

Magnetic absolute multi-turn encoder kit

BMMK – MAGRES

SSI

features

- miniature encoder kit multi-turn / SSI
- magnetic sensing principle
- resolution: single-turn 12 bit and multi-turn 13 bit
- housing ø 42 mm
- high protection class
- high resistance against shock and vibration
- zero setting input

general data

voltage supply	5 VDC ±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 or binary code
max. resolution	
single-turn	12 bit (1 step = 5' 16")
multi-turn	13 bit (8' 192 revolutions)
max. error limit	±1°
repeatability	0,3°
max. clock frequency	1 MHz
zero setting input	zero (zerosetting: < 0,4 V, > 2 ms off state: +Vs 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 x 10 ⁻⁷ kgm ²
mounting tolerance	axial: ±0,3 mm radial: ±0,1 mm
max. protection class	IP 67
material	housing: steel flange: aluminum
weight	approx. 180 g



order designation

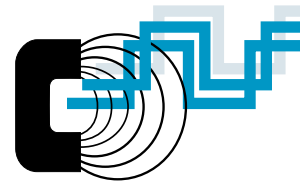
BMMK 42L1 □ □ **12/13065**

□	connection
□	5 cable 1 m radial
□	dimensions
□	06 magnetic rotor shaft ø 6 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.
CANopen and DeviceNet on request.

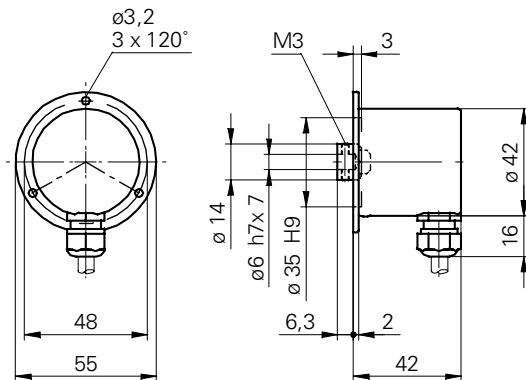
ambient conditions

temperature range	-20...+85 °C -40°C (cable not moved)
relative humidity	max. relative humidity 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



Note

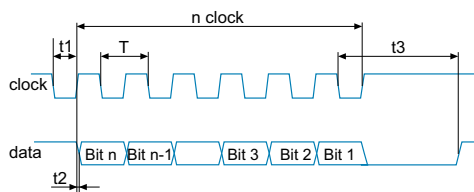
Magnetic rotor is displayed in drawings.
Mounting drawings see end of chapter.

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

read out of position values



pulse times:
 $T = 1 \mu s$ to $10 \mu s$ / $t1 = 0,5$ to $5 \mu s$
 $t2 < 0,2 \mu s$ / $t3 > 12 \mu s$ to $25 \mu s$

accessories

allen key 2 mm	part nr. 112433
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SSI data output and clock input

see page 2.03 chapter absolute single-turn encoders