

Absolute encoders - modular bus covers

Solid shaft with clamping or synchro flange

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

BMSV 58, BMMV 58 flexible - MAGRES



BMMV 58K flexible with clamping flange

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
- Solid shaft with clamping or synchro flange

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, SAEJ1939
Device address	Rotary switch in bus cover (type-specific, see data sheet bus cover)
Steps per turn	≤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
BMSV 58K, BMSV 58S	
Function	Singleturn
BMMV 58K, BMMV 58S	
Function	Multiturn
Number of turns	≤262144 / 18 bit

Technical data - mechanical design

Size (flange)	ø58 mm
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)
Admitted shaft load	≤40 N axial ≤80 N radial
Materials	Housing: steel zinc-coated Flange: aluminium Bus cover: zinc die-cast Solid shaft: stainless steel
Operating temperature	-40...+85 °C (see general informations)
Relative humidity	95 %
Resistance	DIN EN 60068-2-6 Vibration 30 g, 10-2000 Hz DIN EN 60068-2-27 Shock 250 g, 6 ms
Weight approx.	480 g
Connection	Bus cover
BMSV 58K, BMMV 58K	
Shaft type	ø10 x 20 mm, solid shaft with flat (clamping flange)
Flange	Clamping flange
BMSV 58S, BMMV 58S	
Shaft type	ø6 x 10 mm, solid shaft with flat (synchro flange)
Flange	Synchro flange

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Part number

Singleturn clamping flange

BMSV 58K1N 12/00 0

D Connection
Encoder with
bus cover /
cable gland
(CANopen,
DeviceNet,
Profibus)

E Encoder with
bus cover,
M12

0 Solid shaft
ø10 mm, clamping
flange

C Protection
IP 65
N IP 67

12/00 Resolution
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 clamping flange

BMMV 58K1N 0

D Connection
Encoder with
bus cover /
cable gland
(CANopen,
DeviceNet,
Profibus)

E Encoder with
bus cover, M12

0 Solid shaft
ø10 mm, clamping
flange

C Protection
IP 65
N IP 67

12/18 Resolution
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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Part number

Singleturn synchro flange

BMSV 58S1N 12/00 6

D Connection
Encoder with
bus cover /
cable gland
(CANopen,
DeviceNet,
Profibus)

E Encoder with
bus cover,
M12

6 Solid shaft
ø6 mm, synchro
flange

C Protection
IP 65
N IP 67

12/00 Resolution
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 synchro flange

BMMV 58S1N 6

D Connection
Encoder with
bus cover /
cable gland
(CANopen,
DeviceNet,
Profibus)

E Encoder with
bus cover, M12

6 Solid shaft
ø6 mm, synchro
flange

C Protection
IP 65
N IP 67

12/18 Resolution
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

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General informations

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 3 K (IP 65 protection) respectively 8 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 for BMSV 58K, BMMV 58K

10252773	Clamp set ø15 mm
11053277	Bellows coupling aluminium/stainless steel 10 mm

Mounting accessories for BMSV 58S, BMMV 58S

10252773	Clamp set ø15 mm
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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

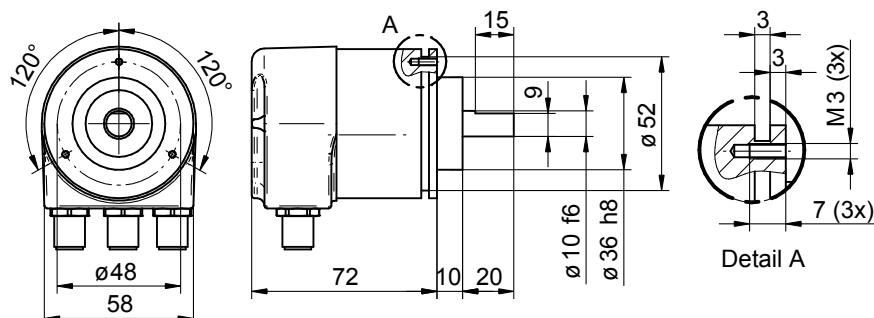
Solid shaft with clamping or synchro flange

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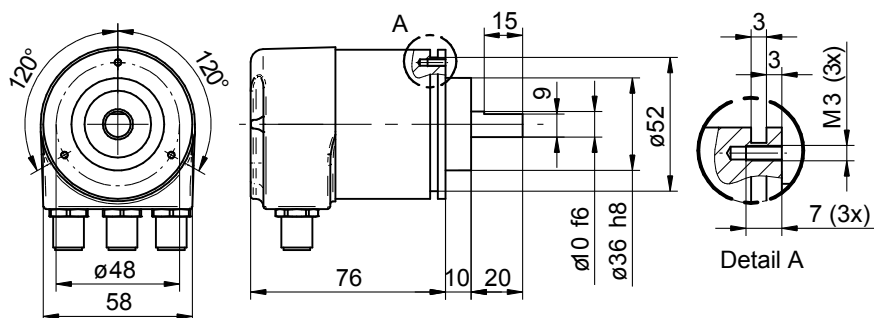
BMSV 58, BMMV 58 flexible - MAGRES

Dimensions

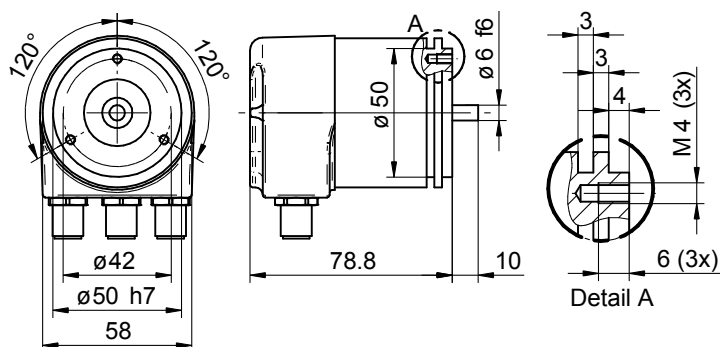
BMSV/BMMV 58 flexible clamping flange, IP 65



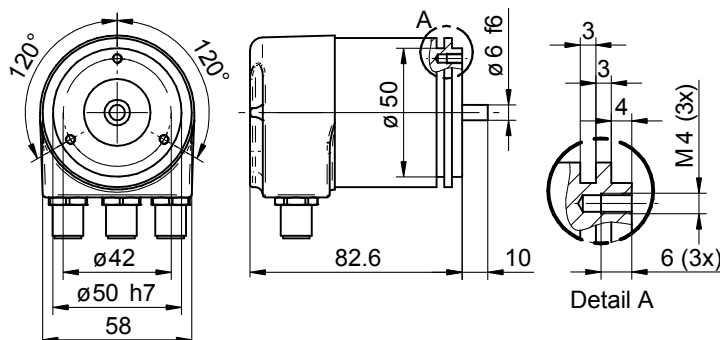
BMSV/BMMV 58 flexible clamping flange, IP 67



BMSV/BMMV 58 flexible synchro flange, IP 65



BMSV/BMMV 58 flexible synchro flange, IP 67



Absolute encoders - modular bus covers

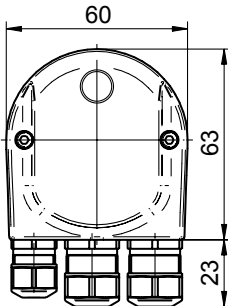
Solid shaft with clamping or synchro flange

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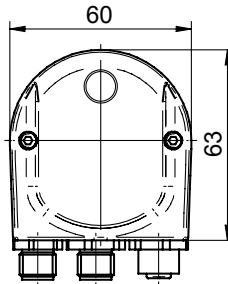
BMSV 58, BMMV 58 flexible - MAGRES

Dimensions

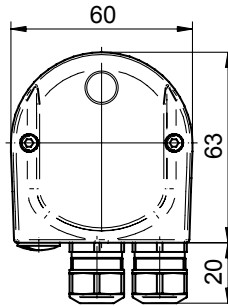
Profibus-DP/CANopen®



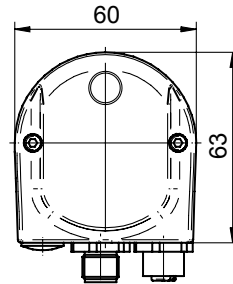
Profibus-DP - M12



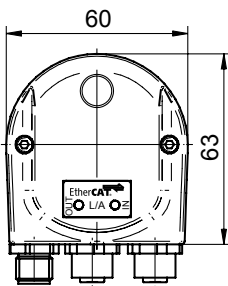
DeviceNet



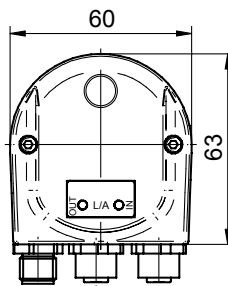
CANopen®/DeviceNet M12



EtherCAT/EtherNet-IP



PROFINET/POWERLINK



SAEJ1939 - M12

