

Technical Data Sheet

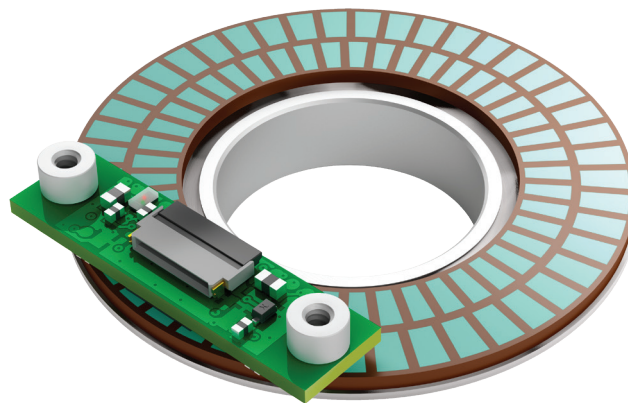
RMSN32-31A-1.50-F-A (Art.No. 51685)

Indicating movements with RMSN is simple, precise and economic. The absolute rotary scale 51685 is used in discrete positioning and motion control applications, e.g. robotics. This special scale is cost effective as well as tried and tested in various customer applications. It benefits from an extended shaft for good positioning on axis and shafts. The hard ferrite and aluminum material combination makes it especially useful in high temperature environments. The combination of BOGEN encoders and scales with optimized pole pitches ensure highest system accuracy.

counting

controlling

ALWAYS
ABSOLUTE 



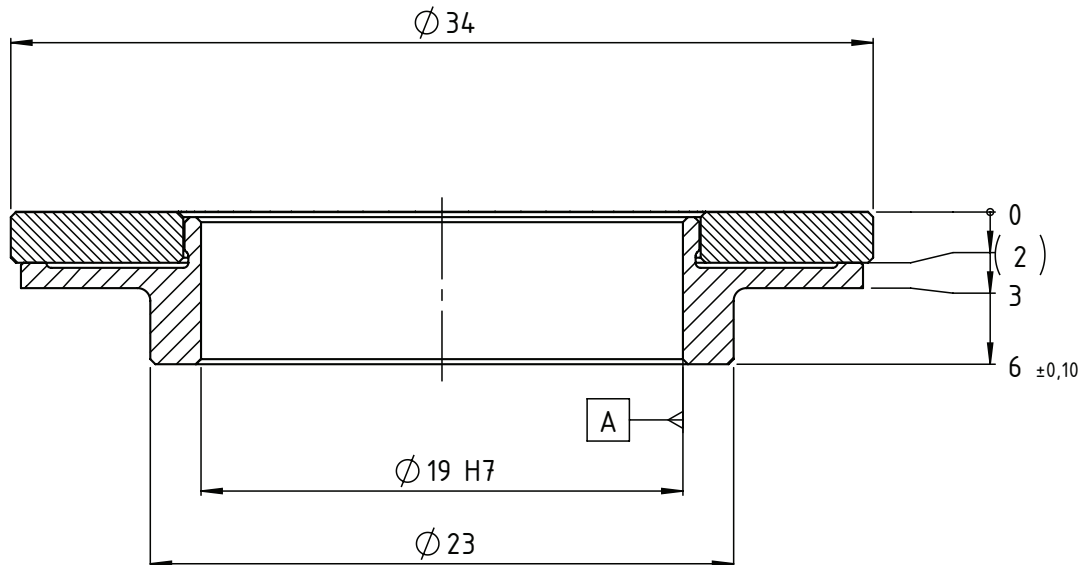
Features and Benefits

- absolute magnetic high performance ring
- available with standard Nonius pattern
- high operating temperature range -40°C +200°C
- rotational speed up to 32000 rpm
- light-weight aluminum hub for easy installation by gluing or press-fit fixing
- excellent resistance against chemical liquids & dirt
- through hollow shaft Ø19mm (others on request)

Absolute Encoder Features in Combination with BOGEN AKS16 & AKP18 Sensors

- up to 19 bit resolution
- BiSS-C/SSI, AB0+UVW output interfaces
- AKS16 compact housed version with multiple sensor vs. ring orientation options
- AKP18 miniature PCB sensor with daisy chain option

Dimensions



Technical Specifications

Magnetic Properties

| | |
|----------------------------|-----------|
| residual induction [Br] mT | 200 - 220 |
|----------------------------|-----------|

Physical Properties

| | |
|----------------------|------------|
| temperature range °C | -40 to 200 |
|----------------------|------------|

Mechanical Specifications

| | |
|--|---|
| dimensions | see drawing |
| rotational speed | 32000 rpm max. |
| recommended axis dimension and tolerance | diameter 19 g6 when fixed with glue diameter 19 h6 when fixed by press-fit |

Materials

| | |
|--------|-----------------------|
| magnet | sintered hard ferrite |
| hub | aluminum |

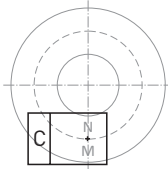
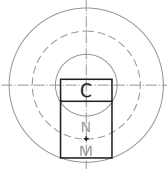
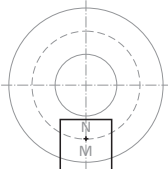
Chemical Properties

| | |
|--|--|
| hydraulic oil [23 °C × 72 h] | ++ |
| alcohol [23 °C × 72 h] | + |
| weak alkali [23 °C × 72 h] | ++ |
| detergent [23 °C × 72 h] | ++ |
| aromatic solvent [23 °C × 72 h] | chemical resistance depends on temperature, concentration and time of exposure to the medium |
| organic, anorganic acid [23 °C × 72 h] | |
| aliphatic solvent [23 °C × 72 h] | |
| water [60 °C × 72 h] | ++ |

- not suitable
+ good
++ very good

Corresponding Magnetic Sensors

| | | order code | |
|-------|------------------|---------------|--------------------|
| AKP18 | AKP18-P1.50-C... | C - connector | C3 - W2B connector |
| | | | C1 - FFC connector |

| | | order code | | | |
|----------------------|-----------------------|-----------------|---|--|--|
| AKS16 ⁽¹⁾ | AKS16-0...-P1.50-C... | 0 - orientation | <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>01 (0°)</p>  </div> <div style="text-align: center;"> <p>02 (90°)</p>  </div> <div style="text-align: center;"> <p>04 (270°)</p>  </div> </div> <p style="margin-top: 10px;"> <small>Rotary Scale Axial</small> <small>M - master track</small> <small>N - nonius track</small> <small>C - connector</small> </p> | | |
| | | C - connector | C3 - W2B connector C1 - FFC connector | | |

⁽¹⁾ full order code

For more details please check [AKS16 datasheet](#) or [AKP18 datasheet](#) respectively.

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