ER A / B / C / D / E / F
INCREMENTAL LINEAR ENCODER

MAIN FEATURES

Incremental linear system based on optical or magnetic principle.
Easy mounting due to to joint heads.

- 0,01 mm max resolution (after quad eval)
- Available with or without zero mark on left, right or central position
- Up to 1 m/s travel speed
- Working stroke up to 500 mm
- Cable output, connector available on cable end
- Mounting by joint heads

ORDERING CODE

ER	A	100	S	8/24	P	6	P	.XXX

SERIES
incremental linear encoder ER

RESOLUTION
0,2 mm A
0,1 mm B
0,04 mm C
1 mm D
0,5 mm E
0,2 mm F

WORKING STROKE
working stroke (mm) from 100 to 500

ZERO PULSE
without zero pulse S
(mod. A) central zero index C
(mod. A) right zero index (closed position) D
(mod. A) left zero index (open position) Z

POWER SUPPLY
5 V DC 5
8 ... 24 V DC 8/24

ELECTRICAL INTERFACE
(mod. A) NPN open collector C
push-pull P
line driver L

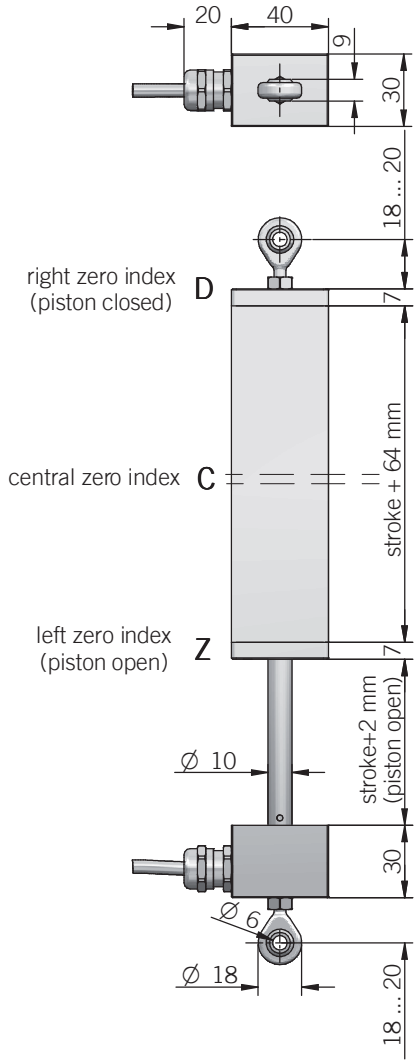
BALL JOINTS FIXING HOLE DIAMETER
mm 6

OUTPUT TYPE
radial cable (standard length 1,5 m) P
preferred cable lengths 2 / 3 / 5 / 10 m, to be added after output type

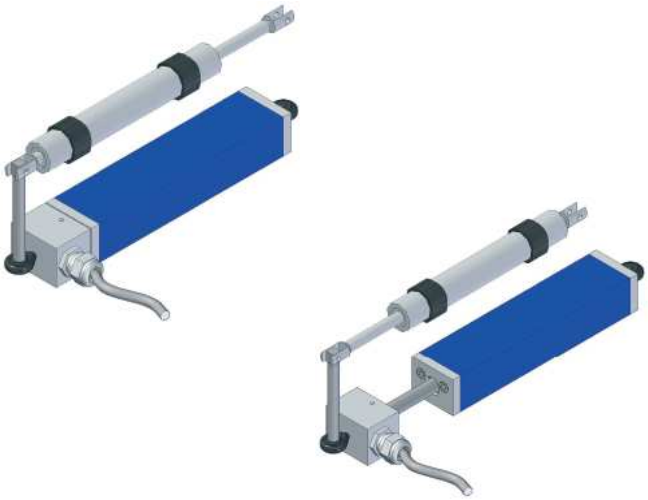
VARIANT
custom version XXX

eltra@eltra.it

A / B / C / D / E / F



dimensions in mm



ELECTRICAL SPECIFICATIONS

Technology	optical mod. A magnetic mod. B / C / D / E / F
Resolution	A / F = 0,2 mm (0,05 mm after quad eval) B = 0,1 mm (0,025 mm after quad eval) C = 0,04 mm (0,01 mm after quad eval) D = 1 mm (0,25 mm after quad eval) E = 0,5 mm (0,125 mm after quad eval)
Linearity error	± 1/4 pulse
Power supply[1]	5 = 4,5 ... 5,5 V DC 8/24 = 7,6 ... 25,2 V DC mod. A 8/24 = 4,5 ... 30 V DC (reverse polarity protection) mod. B / C / D / E / F
Current consumption without load	< 100 mA max
Max load current	50 mA / channel (NPN open) 20 mA / channel (push pull / line driver)
Electrical interface[2]	NPN open collector (pull-up max +30 V DC) push-pull line driver HTL (AEIC-7272)
Max output frequency	100 kHz
Counting direction	A leads B (piston opening) mod. A B leads A (piston opening) mod. B / C / D / E / F
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2015/863/EU directive
UL / CSA	certificate n. E212495

MECHANICAL SPECIFICATIONS

Working stroke	100 - 150 - 200 - 250 - 300 - 350 - 400 - 500 mm
Enclosure rating	IP 64 (IEC 60529)
Travel speed	1 m/s max
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Rod material	1.4305 / AISI 303 stainless steel
Housing material	painted aluminum
Fixing	n.2 ball joints with ø 6 mm hole
Operating temperature[3, 4]	-10° ... +60°C (+14° ... +140°F)
Storage temperature[4]	-25° ... +70°C (-13° ... +158°F)
Weight	400 ... 1000 g (14,11 ... 35,27 oz)

[1] as measured at the transducer without cable influences
[2] for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section
[3] measured on transducer housing
[4] condensation not allowed

CONNECTIONS

Function	Cable C / P	Cable L
+V DC	red	red
0 V	black	black
A+	green	green
A-	/	brown or grey
B+	yellow	yellow
B-	/	orange
Z+	blue	blue
Z-	/	white
⏚	shield	shield