

Absolute encoders - bus interfaces

Blind hollow shaft $\varnothing 12$ mm

Magnetic single- or multiturn encoders 12 bit ST / 16 bit MT, DeviceNet

BMSH 58, BMMH 58 DeviceNet - MAGRES



BMMH 58 DeviceNet with blind hollow shaft

Features

- Encoder single- or multiturn / DeviceNet
- Magnetic sensing
- Resolution: singleturn 12 bit, multiturn 16 bit
- Integrated fieldbus interface
- High resistance to shock and vibrations
- Resolution and zero point programmable

Technical data - electrical ratings

Voltage supply	10...30 VDC
Consumption typ.	100 mA (24 VDC, w/o load)
Initializing time typ.	170 ms after power on
Interface	DeviceNet
Profile conformity	Device Profile Encoder V 1.0
Steps per turn	≤ 4096 / 12 bit
Absolute accuracy	$\pm 1^\circ$
Sensing method	Magnetic
Code	Binary
Code sequence	CW default, programmable
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
Programmable parameters	Operating modes Total resolution Preset Scaling
Diagnostic functions	Position or parameter error Multiturn sensing
Approval	UL approval / E217823

BMSH 58

Function	Singleturn
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BMMH 58

Function	Multiturn
Number of turns	≤ 65536 / 16 bit

Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 12$ mm (blind hollow shaft)
Protection DIN EN 60529	IP 65
Operating speed	≤ 12000 rpm (mechanical) ≤ 6000 rpm (electric)
Operating torque typ.	0.0093 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	Connector D-SUB, 9-pin

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Part number

Singleturn

BMSH 58S1N 24D 12/00 F

Connection
 F Connector D-SUB,
 radial
 Blind hollow shaft
 B2 $\varnothing 12$ mm, IP 42, with
 clamping ring
 P2 $\varnothing 12$ mm, IP 65, with
 clamping ring
 Resolution
 12/00 12 bit singleturn
 Voltage supply / signals
 24D 10...30 VDC / DeviceNet

Multiturn

BMMH 58S1N 24D 12/16 F

Connection
 F Connector D-SUB,
 radial
 Blind hollow shaft
 B2 $\varnothing 12$ mm, IP 42, with
 clamping ring
 P2 $\varnothing 12$ mm, IP 65, with
 clamping ring
 Resolution
 12/16 12/16 bit single-/multiturn
 Voltage supply / signals
 24D 10...30 VDC / DeviceNet

Accessories

Connectors and cables

10145023 Female connector D-SUB, 9-pin, angled

Mounting accessories

10136635 Set of spring washers for encoders $\varnothing 58$ mm

10110616 Clamp set $\varnothing 15$ mm

10107540 Torque pin

10109520 Torque spring

Programming accessories

10147362 CD-ROM with GSD-/EDS-/XML files and user manuals

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Terminal significance

+Vs	Encoder supply voltage.
0 V	Encoder ground connection relating to +Vs.
CAN_L	CAN bus signal (dominant Low).
CAN_H	CAN bus signal (dominant High).
CAN_GND	GND relating to CAN interface.

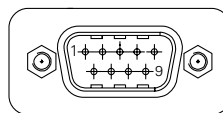
DeviceNet features

Bus protocol	DeviceNet
Device profile	Device Profile for Encoders V 1.0
Operating modes	- I/O-Polling - Cyclic - Change of State
Preset	Parameter for setting the encoder to a requested position value assigned to a defined shaft position of the system. The offset of encoder zero point and mechanical zero point is stored in the encoder.
Rotating direction	Parameter for defining the rotating direction in which there have to be ascending or descending position values. Default setting: ascending position values when looking at the flange and rotating the shaft clockwise.
Scaling	Parameter defining the steps per turn as well as the total resolution.
Diagnosis	The encoder supports the following error warnings: - Position and parameter error - Lithium battery voltage control (Multiturn)
Default	125 kbit/s, Mac Id 63

Terminal assignment

Connector D-Sub male

Connector	Signals	Description
Pin 1	d.u.	do not use
Pin 2	CAN_L	Bus (dominant Low)
Pin 3	CAN_GND	CAN Ground
Pin 4	d.u.	do not use
Pin 5	CAN_SHLD	CAN Shield
Pin 6	0 V	Supply voltage
Pin 7	CAN_H	Bus (dominant High)
Pin 8	n.c.	–
Pin 9	+Vs	Supply voltage



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Dimensions

BMSH/BMMH 58 DeviceNet connector D-SUB radial

