

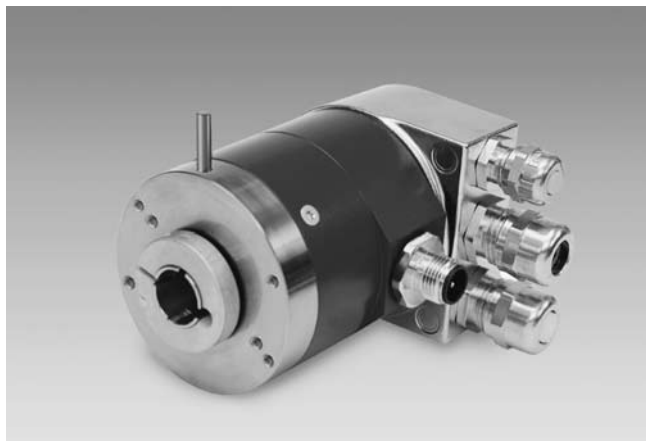
# Absolute encoders - modular bus covers

Optical sensing, end shaft

Multiturn encoder 13 bit ST / 16 bit MT, incremental tracks

CANopen / DeviceNet / EtherCAT / Profibus / SSI / fibre-optic

## GXMMS + incremental *multivo*



GXMMS with modular bus cover

### Features

- Encoder multiturn / bus cover
- Optical sensing
- Resolution: singleturn 13 bit, multiturn 16 bit
- End shaft  $\varnothing 12$  mm /  $\varnothing 14$  mm
- Extreme compact design
- High resistance to shock and vibrations
- Modular bus interfaces
- CANopen/DeviceNet/EtherCAT/Profibus/SSI/fibre-optic
- Code continuity check optional by bus
- Two incremental tracks A and B

### 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 / V2, CANopen, DeviceNet, EtherCAT, Fibre-optic bus, SSI
Function	Multiturn
User address	Rotary switch in bus cover (type-specific)
Steps per turn	8192 / 13 bit
Number of turns	65536 / 16 bit
Incremental output	2048 pulses A90°B + inverted
Absolute accuracy	$\pm 0.025^\circ$
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

### Technical data - mechanical design

Housing	$\varnothing 58$ mm
Shaft	$\varnothing 12$ mm end shaft $\varnothing 14$ mm end shaft
Protection DIN EN 60529	IP 54
Operating speed	$\leq 6000$ rpm (mechanical) $\leq 6000$ rpm (electric)
Starting torque	$\leq 0.015$ Nm IP 54
Rotor moment of inertia	20 gcm <sup>2</sup>
Materials	Housing: steel Flange: steel Bus cover: zinc die-cast or 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.	720 g
E-connection	Bus cover

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#### Part number

GXMMS.

		<u>Interface</u>
	3P32	Profibus-DPV0 / cable gland
	3PA2	Profibus-DPV0 / connector M12
	3V32	Profibus-DPV2 / cable gland
	3VA2	Profibus-DPV2 / connector M12
	EPA2	EtherCAT / connector M12
	5P32	CANopen / cable gland
	5PA2	CANopen / connector M12
	8P22	DeviceNet / cable gland
	8PA2	DeviceNet / connector M12
	LM32	Fiber-optic / cable gland
	2PA2	SSI / connector M12
		<u>Pulses / Incremental output</u>
	50	2048 pulses / push-pull +inverted
	F0	2048 pulses / RS422
		<u>End shaft</u>
0		End shaft ø12 mm without pin
1		End shaft ø12 mm with pin 15 mm
B		End shaft ø12 mm with pin 9.5 mm
4		End shaft ø14 mm without pin
5		End shaft ø14 mm with pin 15 mm
F		End 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 the chapter "Accessories".

#### Accessories

##### Connectors and cables

Z 119.034 Connector for data cable fibre-optic

##### 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 119.050 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

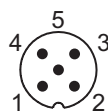
Z 150.022 CD with describing files & manuals

Z 139.008 Programming cable for encoders with SSI bus cover, CD with software and manual

#### Terminal assignment

##### Incremental connector

Connector	Assignment
Pin 1	A
Pin 2	B
Pin 3	A inv.
Pin 4	B inv.
Pin 5	GND



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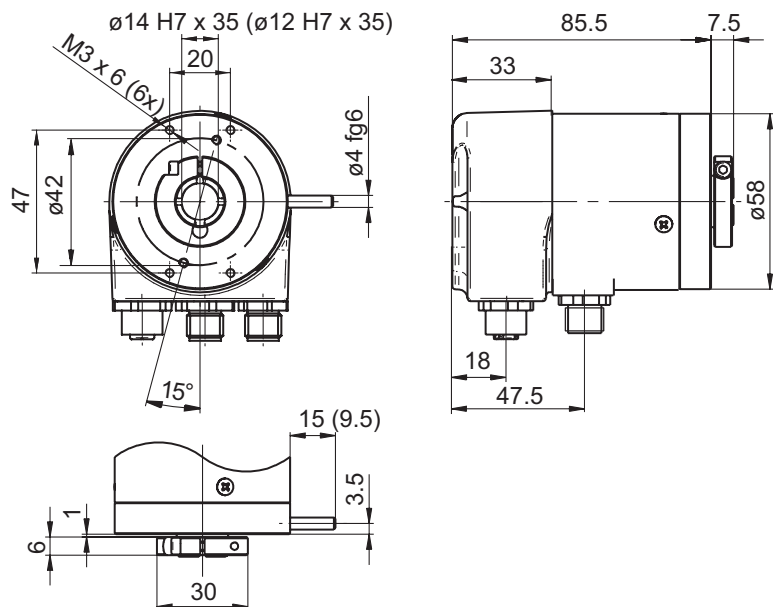
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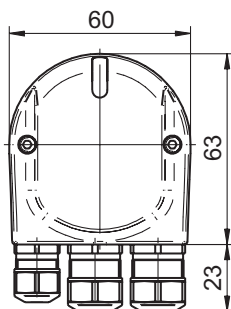
## GXMMS + incremental *multivo*

### Dimensions

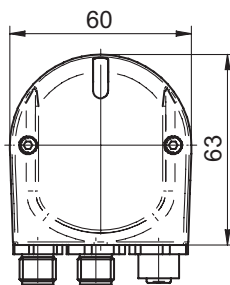
#### GXMMS



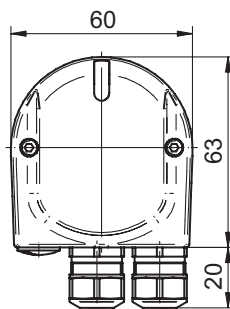
#### Profibus-DP, CANopen



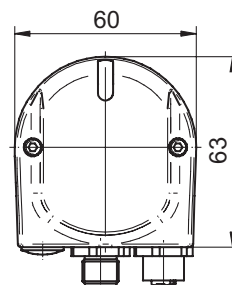
#### Profibus-DP - M12



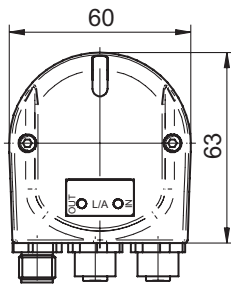
#### DeviceNet



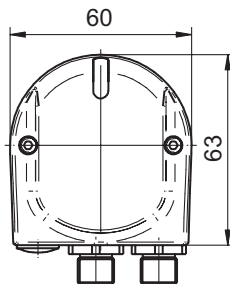
#### CANopen, DeviceNet M12



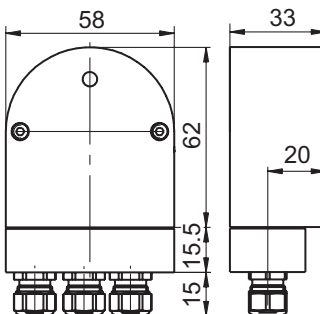
#### EtherCAT



#### SSI



#### Fibre-optic



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