



RE/REM620



RE/REM650

# RE/REM Square Flanged INCREMENTAL ROTARY ENCODERS

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

| MECHANICAL VERSIONS  |   | PULSES PER REVOLUTION  |  |
|--|---|--|--|
| RE620 • REM620   | RE650 • REM650  | Series RE  | Series REM   |
| Body Ø: 58 mm<br>Flange mm 63.5x63.5<br>Centering mask Ø 31.75 mm<br>Shaft Ø 6, 8, 9.52, 10 mm | Body Ø: 58 mm<br>Flange mm 63.5x63.5<br>Centering mask Ø 50 mm<br>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<br>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: housing shaft                | Aluminium<br>AISI 303 steel             |
| • Weight                                  | 400 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                       | IP65 / optional IP66 with sealing ring* |
| • Operating temperature                   | -10 ÷ 70°C                              |
| • Stacking temperature                    | -20 ÷ 80°C                              |

| ELECTRICAL & OPERATING SPECIFICATIONS |   |
|---------------------------------------|---|
| • Pulse code                          | Incremental   |
| • Pulses per revolution               | <b>RE</b> 2 ÷ 12500<br><b>REM</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 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<br>Axial or radial MS connector, 7-pin/10-pin for line driver output |

\* Max operating speed with IP66 sealing ring applied on the shaft: 3000 rpm

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



## CONNECTIONS

| SIGNALS         | Push Pull – Open Collector NPN |               |        | SIGNALS            | Line Driver     |               |              |                  |
|-----------------|--------------------------------|---------------|--------|--------------------|-----------------|---------------|--------------|------------------|
|                 | 7-pin connector                | Cable colours |        |                    | 7-pin connector | Cable colours |              | 10-pin connector |
|                 | 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            |
| Out 2           | B                              | E             | Green  | Out 2              | B               | Green         | B            | Green            |
| Out Z RE/REM6x1 | 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 <sub>-</sub> | C               | Brown         | G            | Brown            |
| Earth           |                                |               | Shield | Out 2 <sub>-</sub> | E               | Yellow        | H            | Yellow           |
|                 |                                |               |        | Out Z <sub>-</sub> |                 |               | I            | Pink             |
|                 |                                |               |        | Non-connected      | G               |               | J            | Shield           |

## ORDERING INFORMATION

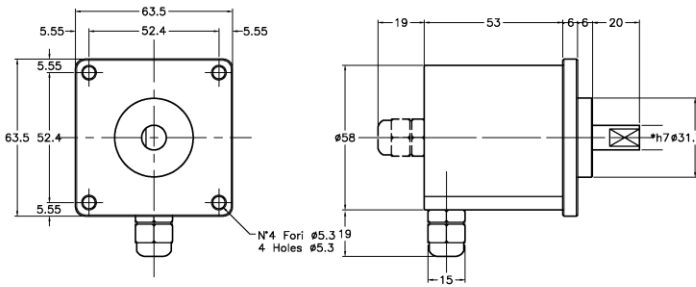
|              |          |             |             |          |          |           |   |
|--------------|----------|-------------|-------------|----------|----------|-----------|---|
| <b>RE620</b> | <b>C</b> | <b>1000</b> | <b>5/30</b> | <b>R</b> | <b>6</b> | <b>PP</b> | <b>2</b>  |
|              |          |             |             |          |          |           | <u>CONNECTION DIAGRAM</u><br>2 – 4  |
|              |          |             |             |          |          |           | <u>OUTPUT SIGNALS</u><br>PP Push-pull<br>OC NPN Open Collector (series <b>RE</b> )<br>LD Line-driver  |
|              |          |             |             |          |          |           | <u>SHAFT Ø</u><br>6 - 8 – 9.52 - 10   |
|              |          |             |             |          |          |           | <u>CONNECTIONS POSITIONS</u><br>A Axial<br>R Radial   |
|              |          |             |             |          |          |           | <u>SUPPLY VOLTAGE</u><br>5/30 Vdc   |
|              |          |             |             |          |          |           | <u>PPR</u><br><b>RE</b> 2 ÷ 12500<br><b>REM</b> 8 ÷ 2048  |
|              |          |             |             |          |          |           | <u>CONNECTION OUTLET – Sealing ring</u><br>- Connector<br>C Cable<br>K Connector outlet – O-ring on the shaft<br>J Cable outlet – O-ring on the shaft |
|              |          |             |             |          |          |           | <u>TIPO</u><br><b>RE/REM620 – RE/REM650</b> no zero pulse<br><b>RE/REM621 – RE/REM651</b> zero pulse  |

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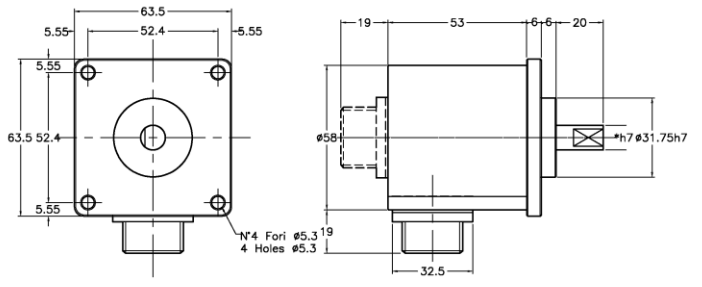
# DIMENSIONS

## RE/REM620

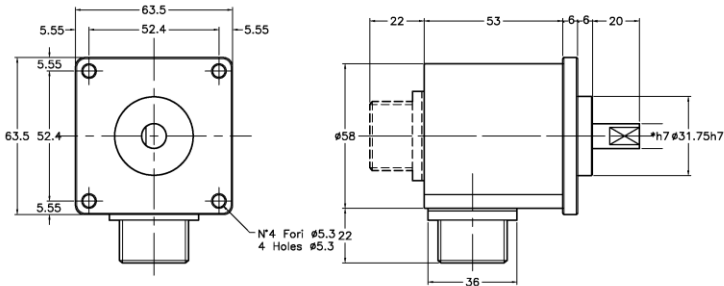
RE620 uscita serracavo  
RE620 cable output



RE620 uscita connettore 7p  
RE620 7pin output connector



RE620 uscita connettore 10p  
RE620 10pin output connector

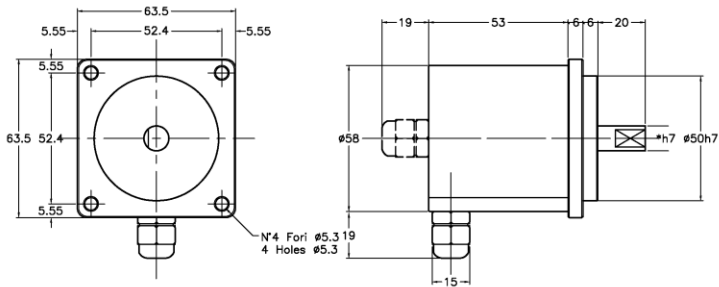


- \* = Albero disponibile nei diametri  
8mm - 9.52mm - 10mm  
Albero  $\varnothing 6$ mm L=10
- \* = Available shaft diameters  
8mm - 9.52mm - 10mm  
Shaft  $\varnothing 6$ mm L=10

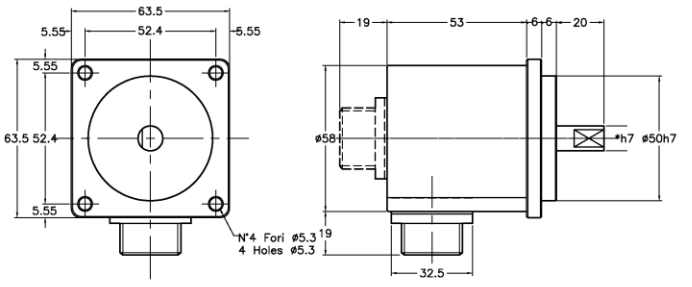
Rif. M1464V

## RE/REM650

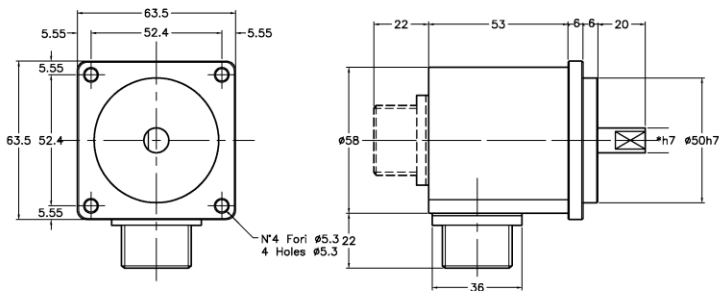
RE650 uscita serracavo  
RE650 cable output



RE650 uscita connettore 7p  
RE650 7pin output connector



RE650 uscita connettore 10p  
RE650 10pin output connector



- \* = Albero disponibile nei diametri  
8mm - 9.52mm - 10mm  
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- \* = Available shaft diameters  
8mm - 9.52mm - 10mm  
Shaft  $\varnothing 6$ mm L=10

Rif. M1972V

## REFERENCES

Further information and dimensional drawings at the following links:

<https://www.elap.it/incremental-encoders/encoder-re620/>

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



Encoder R6xx



Encoder REM

### SQUARE FLANGED ALTERNATIVE ENCODER SERIES:

#### REC 620

##### Compact encoders

2÷12500 ppr

Body Ø 58 mm, h 38 mm • M12 connector or cable outlet  
• Aluminium housing • UL Listed



[Encoder REC](#)

#### REV 620

##### Glass disk encoders

1000÷50000 ppr

Body Ø 58 mm • Aluminium housing



[Encoder REV](#)



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