


ONLINE DATA SHEET
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# Absolute encoders
# ARS60 SSI/Parallel

ARS60-F4M32767



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# ARS60 SSI/Parallel

**Model Name** > ARS60-F4M32767
**Part No.** > 1031630





## 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

- Freely programmable resolution (up to 15 bits)
- Simple zero adjustment directly by press of a button on the encoder or via signal line (cable version)
- Suitable for all mounting methods thanks to individual mechanical interfaces
- A basic device for flexible use thanks to simple interchangeable collets for blind hollow shaft and through hollow shaft
- Versions with cable and M23 connector outlet available in axial and radial designs

## Performance

| | |
|---|---|
| Max. number of steps per revolution: | 32,767 |
| Max. number of revolutions: | 1 |
| Resolution power: | 32,767 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, Face mount flange |
| Shaft diameter: | 10 mm |
| Start up torque: | 0.4 Ncm |
| Operating torque: | 0.3 Ncm |


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| | |
|---|---|
| Permissible Load capacity of shaft: | 20 N (radial)<br>10 N (axial) |
| Maximum operating speed: | 10,000 /min (without shaft seal)<br>6,000 /min (with shaft seal) [1)] |
| Moment of inertia of the rotor: | 54 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 |

**Interfaces**

| | |
|---|---|
| Electrical interface: | Cable, 22-pin, radial, 5 m |

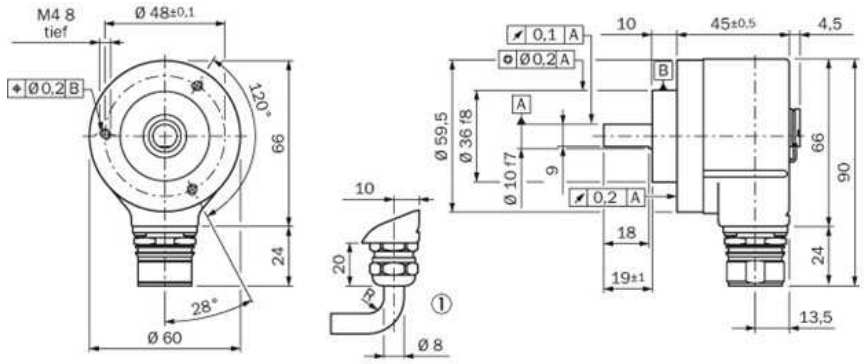
**Ambient data**

| | |
|---|---|
| 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) |

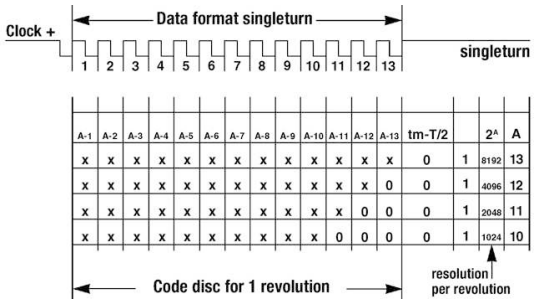
[1)]


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## Dimensional drawing




## PSDI




| A-1 | A-2 | A-3 | A-4 | A-5 | A-6 | A-7 | A-8 | A-9 | A-10 | A-11 | A-12 | A-13 | tm-T/2 | | $2^A$ | A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x | x | x | x | x | x | x | x | x | x | x | x | x | 0 | 1 | 8192 | 13 |
| x | x | x | x | x | x | x | x | x | x | x | x | 0 | 0 | 1 | 4096 | 12 |
| x | x | x | x | x | x | x | x | x | x | x | 0 | 0 | 0 | 1 | 2048 | 11 |
| x | x | x | x | x | x | x | x | x | x | 0 | 0 | 0 | 0 | 1 | 1024 | 10 |


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