ROTAPULS
Incremental encoder

Series **C80**

- 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:	• Operating temperature range: -40°C +100°C (-40°F +212°F) • IP65 Protection (3000 rpm max, torque 2 Ncm)

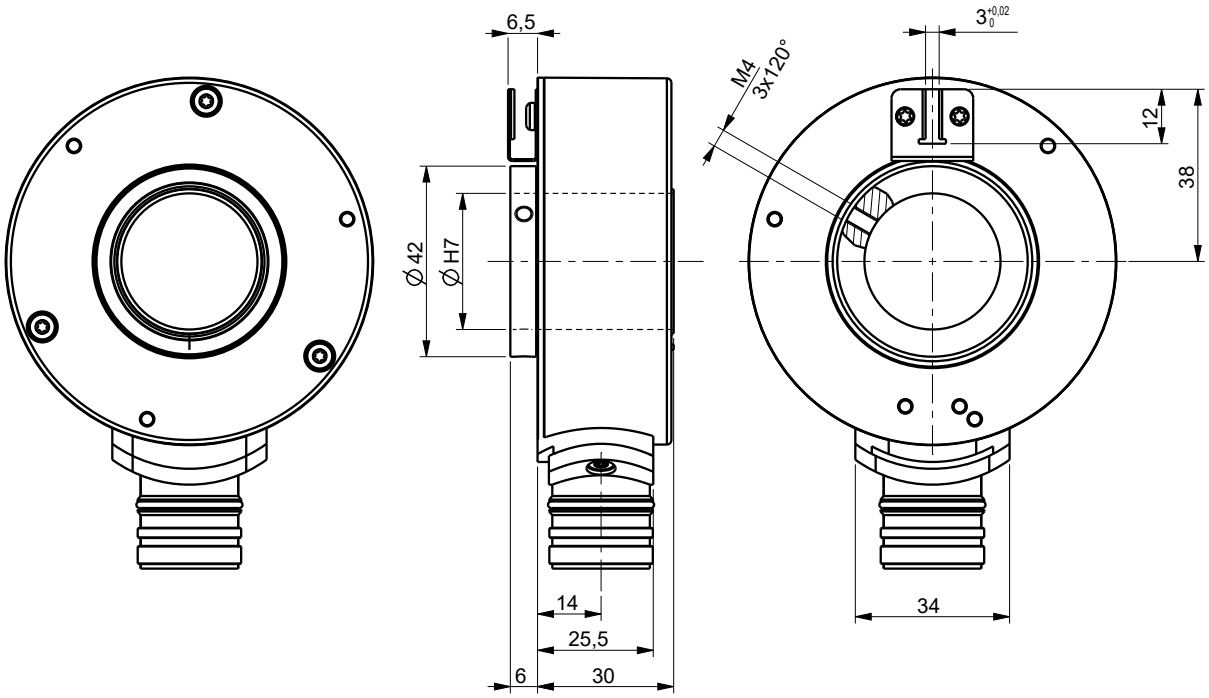
MECHANICAL SPECIFICATIONS	
Dimensions:	see drawing
Hollow shaft diameter:	Ø 25, 30 mm
Reducing sleeves, BR2-xx from Ø 30 mm to:	Ø 15, 5/8' (15,875), 16, 17, 18, 19, 20 22, 23, 24, 1" (25,4), 28 mm
Shaft loading (axial and radial):	30 N max.
Shaft rotational speed:	6000 rpm max.
Starting torque at 20°C:	≤ 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	
Resolution (PPR):	100-200-360-400-500-1000-1024-2000-2048-2500 4096
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

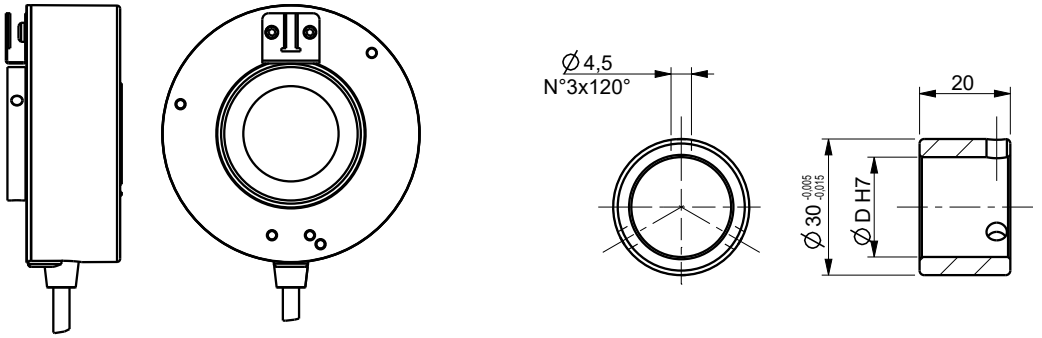
MATERIALS	
Flange:	die cast alluminium, UNI EN AC-46100
Housing:	die cast alluminium, UNI EN AC-46100
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic 1.4305 (UNI EN 10088-1)

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-I8-L050:	Cordset 5m with M23 connector
EC-C12F-LK-I8-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 ⓘ

ⓐ **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

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

ⓒ **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

ⓓ **SHAFT DIAMETER**
25 = 25 mm
30 = 30 mm

ⓔ **PROTECTION**
S = IP64 (standard)
P = IP65

ⓕ **OPERATING TEMPERATURE**
T = -25°C +85°C (-13°F +185°F) standard
K = -40°C +100°C (-40°F +212°F)

ⓖ **CONNECTION POSITION**
R = radial

ⓗ **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

ⓘ **CUSTOM VERSION**

Document release	Date	Description
1.1	24.01.2024	Updated codes on preferential models and accessories
1.0	October 2023	New order code