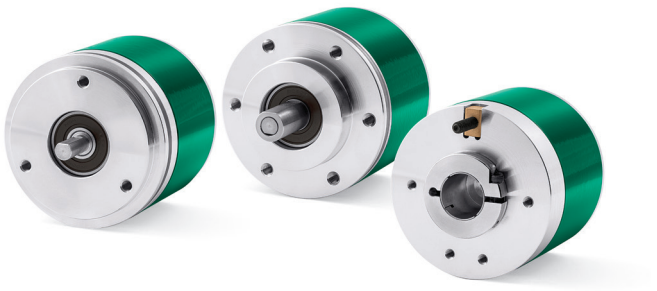
ROTACOD
Absolute single turn encoders

Series HS58 • HS58S • HSC58

- Compact single turn encoders for feedback applications
- High resolution up to 1048576 cpr
- Additional incremental track, 2048 PPR sin/cos
- Precise and fast optical sensing



HS58 • HS58S • HSC58

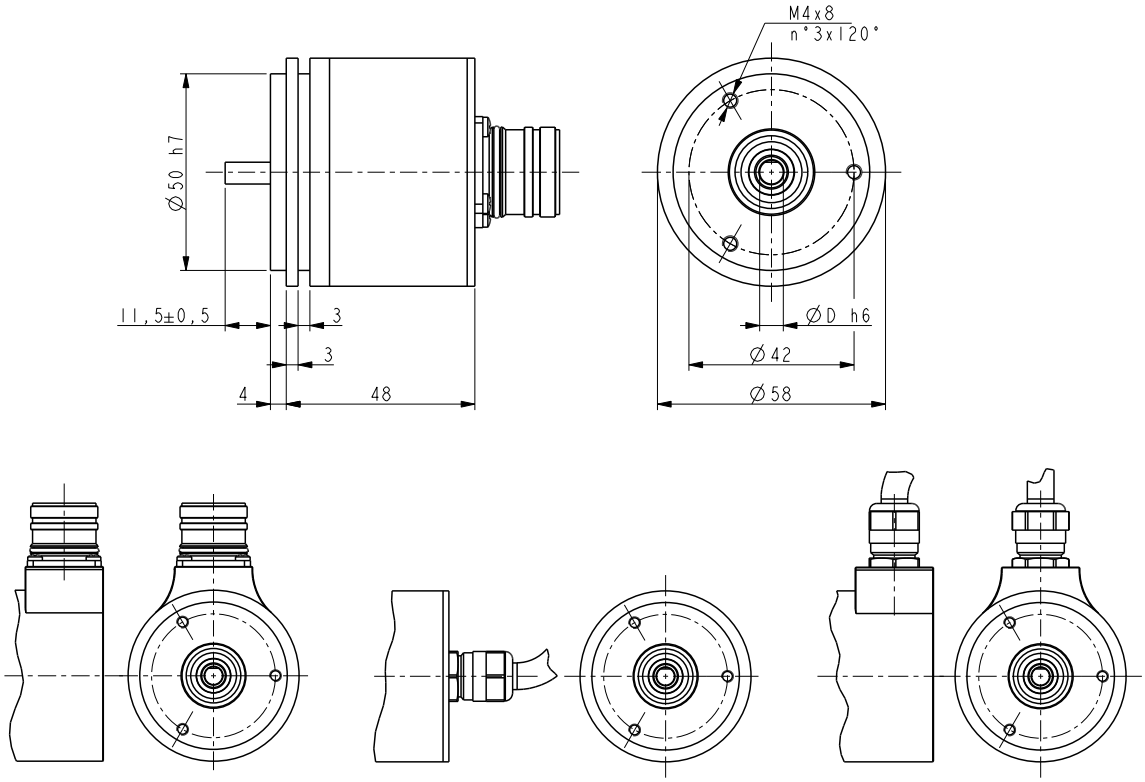
ENVIRONMENTAL SPECIFICATIONS	
Shock:	250 g, 6 ms acc. to CEI EN 60068-2-27
Vibrations:	10 g, 5-2000 Hz acc. to CEI EN 60068-2-6
Protection:	IP67, IP65 shaft side
Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-40°C +100°C (-40°F +212°F) (98% R.H. without condensation)

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):	HS58: 0,15 Ncm (typ.) HS58S, HSCxx: 0,4 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 output 2 m (6.56 ft)
Weight:	~ 300 g (10,6 oz)
Option:	• additional cable

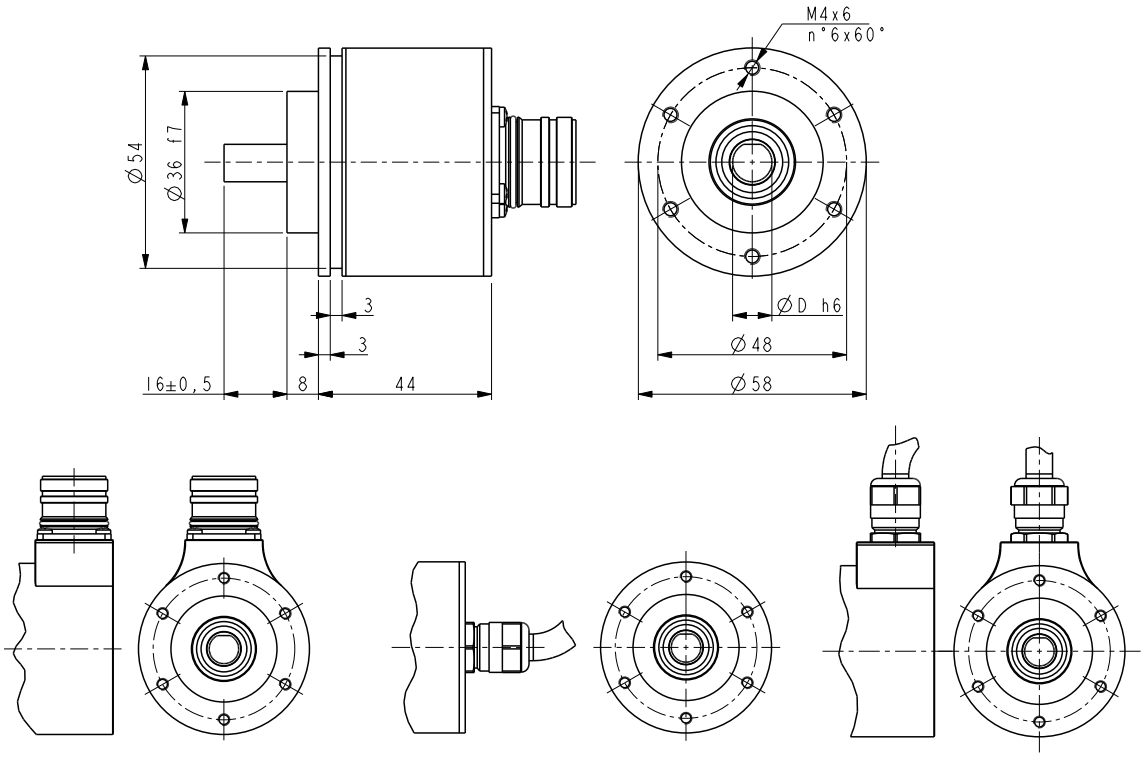
ELECTRICAL SPECIFICATIONS	
Resolution:	SSI, BiSS: 20 bit max. sin/cos: 2048 PPR AB, /AB: 2048, 4096, 8192
Accuracy:	± 0,01°
Output circuits:	SSI, SSI + 1Vpp, SSI + Line Driver 5V, BiSS (B-mode, C-mode) + 1Vpp
Output code:	Gray, Binary
Counting frequency:	220 kHz max.
Power supply:	+5Vdc ± 5%, +10V +30V
Power consumption:	0,9 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

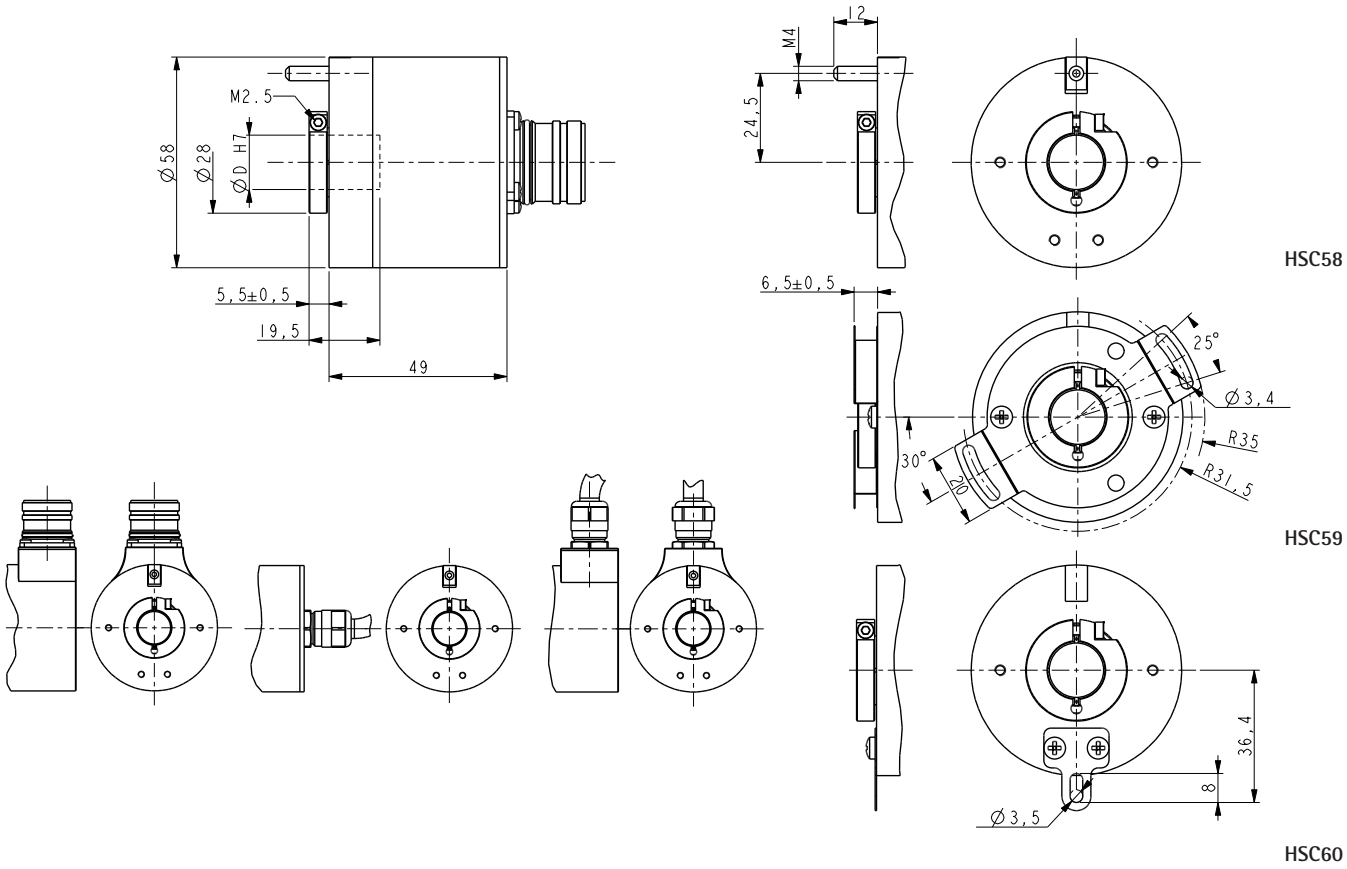
ACCESSORIES	
EPFL121H:	M23 12 pin connector
EM12F8:	M12 8 pin mating connector
EM12F12:	M12 12 pin mating connector
PAN/PGF:	flexible couplings
BR1:	reducing sleeves
EC-CR12F-S28-T12-xxx:	cordset xx m, M23 connector
EC-M12F8-LK-M8-xxx:	cordset xx m, M12 8 pin connector
EC-M12F12-LK-T12-xxx:	cordset xx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


M4x8
n°3x120°
Ø50 h7
11,5±0,5
3
3
4
48
ØD h6
Ø42
Ø58

HS58


M4x6
n°6x60°
Ø54
Ø36 f7
3
3
16±0,5
8
44
ØD h6
Ø48
Ø58

HS58S



Order code

HS58 HS58S HSC58 HSC59 HSC60	-	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)

ⓑ **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

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

ⓓ **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 GA2, BA2, GG2, BG2)
M1 = M12 12 pin plug
(except for GA2, BA2, GG2, BG2)

ⓗ **CUSTOM VERSION**

Document release	Date	Description
1.0	9.02.2024	New order code