

**MAIN FEATURES**

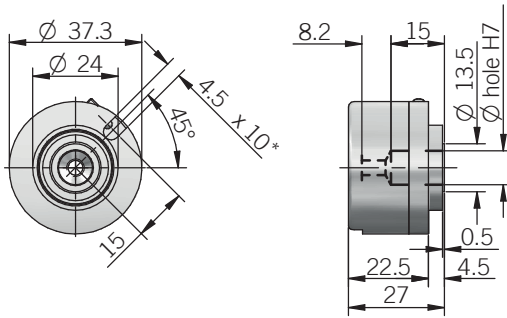
∅ 36 mm encoder series recommended in feedback control systems on AC servomotors, interchangeable with size 15 Resolver in the back of the motor.

- 6 channels encoder with optical generation of “Hall effect phases” (commutation signals)
- Signal transmission by bit parallel bus
- Easy mechanical mounting
- Small dimensions
- Wide range of resolutions available
- High temperature resistance



ORDERING CODE	EF	36K	4	L	512	S	5	L	8	X	6	PR	.XXX
<b>SERIES</b> incremental encoder with Hall phases	EF												
<b>MODEL</b> blind hollow shaft with rear fixing		36K											
<b>MOTOR POLES</b> 4 poles (2 poles pair) 6 poles (3 poles pair) 8 poles (4 poles pair)			4 6 8										
<b>ELECTRICAL INTERFACE FOR COMMUTATION SIGNALS</b> NPN open collector line driver RS-422						C L							
<b>INCREMENTAL RESOLUTION</b> ppr from refer to the available pulses list					512								
<b>ZERO PULSE</b> without zero pulse with zero pulse						S Z							
<b>POWER SUPPLY</b> 5 V DC							5						
<b>ELECTRICAL INTERFACE FOR INCREMENTAL SIGNALS</b> line driver RS-422								L					
<b>BORE DIAMETER</b> mm (3/8") mm mm									8 9,52 10				
<b>ENCLOSURE RATING</b> IP 40										X			
<b>MAX ROTATION SPEED</b> 6000 rpm											6		
<b>OUTPUT TYPE</b> radial cable (standard length 0,3 m) preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)												PR	
<b>VARIANT</b> custom version													XXX

## 36K



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

for size 15 Resolver flange please refer to Accessories

recommended mating shaft tolerance g6  
dimensions in mm

## ELECTRICAL SPECIFICATIONS

<b>Incremental resolution</b>	from 500 to 1024 ppr
<b>Power supply<sup>1</sup></b>	4,5 ... 5,5 V DC
<b>Current consumption without load</b>	150 mA max
<b>Max load current</b>	20 mA / channel (line driver RS-422) 30 mA / channel (NPN open collector)
<b>Electrical interface for incremental signals<sup>2</sup></b>	line driver RS-422 (AELT-5000 or similar)
<b>Electrical interface for Hall phases<sup>2</sup></b>	NPN open collector (pull-up max +30V DC) line driver RS-422 (AELT-5000 or similar)
<b>Max output frequency</b>	150 kHz
<b>Mean time to dangerous failure (MTTF<sub>d</sub>)<sup>3</sup> according to EN ISO 13849-1</b>	300 years
<b>Mission time (Tm)<sup>3</sup></b>	20 years
<b>Diagnostic coverage (DC)<sup>3</sup></b>	0%
<b>Counting direction</b>	A leads B clockwise (shaft view)
<b>Index signal</b>	180°e (gated A)
<b>Cable type</b>	shielded - fixed installation conductors section 0,14 mm <sup>2</sup> / AWG 26 bending radius min 50 mm
<b>Electromagnetic compatibility</b>	according to 2014/30/EU directive
<b>RoHS</b>	according to 2011/65/EU directive
<b>UL / CSA</b>	file n. E212495

## RESOLUTIONS

500 4 / 6 poles  
512 4 / 6 poles  
1000 6 / 8 poles  
1024 4 / 6 / 8 poles

please directly contact our offices for other pulses

## MECHANICAL SPECIFICATIONS

<b>Bore diameter</b>	$\varnothing$ 8 / 9,52 (3/8") / 10 mm
<b>Enclosure rating</b>	IP 40 (IEC 60529)
<b>Max rotation speed</b>	6000 rpm
<b>Shock</b>	50 G, 11 ms (IEC 60068-2-27)
<b>Vibration</b>	5 G, 10 ... 500 Hz (IEC 60068-2-6)
<b>Moment of inertia</b>	0,5 x 10 <sup>-6</sup> kgm <sup>2</sup> (12 x 10 <sup>-6</sup> lbf <sup>2</sup> )
<b>Starting torque (at +20°C / +68°F)</b>	< 0,01 Nm (1,42 Ozin)
<b>Bearing stage material</b>	aluminum
<b>Shaft material</b>	stainless steel
<b>Housing material</b>	aluminum
<b>Bearings</b>	n.2 ball bearings
<b>Bearings life</b>	10 <sup>9</sup> revolutions
<b>Operating temperature<sup>4, 5</sup></b>	-10° ... +85°C (+14° ... +185°F)
<b>Storage temperature<sup>5</sup></b>	-25° ... +85°C (-13° ... +185°F)
<b>Weight</b>	150 g (5,29 oz)

<sup>1</sup> as measured at the transducer without cable influences

<sup>2</sup> for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section

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

<sup>4</sup> measured on the transducer flange

<sup>5</sup> condensation not allowed

## CONNECTIONS

Function	Cable
+V DC	red
0 V	black
A+	green
B+	yellow
Z+	blue
A-	brown
B-	orange or pink
Z-	white
U+	grey
V+	violet
W+	grey-pink
U-	red-blue
V-	white-green
W-	brown-green
⊖	shield