



## Incremental encoder with hollow shaft

RO-0360-I24/N11

phase-out article



### Product characteristics

|                     |                         |
|---------------------|-------------------------|
| Resolution          | 360 resolution          |
| Shaft design        | continuous hollow shaft |
| Shaft diameter [mm] | 10                      |

### Application

|                    |             |
|--------------------|-------------|
| Function principle | incremental |
|--------------------|-------------|

### Electrical data

|                          |            |
|--------------------------|------------|
| Operating voltage [V]    | 10...30 DC |
| Current consumption [mA] | < 150      |

### Outputs

|                                   |        |
|-----------------------------------|--------|
| Electrical design                 | HTL    |
| Max. current load per output [mA] | 50     |
| Switching frequency [kHz]         | 300    |
| Type of short-circuit protection  | < 60 s |
| Phase difference A and B [°]      | 90     |

### Measuring/setting range

|            |                |
|------------|----------------|
| Resolution | 360 resolution |
|------------|----------------|

### Operating conditions

|                                |                                                     |
|--------------------------------|-----------------------------------------------------|
| Ambient temperature [°C]       | -30...85                                            |
| Note on ambient temperature    | for firmly laid cable: -30 °C                       |
| Max. relative air humidity [%] | 98                                                  |
| Protection                     | IP 64; (on the housing: IP 66; on the shaft: IP 64) |



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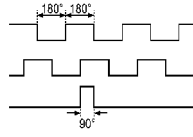
| Tests / approvals    |         |       |
|----------------------|---------|-------|
| Shock resistance     |         | 200 g |
| Vibration resistance |         | 30 g  |
| MTTF                 | [years] | 190   |

| Mechanical data                     |      |                                               |
|-------------------------------------|------|-----------------------------------------------|
| Weight                              | [g]  | 451.6                                         |
| Dimensions                          | [mm] | Ø 58 / L = 54.4                               |
| Materials                           |      | aluminium                                     |
| Max. revolution, mechanical [U/min] |      | 12000; (when using both shaft clamping rings) |
| Max. starting torque                | [Nm] | 2.5                                           |
| Reference temperature torque        | [°C] | 20                                            |
| Shaft design                        |      | continuous hollow shaft                       |
| Shaft diameter                      | [mm] | 10                                            |
| Shaft fit                           |      | H7                                            |
| Shaft material                      |      | stainless steel                               |
| Installation depth of shaft         | [mm] | 10                                            |
| Max. axial shaft misalignment       | [mm] | 1; (max. radial shaft alignment: ± 0,05 mm)   |

| Electrical connection                             |  |  |
|---------------------------------------------------|--|--|
| Cable: 1 m, PUR; radial, can also be used axially |  |  |

|             |                  |
|-------------|------------------|
| brown       | A                |
| green       | A inverted       |
| grey        | B                |
| pink        | B inverted       |
| red         | 0 index          |
| black       | 0 index inverted |
| blue        | L+ sensor        |
| white       | 0V sensor        |
| brown/green | L+ (Up)          |
| white/green | 0V (Un)          |
| screen      | housing          |
| lilac       | failure inverted |

## Diagrams and graphs

|               |                                                                                                                                                    |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Pulse diagram |  <p>direction of rotation clockwise (looking at the shaft)</p> |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------|