

- 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):	300-360-500-512-600-1000-1024-2000-2048 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

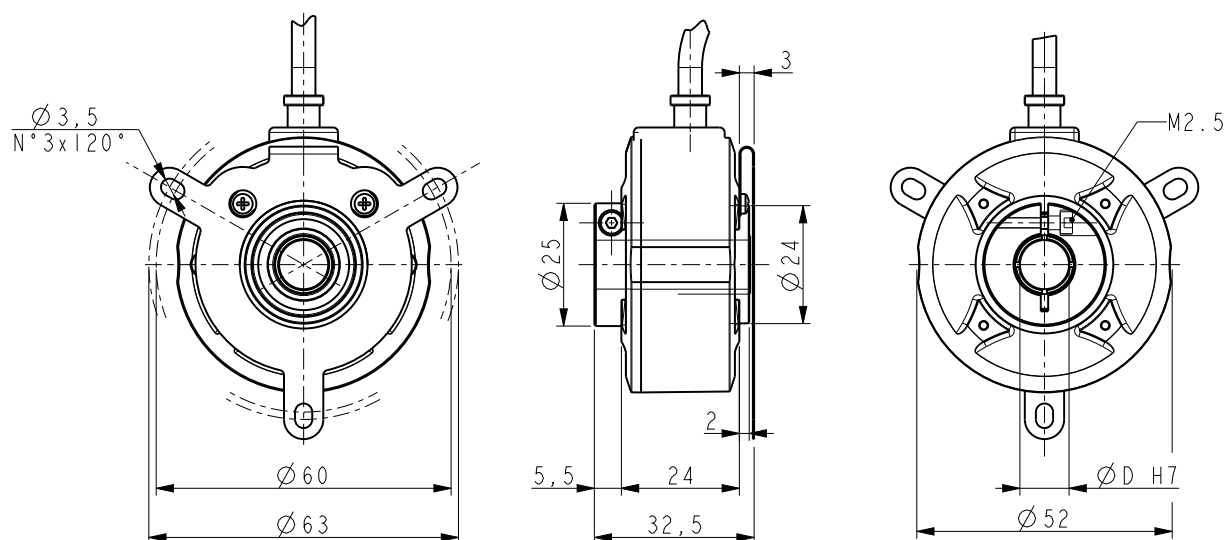
Flange:	zamak 15, UNI EN1774
Housing:	zamak 15, UNI EN1774
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic - UNI EN 4305

PREFERENTIAL MODELS

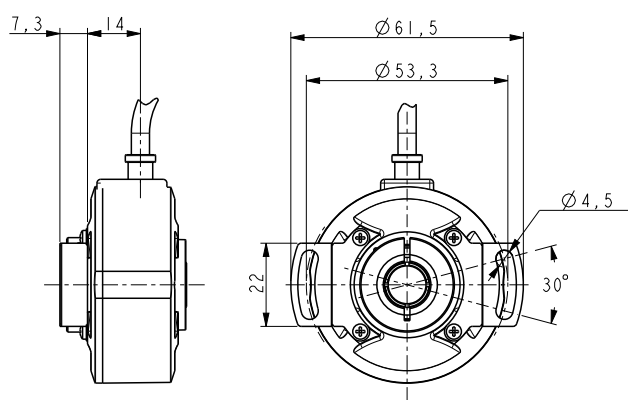
C50-H4-00360-ZCU-10-PK-E-RL010	360 PPR, HTL/TTL output
C50-H4-00500-ZCU-10-PK-E-RL010	500 PPR, HTL/TTL output
C50-H4-01000-ZCU-10-PK-E-RL020	1000 PPR, HTL/TTL output
C50-H4-01024-ZCU-10-PK-E-RL020	1024 PPR, HTL/TTL output

ACCESSORIES

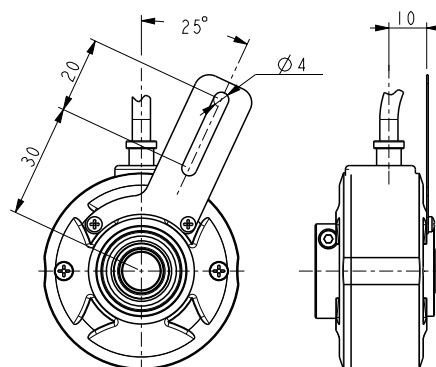
KIT C50:	standard fixing plate and screws
KIT MOL2546:	"B" fixing plates and screws
KIT MOL2433:	"D" fixing plate and screws
KIT C50 SCREWS:	50 screws for fixing plate



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

06 = 6 mm
 P6 = 6.35 mm - 1/4"
 08 = 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
1.7	5.03.2026	Resolution update (removed 180, 200, 250, 256, 400 PPR)
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