

GBMMW

High resolution, solid shaft

Optical multiturn encoders 18 bit ST / 13 bit MT

Overview

- Encoder multiturn / bus cover
- Optical sensing method
- Total resolution up to 31 bit
- Clamping or synchro flange
- High resistance to shock and vibrations
- CANopen®, EtherCAT, EtherNet/IP, SAEJ1939, PROFINET, Profibus, SSI
- Code continuity check optional by bus
- Maximum resistant against magnetic fields



Technical data

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
Interface	CANopen® EtherCAT EtherNet/IP Profibus PROFINET SAE J1939 SSI

Function	Multiturn
Device adress	Rotary switches in bus cover
Steps per revolution	≤262144 / 18 bit
Number of revolutions	≤8192 / 13 bit
Absolute accuracy	±0.01 °
Sensing method	Optical
Code	Binary
Code sequence	CW/CCW programmable
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-4
Programmable parameters	Steps per revolution Number of revolutions Preset Scaling Rotating direction
Diagnostic function	Position or parameter error Multiturn sensing

Technical data - electrical ratings

Status indicator	DUO-LED integrated in bus cover
Approval	UL approval / E63076

Technical data - mechanical design

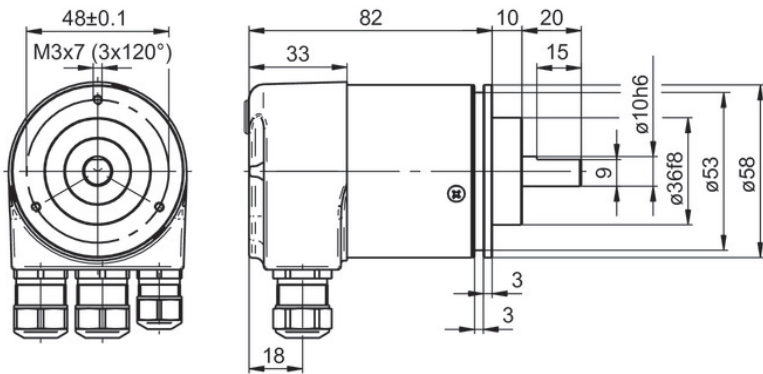
Size (flange)	ø58 mm
Shaft type	ø10 mm solid shaft (clamping flange) ø6 mm solid shaft (synchro flange)
Flange	Clamping or synchro flange
Protection EN 60529	IP 54 (without shaft seal) IP 65 (with shaft seal)
Operating speed	≤10000 rpm (mechanical) ≤6000 rpm (electric)
Starting acceleration	≤1000 U/s ²
Starting torque	≤0.015 Nm (+25 °C, IP 54) ≤0.03 Nm (+25 °C, IP 65)
Rotor moment of inertia	20 gcm ²
Admitted shaft load	≤20 N axial ≤40 N radial
Material	Housing: steel Flange: aluminium Bus cover: zinc die-cast
Operating temperature	-25...+85 °C -40...+85 °C (optional)
Relative humidity	95 % non-condensing
Resistance	EN 60068-2-6 Vibration 10 g, 16-2000 Hz EN 60068-2-27 Shock 200 g, 6 ms
Weight approx.	600 g
Connection	Bus cover

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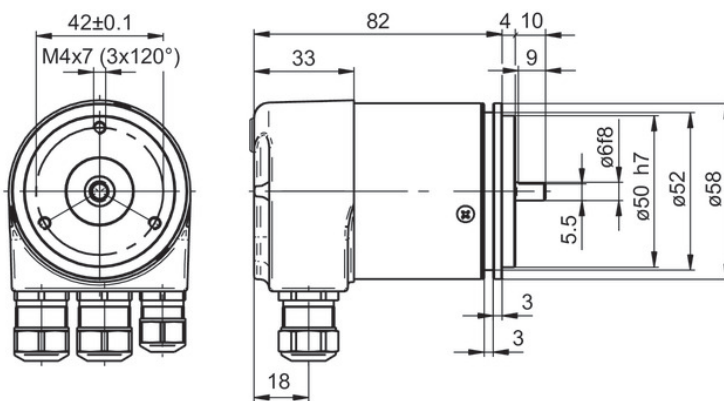
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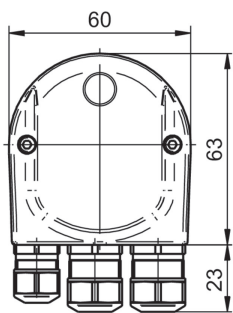
Dimensions



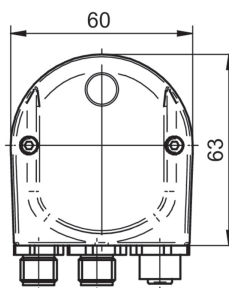
GBMMW - clamping flange



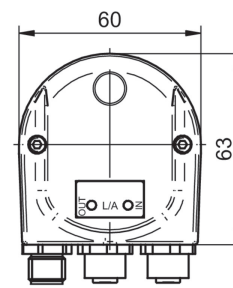
GBMMW - synchro flange



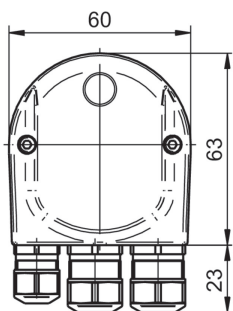
Profibus-DP



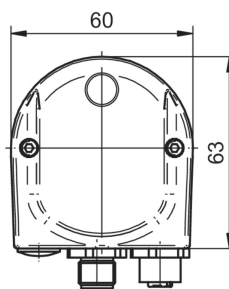
Profibus-DP - M12



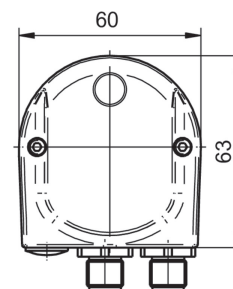
EtherCAT/EtherNet-IP



SAEJ1939



SAEJ1939 - M12



SSI

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Ordering reference

		GBMMW	.	#	20	####
Product						
		GBMMW				
Flange / Solid shaft						
Clamping flange / ø10 mm, IP 54					0	
Clamping flange / ø10 mm, IP 65					A	
Synchro flange / ø6 mm, IP 54					1	
Synchro flange / ø6 mm, IP 65					B	
Voltage supply						
10...30 VDC					20	
Interface						
Profibus-DPV0 / cable gland						3P32
Profibus-DPV0 / connector M12						3PA2
Profibus-DPV2 / cable gland						3V32
Profibus-DPV2 / connector M12						3VA2
PROFINET / connector M12						3EA2
EtherCAT / connector M12						EPA6
EtherNet/IP / connector M12						8EA2
CANopen® / cable gland						5P32
CANopen® / connector M12						5PA2
SSI / connector M12						2PA2
SAEJ1939 / cable gland						5B32
SAEJ1939 / connector M12						5BA2

Accessories

Mounting accessories

10117669	Eccentric fixing, single (Z 119.006)
10141255	Adaptor plate for clamping flange for modification into synchro flange (Z 119.013)
10117667	Mounting adaptor for encoders with synchro flange (Z 119.015)
10125051	Mounting adaptor for encoders with clamping flange (M3) (Z 119.017)
10158124	Bearing flange for encoders with synchro flange (Z 119.035)
10141132	Spring washer coupling D1=6 / D2=10 (Z 121.C01)

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)