

Magnetic absolute multi-turn encoder

BMMH – MAGRES

CANopen

features

- robust multi-turn encoder up to
 - 12 bit single-turn resolution
 - 18 bit multi-turn resolution
- miniature housing
- CANopen interface integrated
- programmable resolution and preset values

general data

voltage supply	10 - 30 VDC
max. supply current no load	typ. 100 mA (at 24 VDC)
output circuit	CAN-bus, standard ISO/DIS 11898
specification	CAN 2.0B
protocol/profile	CANopen/CIA, DS-301 V4.01, DSP-305 V1.0, DS-406 V3.0
signal code	natural binary code
max. resolution single-turn	12 bit (1 step = 5' 16")
multi-turn	18 bit (262'144 revolutions)
max error limit	±1°
repeatability	0,3°
max. baud rate	1 Mbit/s
counter buffering	with Lithium cell typ. 19 years
direction of rotation	looking at the flange, position counts up as the shaft rotates clockwise (CW), programmable

mechanical data

max. revolutions	6'000 rpm
moment of inertia	12 x 10 ⁻⁷ kgm ²
torque	typ. 0,93 cNm (3'000 rpm / 20 °C / IP 42)
product life conditions	depending on ambient (typ. 10 ⁹ revolutions.)
max. protection class	IP 65
material	housing: steel flange: aluminum
weight	approx. 190 g

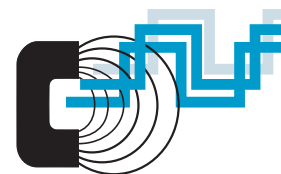


order designation

BMMH 42S1N 24B12/18	☐	☐	connection
	5		cable 0,5 m radial
	N		connector radial
			shaft
		B2	end shaft 12 mm IP 42 with clamping ring
		P2	end shaft 12 mm IP 65 with clamping ring
			resolution multi-turn
		18	18 bit
			resolution single-turn
		12	12 bit
			voltage range, output signals
	24B		10 - 30 VDC, CANopen
			signal code
	N		binary code

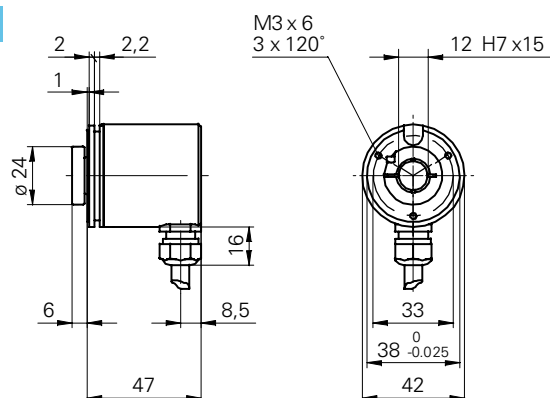
ambient conditions

temperature range	-20...+85 °C
relative humidity	max. 95%
vibration	IEC 60068-2-6 (≤ 300 m/s ² / 10 - 2'000 Hz)
shock	IEC 60068-2-27 (≤ 1'000 m/s ² / 6 ms)
noise immunity	EN 61000-6-2
emitted interference	EN 61000-6-3



dimensions

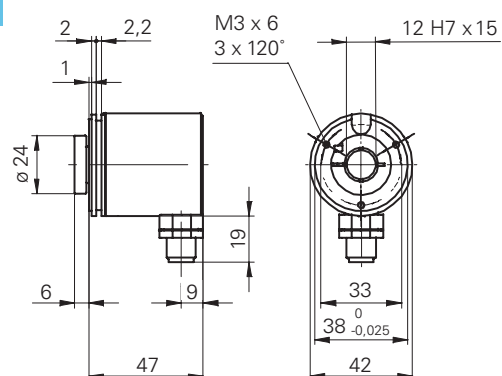
-5



assignment cable

cable color	signal	description
brown	+Vs	voltage supply
white	0 V	voltage supply
green	CAN_H	bus line (dominant HIGH)
yellow	CAN_L	bus line (dominant LOW)
grey	CAN_GND	CAN ground
pink	n.c.	not connected
blue	d.u.	do not use
red	d.u.	do not use
cable data		8 x 0,14 mm ²

-N



assignment connector M12 male

pin	signals	connector
1	n.c.	not connected
2	+Vs	voltage supply
3	CAN_GND	CAN Ground / 0 VDC
4	CAN_H	bus line (dominant HIGH)
5	CAN_L	bus line (dominant LOW)

Note

Mounting drawings see end of chapter.

accessories

spring clamp set	part nr. 110616
field plate set	part nr. 138610
CD-ROM with GSD-/EDS-/XML-files and manuals	part nr. 147362
shaft adapters	see chapter accessories
clamping ring set	
12 mm hollow shaft	part nr. 142556
connector (female) M12 CAN	part nr. 153968
connector (male) M12 CAN	part nr. 153969
T connector M12 CAN	part nr. 153972
terminating resistor	part nr. 153974