

Magnetic absolute multi-turn encoder kit

BMMK – MAGRES

SSI

features

- robust multi-turn encoder up to
 - 12 bit single-turn resolution
 - 13 bit multi-turn resolution
- SSI interface
- zero setting input
- kit structure, IP 67

general data

voltage supply	5 VDC $\pm 10\%$ (05C) 10 - 30 VDC (24C)
max. supply current no load	typ. 100 mA (at 5 VDC) (05C) typ. 50 mA (at 24 VDC) (24C)
output circuit	SSI, RS 422
signal code	Gray and binary code
max. resolution single-turn	12 bit (1 step = 5' 16")
multi-turn	13 bit (8'192 revolutions)
max error limit	$\pm 1^\circ$
repeatability	0,3°
max. clock frequency	1 MHz
input signal	clock input, zero (zerosetting: < 0,4 V, > 2 ms off state: 3,3 V or open)
counter buffering	with Lithium cell typ. 19 years
direction of rotation	looking at the flange, position counts up as the shaft rotates clockwise (CW)

mechanical data

max. revolutions	mech. 12'000 rpm electr. 6'000 rpm
moment of inertia	typ. 12×10^{-7} kgm ²
mounting tolerance	axial: $\pm 0,3$ mm radial: $\pm 0,1$ mm
max. protection class	IP 67
material	housing: steel/aluminum flange: aluminum
weight	approx. 300 g



order designation

BMMK 58S1 **12/13** **12** **5**

connection
5 cable 2m radial

dimensions

12 magnetic rotor
shaft \varnothing 12 mm ¹⁾

resolution multi-turn

13 13 bit

resolution single-turn

12 12 bit

voltage range, output signals

05C 5 VDC SSI interface
24C 10 - 30 VDC SSI interface

signal code

N binary code
G Gray code

¹⁾ Other magnetic rotor shafts on request.
The magnetic rotor is included in delivery.

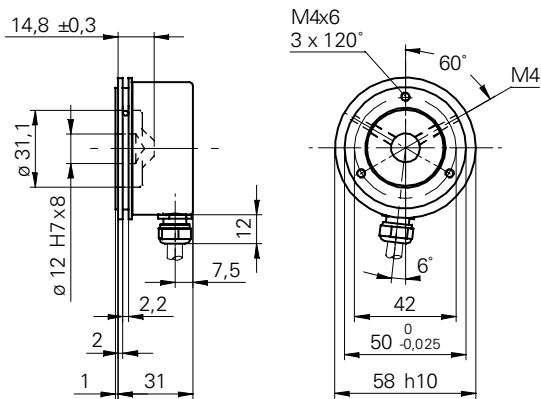
ambient conditions

temperature range	-20...+85 °C -40°C (cable not moved)
relative humidity	max. 95%
vibration	IEC 60068-2-6 (≤ 300 m/s ² / 10 - 2'000 Hz)
shock	IEC 60068-2-27 ($\leq 1'000$ m/s ² / 6 ms)
noise immunity	EN 61000-6-2
emitted interference	EN 61000-6-3



dimensions

-5



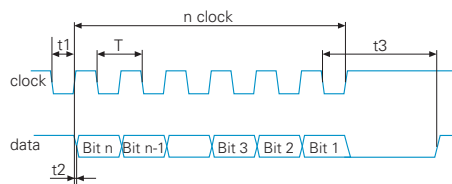
assignment cable

for connection reference **-5**

cable color	signal	description
brown	+Vs	voltage supply
white	0 V	voltage supply
grey	data+	data signal
pink	data-	data signal
green	clock+	clock signal
yellow	clock-	clock signal
blue	zero	zero setting input
red	d.u.	do not use
screen		housing
cable specs		8 x 0,14 mm ²

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read out of position values



pulse times:
 $T = 1 \mu\text{s to } 10 \mu\text{s} / t_1 = 0,5 \text{ to } 5 \mu\text{s}$
 $t_2 < 0,2 \mu\text{s} / t_3 > 12 \mu\text{s to } 25 \mu\text{s}$

accessories

clamp set	part nr. 110616
allen key 2 mm	part nr. 112432

SSI data output and clock input

see page 2.05 chapter absolute single-turn encoders