



RE/REM620



RE/REM650

# RE/E Square Flanged REM/EM INCREMENTAL ROTARY ENCODERS

- Incremental rotary encoders with or without zero pulse
- Pulses per revolution: 2 to 12500
- Aluminium housing (series RE/REM ) or ABS case (series E/EM)
- Several configurations available

MECHANICAL VERSIONS		PULSES PER REVOLUTION	
RE/E620 • REM/EM620	RE/E650 • REM/EM650	Series RE/E	Series REM/EM
Body Ø: 58 mm Flange mm 63.5x63.5 Centering mask Ø 31.75 mm Shaft Ø 6, 8, 9.52, 10 mm	Body Ø: 58 mm Flange mm 63.5x63.5 Centering mask Ø 50 mm Shaft Ø 6, 8, 9.52, 10 mm	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	Magnetic operation 8, 10, 16, 20, 25, 32, 40, 50, 64, 80, 100, 125, 128, 200, 250, 256, 400, 500, 512, 1024, 2048

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS	
• Materials: case shaft	Aluminium ( <b>RE/REM</b> ) / ABS ( <b>E/EM</b> ) AISI 303 steel
• Weight	<b>RE/REM</b> 400 g ca / <b>E/EM</b> 280 g ca
• Shaft Ø	6, 8, 9.52, 10 mm
• Revolutions/minute	6000 continuous/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 / optional IP65 with sealing ring*
• Operating temperature	-10 ÷ 70°C
• Stacking temperature	-20 ÷ 80°C

ELECTRICAL & OPERATING SPECIFICATIONS	
• Pulse code	Incremental
• Pulses per revolution	<b>RE/E</b> 2 ÷ 12500 <b>REM/EM</b> 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 8/24Vdc line driver signals protected against short circuits
• Supply voltage	5Vdc or 8/24Vdc protection against polarity reversal
• Absorption	30÷80 mA max
• Max frequency	100/200 KHz
• 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**

\*Max operating speed with IP65 sealing ring applied on the shaft: 3000 rpm

\* NPN open collector: series **RE/E** only

\*\*The encoder configuration: zero pulse + line drive output +radial connector outlet can only be supplied with aluminium case (series **RE/REM**)



## CONNECTIONS

SIGNALS	Push Pull – Open Collector NPN			SIGNALS	Line Driver			
	7-pin connector	Cable colours			7-pin connector	Cable colours		10-pin connector
	<i>DIAGRAM 1</i>	<i>DIAGRAM 2</i>			<i>DIAGRAM 3</i>		<i>DIAGRAM 4</i>	
					without 0 pulse		with 0 pulse	
Out 1	A	C	White	Out 1	A	White	A	White
Out 2	B	E	Green	Out 2	B	Green	B	Green
Out Z	C	D	Brown	Out Z			C	Grey
+ Vdc	D	F	Red	+ Vdc	D	Red	D	Red
0V	F	A	Blue	+ Vdc			E	Red
Non-connected	E	B		0V	F	Blue	F	Blue
Non-connected	G	G		Out 1	C	Brown	G	Brown
Earth			Shield	Out 2	E	Yellow	H	Yellow
				Out Z			I	Pink
				Non-connected	G		J	Shield

## ORDERING INFORMATION

<b>RE620</b>	<b>C</b>	<b>1000</b>	<b>8/24</b>	<b>R</b>	<b>6</b>	<b>PP</b>	<b>2</b>
							<u>CONNECTION DIAGRAM</u> 2 – 4
							<u>OUTPUT SIGNALS</u> PP Push-pull OC NPN Open Collector (series RE/E) LD Line-driver
							<u>SHAFT Ø</u> 6 - 8 – 9.52 - 10
							<u>CONNECTIONS POSITIONS</u> A Axial R Radial
							<u>SUPPLY VOLTAGE</u> 8/24 Vdc 5 Vdc
							<u>PPR</u> RE/E 2 ÷ 12500 REM/EM 8 ÷ 2048
							<u>CONNECTION OUTLET</u> - Connector C Cable

### TIPO

RE/REM620 – RE/REM650 Aluminium case, no zero pulse

RE/REM621 – RE/REM651 Aluminium case, zero pulse

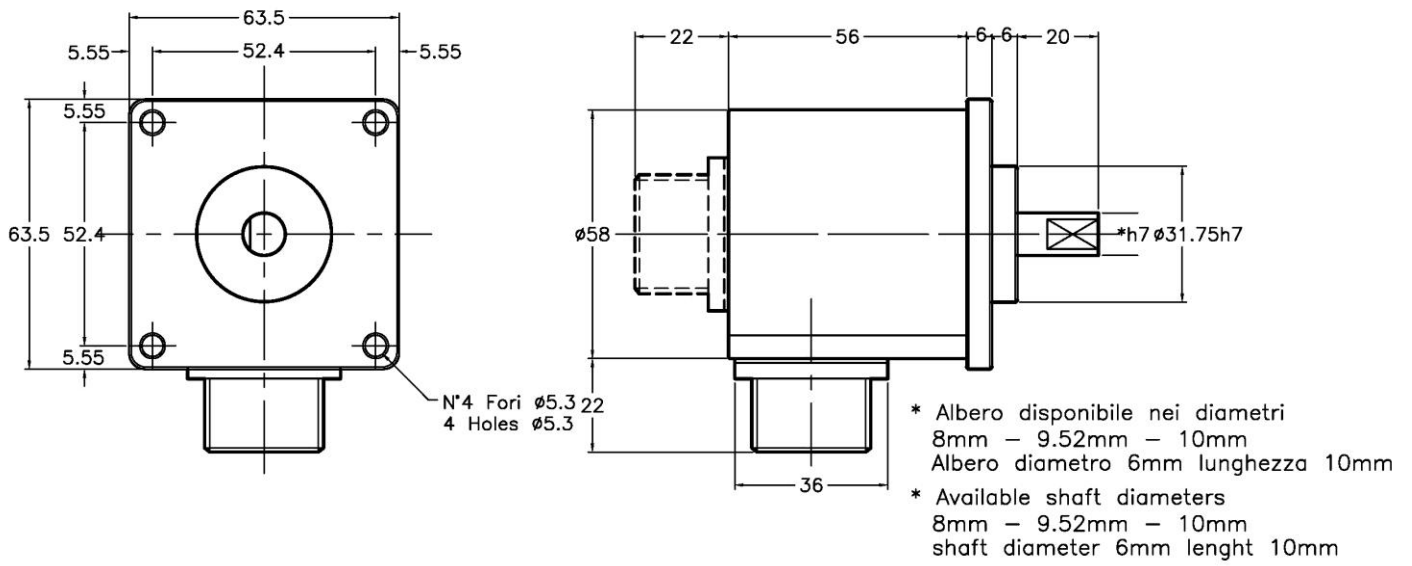
E/EM620 – E/EM650 Plastic case, no zero pulse

E/EM621 – E/EM651 Plastic case, zero pulse

VARIATIONS ADMITTED WITHOUT NOTICE

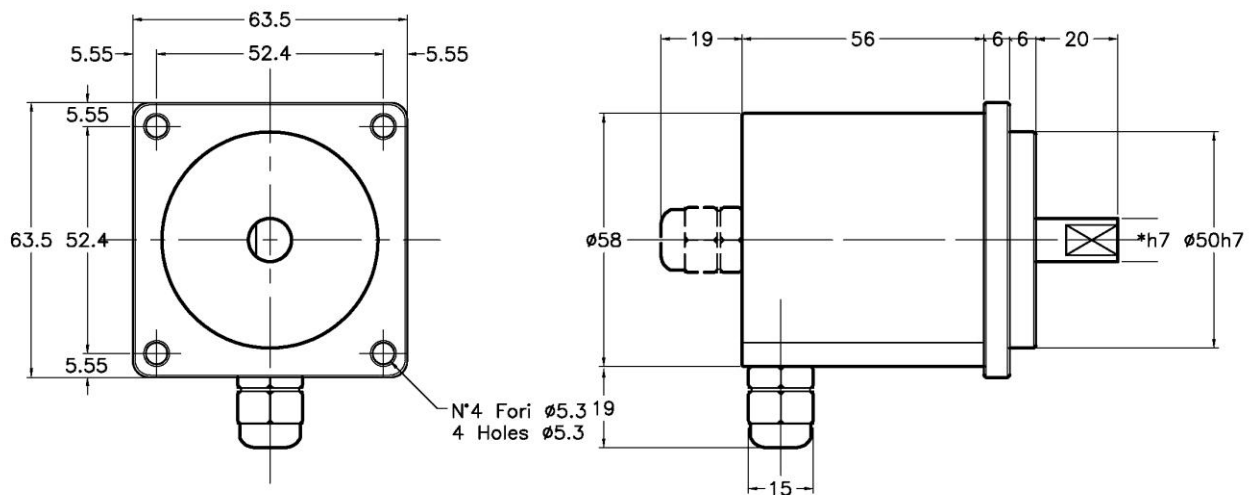
REC 620	REV 620	REP/EP 621/651
<b>Compact encoders</b> <b>2÷12500 ppr</b> Body Ø 58 mm, h 38 mm • M12 connector or cable outlet • Aluminium housing	<b>Glass disk encoders</b> <b>1000÷50000 ppr</b> Body Ø 58 mm • Aluminium housing	<b>Programmable encoders</b> <b>8÷2048 ppr</b> settable by the user Body Ø 58 mm • Aluminium or ABS housing • Magnetic reading • Zero pulse
		

RE/REM620 – 10-pin connector outlet



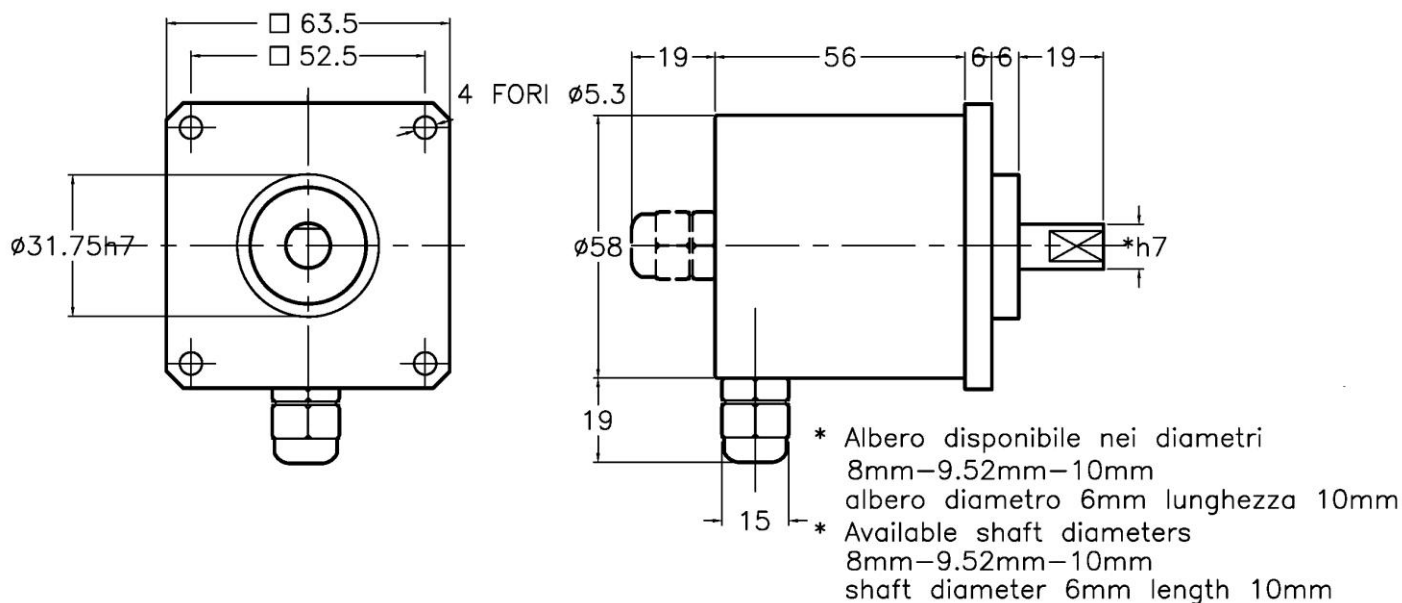
Ref. M11464V

RE/REM650 cable output



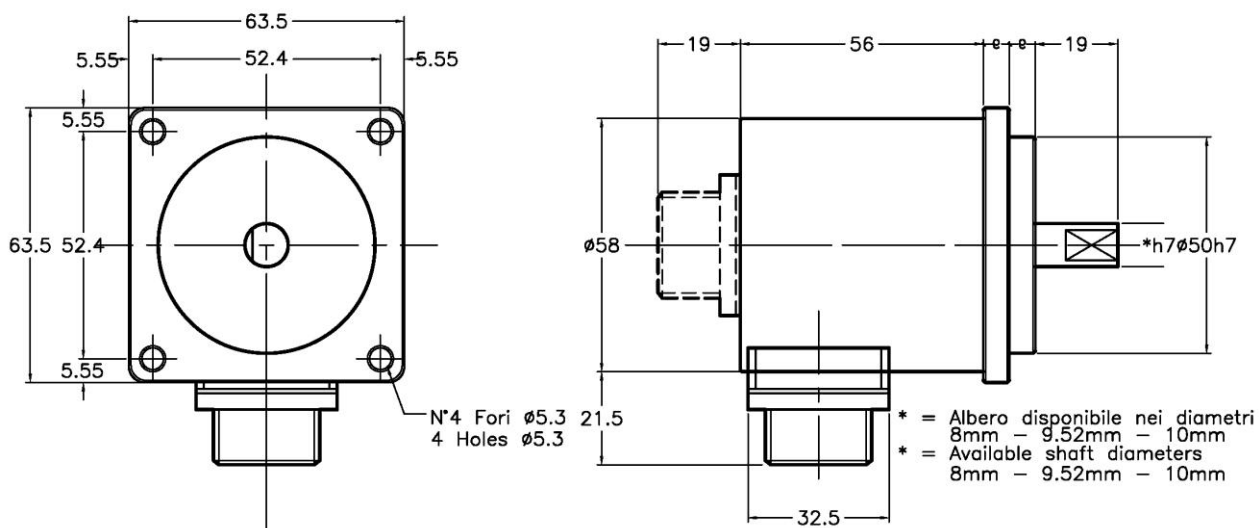
Ref. M1972V

E620/EM620 cable output



Ref. M1008V

E650/EM650 7-pin connector outlet



Ref. M1463V

Dimensional drawings available at  
[www.elap.it](http://www.elap.it)