

# Absolute encoders - parallel

Blind hollow shaft  $\varnothing 12$  mm

Magnetic singleturn encoders 9 bit

## BMSH 42 parallel - MAGRES



BMSH 42 parallel with blind hollow shaft

### Features

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

### Technical data - electrical ratings

Voltage supply	5 VDC $\pm 10$ %
Consumption typ.	100 mA (24 VDC, w/o load)
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	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)	$\varnothing 42$ mm
Shaft type	$\varnothing 12$ mm (blind hollow shaft)
Protection DIN EN 60529	IP 65
Operating speed	$\leq 12000$ rpm (mechanical) $\leq 6000$ rpm (electric)
Operating torque typ.	0.0093 Nm
Materials	Housing: steel 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.	120 g
Connection	Cable 1 m

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### Part number

BMSH 42S1 

	05T	09/00		5
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Connection  
5 Cable radial

Blind hollow shaft  
B2  $\varnothing 12$  mm, IP 42, with  
clamping ring  
P2  $\varnothing 12$  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 washers for BMSH, BMMH 42

10110616 Clamp set  $\varnothing 15$  mm

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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 <sup>2</sup>	

### 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

