PD/PE *Push-pull* PD/PE *Pressurized Version*

LINEAR TRANSDUCERS
Series PD/PE/PS

- ***Incremental linear transducers, with or without zero pulse***
- ***Strokes: 60 to 990 mm***
- ***Different reading resolutions available***

AVAILABLE VERSIONS

PD100	PD500	PE	PS100
Strokes from 60 to 990 mm Reading resolution 0.01 mm after the electronic quadrupling	Strokes from 60 to 750 mm Reading resolution 0.005 mm after the electronic quadrupling	Strokes from 60 to 990 mm Reading resolution 0.05 mm after the electronic quadrupling	Strokes from 60 to 990 mm Reading resolution 0.04 mm Sinusoidal output

SPECIAL VERSIONS

- *Pressurized version IP67 with connector for compressed air*
- *Cable outlet version*
- *Version with amplifier*
- *Customer versions on request*

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

	PD/PS	PE
• Materials: case shaft	Anodized aluminium square dimension 31x31 mm AISI 303 steel 8 mm diameter	
• Max speed.	60 m/min.	120 m/min.
• Max. acceleration	40 m/sec.^{2}	
• Reference search max. speed	12 m/min.	24 m/min.
• Progress strength	1/3 N	
• Operating temperature	0 ÷ 50° C	
• Stocking temperature	-20 ÷ 70° C	
• Protection degree	IP64 – optional IP65	
• Fixing	By metal clamping feet placed freely along the body or by ball joints at the ends	

ELECTRICAL SPECIFICATIONS

	PD/PE	PS
• Lighting signal source	LED	
• Supply voltage	5Vdc or 8/24Vdc Polarity reversal protection	
• Power consumption	30÷80 mA max	
• Output signals	Two square waves dephased by 90° ±15°. Zero pulse width 90°±15°	Two sinusoidal waves dephased by 90±15° 1 V_{pp} Line driver Zero pulse 0-4V
• Electronic output	Push-pull, open collector NPN, 5Vdc or 8/24Vdc line driver, Short circuit protecion	Sinusoidal waves 1 V_{pp} , line driver
• Connection	By connector	

OPERATING SPECIFICATIONS

	PD100/PS100	PD500	PE
• Operating principle	Optoelectronic reading on glass graduated scale 2 mm thick		Optoelectronic reading on polyester film graduated scale 0.18 mm thick
• Grating pitch	20+20 micron	10+10 micron	100+100 micron
• Grating accuracy	±3 µm/m		±10 µm/m
• Reading resolution	0.01 mm	0.005 mm	0.05 mm
	After the electronic quadrupling		
• Reference pulses	1 at mid-stroke or 1 each 25 mm or according to the customer's requirements		
• Measuring element material	Floatglas		Polyester film
• Measuring element thermal expansion	8x10^{-6}/°C		18x10^{-6}/°C

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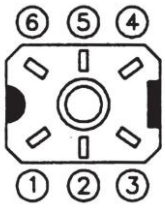
CONNECTIONS

PUSH/PULL – OPEN COLLECTOR NPN

SIGNALS	PIN
Out 1	1
Out 2	2
Out Z *(if present)*	6
+ Vdc	4
0V	3



LINE DRIVER

SIGNALS	PIN
Out 1	A
Out 2	C
Out Z *(if present)*	E
+ Vdc	K
0V	J
Out 1	B
Out 2	D
Out Z	F

ORDERING INFORMATION

PD	100	120	PP	1	K

TYPE
PD
PE
PS

RESOLUTION
100 0.01 mm (PD/PS)
500 0.005 mm (PD)
050 0.05 mm (PE)

STROKE
60 – 990 mm

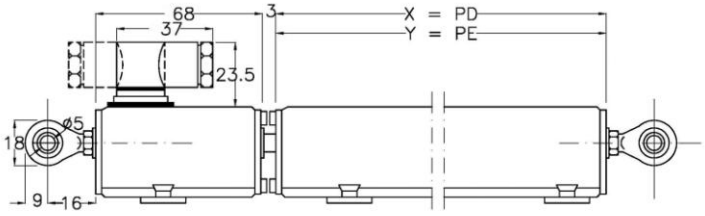
OUTPUT & SUPPLY
Supply voltage 10/24 Vdc
PP Push-pull
OC NPN Open Collector
LR Line driver out 10/24 Vdc
LP Line driver out 5Vdc
Supply voltage 5 Vdc
PN Push-pull
OX NPN Open Collector
LD Line-driver out 5 Vdc

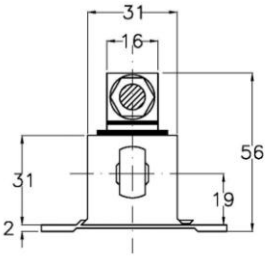
ZERO REFERENCE
No zero reference
1 zero ref. at mid-stroke
2 2 zero ref. at the ends
3 1 zero ref. at mid-stroke*, the others each 25 mm
4 1 zero ref. - scanning head side (7.5 mm from opening end*)
5 1 zero ref. at closing end (7.5 mm from stroke end*)
X According to the customer's requirements
** ±2.5 mm tolerance*

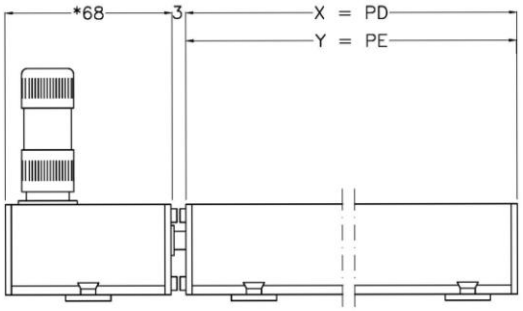
MECHANICAL PECULIARITIES
K O-ring

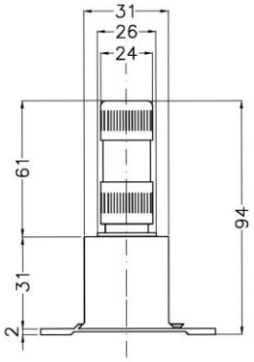
ELAP reserves the right to upgrade the product without notice

DIMENSIONS





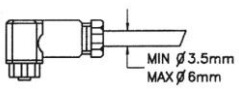


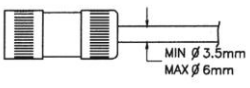


* TYPE PS = 83 mm

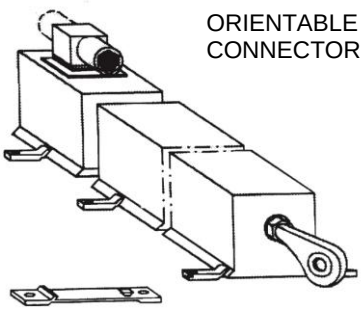
STROKE	X SERIES PD/PS	Y SERIES PE	N. SUPPORTS
60	155	138	3
120	215	198	3
150	243	228	3
170	265	248	3
200	294	278	3
220	315	298	3
255	350		4
280	375	358	4
360	513	498	4
380	533	518	4
440	593	578	5
520	673	658	5
580	733	718	5
650	814	803	6
750	915	904	7
990	1155	1142	7

IPT CONNECTOR





ORIENTABLE CONNECTOR



FIXING FEET

REFERENCES

Further information at:

https://www.elap.it/linear-transducers/trasduttori-lineari-pd-pe/