ROTACOD

Absolute encoders with Ethernet interfaces

PHASE OUT
spares available

lika

Series **EM58 • HS58 • HM58 Ethernet**

Replacement of EM58/HS58/HM58 Profinet available as EXO58/ EXM58 Profinet with special version /S864 (only RT, not IRT mode) valid for units with MAC address 10-B9-FE-xx-xx-xx.

- Ethernet fieldbus encoder
- General purpose magneto-optical multiturn with 13x14 bit
- Precise optical singleturn with 18 bit
- Precise optical multiturn with 16x14 bit
- Radial or axial connector output
- Solid and hollow shaft versions

EM58 • HS58 • HM58 Ethernet

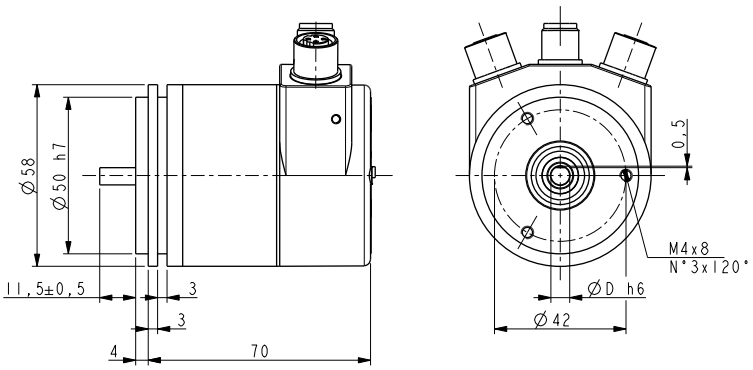
ENVIRONMENTAL SPECIFICATIONS	
Shock:	250 g, 6 ms acc. to CEI EN 60068-2-27
Vibrations:	10 g, 5-2000 Hz acc. to CEI EN 60068-2-6
Protection:	IP65
Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-40°C +100°C (-40°F +212°F) (98% R.H.without condensation)

MECHANICAL SPECIFICATIONS	
Dimensions:	see drawing
Shaft diameter:	Ø 6, 8, 9.52, 10, 12 mm
Hollow shaft diameter:	Ø 14, 15 mm
Reducing sleeves BR1-xx from Ø15 mm to:	Ø 6, 8, 9.52, 10, 11, 12 mm
Shaft loading (axial, radial):	40 N max.
Shaft rotational speed:	6000 rpm max.
Bearings life:	400 x 10^6 rev. min. (10^9 rev. min. with shaft loading of 20 N max.)
Weight:	~ 350 g (12,3 oz)

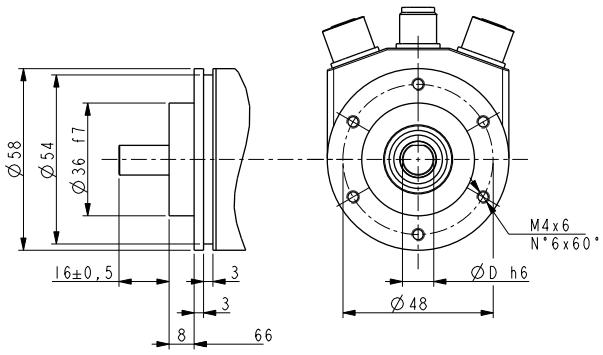
ELECTRICAL SPECIFICATIONS	
Resolution:	HS: 262144 cpr, EM: 8192 cpr x 16384 turns, HM: 65536 cpr x 16384 turns
Accuracy:	HS, HM: ± 0,007° - EM: ± 0,5°
Power supply:	+10V +30V
Power consumption:	3 W max.
Interface & specification:	EtherCAT, CoE (CANopen over EtherCAT) Freerun, Sync-mode, Distributed clock
	Ethernet Powerlink V2.0, Profile 1.2.0, CIA DS406 Sync-mode, Ring redundancy, Segment SDO transfer, Multiplexing
	Ethernet/IP Vol. 2 Ed. 1.22, CIP Spec. Vol. 1 Ed. 3.21, Encoder profile 22h Sync-mode, Ring redundancy, Segment SDO transfer, Multiplexing
	Profinet IO RT2, RT3 (Isochronous)
	Ethernet Modbus TCP/IP Polled mode (master-slave)
Programmable parameters:	see user manual
Protection:	against inversion of polarity and short-circuit
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4

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

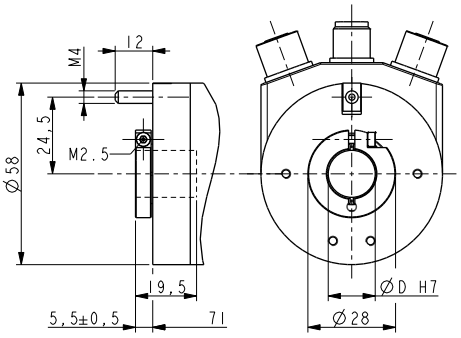
ACCESSORIES	
PAN/PGF:	flexible couplings
BR1:	reducing sleeves
LKM-386:	fixing clamps
EC-M12ME-EC-GN-5:	M12 bus in/out cordset 5 m
EC-M12ME-EC-GN-10:	M12 bus in/out cordset 10 m
EXC-M12ME-EC-GN-5-RJ:	M12 + RJ bus in/out cordset 5 m
EXC-M12ME-EC-GN-10-RJ:	M12 + RJ bus in/out cordset 10 m
EC-M12PP-LK-PBS-5:	M12 Pwr cordset 5 m
EC-M12PP-LK-PBS-10:	M12 Pwr cordset 10 m
E-M12FC:	M12 connector (power supply)
E-M12MEC:	M12 connector (bus IN/OUT)



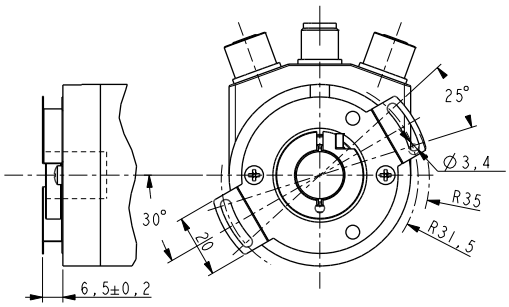
EM58 • HS58 • HM58
EC, EP, PL, PT, MT



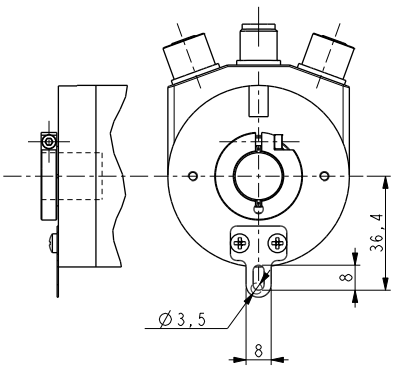
EM58S • HS58S • HM58S
EC, EP, PL, PT, MT



EMC58 • HSC58 • HMC58
EC, EP, PL, PT, MT



EMC59 • HSC59 • HMC59
EC, EP, PL, PT, MT



EMC60 • HSC60 • HMC60
EC, EP, PL, PT, MT

Order code radial version - Single turn

HS58 HS58S HSC58 HSC59 HSC60	XX ⓐ	/	XX ⓑ	-	XX ⓒ	/Sxxx ⓓ

ⓐ RESOLUTION
18 = 262144 cpr

ⓑ INTERFACE
EC = EtherCAT
PL = Powerlink
PT = Profinet IO
EP = Ethernet/IP
MT = Modbus TCP/IP

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

ⓓ CUSTOM VERSION

Order code radial version - Multi turn

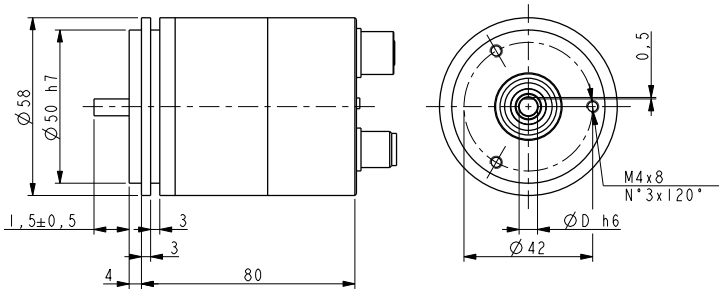
HM58 HM58S HMC58 HMC59 HMC60	EM58 EM58S EMC58 EMC59 EMC60	XX/XXXXX ⓐ	XX ⓑ	-	XX ⓒ	/Sxxx ⓓ

ⓐ RESOLUTION
13/16384 = 8192 cpr x 16384 turns (EMxx)
16/16384 = 65536 cpr x 16384 turns (HMxx)

ⓑ INTERFACE
EC = EtherCAT
PL = Powerlink
PT = Profinet IO
EP = Ethernet/IP
MT = Modbus TCP/IP

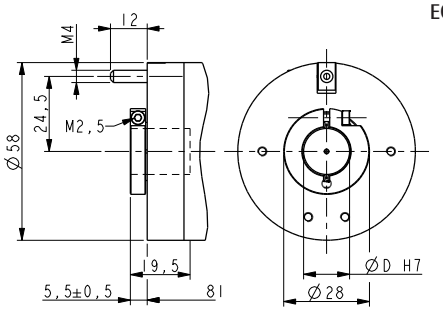
ⓒ SHAFT DIAMETER
6 = 6 mm
8 = 8 mm
P9 = 9.52 mm, 3/8"
10 = 10 mm
12 = 12 mm
14 = 14 mm (EMCxx, HMCxx)
15 = 15 mm (EMCxx, HMCxx)

ⓓ CUSTOM VERSION

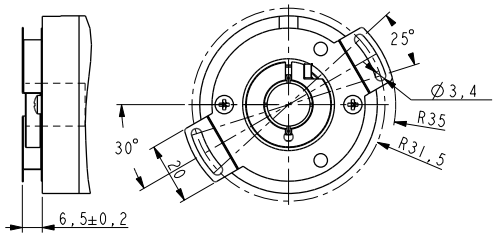


EM58 • HS58 • HM58
ECA, EPA, PLA, PTA, MTA

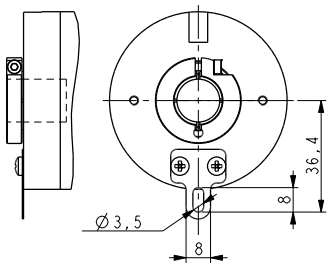
EM58S • HS58S • HM58S
ECA, EPA, PLA, PTA, MTA



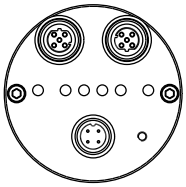
EMC58 • HSC58 • HMC58
ECA, EPA, PLA, PTA, MTA



EMC59 • HSC59 • HMC59
ECA, EPA, PLA, PTA, MTA



EMC60 • HSC60 • HMC60
ECA, EPA, PLA, PTA, MTA



Order code axial version - Single turn

HS58 HS58S HSC58 HSC59 HSC60	XX ⓐ	/	XXX ⓑ	-	XX ⓒ	/Sxxx ⓓ

ⓐ **RESOLUTION**
18 = 262144 cpr

ⓑ **INTERFACE**
ECA = EtherCAT
PLA = Powerlink
PTA = Profinet IO
EPA = Ethernet/IP
MTA = Modbus TCP/IP

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

ⓓ **CUSTOM VERSION**

Order code axial version - Multi turn

HM58 HM58S HMC58 HMC59 HMC60	EM58 EM58S EMC58 EMC59 EMC60	XX/XXXXX ⓐ	XXX ⓑ	-	XX ⓒ	/Sxxx ⓓ

ⓐ **RESOLUTION**
13/16384 = 8192 cpr x 16384 turns (EMxx)
16/16384 = 65536 cpr x 16384 turns (HMxx)

ⓑ **INTERFACE**
ECA = EtherCAT
PLA = Powerlink
PTA = Profinet IO
EPA = Ethernet/IP
MTA = Modbus TCP/IP

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

ⓓ **CUSTOM VERSION**

Document release	Date	Description
1.0	September 2023	Phase out and replacement version (Profinet)