



INCREMENTAL ROTARY ENCODERS

series REC

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



UL listed versions available

MECHANICAL VERSIONS

REC520	REC540	REC620	REC440	REC450
Round flange Ø 58 mm Servo coupling Centering mask Ø 50 mm Shaft Ø 6, 8, 9.52, 10mm SYNCHRO FLANGE	Round flange Ø 58 mm Centering mask Ø 36 mm Shaft Ø 6, 8, 9.52, 10mm CLAMPING FLANGE	Square flange 63.5x63.5 mm Centering mask Ø 31.75 mm Shaft Ø 6, 8, 9.52, 10 mm	Hollow shaft Ø 8, 10, 12, 14, 15 mm Antirotational fixing	Hollow shaft Ø 8, 10, 12, 14, 15 mm Fixing by elastic support

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

	REC520/540/620	REC440/450
• Materials: housing shaft	Aluminium	Steel AISI 303
• Weight	210 g circa	
• Shaft/Hollow shaft Ø mm	10, 9.52, 8, 6	8, 10, 12, 14, 15
• Revolutions/minute	6000 continuous/10000 temporary	
• Starting torque	≤0.8 Ncm	
• Inertia	≤25 g cm ²	
• Max load	80 N axial/100 N radial	
• Vibration resistance (10÷2000 Hz)	100 m/sec ²	
• Shock resistance (11 ms)	50 G	
• Protection degree	IP65	
• 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 (REC521/541/621/REC441/451)
• Output signals	Two square waves 90° ±15° out of phase – Zero pulse width: 90°±15°
• Electronic output	push-pull, line driver 5Vdc or 5/30Vdc signals protected against short circuits
• Supply voltage	5/30Vdc
• Absorption	protection against polarity reversal
• Max. frequency	30-80 mA max
• Connections	100 KHz/200 HKz for ppr>1250
	Radial cable 1 m long
	5-pin M12 radial plug connector
	8-pin connector for line driver output
	Optional: tap connector with cable



ELAP VIA VITTORIO VENETO, 4-I-20094 CORSICO (MI) • TEL. +39.02.4519561
FAX +39.02.45103406 • E-MAIL INFO@ELAP.IT • SITE WWW.ELAP.IT



REC520



REC540



REC620

CONNECTIONS

Push Pull
SIGNALS

5-pin connector

Cable colours

Line Driver
SIGNALS

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

REC520

C

100

5/30

R

10

PP

OUTPUT SIGNALS

PP Push-pull
LD Line-driver
LD5V Line driver 5 Vdc

SHAFT/HOLLOW SHAFT Ø

Shaft 6 – 8 – 9.52 – 10 mm
Hollow shaft 8 – 10 – 12 – 14 -

CONNECTION POSITION

R radial

SUPPLY VOLTAGE

5/30 Vdc

PULSES/REVOLUTION

2-12500

CONNECTION TYPE

- Connector M12
C Cable

Type

REC520 Round flange, mask 50 mm

REC540 Round flange, mask 36 mm

REC620 Square flange

REC440 Hollow shaft

REC450 Hollow shaft and elastic support



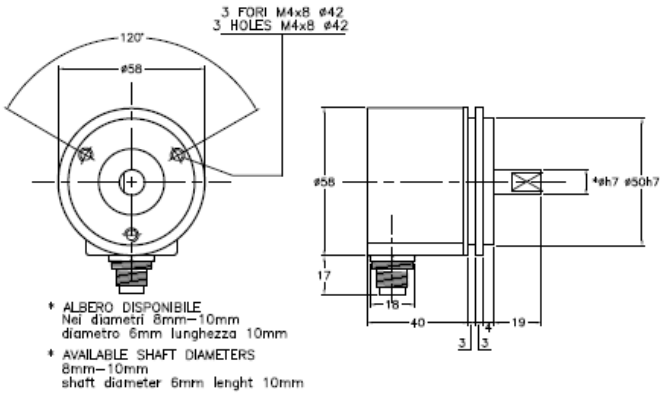
CERTIFICATE NO.E510647

UL listed versions
available
(Encoder with M12 connector)

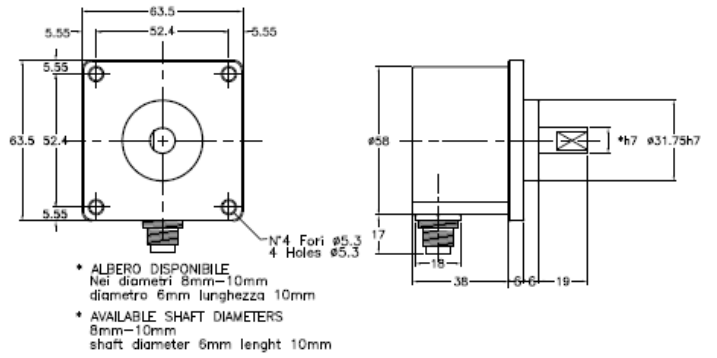
ELAP RESERVES THE RIGHT TO UPDATE THE PRODUCT WITHOUT NOTICE

DIMENSIONS

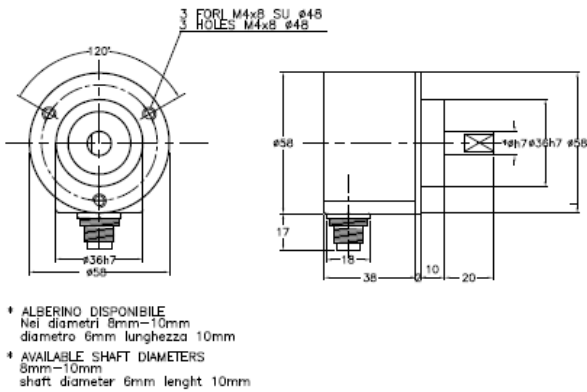
REC520 uscita connettore M12
REC520 M12 connector outlet



REC620 uscita connettore M12
REC620 M12 connector outlet

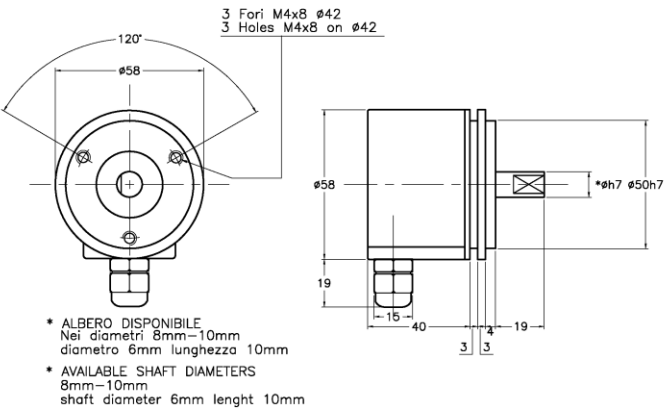


REC540 uscita connettore M12
REC540 M12 connector outlet

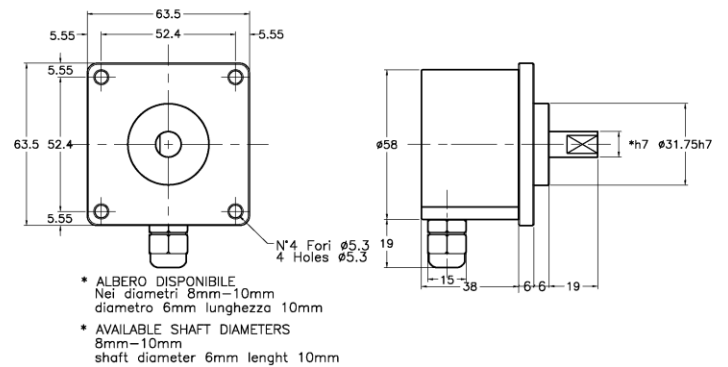


Ref M1483V

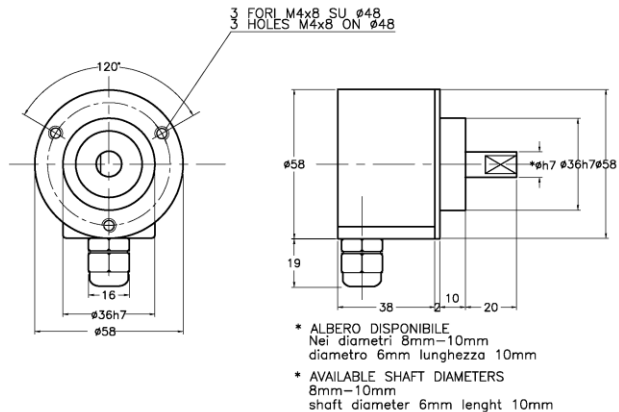
REC520 uscita pressacavo
REC520 cable output



REC620 uscita pressacavo
REC620 cable output



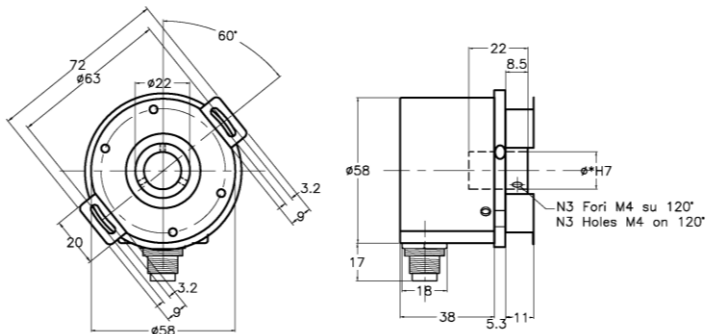
REC540 uscita pressacavo
REC540 cable output



Ref. M1522

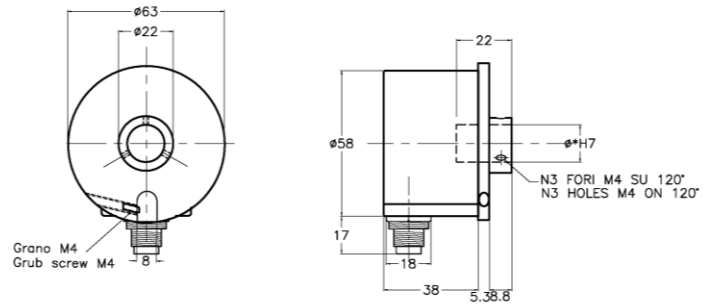
DIMENSIONS

REC450 uscita connettore M12
REC450 M12 connector outlet



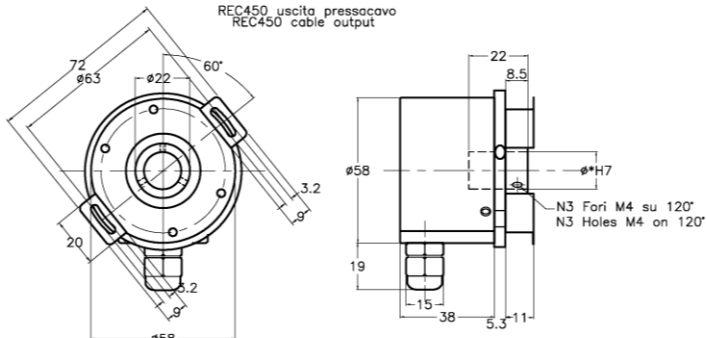
- * FORO DISPONIBILE nei diametri
8mm-10mm-12mm-14mm-15mm
- * AVAILABLE HOLE DIAMETERS
8mm-10mm-12mm-14mm-15mm

REC440 uscita connettore M12
REC440 M12 connector outlet



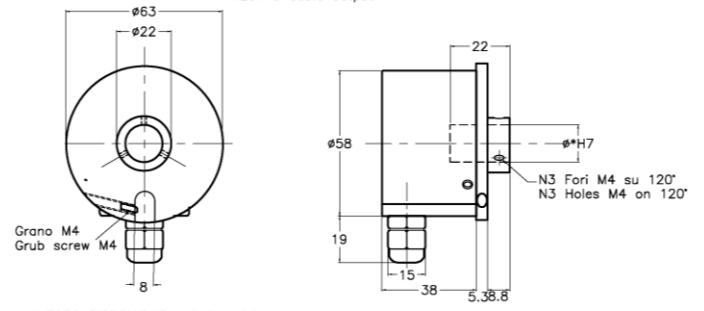
- * FORO DISPONIBILE nei diametri
8mm-10mm-12mm-14mm-15mm
- * AVAILABLE HOLE DIAMETERS
8mm-10mm-12mm-14mm-15mm

REC450 uscita pressacavo
REC450 cable output



- * FORO DISPONIBILE nei diametri
8mm-10mm-12mm-14mm-15mm
- * AVAILABLE HOLE DIAMETERS
8mm-10mm-12mm-14mm-15mm

REC440 uscita pressacavo
REC440 cable output



- * FORO DISPONIBILE nei diametri
8mm-10mm-12mm-14mm-15mm
- * AVAILABLE HOLE DIAMETERS
8mm-10mm-12mm-14mm-15mm

Ref. M1540



REFERENCES

Further information at:

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



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ELAP VIA VITTORIO VENETO, 4-I-20094 CORSICO (MI) • TEL. +39.02.4519561
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