Lika Electronic Srl
Via S. Lorenzo, 25
36010 Carrè (VI) • Italy

Smart encoders & actuators

To
all Business partners

k. attn. Purchasing Manager
Technical Manager
Obsolescence Manager

Carrè, 05.03.2025
Our ref.: NPC25003 AS58 AM58 EasyCANopen_ES58 EM58 Modbus

Subject: Notification of Change to:

AS58 & AM58 EasyCANopen series
ES58 & EM58 Modbus-RTU series

Dear Customer,

In the process of continuous improvement to the quality, reliability and competitiveness of our products it is necessary to make occasional updates or changes to one of our products.
Details thereof are given in this letter and/or attachment. We would be happy to answer any queries you might have.

Change Category

☐ **Minor Change**	☑ **Major Change**

☑ **End of Life Notification / Product obsolete**	☑ **Datasheet specification Change**
☐ **Design Change**	☐ **Ordering code Change**
☐ **Material / Component Change**	☐ **Process / Manifacturing Facility Change**

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Description of Change

Due to a technology update the AS58, AM58 EasyCANopen & ES58, EM58 Modbus-RTU series (see attached datasheets) are phased-out and will be obsoleted in Q1/2025. Parts will be available for limited spares part orders.

The products will be preplaced by the new EBO58 & EBM58 series (see attached datasheet).
Advantages of these new products are listed below.

Description	Before	Now
Singleturn versions with resolution up to 13 bit (magnetic sensing)	AS58 AS58S ASC58 ASC59 ASC60	EBM58 EBM58S EBM58C EBM59C EBM59C + KIT xx60
Singleturn versions with resolution up to 18 bit (optical sensing)	AS58 AS58S ASC58 ASC59 ASC60	EBO58 EBO58S EBO58C EBO59C EBO59C + KIT xx60
Multiturn versions with resolution 12*12 bit (4096x4096) (magnetic sensing)	AM58 AM58S AMC58 AMC59 AMC60	EBM58 EBM58S EBM58C EBM59C EBM59C + KIT xx60
Multiturn versions with resolution 13*14 bit (8192x16384) 16*14 bit (65536x16384) (optical sensing)	AM58 AM58S AMC58 AMC59 AMC60	EBO58 EBO58S EBO58C EBO59C EBO59C + KIT xx60
XML installation file	not compatible with the new series	is available on the website and needs to be updated
Diagnostic Led's	available only on AS singleturn series	available on all series
Dimensions (see datasheets)		similar or more compact
General performance (see datasheets)		improved

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Customer Impact

☑ **Customer should verify this document.**	☐ **Customer should verify impacts on mechanical or electrical interface**
☑ **Sampling, testing & approval is recommended.**	☐ **No direct alternative available. Please contact your sales representative**

Spare part orders will be possible only for limited q.ties.
New orders should be converted immediately to the new series. Our sales team will assist you with the conversion of part numbers.

You are welcome to address your sales engineer for technical issues, and certainly our sales assistants for any ordering issue.

Best Regards
LIKA ELECTRONIC Srl
Sales & Marketing team

ROTACOD

Absolute encoders with CANopen and Modbus interfaces

Series **EBO58 • EBM58**

- Compact single and multi turn encoders
- CANopen and Modbus-RTU interfaces
- Robust magnetic (EBM58) or precise optical (EBO58) sensing
- High resolution up to 18 bits
- Point-to-point connection
- Cable, M12 connections

EBO58 • EBM58

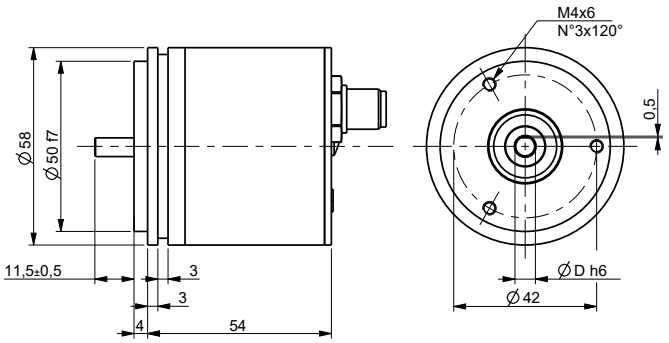
ENVIRONMENTAL SPECIFICATIONS	
Shock:	250 g, 6 ms acc. to CEI EN 60068-2-27
Vibrations:	10 g, 5-2000 Hz acc. to CEI EN 60068-2-6
Protection:	IP65
Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-40°C +100°C (-40°F +212°F) (98% R.H.without condensation)

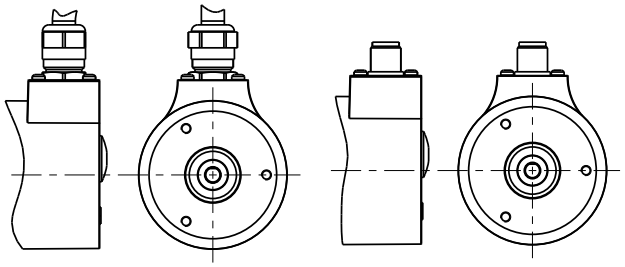
MECHANICAL SPECIFICATIONS	
Dimensions:	see drawing
Shaft diameter:	Ø 6, 8, 9.52, 10, 12 mm
Hollow shaft diameter:	Ø 14, 15
Reducing sleeves BR1-xx from Ø 15 mm to:	Ø 6, 8, 9.52, 10, 11, 12 mm
Shaft loading (axial, radial):	40 N max.
Shaft rotational speed:	12000 rpm, 9000 rpm continuous operation
Starting torque (at 20°C):	< 1 Ncm (typical)
Electrical connections:	M12 plug or cable output 1 m (3,3 ft)
Weight:	~ 250 g (8,8 oz)
Option:	• additional cable

ELECTRICAL SPECIFICATIONS	
Resolution:	single turn = 262144 cpr max. multi turn = 16384 turns max.
Power supply:	+10V +30V
Power consumption:	1 W
Output circuit:	CANopen, Modbus RTU RS485
Interface:	CANopen DS301, DS406, Class 2 (RS485) Modbus RTU (RS485)
Programmable parameters:	• Baudrate • Device address (Node ID) • Scaling function • Counting direction • Preset value • Two software limit switches (CANopen) • Transmission mode: Cyclic, Sync (CANopen) • Velocity output (CANopen) • Round loop function (CANopen)
Bus termination:	programmable by Dip-switches
Protection:	against inversion of polarity and short-circuit
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4
Functions:	• Counting direction • Zero setting/Preset • Resolution • Reset to default parameters • Firmware update (Modbus) • Saving parameters

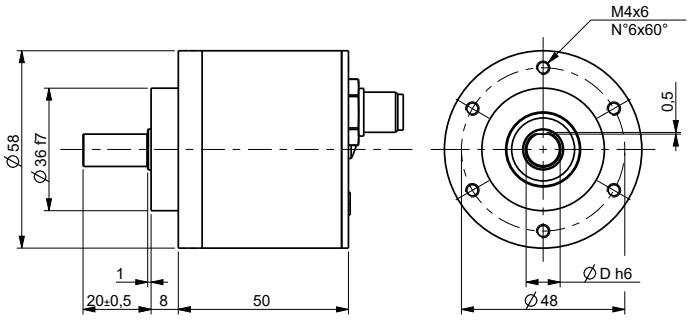
MATERIALS	
Housing:	anticorodal, UNI EN AW-6082
Flange:	anticorodal, UNI EN AW-6082 or zamac die cast
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic, UNI EN 4305

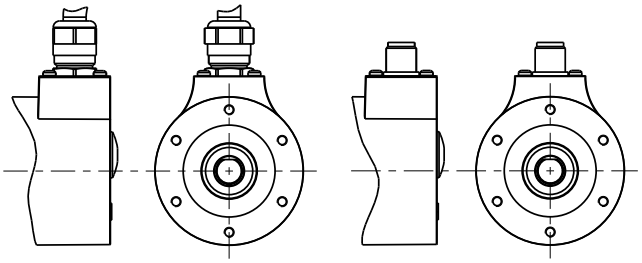
ACCESSORIES	
EM12FC:	M12 5 pin mating connector
PAN/PGF:	flexible couplings
BR1:	reducing sleeves
LKM-386:	fixing clamps



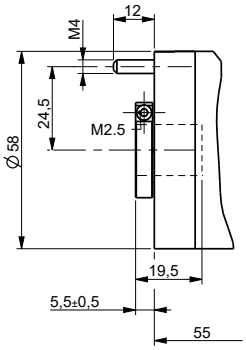


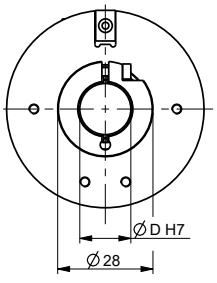
EBO58 • EBM58



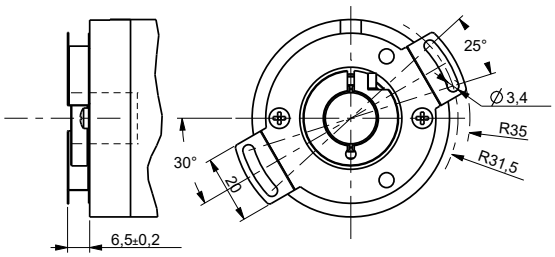


EBO58S • EBM58S





EBO58C • EBM58C



EBO59C • EBM59C

Order code EBO, optical sensing

EB058 EB058S EBO58C EBO59C	XX-XX ⓐ	-	XXX ⓑ	-	XX ⓒ	-	X ⓓ	X ⓔ	-	X ⓕ	XXXX ⓖ	/Sxxx ⓗ

ⓐ **RESOLUTION (BIT SINGLETURN-BIT MULTITURN)**
13-00 = 13 bit (8192 cpr x 1 turn)
16-00 = 16 bit (65536 cpr x 1 turn)
18-00 = 18 bit (262144 cpr x 1 turn)
13-14 = 13 x 14 bit (8192 cpr x 16384 turns)
16-14 = 16 x 14 bit (65536 cpr x 16384 turns)
18-12 = 18 x 12 bit (262144 cpr x 4096 turns)

ⓑ **INTERFACE / POWER SUPPLY**
CB2 = CANopen, +10V +30V
MB2 = Modbus RTU, +10Vdc +30Vdc

ⓒ **SHAFT DIAMETER**
06 = 6 mm
08 = 8 mm
P9 = 9.52 mm, 3/8"
10 = 10 mm
12 = 12 mm
14 = 14 mm (EBO58C, EBO59C)
15 = 15 mm (EBO58C, EBO59C)

ⓓ **PROTECTION**
P = IP65

ⓔ **OPER. TEMP. RANGE**
T = -25°C +85°C (-13°F +185°F)

ⓕ **CONNECTION POSITION**
A = axial
R = radial

ⓖ **CONNECTION TYPE & CABLE LENGTH**
L010 = cable output 1 m (stnd.)
Lxx0 = cable out. x m (max. length 10m)
L050 = cable output 5 m
M5 = M12 5 pin plug

ⓗ **CUSTOM VERSION**

Order code EBM, magnetic sensing

EBM58 EBM58S EBM58C EBM59C	XX-XX ⓐ	-	XXX ⓑ	-	XX ⓒ	-	X ⓓ	X ⓔ	-	X ⓕ	XXXX ⓖ	/Sxxx ⓗ

ⓐ **RESOLUTION (BIT SINGLETURN-BIT MULTITURN)**
12-00 = 12 bit (4096 cpr x 1 turn)
13-00 = 13 bit (8192 cpr x 1 turn)
16-00 = 16 bit (65536 cpr x 1 turn)
12-12 = 12 x 12 bit (4096 cpr x 4096 turns)
12-14 = 12 x 14 bit (4096 cpr x 16384 turns)
13-14 = 13 x 14 bit (8192 cpr x 16384 turns)

ⓑ **INTERFACE / POWER SUPPLY**
CB2 = CANopen, +10V +30V
MB2 = Modbus RTU, +10Vdc +30Vdc

ⓒ **SHAFT DIAMETER**
06 = 6 mm
08 = 8 mm
P9 = 9.52 mm, 3/8"
10 = 10 mm
12 = 12 mm
14 = 14 mm (EBM58C, EBM59C)
15 = 15 mm (EBM58C, EBM59C)

ⓓ **PROTECTION**
P = IP65

ⓔ **OPER. TEMP. RANGE**
T = -25°C +85°C (-13°F +185°F)

ⓕ **CONNECTION POSITION**
A = axial
R = radial

ⓖ **CONNECTION TYPE & CABLE LENGTH**
L010 = cable output 1 m (stnd.)
Lxx0 = cable out. x m (max. length 10m)
L050 = cable output 5 m
M5 = M12 5 pin plug

ⓗ **CUSTOM VERSION**

Document release	Date	Description
1.0	6.02.2025	First issue

ROTACOD

Absolute encoders with CANopen output

Series Ax58 • Ax58S • AxC58 EasyCAN

- Compact CAN single and multi turn encoders
- High resolution, 18 bits or 30 bits
- CANopen and CANlift protocols
- Point-to-point connection
- Velocity output & roundloop function
- Resistant against magnetic fields

AS58 EasyCan

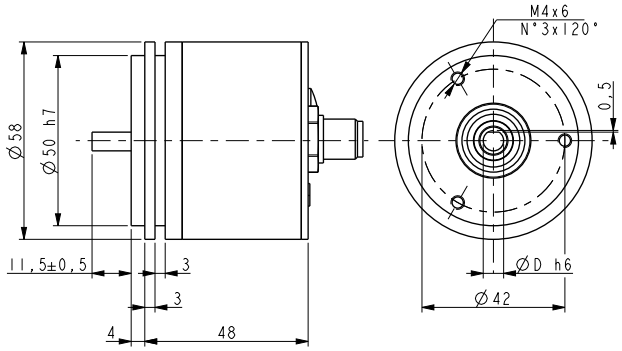
ENVIRONMENTAL SPECIFICATIONS	
Shock:	100 g, 6 ms
Vibrations:	10 g, 5-2000Hz
Protection:	IP67, IP65 shaft side
Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-40°C +100°C (-40°F +212°F) (98% R.H.without condensation)

MECHANICAL SPECIFICATIONS	
Dimensions:	see drawing
Shaft diameter:	Ø 6, 8, 9.52, 10, 12 mm
Hollow shaft diameter:	Ø 14, 15
Reducing sleeves BR1-xx from Ø 15 mm to:	Ø 6, 8, 9.52, 10, 11, 12 mm
Shaft loading (axial, radial):	40 N max.
Shaft rotational speed:	6000 rpm max.
Starting torque (at 20°C):	< 1 Ncm (typical)
Bearings life:	400 x 10^6 rev. min. (10^9 rev. min. with shaft loading of 20 N max.)
Electrical connections:	M12 plug or cable output 2 m (6,56 ft)
Weight:	~ 250 g (8,8 oz)
Option:	• additional cable

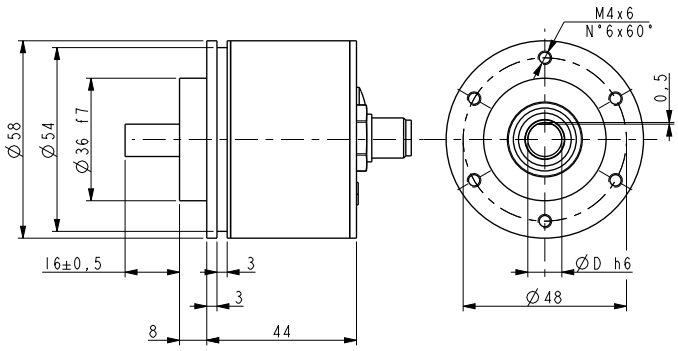
ELECTRICAL SPECIFICATIONS	
Resolution:	single turn = 8192, 65536, 262144 cpr multi turn = 65536 cpr x 16384 turns
Accuracy:	± 0,007°
Counting frequency:	220 kHz max.
Power supply:	+10V +30V
Power consumption:	AS = 1.2 W, AM = 3 W
Interface:	CANopen DS301, DS406, Class 2 (RS485) CANlift DS301, DSP417, Class 2 (RS485)
Programmable parameters:	• Baudrate • Device address (Node ID) • Scaling function • Counting direction • Preset value • Two software limit switches • Transmission mode: Cyclic, Sync • Velocity output • Round loop function
Bus termination:	programmable by Dip-switches
Protection:	against inversion of polarity and short-circuit
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4
Optoelectronic life:	100.000 h min.

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

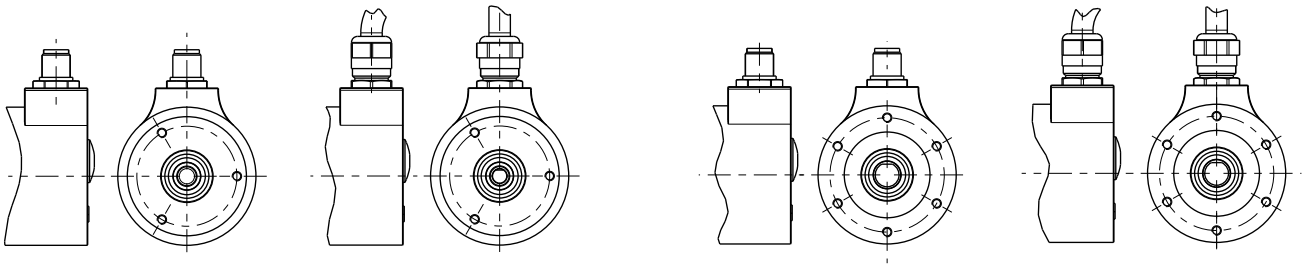
ACCESSORIES	
EM12FC:	M12 5 pin mating connector
PAN/PGF:	flexible couplings
BR1:	reducing sleeves
LKM-386:	fixing clamps

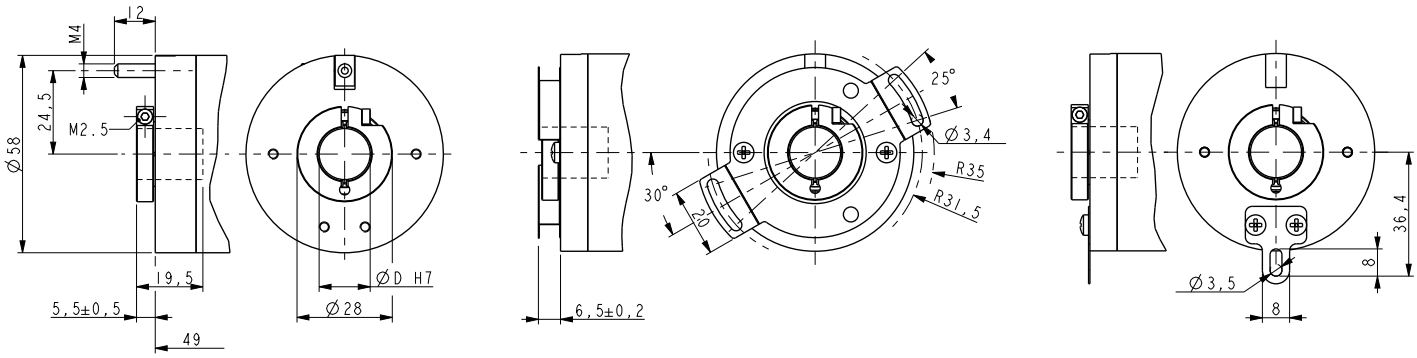


AS58



AS58S





ASC58 ASC59 ASC60

Order code - Single turn

AS58 AS58S ASC58 ASC59 ASC60	XX ⓐ	/	XX ⓑ	-	XX ⓒ	-	X ⓓ	XX ⓔ	/Sxxx ⓕ

ⓐ **RESOLUTION**
13 = 8192 cpr
16 = 65536 cpr
18 = 262144 cpr

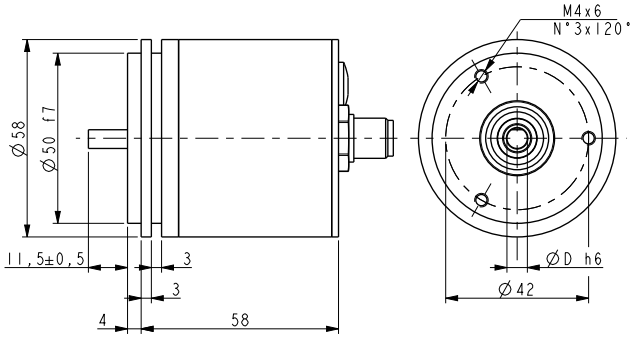
ⓑ **INTERFACE**
CB = CANopen (DS301, DS406)
I6 = CANlift (DS301, DSP417)

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

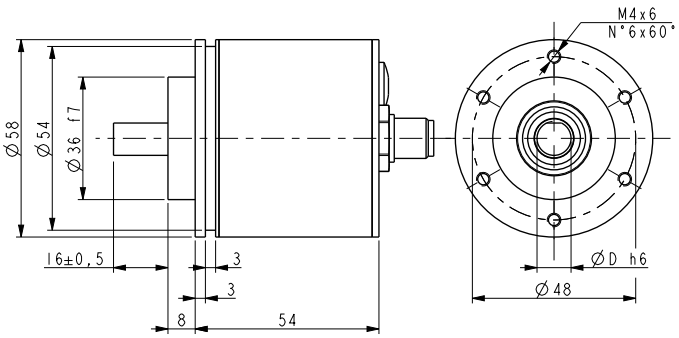
ⓓ **CONNECTION POSITION**
- = axial
R = radial

ⓔ **CONNECTIONS**
L2 = cable output 2 m (standard)
L5 = cable output 5 m
M = M12 5 pin plug

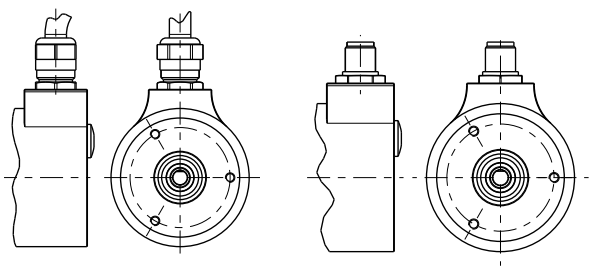
ⓕ **CUSTOM VERSION**

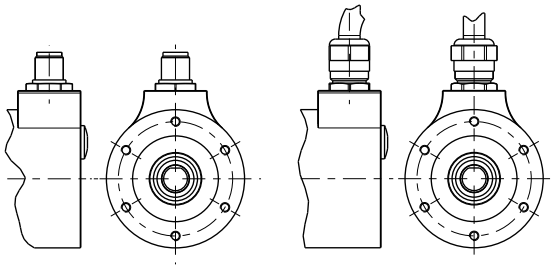


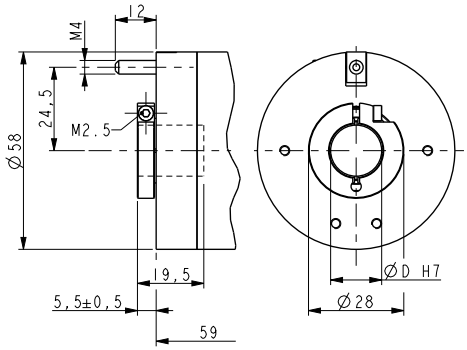
AM58



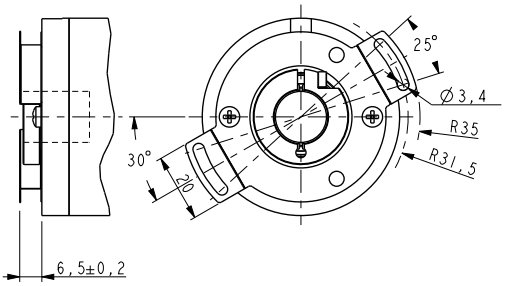
AM58S



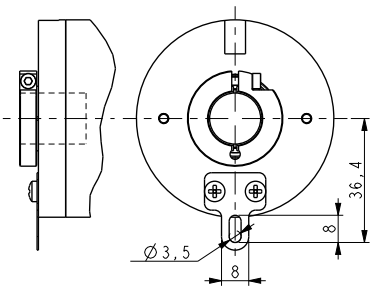




AMC58



AMC59



AMC60

Order code - Multi turn

AM58 AM58S AMC58 AMC59 AMC60	XX/XXXXX ⓐ	XX ⓑ	-	XX ⓒ	-	X ⓓ	XX ⓔ	/Sxxx ⓕ

ⓐ **RESOLUTION**
12/4096 = 4096 cpr x 4096 turns
13/16384 = 8192 cpr x 16384 turns
16/16384 = 65536 cpr x 16384 turns

ⓑ **INTERFACE**
CB = CANopen (DS301, DS406)
I6 = CANlift (DS301, DSP417)

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

ⓓ **CONNECTION POSITION**
- = axial
R = radial

ⓔ **CONNECTIONS**
L2 = cable output 2 m (standard)
L5 = cable output 5 m
M = M12 5 pin plug

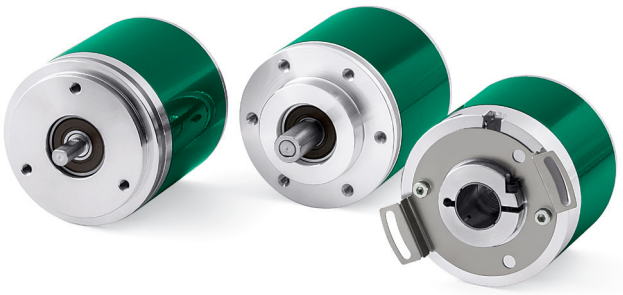
ⓕ **CUSTOM VERSION**

ROTACOD

Absolute single and multiturn encoders with RS485 Modbus interface

Series ESx58x MB • EMx58x MB

- Compact optical single and multiturn encoder
- Modbus RTU RS485 protocol
- Resolution: singleturn 4096 cpr
  and multiturn 4096 cpr x 16384 turns
- Freely programmable via RS485
- Diagnostic LEDs
- High degree of protection, IP67



ESx58x • EMx58x

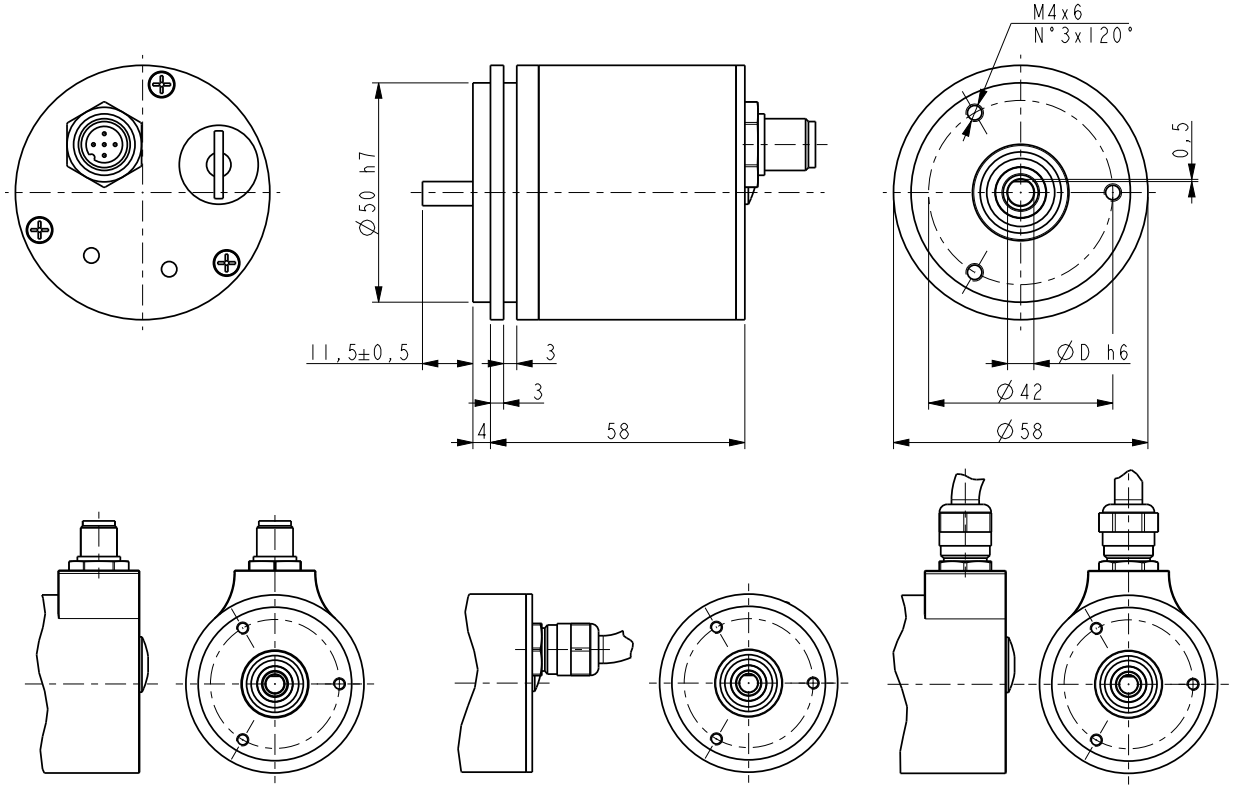
ENVIRONMENTAL SPECIFICATIONS	
Shock:	250 g, 6 ms acc. to CEI EN 60068-2-27
Vibrations:	10 g, 5-2000 Hz acc. to CEI EN 60068-2-6
Protection:	IP67, IP65 shaft side
Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-40°C +100°C (-40°F +212°F) (98% R.H. without condensation)

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 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 x10^6 rev. min. (10^9 rev. min. with 20 N shaft loading max.)
Electrical connections:	M12 plug or cable output 2 m (6.56 ft)
Weight:	~ 300 g (10,6 oz)
Option:	• additional cable

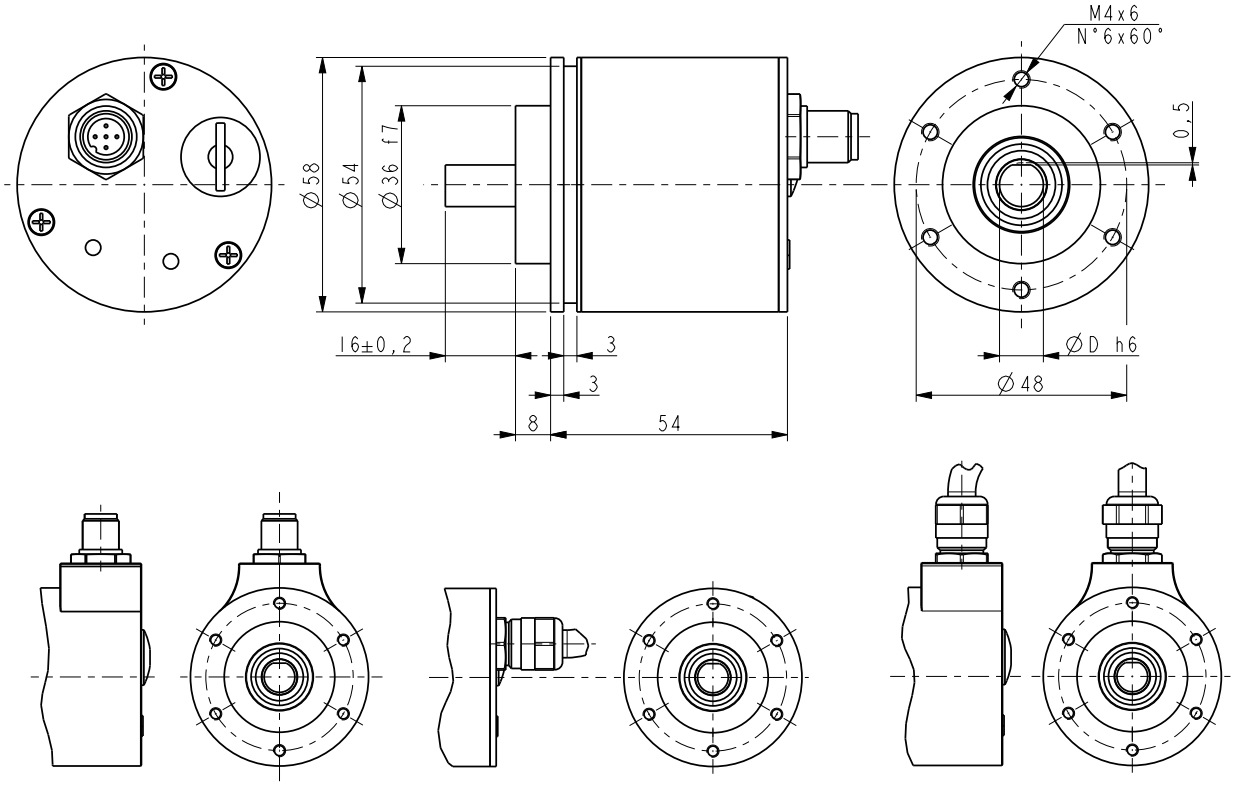
ELECTRICAL SPECIFICATIONS	
Resolution:	singleturn: 4096 cpr (12 bit) multiturn: 4096 cpr x 16384 turns
Output circuits:	Modbus RTU RS485
Output code:	according to: Modbus RTU specifications
Counting frequency:	> 150 kHz
Power supply:	+10Vdc +30Vdc
Power consumption:	1,7 W
Protection:	against inversion of polarity and short-circuit
EMC:	electro-magnetic immunity, according to: EN-61000-4-2 EN-61000-4-4
Functions:	• Counting direction • Zero setting/Preset • Resolution • Reset to default parameters • Firmware update • Saving parameters

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

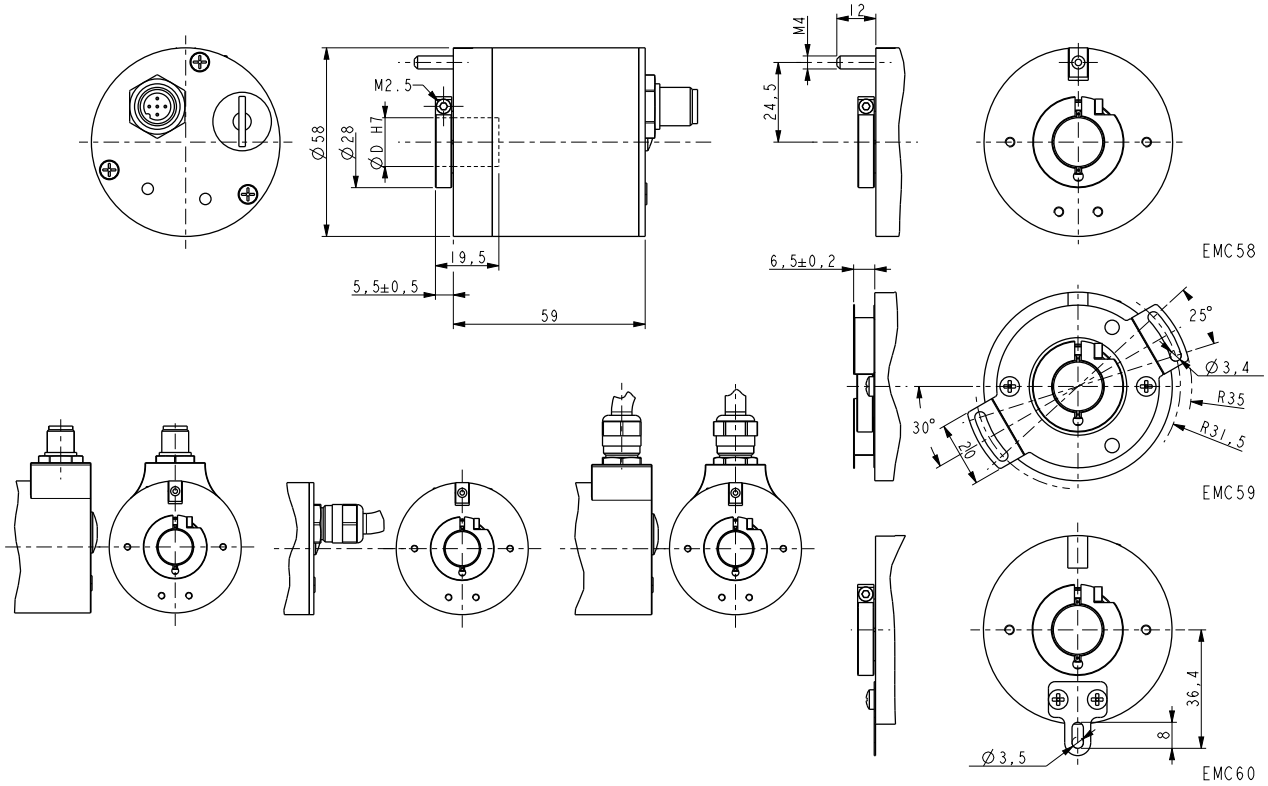
ACCESSORIES	
PAN/PGF:	flexible couplings
BR1:	reducing sleeves
E-M12FC:	5 pin M12 mating connector
EC-M12FC-LK-CB-xxx:	pre-assembled cable xx m
LKM-386:	fixing clamps


M4x6
N°3x120°
Ø50 h7
11,5±0,5
3
3
4
58
0,5
ØD h6
Ø42
Ø58

EM58


M4x6
N°6x60°
Ø58
Ø54
Ø36 f7
16±0,2
3
3
8
54
0,5
ØD h6
Ø48

EM58S



Order code

ES58 ES58S	ESC58 ESC59 ESC60	XX-XX ⓐ	-	XXX ⓑ	-	XX ⓒ	-	X ⓓ	X ⓔ	-	X ⓕ	XXXX ⓖ	/Sxxx ⓗ

ⓐ **RESOLUTION (BIT SINGLETURN-BIT MULTITURN)**
12-00 = 12 bit (4096 cpr x 1 turn)

ⓑ **INTERFACE / POWER SUPPLY**
MB2 = Modbus RTU, +10Vdc +30Vdc

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

ⓓ **PROTECTION**
P = IP67, IP65 shaft side

ⓔ **OPERATING TEMPERATURE RANGE**
T = -25°C +85°C (-13°F +185°F)
K = -40°C +100°C (-40°F +212°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
M5 = M12, 5 pin plug

ⓗ **CUSTOM VERSION**

Order code

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

ⓐ **RESOLUTION (BIT SINGLETURN-BIT MULTITURN)**
12-14 = 12 x 14 bit (4096 cpr x 16384 turns)

ⓑ **INTERFACE / POWER SUPPLY**
MB2 = Modbus RTU, +10Vdc +30Vdc

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

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Document release	Date	Description
1.0	9.02.2024	New order code