

- Compact multiturn encoders for feedback applications
- High resolution up to 65536 cpr and 16384 turns
- Additional incremental track, 2048 PPR sin/cos
- Precise and fast optical sensing



HM58 • HM58S • HMC58

### 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)

### MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Shaft diameter:	Ø 6, 8, 9.52, 10, 12 mm
Hollow shaft diameter:	Ø 14, 15 mm
Reducing sleeves BR1-xx from Ø 15 mm to:	Ø 6, 8, 9.52, 10, 11, 12
Shaft loading (axial, radial):	40 N max.
Shaft rotational speed:	12000 rpm, 9000 rpm continuous operation
Starting torque (at 20°C):	HM58: 0,15 Ncm (typ.) HM58S, HMCxx: 0,4 Ncm (typ.)
Bearings life:	400 x10 <sup>6</sup> rev. min. (10 <sup>9</sup> rev. min. with 20 N shaft loading max.)
Electrical connections:	M12, M23 plug or cable output 2 m (6.56 ft)
Weight:	~ 300 g (10,6 oz)
Option:	• additional cable

### ELECTRICAL SPECIFICATIONS

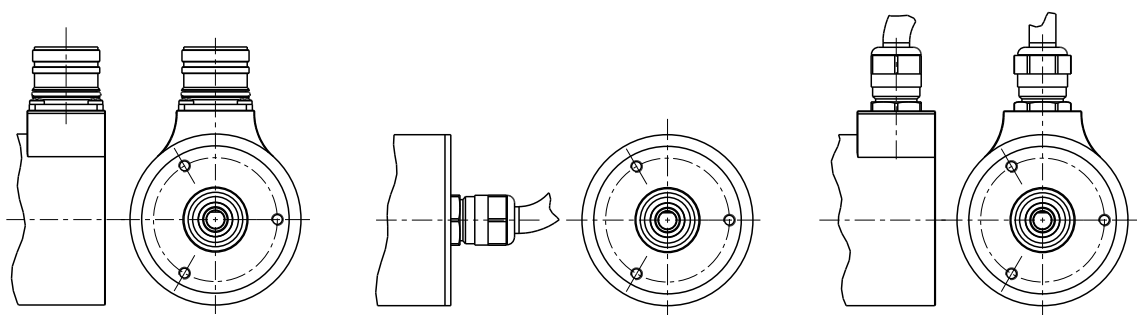
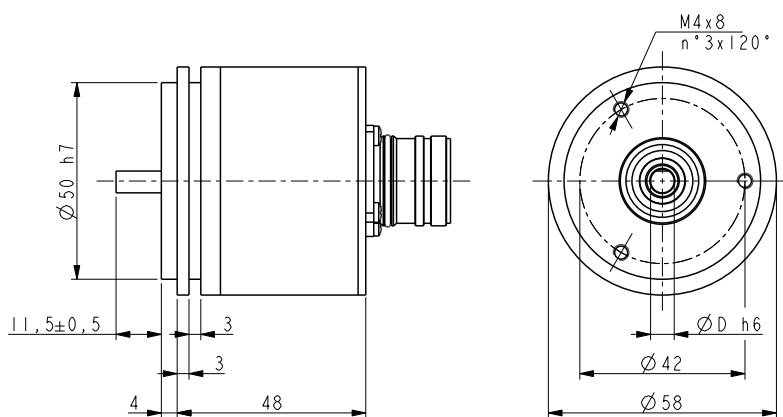
Resolution:	SSI, BiSS, 16x14 bit max. sin/cos: 2048 PPR AB, /AB: 2048, 4096, 8192
Accuracy:	± 0,01°
Output circuits:	SSI, SSI + 1Vpp, SSI + Push-Pull, SSI + Line Driver 5V, BiSS + 1Vpp
Output code:	Gray, Binary
Counting frequency:	220 kHz max.
Power supply:	+5Vdc ±5%, +10V +30V
Power consumption:	1 W
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

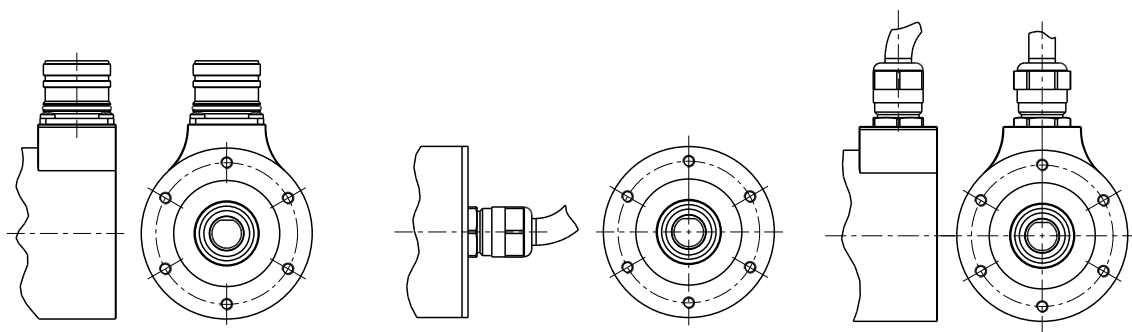
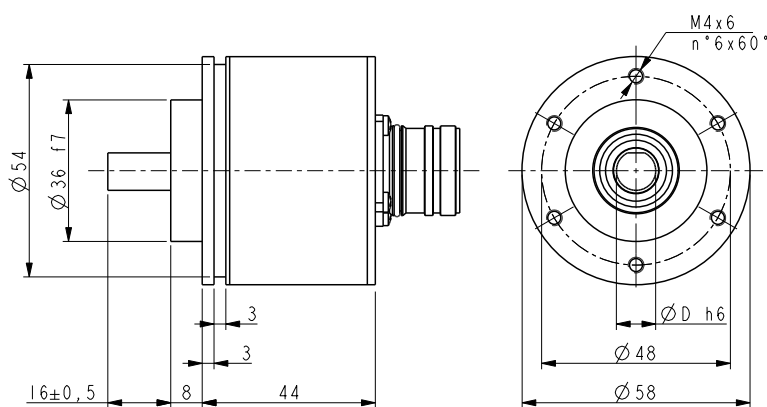
Flange:	anticorodal, UNI EN AW-6082
Housing:	anticorodal, UNI EN AW-6082 or zamac die cast
Bearings:	ABEC 5
Shaft:	stainless steel, non magnetic, UNI EN 4305
Light source:	GaAl diodes

### ACCESSORIES

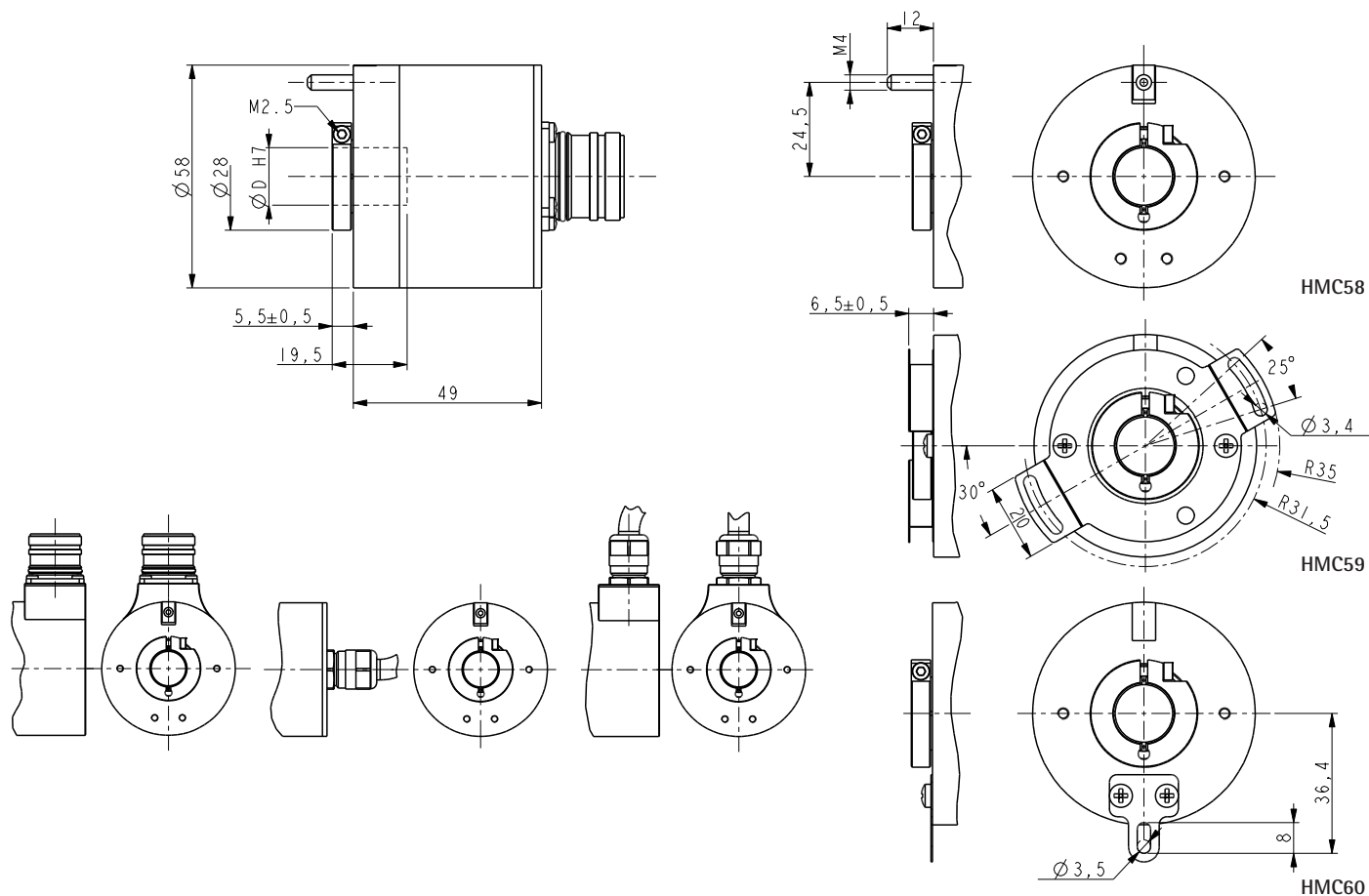
EPFL121H:	M23 12 pin connector
EM12F8:	M12 8 pin mating connector
EM12F12:	M12 12 pin mating connector
PAN/PGF:	flexible couplings
BR1:	reducing sleeves
EC-CR12F-S28-T12-xxx:	cordset xx m, M23 connector
EC-M12F8-LK-M8-xxx:	cordset xx m, M12 8 pin connector
EC-M12F12-LK-T12-xxx:	cordset xx m, M12 12 pin conn.
LKM-386:	fixing clamps



HM58



HM58S



Order code

HM58	-	XX-XX	-	XXX	-	XX	-	X	X	-	X	XXXX	/Sxxx
HM58S		(a)		(b)		(c)		(d)	(e)		(f)	(g)	(h)
HMC58													
HMC59													
HMC60													

(a) RESOLUTION  
(BIT SINGLETURN - BIT MULTITURN)

13-12 = 13 x 12 bit (8192 cpr x 4096 turns)  
16-14 = 16 x 14 bit (65536 cpr x 16384 turns)

(b) INTERFACE / POWER SUPPLY

GV2 = SSI, LSB aligned, Gray code + 2048 PPR sin/cos, +10V +30V  
BV2 = SSI, LSB aligned, Binary code + 2048 PPR sin/cos, +10V +30V  
GA2 = SSI, LSB aligned, Gray code, +10V +30V  
BA2 = SSI, LSB aligned, Binary code, +10V +30V  
GG2 = SSI, MSB aligned, Gray code, +10V +30V  
BG2 = SSI, MSB aligned, Binary code, +10V +30V  
SC1 = BiSS C-mode + 2048 PPR sin/cos, LSB aligned (5Vdc)  
SC2 = BiSS C-mode + 2048 PPR sin/cos, LSB aligned, +10V +30V  
G12 = SSI, Gray code + 2048 PPR AB, /AB Line Driver, LSB aligned, +10V +30V  
G62 = SSI, Gray code + 2048 PPR AB, /AB Push-Pull, LSB aligned, +10V +30V

(c) SHAFT DIAMETER

06 = 6 mm  
08 = 8 mm  
P9 = 9.52 mm, 3/8"  
10 = 10 mm  
12 = 12 mm  
14 = 14 mm (HMCxx)  
15 = 15 mm (HMCxx)

(d) PROTECTION

P = IP67, IP65 shaft side

(e) OPERATING TEMP. RANGE

T = -25°C +85°C (-13°F +185°F)

(f) CONNECTION POSITION

A = axial  
R = radial

(g) CONNECTION TYPE & CABLE LENGTH

L020 = cable output 2 m  
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 GA2, BA2, GG2, BG2)  
M1 = M12 12 pin plug  
(except for GA2, BA2, GG2, BG2)

(h) CUSTOM VERSION

Document release	Date	Description
1.1	21.01.2025	Order code correction (shaft diameter)
1.0	9.02.2024	New order code