



# INCREMENTAL ROTARY ENCODERS

## series REC

- **Compact-sized encoders - h 38 mm**
- **Pulses per revolution: 2 to 12500**
- **Aluminium housing**
- **Connections by cable or M12 connector**

### MECHANICAL VERSIONS

REC520:	REC620	REC440	REC450
Round flange Ø 58 mm	Square flange 63.5x63.5 mm	Hollow shaft	Hollow shaft
Servo coupling	Centering mask Ø 31.75 mm	Joint hole Ø 8, 10, 12, 14 mm	Joint hole Ø 8, 10, 12, 14 mm
Centering mask Ø 50 mm	Shaft Ø 6, 8, 9.52, 10 mm		Fixing by antirotational elastic support
Shaft Ø 6, 8, 9.52, 10 mm			

### MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

	REC520/620	REC440/450
• Materials: case shaft	Aluminium	Steel AISI 303
• Weight	210 g circa	
• Shaft/joint hole Ø mm	10, 9.52, 8, 6	8, 10, 12, 14
• Revolutions/minute	6000 continuos/10000 temporary	
• Starting torque	≤0.8 Ncm	
• Inertia	≤25 g cm <sup>2</sup>	
• Max load	80 N axial/100 N radial	
• Vibration resistance (10÷2000 Hz)	100 m/sec <sup>2</sup>	
• Shock resistance (11 ms)	50 G	
• Protection degree	IP64	
• Operating temperature	-10 ÷ 70°C	
• Stocking temperature	-20 ÷ 80°C	

### ELECTRICAL & OPERATING SPECIFICATIONS

• Pulse code	Incremental
• Pulses/revolution	2 ÷ 12500
• Zero pulse	One pulse/revolution (REC521/REC62/REC441/REC451)
• Output signals	Two square waves 90° ±15° out of phase – Zero pulse width: 90°±15°
• Electronic output	push-pull, line driver 5Vdc or 8/24Vdc signals protected against short circuits
• Supply voltage	5Vdc or 8/24Vdc protection against polarity reversal
• Absorption	30-80 mA max
• Max. frequency	100 KHz
• Connections	Axial cable 1 m long 5-pin M12 axial plug connector 8-pin connector for line driver output Optional: tap connector with cable





REC440



REC620



REC520

## CONNECTIONS

Push Pull SIGNALS			Line Driver SIGNALS		
5-pin connector	Cable colours	8-pin connector	Cable colours		
Out 1	pin 2	White	Out 1	pin 1	White
Out 2	pin 4	Green	Out 2	pin 3	Green
Out Z (types with 0)	pin 5	Brown	Out Z (solo con 0)	pin 5	Grey
+ Vdc	pin 1	Red	+ Vdc	pin 8	Red
0V	pin 3	Blue	0V	pin 7	Blue
		Shield	Out 1	pin 2	Brown
			Out 2	pin 4	Yellow
			Out Z	pin 6	Pink
					Shield

## ORDERING INFORMATION

<b>REC520</b>	<b>C</b>	<b>100</b>	<b>8/24</b>	<b>A</b>	<b>10</b>	<b>PP</b>	<b>M12</b>
							<u>CONNECTOR</u> M12
							<u>OUTPUT SIGNALS</u> PP Push-pull LD Line-driver LD5V Line driver 5 Vdc
							<u>SHAFT/JOINT HOLE Ø</u> Shaft 6 – 8 – 9.52 – 10 mm Joint 8 – 10 – 12 – 14 mm
							<u>CONNECTION POSITION</u> R radial
							<u>SUPPLY VOLTAGE</u> 8/24 Vdc 5 Vdc
							<u>PULSES/REVOLUTION</u> 2-12500
							<u>CONNECTION TYPE</u> - Connector M12 C Cable
<b>Type</b>							
REC520 Round flange							
REC620 Square flange							
REC440 Hollow shaft							
REC450 Hollow shaft and elastic support							

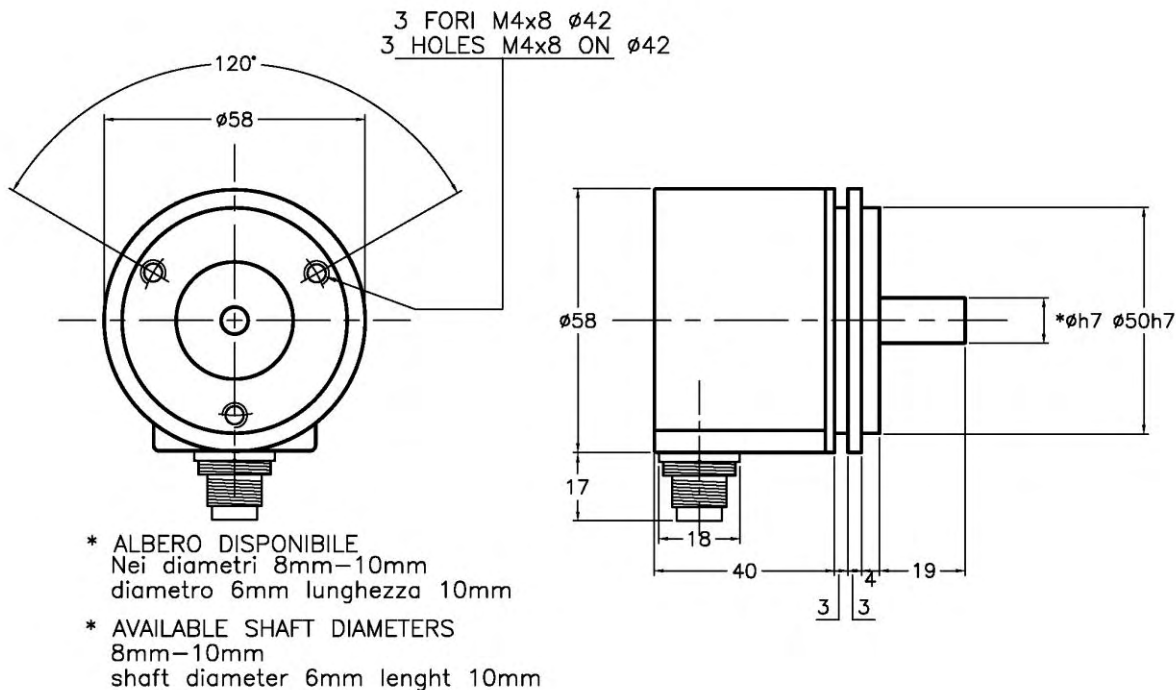
VARIATIONS ADMITTED WITHOUT NOTICE

Dimensional drawing available at  
<http://www.elap.it/it/encoder-incrementali/encoder-rec.html>

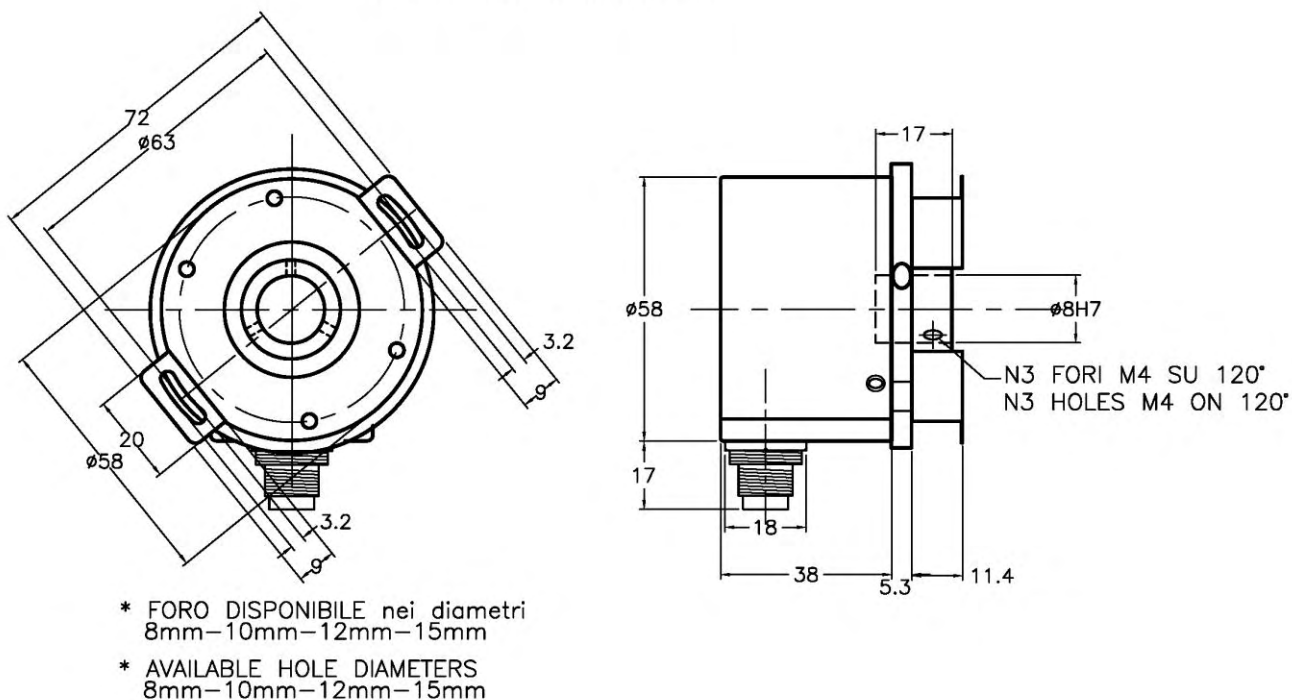


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REC520 uscita connettore M12  
REC520 M12 connector outlet



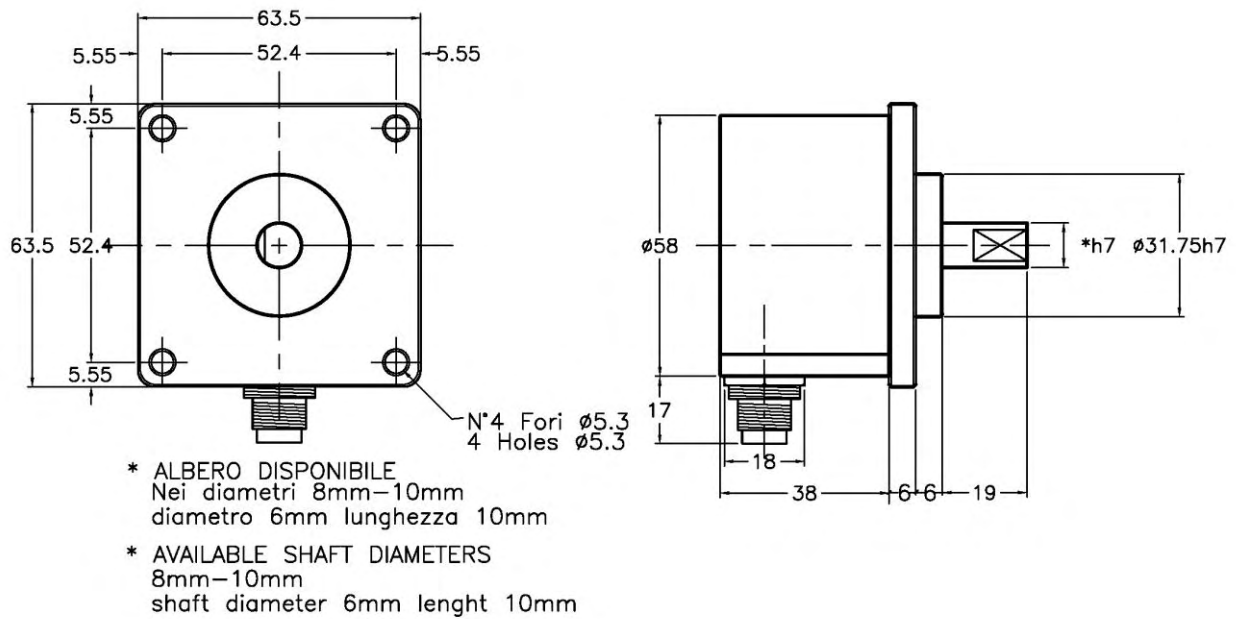
REC450 uscita connettore M12  
REC450 M12 connector outlet



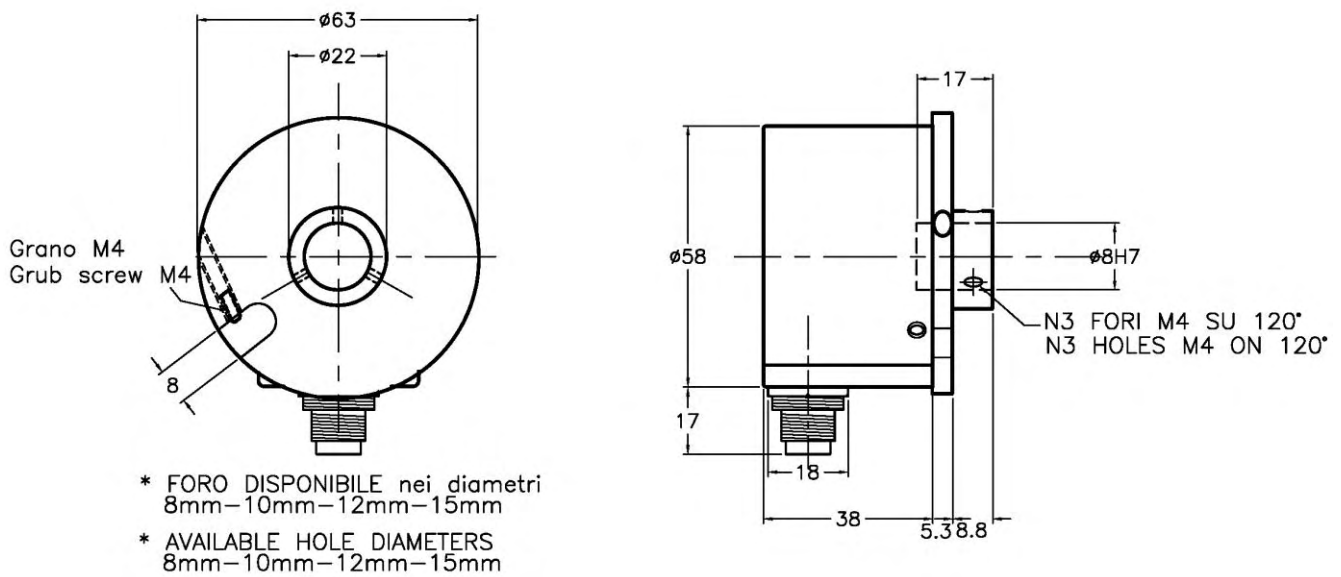
Further dimensionall drawing available at  
<http://www.elap.it/eng/incremental-encoders/encoder-rec.html>

## DIMENSIONS

REC620 uscita connettore M12  
REC620 M12 connector outlet



REC440 uscita connettore M12  
REC440 M12 connector outlet



Further dimensionall drawing available at  
<http://www.elap.it/it/encoder-incrementali/encoder-rec.html>