

# 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:                       | 250 g, 6 ms acc. to CEI EN 60068-2-27                                    |
| Vibrations:                  | 10 g, 5-2000 Hz acc. to CEI EN 60068-2-6                                 |
| 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):              | 6-10-12-25-50-100-180-200-250-256-300-360-400<br>500-512-600-1000-1024-1500-2000-2048-2500<br>4000-4096-5000-8192 |
| 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

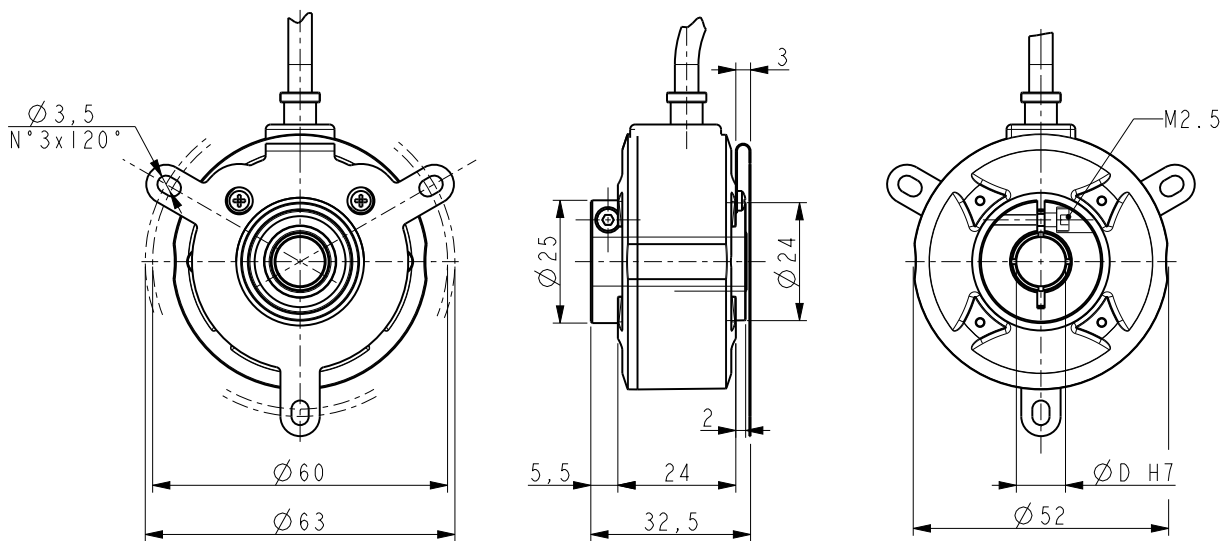
|           |   |
|-----------|---|
| Flange:   | aluminium die cast                          |
| Housing:  | aluminium die cast                          |
| Bearings: | ABEC 5                                      |
| Shaft:    | stainless steel, non-magnetic - UNI EN 4305 |

## PREFERENTIAL MODELS

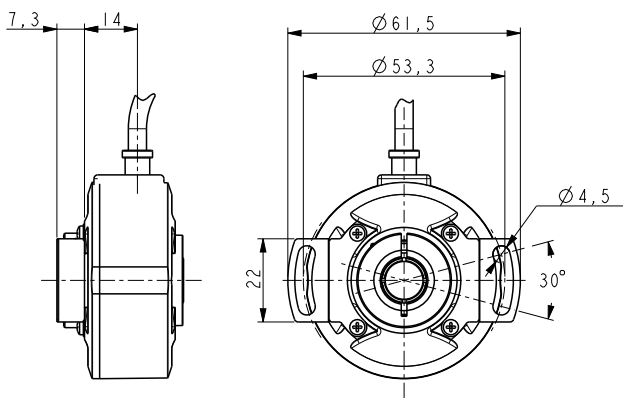
|                    |                          |
|--------------------|--------------------------|
| C50-H-100ZCU410    | 100 PPR, HTL/TTL output  |
| C50-H-360ZCU410    | 360 PPR, HTL/TTL output  |
| C50-H-500ZCU410    | 500 PPR, HTL/TTL output  |
| C50-H-1000ZCU410L2 | 1000 PPR, HTL/TTL output |
|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

## ACCESSORIES

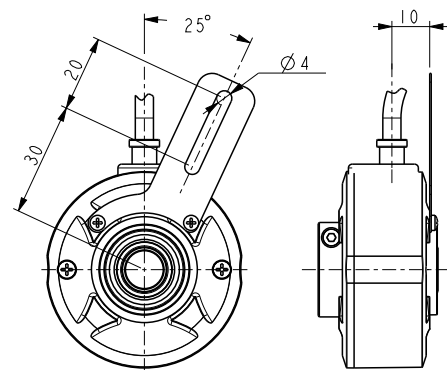
|                 |                                  |
|-----------------|----------------------------------|
| KIT C50:        | standard fixing plate and screws |
| KIT MOL2546:    | "B" fixing plates and screws     |
| KIT MOL2433:    | "D" fixing plate and screws      |
| KIT C50 SCREWS: | 50 screws for fixing plate       |



C50



Version B (2 x MOL2546)



Version D (1 x MOL2433)

### Order code

|     |   |     |   |      |     |     |     |     |     |     |       |
|-----|---|-----|---|------|-----|-----|-----|-----|-----|-----|-------|
| C50 | - | X   | - | XXXX | XXX | X   | XX  | X   | X   | XX  | /Sxxx |
|     |   | (a) |   | (b)  | (c) | (d) | (e) | (f) | (g) | (h) | (i)   |

#### (a) OUTPUT CIRCUITS

Y = Push Pull  
L = Line Driver (RS422)  
H = PP/LD universal circuit

#### (b) RESOLUTION (PPR)

See electrical specifications

#### (c) OUTPUT SIGNALS

BNF = AB  
BCU = AB, /AB  
ZNF = ABO  
ZCU = ABO, /ABO

#### (d) SUPPLY VOLTAGE

1 = +5V±5% (L output circuit)  
2 = +10V÷ +30V (Y output circuit)  
4 = +5V÷ +30V (H output circuit)

#### (e) SHAFT DIAMETER

6 = 6 mm  
P6 = 6.35 mm - 1/4"  
8 = 8 mm  
P9 = 9.52 mm - 3/8"  
10 = 10 mm

#### (f) PROTECTION

- = IP65 (standard)  
V = IP54 (low inertia bearings)

#### (g) FIXING PLATE

- = standard fixing plate  
A = no fixing plate  
B = Version B fixing plate  
D = Version D fixing plate

#### (h) CABLE LENGTH

- = cable output 1 m (standard)  
L2 = cable output 2 m  
Lx = cable output x m

#### (i) CUSTOM VERSION