

MAIN FEATURES

∅ 49 mm encoder recommended in feedback control systems on AC servomotors,

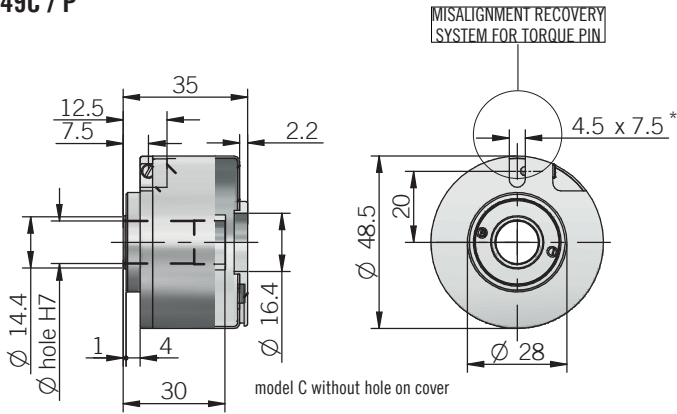
- 3 channel encoder (A / B / Z) up to 2048 ppr
- Power supply up to +24 V DC with several electrical interfaces available
- Up to 150 kHz output frequency
- Cable output, connectors available on cable end
- Through hollow shaft diameter up to 12,7 mm (1/2")
- Interchangeable with size 19 Resolver



ORDERING CODE **EL 49C 500 S 5 L 8 X 6 PR .XXX**

SERIES incremental encoder EL	MODEL blind hollow shaft 49C through hollow shaft 49P	RESOLUTION ppr from 100 to 2048 refer to the available pulses list	ZERO PULSE without zero pulse S with zero pulse Z	POWER SUPPLY (with L electrical interface) 5 V DC 5 8 ... 24 V DC 8/24	ELECTRICAL INTERFACE NPN open collector C push-pull P line driver L	BORE DIAMETER mm 6 mm 8 (3/8") mm 9,52 mm 10 mm 12 (1/2") mm 12,7	ENCLOSURE RATING IP 40 X	MAX ROTATION SPEED 6000 rpm 6	OUTPUT TYPE radial cable (standard length 0,3 m) PR preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)	VARIANT custom version XXX
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49C / P



* \varnothing 4 mm torque pin min 0.5 mm from bottom end

for size 19 (version 01 or 14) resolver flange please refer to Accessories

recommended mating shaft tolerance g6
dimensions in mm

ELECTRICAL SPECIFICATIONS	
Resolution	from 100 to 2048 ppr
Power supply¹	5 = 4,5 ... 5,5 V DC 8/24 = 7,6 ... 25,2 V DC
Current consumption without load	100 mA max
Max load current	20 mA / channel
Electrical interface²	NPN open collector (pull-up max +30V DC) push-pull / line driver HTL (AEC-7272 or similar) line driver RS-422 (AELT-5000 or similar)
Max output frequency	150 kHz
Counting direction	A leads B clockwise (shaft view)
Index signal	180°e (gated A)
Mean time to dangerous failure (MTTF)_d³ according to EN ISO 13849-1	208 years
Mission time (Tm)³	20 years
Diagnostic coverage (DC)³	0%
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

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

MECHANICAL SPECIFICATIONS	
Bore diameter	\varnothing 6 / 8 / 9,52 (3/8") / 10 / 12 / 12,7 (1/2") mm
Enclosure rating	IP 40 (IEC 60529)
Max rotation speed	6000 rpm
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	20 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	2×10^{-6} kgm ² (47 x 10 ⁻⁶ lbf ²)
Starting torque (at +20°C / +68°F)	< 0,01 Nm (1,42 Ozin)
Bearing stage material	aluminum
Shaft material	stainless steel
Housing material	nickel plated brass
Bearings	n.2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature^{4,5}	-20° ... +85 °C (-4° ... +185°F) -10° ... +100°C (+14° ... +212°F) on demand
Storage temperature⁵	-25° ... +85 °C (-13° ... +185°F)
Weight	150 g (5,29 oz)

¹ as measured at the transducer without cable influences

² for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section

³ this product is not a safety component, for further details refer to TECHNICAL BASICS section

⁴ measured on the transducer flange

⁵ condensation not allowed

RESOLUTIONS
100 - 200 - 500 - 512 - 1000 - 1024 - 2000 - 2048
please directly contact our offices for other pulses