



RE40



RE40V



RE40Q

## INCREMENTAL ROTARY ENCODERS Series RE40

- *Incremental rotary encoders with or without zero pulse*
- *Pulses per revolution: 2 to 12500*
- *Several configurations available*
- *Metal housing*
- *IP65 protection degree*

### MECHANICAL versions

| RE40/RE41          | RE40Q/RE41Q        | RE40V/RE41V        | RE40M/RE41M            | RE40S/RE41S               |
|--------------------|--------------------|--------------------|------------------------|---------------------------|
| Body Ø: 40 mm      | Body Ø: 40 mm      | Body Ø: 40 mm      | Body Ø: 40 mm          | Body Ø: 40 mm             |
| Round flange       | Square flange, mm  | Round flange,      | Hollow shaft flange    | Hollow shaft flange       |
| Shaft Ø: 6 or 4 mm | 43x43              | M18x1 screw fixing | Hole Ø 6 or 8 mm       | Hole Ø 6 or 8 mm          |
|                    | Shaft Ø: 6 or 4 mm | Shaft Ø: 6 or 4 mm | Anti-rotational fixing | Fixing by elastic support |

### Aluminium housing

Connections outlet:: cable gland in radial position – cable 1 m long

### MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

#### RE40/RE40V/RE40Q RE40M/RE40S

|                                        |                                          |
|----------------------------------------|------------------------------------------|
| • Materials: case<br>shaft             | Aluminium<br>AISI 303 steel              |
| • Weight                               | 100 g ca                                 |
| • Shaft/Hollow shaft<br>diameter       | 4 or 6 mm      Hollow shaft<br>6 or 8 mm |
| • Revolutions/minute                   | 6000                                     |
| • Starting torque                      | ≤0.2 Ncm                                 |
| • Inertia                              | ≤5 g cm <sup>2</sup>                     |
| • Max load                             | 10N axial / 20N radial                   |
| • Vibration resistance<br>(10÷2000 Hz) | 10 G                                     |
| • Shock resistance (11 ms)             | 30 G                                     |
| • Protection degree                    | IP65                                     |
| • Operating temperature                | -10 ÷ 70°C                               |
| • Stacking temperature                 | -20 ÷ 80°C                               |

### ELECTRICAL & OPERATING SPECIFICATIONS

|                     |                                                                                       |
|---------------------|---------------------------------------------------------------------------------------|
| • Pulse code        | Incremental                                                                           |
| • Pulses/revolution | 2 ÷ 12500                                                                             |
| • Zero pulse        | One pulse/revolution                                                                  |
| • Output signals    | Two square waves 90° ±15° out of<br>phase – Zero pulse width: 90°±15°                 |
| • Electronic output | push-pull,<br>5Vdc or 5/30Vdc line driver<br>signals protected against short circuits |
| • Supply voltage    | 5/30Vdc 8/24Vdc* 5Vdc*<br>protection against polarity reversal                        |
| • Absorption        | 40 mA max                                                                             |
| • Max. frequency    | 100/150 KHz                                                                           |
| • Connections       | Radial cable gland – cable 1 m long                                                   |

\*PPR: 8, 16, 32, 40 -64, 125, 128, 512, 1024, 2048.



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RE40M



RE40S



RE40

## CONNECTIONS

### Push/Pull SIGNALS

Out 1  
Out 2  
Out Z (RE41)  
+ Vdc  
0V  
Earth

### Cable Colours

White  
Green  
Yellow  
Red  
Blue  
Shield

### Line Driver Output SIGNALS

Out 1  
Out 2  
Out Z (RE41)  
+ Vdc  
0V  
Out 1  
Out 2  
Out Z (RE41)  
Earth

### Cable Colours

White  
Green  
Grey  
Red  
Blue  
Brown  
Yellow  
Pink  
Shield

## ORDERING INFORMATION

RE40

1000

530

R

6

PP

### ELECTRONIC OUTPUT

PP Push-pull  
LD Line-driver

### SHAFT/HOLLOW SHAFT DIAMETER

6 mm shaft/hollow shaft  
4 mm shaft  
8 mm hollow shaft

### CONNECTIONS POSITION

R Radial

### SUPPLY VOLTAGE

5/30 Vdc  
8/24 Vdc\*  
5 Vdc\*

\*PPR: 8, 16, 32, 40 -64, 125, 128, 512, 1024, 2048

### TYPE

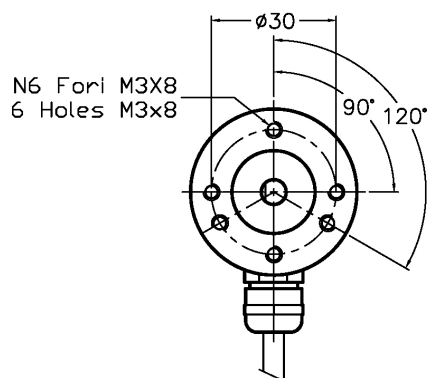
RE40/RE41  
RE40V/RE41V  
RE40Q/RE41Q  
RE40M/RE41M  
RE40S/RE41S

### PPR NO.

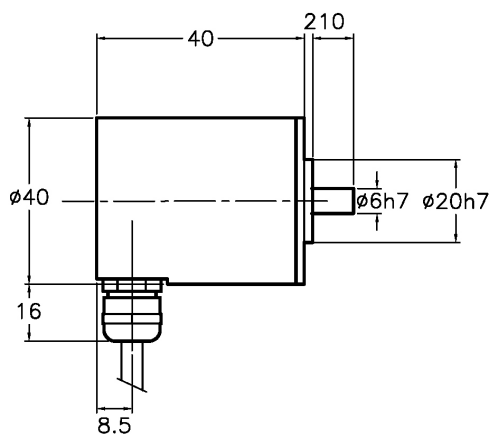
2 ÷ 12500

ELAP reserves the right to update the product without notice

## DIMENSIONS

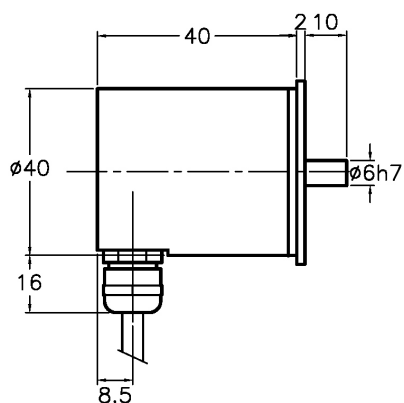
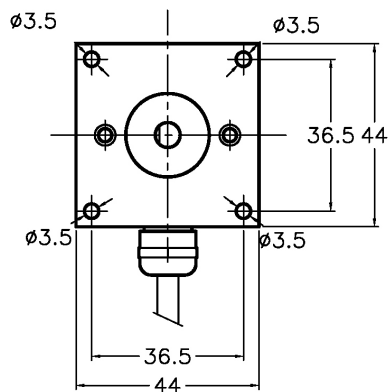


RE40

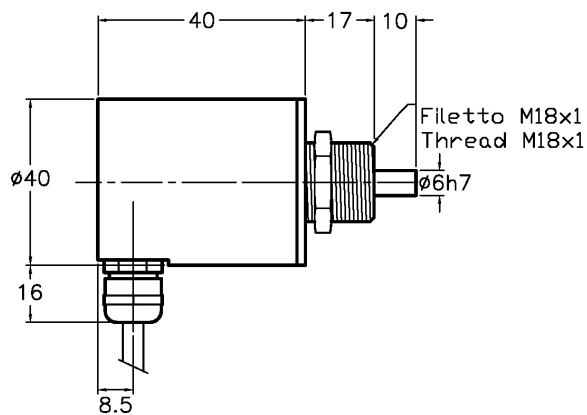
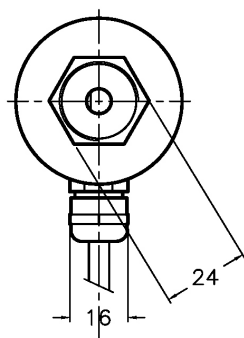


Rif. M2109

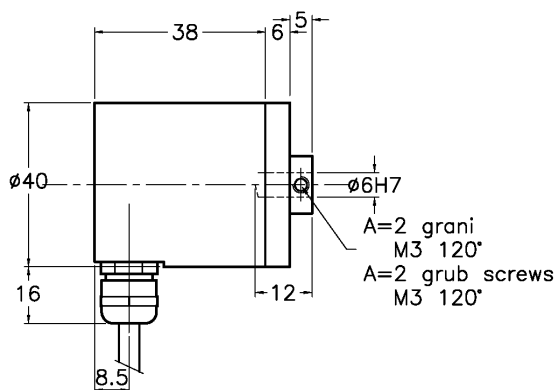
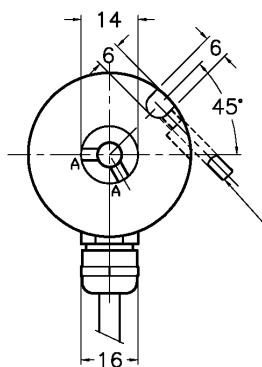
RE40Q



RE40V

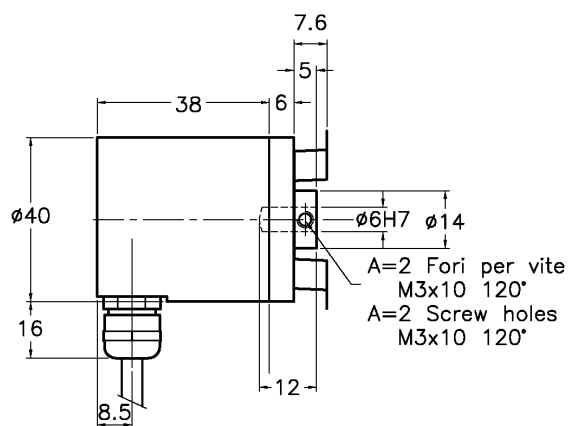
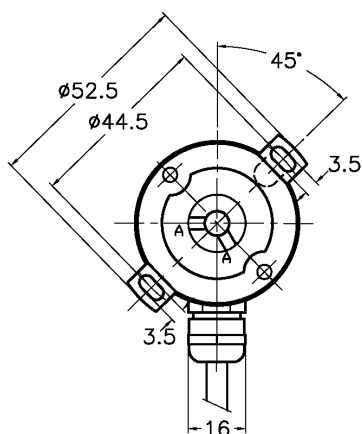


RE40M



Grano M3x5 a esagono 1.5  
1.5 hexagonal grub screw M3x5

RE40S



# RE40 • RE41

## INCREMENTAL ROTARY ENCODERS

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### REFERENCES

Further info available at:

<https://www.elap.it/incremental-encoders/encoder-re40/>



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