

C81 Through Hollow Shaft Encoder Series



FEATURES

- **Standard Encoder for Elevator Motors**
- **Hollow Shaft up to $\varnothing 44\text{mm}$**
- **Connector or Cable Output**
- **12 to 4,096 Cycles Per Revolution**
- **Optional Index Channel**
- **Output Circuitry**
 - **Push-Pull**
 - **Line Driver**
 - **PP/LD Universal Circuit**
- **IP54 Standard**
- **Custom Options Available**
 - **Custom Cable Lengths**
 - **IP65 Protection**
 - **Termination Connectors**



DESCRIPTION

The ENC-C81 is a hollow shaft encoder used for heavy Industrial and Elevator feedback applications. These encoders are offered with resolutions ranging from 12 to 4096 CPR (model dependent). These encoders fit shaft diameters up to 44mm, but reducing sleeves are available for shaft diameters as small as 15mm. With various mounting options, three output circuitry options, and input voltage ranges, these encoders can be customized to fit your applications needs.

ORDERING INFORMATION

ENC-C81SN-L-4096-1-44-L1

Output Signals		Output Circuits		Resolution		Supply Voltage		Cable Length	
SN	Single-Ended without Index AB Cable Output	L	Line Driver	0012	1024	1	+5V \pm 5% Must be selected with Output Circuit option "L"	L1	1m Cable
SI	Single-Ended with Index ABI Cable Output	Y	Push Pull	0100	2000	2	+10V - +30V Must be selected with Output Circuit Option "Y"	L2	2m Cable
DN	Differential without Index AB, /A /B Cable Output	H	PP/LD Universal Circuit	0300	2048	4	+5V - +30V Must be selected with Output Circuit option "H"	Lx	x m Cable
DI	Differential with Index ABI, /A /B /I Cable Output			0400	2500				
				0500	4096				

*NOTE: Output Circuit option "L" must be matched with Supply Voltage option "1" (+5V \pm 5%)

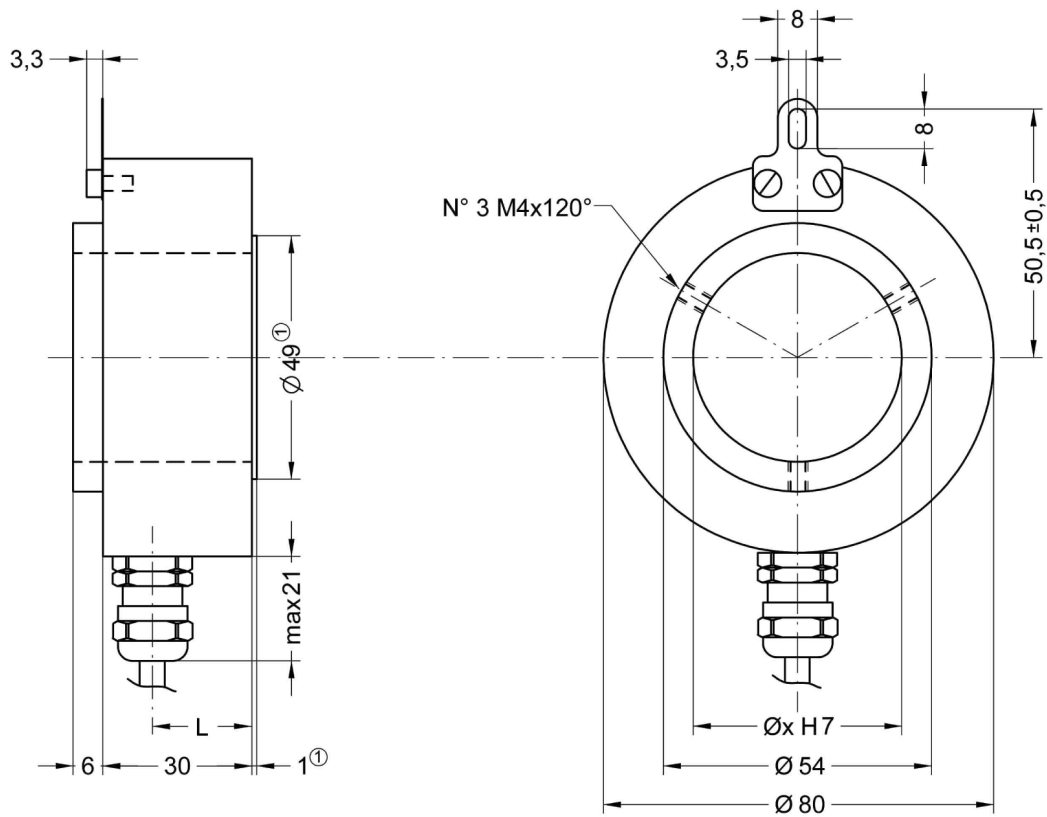
*NOTE: Output Circuit option "Y" must be matched with Supply Voltage option "2" (+10V - +30V)

*NOTE: Output Circuit option "H" must be matched with Supply Voltage option "4" (+5V - +30V)

*Note: For customization options, please contact our applications engineers.

Bore Diameter		
15 = 15mm	22 = 22mm	34 = 34mm
58 = 5/8"	23 = 23mm	35 = 35mm
16 = 16mm	24 = 24mm	38 = 38mm
17 = 17mm	10 = 1.00"	40 = 40mm
18 = 18mm	28 = 28mm	42 = 42mm
19 = 19mm	30 = 30mm	44 = 44mm
20 = 20mm		

DIMENSIONS



ENC C81

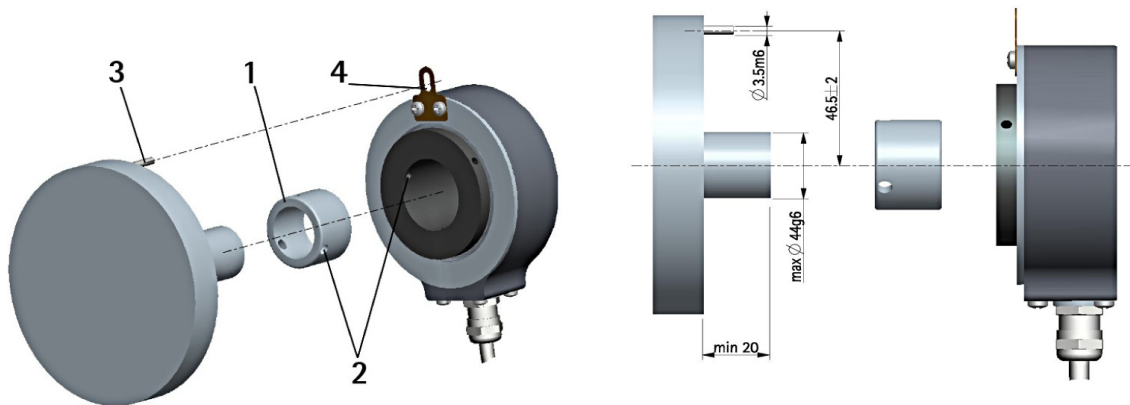
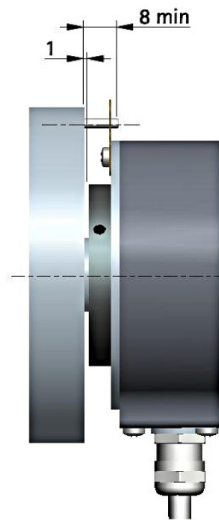
CONNECTOR INFORMATION

Differential Pinout	
Color	Description
Yellow	A
Blue	/A
Green	B
Orange	/B
White	I
Grey	/I
Red	+VDC
Black	OVDC
Shield	Shield

Single-Ended Pinout	
Color	Description
Brown	A
Blue	B
White	I
Red	+VDC
Black	OVDC
Shield	Shield

C81 Series

- Insert reducing sleeve 1 into the encoder shaft (fixing holes 2 have to match).
- Mount the encoder onto the motor shaft.
- Make sure the anti-rotation pin 3 is inserted properly into the fixing plate 4.
- Fix the encoder shaft by tightening the three grub screws 2 (3 x M4)



Mechanical Specifications

Housing:	Anti Corodal, UNI EN AW-6082
Shaft Rotational Speed:	2000 RPM Max @70°C/IP54, 3000 RPM Max @100°C/IP54 1500 RPM Max @70°C/IP65, 2000 RPM Max @100°C/IP65
Starting Torque at 20°C:	4-12 Ncm
Hollow Shaft Diameter:	30, 34, 35, 38, 40, 42, 44 mm
Shaft Loading (Axial, Radial):	100N Max
Moment of Inertia	100-450 gcm ²
Bearings Life:	10 ⁹ rev. min.
Weight:	0.6614-1.323lb

Electrical Specifications

Resolution (CPR) (Other CPR Upon Request):	12, 100, 300, 400, 500, 1024, 2000, 2048, 2500, 4096
Power Supply:	+5V±5%, +10V to +30V, +5V to +30V
Output Circuits:	Push-Pull, Line Driver, PP/LD
Output Current (Per Channel):	40 mA Max.
Output Frequency:	100 kHz Max.
Input Current:	70 mA Max.
Protection:	Against Inversion of Polarity (Except Line Driver Version) Outputs are Protected Against Short-Circuit (Except Line Driver Version)
Option:	Output Frequency 200 kHz Max

Environmental Specifications	Min	Max	Units
Operating Temperature	-25	85	°C
Storage Temperature	-25	85	°C
Protection Level		IP54	
Option	IP65 Protection (2000 RPM Max, Torque 2 Ncm) Operating Temperature Range: -40°C to 100°C		

Custom Options

Protection	IP65
Operating Temperature	-40°C to 100°C
Cable Lengths	Up to 100m
Output Frequency	Up to 200 kHz
EDE9S	9 Pin DSub Mating Connector