

# ROTAPULS

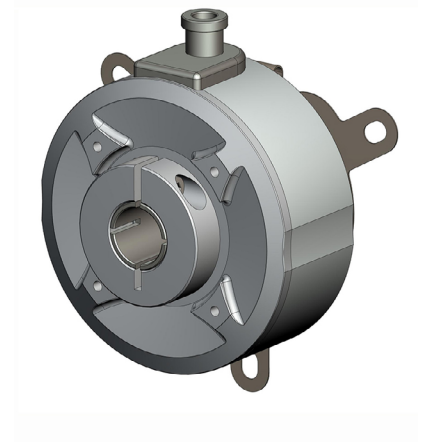
Incremental encoder

Series

C50



- Small size hollow shaft encoder
- Ideally suited for motor feedback applications
- Extended standard operating temperature from -40°C to 100°C
- Universal output circuit TTL/HTL 5-30Vdc
- Preferential versions with fast delivery



C50

## ENVIRONMENTAL SPECIFICATIONS

|                              |  |
|------------------------------|--|
| Shock:                       | 100 g, 6 ms  |
| Vibrations:                  | 10 g, 5-2000 Hz  |
| Protection:                  | IP65   |
| Operating temperature range: | -40°C + 100°C (-40°F + 212°F)  |
| Storage temperature range:   | -40°C + 100°C (-40°F + 212°F)<br>(98% R.H. without condensation)         |
| Option:                      | • IP54 Protection<br>(low inertia bearings, 10000 rpm for short periods) |

## MECHANICAL SPECIFICATIONS

|                                |                           |
|--------------------------------|---------------------------|
| Dimensions:                    | see drawing               |
| Hollow shaft diameter:         | ∅ 6, 6.35, 8, 9.52, 10 mm |
| Shaft loading (axial, radial): | 20 N max.                 |
| Shaft rotational speed:        | 6000 rpm max.             |
| Starting torque (at 20°C):     | ≤ 0,25 Ncm (typical)      |
| Bearings life:                 | 10 <sup>9</sup> rev. min. |
| Electrical connections:        | cable output 1 m (3.3 ft) |
| Weight:                        | ~ 100 g (3,5 oz)          |
| Options:                       | • additional cable        |

## ELECTRICAL SPECIFICATIONS

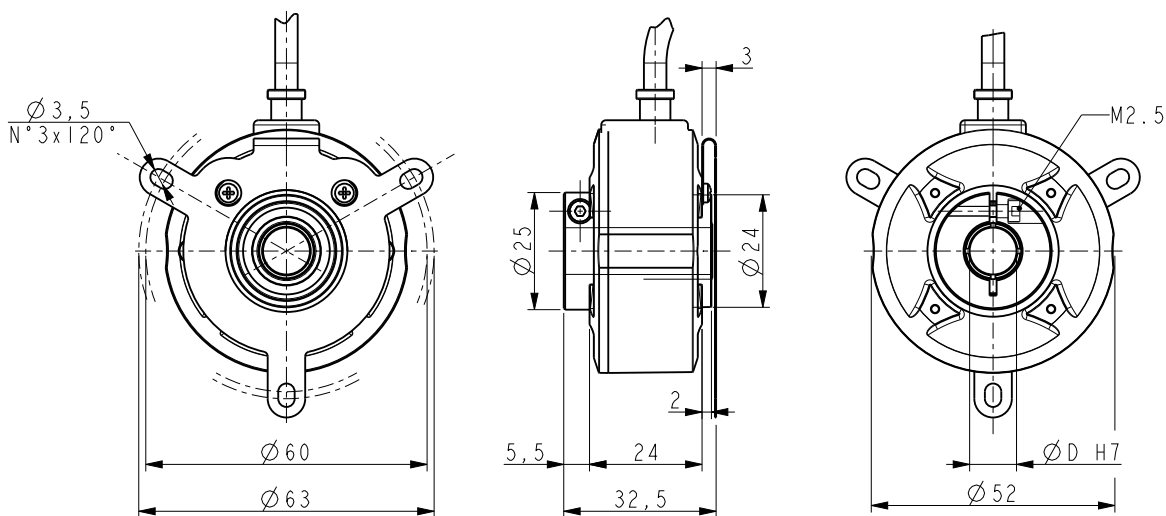
|                                |   |
|--------------------------------|---|
| Resolution (PPR):              | 100-180-200-250-256-300-360-400-500-512-600<br>1000-1024-2000-2048-4096 |
| Counting frequency:            | 100 kHz max.  |
| Output circuits:               | Push-Pull, Line Driver, Universal circuit                               |
| Power supply:                  | +5V±5%, +10V +30V, +5V +30V   |
| Consumption:                   | 70 mA (typical)   |
| Output current (each channel): | 40 mA max.  |
| Protection:                    | against inversion of polarity and short-circuit<br>(except L circuit)   |
| EMC:                           | electro-magnetic immunity, according to: EN 61000-4-2<br>EN 61000-4-4   |
| Optoelectronic life:           | 100.000 hrs min.  |

## MATERIALS

|           |   |
|-----------|---|
| Flange:   | aluminium die cast                          |
| Housing:  | aluminium die cast                          |
| Bearings: | ABEC 5                                      |
| Shaft:    | stainless steel, non-magnetic - UNI EN 4305 |

## PREFERENTIAL MODELS

|                    |                          |
|--------------------|--------------------------|
| C50-H-100ZCU410    | 100 PPR, HTL/TTL output  |
| C50-H-360ZCU410    | 360 PPR, HTL/TTL output  |
| C50-H-500ZCU410    | 500 PPR, HTL/TTL output  |
| C50-H-1000ZCU410L2 | 1000 PPR, HTL/TTL output |
| C50-H-1024ZCU410L2 | 1024 PPR, HTL/TTL output |



C50

Order code

|     |   |        |   |           |          |        |         |        |         |            |
|-----|---|--------|---|-----------|----------|--------|---------|--------|---------|------------|
| C50 | - | X<br>Ⓐ | - | XXXX<br>Ⓑ | XXX<br>Ⓒ | X<br>Ⓓ | XX<br>Ⓔ | X<br>Ⓕ | XX<br>Ⓖ | /Sxxx<br>Ⓗ |
|-----|---|--------|---|-----------|----------|--------|---------|--------|---------|------------|

|  |   |  |  |                         |
|--|---|--|--|-------------------------|
| <p>Ⓐ OUTPUT CIRCUITS</p> <p>Y = Push Pull<br/>L = Line Driver (RS422)<br/>H = PP/LD universal circuit</p> <p>Ⓑ RESOLUTION (PPR)</p> <p>See electrical specifications</p> | <p>Ⓒ OUTPUT SIGNALS</p> <p>BNF = AB<br/>BCU = AB, /AB<br/>ZNF = ABO<br/>ZCU = ABO, /ABO</p> <p>Ⓓ SUPPLY VOLTAGE</p> <p>1 = +5V±5% (L output circuit)<br/>2 = +10V÷ +30V (Y output circuit)<br/>4 = +5V÷ +30V (H output circuit)</p> | <p>Ⓔ SHAFT DIAMETER</p> <p>6 = 6 mm<br/>P6 = 6.35 mm - 1/4"<br/>8 = 8 mm<br/>P9 = 9.52 mm - 3/8"<br/>10 = 10 mm</p> <p>Ⓕ PROTECTION</p> <p>- = IP65 (standard)<br/>V = IP54 (low inertia bearings)</p> | <p>Ⓖ CABLE LENGTH</p> <p>- = cable output 1 m (standard)<br/>L2 = cable output 2 m<br/>Lx = cable output x m</p> | <p>Ⓗ CUSTOM VERSION</p> |
|--|---|--|--|-------------------------|