

- Miniature optical multiturn encoder with SSI and BiSS interfaces
- Singleturn resolution up to 24 bits (16777216 cpr)
- Multiturn with Energy Harvesting technology
- Solid and hollow shaft version
- High degree of protection, IP67
- Cable output or M12 connections



EH036 • EHM36 • EH037C

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
Shaft diameter:	Ø 6 mm
Hollow shaft diameter:	Ø 6 mm
Shaft loading (axial, radial):	20 N max.
Shaft rotational speed:	12000 rpm
Starting torque (at 20°C):	0,1 Ncm
Electrical connections:	M12 inline plug or cable output 1 m (3.3 ft)
Weight:	~ 100 g (3,5 oz)
Option:	• additional cable

ELECTRICAL SPECIFICATIONS

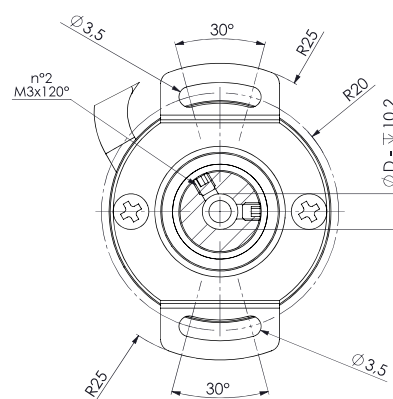
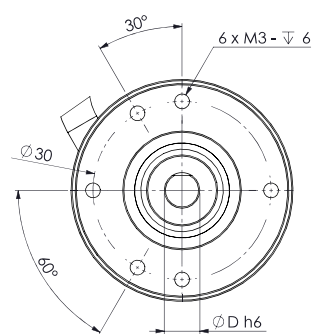
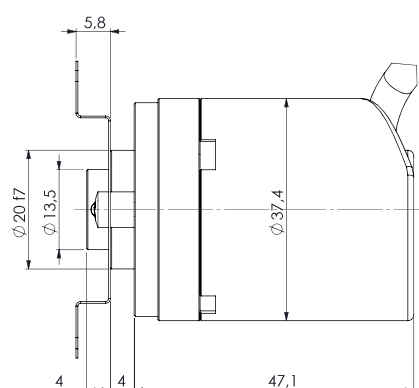
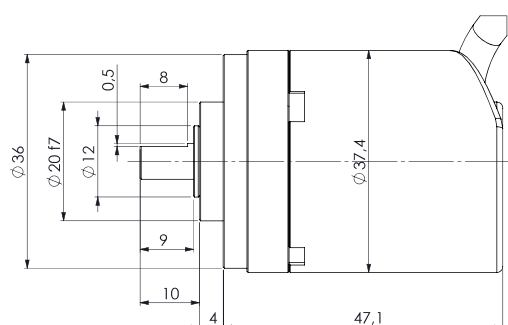
Resolution:	singleturn 16777216 cpr multiturn: 1048576 cpr x 4096 rev., 8192 cpr x 65536 turns
Accuracy:	EHM36 ± 0,09°; EH036 ± 0,01°
Output circuits:	SSI (RS422), clock rate < 4 MHz BiSS-C, clock rate < 10 MHz
Output code:	Gray, Binary
Counting frequency:	> 100 kHz
Power supply:	+5Vdc +30Vdc
Power consumption:	0,5 W
Protection:	against inversion of polarity and 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

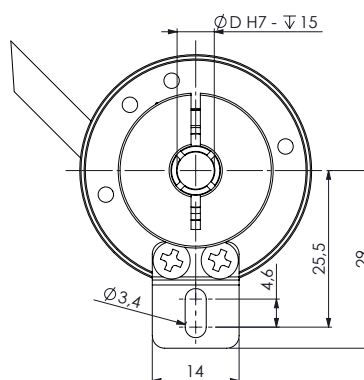
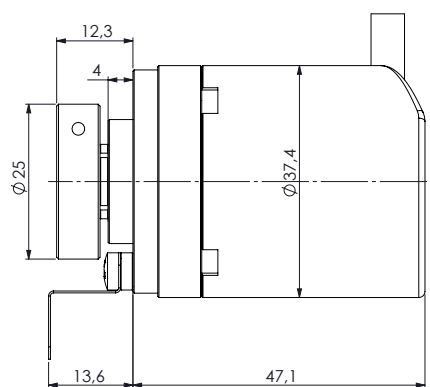
Flange:	anticorodal, UNI EN AW-6082
Housing:	anticorodal, UNI EN AW-6082
Bearings:	ABEC 5
Shaft:	stainless steel, non magnetic, UNI EN 4305

ACCESSORIES

PAN:	flexible couplings
E-M12F8:	M12 8 pin mating connector
EC-M12F8-LK-M8-L050:	M12 8 pin cordset, 5 m cable
EC-M12F8-LK-M8-L100:	M12 8 pin cordset, 10 m cable
EC-M12F8-LK-M8-L150:	M12 8 pin cordset, 15 m cable
EC-M12F8-LK-M8-L200:	M12 8 pin cordset, 20 m cable



EH036/EH036C • EHM36/EHM36C



EH037C

Order code - Optical version

EH036 EH036C EH037C	-	XX-XX (a)	-	XXX (b)	-	XX (c)	-	X (d)	X (e)	-	X (f)	XXXX (g)	/Sxxx (h)
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(a) RESOLUTION (BIT SINGLETURN-BIT MULTITURN)

24-00 = 16777216 counts/rev. (singleturn)

18-00 = 262144 counts/rev. (singleturn)

12-12 = 4096 counts/rev. x 4096 rev.

13-12 = 8192 counts/rev. x 4096 rev.

16-12 = 65536 counts/rev. x 4096 rev.

19-12 = 524288 counts/rev. x 4096 rev.

20-12 = 1048576 counts/rev. x 4096 rev.

(b) INTERFACE / POWER SUPPLY

BG4 = SSI, Binary MSB aligned, +5Vdc+30Vdc

GG4 = SSI, Gray MSB aligned, + 5Vdc+30Vdc

SC4 = BiSS-C, +5Vdc+30Vdc

(c) SHAFT DIAMETER

06 = 6 mm

P6 = 6.35 mm (only for EH03xC)

(d) PROTECTION

P = IP67, IP65 shaft side

(e) OPERATING TEMPERATURE RANGE

T = -25°C +85°C (-13°F +185°F) standard

K = -40°C +100°C (-40°F +212°F)

(f) CONNECTION POSITION

R = radial

(g) CONNECTION TYPE & CABLE LENGTH

L010 = cable output 1 m (standard)

Lxx0 = cable output x m (max. length 10 m)

L100 = cable output 10 m

M005 = 0,5 m cable + M12 8 pin inline plug

M020 = 2 m cable + M12 8 pin inline plug

(h) CUSTOM VERSION

Order code - Magnetic version

EHM36 EHM36C	-	XX-XX (a)	-	XXX (b)	-	XX (c)	-	X (d)	X (e)	-	X (f)	XXXX (g)	/Sxxx (h)
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(a) RESOLUTION (BIT SINGLETURN-BIT MULTITURN)

18-00 = 262144 counts/rev. (singleturn)

13-00 = 8192 counts/rev. (singleturn)

10-15 = 1024 counts/rev. x 32768 rev.

12-13 = 4096 counts/rev. x 8192 rev.

13-16 = 8192 counts/rev. x 65536 rev.

(b) INTERFACE / POWER SUPPLY

BG4 = SSI, Binary MSB aligned, +5Vdc+30Vdc

GG4 = SSI, Gray MSB aligned, + 5Vdc+30Vdc

SC4 = BiSS-C, +5Vdc+30Vdc

(c) SHAFT DIAMETER

06 = 6 mm

(d) PROTECTION

P = IP67, IP65 shaft side

(e) OPERATING TEMPERATURE RANGE

T = -25°C +85°C (-13°F +185°F) standard

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L010 = cable output 1 m (standard)

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M005 = 0,5 m cable + M12 8 pin inline plug

M020 = 2 m cable + M12 8 pin inline plug

(h) CUSTOM VERSION

Document release	Date	Description
2.1	12.12.2025	Introduction of the new series EH037C
2.0	02.09.2025	Resolution update (deleted 20-16 from EH036)
1.9	28.08.2025	Resolution update and shaft diameter (EH036-EH036C)
1.8	6.05.2025	Resolution update (EH036-EH036C)
1.7	13.02.2025	Drawing update
1.6	15.10.2024	Accessories update
1.5	16.09.2024	EHM36-EHM36C resolution update
1.4	30.08.2024	Electrical specifications update
1.3	22.07.2024	Order code - Connection position update
1.2	3.07.2024	Product photos update
1.1	20.06.2024	Drawing update
1.0	July 2023	First issue