



**Absolute encoders
ARS60 SSI/Parallel**

ARS60-FDL08192



Model Name > [ARS60-FDL08192](#)
Part No. > [1031798](#)



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: | 8,192 |
| Max. number of revolutions: | 1 |
| Resolution power: | 8,192 x 1 |
| Error limits: | 0.035 ° (binary number of steps) 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: | Through hollow shaft |
|-----------------------|----------------------|

| | |
|---------------------------------------------|------------------------------------------------------------------------------------------------------|
| Shaft diameter: | 6 mm 8 mm 10 mm 12 mm 14 mm 15 mm 1/4 " 3/8 " ¹⁾ 1/2 " ¹⁾ |
| Start up torque: | 2.2 Ncm |
| Operating torque: | 1.6 Ncm |
| Maximum operating speed: | 3,000 /min |
| Bearing lifetime: | 3.6 x 10 ⁹ revolutions |
| Max. angular acceleration: | 500,000 rad/s ² |
| Permissible movement axial static/dynamic: | ± 0.5 mm, ± 0.2 mm |
| Permissible movement radial static/dynamic: | ± 0.3 mm, ± 0.1 mm |
| Operation of zero-set: | ≥ 100 ms ²⁾ |

¹⁾ Collets for 6, 8, 10, 12, 14 mm and 1/4 ", 3/8 " and 1/2 " as accessories, separate order item. For 15 mm shaft diameter collet is not needed. 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

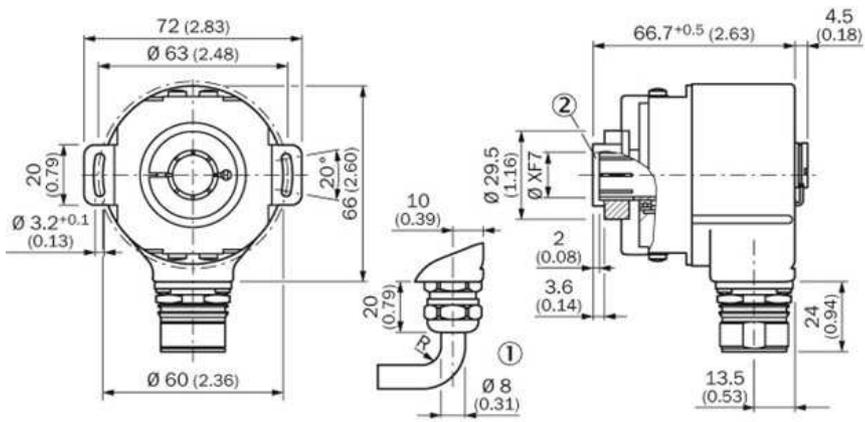
| | |
|-----------------------|----------------------------|
| Electrical interface: | Cable, 22-pin, radial, 3 m |
|-----------------------|----------------------------|

Ambient data

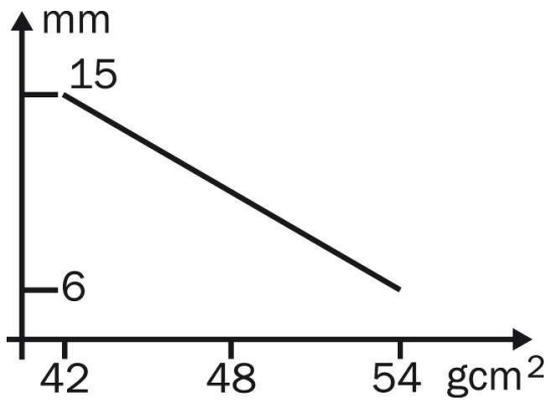
| | |
|--------------------------------|------------------------------------------------------------|
| EMC: | (according to EN 61000-6-2 and EN 61000-6-3) ¹⁾ |
| Enclosure rating: | IP 64 (according to IEC 60529) |
| Permissible relative humidity: | 90 % (condensation of the optical scanning not permitted) |
| 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⁾

Dimensional drawing



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