

Encoders without bearings - absolute

Magnetic sensor bore max. $\varnothing 12$ mm

Magnetic singleturn encoders / kit 12 bit

BMSK 58 parallel - MAGRES



BMSK 58 parallel kit

Features

- Encoder kit singleturn / parallel
- Magnetic sensing
- Resolution: 12 bit
- High protection standard
- High resistance to shock and vibrations
- Reset input

Technical data - electrical ratings

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

Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 12$ mm (magnet bore)
Protection DIN EN 60529	IP 67
Gap tolerance	≤ 0.3 mm axial ≤ 0.1 mm radial
Operating temperature	$-20 \dots +85^\circ\text{C}$
Operating speed	≤ 12000 rpm (mechanical) ≤ 6000 rpm (electric)
Resistance	DIN EN 60068-2-6 Vibration 30 g, 10-2000 Hz DIN EN 60068-2-27 Shock 100 g, 6 ms
Materials	Housing: steel/aluminium Flange: aluminium
Relative humidity	95 %
Connection	Cable 2 m
Weight approx.	300 g

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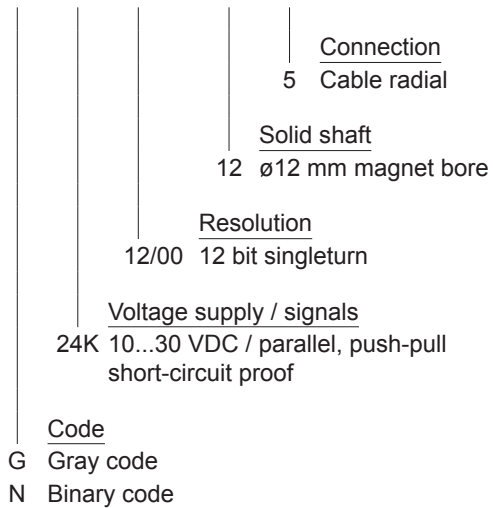
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Part number

BMSK 58S1

	24K	12/00	12	5
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Accessories

Mounting accessories

10110616	Clamp set \varnothing 15 mm
10112432	Hexagon wrench 2.5 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 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

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Dimensions

BMSK 58 parallel cable radial

