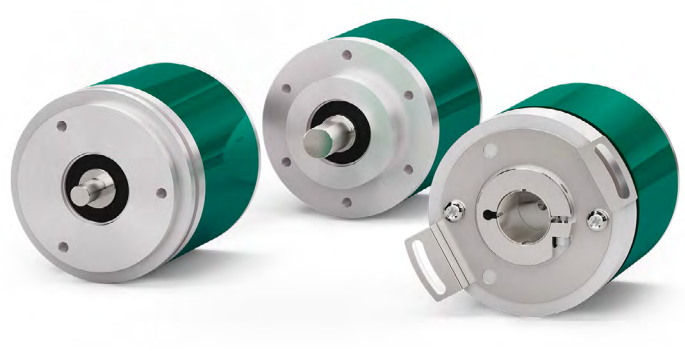
ROTACOD
Absolute multiturn encoders

Series **R. EHO58 • R. EHM58**

- Replacement version of:

ES58, ES58S, ESC58, ESC59 → EHM58
EM58, EM58S, EMC58, EMC59 → EHM58
HS58, HS58S, HSC58, HSC59 → EHO58
HM58, HM58S, HMC58, HMC59 → EHO58



EHO58 • EHM58

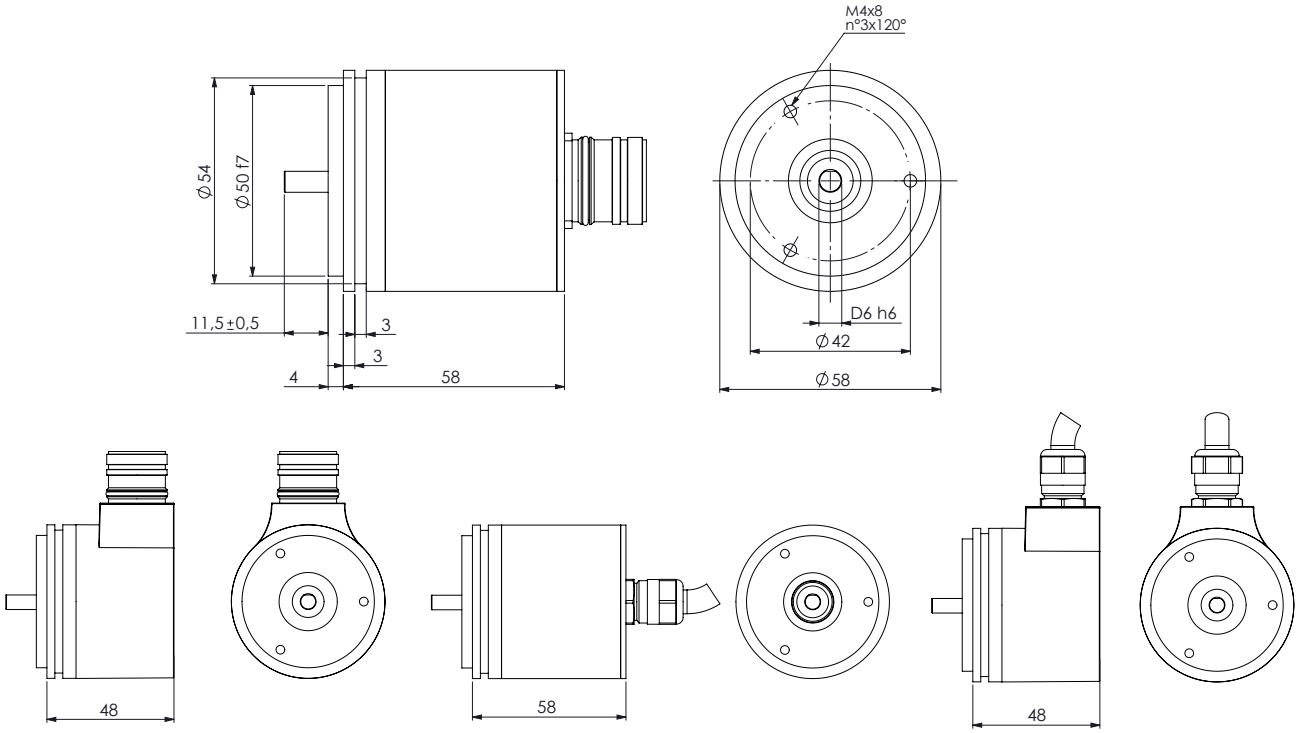
ENVIRONMENTAL SPECIFICATIONS	
Shock:	250 g, 6 ms acc. to CEI EN 60068-2-27
Vibrations:	10 g, 5-2000 Hz acc. to CEI EN 60068-2-6
Protection:	IP67, IP65 shaft side
Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-40°C +100°C (-40°F +212°F) (98% R.H.without condensation)
Option:	• Operating temperature range: -40°C +100°C (-40°F +212°F) (only for R. EHM58 series)

MECHANICAL SPECIFICATIONS	
Dimensions:	see drawing
Shaft diameter:	Ø 6, 8, 9.52, 10, 12 mm
Hollow shaft diameter:	Ø 14, 15 mm
Shaft loading (axial, radial):	20 N max.
Shaft rotational speed:	12000 rpm
Starting torque (at 20°C):	0,1 Ncm
Electrical connections:	MIL 7, MIL 10, M12, M23 plug or cable output 1 m (3.3 ft)
Weight:	~ 100 g (3,5 oz)
Option:	• additional cable

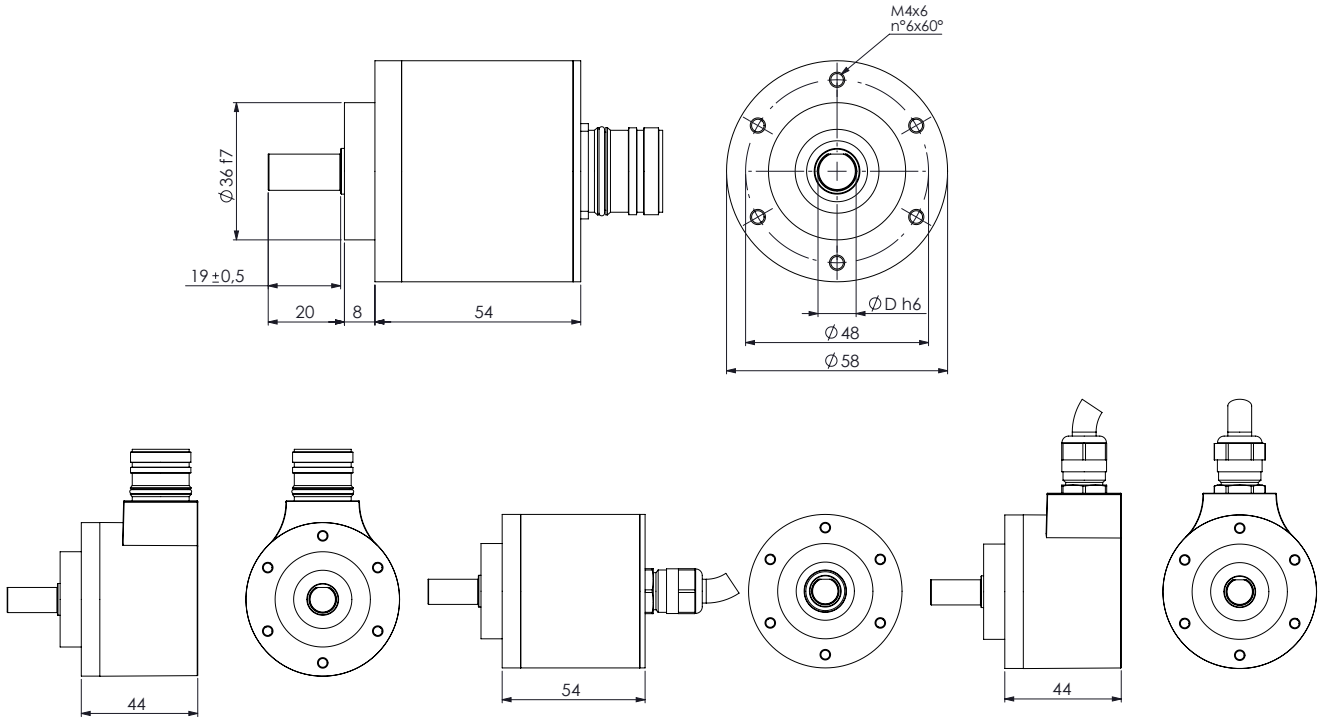
ELECTRICAL SPECIFICATIONS	
Resolution:	singleturn up to 20 bit (1048576 cpr) multiturn up to 14 bit (16384 turns) *others on request*
Accuracy:	EHM58 ± 0,09°; EHO58 ± 0,01°
Output circuits:	SSI (RS422), clock rate < 4 MHz - Data refresh rate 8 µec. BiSS-C, clock rate < 10 MHz - Costant processing time (t_{busy} = 8 µec.) AB Push-Pull/Line Driver 2048 PPR
Output code:	Gray, Binary
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 or zamac die cast
Bearings:	ABEC 5
Shaft:	stainless steel, non magnetic, UNI EN 4305

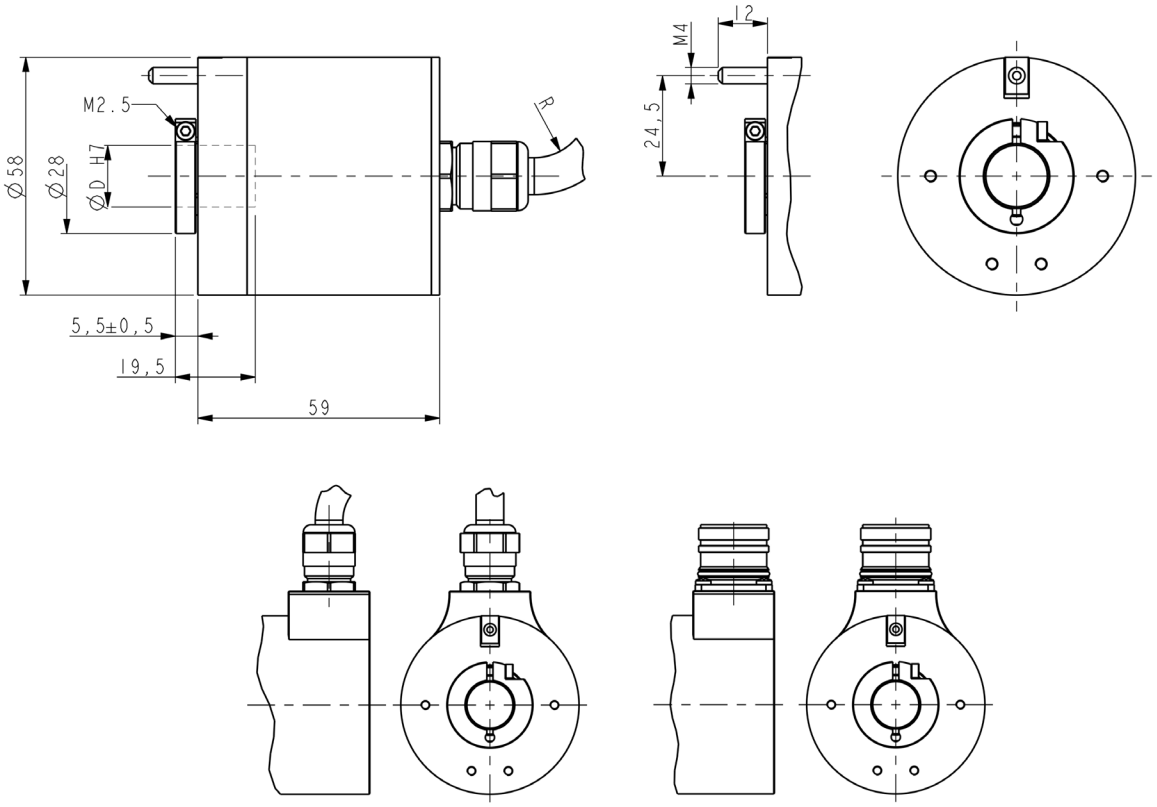
ACCESSORIES	
PAN/PGF:	flexible couplings
BR1:	reducing sleeves
LKM-386:	fixing clamps
KIT xx60:	fixing plate (ESC60/EMC60 compatible)
E-M12F8:	M12 8 pin mating connector
EC-M12F8-LK-M8-L050:	M12 8 pin cordset, 5 m cable
EC-M12F8-LK-M8-L100:	M12 8 pin cordset, 10 m cable
EC-M12F8-LK-M8-L150:	M12 8 pin cordset, 15 m cable
EC-M12F8-LK-M8-L200:	M12 8 pin cordset, 20 m cable
E-M12F12:	M12 12 pin mating connector
EC-M12F12-LK-T12-L050:	M12 12 pin cordset, 5 m cable
EC-M12F12-LK-T12-L100:	M12 12 pin cordset, 10 m cable
EC-M12F12-LK-T12-L200:	M12 12 pin cordset, 20 m cable
EPFL121H:	M23 12 pin mating connector
EC-CR12F-S28-T12-L100:	M23 12 pin cordset, 10 m cable
EC-CR12F-S28-T12-L200:	M23 12 pin cordset, 20 m cable



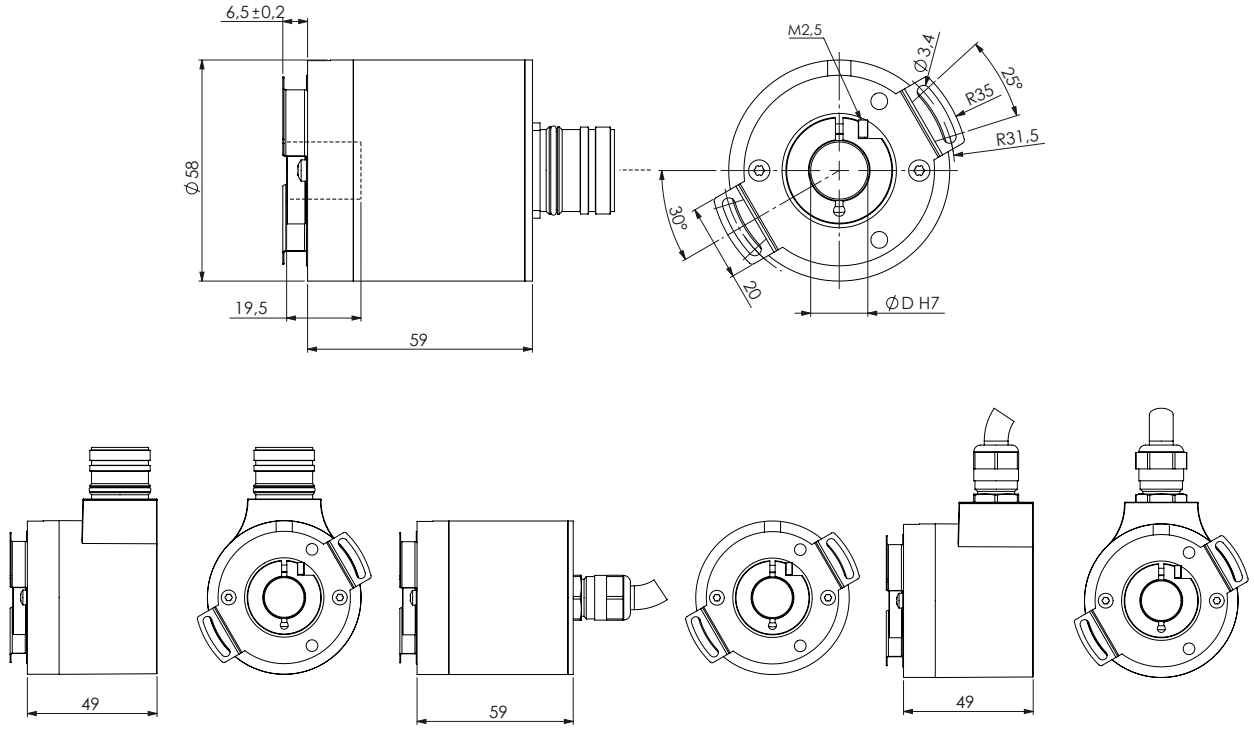
R.EHM58 • R.EHO58



R.EHM58S • R.EHO58S



R.EHM58C • R.EHO58C



R.EHM59C • R.EHO59C

Order code - SSI output

R.	EHM58 EHM58S EHM58C EHM59C	XX ⓐ	-	XX ⓑ	-	XXX ⓒ	-	XX ⓓ	-	X ⓔ	X ⓕ	X ⓖ	-	X ⓗ	XXXX ⓘ	/Sxxx ⓙ

ⓐ **RESOLUTION**
04 ... 07
08 = 8 bit (256 cpr)
09 = 9 bit (512 cpr)
10 = 10 bit (1024 cpr)
11 = 11 bit (2048 cpr)
12 = 12 bit (4096 cpr)
13 = 13 bit (8192 cpr)

ⓑ **REVOLUTIONS**
00 = 1 turn (singleturn)
04 = 16 turns
08 = 256 turns
12 = 4096 turns
other rev. on request

ⓒ **OUTPUT**
BS4 = Binary, SSI tree format, +5+30Vdc
BA4 = Binary, SSI LSB aligned, + 5+30Vdc
GS4 = Gray, SSI tree format, + 5+30Vdc
GA4 = Gray, SSI LSB aligned, + 5 +30Vdc

ⓓ **SHAFT DIAMETER**
06 = 6 mm
08 = 8 mm
P9 = 9.52mm / 3/8"
10 = 10 mm
12 = 12 mm
14 = 14 mm (R.EHM58C, R.EHM59C)
15 = 15 mm (R.EHM58C, R.EHM59C)

ⓔ **PARITY BIT**
B = Parity bit (option)
- = no parity bit

ⓕ **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

ⓘ **CONNECTIONS**
L010 = cable output 1 m (standard)
Lxx0 = cable output x m
D002 = 0,2 m cable + MIL 7 pin inline plug
P002 = 0,2 m cable + MIL 10 pin inline plug
M2 = M23 12 pin plug
M8 = M12 8 pin plug

ⓙ **CUSTOM VERSION**

Order code

R.	EHO58 EHO58S EHO58C EHO59C	-	XX-XX ⓐ	-	XXX ⓑ	-	XX ⓒ	-	X ⓓ	X ⓔ	-	X ⓕ	XXXX ⓖ	/Sxxx ⓗ

ⓐ **RESOLUTION**
(BIT SINGLETURN-BIT MULTITURN)
13-00 = 13 bit (8192 cpr)
16-00 = 16 bit (65536 cpr)
18-00 = 18 bit (262144 cpr)
19-00 = 19 bit (524288 cpr)
20-00 = 20 bit (1048576 cpr)
13-12 = 13 x 12 bit (8192 cpr x 4096 turns)
16-14 = 16 x 14 bit (65536 cpr x 16384 turns)

ⓑ **INTERFACE / POWER SUPPLY**
GV4 = SSI, LSB aligned, Gray code + 512 PPR sin/cos, +5V +30V
BV4 = SSI, LSB aligned, Binary code + 512 PPR sin/cos, +5V +30V
GA4 = SSI, LSB aligned, Gray code, +5V +30V
BA4 = SSI, LSB aligned, Binary code, +5V +30V
GG4 = SSI, MSB aligned, Gray code, +5V +30V
BG4 = SSI, MSB aligned, Binary code, +5V +30V
SC4 = BiSS C-mode + 512 PPR sin/cos, +5V +30V
G14 = SSI, Gray code + 2048 PPR AB, /AB Line Driver, LSB aligned +5V +30V
G64 = SSI, Gray code + 2048 PPR AB, /AB Push-Pull, LSB aligned +5V +30V

ⓒ **SHAFT DIAMETER**
06 = 6 mm
08 = 8 mm
P9 = 9.52 mm, 3/8"
10 = 10 mm
12 = 12 mm
14 = 14 mm (R.EHO58C, R.EHO59C)
15 = 15 mm (R.EHO58C, R.EHO59C)

ⓓ **PROTECTION**
P = IP67, IP65 shaft side

ⓔ **OPER. TEMP. RANGE**
T = -25°C +85°C (-13°F +185°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 12 pin plug
M8 = M12 8 pin plug
(only for GA4, BA4, GG4, BG4)
M1 = M12 12 pin plug
(except for GA4, BA4, GG4, BG4)

ⓗ **CUSTOM VERSION**

Document release	Date	Description
1.4	23.01.2026	Environmental specifications
1.3	16.01.2026	Mechanical and electrical specifications update
1.2	16.12.2025	EHM58 series order code update (Revolutions "00")
1.1	11.12.2025	EHM58 series order code update (Protection)
1.0	1.12.2025	First issue