

# Absolute encoders - modular bus covers

Solid shaft with clamping or synchro flange

Optical multiturn encoders 13 bit ST / 16 bit MT, incremental tracks

## GXMMW + incremental



GXMMW with modular bus cover

### Features

- Encoder multiturn / bus cover
- Optical sensing method
- Resolution: singleturn 13 bit, multiturn 16 bit
- Clamping or synchro flange
- High resistance to shock and vibrations
- CANopen®/DeviceNet/EtherCAT/EtherNet-IP  
SAEJ1939/PROFINET/PoE/POWERLINK/Profibus/SSI
- Code continuity check optional by bus
- Two incremental tracks A and B
- 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, EtherCAT, EtherNet/IP, PoE, Profibus, PROFINET, POWERLINK, SAEJ1939, SSI
Function	Multiturn
Device adress	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	±0.025 °
Sensing method	Optical
Code	Binary
Code sequence	CW/CCW programmable
Output stages	Push-pull short-circuit proof RS422
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)	ø58 mm
Shaft type	ø10 mm solid shaft (clamping flange) ø6 mm solid shaft (synchro flange)
Flange	Clamping or synchro flange
Protection DIN EN 60529	IP 54 (without shaft seal), IP 65 (with shaft seal)
Operating speed	≤10000 rpm (mechanical) ≤6000 rpm (electric)
Starting acceleration	≤1000 U/s <sup>2</sup>
Starting torque	≤0.01 Nm (+25 °C, IP 54) ≤0.015 Nm (+25 °C, IP 65)
Rotor moment of inertia	20 gcm <sup>2</sup>
Admitted shaft load	≤20 N axial ≤40 N radial
Materials	Housing: steel 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.	670 g
Connection	Bus cover



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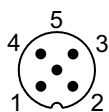
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### Terminal assignment

#### Incremental connector

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



### Accessories

#### Mounting accessories

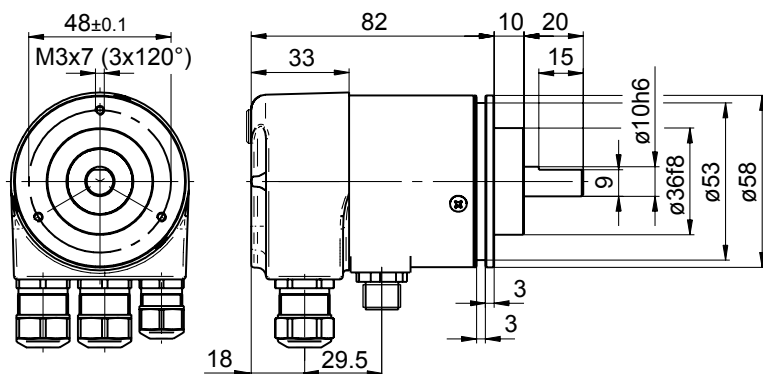
Z 119.006	Eccentric fixing, single
Z 119.013	Adaptor plate for clamping flange for modification into synchro flange
Z 119.015	Mounting adaptor for synchro flange
Z 119.017	Mounting adaptor for clamping flange (M3)
Z 119.035	Bearing flange for encoders with synchro flange

#### Programming accessories

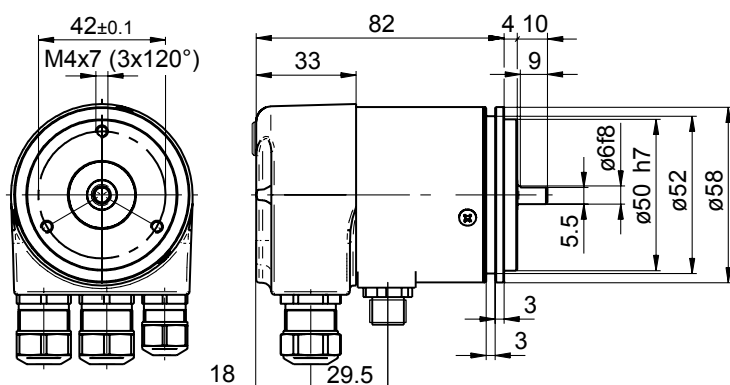
Z 150.022	CD with describing files & manuals
Z 139.008	Programming cable for encoders with SSI bus cover, CD with software and manual

### Dimensions

#### GXMMW - clamping flange



#### GXMMW - synchro flange



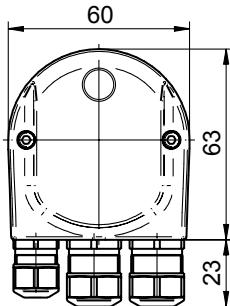
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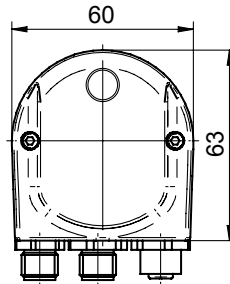
GXMMW + incremental

## Dimensions

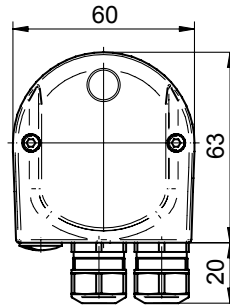
Profibus-DP/CANopen®



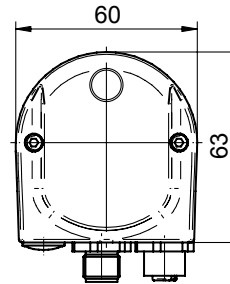
Profibus-DP - M12



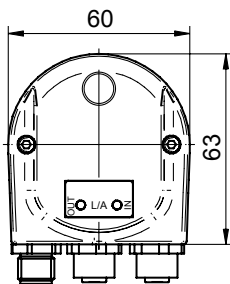
DeviceNet



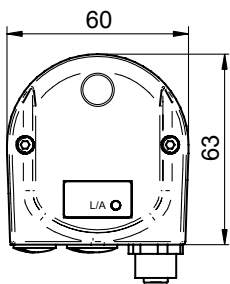
CANopen®/DeviceNet M12



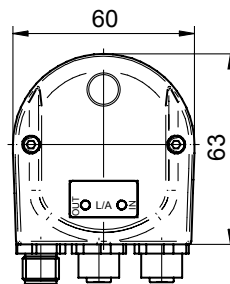
EtherCAT/EtherNet-IP



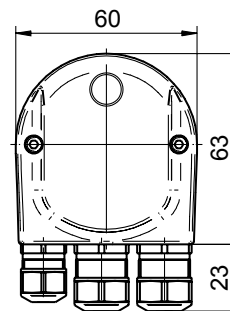
Power over EtherCAT



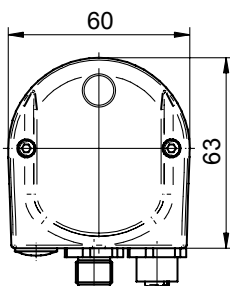
PROFINET/POWERLINK



SAEJ1939



SAEJ1939 - M12



SSI

