

# Absolute Encoders - Modular Bus Covers

multivoPlus: optical sensing, high resolution, hollow shaft

Single and multiturn encoder 18 bit ST / 16 bit MT

CANopen / DeviceNet / Profibus



GBAMH, GBMMH

multivoPlus



GBAMH with modular bus cover

## Features

- High-resolution singleturn/multiturn encoder with bus covers
- High total resolution up to 31 bit
- Hollow shaft up to  $\varnothing 14$  mm
- New innovative sensing technology
- Modular bus interfaces
- CANopen / DeviceNet / Profibus-DP
- Cost-efficient mounting
- Code continuity check optional by bus

## Technical data - electrical ratings

Supply voltage range	10...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	$\leq 100$ mA (24 VDC)
Initializing time	250 ms after power on
Interfaces	Profibus-DPV0, CANopen, DeviceNet
User address	Rotary switch in bus cover
Steps per turn	262144 / 18 bit
Number of turns	65536 / 16 bit
Absolute accuracy	$\pm 0.01^\circ$
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 turn Number of turns Preset Scaling Rotating direction
Diagnostic functions	Position or parameter error Multiturn sensing
Status indicator	DUO-LED in bus cover
Approval	UL Approval / E63076

## GBAMH

Function	Singleturn
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## GBMMH

Function	Multiturn
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## 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
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
E-connection	Bus cover

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adparts

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## Ordering part number

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		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 pin 15 mm	
F	Hollow shaft ø14 mm pin 9.5 mm	

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		Interface
	3P32	Profibus-DPV0 / cable gland
	5P32	CANopen / cable gland
	8P22	DeviceNet / cable gland
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CD with describing files is not included with delivery. Describing files (GSD / EDS / XML), manuals and mounting instructions are available as download on [www.ivo.de](http://www.ivo.de). You may also order them on CD as accessory free-of-charge: Part number Z 150.022.

The matching bus covers are listed in the chapter "Bus covers / Accessories / Service".

## Accessories

### Programming accessories

Z 150.022 CD with describing file and manuals

### Mating connectors

Z 119.034 Lightbus connector for data line

### Mounting accessories

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 119.072 Spring washer for encoders with 58 mm housing

## Recommended accessories



Z 119.072

For flange without pin



Z 119.024

For flange with pin 9.5 mm



Z 119.041

For flange with pin 15 mm



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