

Absolute encoders - parallel

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 w/o load (typ.)	50 mA (24 VDC)
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	Reset 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
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BMSV 58S

Code sequence	CW: ascending values with clockwise sense of rotation (looking at flange)
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Technical data - mechanical design

Dimensions (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	ø10 mm (clamping flange)
Flange	Clamping flange
Shaft loading	≤40 N axial ≤60 N radial

BMSV 58S

Shaft	ø6 mm (synchro flange)
Flange	Synchro flange
Shaft loading	≤10 N axial ≤20 N radial

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Part number

Clamping flange

BMSV 58K1	24K	C0	5
			5
			Connection Cable radial
			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
			5
			Connection Cable radial
			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
11053277	Bellows coupling aluminium/stainless steel 10 mm

Mounting accessories for BMSV 58S

10252773	Clamp set
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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 mm ²	

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

