

# Absolute encoders - modular bus covers

Blind hollow shaft  $\varnothing 12$  mm

Magnetic single- or multiturn encoders 12 bit ST / 18 bit MT

## BMSH 58, BMMH 58 flexible - *MAGRES*



BMMH 58 flexible with blind hollow shaft

### Features

- Encoder single- or multiturn / bus cover
- Magnetic sensing
- Resolution: singleturn 12 bit, multiturn 18 bit
- Modular fieldbus interfaces
- High resistance to shock and vibrations
- CANopen®/DeviceNet/EtherCAT/EtherNet-IP  
SAEJ1939/PROFINET/PoE/POWERLINK/Profibus
- Resolution and zero point programmable

### Technical data - electrical ratings

Voltage supply	10...30 VDC
Consumption w/o load typ.	100 mA (24 VDC)
Initializing time typ.	170 ms after power on
Interfaces	CANopen®, DeviceNet, EtherCAT, EtherNet/IP, PoE, Profibus-DPV0/V2, PROFINET, POWERLINK, SAEJ1939
Device address	Rotary switch in bus cover
Steps per turn	$\leq 4096$ / 12 bit
Absolute accuracy	$\pm 1^\circ$
Sensing method	Magnetic
Code	Binary
Code sequence	CW default, programmable
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
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 / E217823
<b>BMSH 58</b>	
Function	Singleturn
<b>BMMH 58</b>	
Function	Multiturn
Number of turns	$\leq 262144$ / 18 bit

### Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 12$ mm (blind hollow shaft)
Protection DIN EN 60529	IP 65
Operating speed	$\leq 12000$ rpm (mechanical) $\leq 6000$ rpm (electric)
Operating torque typ.	0.0093 Nm
Materials	Housing: steel Flange: aluminium Bus cover: zinc die-cast
Operating temperature	-20...+85 °C
Relative humidity	95 %
Resistance	DIN EN 60068-2-6 Vibration 30 g, 10-2000 Hz DIN EN 60068-2-27 Shock 200 g, 6 ms
Weight approx.	480 g
Connection	Bus cover

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## Blind hollow shaft ø12 mm

### Magnetic single- or multiturn encoders 12 bit ST / 18 bit MT

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Part number									
Singleturn			Multiturn						
<b>BMSH 58S1N</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<b>BMMH 58S1N</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		12/00							
				<b>Connection</b>					<b>Connection</b>
				G Basic encoder without bus cover					G Basic encoder without bus cover
				D Complete encoder with bus cover / cable gland (CANopen, DeviceNet, Profibus)					D Complete encoder with bus cover / cable gland (CANopen, DeviceNet, Profibus)
				E Complete encoder with bus cover, M12					E Complete encoder with bus cover, M12
				<b>Blind hollow shaft</b>					<b>Blind hollow shaft</b>
				B2 ø12 mm, IP 42, with clamping ring					B2 ø12 mm, IP 42, with clamping ring
				P2 ø12 mm, IP 65, with clamping ring					P2 ø12 mm, IP 65, with clamping ring
				<b>Resolution</b>					<b>Resolution</b>
		12/00		12 bit singleturn	12/18				12/18 bit single-/multiturn (only CANopen)
					12/16				12/16 bit single-/multiturn
				<b>Voltage supply / signals</b>					<b>Voltage supply / signals</b>
24B	10...30	VDC / CANopen®			24B	10...30	VDC / CANopen®		
24D	10...30	VDC / DeviceNet			24D	10...30	VDC / DeviceNet		
24P	10...30	VDC / Profibus-DPV0			24P	10...30	VDC / Profibus-DPV0		
24Q	10...30	VDC / Profibus-DPV2			24Q	10...30	VDC / Profibus-DPV2		
246	10...30	VDC / EtherCAT			246	10...30	VDC / EtherCAT		
24I	10...30	VDC / EtherNet/IP			24I	10...30	VDC / EtherNet/IP		
242	10...30	VDC / Power over EtherCAT*			242	10...30	VDC / Power over EtherCAT*		
24L	10...30	VDC / POWERLINK			24L	10...30	VDC / POWERLINK		
24H	10...30	VDC / PROFINET			24H	10...30	VDC / PROFINET		
24J	10...30	VDC / SAEJ1939			24J	10...30	VDC / SAEJ1939		
24C	10...30	VDC / basic encoder			24C	10...30	VDC / basic encoder		

CD with file descriptions is not included in the delivery. You may order them on CD as accessory free-of-charge under part number 10147362.

\* Power over EtherCAT on request

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### Accessories

#### Connectors and cables

10160565	Cable connector/connector M12, EtherCAT, straight, 5 m
11046266	Female connector M12, 5-pin, straight, shielded, 5 m
11046264	Female connector M12, 5-pin, straight, shielded, 2 m
10153968	Female connector M12, 5-pin, straight
10157909	Cable with male/female M12, Profibus, shielded, straight, B-coded, 2 m
10157910	Cable with male/female M12, Profibus, shielded, straight, B-coded, 5 m
10159389	Cable with male/female M12, Profibus, shielded, straight, B-coded, 0.3 m (stub line)
10157911	Cable with male/female M12, Profibus, shielded, angled, B-coded, 2 m
10157912	Cable with male/female M12, Profibus, shielded, angled, B-coded, 5 m

#### Mounting accessories

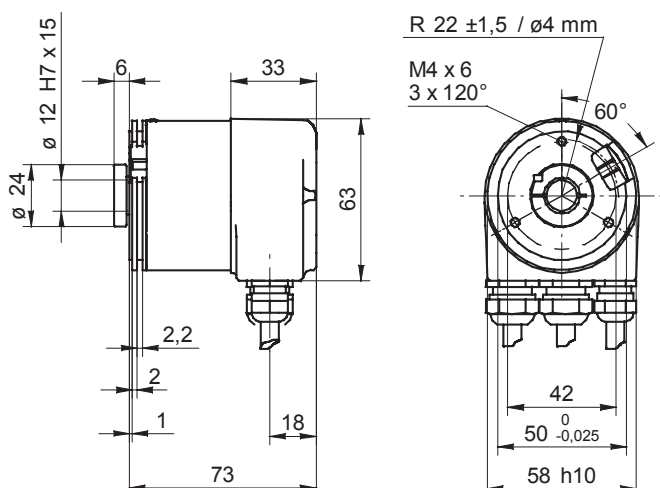
10136635	Set of spring coupling for encoders $\varnothing 58$ mm
10110616	Clamp set $\varnothing 15$ mm
10107540	Torque pin
10109520	Torque spring washer

#### Programming accessories

10147362	CD-ROM with GSD-/EDS-/XML files and user manuals
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### Dimensions

#### BMSH/BMMH 58 flexible encoder with bus cover



# Absolute encoders - modular bus covers

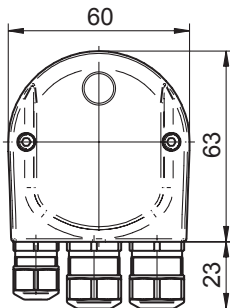
Blind hollow shaft  $\varnothing 12$  mm

Magnetic single- or multiturn encoders 12 bit ST / 18 bit MT

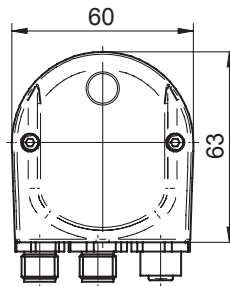
BMSH 58, BMMH 58 flexible - MAGRES

## Dimensions

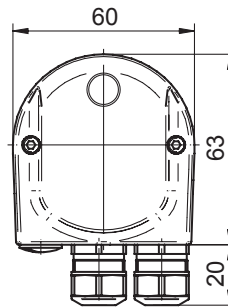
Profibus-DP/CANopen®



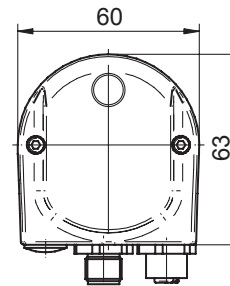
Profibus-DP - M12



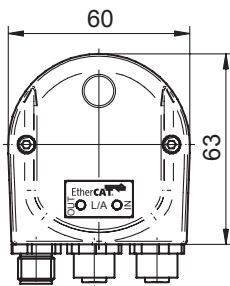
DeviceNet



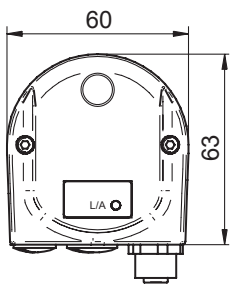
CANopen®/DeviceNet M12



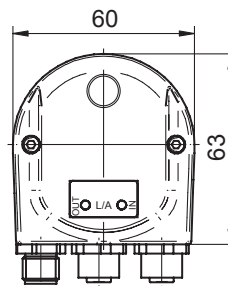
EtherCAT/EtherNet-IP



Power over EtherCAT



PROFINET/POWERLINK



SAEJ1939 - M12

