

# Magnetic absolute singleturn encoder

## BMSH parallel - *MAGRES*

### features

- 9 Bit singleturn resolution
- Zero-point programmable
- Parallel interface



### general data

|                               |   |
|-------------------------------|---|
| voltage supply                | 5 VDC $\pm$ 10% (05T)   |
| max. supply current (no load) | typ. 100 mA   |
| steps/rev                     | 512   |
| max. measuring step           | 9 Bit (1 step relates to 42' 11")   |
| pulse tolerance               | $\pm$ 1°  |
| switching frequency fmax.     | 51,2 kHz  |
| input signal                  | Zero (zerosetting: < 0,4 V, > 2 ms off state: 3,3 V or open)                      |
| sense of rotation             | looking at the <i>MAGRES</i> flange counts up as the shaft rotates clockwise (CW) |

### mechanical data

|                       |  |
|-----------------------|--|
| max. revolutions      | 6'000 rev/min  |
| rotor inertia         | typ. $12 \times 10^{-7}$ kgm <sup>2</sup>                          |
| torque                | typ. 0,93 cNm (3000 rev/min 20 °C)                                 |
| product life          | depending on ambient conditions (typ. 10 <sup>9</sup> revolutions) |
| max. protection class | shaft IP 64 / housing IP 64  |
| material              | housing: inox<br>flange: aluminum                                  |
| weight                | approx. 120 g  |

### ambient conditions

|                   |   |
|-------------------|---|
| temperature range | -20...+85 °C  |
| relative humidity | max. relative humidity 95%                                      |
| vibration         | IEC 68 part 2-6<br>( $\leq$ 100 m/s <sup>2</sup> / 10 - 200 Hz) |
| shock             | IEC 68 part 2-27<br>( $\leq$ 500 m/s <sup>2</sup> / 11 ms)      |

### order designation

**BMSH 42S1** 05T09/00 5

05 voltage range, output signals  
**05T** output TTL, 5 VDC

T09/00 resolution  
**09** 9 Bit

5 signal code  
**G** gray code  
**N** binary code

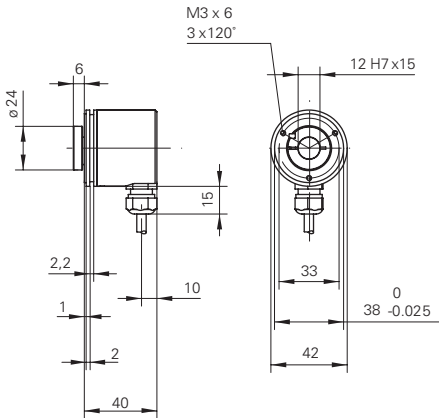
shaft  
**B2** end shaft 12 mm IP 42 with clamping ring  
**E2** end shaft 12 mm IP 64 with clamping ring

### accessories

|                 |                           |
|-----------------|---------------------------|
| servo clamp set | part nr. 110616           |
| field plate set | part nr. 138610           |
| shaft adapter   | (see accessories section) |



## dimensions



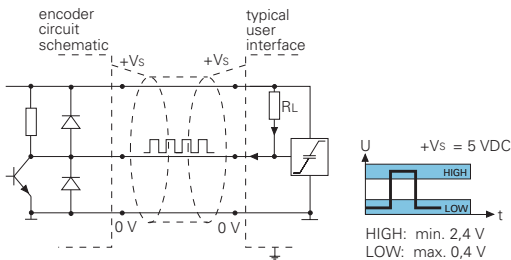
## assignment cable

for connection reference -5

| cable color | signals   | description        |
|-------------|-----------|--------------------|
| white       | 0 V       | voltage supply     |
| brown       | +Vs       | voltage supply     |
| green       | Bit 1 LSB |                    |
| yellow      | Bit 2     |                    |
| grey        | Bit 3     |                    |
| pink        | Bit 4     |                    |
| blue        | Bit 5     |                    |
| red         | Bit 6     |                    |
| black       | Bit 7     |                    |
| violet      | Bit 8     |                    |
| grey/pink   | Bit 9 MSB |                    |
| red/blue    | Zero      | zero setting input |

## output level

### 05T



|                                 |                       |
|---------------------------------|-----------------------|
| voltage supply                  | 5 VDC $\pm$ 10%       |
| supply current (+Vs/ o. charge) | typ. 100 mA           |
| output current                  | HIGH 2 mA / LOW 10 mA |