



**Absolute encoders
ARS60 SSI/Parallel**

ARS60-H4K00180



Model Name > [ARS60-H4K00180](#)
Part No. > [1031669](#)



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: | 180 |
| Max. number of revolutions: | 1 |
| Resolution power: | 180 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: | Solid shaft, Face mount flange |
| Shaft diameter: | 10 mm |
| Start up torque: | 0.4 Ncm |
| Operating torque: | 0.3 Ncm |

| | |
|-------------------------------------|--|
| Permissible Load capacity of shaft: | 20 N (radial) 10 N (axial) |
| Maximum operating speed: | 10,000 /min (without shaft seal) 6,000 /min (with shaft seal) ¹⁾ |
| Moment of inertia of the rotor: | 54 gcm ² |
| Bearing lifetime: | 3.6 x 10 ⁹ revolutions |
| Max. angular acceleration: | 500,000 rad/s ² |
| 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

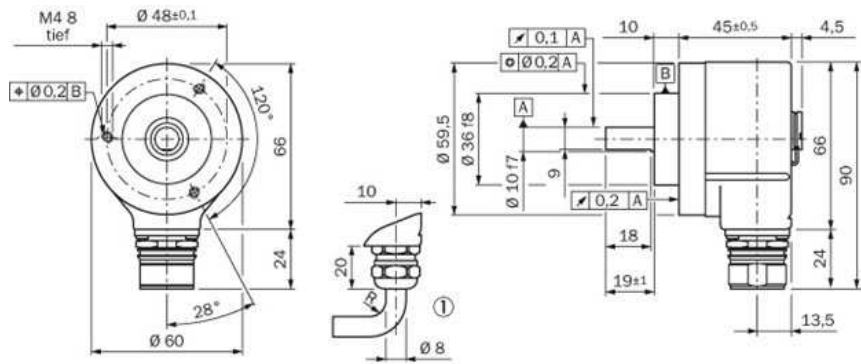
| | |
|-----------------------|------------------------------|
| Electrical interface: | Cable, 22-pin, radial, 1.5 m |
|-----------------------|------------------------------|

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⁾

Dimensional drawing



PSDI

Clock +

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | En | Ed | 0 | 14 | 13 | 12 | 11 | 10 | 9 | 8 |

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