

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

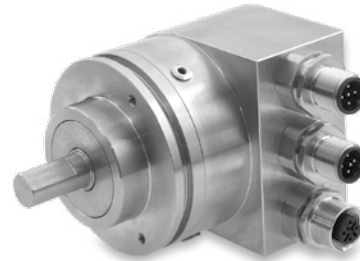
general data

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

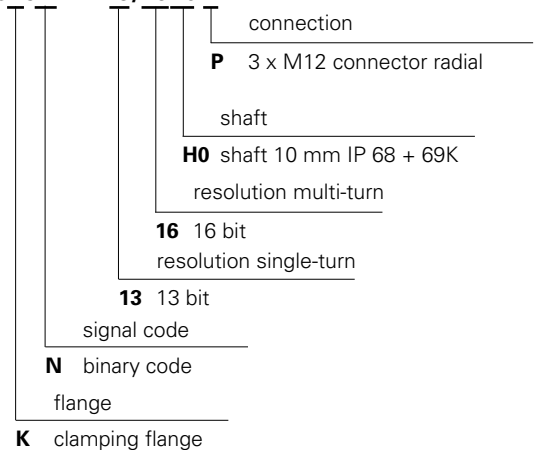
max. revolutions	6'000 rpm
moment of inertia	typ. $20 \times 10^{-7} \text{ kgm}^2$
torque	typ. 3,1 cNm (3'000 rpm / 20 °C)
max. shaft load	axial: 120 N radial: 280 N (combined) axial: 270 N (single load)
storage life	depending on ambient conditions (typ. 10^9 revolutions)
protection class	IP 68 + IP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

¹ additional versions and materials on request



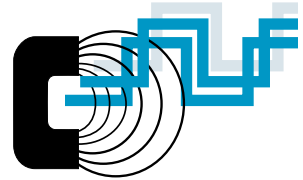
order designation BMMV 58K

BMMV 58K5N 24P13/16H0 P

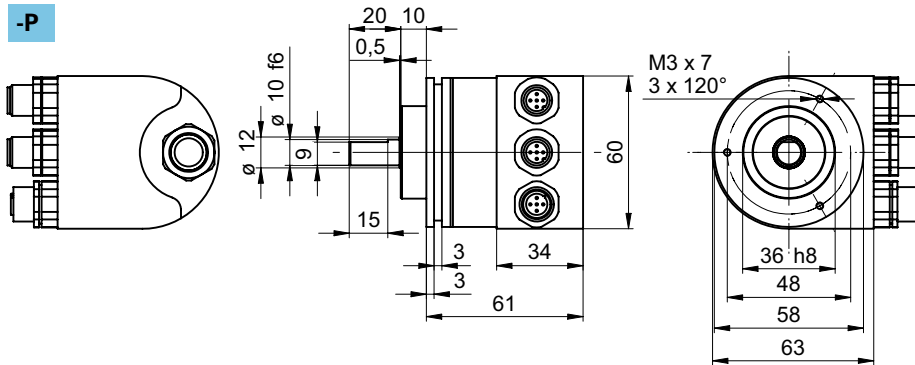


ambient conditions

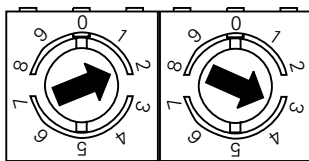
temperature range	-40...+85 °C
vibration	IEC 60068-2-6 ($\leq 300 \text{ m/s}^2$ / 10 - 2'000 Hz)
shock	IEC 60068-2-27 ($\leq 3'000 \text{ m/s}^2$ / 6 ms)
noise immunity	EN 61000-6-2
emitted interference	EN 61000-6-3



dimensions

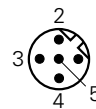


settings of user address for Profibus-DP



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.	-

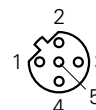
B-coded

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 ¹⁾
2	A line green	cable green / Profibus-DP
3	0 VDP	DGND Profibus ¹⁾
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

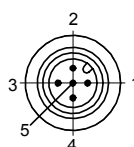
connector male/female straight 2 m part nr. 157909
5 m part nr. 157910
connector male/female angled 2 m part nr. 157911
6 m part nr. 157912

(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

¹⁾ for optional external terminating resistor