



Absolute encoders ARS60 SSI/Parallel

ARS60-H4K02048



Model Name > [ARS60-H4K02048](#)
Part No. > [1035111](#)



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:	2,048
Max. number of revolutions:	1
Resolution power:	2,048 x 1
Error limits:	0.035 ° (binary number of steps) 0.046 ° (non-binary number of steps)
Repeat accuracy:	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
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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⁾

Technical drawing of a mechanical part showing three views: front, side, and top.

- Front View:** Shows a circular flange with a central hole of diameter $\varnothing 60$. Four mounting holes are located at 120° intervals. The overall height is 90 mm. A detail callout indicates a hole with a diameter tolerance of $+ \varnothing 0,2 B$.
- Side View:** Shows a cylindrical body with a diameter of $\varnothing 48 \pm 0,1$ mm and a length of 66 mm. A detail callout indicates a hole with a diameter tolerance of $+ \varnothing 0,2 B$.
- Top View:** Shows a square base with dimensions $45 \pm 0,5$ mm by $45 \pm 0,5$ mm. It includes a central hole of diameter $\varnothing 10$ and various surface finish requirements indicated by symbols like $\sqrt{0,1}$, $\sqrt{0,2}$, and $\sqrt{0,4}$.

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	E1	E2	0	14	13	12	11	10	9	8

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