

## BMSH 58 flexible

 Blind hollow shaft up to  $\varnothing 15$  mm

Magnetic singleturn encoders 12 bit

### Overview

- Encoder singleturn / bus cover
- Robust magnetic sensing
- Resolution: singleturn 12 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



### Technical data

#### Technical data - electrical ratings

Voltage supply	10...30 VDC
Consumption w/o load	$\leq 200$ mA (24 VDC)
Initializing time	$\leq 250$ ms after power on
Interface	CANopen® DeviceNet EtherCAT EtherNet/IP Profibus-DPV0 PROFINET POWERLINK SAE J1939
Function	Singleturn
Device address	Rotary switches in bus cover (type-specific, see data sheet bus cover)
Steps per revolution	$\leq 4096$ / 12 bit
Sensing method	Magnetic
Angular accuracy	$\pm 0.5^\circ$
Repeatability	$\pm 0.3^\circ$
Code	Binary
Code sequence	CW default, programmable
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Programmable parameters	Steps per revolution Preset Scaling Rotating direction

#### Technical data - electrical ratings

Diagnostic function	Position error
Status indicator	DUO-LED integrated in bus cover
Approval	UL approval / E217823

#### Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 12$ mm (blind hollow shaft) $\varnothing 15$ mm (blind hollow shaft)
Protection EN 60529	IP 65 (without shaft seal) IP 67 (with shaft seal)
Operating speed	$\leq 6000$ rpm
Starting torque	$\leq 2$ Ncm (+20 °C, IP 65) $\leq 2.5$ Ncm (+20 °C, IP 67)
Material	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	EN 60068-2-6 Vibration 30 g, 10-2000 Hz EN 60068-2-27 Shock 200 g, 6 ms
Weight approx.	480 g
Connection	Bus cover

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### General information

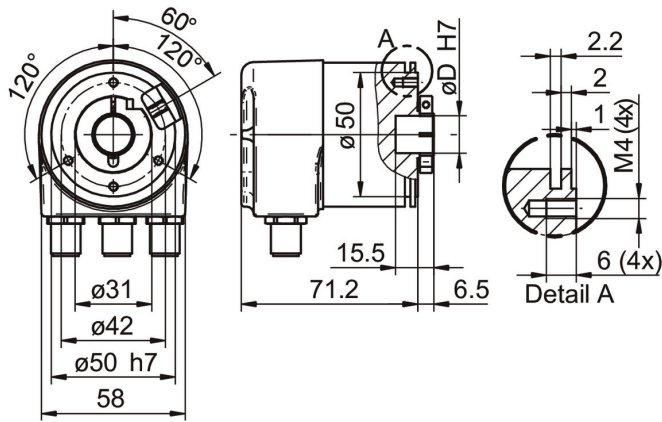
Self-heating interrelated to speed, protection, attachment method and ambient conditions as well electronics and supply voltage must be considered for precise thermal dimensioning. Self-heating is supposed to approximate 6 K (IP 65 protection) respectively 12 K (IP 67 protection) per 1000 rpm. Operating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

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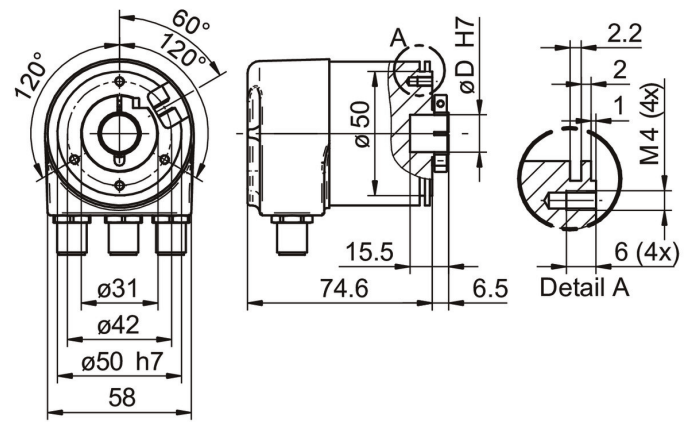
Blind hollow shaft up to  $\varnothing 15$  mm

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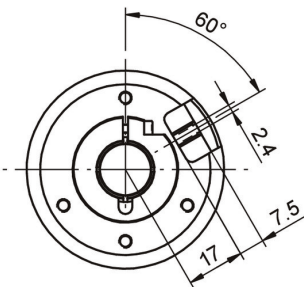
## Dimensions



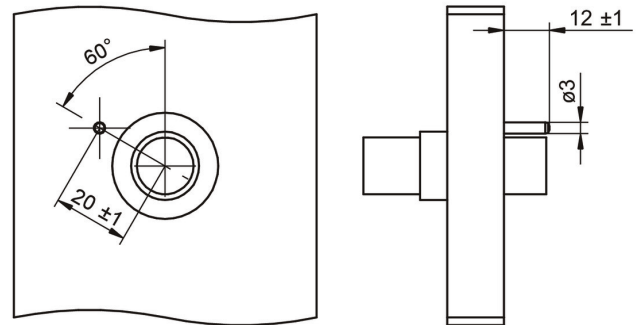
BMSH/BMMH 58 flexible, IP 65



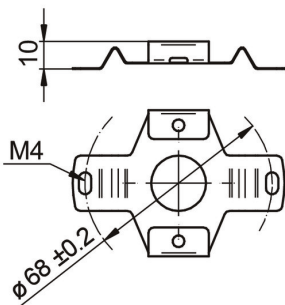
BMSH/BMMH 58 flexible, IP 67



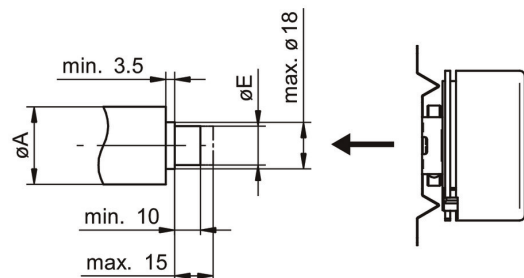
Torque pin support



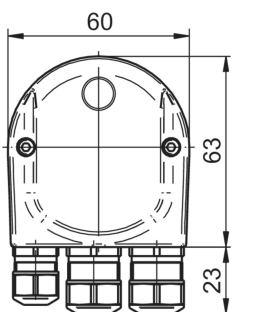
Bore torque pin



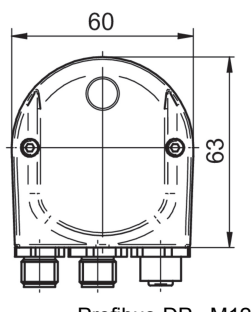
Set of spring washers



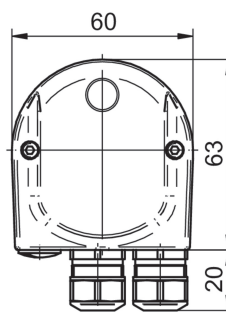
Hollow shaft mounting



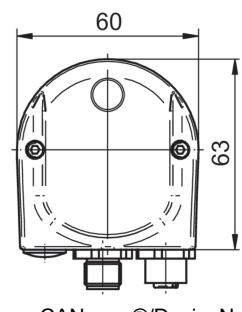
Profibus-DP/CANopen®



Profibus-DP - M12



DeviceNet



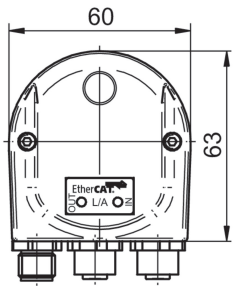
CANopen®/DeviceNet M12

## BMSH 58 flexible

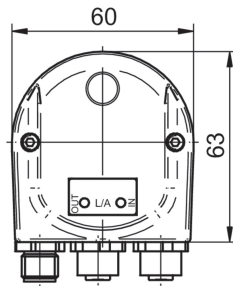
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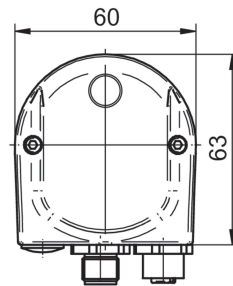
### Dimensions



EtherCAT/EtherNet-IP



PROFINET/POWERLINK



SAEJ1939 - M12

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## Ordering reference

	<b>BMSH-58</b>	<b>S</b>	<b>1</b>	<b>N</b>	<b>###</b>	<b>12</b>	<b>/</b>	<b>00</b>	<b>#</b>	<b>#</b>	<b>##</b>
<b>Product</b>	BMSH-58										
<b>Flange</b>		S									
Synchro flange											
<b>Operating temperature</b>			1								
-40...+85 °C											
<b>Code</b>				N							
Binary											
<b>Supply voltage / Interface</b>											
10...30 VDC / CANopen						24B					
10...30 VDC / Profibus						24P					
10...30 VDC / DeviceNet						24D					
10...30 VDC / EtherCat (V5)						246					
10...30 VDC / Profinet						24H					
10...30 VDC / EtherNet/IP						24I					
10...30 VDC / Powerlink						24L					
10...30 VDC / SAE J1939						24J					
<b>Resolution Singleturn</b>											
12 Bit								12			
<b>Resolution Multiturn</b>											
00 Bit									00		
<b>Protection class</b>											
Hollow shaft IP65										P	
Hollow shaft IP67										Q	
<b>Shaft diameter</b>											
Ø12 mm											2
Ø15 mm											B
<b>Connection</b>											
Encoder with buscover and cable radial											D
Encoder with buscover and M12 connector radial											E

## Accessories

### Mounting accessories

11136718	Set of spring plate for encoders ø58 mm
10110616	Clamp set ø15 mm
10107540	Torque pin
10109520	Torque spring