

- Compact single and multi turn encoders
- CANopen and Modbus-RTU interfaces
- Robust magnetic (EBM58) or precise optical (EBO58) sensing
- High resolution up to 18 bits
- Point-to-point connection
- Cable, M23 & M12 connections



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:	IP65
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)

MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Shaft diameter:	Ø 6, 8, 9.52, 10, 12 mm
Hollow shaft diameter:	Ø 14, 15
Reducing sleeves BR1-xx from Ø 15 mm to:	Ø 6, 8, 9.52, 10, 11, 12 mm
Shaft loading (axial, radial):	40 N max.
Shaft rotational speed:	12000 rpm, 9000 rpm continuous operation
Starting torque (at 20°C):	< 1 Ncm (typical)
Electrical connections:	M12 plug or cable output 1 m (3,3 ft)
Weight:	~ 250 g (8,8 oz)
Option:	• additional cable

ELECTRICAL SPECIFICATIONS

Resolution:	single turn = 262144 cpr max. multi turn = 16384 turns max.
Power supply:	+10V +30V
Power consumption:	1 W
Output circuit:	CANopen, Modbus RTU RS485
Interface:	CANopen DS301, DS406, Class 2 (RS485) Modbus RTU (RS485)
Programmable parameters:	<ul style="list-style-type: none"> • Baudrate • Device address (Node ID) • Scaling function • Counting direction • Preset value • Two software limit switches (CANopen) • Transmission mode: Cyclic, Sync (CANopen) • Velocity output (CANopen) • Round loop function (CANopen)
Bus termination:	programmable by Dip-switches
Protection:	against inversion of polarity and short-circuit
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4
Functions:	<ul style="list-style-type: none"> • Counting direction • Zero setting/Preset • Resolution • Reset to default parameters • Firmware update (Modbus) • Saving parameters

MATERIALS

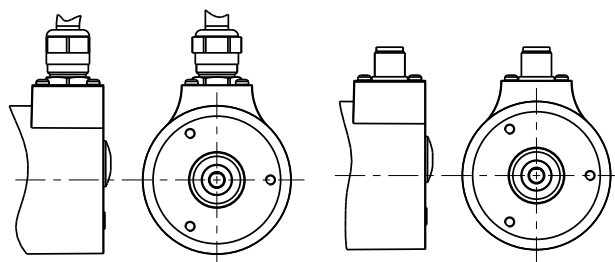
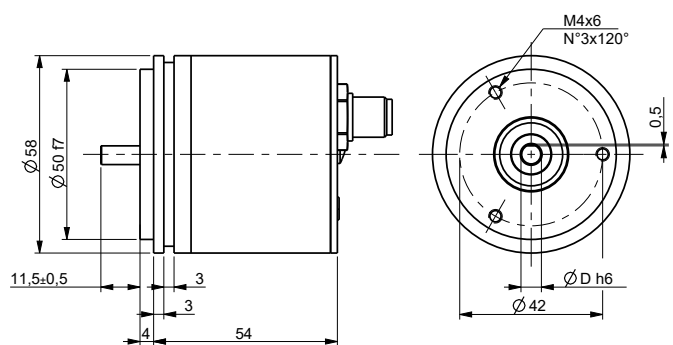
Housing:	anticorodal, UNI EN AW-6082
Flange:	anticorodal, UNI EN AW-6082 or zamac die cast
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic, UNI EN 4305



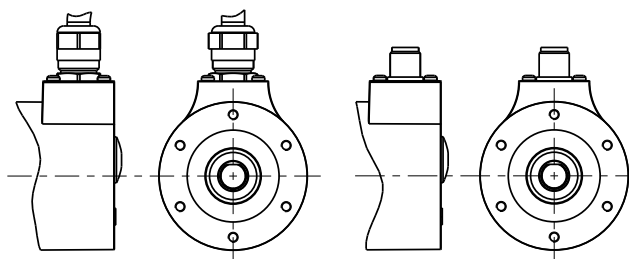
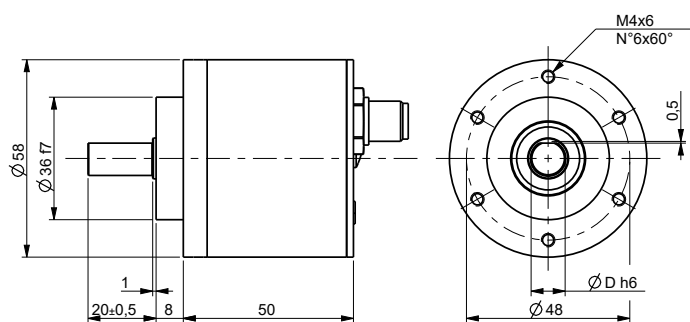
EBO58 • EBM58

ACCESSORIES

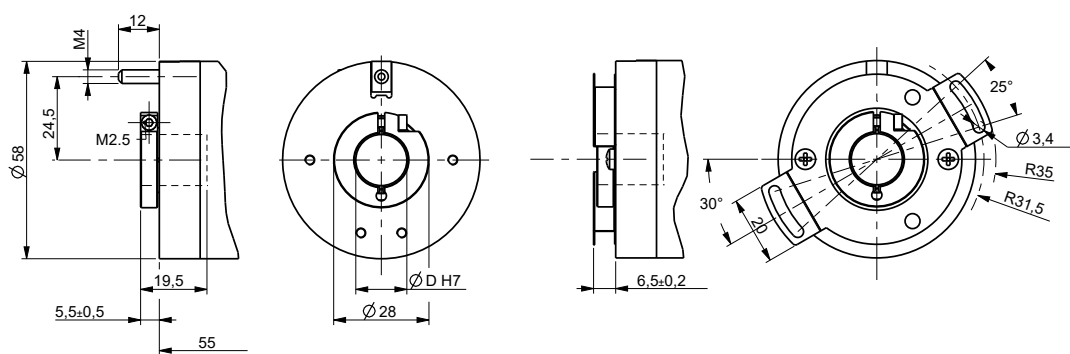
EM12FC:	M12 5 pin mating connector
PAN/PGF:	flexible couplings
BR1:	reducing sleeves
LKM-386:	fixing clamps



EBO58 • EBM58



EBO58S • EBM58S



EBO58C • EBM58C

EBO59C • EBM59C

Order code EBO, optical sensing

EBO58	XX-XX	-	XXX	-	XX	-	X	X	-	X	XXXX	/Sxxx
EBO58S	(a)		(b)		(c)		(d)	(e)		(f)	(g)	(h)
EBO58C												
EBO59C												

(a) RESOLUTION (BIT SINGLETURN-BIT MULTITURN) 13-00 = 13 bit (8192 cpr x 1 turn) 16-00 = 16 bit (65536 cpr x 1 turn) 18-00 = 18 bit (262144 cpr x 1 turn) 13-14 = 13 x 14 bit (8192 cpr x 16384 turns) 16-14 = 16 x 14 bit (65536 cpr x 16384 turns) 18-12 = 18 x 12 bit (262144 cpr x 4096 turns)	(b) INTERFACE / POWER SUPPLY CB2 = CANopen, +10V +30V MB2 = Modbus RTU, +10Vdc +30Vdc	(d) PROTECTION P = IP65	(f) CONNECTION POSITION A = axial R = radial
	(c) SHAFT DIAMETER 06 = 6 mm 08 = 8 mm P9 = 9.52 mm, 3/8" 10 = 10 mm 12 = 12 mm 14 = 14 mm (EBO58C, EBO59C) 15 = 15 mm (EBO58C, EBO59C)	(e) OPER. TEMP. RANGE T = -25°C +85°C (-13°F +185°F)	(g) CONNECTION TYPE & CABLE LENGTH L010 = cable output 1 m (std.) Lxx0 = cable out. x m (max. length 10m) L050 = cable output 5 m M5 = M12 5 pin plug
			(h) CUSTOM VERSION

Order code EBM, magnetic sensing

EBM58	XX-XX	-	XXX	-	XX	-	X	X	-	X	XXXX	/Sxxx
EBM58S	(a)		(b)		(c)		(d)	(e)		(f)	(g)	(h)
EBM58C												
EBM59C												

(a) RESOLUTION (BIT SINGLETURN-BIT MULTITURN) 12-00 = 12 bit (4096 cpr x 1 turn) 13-00 = 13 bit (8192 cpr x 1 turn) 16-00 = 16 bit (65536 cpr x 1 turn) 12-12 = 12 x 12 bit (4096 cpr x 4096 turns) 12-14 = 12 x 14 bit (4096 cpr x 16384 turns) 13-14 = 13 x 14 bit (8192 cpr x 16384 turns)	(b) INTERFACE / POWER SUPPLY CB2 = CANopen, +10V +30V MB2 = Modbus RTU, +10Vdc +30Vdc	(d) PROTECTION P = IP65	(f) CONNECTION POSITION A = axial R = radial
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			(h) CUSTOM VERSION

Document release	Date	Description
1.0	6.02.2025	First issue