

# ROTAPULS

Incremental encoder

Series

C81



- Encoder for lift traction machines and big size motors
- Precise optical sensing
- Internal structure in stainless steel
- Hollow shaft from  $\varnothing$  30 to  $\varnothing$  44 mm



C81

## ENVIRONMENTAL SPECIFICATIONS

Shock:	100 g, 6 ms
Vibrations:	10 g, 5-2000 Hz
Protection:	IP54
Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-25°C +85°C (-13°F +185°F) (98% R.H. without condensation)
Options:	<ul style="list-style-type: none"><li>• Operating temperature range: -40°C +100°C (-40°F +212°F)</li><li>• IP65 Protection (2000 rpm max, torque 2 Ncm)</li></ul>

## MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Hollow shaft diameter:	$\varnothing$ 30, 34, 35, 38, 40, 42, 44 mm
Reducing sleeves, BR2-xx from $\varnothing$ 30 mm to:	$\varnothing$ 15, 5/8" (15,875), 16, 17, 18, 19, 20 22, 23, 24, 1" (25,4), 28 mm
Shaft loading (axial, radial):	100 N max.
Shaft rotational speed:	max. 2000 rpm@70°C (158°F)/IP54, 3000 rpm@100°C (212°F)/IP54 max. 1500 rpm@70°C (158°F)/IP65, 2000 rpm@100°C (212°F)/IP65
Starting torque (at 20°C):	4 ÷ 12 Ncm (typical)
Misalignment:	± 0,3 mm radial ± 0,2 mm axial
Bearing life:	400 x 10 <sup>6</sup> rev. min. (10 <sup>9</sup> rev. min. with 20 N shaft loading max.)
Electrical connections:	cabl e output 1 m (3.3 ft)
Weight:	~ 300 g (10,6 oz)
Option:	<ul style="list-style-type: none"><li>• additional cable</li></ul>

## ELECTRICAL SPECIFICATIONS

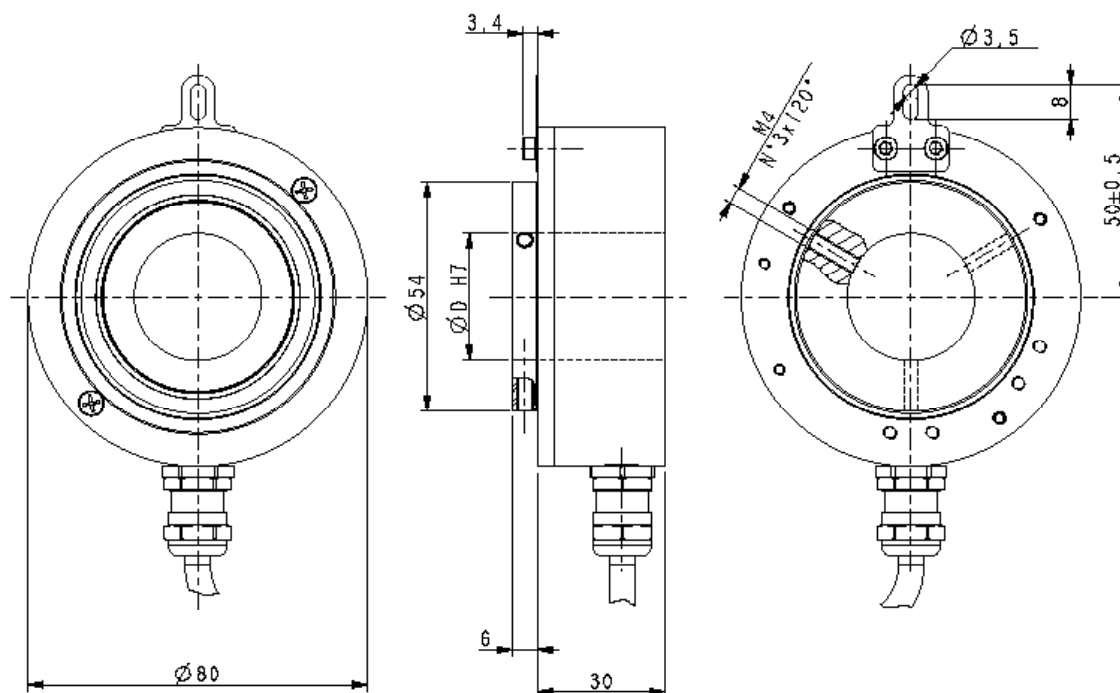
Resolution (PPR):	12-100-300-400-500-1024-2000-2048-2500-4096
Counting frequency:	100 kHz max.
Output circuits:	Push-Pull, Line Driver, Universal circuit
Power supply:	+5V ±5%, +10V +30V, +5V +30V
Consumption:	70 mA (typical)
Output current (each channel):	40 mA max.
Protection:	against inversion of 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.
Option:	<ul style="list-style-type: none"><li>• Output freq. 200 kHz max.</li></ul>

## MATERIALS

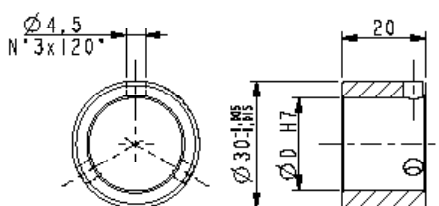
Flange:	steel, UNI EN 4305
Housing:	anticorodal, UNI EN AW-6082
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic, UNI EN 4305
Light source:	GaAl diodes

## ACCESSORIES

EDE9S:	9 pin DSub mating connector
BR2-xx:	reducing sleeves



C81



BR2-xx

Order code

C81	-	X	-	XXXXX	XXX	X	XX	X	X	X	XX	/Sxxx
		Ⓐ		Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	Ⓖ	Ⓗ	Ⓘ	⓵

Ⓐ OUTPUT CIRCUITS

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

Ⓑ RESOLUTION (PPR)

See electrical specifications

Ⓒ OUTPUT SIGNALS / CONNECTIONS

BNF = AB, cable output  
ZNF = ABO, cable output  
BCU = AB /AB, cable output  
ZCU = ABO /ABO, cable output

Ⓓ SUPPLY VOLTAGE

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

Ⓔ SHAFT DIAMETER

30 = 30 mm  
34 = 34 mm  
35 = 35 mm  
38 = 38 mm  
40 = 40 mm  
42 = 42 mm  
44 = 44 mm (43,97)

Ⓕ PROTECTION

- = IP54 (standard)  
P = IP65

Ⓖ COUNTING FREQUENCY

- = 100 kHz standard  
W = 200 kHz

Ⓗ OPERATING TEMPERATURE

- = -25°C +85°C (-13°F +185°F)  
K = -40°C +100°C (-40°F +212°F)

Ⓘ CABLE LENGTH

- = cable output 1 m  
L2 = cable output 2 m  
L7 = cable output 7 m  
Lx = cable output x m  
CLx = x m cable with DSub 9 pin inline plug

⓵ CUSTOM VERSION