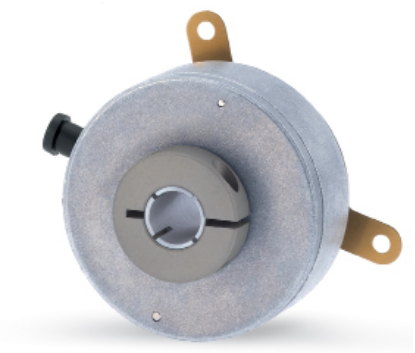
ROTAPULS
Incremental encoder

Series **C50**

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



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) (98% R.H. without condensation)
Option:	• IP54 Protection (low inertia bearings, 10000 rpm for short periods)

MECHANICAL SPECIFICATIONS	
Dimensions:	see drawing
Hollow shaft diameter:	Ø 6, 6.35, 8, 9.52, 10 mm
Solid shaft:	1:10 taper
Shaft loading (axial, radial):	20 N max.
Shaft rotational speed:	6000 rpm max.
Starting torque (at 20°C):	≤ 0,25 Ncm (typical)
Bearings life:	10^9 rev. min.
Electrical connections:	cable output 1 m (3.3 ft)
Weight:	~ 100 g (3,5 oz)
Options:	• additional cable • DSub 9 pin inline connector

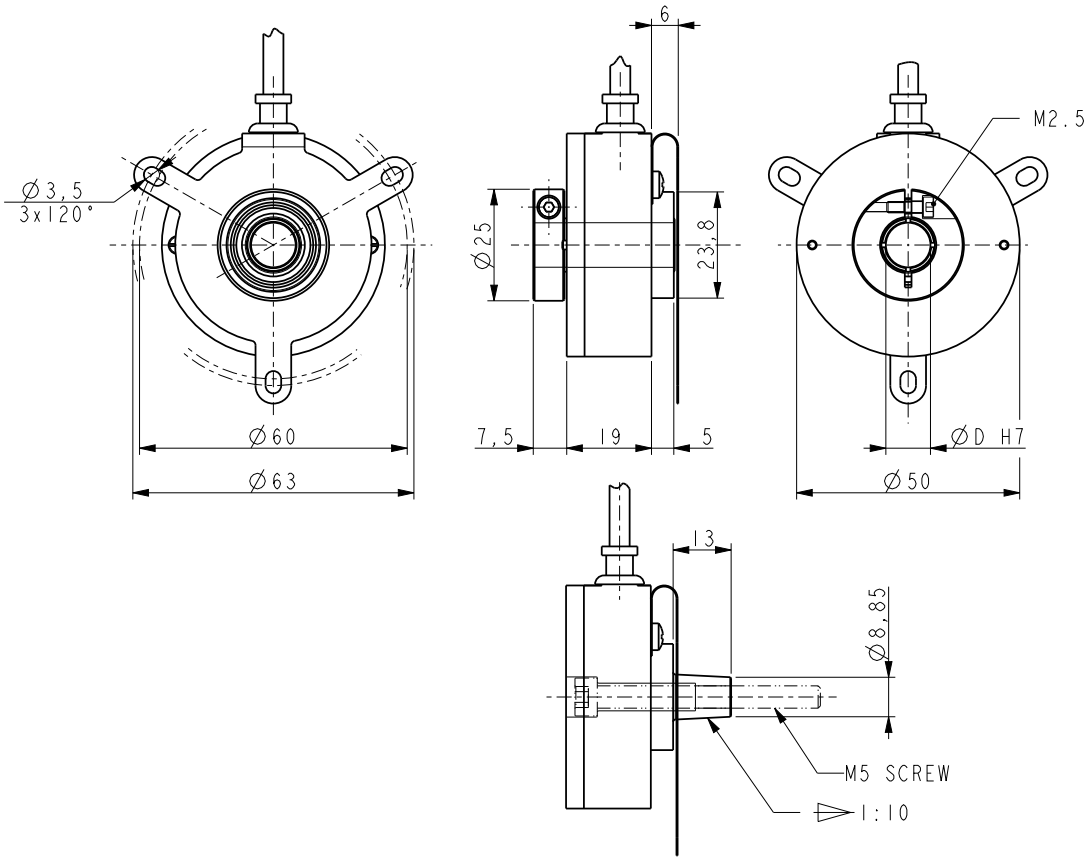
ELECTRICAL SPECIFICATIONS	
Resolution (PPR):	100-180-200-250-256-300-360-400-500-512-600 1000-1024-2000-2048-4096
Counting frequency:	100 kHz max.
Output circuits:	Push-Pull, Line Driver, Universal circuit
Power supply:	+5V±5%, +10V +30V,+5V +30V
Consumption:	70 mA (typical)
Output current (each channel):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

MATERIALS	
Flange:	zamac die cast
Housing:	zamac die cast
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic - UNI EN 4305
Light source:	GaAl diodes

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	
EDE9S:	9 pin DSub mating connector

Specifications subject to changes without prior notice



C50

Order code

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

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

ⓑ **RESOLUTION (PPR)**
See electrical specifications

ⓒ **OUTPUT SIGNALS**
BNF = AB
BCU = AB, /AB
ZNF = AB0
ZCU = AB0, /AB0

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

ⓔ **SHAFT DIAMETER**
6 = 6 mm
P6 = 6.35 mm - 1/4"
8 = 8 mm
P9 = 9.52 mm - 3/8"
10 = 10 mm
C10 = 1:10 taper

ⓖ **PROTECTION**
- = IP65 (standard)
V = IP54 (low inertia bearings)

ⓕ **CABLE LENGTH**
- = cable output 1 m (standard)
L2 = cable output 2 m
Lx = cable output x m
CLx = x m cable with DSub 9 pin inline plug

ⓗ **CUSTOM VERSION**