

# Magnetic absolute multi-turn shaft encoder

## BMMV – MAGRES hermetic

### Profibus-DP

#### features

- multi-turn encoder / Profibus-DP
- magnetic principle, hermetically sealed
- resolution: single-turn 13 bit and multi-turn 16 bit
- integrated fieldbus
- high shock- und vibration-resistance
- resolution and zero-point programmable
- protection class IP 69K

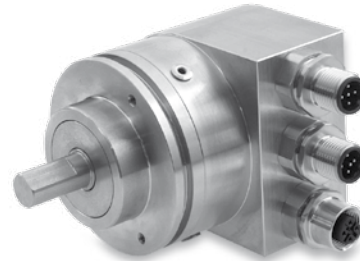
#### general data

voltage supply	10 - 30 VDC
max. supply current no load	typ. 100 mA (at 24 VDC)
bus protocol	Profibus-DP
Profibus Features	device class 1 und 2
default setting	user address 03
max. resolution	
single-turn	13 bit (1 step = 2' 38'')
multi-turn	16 bit (65'536 revolutions)
max. error limit	±1°
repeatability	0,3°
direction of rotation	looking at the flange, position counts up as the shaft rotates clockwise (CW), programmable

#### mechanical data

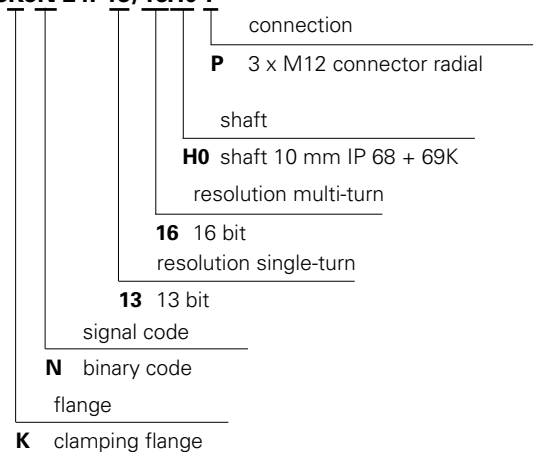
max. revolutions	6'000 rpm
moment of inertia	typ. 20 x 10 <sup>-7</sup> kgm <sup>2</sup>
torque	typ. 3,1 cNm (3'000 rpm / 20 °C)
max. shaft load	axial: 120 N    radial: 280 N (combined) axial: 270 N (single load)
storage life	depending on ambient conditions (typ. 10 <sup>9</sup> revolutions)
protection class	IP 68 + IP 69K (IP 68: water 20 °C, 1 m, 24 h)
material	high grade steel 1,4305 <sup>1</sup>
weight	approx. 900 g
explosion protection	Ex II3D Txx °C (Zone 22) <sup>1</sup>

<sup>1</sup> additional versions and materials on request



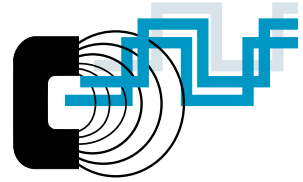
#### order designation BMMV 58K

##### BMMV 58K5N 24P13/16H0 P

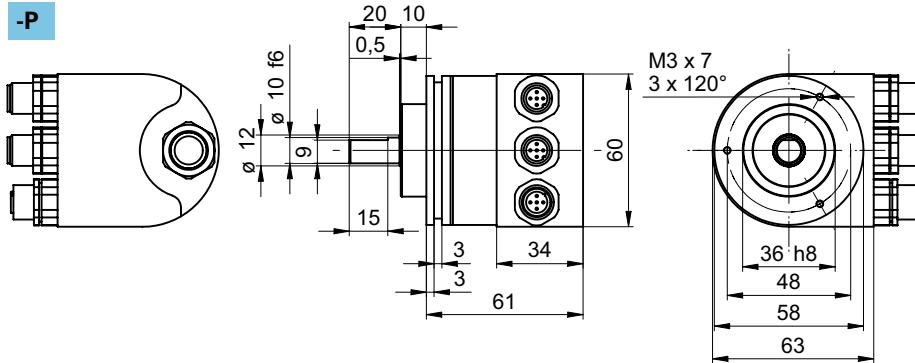


#### ambient conditions

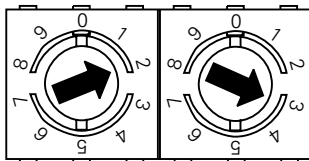
temperature range	-40...+85 °C
vibration	IEC 60068-2-6 (≤ 300 m/s <sup>2</sup> / 10 - 2'000 Hz)
shock	IEC 60068-2-27 (≤ 3'000 m/s <sup>2</sup> / 6 ms)
noise immunity	EN 61000-6-2
emitted interference	EN 61000-6-3



#### dimensions

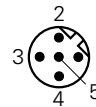


#### settings of user address for Profibus-DP



Address can be set with rotary switch.  
Example: User address 23

#### assignment M12 Bus-IN male



pin nr.	signal	description
1	n.c.	-
2	A line green	cable green / Profibus-DP
3	n.c.	-
4	B line red	cable red / Profibus-DP
5	n.c.	-

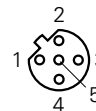
B-coded

#### settings of terminating resistors for Profibus-DP



ON = Last User  
OFF = User X

#### assignment M12 Bus-OUT female



pin nr.	signal	description
1	+VsDP	VP Profibus +5 VDC <sup>1)</sup>
2	A line green	cable green / Profibus-DP
3	0 VDP	DGND Profibus <sup>1)</sup>
4	B line red	cable red / Profibus-DP
5	n.c.	-

B-coded

#### accessories

CD-ROM with GSD/EDS/XML-files and manuals part nr. 147362

cable with M12 connector female assembled on one side for power supply

connector straight 2 m part nr. 132540  
connector angled 2 m part nr. 127803

cable with M12 connector male and M12 connector female assembled for bus-IN, bus-OUT

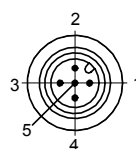
connector male/female straight 2 m part nr. 157909  
5 m part nr. 157910  
connector male/female angled 2 m part nr. 157911  
6 m part nr. 157912

(usage see page 5.19 fieldbus accessories)

spring clamp set part nr. 252773

couplings and mounting adapters see chapter accessories

#### assignment M12 supply voltage



pin nr.	signal	description
1	+Vs	voltage supply
2	n.c.	-
3	0 V	voltage supply
4	0 V	voltage supply
5	n.c.	-

A-coded

<sup>1)</sup> for optional external terminating resistor