



## EL 63 FB / GB / PB / PBF / PC / PCF

### BLIND / THROUGH HOLLOW SHAFT INCREMENTAL ENCODER

#### MAIN FEATURES

Hollow shaft encoder series for small AC motors, thanks to compact size (only 35mm height).

- 3 channel encoder (A / B / Z) up to 2500 ppr
- Power supply up to +28 VDC with several electronic interfaces available
- Up to 300 kHz output frequency
- Cable output, connector available on cable end
- Through or blind hollow shaft diameter up to 15 mm
- Shaft fixing by collar clamping



#### ORDERING CODE

EL 63GB 500 S 5/28 N 8 X 3 P .XXX

ORDERING CODE	EL 63GB	500	S	5/28	N	8	X	3	P	.XXX
<b>SERIES</b> incremental encoder EL										
<b>MODEL</b> blind hollow shaft with spring 63FB blind hollow shaft with antirotation pin 63GB through hollow shaft with antirotation pin 63PB through hollow shaft with spring 63PBF rear fixing shaft with antirotation pin 63PC rear fixing shaft with spring 63PCF										
<b>RESOLUTION</b> ppr from 1 to 2500 see table for pulses availability										
<b>ZERO PULSE</b> without zero pulse S with zero pulse Z										
<b>POWER SUPPLY</b> (with L electronic interface) 5 V DC 5 (with L or PC electronic interface) 8 ... 24 V DC 8/24 5 ... 28 V DC 5/28										
<b>ELECTRONIC INTERFACE</b> NPN N NPN open collector C push-pull P (AEIC-7272) protected push-pull PC line driver L power supply 5/28V - output RS-422 RS										
<b>BORE DIAMETER</b> mm 8 mm 10 mm 12 mm 14 mm 15										
<b>ENCLOSURE RATING</b> IP 54 X										
<b>MAX ROTATION SPEED</b> 3000 rpm 3										
<b>OUTPUT TYPE</b> radial cable (standard length 1,5 m) PR										
<b>VARIANT</b> custom version XXX										



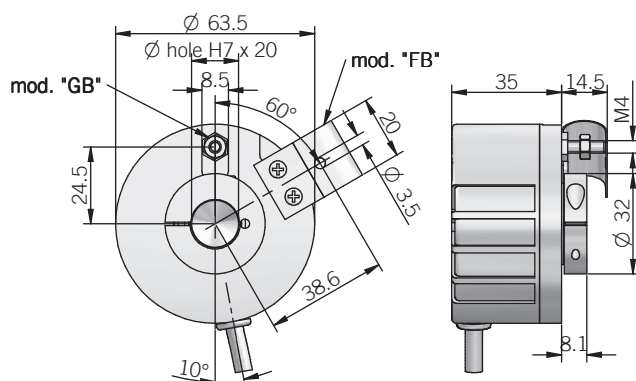
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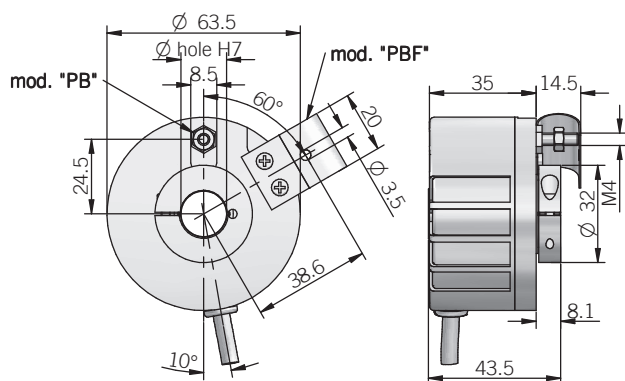
1985 - 2015  
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## OPTICAL HOLLOW SHAFT INCREMENTAL ENCODERS | EL 63 GB / FB / PB / PBF / PC / PCF

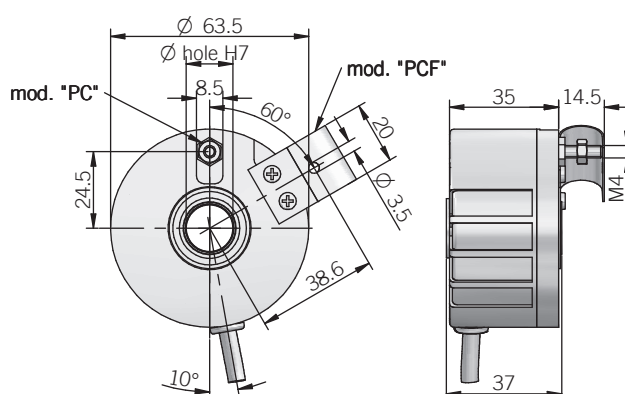
## EL 63 FB / GB



## EL 63 PB / PBF



## EL 63 PC / PCF



anti-rotation pin is included in model GB / PB / PC, for mounting instruction please refer to product installation notes  
dimensions in mm

## ELECTRICAL SPECIFICATIONS

<b>Resolution</b>	from 1 to 2500 ppr
<b>Power supply</b>	5 = 4,5 ... 5,5 V DC 5/28 = 4,75 ... 29,4 V DC 8/24 = 7,6 ... 25,2 V DC (reverse polarity protection)
<b>Power draw without load</b>	800 mW
<b>Max load current</b>	N / C / P / PC = 50 mA / channel L / RS = 20 mA / channel
<b>Output type*</b>	NPN / NPN open collector / push-pull / line driver
<b>Max output frequency</b>	300 kHz
<b>Counting direction</b>	A leads B clockwise (shaft view)
<b>Electromagnetic compatibility</b>	IEC 61000-6-2 IEC 61000-6-4

\*output levels according to power supply, for further details please see under Technical basics section

## MECHANICAL SPECIFICATIONS

<b>Bore diameter</b>	$\varnothing 8 / 10 / 12 / 14 / 15$ mm
<b>Enclosure rating</b>	IP 54 (IEC 60529)
<b>Max rotation speed</b>	3000 rpm
<b>Shock</b>	50 G, 11 ms (IEC 60068-2-27)
<b>Vibration</b>	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
<b>Moment of inertia</b>	$4 \times 10^{-6}$ kgm <sup>2</sup>
<b>Starting torque (at +20°C / +68°F)</b>	< 0,04 Nm
<b>Body material</b>	EN-AW 2011 aluminum
<b>Shaft material</b>	1.4305 / AISI 303 stainless steel
<b>Housing material</b>	PA 66 glass fiber reinforced
<b>Bearings</b>	2 ball bearings
<b>Bearings life</b>	10 <sup>9</sup> revolutions
<b>Operating temperature</b>	-10° ... +60 °C (+14° ... +140°F)
<b>Storage temperature</b>	-25° ... +70 °C (-13° ... +158°F)
<b>Fixing torque for collar clamping</b>	1,5 Nm recommended
<b>Weight</b>	350 g (12,35 oz)

## CONNECTIONS

Function	Cable output N / C / P / PC	Cable output Line driver
+V DC	red	red
0 V	black	black
Ch. A	green	green
Ch. A-	/	brown
Ch. B	yellow	yellow
Ch. B-	/	orange
Ch. Z	blue	blue
Ch. Z-	/	white
⊕	shield	shield

## RESOLUTIONS

1 - 2 - 5 - **20** - 25 - **32** - 50 - 60 - 100 - 128 - **200** - 250 - 256 - **360** - 400 - 500  
- 512 - 600 - 720 - 1000 - **1024** - 1440 - 1800 - **2000** - 2048 - 2500

please directly contact our offices for other pulses, preferred resolutions in bold

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