

- Programmable absolute encoder (via USB cable)
- Compact housing
- Max. resolution 262144 cpr x 16384 turns
- Programmable scaling factor & Teach-in function
- Free SSI parameters setting
- Roundloop function
- Bit parallel output available



HM58 P • HM58S P • HMC58 P

#### ENVIRONMENTAL SPECIFICATIONS

Shock:	100 g, 6 ms
Vibrations:	10 g, 5-2000 Hz
Operating temperature range:	-40°C +85°C (-40°F +185°F)
Storage temperature range:	-40°C +100°C (-40°F +212°F) (98% R.H. without condensation)
Protection:	IP67, IP65 shaft side

#### MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Solid shaft:	Ø 6, 8, 9.52, 10, 12 mm
Hollow shaft:	Ø 14, 15 mm
Reducing sleeves BR1-xx from Ø 15mm to:	Ø 6, 8, 9.52, 10, 11, 12 mm
Shaft loading (axial and radial):	100 N max.
Shaft rotational speed:	12000 rpm, 9000 rpm continuous operation
Starting torque (at 20°C):	HM58: 0,15 Ncm (typical) HM58S, HMCxx: 0,40 Ncm (typical)
Bearing life:	400 x10 <sup>6</sup> rev. min. (10 <sup>9</sup> rev. min. with 20 N shaft loading max.)
Weight:	~ 300 g (10,6 oz)
Electrical connections:	SSI: M12, M23 plug, MIL inline plug or cable output 1 m (3.3 ft) Bit parallel: MIL, DSub inline plug or cable output 1 m (3.3 ft)
Option:	• additional cable

#### ELECTRICAL SPECIFICATIONS

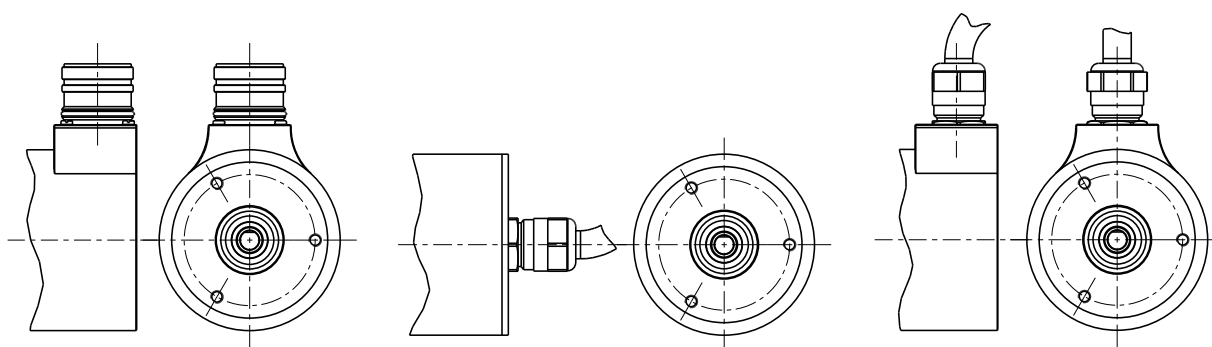
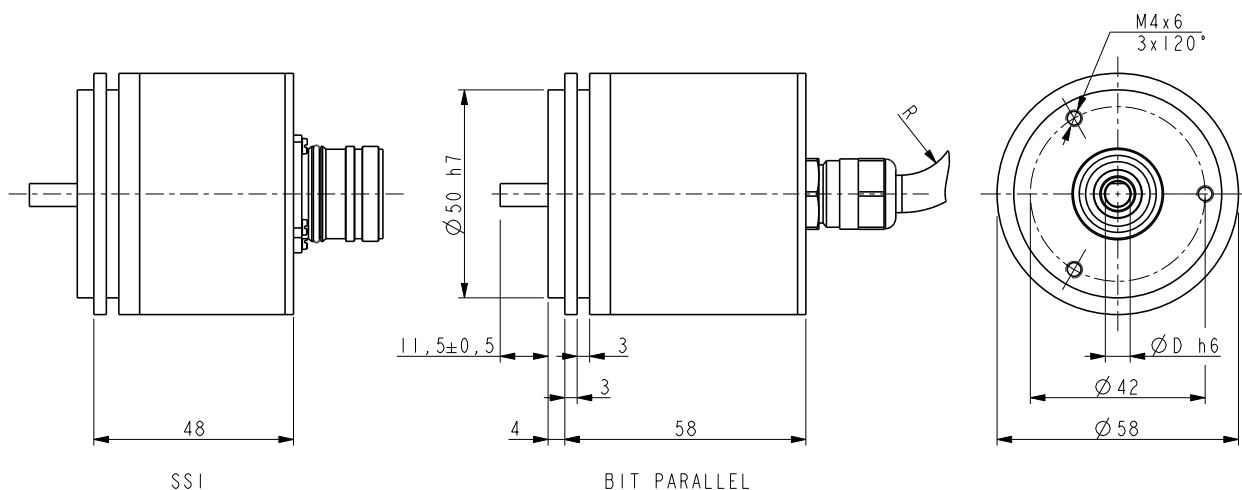
Resolution:	262144 cpr x 16384 turns programmable
Accuracy:	± 0,007°
Output code:	Gray, Binary, BCD
Power supply:	+10Vdc ÷ 30Vdc
Power consumption:	SSI: 1 W Bit parallel: 2,2 W
Output circuits:	SSI (RS422), Bit parallel Push-Pull, NPN
Counting frequency:	SSI: 150 kHz, Bit parallel: 30 kHz
Protection:	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
Functions:	<ul style="list-style-type: none"> <li>• Programmable resolution</li> <li>• Teach-in of resolution</li> <li>• Counting direction (programmable + input)</li> <li>• Zero setting / Preset (programmable + input) <ul style="list-style-type: none"> <li>• Parity bit (even/odd)</li> </ul> </li> <li>• SSI protocol (alignment, clock, timing) <ul style="list-style-type: none"> <li>• Latch, Tristate inputs</li> </ul> </li> </ul>

#### MATERIALS

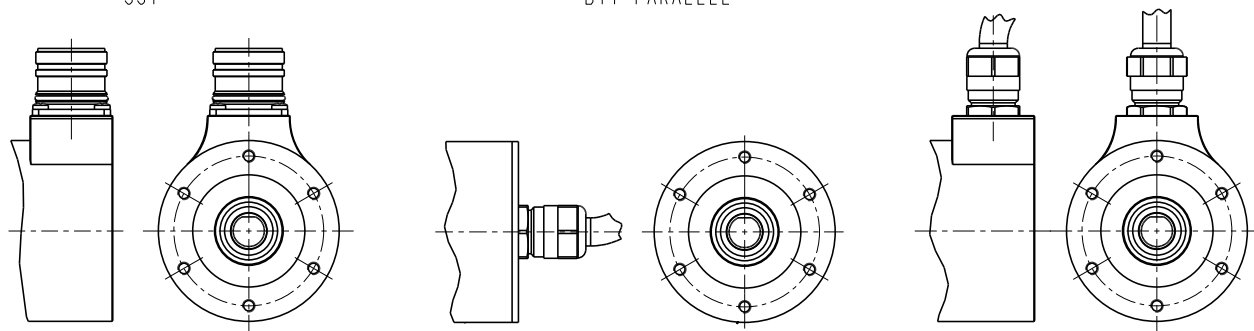
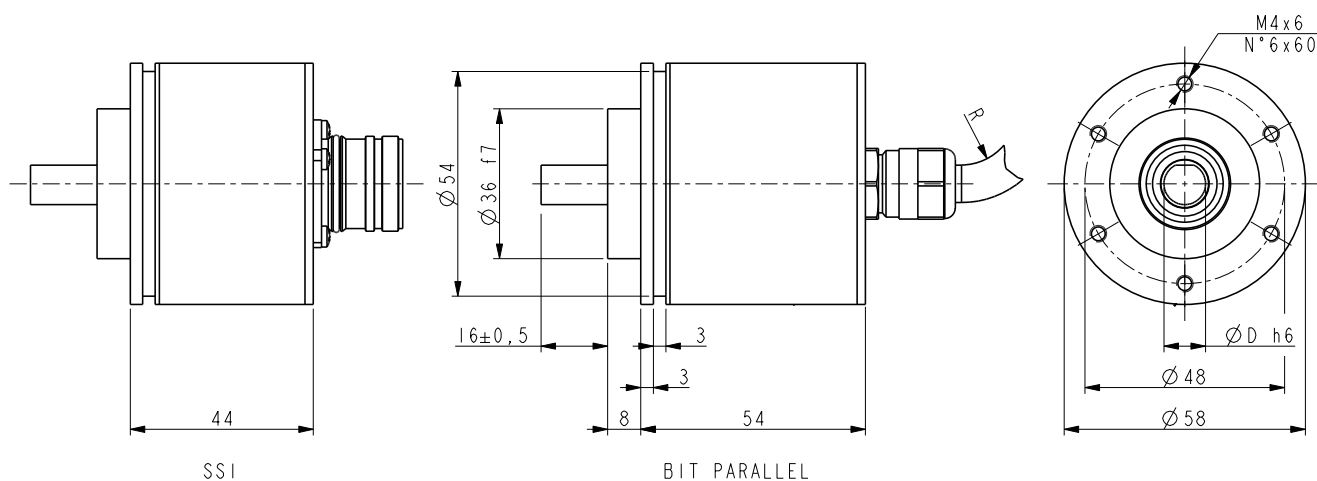
Flange:	anticorrosive, UNI EN AW-6082
Housing:	anticorrosive, UNI EN AW-6082
Bearings:	ABEC 5
Shaft:	stainless steel, non magnetic, UNI EN 4305

#### ACCESSORIES

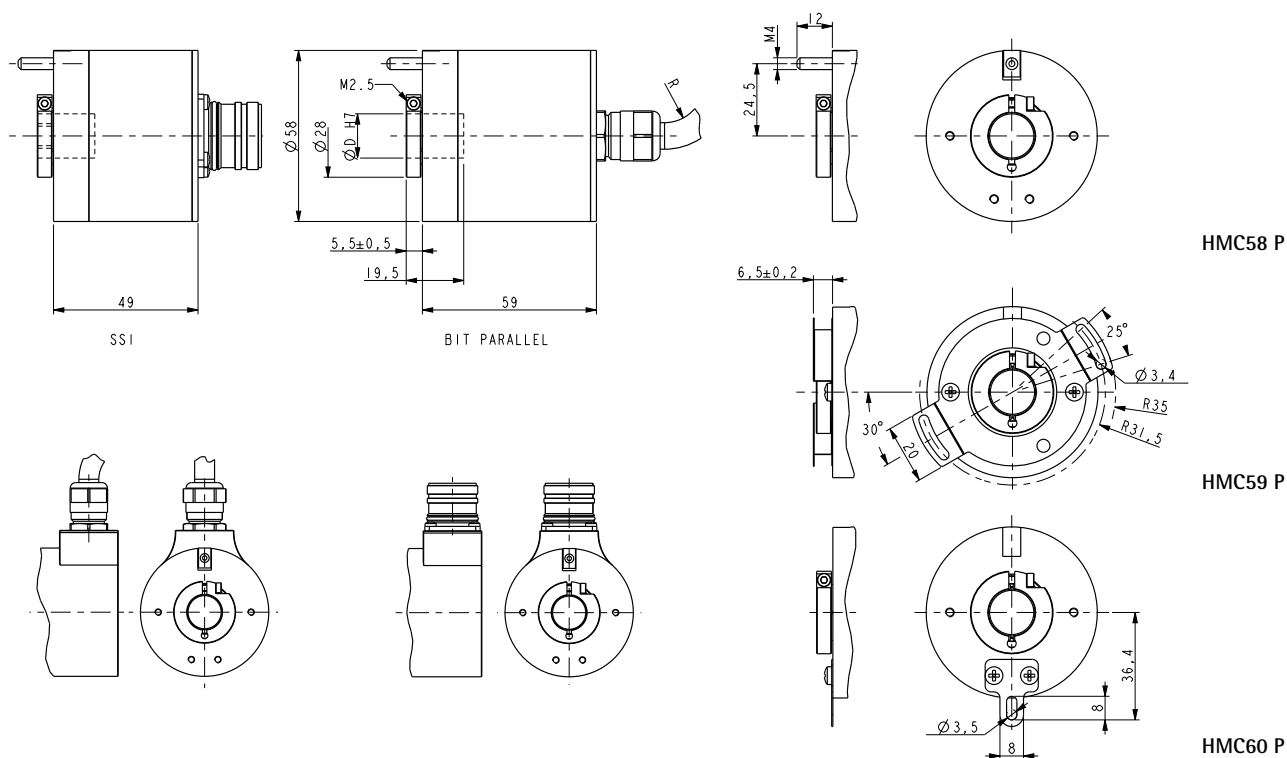
EPFL121H:	M23 12 pin mating connector
EM12F12:	M12 12 pin mating connector
E41MLS:	MIL 41 pin mating connector
E32MLS:	MIL 32 pin mating connector
E19MLS:	MIL 19 pin mating connector
E10MLS:	MIL 10 pin mating connector
E7MLS:	MIL 7pin mating connector
EDA 15S:	DSub 15 pin mating connector
EDB 25S:	DSub 25 pin mating connector
PAN/PGF:	flexible couplings
IF92:	Programming box with USB conn.
EC-HMPY-M41F:	MIL 41 cordset
EC-M12F12-S69-I5-0,5:	M12 programming cable
EC-CR12F-S70-I5-0,5:	M23 programming cable
BR1:	reducing sleeves
LKM-386:	fixing clamps



HM58 P



HM58S P



Order code - Bit parallel output

HM58 HM58S	HMC58 HMC59 HMC60	XX/XXXXX (a)	XX (b)	-	XX (c)	-	X (d)	XX (e)	/Sxxx - /Pxxx (f)
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<p><b>(a) RESOLUTION</b> 18/16384 = 262144 cpr x 16384 turns</p> <p><b>(b) OUTPUT</b> PY = programmable, Push-Pull PN = programmable, NPN</p>	<p><b>(c) SHAFT DIAMETER</b> 6 = 6 mm 8 = 8 mm P9 = 9.52mm / 3/8" 10 = 10 mm 12 = 12 mm 14 = 14 mm (HMCxx) 15 = 15 mm (HMCxx)</p>	<p><b>(d) CONNECTION POSITION</b> - = axial R = radial</p> <p><b>(e) CONNECTIONS</b> Lx = cable output x m Y1 = 1 m cable + MIL 41 pin inline plug</p>	<p>with (f) = /Pxxx Z1 = 1 m cable + DSub 15 pin inline plug W1 = 1 m cable + DSub 25 pin inline plug X1 = 1 m cable + MIL 19 pin inline plug V1 = 1 m cable + MIL 32 pin inline plug Ax = A20 cable x m Bx = A32 cable x m</p> <p><b>(f)</b> /Sxxx: Custom version /Pxxx: Factory programmed encoder on customer request</p>
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Order code - SSI output

HM58 HM58S	HMC58 HMC59 HMC60	XX/XXXXX (a)	XX (b)	-	XX (c)	-	X (d)	XX (e)	/Sxxx - /Pxxx (f)
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<p><b>(a) RESOLUTION</b> 18/16384 = 262144 cpr x 16384 turns</p> <p><b>(b) OUTPUT</b> PS = programmable, SSI</p>	<p><b>(c) SHAFT DIAMETER</b> 6 = 6 mm 8 = 8 mm P9 = 9.52mm / 3/8" 10 = 10 mm 12 = 12 mm 14 = 14 mm (HMCxx) 15 = 15 mm (HMCxx)</p>	<p><b>(d) CONNECTION POSITION</b> - = axial R = radial</p> <p><b>(e) CONNECTIONS</b> Lx = cable output x m M2 = M23 12 pin plug M = M12 12 pin plug</p>	<p>with (f) = /Pxxx D1 = 1 m cable + MIL 7 pin inline plug P1 = 1 m cable + MIL 10 pin inline plug Cx = A8 cable x m</p> <p><b>(f)</b> /Sxxx: Custom version /Pxxx: Factory programmed encoder on customer request</p>
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Document release	Date	Description
1.1	19.03.2021	Order code review - Ax cable