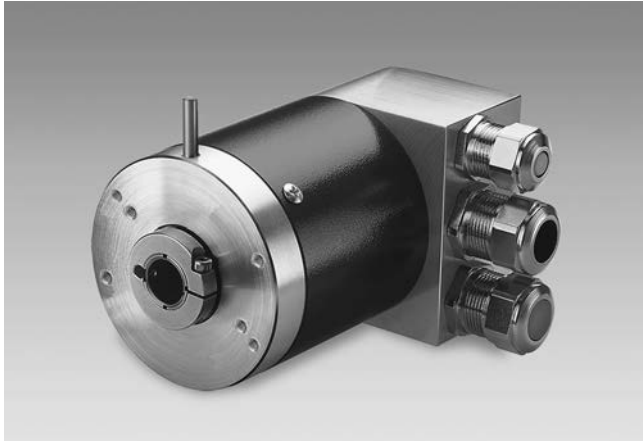


Absolute encoders - modular bus covers

High resolution, blind hollow shaft

Optical multiturn encoders 18 bit ST / 13 bit MT

GBMMS



GBMMS with modular bus cover

Features

- Encoder multiturn / bus cover
- Optical sensing method
- Total resolution up to 31 bit
- Blind hollow shaft $\varnothing 12... \varnothing 15$ mm
- CANopen®/DeviceNet/EtherCAT/EtherNet-IP
SAEJ1939/PROFINET/POWERLINK/Profibus/SSI
- Cost-efficient mounting
- Code continuity check optional by bus
- 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, Profibus, PROFINET, POWERLINK, SAE J1939, SSI
Function	Multiturn
Device address	Rotary switches in bus cover
Steps per revolution	≤ 262144 / 18 bit
Number of revolutions	≤ 8192 / 13 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 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)	$\varnothing 58$ mm
Shaft type	$\varnothing 12...15$ 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/s ²
Starting torque	≤ 0.015 Nm (+25 °C)
Rotor moment of inertia	20 gcm ²
Materials	Housing: aluminium 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.	600 g
Connection	Bus cover

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GBMMS

Part number

GBMMS. 20

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
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

Blind hollow shaft

0	∅12 mm, without pin
1	∅12 mm, pin 15 mm
B	∅12 mm, pin 9.5 mm
4	∅14 mm, without pin
5	∅14 mm, pin 15 mm
F	∅14 mm, pin 9.5 mm
U	∅15 mm, pin 15 mm / IP 54
W	∅15 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.

Accessories

Connectors and cables

11034355	Cable connector M12, 4-pin, on both sides, D-coded, 5 m cable (Z 185.E05)
11034304	Female connector M12, 8-pin, straight, 2 m cable (Z 174.003)
11034305	Female connector M12, 8-pin, straight, 5 m cable (Z 174.005)

Mounting accessories

10140347	Torque support and spring washer for encoders with 9.5 mm pin (Z 119.024)
10139345	Torque support by rubber buffer for encoders with 15 mm pin (Z 119.041)
10147837	Spring coupling for one-side attachment, length 35 mm (Z 119.050)
11034106	Spring coupling for motor's fan guard (Z 119.053)
10165157	Spring coupling for encoders with ∅58 mm housing, hole distance 73 mm (Z 119.072)
11034121	Spring coupling for encoders with ∅58 mm housing, hole distance 68 mm (Z 119.073)
11034123	Spring coupling for one-side attachment, length 115 mm (Z 119.076)
11003562	Spring coupling for encoders with ∅58 mm housing, hole distance 63 mm (Z 119.082)
11098229	Clamping ring set 16/30x6 - stainless steel (Z 119.092)

Programming accessories

10146710	CD with describing files & manuals (Z 150.022)
11034193	Programming cable for encoders with SSI bus cover, CD with software and manual (Z 139.008)

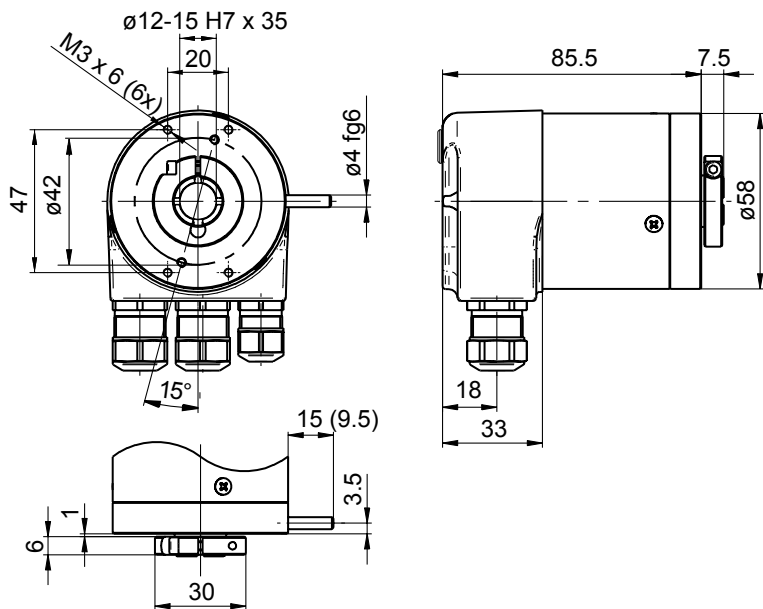
Absolute encoders - modular bus covers

High resolution, blind hollow shaft

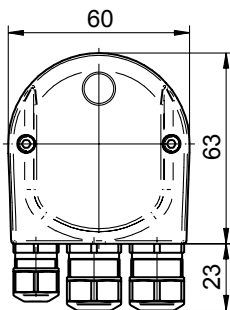
Optical multiturn encoders 18 bit ST / 13 bit MT

GBMMS

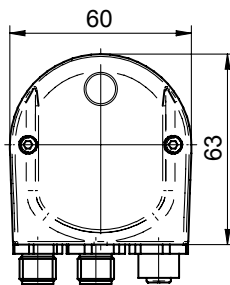
Dimensions



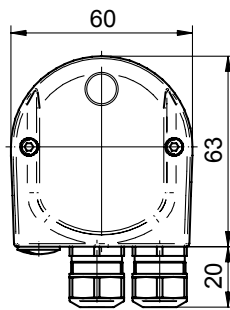
Profibus-DP/CANopen®



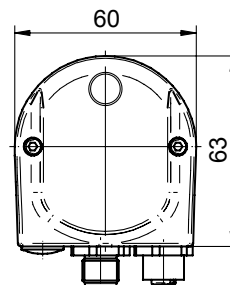
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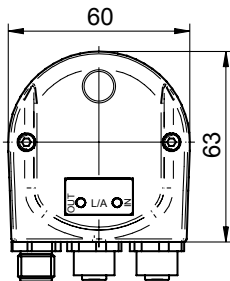
DeviceNet



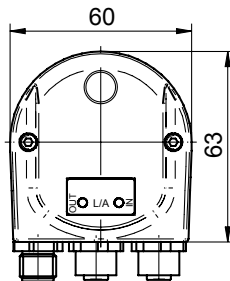
CANopen®/DeviceNet M12



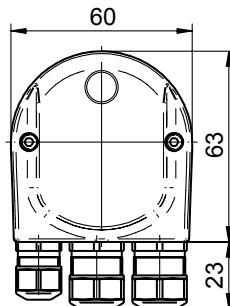
EtherCAT/EtherNet-IP



PROFINET/POWERLINK



SAEJ1939



SAEJ1939 - M12

