


ONLINE DATA SHEET
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# Absolute encoders
# ARS60 SSI/Parallel

ARS60-F1K04096



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# ARS60 SSI/Parallel

**Model Name** > ARS60-F1K04096
**Part No.** > 1031606





*Illustration may differ*

**At a glance**

- Absolute singleturn encoder
- Resolution: up to 15 bits (32,768 increments)
- Electrical interface: SSI with gray code type or gray capped
- Electrical interface: Parallel with gray, gray capped, binary, BCD code type
- Zero-set function
- Mechanical interfaces: face mount flange, servo flange, blind and through hollow shaft
- Enclosure rating: Up to IP66

**Your benefits**

- Optical and magnetic variants for the widest range of requirements
- Reduced maintenance costs thanks to magnetic, wearless scanning in single and multiturn design
- High level of productivity due to optical encoders with a high level of precision and fast calculation of positions
- Robust design for maximum system availability, even in extreme environmental conditions
- Absolutely compact - specially suited in cases where installation space is tight
- Flexible integration in all common networks

## Performance

| | |
|---|---|
| Max. number of steps per revolution: | 4,096 |
| Max. number of revolutions: | 1 |
| Resolution power: | 4,096 x 1 |
| Error limits: | 0.035 ° (binary number of steps)<br>0.046 ° (non-binary number of steps) |
| Repeatability (Ta not constant): | 0.005 ° |
| Measuring step deviation: | 0.005 °, 0.016 ° |
| Measuring step: | 360 ° /number of lines |
| Initialization time: | 80 ms [1)] |

[1)] Valid positional data can be read once this time has elapsed

## Mechanical data

| | |
|---|---|
| Mechanical interface: | Solid shaft, Servo flange |
| Shaft diameter: | 6 mm |
| Start up torque: | 0.25 Ncm |


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| | |
|---|---|
| Operating torque: | 0.2 Ncm |
| Permissible Load capacity of shaft: | 10 N (axial), 20 N (radial) |
| Maximum operating speed: | 10,000 /min (without shaft seal), 6,000 /min (with shaft seal) [1] |
| Moment of inertia of the rotor: | 48 gcm² |
| Bearing lifetime: | 3.6 x 10^9 revolutions |
| Max. angular acceleration: | 500,000 rad/s² |
| Operation of zero-set: | ≥ 100 ms [2] |

[1] If the shaft seal has been removed by the customer [2] Only with shaft stationary (note initialisation time)

## Electrical data

| | |
|---|---|
| Operating voltage range: | 10 V DC ... 32 V DC |
| Operating power consumption (no load): | 90 mA |
| MTTFd: mean time to dangerous failure: | 300 a (EN ISO 13849-1) [1] |

[1] This product is a standard product and does not constitute a safety component as defined in the Machinery Directive. Calculation based on nominal load of components, average ambient temperature 40°C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

## Interfaces

| | |
|---|---|
| Electrical interface: | Cable, 22-pin, radial, 1.5 m |

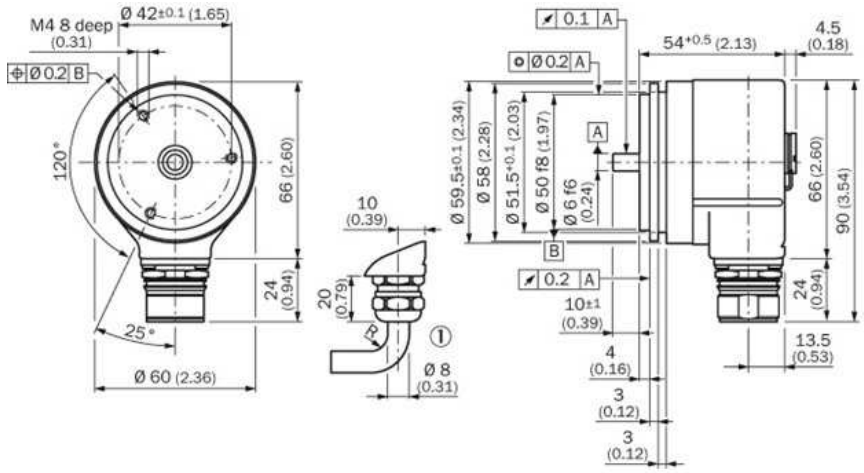
## Ambient data

| | |
|---|---|
| EMC: | (according to EN 61000-6-2 and EN 61000-6-3) [1] |
| Enclosure rating: | IP 66 (according to IEC 60529) |
| Permissible relative humidity: | 90 % (condensation of the optical scanning not permitted) |
| Working temperature range: | -20 °C ... 85 °C |
| Storage temperature range: | -40 °C ... 100 °C |
| Resistance to shocks: | 50 g (according to EN 60068-2-27) |
| Resistance to vibration: | 20 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6) |

[1]


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## Dimensional drawing





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