

Absolute encoders - modular bus covers

High resolution, hollow shaft

Optical single and multiturn encoders 18 bit ST / 13 bit MT

CANopen / DeviceNet / EtherNet-IP / Profibus / PROFINET

GBAMH, GBMMH - *multivoPlus*



GBAMH with modular bus cover

Features

- Encoder single- or multiturn / bus cover
- Optical sensing
- Total resolution max. 31 bit
- Hollow shaft max. $\varnothing 14$ mm
- CANopen/DeviceNet/EtherNet-IP/Profibus/PROFINET
- Cost-efficient mounting
- Code continuity check optional by bus

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
User address	Rotary switch in bus cover or via interface
Steps per turn	≤ 262144 / 18 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 Rotational direction
Diagnostic functions	Position or parameter error Multiturn sensing
Status indicator	DUO-LED integrated in bus cover
Approval	UL approval / E63076

GBAMH

Function Singleturn

GBMMH

Function Multiturn
Number of turns ≤ 8192 / 13 bit

Technical data - mechanical design

Dimensions (flange)	$\varnothing 58$ mm
Shaft	$\varnothing 12$ mm hollow shaft $\varnothing 14$ mm hollow shaft
Protection DIN EN 60529	IP 54
Operating speed	≤ 6000 rpm (mechanical) ≤ 6000 rpm (electric)
Starting torque	≤ 0.04 Nm (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

Singleturn

GBAMH. 20

	Interface
3EA2	PROFINET / connector M12
3P32	Profibus-DPV0 / cable gland
5P32	CANopen / cable gland
8EA2	EtherNet/IP / connector M12
8P22	DeviceNet / cable gland
<u>Hollow shaft / clamping ring</u>	
0	Hollow shaft ø12 mm without pin / on flange
1	Hollow shaft ø12 mm with pin 15 mm / on flange
4	Hollow shaft ø14 mm without pin / on flange
5	Hollow shaft ø14 mm with pin 15 mm / on flange
L	Hollow shaft ø12 mm without pin / on housing
A	Hollow shaft ø12 mm with pin 23.5 mm / on housing
M	Hollow shaft ø14 mm without pin / on housing
E	Hollow shaft ø14 mm with pin 23.5 mm / on housing

Multiturn

GBMMH. 20

	Interface
3EA2	PROFINET / connector M12
3P32	Profibus-DPV0 / cable gland
5P32	CANopen / cable gland
8EA2	EtherNet/IP / connector M12
8P22	DeviceNet / cable gland
<u>Hollow shaft / clamping ring</u>	
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5	Hollow shaft ø14 mm with pin 15 mm / on flange
L	Hollow shaft ø12 mm without pin / on housing
A	Hollow shaft ø12 mm with pin 23.5 mm / on housing
M	Hollow shaft ø14 mm without pin / on housing
E	Hollow shaft ø14 mm with pin 23.5 mm / on housing

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

Accessories

Connectors and cables

Z 119.034 Connector for data cable fibre-optic

Mounting accessories

Z 119.041 Torque support by rubber buffer element for encoders with 15 mm pin

Z 119.050 Spring coupling

Z 119.053 Spring coupling height 19.1 mm

Z 119.072 Spring coupling for encoders with ø58 mm housing, hole distance 73 mm

Z 119.073 Spring coupling for encoders with ø58 mm housing, hole distance 68 mm

Z 119.076 Spring coupling for encoders with ø58 mm housing

Z 119.082 Spring coupling for encoders with ø58 mm housing, hole distance 63 mm

Programming accessories

Z 150.022 CD with describing files & manuals

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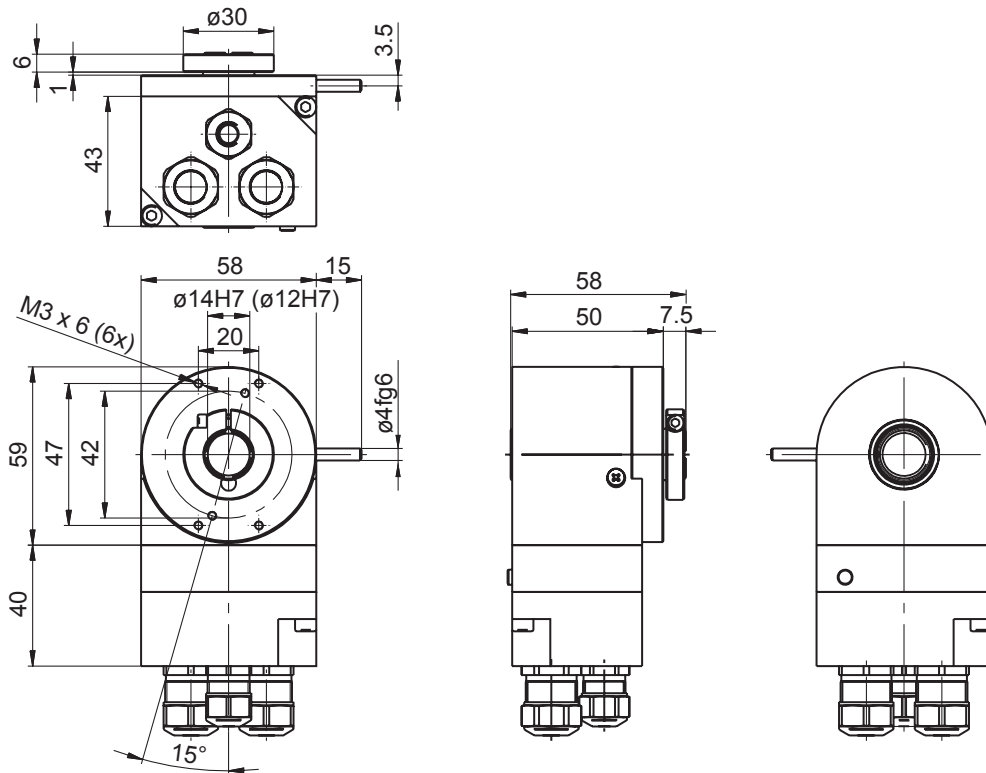
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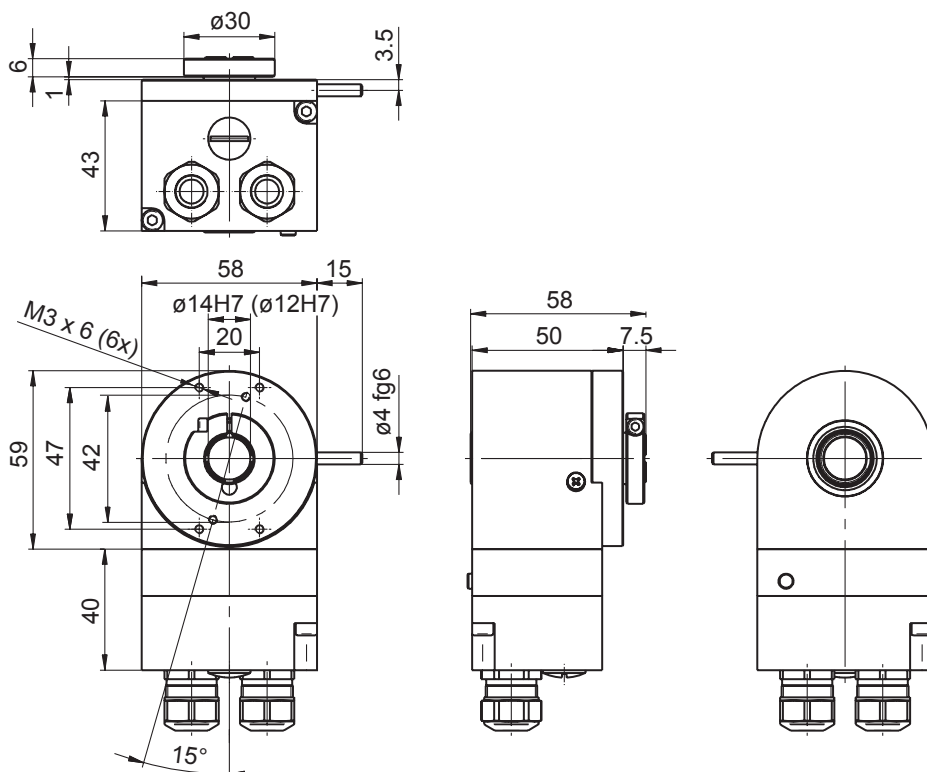
GBAMH, GBMMH - *multivoPlus*

Dimensions

GBAMH, GBMMH - clamping ring on flange / CANopen, Profibus



GBAMH, GBMMH - clamping ring on flange / DeviceNet



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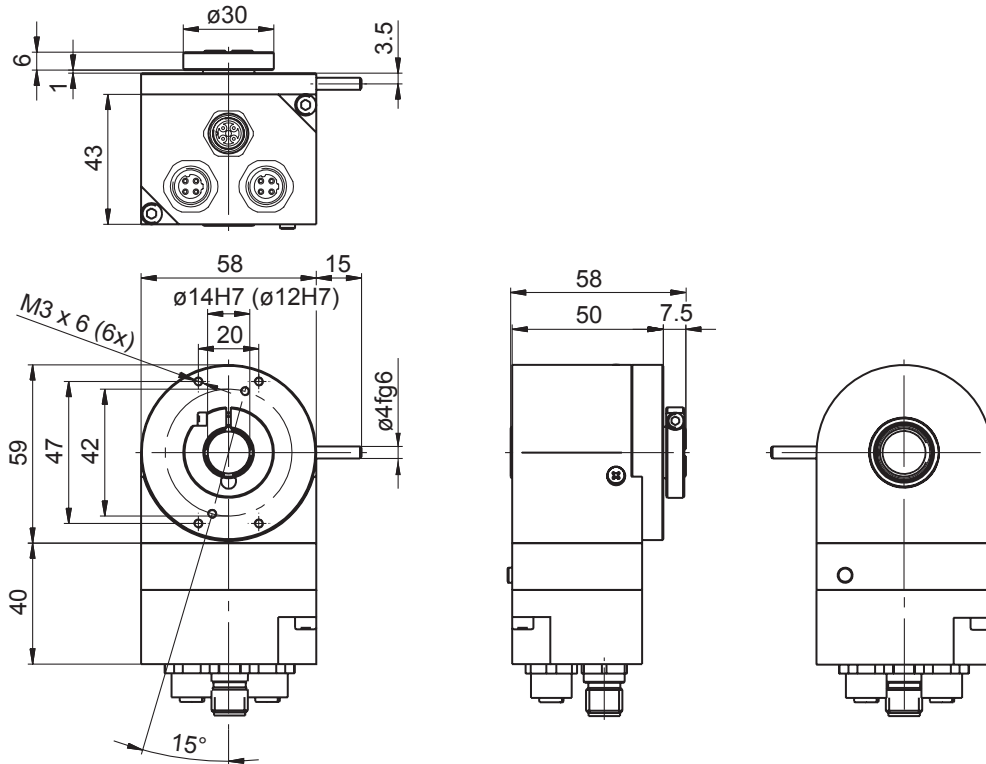
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GBAMH, GBMMH - *multivoPlus*

Dimensions

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



GBAMH, GBMMH - clamping ring on housing

