

MAIN FEATURES

Incremental linear system based on optical or magnetic principle.
 Easy mounting due 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, connectors available on cable end
- Mounting by joint heads

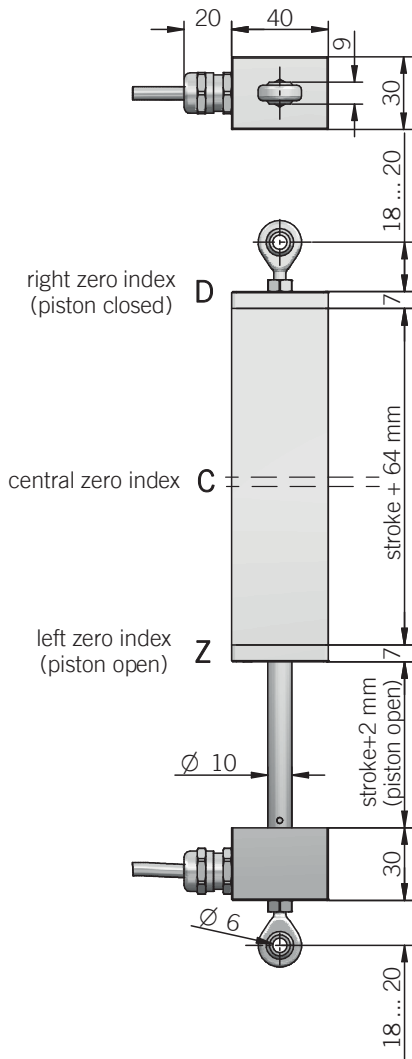


ORDERING CODE

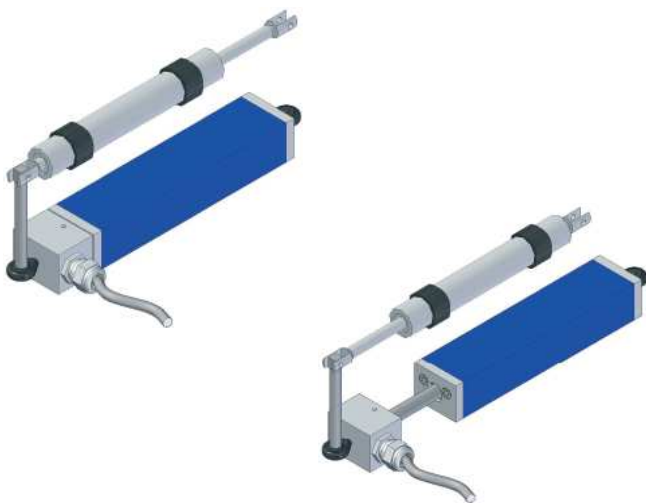
ER A 100 S 8/24 P 6 P .XXX

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									

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 or similar)
Max output frequency	100 kHz
Mean time to dangerous failure (MTTF)_d ³ according to EN ISO 13849-1	431 years mod. A 318 years mod. B / C / D / E / F
Mission time (T_m) ³	20 years
Diagnostic coverage (DC) ³	0%
Counting direction	A leads B (piston opening) mod. A B leads A (piston opening) mod. B / C / D / E / F
Cable type	shielded - fixed installation conductors section 0,22 mm ² / AWG 24 bending radius min 60 mm
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU directive
UL / CSA	file n. E212495

MECHANICAL SPECIFICATIONS

Working stroke	100 - 150 - 200 - 250 - 300 - 350* - 400* - 500* mm * vertical mounting only (mod.A)
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	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 or brown	red
0 V	black or grey	black
A+	green	green
A-	/	brown or grey
B+	yellow	yellow
B-	/	orange
Z+	blue or white	blue
Z-	/	white
⊖	shield	shield