

- Stainless steel housing
- Ethernet fieldbus encoder
- EXO, version with precise optical sensing
- EXM general purpose version with robust magnetic sensing
- Axial connector output



EXO59CK • EXM59CK



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
Hollow shaft diameter:	Ø 14, 15 mm
Reducing sleeves BR1-xx from Ø15mm to:	Ø 6, 8, 9.52, 10, 11, 12 mm
Shaft rotational speed:	12000 rpm, 9000 rpm continuous operation
Electrical connections:	M12 connectors
Weight:	~ 350 g (12,3 oz)

ELECTRICAL SPECIFICATIONS

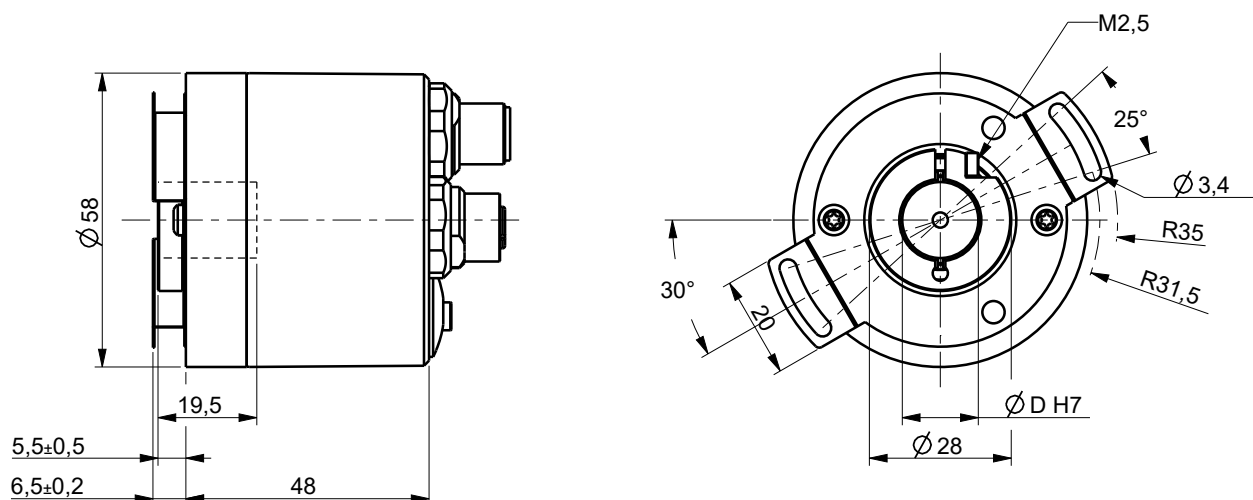
Resolution:	EXM59CK: 8192 x 16384; 262144 x 4096 EXO59CK: 262144 x 1; 65536 x 16384
Accuracy:	EXM58: ± 0,09°, EXO58: ± 0,01°
Power supply:	+5Vdc +30Vdc
Power consumption:	2 W max.
Interface & specification:	EtherCAT, CoE (CANopen over EtherCAT) Freerun, Sync-mode, Distributed clock Ethernet Powerlink V2.0, Profile 1.2.0, CIA DS406 Sync-mode, Segment SDO transfer, Multiplexing Ethernet/IP Vol. 2 Ed. 1.31, CIP Spec. Vol. 1 Ed. 3.3, Encoder profile 22h Sync-mode, Ring redundancy, Segment SDO transfer, Multiplexing Profinet IO RT1, RT3 (Isochronous) Ethernet Modbus TCP/IP Polled mode (master-slave) CC-Link IE Field Basic
Protection:	against inversion of polarity and short-circuit
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4

ACCESSORIES

BR1:	reducing sleeves
EC-M12ME-EC-GN-050:	M12 bus in/out cordset 5 m
EC-M12ME-EC-GN-100:	M12 bus in/out cordset 10 m
EXC-M12ME-EC-GN-050-RJ:	M12 + RJ bus in/out cordset 5 m
EXC-M12ME-EC-GN-100-RJ:	M12 + RJ bus in/out cordset 10 m
EC-M12PP-LK-PBS-050:	M12 Pwr cordset 5 m
EC-M12PP-LK-PBS-100:	M12 Pwr cordset 10 m
E-M12FC:	M12 connector (power supply)
E-M12MEC:	M12 connector (bus IN/OUT)
EC-M12ME90-EC-GN-050:	Ethernet M12 radial cordset with 5 m cable
EC-M12ME90-EC-GN-100:	Ethernet M12 radial cordset with 10 m cable
EXC-M12ME90-EC-GN-050-RJ:	Cordset M12 radial plug with 5 m cable + RJ conn.
EXC-M12ME90-EC-GN-100-RJ:	Cordset M12 radial plug with 10 m cable + RJ conn.
EC-M12PP90-LK-PBS-050:	Pwr supply cordset M12 radial plug 5 m cable
EC-M12PP90-LK-PBS-100:	Pwr supply cordset M12 radial plug 10 m cable
EXC-M12ME90-EC-GN-100-M-12ME90-EC:	Cordset M12 radial 5 m cable + M12 radial plug
EXC-M12ME90-EC-GN-200-M-12ME90-EC:	Cordset M12 radial 10 m cable + M12 radial plug

MATERIALS

Housing (all parts):	stainless steel
Shaft:	stainless steel, non magnetic, UNI EN 4305



EXO59CK • EXM59CK

Order code optical sensing

EXO59CK	XX-XX Ⓐ	-	XXX Ⓑ	-	XX Ⓒ	-	X Ⓓ	X Ⓔ	-	X Ⓕ	/Sxxx Ⓖ
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Ⓐ RESOLUTION

(BIT SINGLETURN-BIT MULTITURN)

18-00 = 18 bit (262144 cpr x 1 turn)

16-14 = 16 x 14 bit (65536 cpr x 16384 turns)

Ⓑ INTERFACE / POWER SUPPLY

EC4 = EtherCAT, +5Vdc +30Vdc

PL4 = Powerlink, +5Vdc +30Vdc

PT4 = Profinet IO, +5Vdc +30Vdc

EP4 = Ethernet/IP, +5Vdc +30Vdc

MT4 = Modbus TCP/IP, +5Vdc +30Vdc

CC4 = CC-Link IE Field basic, +5Vdc +30Vdc

Ⓒ SHAFT DIAMETER

14 = 14 mm

15 = 15 mm

Ⓓ PROTECTION

P = IP65

Ⓔ OPER. TEMP. RANGE

T = -25°C +85°C (-13°F +185°F)

Ⓕ CONNECTION POSITION

A = axial

Ⓖ CUSTOM VERSION

Order code magnetic sensing

EXM59CK	XX-XX Ⓐ	-	XXX Ⓑ	-	XX Ⓒ	-	X Ⓓ	X Ⓔ	-	X Ⓕ	/Sxxx Ⓖ
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Ⓐ RESOLUTION

(BIT SINGLETURN-BIT MULTITURN)

13-14 = 13 x 14 bit (8192 cpr x 16384 turns)

18-12 = 18 x 12 bit (262144 cpr x 4096 turns)

Ⓑ INTERFACE / POWER SUPPLY

EC4 = EtherCAT, +5Vdc +30Vdc

PL4 = Powerlink, +5Vdc +30Vdc

PT4 = Profinet IO, +5Vdc +30Vdc

EP4 = Ethernet/IP, +5Vdc +30Vdc

MT4 = Modbus TCP/IP, +5Vdc +30Vdc

CC4 = CC-Link IE Field basic, +5Vdc +30Vdc

Ⓒ SHAFT DIAMETER

14 = 14 mm

15 = 15 mm

Ⓓ PROTECTION

P = IP65

Ⓔ OPER. TEMP. RANGE

T = -25°C +85°C (-13°F +185°F)

Ⓕ CONNECTION POSITION

A = axial

Ⓖ CUSTOM VERSION

Document release	Date	Description
1.0	7.02.2025	First issue