

Cable transducer

Interface SSI

Measuring length absolute up to 5 m

BMMS K50 SSI - MAGRES



BMMS K50 SSI with flange connector M12

Features

- Magnetic sensing method
- Resolution: 0.0591 mm/step
- Interface SSI
- Measuring length up to 5 m
- Removable caps for water outlet
- Extremely light thanks to housing of plastic and aluminium

Technical data - electrical ratings

| | |
|-----------------------|--|
| Voltage supply | 10...30 VDC |
| Consumption w/o load | ≤60 mA (24 VDC) |
| Initializing time | ≤170 ms after power on |
| Interface | SSI |
| Function | Linear position feedback |
| Resolution | 0.0591 mm/step |
| Linearity | ±0.61 % full scale output (f.s.o.) |
| Absolute accuracy | ±1.03 % f.s.o. (+25 °C) ±1.11 % f.s.o. (-40...+85 °C) |
| Sensing method | Magnetic |
| Code | Gray or binary |
| Inputs | SSI clock Zero setting input |
| Output stages | SSI data: Linedriver RS422 |
| Interference immunity | DIN EN 61000-6-2 |
| Emitted interference | DIN EN 61000-6-4 |

Technical data - mechanical design

| | |
|-------------------------|--|
| Protection DIN EN 60529 | IP 65 (encoder) |
| Materials | Encoder housing: aluminium Cable-pull housing: PA6 GF30 Cable: Stainless steel cable coated with polyamide |
| Operating temperature | -40...+85 °C |
| Service life | Typ. >500000 strokes |
| Measuring length | 5 m |
| Distance/revolution | 242 ±1 mm |
| Cable acceleration | ≤50 m/s ² |
| Cable diameter | 0.61 mm |
| Pull-in force | >3 N |
| Pull-out force | ≤9 N |
| Relative humidity | 95 % temporary condensing |
| Resistance | DIN EN 60068-2-6 Vibration 10 g, 10-2000 Hz DIN EN 60068-2-27 Shock 50 g, 11 ms |
| Weight approx. | 600 g |
| Connection | Flange connector M12, 8-pin Cable 2 m |
| Bending radius | Cable: >55 mm |
| Special characteristics | Coated electronic |
| Instruction | Please consider the assembly instructions |

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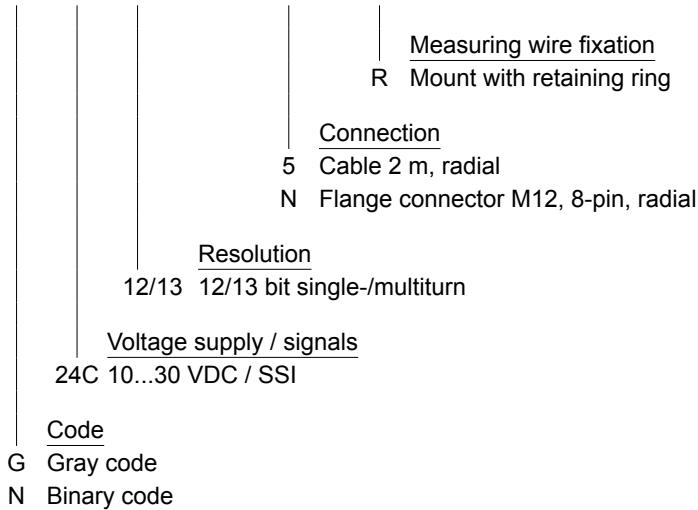
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Part number

BMMS K505

| | | | | | | | |
|--|-----|-------|----|--|---|---|---|
| | 24C | 12/13 | 00 | | . | R | 3 |
|--|-----|-------|----|--|---|---|---|



Accessories

Connectors and cables

| | |
|----------|--|
| 10146775 | Female connector M12, 8-pin, straight, without cable |
|----------|--|

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Terminal significance

| | |
|--------|--|
| +Vs | Encoder supply voltage. |
| 0 V | Encoder ground connection relating to +Vs. |
| Data+ | Positive data output. |
| Data- | Negative data output. |
| Clock+ | Positive SSI clock input. |
| Clock- | Negative SSI clock input. |
| Zero | Input for setting a zero point anywhere within the encoder resolution. The zero setting operation is triggered by a Low impulse. Connect to +Vs after setting operation for maximum interference immunity. Impulse duration >2 ms. |
| Note | Include termination resistor R=120 Ohm between Data+ and Data- on control side. |

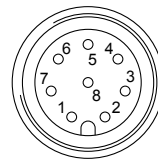
Terminal assignment

Cable and flange connector M12 for connection references -5 and -N

| Pin | Core colour | Signals | Description |
|-----|-------------|---------|--------------------|
| 1 | white | 0 V | Supply voltage |
| 2 | brown | +Vs | Supply voltage |
| 3 | green | Clock+ | Clock signal |
| 4 | yellow | Clock- | Clock signal |
| 5 | grey | Data+ | Data signal |
| 6 | pink | Data- | Data signal |
| 7 | blue | Zero | Zero setting input |
| 8 | red | d.u. | do not use |

Screen: connected to housing

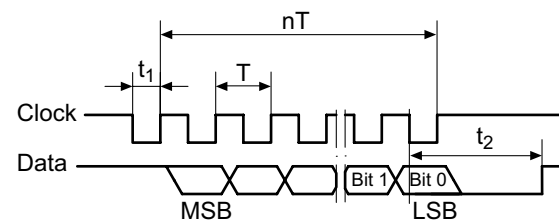
Cable data: 8 x 0.14 mm²



Trigger level

| Control inputs | Input circuit |
|------------------|----------------|
| Input level Low | <0,4 V (>2 ms) |
| Input level High | +Vs or open |

Data transfer



$$T = 1 \dots 10 \mu\text{s} \quad t_1 = 0.5 \dots 5 \mu\text{s}$$

$$t_2 \leq 12 \dots 26 \mu\text{s} \quad f \text{ max. } 1 \text{ MHz}$$

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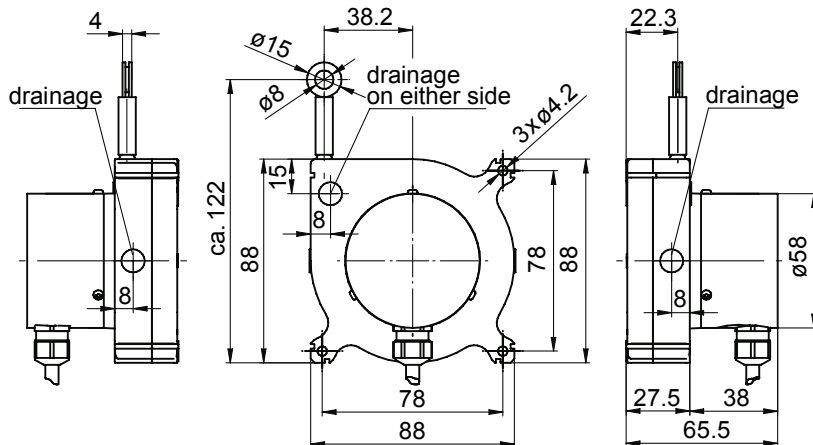
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Dimensions

BMMS K50 cable radial



BMMS K50 flange connector M12

