

Series

ES58 • ES58S • ESC58

- Compact singleturn encoder
- Resolution up to 8192 cpr
- High degree of protection, IP67



ES58 • ES58S • ESC58

### 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)
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):	ES58: 0,15 Ncm (typ.) ES58S, ESCxx: 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:	M12, M23 plug or cable output 2 m (6.56 ft)
Weight:	~ 200 g (7 oz)
Option:	• additional cable

### ELECTRICAL SPECIFICATIONS

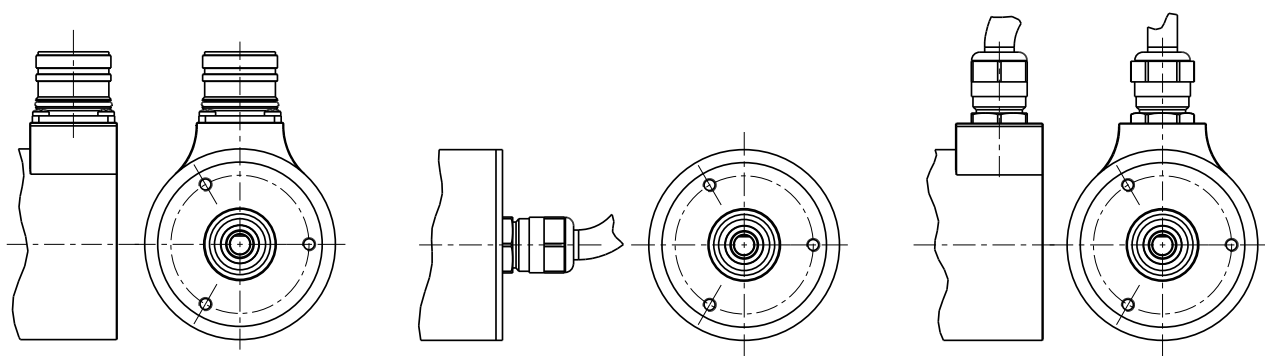
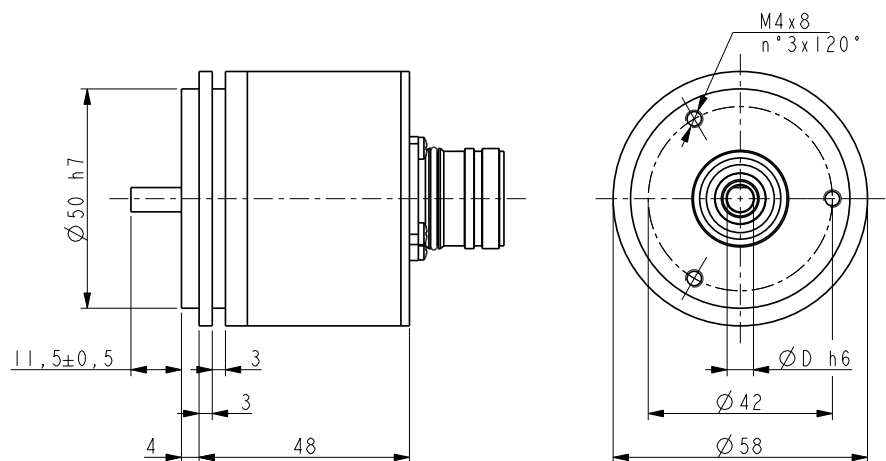
Resolution:	360, 720, 1024, 4096, 8192 cpr
Output circuits:	SSI (RS422), Bit parallel Push-Pull, NPN
Output code:	Gray, Binary
Counting frequency:	SSI: 150 kHz, Bit parallel: 50 kHz
Power supply:	+10Vdc +30Vdc
Power consumption:	SSI: 0,9 W Bit parallel: 1,6 W
Protection:	against inversion of polarity, 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

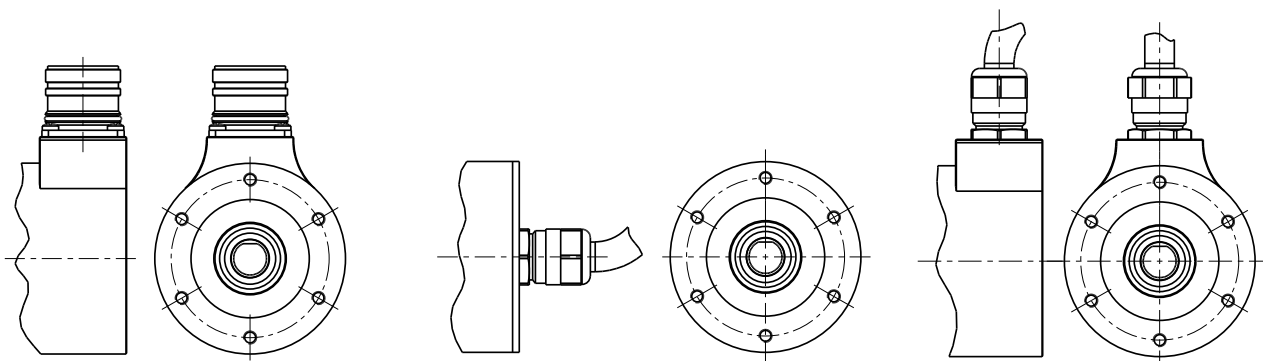
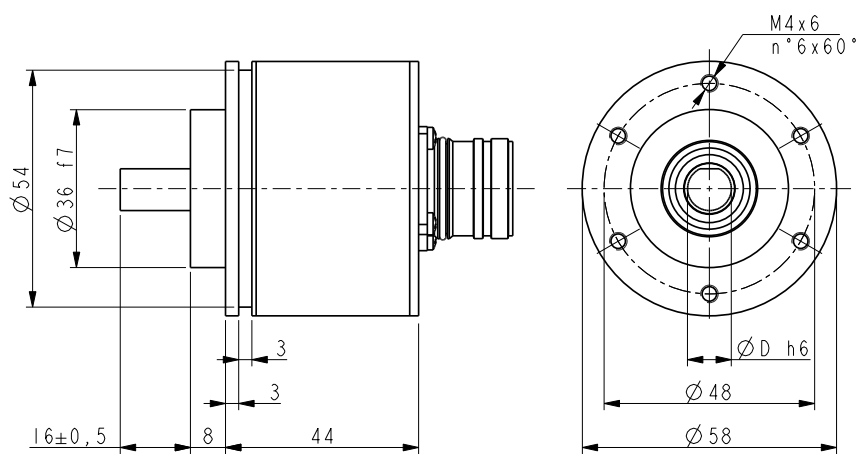
Flange:	anticorodal, UNI EN AW-6082
Housing:	anticorodal, UNI EN AW-6082 or zamac die cast
Bearings:	ABEC 5
Shaft:	stainless steel, non magnetic, UNI EN 4305

### ACCESSORIES

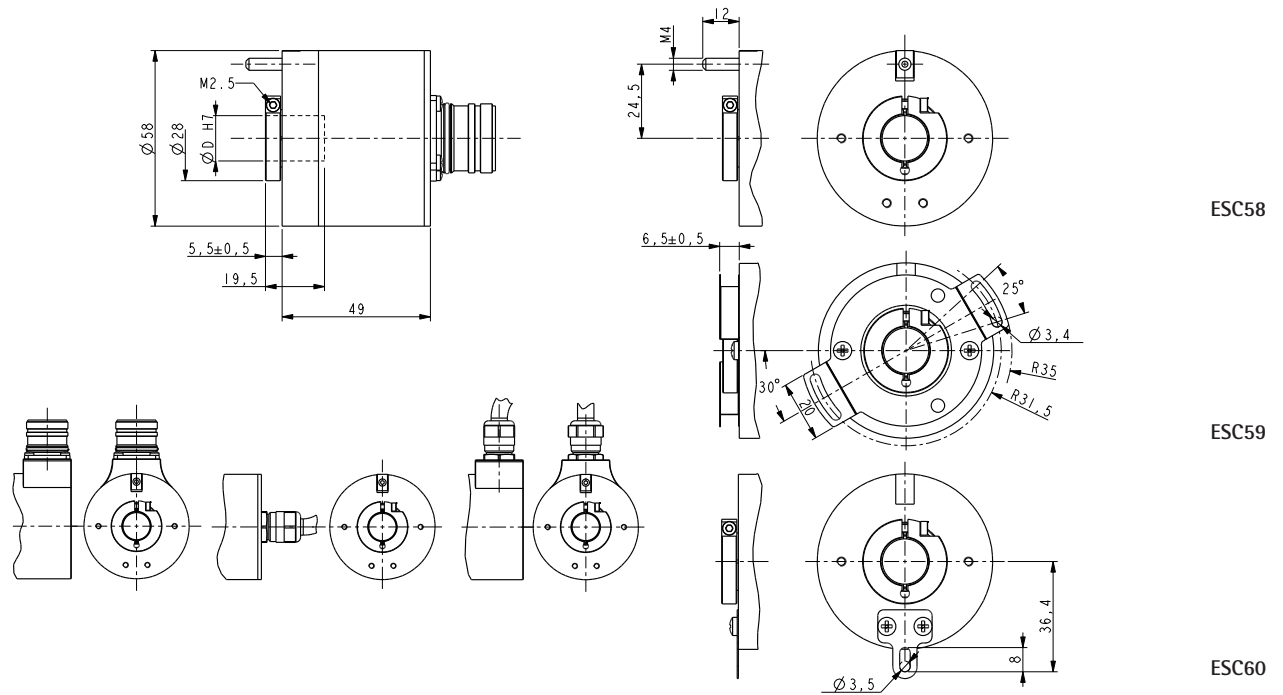
EPFL121H:	M23 12 pin mating connector
EM12F8:	M12 8 pin mating connector
EM12F12:	M12 12 pin mating connector
EPFL171H:	M23 17 pin mating connector
PAN/PGF:	flexible couplings
BR1:	reducing sleeves
EC-CR12F-S28-T12-xx:	cordset xx m, M23 connector
EC-M12F8-LK-M8-xx:	cordset xx m, M12 8 pin connector
EC-M12F12-LK-T12-xx:	cordset xx m, M12 12 pin conn.
EC-CR17F-LK-A20-xx:	cordset xx m, M23 17 pin conn.
LKM-386:	fixing clamps



ES58



ES58S



Order code - Bit parallel output

ES58	ESC58	XX-XX	-	XXX	-	XX	-	X	X	-	X	X	/Sxxx
ES58S	ESC59	Ⓐ		Ⓑ		Ⓒ		Ⓓ	Ⓔ		Ⓕ	Ⓖ	Ⓗ
	ESC60												

<p><b>Ⓐ RESOLUTION (BIT SINGLETURN-BIT MULTITURN)</b>          36-00 = 360 cpr          72-00 = 720 cpr          08-00 = 8 bit (256 cpr)          09-00 = 9 bit (512 cpr)          10-00 = 10 bit (1024 cpr)          11-00 = 11 bit (2048 cpr)          12-00 = 12 bit (4096 cpr)          13-00 = 13 bit (8192 cpr)</p>	<p><b>Ⓑ INTERFACE / POWER SUPPLY</b>          BY2 = Binary, Push-Pull, +10Vdc+30Vdc          GY2 = Gray, Push-Pull, +10Vdc+30Vdc          BN2 = Binary, NPN, +10Vdc+30Vdc          GN2 = Gray, NPN, +10Vdc+30Vdc</p> <p><b>Ⓒ SHAFT DIAMETER</b>          06 = 6 mm          08 = 8 mm          P9 = 9.52mm / 3/8"          10 = 10 mm          12 = 12 mm          14 = 14 mm (ESCxx)          15 = 15 mm (ESCxx)</p>	<p><b>Ⓓ PROTECTION</b>          P = IP67, IP65 shaft side</p> <p><b>Ⓔ OPER. TEMP. RANGE</b>          T = -25°C +85°C (-13°F +185°F)          K = -40°C +100°C (-40°F +212°F)</p> <p><b>Ⓕ CONNECTION POSITION</b>          A = axial          R = radial</p>	<p><b>Ⓖ CONNECTION TYPE &amp; CABLE LENGTH</b>          L020 = cable output 2 m (standard)          Lxx0 = cable out. x m (max. length 10 m)          L100 = cable output 10 m          M7 = M23 17 pin plug</p>	<p><b>Ⓗ CUSTOM VERSION</b></p>
---	---	---	--	--------------------------------

Order code - SSI output

ES58	ESC58	XX-XX	-	XXX	-	XX	-	X	X	-	X	X	/Sxxx
ES58S	ESC59	Ⓐ		Ⓑ		Ⓒ		Ⓓ	Ⓔ		Ⓕ	Ⓖ	Ⓗ
	ESC60												

<p><b>Ⓐ RESOLUTION (BIT SINGLETURN-BIT MULTITURN)</b>          36-00 = 360 cpr          72-00 = 720 cpr          09-00 = 9 bit (512 cpr)          10-00 = 10 bit (1024 cpr)          12-00 = 12 bit (4096 cpr)          13-00 = 13 bit (8192 cpr)</p>	<p><b>Ⓑ INTERFACE / POWER SUPPLY</b>          BS2 = Binary, SSI tree format, +10Vdc+30Vdc          BA2 = Binary, SSI LSB aligned, +10Vdc+30Vdc          GS2 = Gray, SSI tree format, +10Vdc+30Vdc          GA2 = Gray, SSI LSB aligned, +10Vdc+30Vdc</p>	<p><b>Ⓒ SHAFT DIAMETER</b>          06 = 6 mm          08 = 8 mm          P9 = 9.52mm / 3/8"          10 = 10 mm          12 = 12 mm          14 = 14 mm (ESCxx)          15 = 15 mm (ESCxx)</p>	<p><b>Ⓓ PROTECTION</b>          P = IP67, IP65 shaft side</p> <p><b>Ⓔ OPERATING TEMP. RANGE</b>          T = -25°C +85°C (-13°F +185°F)          K = -40°C +100°C (-40°F +212°F)</p> <p><b>Ⓕ CONNECTION POSITION</b>          A = axial          R = radial</p>	<p><b>Ⓖ CONNECTION TYPE &amp; CABLE LENGTH</b>          L020 = cable output 2 m (standard)          Lxx0 = cable out. x m (max. length 10 m)          L100 = cable output 10 m          M2 = M23 12 pin plug          M8 = M12 8 pin plug</p>	<p><b>Ⓗ CUSTOM VERSION</b></p>
---	--	--	---	---	--------------------------------

Document release	Date	Description
1.0	February 2024	New order code