

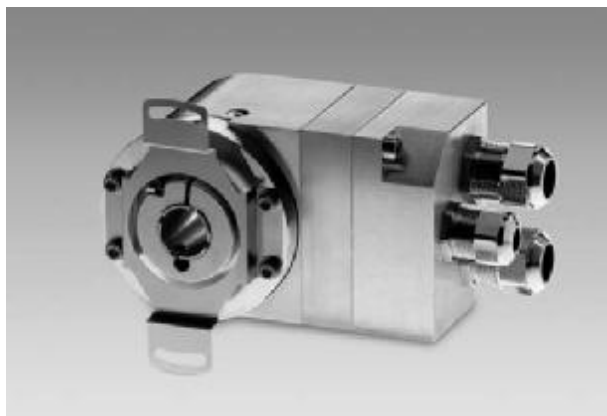
# Absolute encoders - modular bus covers

Optical sensing, high resolution, hollow shaft

Single and multiturn encoder 18 bit ST / 13 bit MT

CANopen / DeviceNet / Profibus

## 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
- Modular bus interfaces
- CANopen / DeviceNet / Profibus
- 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	$\leq 100$ mA (24 VDC)
Initializing time (typ.)	250 ms after power on
Interfaces	Profibus-DPV0, CANopen, DeviceNet
User address	Rotary switch in bus cover
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
<b>GBAMH</b>	
Function	Singleturn
<b>GBMMH</b>	
Function	Multiturn
Number of turns	8192 / 13 bit

### Technical data - mechanical design

Housing	$\varnothing 58$ mm
Shaft	$\varnothing 12$ mm hollow shaft $\varnothing 14$ mm hollow shaft
Protection DIN EN 60529	IP 54
Operating speed	$\leq 6000$ rpm (mechanical) $\leq 6000$ rpm (electric)
Starting torque	$\leq 0.04$ Nm IP 54
Rotor moment of inertia	20 gcm <sup>2</sup>
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
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Singleturn
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GBAMH.	20		
			Interface
		3P32	Profibus-DPV0 / cable gland
		5P32	CANopen / cable gland
		8P22	DeviceNet / cable gland
			Hollow shaft
0			Hollow shaft ø12 mm without pin
1			Hollow shaft ø12 mm with pin 15 mm
B			Hollow shaft ø12 mm with pin 9.5 mm
4			Hollow shaft ø14 mm without pin
5			Hollow shaft ø14 mm with pin 15 mm
F			Hollow shaft ø14 mm with pin 9.5 mm

Multiturn
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GBMMH.	20		
			Interface
		3P32	Profibus-DPV0 / cable gland
		5P32	CANopen / cable gland
		8P22	DeviceNet / cable gland
			Hollow shaft
0			Hollow shaft ø12 mm without pin
1			Hollow shaft ø12 mm with pin 15 mm
B			Hollow shaft ø12 mm with pin 9.5 mm
4			Hollow shaft ø14 mm without pin
5			Hollow shaft ø14 mm with pin 15 mm
F			Hollow shaft ø14 mm with pin 9.5 mm

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. Matching bus covers are listed in "Accessories".

Accessories
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Connectors and cables
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Z 119.034	Connector for data cable fibre-optic
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Mounting accessories
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Z 119.024	Torque support and spring washer for encoders with 9.5 mm pin
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 119.070	Spring coupling height 29.1 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
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Z 150.022	CD with describing files & manuals
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8/1/2010 Subject to modification in technic and design. Errors and omissions excepted.

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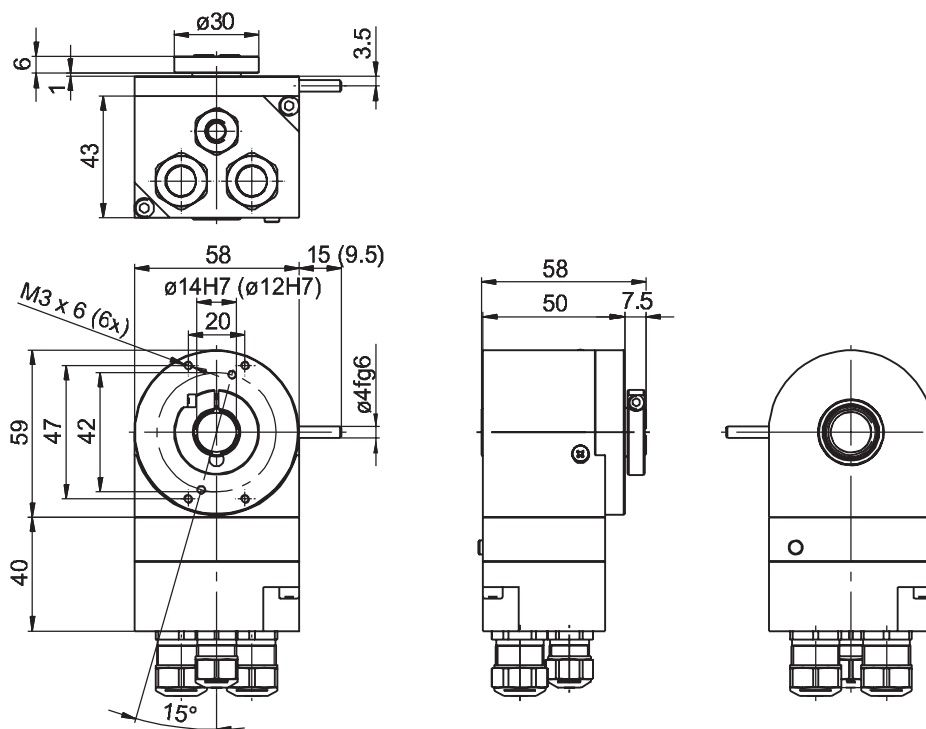
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## GBAMH, GBMMH - *multivoPlus*

### Dimensions

#### GBAMH, GBMMH CANopen, Profibus



#### GBAMH, GBMMH DeviceNet

