



RE/REM450



RE/REM410



RE/REM400

RE/REM Hollow Shaft INCREMENTAL ROTARY ENCODERS

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

MECHANICAL VERSIONS			
RE400 • REM400	RE470 • REM470	RE410 • REM410	RE450 • REM450
Body Ø: 58 mm	Body Ø: 58 mm	Body Ø: 58 mm	Body Ø: 58 mm
Flange Ø: 53.5 mm	Flange Ø: 72 mm	Flange Ø: 63 mm	Flange Ø: 63 mm
Fixing holes on Ø 30 mm	Fixing holes on Ø 63.5 mm	Hollow shaft for motor	Hollow shaft for motor
Motor coupling through hollow shaft Ø 6, 8 or 10 mm	Motor coupling through hollow shaft Ø 6, 8 or 10 mm	coupling Ø 8, 10, 12, 14 or 15 mm	coupling Ø 8, 10, 12, 14 or 15 mm
		Antirotational fixing	Fixing by elastic support
PULSES PER REVOLUTION Series RE/E		Magnetic series REM/EM	
2, 5, 10, 15, 20, 25, 27, 30, 40, 50, 60, 80, 100, 115, 125, 150, 180, 200, 250, 256, 300, 360, 500, 600, 720, 750, 800, 900, 1000, 1200, 1250, 1440, 1500, 1800, 2000, 2400, 2500, 2700, 2880, 3000, 3600, 4000, 4500, 5000, 7200, 8000, 9000, 10000, 12500		8, 10, 16, 20, 25, 32, 40, 50, 64, 80, 100, 125, 128, 200, 250, 256, 400, 500, 512, 1024, 2048	

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS		
RE/REM	400 • 470	410 • 450
• Materials: case shaft	Aluminium AISI 303 steel	
• Weight	400 g circa	
• Hollow shaft diameter	6, 8, 10 mm	8, 10, 12, 14, 15 mm
• 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 per revolution	RE 2 ÷ 12500 REM 8÷2048
• Zero reference pulse	one pulse/revolution
• Output signals	Two square waves 90° ±15° out of phase – Zero pulse width: 90°±15°
• Electronic outputs	push-pull, NPN open collector*, 5Vdc or 5/30 Vdc line driver signals protected against short circuits
• Supply voltage	5/30 Vdc protection against polarity reversal
• Absorption	30÷80 mA max
• Max frequency	100 KHz / 200 KHz for ppr>1250
• Connections	Axial or radial cable 3 m long /1 m for line driver output Axial or radial MS connector, 7-pin/10-pin for line driver output

* NPN open collector: series **RE** only





RE/REM470



RE/REM400



RE/REM470

CONNECTIONS											
Push Pull – Open Collector NPN				Line Driver							
SIGNALS		7-pin connector		Cable colours		SIGNALS		7-pin connector		Cable colours	
		DIAGRAM 1	DIAGRAM 2			DIAGRAM 3		DIAGRAM 4			
						without 0 pulse		with 0 pulse			
Out 1	A	C	White	Out 1	A	White	A	White	A	White	
Out 2	B	E	Green	Out 2	B	Green	B	Green	B	Green	
Out Z RE/REM4x1	C	D	Brown	Out Z			C	Grey	C	Grey	
+ Vdc	D	F	Red	+ Vdc	D	Red	D	Red	D	Red	
0V	F	A	Blue	+ Vdc			E	Red	E	Red	
Non-connected	E	B		0V	F	Blue	F	Blue	F	Blue	
Non-connected	G	G		Out 1	C	Brown	G	Brown	G	Brown	
Earth			Shield	Out 2	E	Yellow	H	Yellow	H	Yellow	
				Out Z			I	Pink	I	Pink	
				Non-connected	G		J	Shield	J	Shield	

ORDERING INFORMATION

RE400	C	1000	5/30	R	6	PP	2
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CONNECTION DIAGRAM
2 – 4

OUTPUT SIGNALS
PP Push-pull
OC NPN Open Collector (RE only)
LD Line-driver

HOLE Ø
6 -8 -10 -12 - 14- 15 mm

CONNECTIONS POSITIONS
A Axial
R Radial

SUPPLY VOLTAGE
5/30 Vdc

PPR
RE 2 ÷ 12500
REM 8 ÷ 2048

CONNECTION OUTLET
- Connector
C Cable

TYPE
RE400 – RE470 – RE410 – RE450 no zero pulse
RE401 – RE471 – RE411 – RE451 zero pulse
REM400 – REM470 – REM410 – REM450 no zero pulse
REM401 – REM471 – REM411 – REM451 zero pulse

VARIATIONS ADMITTED WITHOUT NOTICE

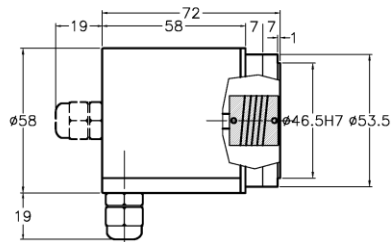
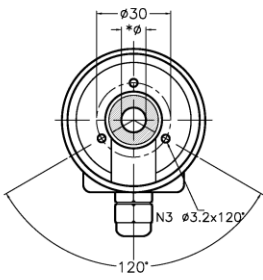
Hollow shaft alternative encoder series:

REC 400/440/450/470 Compact encoders 2÷12500 ppr Body Ø 58 mm, h 38 mm • M12 connector or cable outlet • Aluminium housing	REP 401/411/451/471 Programmable encoders 8÷2048 ppr settable by the user Body Ø 58 mm • Aluminium housing • Magnetic reading • Zero pulse

DIMENSIONS

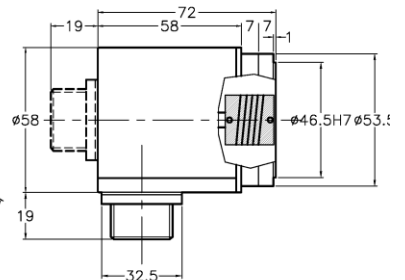
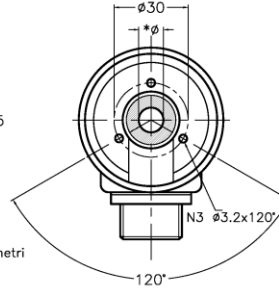
RE/REM400

RE400 uscita serracavo
RE400 cable outlet



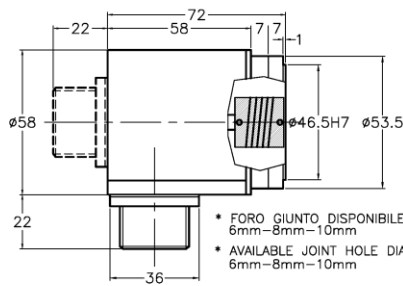
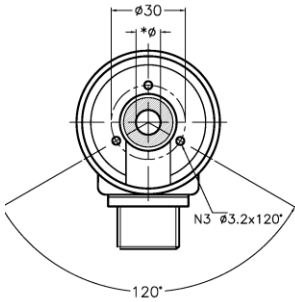
- * FORO GIUNTO DISPONIBILE nei diametri 6mm-8mm-10mm
- * AVAILABLE JOINT HOLE DIAMETERS 6mm-8mm-10mm

RE400 uscita connettore 7 poli
RE400 7pin connector outlet



- * FORO GIUNTO DISPONIBILE nei diametri 6mm-8mm-10mm
- * AVAILABLE JOINT HOLE DIAMETERS 6mm-8mm-10mm

RE400 uscita connettore 10 poli
RE400 10pin connector outlet

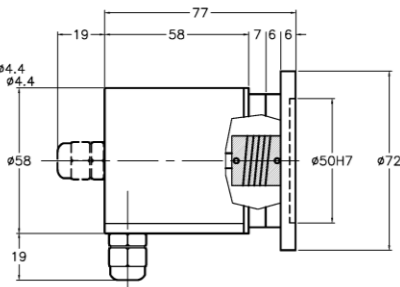
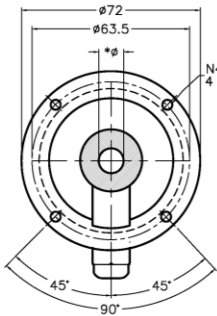


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- * AVAILABLE JOINT HOLE DIAMETERS 6mm-8mm-10mm

Rif. M148

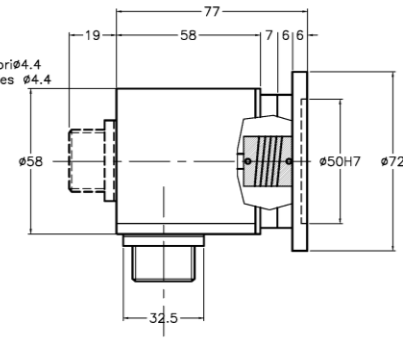
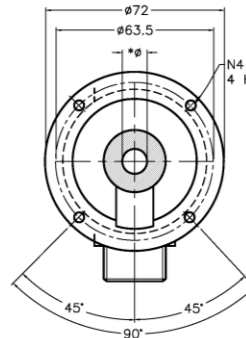
RE/REM470

RE470 uscita serracavo
RE470 cable ouput



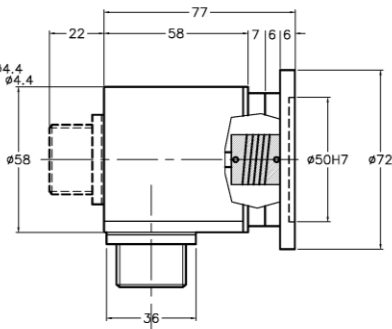
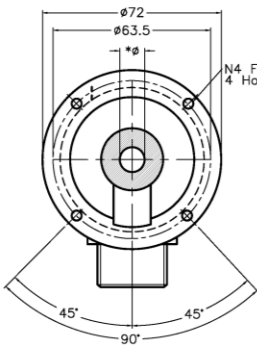
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- * AVAILABLE JOINT HOLE DIAMETERS 6mm-8mm-10mm

RE470 uscita connettore 7p
RE470 7pin ouput connector

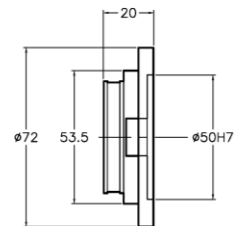


- * FORO GIUNTO DISPONIBILE nei diametri 6mm-8mm-10mm
- * AVAILABLE JOINT HOLE DIAMETERS 6mm-8mm-10mm

RE470 uscita connettore 10p
RE470 10 pin ouput connector



- * FORO GIUNTO DISPONIBILE nei diametri 6mm-8mm-10mm
- * AVAILABLE JOINT HOLE DIAMETERS 6mm-8mm-10mm

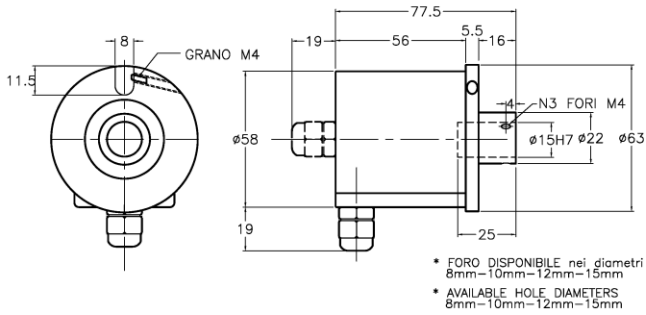


Rif. M1510

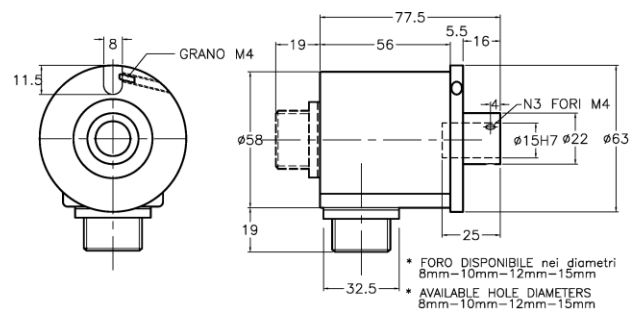
DIMENSIONS

RE/REM410

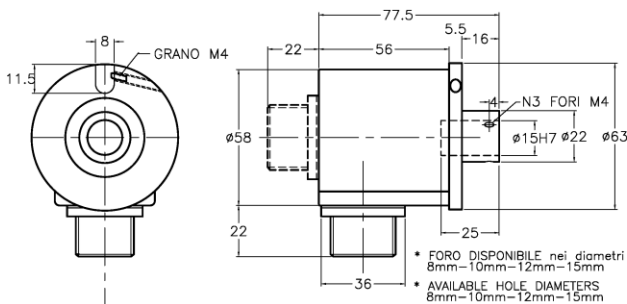
RE410 uscita serracavo
RE410 cable outlet



RE410 uscita connettore 7 poli
RE410 7pin connector outlet



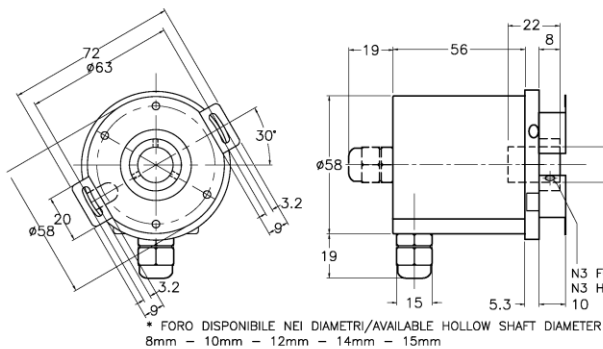
RE410 uscita connettore 10 poli
RE410 10pin connector outlet



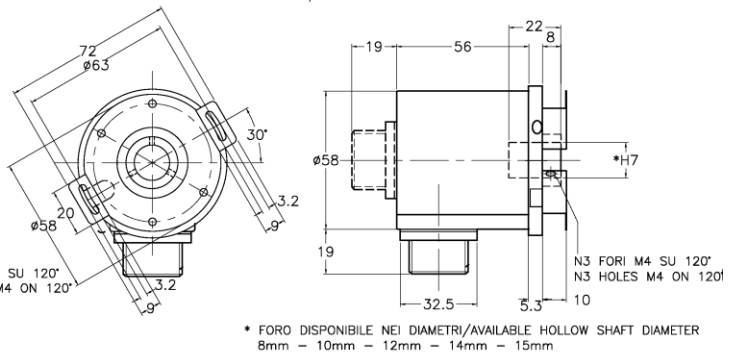
Rif. M1484

RE/REM450

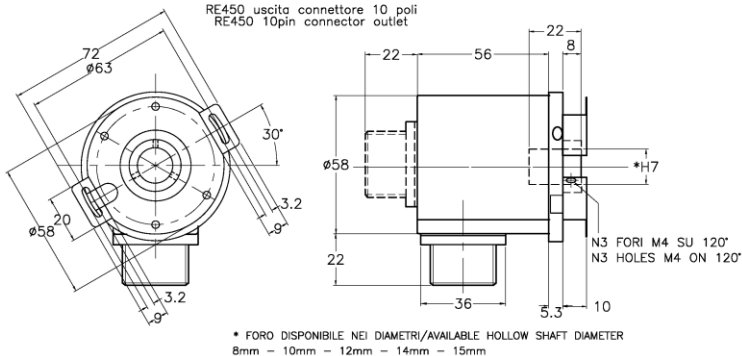
RE450 uscita serracavo
RE450 cable outlet



RE450 uscita connettore 7 poli
RE450 7pin connector outlet



RE450 uscita connettore 10 poli
RE450 10pin connector outlet



Rif. M2045

REFERENCES

Further information and dimensional drawings at the following links:

<https://www.elap.it/incremental-encoders/hollow-shaft-encoders/>
<https://www.elap.it/incremental-encoders/encoder-rem/>



Encoder RE4xx Encoder REM



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