

Absolute encoders - modular bus covers

Blind hollow shaft up to $\varnothing 15$ 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
- Robust magnetic sensing
- Resolution: singleturn 12 bit, multiturn 18 bit
- Modular fieldbus interfaces
- CANopen®/DeviceNet/EtherCAT/EtherNet/IP
SAEJ1939/PROFINET/POWERLINK/Profibus
- Resolution and zero point programmable
- High resistance to shock and vibrations
- Operating temperature $-40...+85$ °C
- Blind hollow shaft up to $\varnothing 15$ mm

Technical data - electrical ratings

Voltage supply	10...30 VDC
Consumption w/o load	≤ 200 mA (24 VDC)
Initializing time	≤ 250 ms after power on
Interfaces	CANopen®, DeviceNet, EtherCAT, EtherNet/IP, Profibus-DPV0/V2, PROFINET, POWERLINK, SAE J1939
Device address	Rotary switches in bus cover (type-specific, see data sheet bus cover)
Steps per revolution	≤ 4096 / 12 bit
Sensing method	Magnetic
Angular accuracy	± 0.5 °
Repeatability	± 0.3 °
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	Multiturn sensing Position error
Status indicator	DUO-LED integrated in bus cover
Approval	UL approval / E217823
BMSH 58	
Function	Singleturn
BMMH 58	
Function	Multiturn
Number of revolutions	≤ 262144 / 18 bit

Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 12$ mm (blind hollow shaft) $\varnothing 15$ mm (blind hollow shaft)
Protection DIN EN 60529	IP 65 (without shaft seal), IP 67 (with shaft seal)
Operating speed	≤ 6000 rpm
Starting torque	≤ 2 Ncm (+20 °C, IP 65) ≤ 2.5 Ncm (+20 °C, IP 67)
Materials	Housing: steel zinc-coated Flange: aluminium Bus cover: zinc die-cast Hollow shaft: stainless steel
Operating temperature	$-40...+85$ °C (see general information)
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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Part number

Singleturn

BMSH 58S1N

D Encoder with bus cover / cable gland (CANopen, DeviceNet, Profibus)
 E Encoder with bus cover, M12
Blind hollow shaft
 2 $\varnothing 12$ mm
 B $\varnothing 15$ mm
Protection
 P IP 65
 Q IP 67
Resolution
 12/00 12 bit singleturn
Voltage supply / signals
 24B 10...30 VDC / CANopen®
 24D 10...30 VDC / DeviceNet
 24P 10...30 VDC / Profibus-DPV0
 24Q 10...30 VDC / Profibus-DPV2
 246 10...30 VDC / EtherCAT
 24I 10...30 VDC / EtherNet/IP
 24L 10...30 VDC / POWERLINK
 24H 10...30 VDC / PROFINET
 24J 10...30 VDC / SAEJ1939

Multiturn

BMMH 58S1N

D Encoder with bus cover / cable gland (CANopen, DeviceNet, Profibus)
 E Encoder with bus cover, M12
Blind hollow shaft
 2 $\varnothing 12$ mm
 B $\varnothing 15$ mm
Protection
 P IP 65
 Q IP 67
Resolution
 12/18 12/18 bit single-/multiturn (only CANopen)
 12/16 12/16 bit single-/multiturn
Voltage supply / signals
 24B 10...30 VDC / CANopen®
 24D 10...30 VDC / DeviceNet
 24P 10...30 VDC / Profibus-DPV0
 24Q 10...30 VDC / Profibus-DPV2
 246 10...30 VDC / EtherCAT
 24I 10...30 VDC / EtherNet/IP
 24L 10...30 VDC / POWERLINK
 24H 10...30 VDC / PROFINET
 24J 10...30 VDC / SAEJ1939

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

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General information

Self-heating interrelated to speed, protection, attachment method and ambient conditions as well electronics and supply voltage must be considered for precise thermal dimensioning. Self-heating is supposed to approximate 6 K (IP 65 protection) respectively 12 K (IP 67 protection) per 1000 rpm. Operating the encoder close to the maximum limits requires measuring the real prevailing temperature at the encoder flange.

Accessories

Mounting accessories

11136718	Set of spring plate for encoders $\varnothing 58$ mm
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10110616	Clamp set $\varnothing 15$ mm
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10107540	Torque pin
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10109520	Torque spring
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Programming accessories

10147362	CD-ROM with GSD-/EDS-/XML files and user manuals
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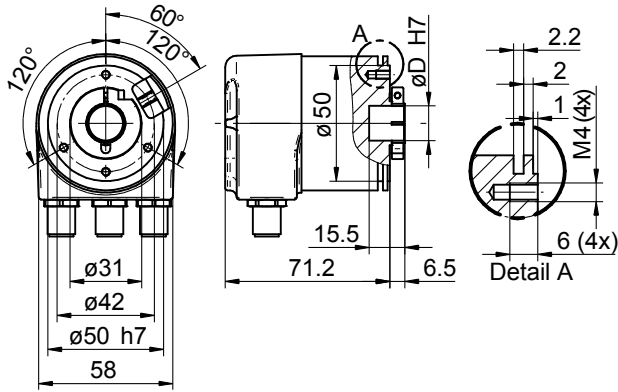
Absolute encoders - modular bus covers

Blind hollow shaft up to $\varnothing 15$ mm
Magnetic single- or multiturn encoders 12 bit ST / 18 bit MT

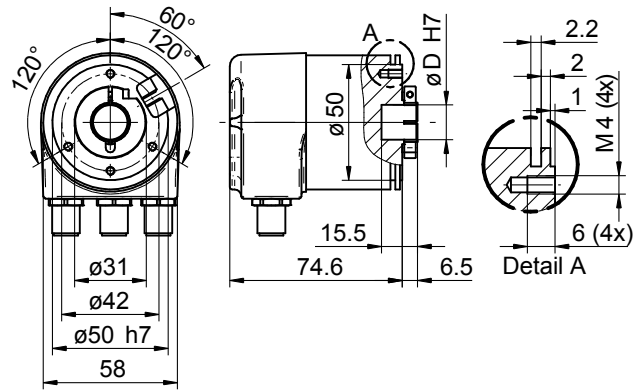
BMSH 58, BMMH 58 flexible - MAGRES

Dimensions

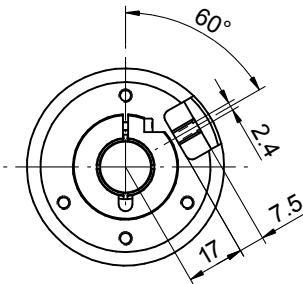
BMSH/BMMH 58 flexible, IP 65



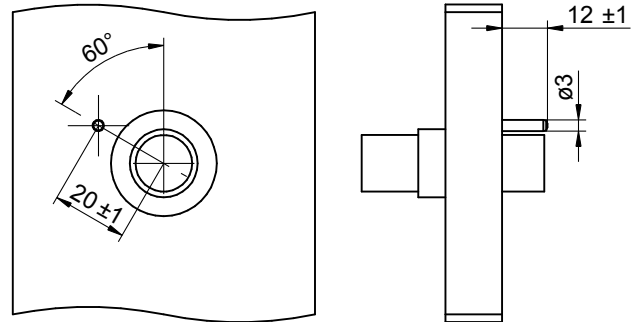
BMSH/BMMH 58 flexible, IP 67



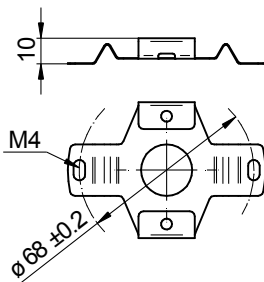
Torque pin support



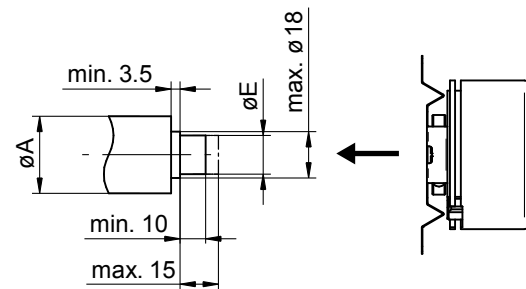
Bore torque pin



Set of spring plate



Hollow shaft mounting



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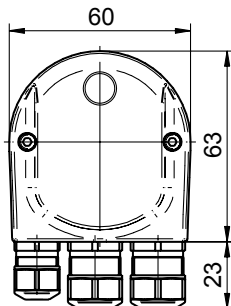
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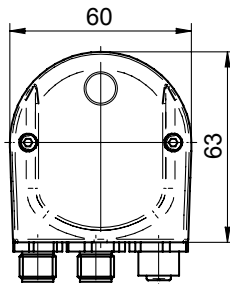
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Dimensions

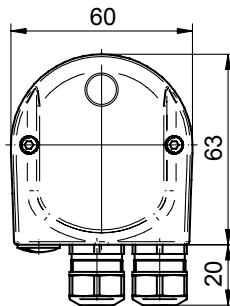
Profibus-DP/CANopen®



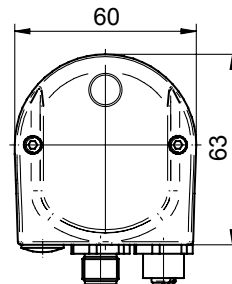
Profibus-DP - M12



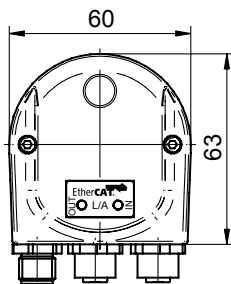
DeviceNet



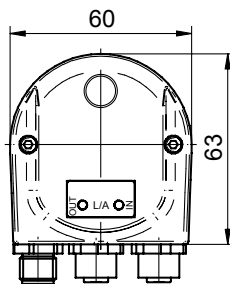
CANopen®/DeviceNet M12



EtherCAT/EtherNet-IP



PROFINET/POWERLINK



SAEJ1939 - M12

