



E40



E40M



E40S



E40Q

## INCREMENTAL ROTARY ENCODERS Series E40

- Incremental rotary encoders with or without zero pulse
- Pulses per revolution: 2 to 12500
- Several configurations available

MECHANICAL versions			
E40/E41	E40A/E41A	E40V/E41V	E40Q/E41Q
Body Ø: 40 mm Round flange Shaft Ø: 6 or 4 mm	Body Ø: 40 mm Round flange with 4 holes on Ø 25.4 mm Shaft Ø: 6 or 4 mm	Body Ø: 40 mm Round flange, M18x1 screw fixing Shaft Ø: 6 or 4 mm	Body Ø: 40 mm Square flange, mm 43x43 Shaft Ø: 6 or 4 mm
E40M/E41M	E40S/E41S	ABS plastic case	
Body Ø: 40 mm Hollow shaft flange Hole Ø 6 or 8 mm	Body Ø: 40 mm Hollow shaft flange Hole Ø 6 or 8 mm Fixing by antirotational elastic support	Connections outlet: axial or radial cable  <i>Available series RE40 with aluminium case and connections outlet by cable gland in radial position</i>	

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS	
E40/E40A/E40V/E40Q	E40M/E40S
• Materials: case shaft	ABS AISI 303 steel
• Weight	95 g ca
• Shaft/Hollow shaft diameter	4 or 6 mm      Hollow shaft 6 or 8 mm
• Revolutions/minute	6000
• Starting torque	≤0.2 Ncm
• Inertia	≤5 g cm <sup>2</sup>
• Max load	10N axial / 20N radial
• Vibration resistance (10÷2000 Hz)	10 G
• Shock resistance (11 ms)	30 G
• Protection degree	IP54
• Operating temperature	-10 ÷ 60°C
• Stocking temperature	-20 ÷ 80°C

ELECTRICAL & OPERATING SPECIFICATIONS	
• Pulse code	Incremental
• Pulses/revolution	2 ÷ 12500
• Zero pulse	One pulse/revolution
• Output signals	Two square waves 90° ±15° out of phase Zero pulse width: 90°±15°
• Electronic output	Push-pull, NPN open collector, 5Vdc or 8/24Vdc line driver signals protected against short circuits
• Supply voltage	5Vdc or 8/24Vdc protection against polarity reversal
• Absorption	40 mA max
• Max. frequency	100/150 KHz
• Connections	Axial or radial cable 1 m long Optional: 5-pin Lumberg or DB9 axial connector





E40V



E40A



RE40

**CONNECTIONS**

Push/Pull – NPN Open Collector Output  
SIGNALS Cable Colours

Out 1	White
Out 2	Green
Out Z(E41)	Yellow
+ Vdc	Red
0V	Blue
Earth	Shield

Line Driver Output  
SIGNALS Cable Colours

Out 1	White
Out 2	Green
Out Z (E41)	Grey
+ Vdc	Red
0V	Blue
Out 1	Brown
Out 2	Yellow
Out Z (E41)	Pink
Earth	Shield

**ORDERING INFORMATION**

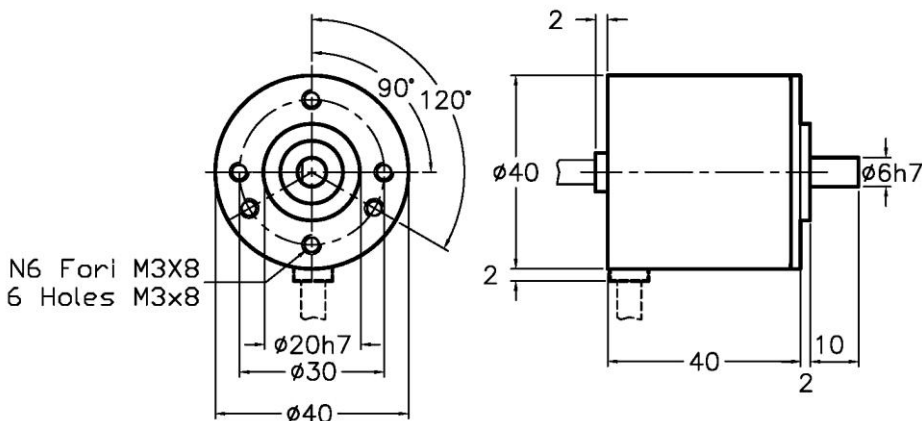
<b>E40</b>	<b>1000</b>	<b>824</b>	<b>R</b>	<b>6</b>	<b>PP</b>
<b>TYPE</b> E40/E41 E40A/E41A E40V/E41V E40Q/E41Q E40M/E41M E40S/E41S	<b>PPR NO.</b> 2 ÷ 12500	<b>SUPPLY VOLTAGE</b> 8/24 Vdc 5 Vdc	<b>CONNECTIONS POSITION</b> A Axial R Radial	<b>SHAFT/HOLLOW SHAFT DIAMETER</b> 6 mm shaft/hollow shaft 4 mm shaft 8 mm hollow shaft	<b>ELECTRONIC OUTPUT</b> PP Push-pull OC Open Collector NPN LD Line-driver

ELAP reserves the right to update the product without notice

**DIMENSIONS**

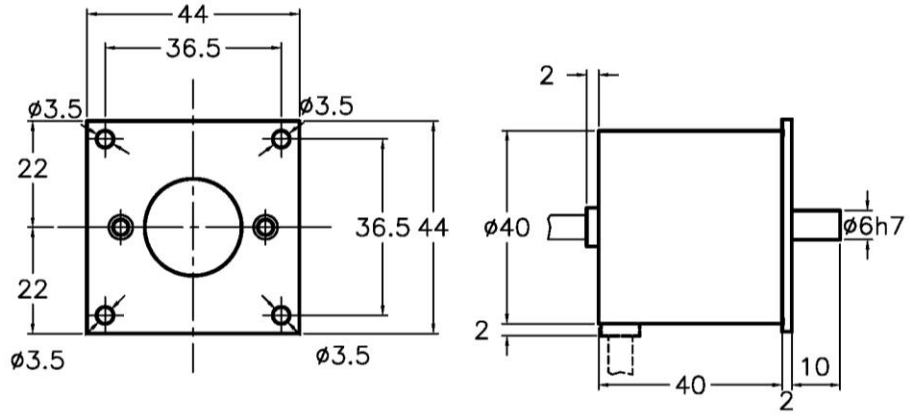
E40

Rif. M1402

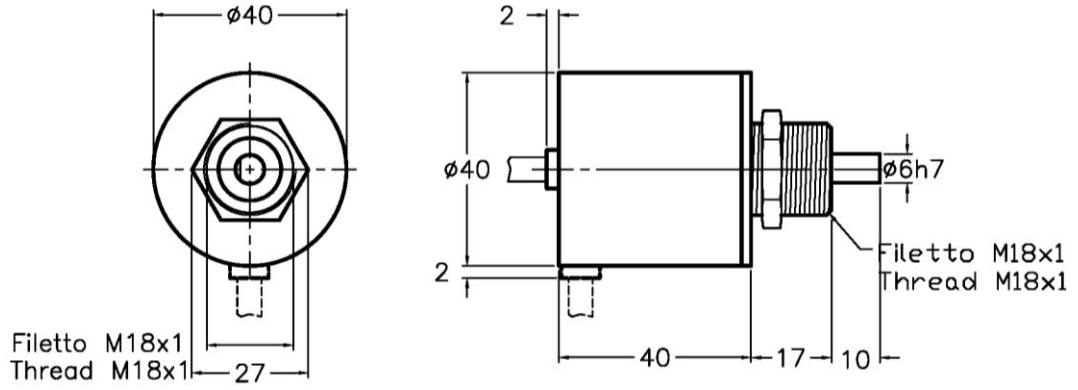


E40Q

Rif. M1402

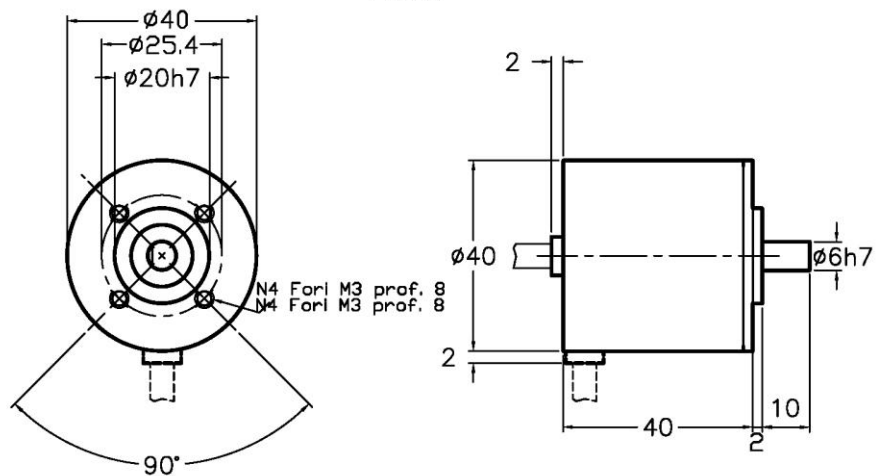


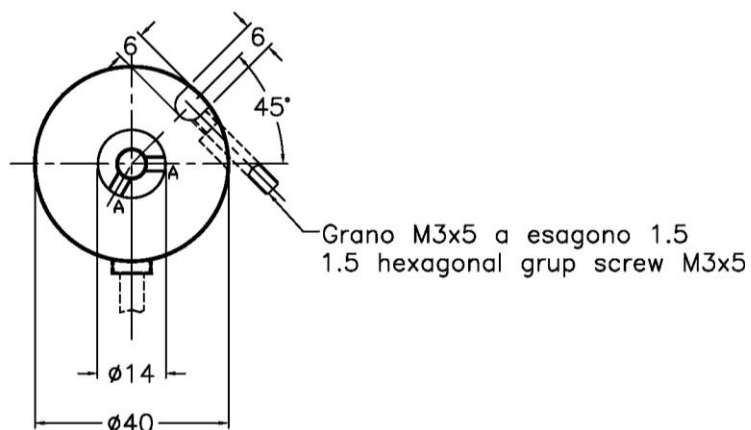
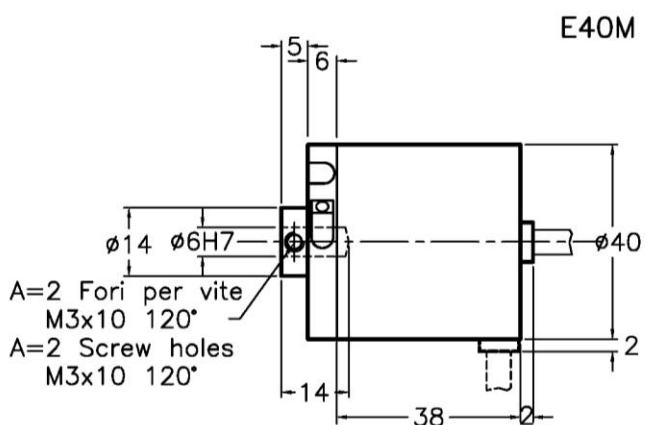
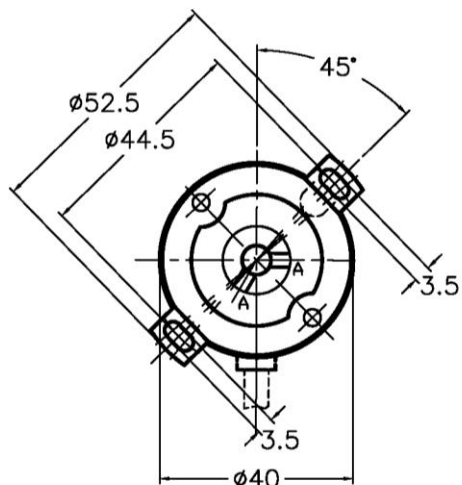
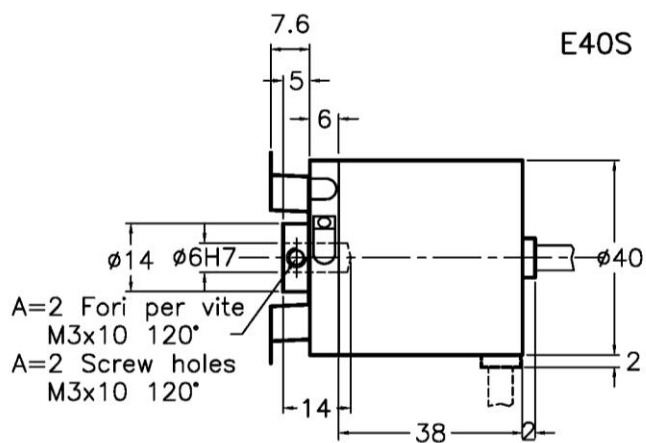
E40V



Rif. M1402

E40A





REFERENCES

Further info available at:

<https://www.elap.it/incremental-encoders/encoder-re40/>

