

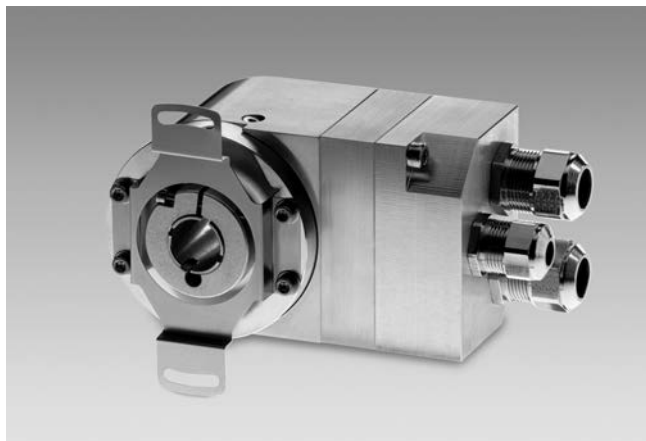
Absolute encoders - modular bus covers

High resolution, through hollow shaft

Optical multiturn encoders 18 bit ST / 13 bit MT

CANopen® / DeviceNet / EtherNet-IP / Profibus / PROFINET

GBMMH



GBMMH with modular bus cover

Features

- Encoder multiturn / bus cover
- Optical sensing method
- Total resolution up to 31 bit
- Through hollow shaft up to $\varnothing 14$ mm
- CANopen®/DeviceNet/EtherNet-IP/Profibus/
PROFINET
- Cost-efficient mounting
- Code continuity check optional by bus
- Maximum resistant against magnetic fields

Technical data - electrical ratings

Voltage supply	10...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤ 100 mA (24 VDC)
Initializing time typ.	250 ms after power on
Interfaces	CANopen®, DeviceNet, EtherNet/IP, Profibus-DPV0, PROFINET
Function	Multiturn
Device adress	Rotary switches in bus cover or via interface
Steps per revolution	≤ 262144 / 18 bit
Number of revolutions	≤ 8192 / 13 bit
Absolute accuracy	$\pm 0.01^\circ$
Sensing method	Optical
Code	Binary
Code sequence	CW/CCW programmable
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Programmable parameters	Steps per revolution Number of revolutions Preset Scaling Rotating direction
Diagnostic functions	Position or parameter error Multiturn sensing
Status indicator	DUO-LED integrated in bus cover
Approval	UL approval / E63076

Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 10...14$ mm (through hollow shaft)
Protection DIN EN 60529	IP 54, IP 65 (optional)
Operating speed	≤ 6000 rpm (mechanical) ≤ 6000 rpm (electric)
Starting acceleration	≤ 1000 U/s ²
Starting torque	≤ 0.04 Nm (+25 °C, IP 54)
Rotor moment of inertia	20 gcm ²
Materials	Housing: aluminium Flange: aluminium Bus cover: aluminium
Operating temperature	-25...+85 °C -40...+85 °C (optional)
Relative humidity	95 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 16-2000 Hz DIN EN 60068-2-27 Shock 200 g, 6 ms
Weight approx.	600 g
Connection	Bus cover

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Part number

GBMMH. **20**

Interface

3EA2	PROFINET / connector M12
3P32	Profibus-DPV0 / cable gland
3PA2	Profibus-DPV0 / connector M12
5P32	CANopen® / cable gland
8EA2	EtherNet/IP / connector M12
8P22	DeviceNet / cable gland

Through hollow shaft / clamping ring

8	ø10 mm, without pin / on flange
9	ø10 mm, pin 15 mm / on flange
0	ø12 mm, without pin / on flange
1	ø12 mm, pin 15 mm / on flange
4	ø14 mm, without pin / on flange
5	ø14 mm, pin 15 mm / on flange
L	ø12 mm, without pin / on housing
A	ø12 mm, pin 23.5 mm / on housing
M	ø14 mm, without pin / on housing
E	ø14 mm, pin 23.5 mm / on housing

CD with file descriptions is not included in the delivery.
You may order them on CD as accessory under part number Z 150.022.

Accessories

Connectors and cables

11034355	Cable connector M12, 4-pin, on both sides, D-coded, 5 m cable (Z 185.E05)
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Mounting accessories

10139345	Torque support by rubber buffer for encoders with 15 mm pin (Z 119.041)
10147837	Spring coupling for one-side attachment, length 35 mm (Z 119.050)
11034106	Spring coupling for motor's fan guard (Z 119.053)
10165157	Spring coupling for encoders with ø58 mm housing, hole distance 73 mm (Z 119.072)
11034121	Spring coupling for encoders with ø58 mm housing, hole distance 68 mm (Z 119.073)
11034123	Spring coupling for one-side attachment, length 115 mm (Z 119.076)
11003562	Spring coupling for encoders with ø58 mm housing, hole distance 63 mm (Z 119.082)
11098229	Clamping ring set 16/30x6 - stainless steel (Z 119.092)

Programming accessories

10146710	CD with describing files & manuals (Z 150.022)
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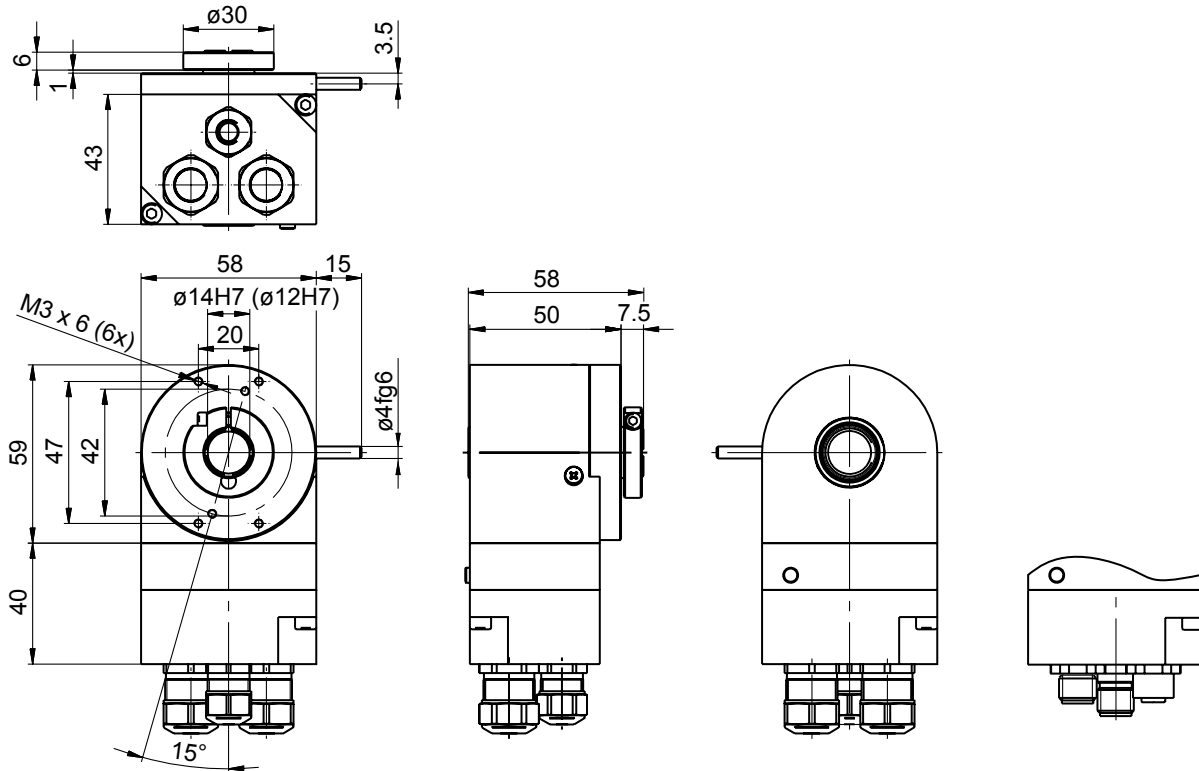
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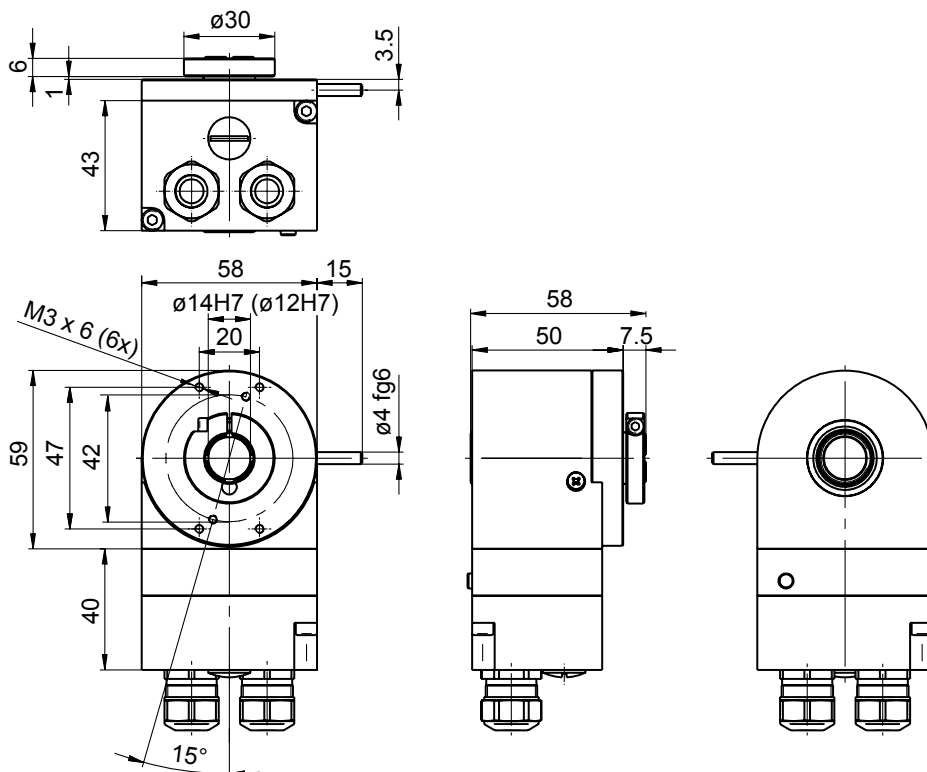
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Dimensions

GBMMH - clamping ring on flange / CANopen®, Profibus



GBMMH - clamping ring on flange / DeviceNet



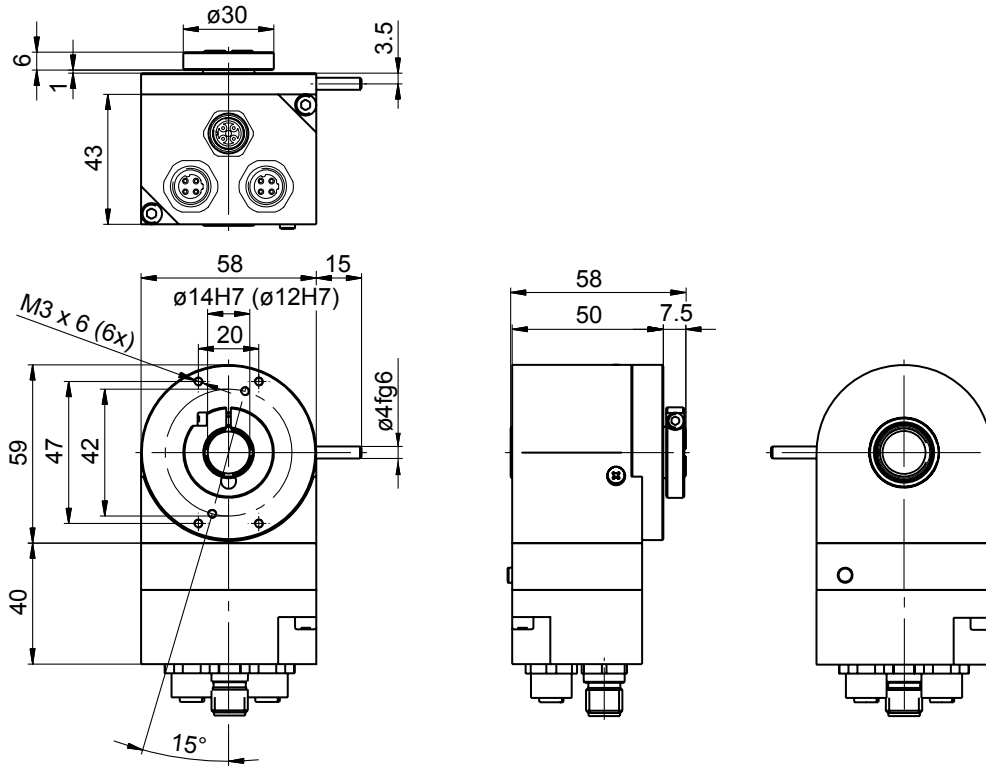
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Dimensions

GBMMH - clamping ring on flange / EtherNet-IP, PROFINET



GBMMH - clamping ring on housing

