

# ROTACOD

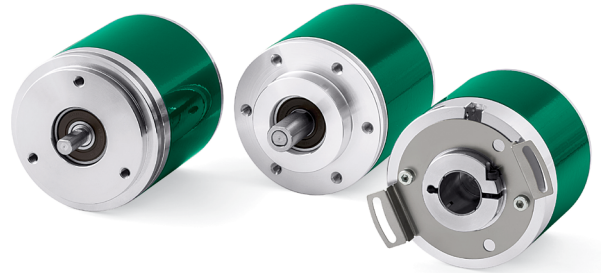
Absolute multi turn encoders

Series

EM58 • EM58S • EMC58



- AM58 series replacement version
- Not for new designs



EM58 • EM58S • EMC58

## 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)
Option:	• Operating temperature range: -40°C +100°C (-40°F +212°F)

## MECHANICAL SPECIFICATIONS

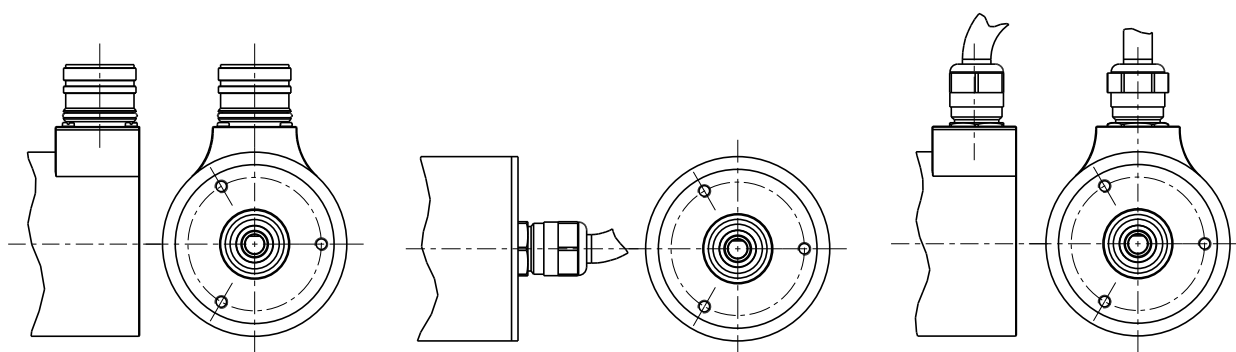
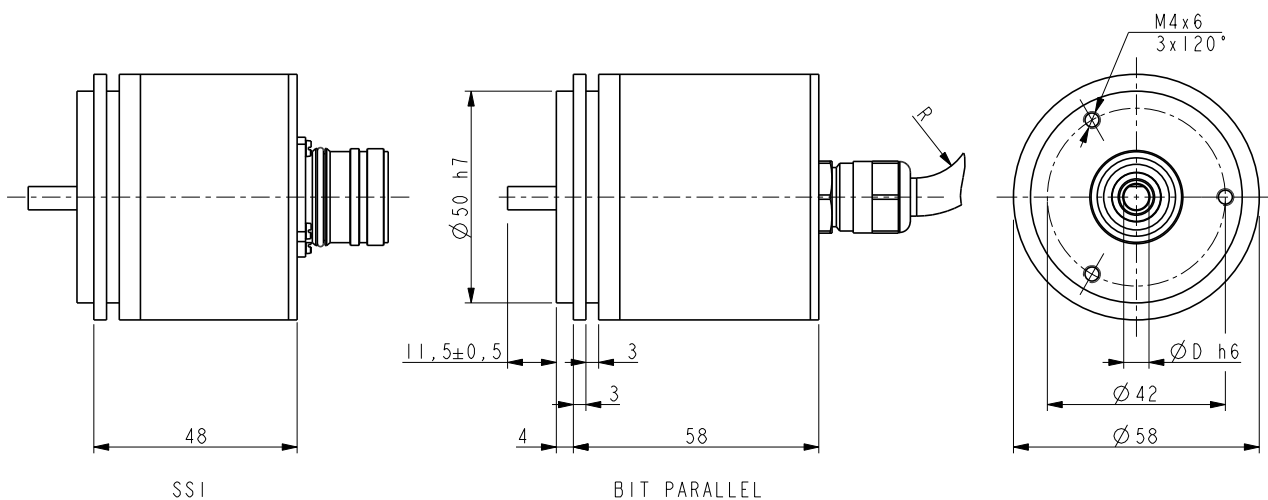
Dimensions:	see drawing
Shaft diameter:	Ø 6, 8, 9.52, 10, 12 mm
Hollow shaft diameter:	Ø 14, 15 mm
Reducing sleeves BR1-xx from Ø 15 mm to:	Ø 6, 8, 9.52, 10, 11, 12 mm
Shaft loading (axial, radial):	100 N max.
Shaft rotational speed:	12000 rpm, 9000 rpm continuous operation
Starting torque (at 20°C):	EM58: 0,15 Ncm (typ.) EM58S, EMCxx: 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:	cable 1 m, 0,2 m cable + MIL or DSub inline plug
Weight:	~ 250 g (8,8 oz)
Option:	• additional cable

## ELECTRICAL SPECIFICATIONS

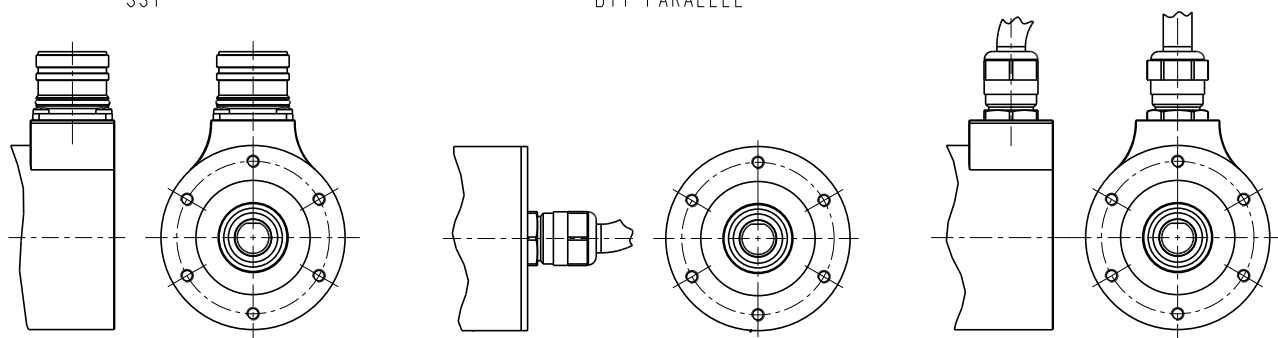
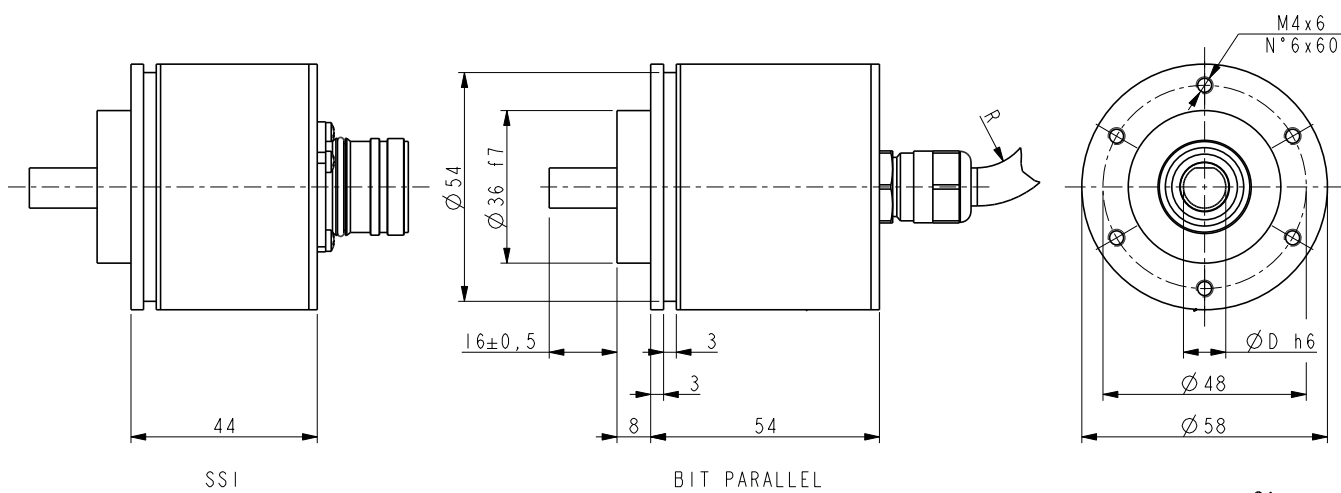
Resolution:	see order code
Accuracy:	± 0,02°
Output circuits:	SSI (RS422), Bit parallel Push-Pull, NPN, PNP
Output code:	Gray, Binary
Counting frequency:	SSI: 150 kHz, Bit Parallel: 30 kHz
Power supply:	+7,5Vdc ÷ 34Vdc
Power consumption:	SSI: 1 W Bit parallel: 1,7 W
Protection:	against inversion of polarity, short-circuit
EMC:	electro-magnetic immunity, according to EN 61000-4-2 EN 61000-4-4
Optoelectronic life:	> 100.000 h
Functions:	• counting direction (input) • Zero setting/Preset (input)

## MATERIALS

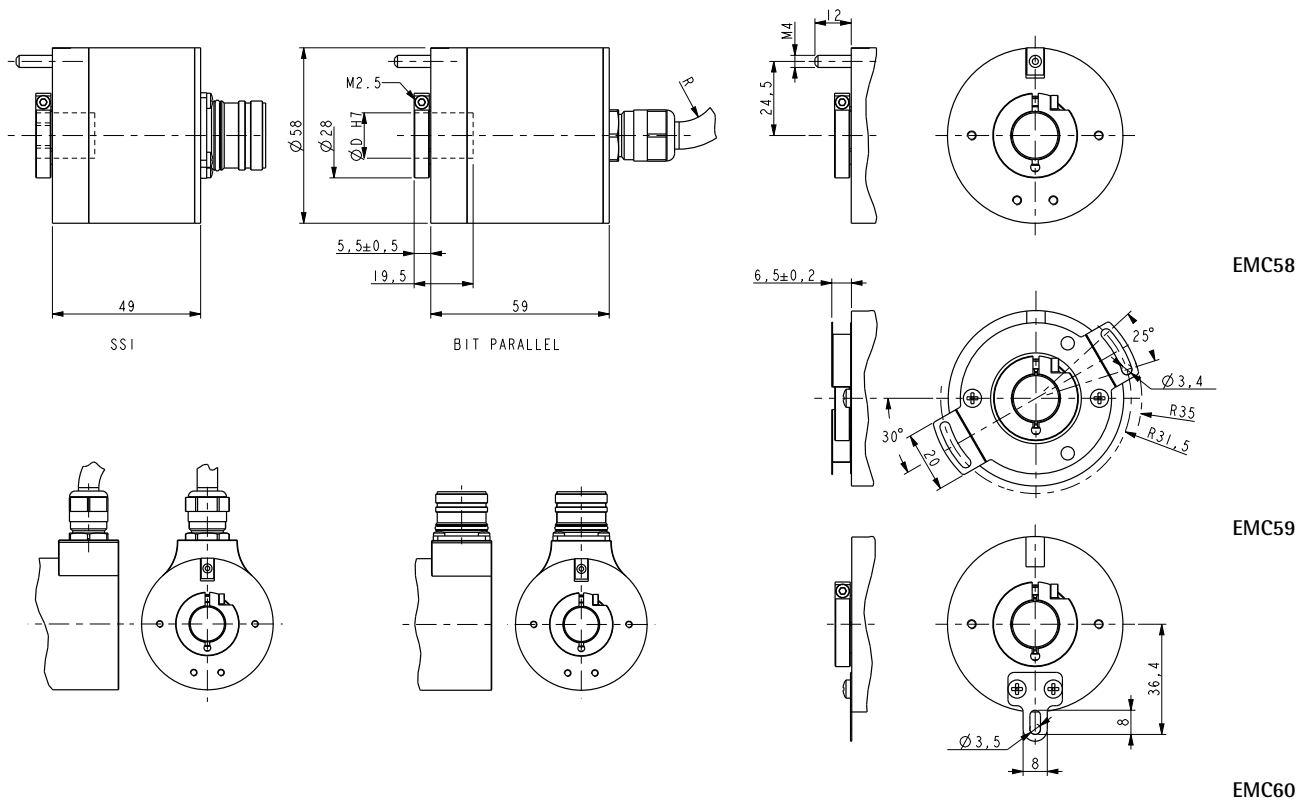
Flange:	anticorrosive, UNI EN AW-6082
Housing:	anticorrosive, UNI EN AW-6082
Bearings:	ABEC 5
Shaft:	stainless steel, non magnetic, UNI EN 4305



EM58



EM58S



Order code - Bit parallel output

EM58	EMC58	XX	/	XXXX	X	-	X	-	XX	X	X	X	XXX	/Sxxx
EM58S	EMC59	(a)		(b)	(c)		(d)		(e)	(f)	(g)	(h)	(i)	(j)
	EMC60													

<p><b>(a) RESOLUTION</b>                  08 = 256 cpr                  09 = 512 cpr                  10 = 1024 cpr                  11 = 2048 cpr                  12 = 4096 cpr                  13 = 8192 cpr</p> <p><b>(b) REVOLUTIONS</b>                  16 = 16 turns                  256 = 256 turns                  4096 = 4096 turns</p> <p><b>(c) OUTPUT CODE</b>                  B = Binary                  G = Gray</p>	<p><b>(d) OUTPUT CIRCUITS</b>                  N = NPN o.c.                  P = PNP o.c.                  Y = Push-Pull</p> <p>on request:                  L = LATCH (NPN)                  M = LATCH (PNP)                  H = LATCH (Push-Pull)                  T = TRI-STATE (NPN)                  U = TRI-STATE (PNP)                  E = LATCH+TRI-STATE (PNP)                  F = LATCH+TRI-STATE (NPN)</p>	<p><b>(e) SHAFT DIAMETER</b>                  6 = 6 mm                  8 = 8 mm                  P9 = 9.52mm / 3/8"                  10 = 10 mm                  12 = 12 mm                  14 = 14 mm (EMCxx)                  15 = 15 mm (EMCxx)</p> <p><b>(f) PARITY BIT</b>                  B = Parity bit (option)</p> <p><b>(g) OPERATING TEMP. RANGE</b>                  - = -25°C +85°C (-13°F +185°F)                  K = -40°C +100°C (-40°F +212°F)</p>	<p><b>(h) CONNECTION POSITION</b>                  - = axial                  R = radial</p> <p><b>(i) CONNECTIONS</b>                  L1 = cable output 1 m (standard)                  Lx = cable output x m                  V0,2 = 0,2 m cable + MIL 32 pin inline plug                  W0,2 = 0,2 m cable + DSub 25 pin inline plug</p>	<p><b>(j) CUSTOM VERSION</b></p>
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Order code - SSI output

EM58	EMC58	XX	/	XXXX	XX	-	XX	-	X	X	X	XXX	/Sxxx
EM58S	EMC59	(a)		(b)	(c)		(d)		(e)	(f)	(g)	(g)	(h)
	EMC60												

<p><b>(a) RESOLUTION</b>                  08 = 256 cpr                  09 = 512 cpr                  10 = 1024 cpr                  11 = 2048 cpr                  12 = 4096 cpr                  13 = 8192 cpr</p> <p><b>(b) REVOLUTIONS</b>                  16 = 16 turns                  256 = 256 turns                  4096 = 4096 turns</p>	<p><b>(c) OUTPUT</b>                  BS = Binary, SSI tree format                  BA = Binary, SSI LSB aligned                  GS = Gray, SSI tree format                  GA = Gray, SSI LSB aligned                  G5 = Gray, SSI tree format + 1024 PPR AB /AB Push-Pull</p>	<p><b>(d) SHAFT DIAMETER</b>                  6 = 6 mm                  8 = 8 mm                  P9 = 9.52mm / 3/8"                  10 = 10 mm                  12 = 12 mm                  14 = 14 mm (EMCxx)                  15 = 15 mm (EMCxx)</p> <p><b>(e) PARITY BIT</b>                  B = Parity bit (option)</p>	<p><b>(f) OPERATING TEMP. RANGE</b>                  - = -25°C +85°C (-13°F +185°F)                  K = -40°C +100°C (-40°F +212°F)</p> <p><b>(g) CONNECTION POSITION</b>                  - = axial                  R = radial</p>	<p><b>(h) CONNECTIONS</b>                  L1 = cable output 1 m (standard)                  Lx = cable output x m                  D0,2 = 0,2 m cable + MIL 7 pin plug                  P0,2 = 0,2 m cable + MIL 10 pin plug</p>	<p><b>(i) CUSTOM VERSION</b></p>
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