

- Feedback encoder for big size motors
- Precise optical sensing
- Very flat design
- Through hollow shaft up to Ø 30 mm
- Robust die cast housing with IP65 protection



C80

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:	IP64
Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-40°C +100°C (-40°F +212°F) (98% R.H. without condensation)
Options:	<ul style="list-style-type: none"> • Operating temperature range: -40°C +100°C (-40°F +212°F) • IP65 Protection (3000 rpm max, torque 2 Ncm)

MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Hollow shaft diameter:	Ø 25, 30 mm
Reducing sleeves, BR2-xx from Ø 30 mm to:	Ø 15, 5/8" (15,875), 16, 17, 18, 19, 20 22, 23, 24, 1" (25,4), 28 mm
Shaft loading (axial and radial):	30 N max.
Shaft rotational speed:	6000 rpm max.
Starting torque at 20°C:	≤ 1,5 Ncm (typical)
Bearings life:	400 x 10 ⁶ rev. min. (10 ⁹ rev. min. with 20 N shaft loading max.)
Electrical connections:	M23 12 pin plug or cable output 1 m (3.3 ft)
Weight:	~ 300 g (10,6 oz)
Option:	• additional cable

ELECTRICAL SPECIFICATIONS

UB: Standard resolutions with unbreakable disk (PPR): (output circuits P, Y, L, H)	1000-1024-2000-2048-2500-4096
OL: Other optical sensing low resolutions (PPR): (output circuits P, Y, L, H)	100-200-360-500
Counting frequency:	300 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

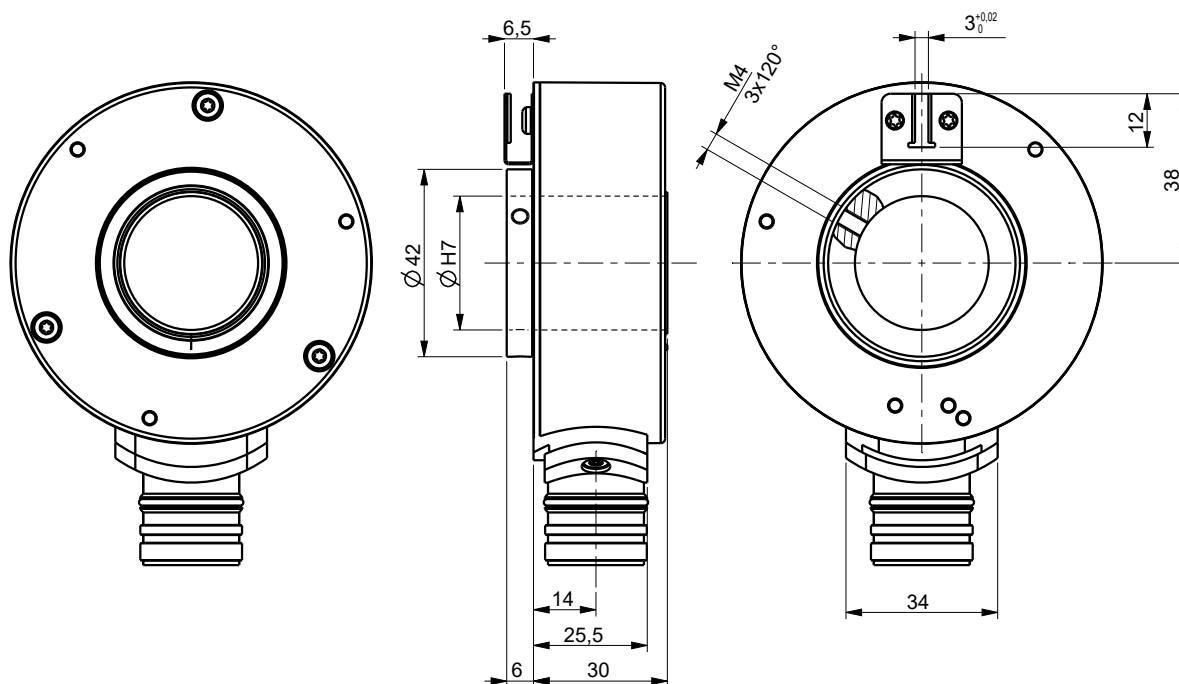
Flange:	die cast aluminium, UNI EN AC-46100
Housing:	die cast aluminium, UNI EN AC-46100
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic 1.4305 (UNI EN 10088-1)

PREFERENTIAL MODELS

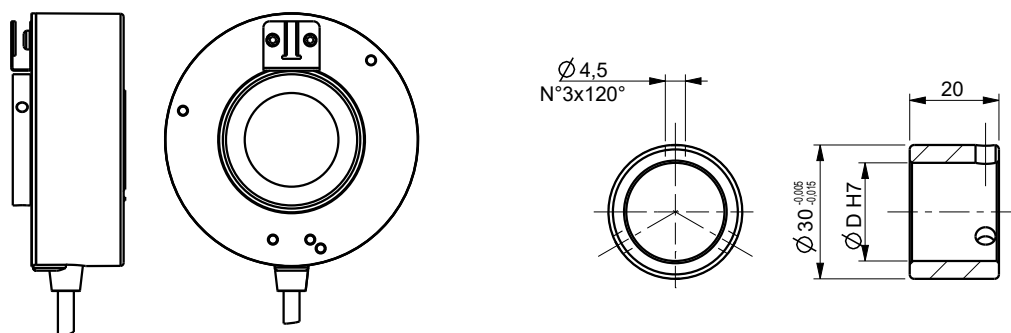
C80-H4-01024-ZCU-30-ST-RL020	1024 PPR, HTL/TTL output
C80-H4-02048-ZCU-30-ST-RL020	2048 PPR, HTL/TTL output

ACCESSORIES

EC-C12F-LK-18-L050:	Cordset 5m with M23 connector
EC-C12F-LK-18-L100:	Cordset 10m with M23 connector
EDE9S:	9 pin DSub mating connector
BR2-xx:	reducing sleeves
EPFL121:	12 pin M23 mating connector



C80



BR2-xx

Order code

C80	-	XX	-	XXXXX	-	XXX	-	XX	-	X	X	-	X	XXXX	/Sxxx
		(a)		(b)		(c)		(d)		(e)	(f)		(g)	(h)	(i)

<p>(a) 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</p> <p>(b) RESOLUTION (PPR) See electrical specifications</p>	<p>(c) OUTPUT SIGNALS / CONNECTIONS BNF = AB, cable output ZNF = AB0, cable output BCU = AB /AB, cable output ZCU = AB0 /AB0, cable output BCZ = AB /AB, M23 12 pin plug ZCZ = AB0 /AB0, M23 12 pin plug</p> <p>(d) SHAFT DIAMETER 25 = 25 mm 30 = 30 mm</p>	<p>(e) PROTECTION S = IP64 (standard) P = IP65</p> <p>(f) OPERATING TEMPERATURE T = -25°C +85°C (-13°F +185°F) standard K = -40°C +100°C (-40°F +212°F)</p> <p>(g) CONNECTION POSITION R = radial</p>	<p>(h) CABLE LENGTH L010 = cable output 1 m L020 = cable output 2 m L070 = cable output 7 m Lxx0 = cable output x m (max. 10 m) Cxxx = x m cable with DSub 9 pin inline plug</p> <p>(i) CUSTOM VERSION</p>
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Document release	Date	Description
1.5	15.12.2025	Resolution update (deleted 400 PPR from OL)
1.4	10.09.2025	Resolution subdivisions (UB and OL)
1.3	19.06.2025	Technical drawing (new fixing plate)
1.2	10.04.2024	Technical drawing
1.1	24.01.2024	Updated codes on preferential models and accessories
1.0	October 2023	New order code