

Magnetic absolute single-turn shaft encoder

BMSV – MAGRES

parallel

features

- single-turn encoder / parallel
- magnetic sensing principle
- resolution: 12 bit
- high resistance shock and vibration
- zero setting input
- clamping or servo flange

general data

| | |
|-------------------------------------|---|
| voltage supply | 10 - 30 VDC |
| max. supply current no load | typ. 50 mA (at 24 VDC) |
| output circuit | parallel 10 - 30 VDC |
| signal code | Gray code |
| max. resolution | 12 bit (1 step = 5' 16'') |
| max. error limit | ±1° |
| repeatability | 0,3° |
| max. switching frequency | 51,2 kHz |
| zero setting signal | zero setting: < 0,4 V, min. 2 ms off state: +Vs or open |
| direction of rotation ¹⁾ | looking at the flange, position counts up as the shaft rotates clockwise (CW) |

mechanical data

| | |
|-------------------------------|--|
| max. revolutions | 12'000 rpm (mechanical) 6'000 rpm (electrical) |
| moment of inertia C6 C0 | typ. 11,8 x 10 ⁻⁷ kgm ² typ. 17,8 x 10 ⁻⁷ kgm ² |
| torque | typ. 2,3 cNm (3'000 rpm / 20 °C) |
| max. shaft load C6 C0 | axial: 10 N radial: 20 N axial: 40 N radial: 60 N |
| product life | depending on ambient conditions (typ. 10 ⁹ revolutions) |
| max. protection class | IP 65 |
| material | housing: aluminium flange: aluminium |
| weight | approx. 300 g |



order designation BMSV 58K

BMSV 58K1G24K **C05**

| | |
|--------------|---|
| 5 | connection cable 2 m radial shaft |
| C0 | shaft 10 mm IP 65 resolution |
| 12/00 | 12 bit |
| 00360 | 360 steps (9 bit Gray clipped) |
| G | Gray code flange |
| K | clamping flange |

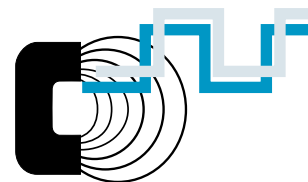
order designation BMSV 58S

BMSV 58S1G24K **C65**

| | |
|--------------|---|
| 5 | connection cable 2 m radial shaft |
| C6 | full shaft 6 mm IP 65 resolution |
| 12/00 | 12 bit |
| 00360 | 360 steps (9 bit Gray clipped) |
| G | Gray code flange |
| S | servo flange |

ambient conditions

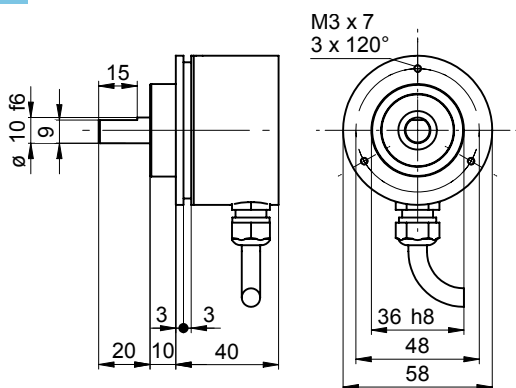
| | |
|----------------------|---|
| temperature range | -20...+85 °C |
| relative humidity | max. relative humidity 95% |
| vibration | IEC 60068-2-6 (≤ 300 m/s ² / 10 - 2'000 Hz) |
| shock | IEC 60068-2-27 (≤ 1'000 m/s ² / 6 ms) |
| noise immunity | EN 61000-6-2 |
| emitted interference | EN 61000-6-3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



parallel

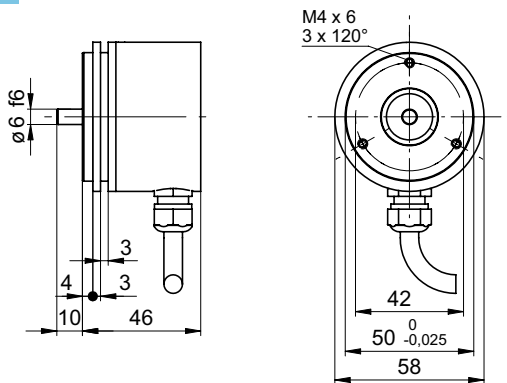
dimensions clamping flange (K)

-5



dimensions servo flange (S)

-5



assignment cable

| cable color | signal | description |
|--------------|-------------------------------|---------------------------|
| brown | +Vs | voltage supply |
| white | 0 V | voltage supply |
| green | bit 1 LSB | data |
| yellow | bit 2 | data |
| grey | bit 3 | data |
| pink | bit 4 | data |
| blue | bit 5 | data |
| red | bit 6 | data |
| black | bit 7 | data |
| purple | bit 8 | data |
| grey/pink | bit 9 | data |
| white/green | bit 10 | data |
| brown/green | bit 11 | data |
| yellow/brown | bit 12 MSB | data |
| white/yellow | ¹⁾ bit 12 MSB inv. | data |
| red/blue | zero | zero setting input |
| screen | | housing |
| cable data | | 16 x 0,14 mm ² |

direction of rotation

¹⁾The direction of rotation from encoders using a Gray code can be defined by connecting the MSB or inverted MSB. Both signals are available as an output. If the MSB is connected, the encoder counts up as the shaft rotates clockwise. If the MSB inv. is connected, the encoder counts up if the shaft rotates counter clockwise.

accessories

| | |
|---------------------------------|-------------------------|
| clamp set | part nr. 252773 |
| couplings and mounting adapters | see chapter accessories |