

# ROTACOD

Absolute multi-turn encoders

Series

HM58 • HM58S • HMC58



- Compact single turn 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



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## ENVIRONMENTAL SPECIFICATIONS

Shock:	100 g, 6 ms
Vibrations:	10 g, 5-2000 Hz
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 x 10 <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

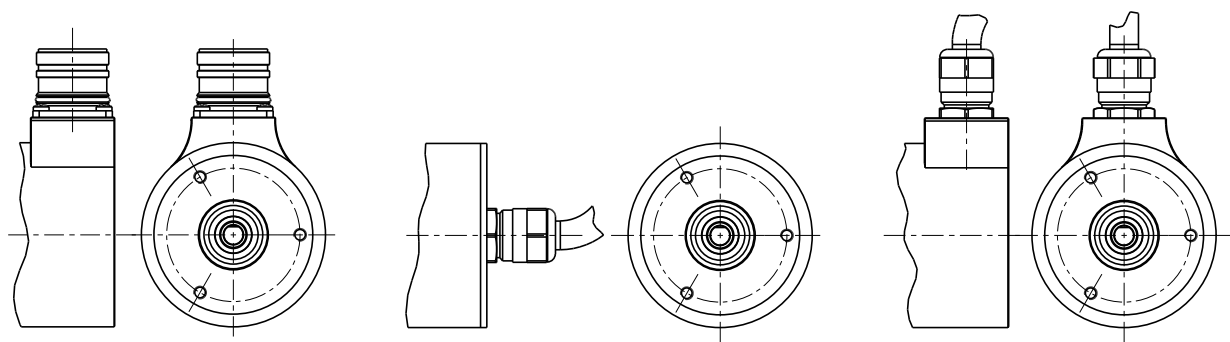
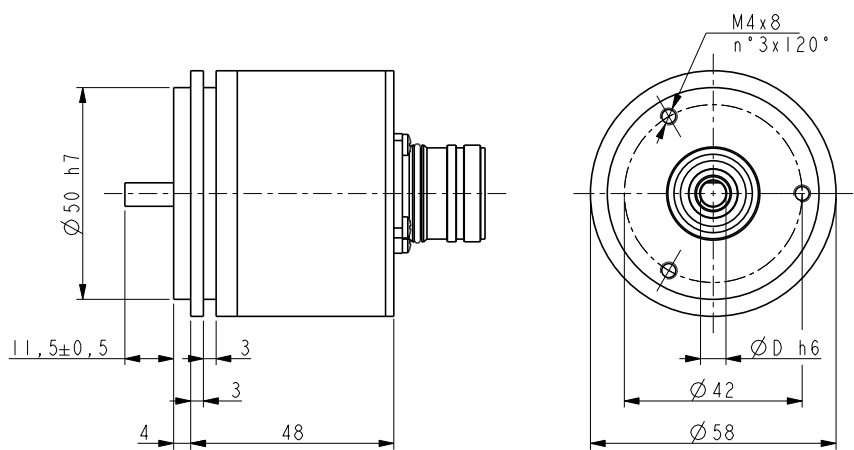
Resolution:	SSI, BiSS, 16x14 bit max. sin/cos: 2048 PPR AB, /AB: 2048, 4096, 8192
Accuracy:	± 0,007°
Output circuits:	SSI, SSI + 1Vpp, SSI + Push-Pull, SSI + Line Driver 5V, BiSS + 1Vpp
Output code:	Gray, Binary
Counting frequency:	220 kHz max.
Power supply:	+10V +30V
Power consumption:	1 W
Protection:	against inversion of polarity, short-circuit
EMC:	electro-magnetic immunity, according to: EN-61000-4-2 EN-61000-4-4
Optoelectronic life:	100.000 h min.
Functions:	• Counting direction (input) • Zero setting/Preset (input)

## MATERIALS

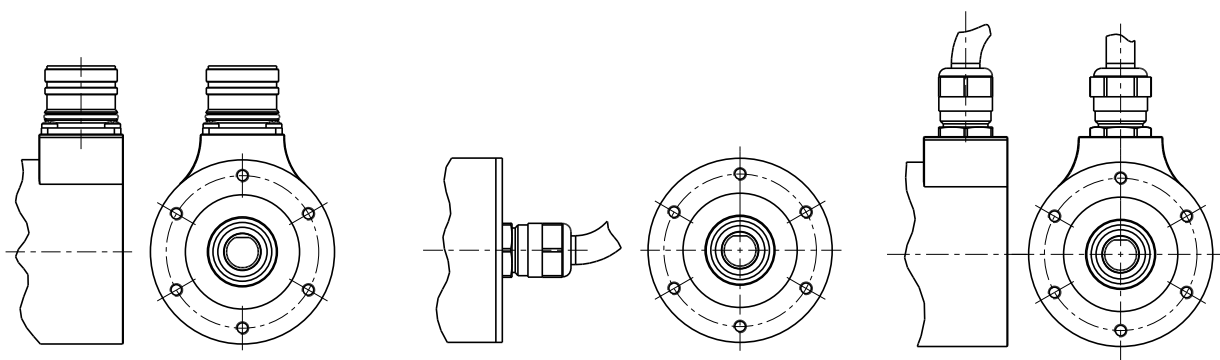
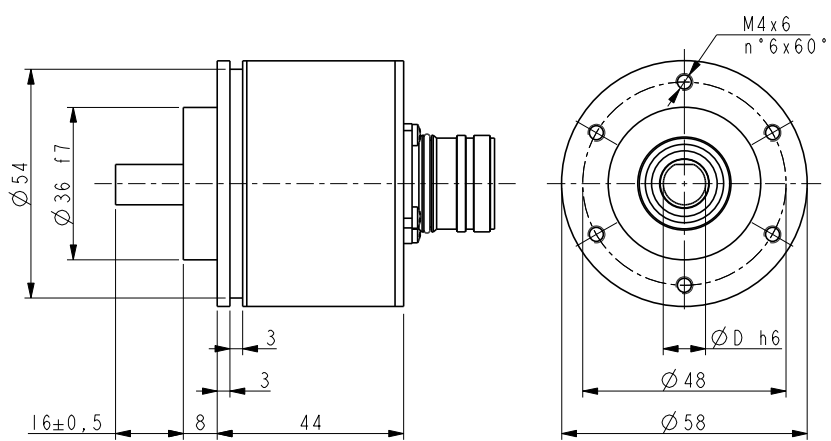
Flange:	anticorrosive, UNI EN AW-6082
Housing:	anticorrosive, UNI EN AW-6082
Bearings:	ABEC 5
Shaft:	stainless steel, non magnetic, UNI EN 4305
Light source:	GaAl diodes

## ACCESSORIES

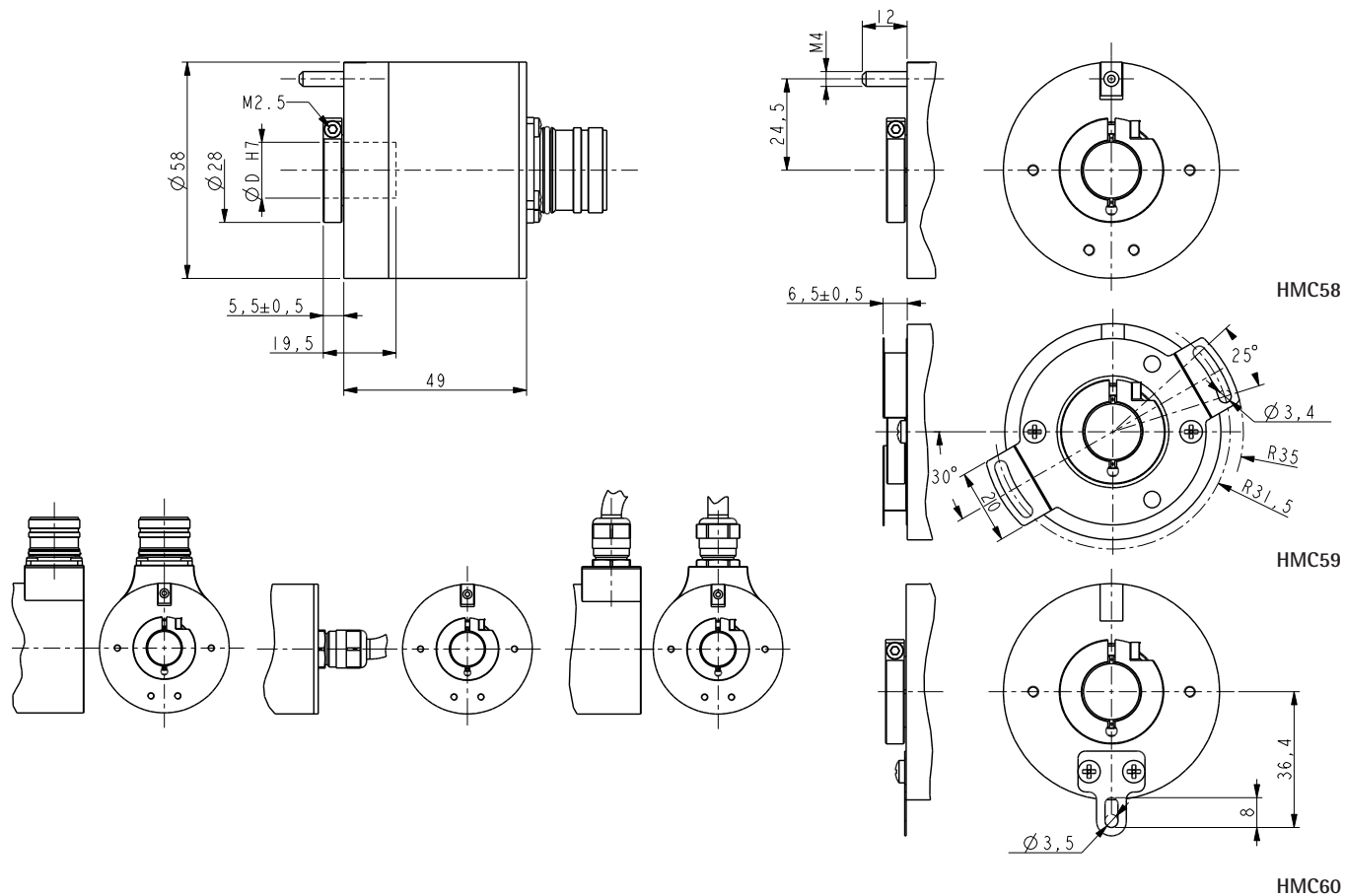
EPFL121H:	M23 12 pin connector
EM12F8:	M12 8 pin mating connector
EM12F12:	M12 12 pin mating connector
PAN/PGF:	flexible couplings
BR1:	reducing sleeves
EC-CR12F-S28-T12-xx:	cordset xx m, M23 connector
EC-M12F8-LK-M8-xx:	cordset xx m, M12 8 pin connector
EC-M12F12-LK-T12-xx:	cordset xx m, M12 12 pin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



HM58



HM58S



Order code

HM58	XX / XXXXX	XX	-	XX	-	X	XX	/Sxxx
HM58S	Ⓐ	Ⓑ		Ⓒ		Ⓓ	Ⓔ	Ⓕ
HMC58								
HMC59								
HMC60								

<p>Ⓐ RESOLUTION</p> <p>13/4096 = 8192 cpr x 4096 turns</p> <p>16/16384 = 65536 cpr x 16384 turns</p>	<p>Ⓑ OUTPUT CIRCUITS</p> <p>GV = SSI, LSB aligned, Gray code + 2048 PPR sin/cos</p> <p>BV = SSI, LSB aligned, Binary code + 2048 PPR sin/cos</p> <p>GA = SSI, LSB aligned, Gray code</p> <p>BA = SSI, LSB aligned, Binary code</p> <p>I7 = BiSS C-mode + 2048 PPR sin/cos</p> <p>I8 = BiSS B-mode + 2048 PPR sin/cos</p> <p>G1 = SSI, Gray code + 2048 PPR AB, /AB Line Driver</p> <p>G2 = SSI, Gray code + 4096 PPR AB, /AB Line Driver</p> <p>G3 = SSI, Gray code + 8192 PPR AB, /AB Line Driver</p> <p>G6 = SSI, Gray code + 2048 PPR AB, /AB Push-Pull</p> <p>G7 = SSI, Gray code + 4096 PPR AB, /AB Push-Pull</p> <p>G8 = SSI, Gray code + 8192 PPR AB, /AB Push-Pull</p>	<p>Ⓒ SHAFT DIAMETER</p> <p>6 = 10 mm</p> <p>8 = 8 mm</p> <p>P9 = 9.52 mm, 3/8"</p> <p>10 = 10 mm</p> <p>12 = 12 mm</p> <p>14 = 14 mm (HMCxx)</p> <p>15 = 15 mm (HMCxx)</p>	<p>Ⓓ CONNECTIONS</p> <p>L2 = cable output 2 m</p> <p>L5 = cable output 5 m</p> <p>L10 = cable output 10 m</p> <p>M2 = M23 12 pin plug</p> <p>M = M12 8 pin plug</p> <p>M1 = M12 12 pin plug (only for GV, BV, GA, BA)</p> <p>(except with GV, BV, GA, BA)</p>
<p>Ⓔ CONNECTION POSITION</p> <p>- = axial</p> <p>R = radial</p>			<p>Ⓕ CUSTOM VERSION</p>