

Absolute encoders - parallel

End shaft $\varnothing 12$ mm

Magnetic singleturn encoders 9 bit

BMSH 42 parallel - MAGRES



BMSH 42 parallel with end shaft

Features

- Mini encoder singleturn / parallel
- Magnetic sensing
- Resolution: 9 bit
- Housing $\varnothing 42$ mm
- High resistance to shock and vibrations
- Reset input
- End shaft $\varnothing 12$ mm

Technical data - electrical ratings

Voltage supply	5 VDC ± 10 %
Consumption w/o load (typ.)	100 mA (24 VDC)
Initializing time (typ.)	170 ms after power on
Interface	9 parallel outputs
Function	Singleturn
Steps per turn	512 / 9 bit
Absolute accuracy	$\pm 1^\circ$
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)	$\varnothing 42$ mm
Shaft	$\varnothing 12$ mm end shaft
Protection DIN EN 60529	IP 65
Operating speed	≤ 12000 rpm (mechanical) ≤ 6000 rpm (electric)
Operating torque typ.	0.0093 Nm
Materials	Housing: steel Flange: aluminium
Operating temperature	$-20 \dots +85^\circ\text{C}$
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.	120 g
Connection	Cable 1 m

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Part number

BMSH 42S1 05T 09/00 5

Connection
5 Cable radial

Shaft
B2 End shaft \varnothing 12 mm,
IP 42, with clamping
ring
P2 End shaft \varnothing 12 mm,
IP 65, with clamping
ring

Resolution
09/00 9 bit singleturn

Voltage supply / signals
05T 5 VDC / parallel TTL compatible

Code

G Gray code
N Binary code

Accessories

Mounting accessories

10138610 Set of spring coupling for BMSH, BMMH 42

10110616 Clamp set

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Terminal significance

+Vs	Encoder supply voltage.
0 V	Encoder ground connection relating to +Vs.
Bit 1-9	9 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 MSB	Data bit
red/blue	Zero	Zero setting input
Screen	connected to housing	
Cable data	14 x 0.14 mm ²	

Trigger level

Control inputs

Input circuit

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

Parallel outputs 05T

Output circuit

	TTL
Output level High	>2,4 V
Output level Low	<0,4 V
Load High	<2 mA / Output
Load Low	<10 mA / Output

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Dimensions

BMSH 42 cable radial

