Series **ESC61 • EMC61**

- Compact encoder with ø20 mm hollow shaft
- Single turn up to 8192 cpr
- True multi turn (without battery backup)
- Cable and connector output
- Rugged design with IP67 protection and fixing clamp

ESC61 • EMC61

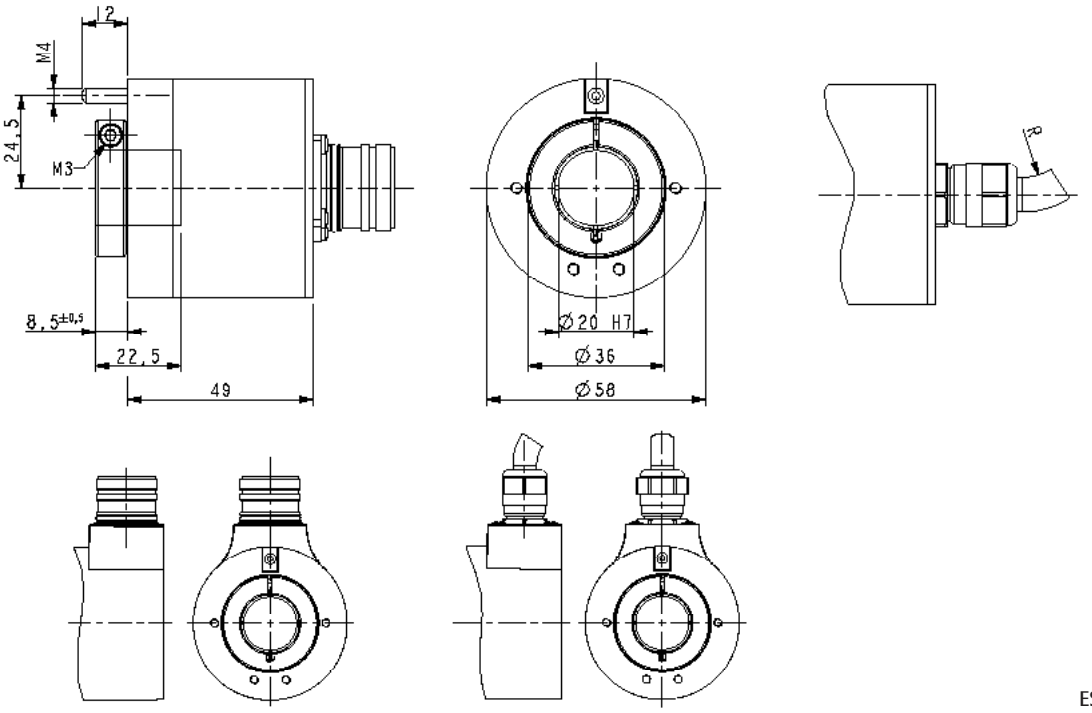
ENVIRONMENTAL SPECIFICATIONS	
Shock:	250 g, 6 ms acc. to CEI EN 60068-2-27
Vibrations:	10 g, 5-2000 Hz acc. to CEI EN 60068-2-6
Protection:	IP67, IP65 shaft side
Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-40°C +100°C (-40°F +212°F) (98% R.H. without condensation)
Option:	• Operating temperature range: -40°C +100°C (-40°F +212°F)

MECHANICAL SPECIFICATIONS	
Dimensions:	see drawing
Hollow shaft diameter:	Ø 20 mm
Shaft loading (axial, radial):	100 N max.
Shaft rotational speed:	12000 rpm, 9000 rpm continuous operation
Starting torque (at 20°C):	0,5 Ncm (typ.)
Bearings life:	400 x10^6 rev. min. (10^9 rev. min. with 20 N shaft loading max.)
Electrical connections:	M12, M23 plug or cable 2 m (6.56 ft)
Weight:	~ 250 g (8,8 oz)
Option:	• additional cable

ELECTRICAL SPECIFICATIONS	
Resolution:	single turn = 1024, 4096, 8192 cpr multi turn = 4096, 16384 turns
Accuracy:	± 0,5°
Output circuits:	SSI (RS422)
Output code:	Gray, Binary
Counting frequency:	10 kHz
Power supply:	+10Vdc +30Vdc
Power consumption:	1 W
Protection:	against inversion of polarity, short-circuit
EMC:	electro-magnetic immunity, according to EN 61000-4-2 EN 61000-4-4
Functions:	• counting direction (input) • Zero setting/Preset (input)

MATERIALS	
Flange:	anticorodal, UNI EN AW-6082
Housing:	anticorodal, UNI EN AW-6082 or zamac die cast
Bearings:	ABEC 5
Shaft:	stainless steel, non magnetic, UNI EN 4305

ACCESSORIES	
EPFL121H:	M23 12 pin connector
EM12F8:	M12 8 pin mating connector
EC-CR12F-S28-T12-L050:	cordset 5 m with M23 connector
EC-CR12F-S28-T12-L100:	cordset 10 m with M23 connector
EC-M12F8-LK-M8-L050:	cordset 5 m with M12 connector
EC-M12F8-LK-M8-L100:	cordset 10 m with M12 connector



ESC61 • EMC61

Order code - Single turn version

ESC61	XX-XX ⓐ	-	XXX ⓑ	-	XX ⓒ	-	X ⓓ	X ⓔ	-	X ⓕ	XXXX ⓖ	/Sxxx ⓗ

ⓐ RESOLUTION
(BIT SINGLETURN-BIT MULTITURN)
10-00 = 10 bit (1024 cpr)
12-00 = 12 bit (4096 cpr)
13-00 = 13 bit (8192 cpr)

ⓑ INTERFACE / POWER SUPPLY
BS2 = Binary, SSI tree format, +10Vdc +30Vdc
BA2 = Binary, SSI LSB aligned, +10Vdc +30Vdc
GS2 = Gray, SSI tree format, +10Vdc +30Vdc
GA2 = Gray, SSI LSB aligned, +10Vdc +30Vdc

ⓒ SHAFT DIAMETER
20 = 20 mm

ⓓ PROTECTION
P = IP67, IP65 shaft side

ⓔ OPERATING TEMP. RANGE
T = -25°C +85°C (-13°F +185°F)
K = -40°C +100°C (-40°F +212°F)

ⓕ CONNECTION POSITION
A = axial
R = radial

ⓖ CONNECTION TYPE & CABLE LENGTH
L020 = cable output 2 m (standard)
Lxx0 = cable out. x m (max. length 10m)
L100 = cable output 10 m
M2 = M23 plug
M8 = M12 8 pin plug

ⓗ CUSTOM VERSION

Order code - Multi turn version

EMC61	XX ⓐ	-	XX ⓑ	-	XXX ⓒ	-	XX ⓓ	-	X ⓔ	X ⓕ	-	X ⓖ	XXXX ⓗ	/Sxxx ⓘ

ⓐ BIT SINGLETURN
10 = 10 bit (1024 cpr)
12 = 12 bit (4096 cpr)
13 = 13 bit (8192 cpr)

ⓑ BIT MULTITURN
12 = 12 bit (4096 turns)

ⓒ INTERFACE / POWER SUPPLY
BS2 = Binary, SSI tree format, +10Vdc +30Vdc
BA2 = Binary, SSI LSB aligned, +10Vdc +30Vdc
GS2 = Gray, SSI tree format, +10Vdc +30Vdc
GA2 = Gray, SSI LSB aligned, +10Vdc +30Vdc

ⓓ SHAFT DIAMETER
20 = 20 mm

ⓔ PROTECTION
P = IP67, IP65 shaft side

ⓕ OPERATING TEMP. RANGE
T = -25°C +85°C (-13°F +185°F)
K = -40°C +100°C (-40°F +212°F)

ⓖ CONNECTION POSITION
A = axial
R = radial

ⓗ CONNECTION TYPE & CABLE LENGTH
L020 = cable output 2 m (standard)
Lxx0 = cable out. x m (max. length 10m)
L100 = cable output 10 m
M2 = M23 plug
M8 = M12 8 pin plug

ⓘ CUSTOM VERSION

Document release	Date	Description
1.0	2.2.2024	EMC61: deleted 14 bit from bit multiturn. New order code