Absolute encoders

GBMMH

High resolution, through hollow shaft

Optical multiturn encoders 18 bit ST / 13 bit MT, CANopen®, EtherNet/IP, Profibus, PROFINET

Overview

- Encoder multiturn / bus cover
- Optical sensing method
- Total resolution up to 31 bit
- Through hollow shaft up to ø14 mm
- CANopen®, EtherNet/IP, Profibus, PROFINET
- Cost-efficient mounting
- 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® EtherNet/IP Profibus-DPV0 PROFINET
Function	Multiturn
Device adress	Rotary switches in bus cover or via interface
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

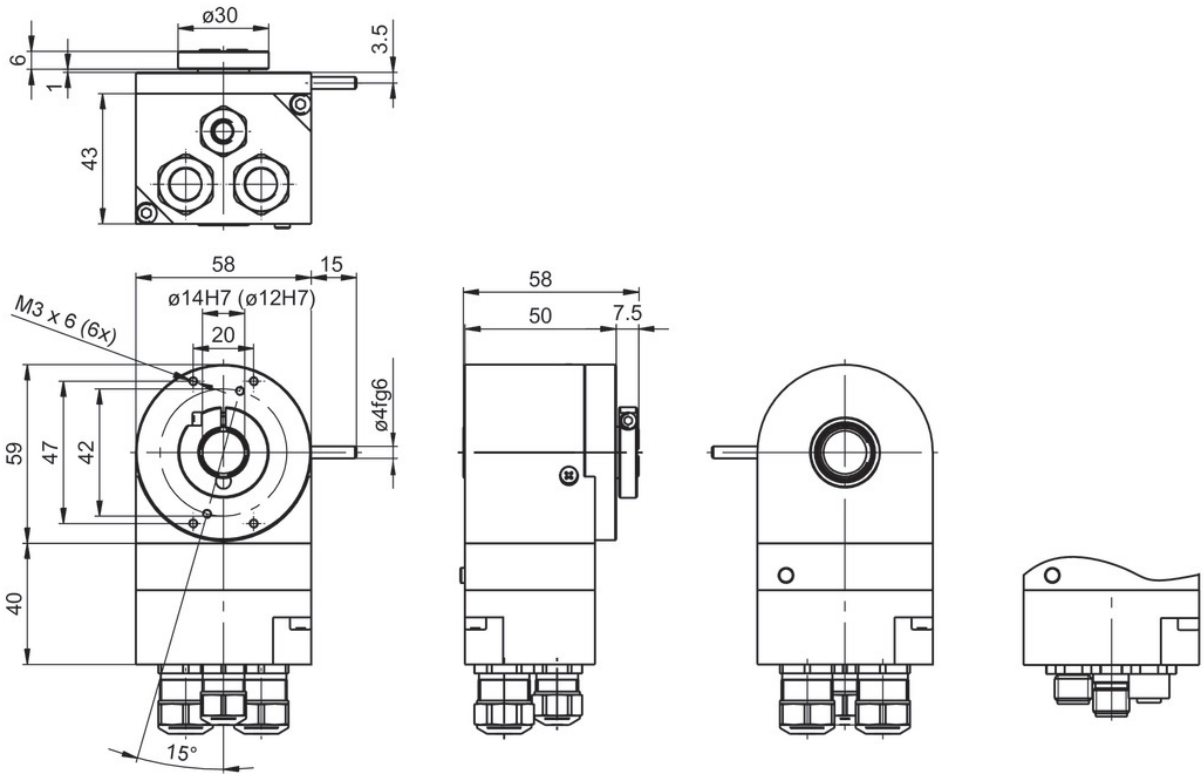
Technical data - electrical ratings	
Status indicator	DUO-LED integrated in bus cover
Approval	UL approval / E63076
Technical data - mechanical design	
Size (flange)	ø58 mm
Shaft type	ø10...14 mm (through hollow shaft)
Protection EN 60529	IP 54 IP 65 (optional)
Operating speed	≤6000 rpm (mechanical) ≤6000 rpm (electric)
Starting acceleration	≤1000 U/s²
Starting torque	≤0.04 Nm (+25 °C, IP 54)
Rotor moment of inertia	20 gcm²
Material	Housing: aluminium Flange: aluminium Bus cover: aluminium
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

GBMMH

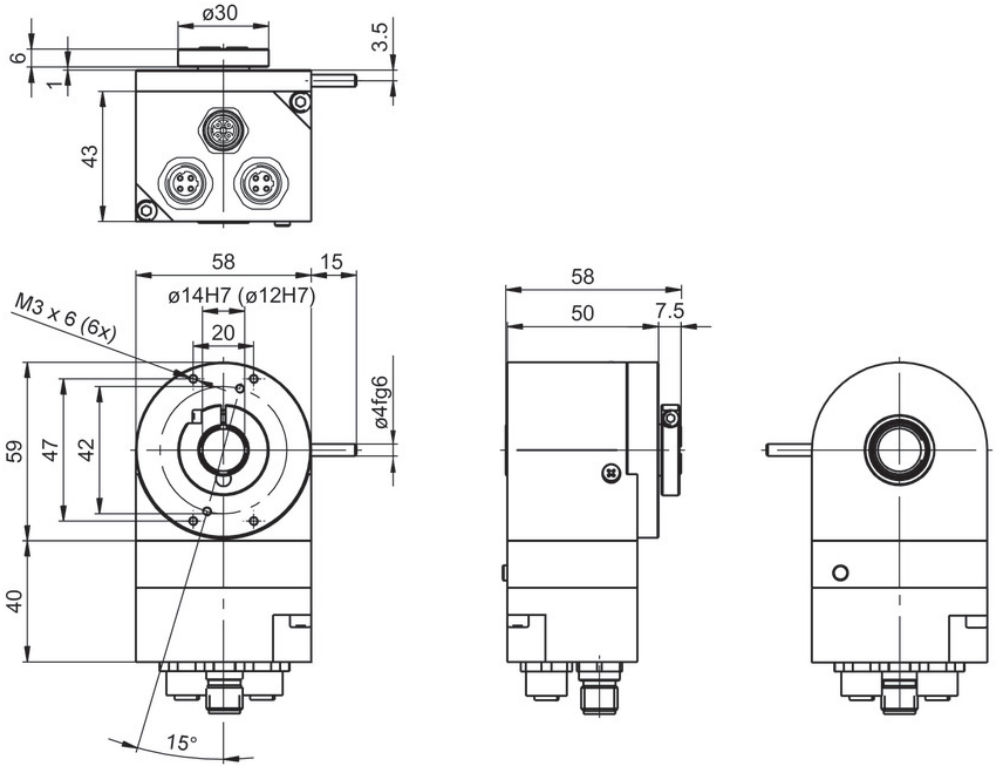
High resolution, through hollow shaft

Optical multiturn encoders 18 bit ST / 13 bit MT, CANopen®, EtherNet/IP, Profibus, PROFINET

Dimensions



GBMMH - clamping ring on flange / CANopen®, Profibus



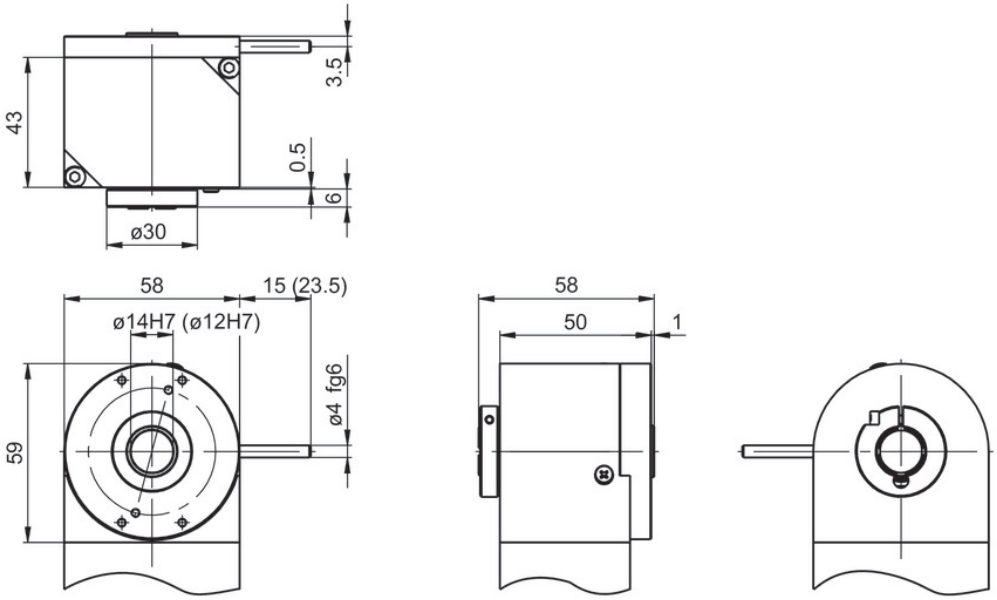
GBMMH - clamping ring on flange / EtherNet-IP, PROFINET

GBMMH

High resolution, through hollow shaft

Optical multiturn encoders 18 bit ST / 13 bit MT, CANopen®, EtherNet/IP, Profibus, PROFINET

Dimensions



GBMMH - clamping ring on housing

GBMMH

High resolution, through hollow shaft

Optical multiturn encoders 18 bit ST / 13 bit MT, CANopen®, EtherNet/IP, Profibus, PROFINET

Ordering reference

	GBMMH	.	#	20	####
Product	GBMMH				
Through hollow shaft / clamping ring					
ø10 mm, without pin / on flange			8		
ø10 mm, pin 15 mm / on flange			9		
ø12 mm, without pin / on flange			0		
ø12 mm, pin 15 mm / on flange			1		
ø14 mm, without pin / on flange			4		
ø14 mm, pin 15 mm / on flange			5		
ø12 mm, without pin / on housing			L		
ø12 mm, pin 23.5 mm / on housing			A		
ø14 mm, without pin / on housing			M		
ø14 mm, pin 23.5 mm / on housing			E		
Voltage supply					
10...30 VDC				20	
Interface					
PROFINET / connector M12					3EA2
Profibus-DPV0 / cable gland					3P32
Profibus-DPV0 / connector M12					3PA2
CANopen® / cable gland					5P32
EtherNet/IP / connector M12					8EA2

Accessories

Mounting accessories	
10139345	Torque support by rubber buffer for encoders with 15 mm pin (Z 119.041)
11066120	Mounting kit 056
11034106	Spring coupling for motor’s fan guard (Z 119.053)
10165157	Spring coupling for encoders with ø58 mm housing, hole distance 73 mm (Z 119.072)
11034121	Spring coupling for encoders with ø58 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 ø58 mm housing, hole distance 63 mm (Z 119.082)
11098229	Clamping ring set 16/30x6 - stainless steel (Z 119.092)