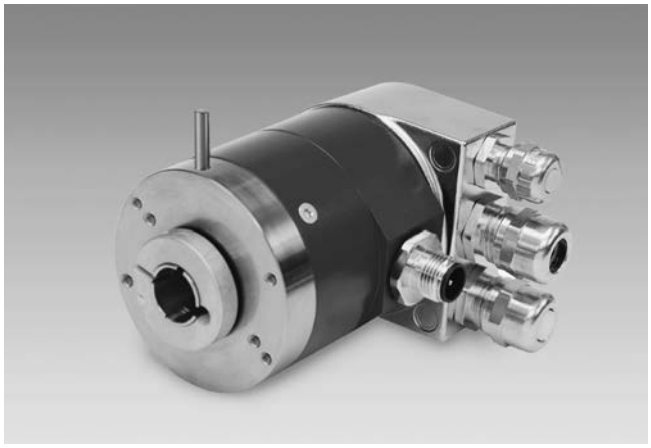
Absolute encoders - modular bus covers

Blind hollow shaft up to ø15 mm

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

GXMMS + incremental



GXMMS with modular bus cover

Features

- **Encoder multiturn / bus cover**
- **Optical sensing method**
- **Resolution: singleturn 13 bit, multiturn 16 bit**
- **Blind hollow shaft ø12...ø15 mm**
- **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**
- **100 % 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
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	ø12 mm (blind hollow shaft) ø14 mm (blind hollow shaft) ø15 mm (blind hollow shaft)
Protection DIN EN 60529	IP 54, IP 65 (optional)
Operating speed	≤6000 rpm (mechanical) ≤6000 rpm (electric)
Starting acceleration	≤1000 U/s²
Starting torque	≤0.015 Nm (IP 54)
Rotor moment of inertia	20 gcm²
Materials	Housing: steel Flange: aluminium Bus cover: zinc die-cast
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.	520 g
Connection	Bus cover

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Part number

GXMMS. [ ][ ][ ]

Interface

3P32	Profibus-DPV0 / cable gland
3PA2	Profibus-DPV0 / connector M12
3V32	Profibus-DPV2 / cable gland
3VA2	Profibus-DPV2 / connector M12
3EA2	PROFINET / connector M12
EPA6	EtherCAT / connector M12
8EA2	EtherNet/IP / connector M12
EEA2	Power over EtherCAT / connector M12*
5EA4	POWERLINK / connector M12
5P32	CANopen® / cable gland
5PA2	CANopen® / connector M12
8P22	DeviceNet / cable gland
8PA2	DeviceNet / connector M12
2PA2	SSI / connector M12
5B32	SAEJ1939 / cable gland
5BA2	SAEJ1939 / connector M12

Pulses / Incremental output

50	2048 pulses / push-pull +inverted
F0	2048 pulses / RS422

Blind hollow shaft

0	ø12 mm, without pin
1	ø12 mm, pin 15 mm
B	ø12 mm, pin 9.5 mm
4	ø14 mm, without pin
5	ø14 mm, pin 15 mm
F	ø14 mm, pin 9.5 mm
U	ø15 mm, pin 15 mm / IP 54
W	ø15 mm, without pin / IP 65

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

* Power over EtherCAT on request

Absolute encoders - modular bus covers

Blind hollow shaft up to ø15 mm

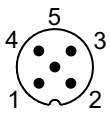
Optical multiturn encoders 13 bit ST / 16 bit MT, incremental tracks

GXMMS + incremental

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

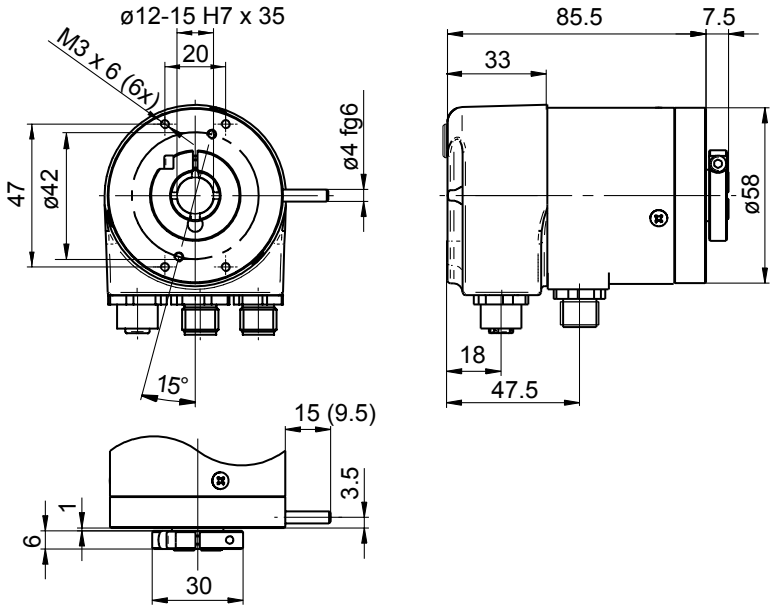
Z 119.024	Torque support and spring washer for encoders with 9.5 mm pin
Z 119.041	Torque support by rubber buffer for encoders with 15 mm pin
Z 119.050	Spring coupling for one-side attachment, length 35 mm
Z 119.053	Spring coupling for motor's fan guard
Z 119.072	Spring coupling for encoders with ø58 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 one-side attachment, length 115 mm
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

Dimensions

GXMMS



Absolute encoders - modular bus covers

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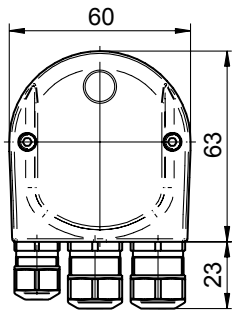
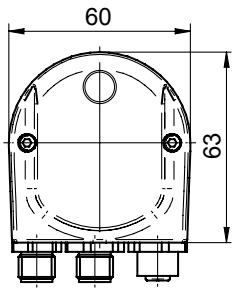
Dimensions

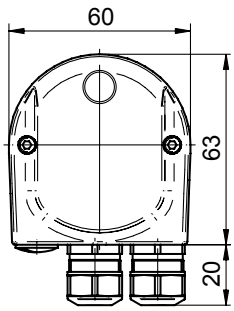
Profibus-DP/CANopen®



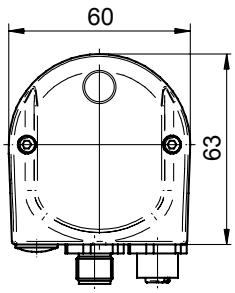
Profibus-DP - M12



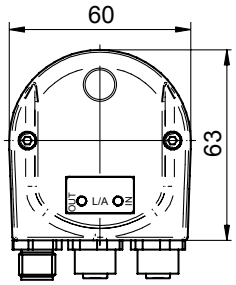
DeviceNet



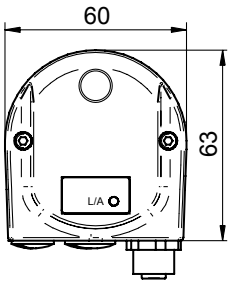
CANopen®/DeviceNet M12



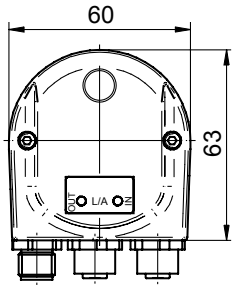
EtherCAT/EtherNet-IP



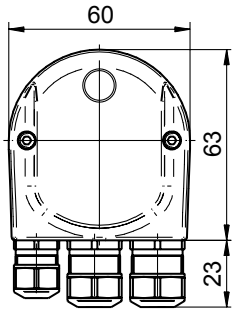
Power over EtherCAT



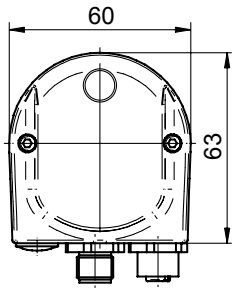
PROFINET/POWERLINK



SAEJ1939



SAEJ1939 - M12



SSI