Absolute encoders - parallel

Solid shaft with clamping or synchro flange

Magnetic singleturn encoders 12 bit

BMSV 58 parallel - *MAGRES*

BMSV 58K parallel with clamping flange

Features

- **Encoder singleturn / parallel**
- **Magnetic sensing**
- **Resolution: 12 bit**
- **High resistance to shock and vibrations**
- **Reset input**
- **Clamping or synchro flange**

Technical data - electrical ratings

Voltage supply	10...30 VDC
Consumption typ.	50 mA (24 VDC, w/o load)
Initializing time typ.	170 ms after power on
Interface	12 parallel outputs
Function	Singleturn
Steps per turn	≤4096 / 12 bit
Absolute accuracy	±1 °
Sensing method	Magnetic
Code	Gray or binary
Inputs	Zero setting input
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
Approval	UL approval / E217823
BMSV 58K	
Code sequence	CW default
BMSV 58S	
Code sequence	CW: ascending values with clockwise sense of rotation; looking at flange

Technical data - mechanical design

Size (flange)	ø58 mm
Protection DIN EN 60529	IP 65
Operating speed	≤12000 rpm (mechanical) ≤6000 rpm (electric)
Operating torque typ.	0.023 Nm
Materials	Housing: aluminium Flange: aluminium
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 500 g, 6 ms
Weight approx.	300 g
Connection	Cable 2 m
BMSV 58K	
Shaft type	ø10 mm solid shaft (clamping flange)
Flange	Clamping flange
Admitted shaft load	≤40 N axial ≤60 N radial
BMSV 58S	
Shaft type	ø6 mm solid shaft (synchro flange)
Flange	Synchro flange
Admitted shaft load	≤10 N axial ≤20 N radial

BMSV 58 parallel - *MAGRES*

Part number

Clamping flange

BMSV 58K1 | | **24K** | | **C0** | **5** |

Connection
5 Cable radial

Solid shaft
C0 ø10 mm, IP 65

Resolution
12/00 12 bit singleturn
360 9 bit singleturn (capped)

Voltage supply / signals
24K 10...30 VDC / parallel, push-pull short-circuit proof

Code
N Binary code
G Gray code

Synchro flange

BMSV 58S1 | | **24K** | | **C6** | **5** |

Connection
5 Cable radial

Solid shaft
C6 ø6 mm, IP 65

Resolution
12/00 12 bit singleturn
360 9 bit singleturn (capped)

Voltage supply / signals
24K 10...30 VDC / parallel, push-pull short-circuit proof

Code
N Binary code
G Gray code

Accessories

Mounting accessories for BMSV 58K	
10252773	Clamp set ø15 mm
11053277	Bellows coupling aluminium/stainless steel 10 mm
Mounting accessories for BMSV 58S	
10252773	Clamp set ø15 mm

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Terminal significance	
+Vs	Encoder supply voltage.
0 V	Encoder ground connection relating to +Vs.
Bit 1-12	12 parallel output signals.
Zero	Input for setting a zero point anywhere within the encoder resolution. The zero setting operation is triggered by a Low impulse. Connect to +Vs after setting operation for maximum interference immunity. Impulse duration >2 ms.

Terminal assignment

Cable
for connection reference **-5**

Core colour	Signals	Description
brown	+Vs	Supply voltage
white	0 V	Supply voltage
green	Bit 1 LSB	Data bit
yellow	Bit 2	Data bit
grey	Bit 3	Data bit
pink	Bit 4	Data bit
blue	Bit 5	Data bit
red	Bit 6	Data bit
black	Bit 7	Data bit
purple	Bit 8	Data bit
grey/pink	Bit 9	Data bit
white/green	Bit 10	Data bit
brown/green	Bit 11	Data bit
yellow/brown	Bit 12 MSB	Data bit
white/yellow	Bit 12 MSB comp. [1]	Data bit
red/blue	Zero	Zero setting input
Screen	connected to housing	
Cable data	16 x 0.14 mm²	

[1] The direction of rotation for encoders with gray-code can be defined by connecting the MSB or MSB comp. If MSB is connected, the encoder counts up as the shaft rotates clockwise (CW). If MSB inv. is connected, the encoder counts up if the shaft rotates counter clockwise (CCW).

Trigger level

Control inputs	Input circuit
Zero setting	<0,4 V (>2 ms)
Off state	+Vs or open

Parallel outputs 24K	Output circuit Push-pull short-circuit protection
Output level High	>UB - 5,5 V (I = -30 mA)
Output level Low	<5,5 V (I = 30 mA)
Load High	<30 mA / Output
Load Low	<30 mA / Output

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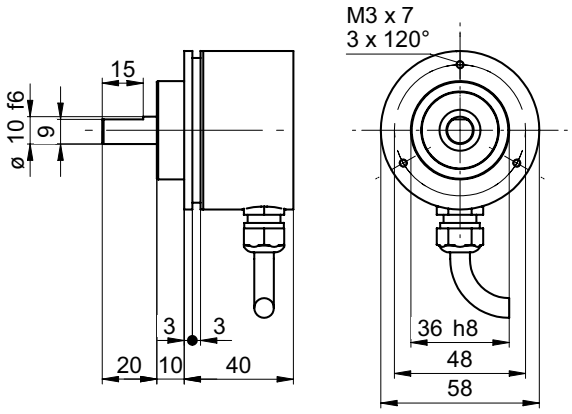
Dimensions

BMSV 58 parallel clamping flange



BMSV 58 parallel synchro flange