



Absolute encoders ARS60 SSI/Parallel

ARS60-H4K03600



Model Name > ARS60-H4K03600
Part No. > 1032884



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:	3,600
Max. number of revolutions:	1
Resolution power:	3,600 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
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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⁾

The technical drawing illustrates a ball joint assembly with the following dimensions and features:

- Front View (Top Left):** Shows a circular flange with a central hole. Dimensions include a diameter of $\varnothing 60$, a height of 66, and a mounting hole diameter of $\varnothing 48 \pm 0.1$. A depth of M4 8 is indicated. A chamfer angle of 28° is shown at the base.
- Side View (Bottom Left):** Shows the profile of the ball joint. Dimensions include a total width of 10, a height of 20, and a base diameter of $\varnothing 8$.
- Cross-Section View (Right):** Provides a detailed look at the internal components and their tolerances. Key dimensions include:
 - A vertical distance of 59.5 from the top surface to the center of the ball.
 - A horizontal distance of 10 from the left edge to the center of the ball.
 - A vertical distance of 36 f8 from the top surface to the bottom of the housing.
 - A vertical distance of 10 f7 from the bottom of the housing to the center of the ball.
 - A horizontal distance of 9 from the center of the ball to the right edge of the housing.
 - A horizontal distance of 18 from the center of the ball to the right edge of the flange.
 - A horizontal distance of 19 ± 1 from the center of the ball to the right edge of the base.
 - A vertical distance of 45 ± 0.5 from the top surface to the top of the flange.
 - A vertical distance of 66 from the top surface to the top of the base.
 - A vertical distance of 90 from the top surface to the bottom of the base.
 - A vertical distance of 24 from the top surface to the bottom of the flange.
 - A vertical distance of 13.5 from the top surface to the bottom of the base.

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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