Absolute encoders - parallel

Magnetic sensor bore max. ø12 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 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
Code sequence	CW: ascending values with clockwise sense of rotation (looking at flange)
Inputs	Reset input
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
Approval	UL approval / E217823

Technical data - mechanical design

Dimensions (flange)	ø58 mm
Shaft	Magnet hole 12 mm
Protection DIN EN 60529	IP 67
Operating speed	≤12000 rpm (mechanical) ≤6000 rpm (electric)
Materials	Housing: steel/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 100 g, 6 ms
Weight approx.	300 g
Connection	Cable 2 m
Gap tolerance	≤0.3 mm axial ≤0.1 mm radial

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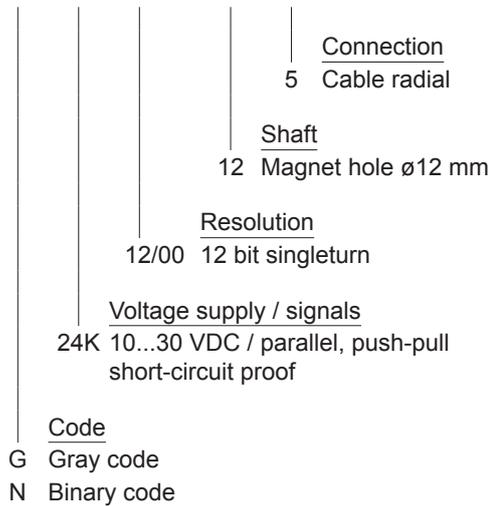**Magnetic singleturn encoders / kit 12 bit**

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Part number

BMSK 58S1 | **24K** | **12/00** | **12** | **5**

Connection
5   Cable radial

Shaft
12   Magnet hole ø12 mm

Resolution
12/00   12 bit singleturn

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

Code
G   Gray code
N   Binary code

Accessories

Mounting accessories

10110616	Clamp set
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

Baumer

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Dimensions

BMSK 58 parallel cable radial