



**Absolute encoders  
ARS60 SSI/Parallel**

ARS60-F1K00512



**Model Name** > [ARS60-F1K00512](#)  
**Part No.** > [1032833](#)



*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:	512
Max. number of revolutions:	1
Resolution power:	512 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 <sup>1)</sup>

<sup>1)</sup> 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

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) <sup>1)</sup>
Moment of inertia of the rotor:	48 gcm <sup>2</sup>
Bearing lifetime:	3.6 x 10 <sup>9</sup> revolutions
Max. angular acceleration:	500,000 rad/s <sup>2</sup>
Operation of zero-set:	≥ 100 ms <sup>2)</sup>

<sup>1)</sup> If the shaft seal has been removed by the customer <sup>2)</sup> Only with shaft stationary (note initialisation time)

### Electrical data

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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) <sup>1)</sup>

<sup>1)</sup> 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

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Electrical interface:	Cable, 22-pin, radial, 1.5 m
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### Ambient data

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EMC:	(according to EN 61000-6-2 and EN 61000-6-3) <sup>1)</sup>
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)

<sup>1)</sup>



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