

- 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) (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
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

ELECTRICAL SPECIFICATIONS

Resolution (PPR):	180-200-250-256-300-360-400-500-512-600-1000 1024-2000-2048-4000-4096-8192
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 (except L circuit)
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4

MATERIALS

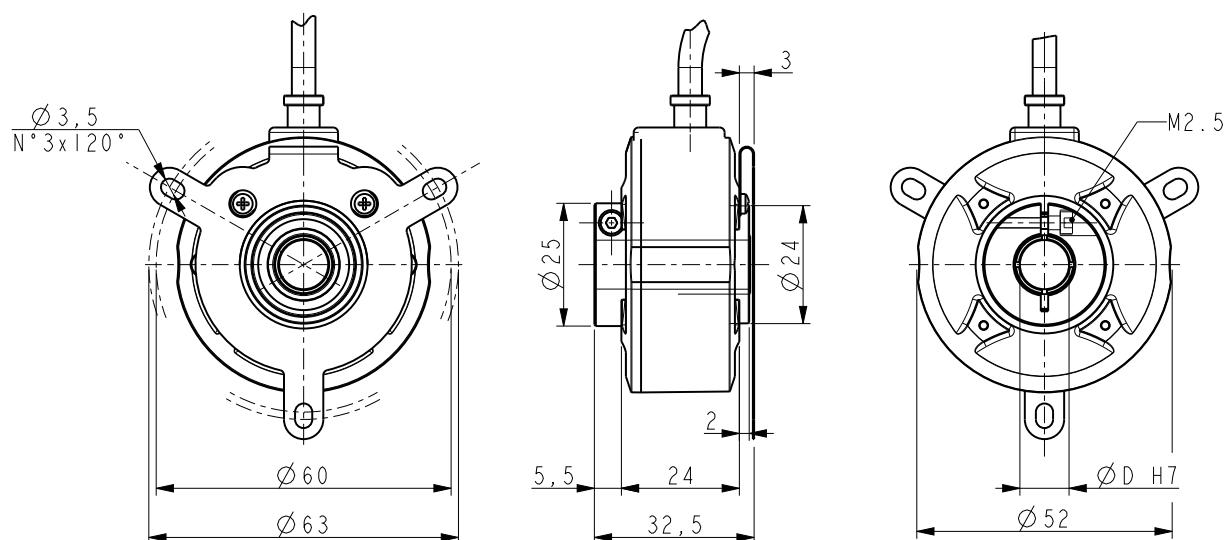
Flange:	zamak 15, UNI EN1774
Housing:	zamak 15, UNI EN1774
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic - UNI EN 4305

PREFERENTIAL MODELS

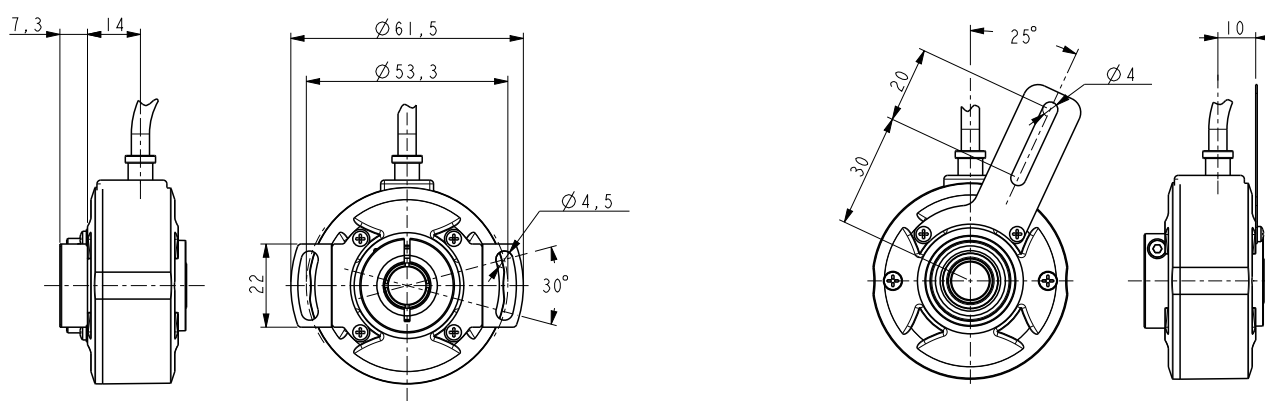
C50-H4-00360-ZCU-10-PK-E-RL010	360 PPR, HTL/TTL output
C50-H4-00500-ZCU-10-PK-E-RL010	500 PPR, HTL/TTL output
C50-H4-01000-ZCU-10-PK-E-RL020	1000 PPR, HTL/TTL output
C50-H4-01024-ZCU-10-PK-E-RL020	1024 PPR, HTL/TTL output

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

① OUTPUT CIRCUITS / POWER SUPPLY

Y2 = Push Pull, +10V ÷ +30V
 L1 = Line Driver (RS422), +5V ± 5%
 H4 = PP/LD universal circuit, +5V ÷ +30V
 L2 = Line Driver (RS422), +10V ÷ +30V

② RESOLUTION (PPR)

See electrical specifications

③ OUTPUT SIGNALS

BNF = AB
 BCU = AB, /AB
 ZNF = AB0
 ZCU = AB0, /AB0

④ SHAFT DIAMETER

Ø6 = 6 mm
 P6 = 6.35 mm - 1/4"
 Ø8 = 8 mm
 P9 = 9.52 mm - 3/8"
 10 = 10 mm

⑤ PROTECTION

P = IP65 (standard)
 V = IP54 (with low inertia bearings)

⑥ OPERATING TEMPERATURE

K = -40°C +100°C (-40°F +212°F)

⑦ FIXING PLATE

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

⑧ CONNECTION POSITION

R = radial

⑨ CABLE LENGTH

L010 = cable output 1 m (standard)
 L020 = cable output 2 m
 Lxx0 = cable output x m (max. 10 m)
 Cxx0 = cable output x m with DSub 9 pin inline plug (max. 10 m)

⑩ CUSTOM VERSION

Document release	Date	Description
1.6	12.09.2025	Resolution update (removed 1500 PPR)
1.5	18.07.2025	Resolution update (removed 10, 25, 50, 100, 5000 PPR)
1.4	23.05.2025	Resolution update (removed 6 and 2500 PPR)
1.3	2.11.2023	Order code update (Cable length Cxx0)
1.2	September 2023	Order code update
1.1	11.01.2022	Resolution update (removed 12 PPR)
1.0	02.02.2021	Materials update