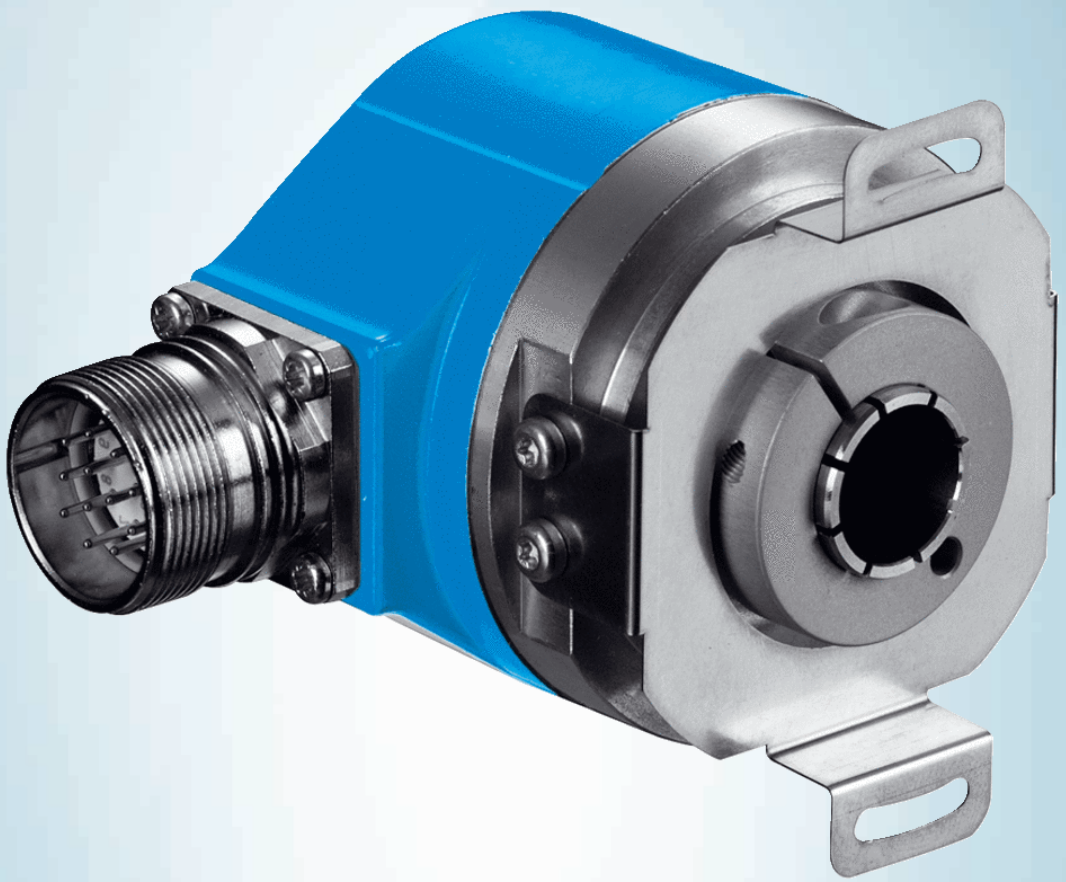
Product data sheet



ARS60-AAB00360

ARS60 SSI/Parallel

ABSOLUTE ENCODERS

SICK
Sensor Intelligence.

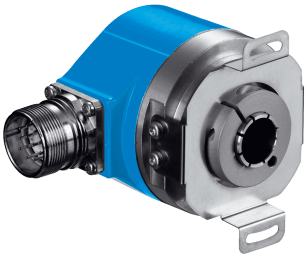


Illustration may differ

Ordering information

Type	Part no.
ARS60-AAB00360	1034416

Other models and accessories ➜ www.sick.com/ARS60_SSI_Parallel

Detailed technical data

Performance

Number of steps per revolution (max. resolution)	360 Any number of steps from 00002 to 32768 possible. Always 5 characters in cleartext.
Error limits G	0.035° (binary number of steps) [1] 0.046° (non-binary number of steps)
Repeatability standard deviation σ_r	0.005° [2]

[1] In accordance with DIN ISO 1319-1, position of the upper and lower error limit depends on the installation situation, specified value refers to a symmetrical position, i.e. deviation in upper and lower direction is the same.
[2] In accordance with DIN ISO 55350-13; 68.3% of the measured values are inside the specified area.

Interfaces

Communication interface	SSI
Initialization time	80 ms [1]
SSI	
Code type	Gray
Code sequence parameter adjustable	CW (clockwise) increasing when viewing the clockwise rotating shaft Increasing, when turning the shaft For clockwise rotation, looking in direction “A” (see dimensional drawing)

[1] Valid positional data can be read once this time has elapsed.

Electrical data

Connection type	Male connector, M23, 12-pin, axial
Supply voltage	10 ... 32 V DC
MTTFd: mean time to dangerous failure	300 years (EN ISO 13849-1) [1]

[1] 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.

Mechanical data

Mechanical design	Blind hollow shaft
Shaft diameter	15 mm [1]

[1] Collets for 6, 8, 10, 12, 14 mm and 1/4", 3/8" and 1/2" as accessories, separate order item. For 15 mm shaft diameter collet is not needed.

Weight	0.3 kg
Housing material	Aluminum die cast
Start up torque	0.6 Ncm
Operating torque	0.4 Ncm
Permissible shaft movement, axial static/dynamic	± 0.5 mm, ± 0.2 mm
Permissible shaft movement, radial static/dynamic	± 0.3 mm, ± 0.1 mm
Bearing lifetime	3.6 x 10^9 revolutions
Angular acceleration	≤ 500,000 rad/s²

[1] Collets for 6, 8, 10, 12, 14 mm and 1/4", 3/8" and 1/2" as accessories, separate order item. For 15 mm shaft diameter collet is not needed.

Ambient data

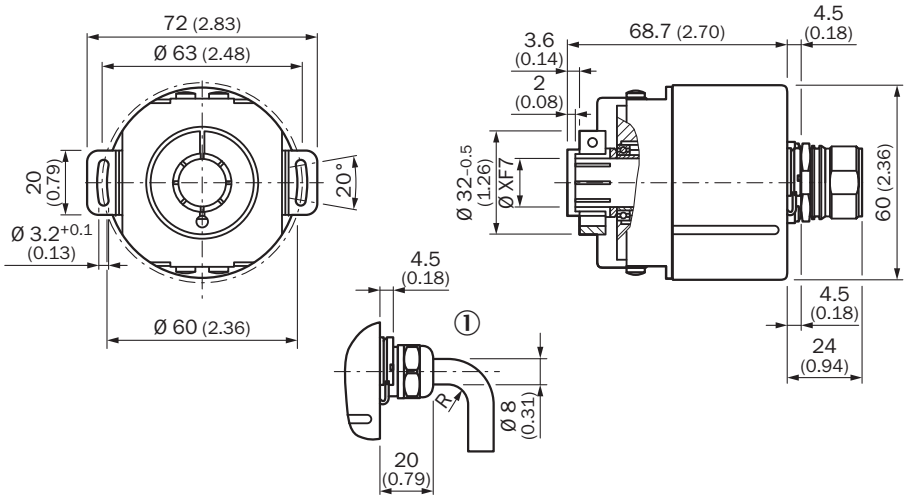
EMC	According to EN 61000-6-2 and EN 61000-6-3 [1]
Enclosure rating	IP65, with mating connector fitted (according to IEC 60529)
Permissible relative humidity	90 % (condensation of the optical scanning not permitted)
Operating temperature range	–20 °C ... +85 °C
Storage temperature range	–40 °C ... +100 °C
Resistance to shocks	50 g, 11 ms (according to EN 60068-2-27)
Resistance to vibration	20 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)

[1] EMC according to the standards quoted is achieved if shielded cables are used.

Classifications

ECl@ss 5.0	27270502
ECl@ss 5.1.4	27270502
ECl@ss 6.0	27270590
ECl@ss 6.2	27270590
ECl@ss 7.0	27270502
ECl@ss 8.0	27270502
ECl@ss 8.1	27270502
ECl@ss 9.0	27270502
ETIM 5.0	EC001486
ETIM 6.0	EC001486
UNSPSC 16.0901	41112113

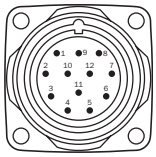
Dimensional drawing (Dimensions in mm (inch))



PIN assignment

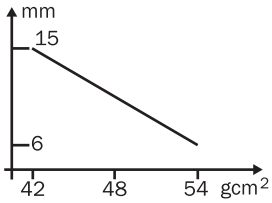
- Allocation for encoder with 12-pin connector; SSI interface

Signal	12-pin connector	11-core cable outlet
GND	1	Blue
Data (+)	2	White
Clock (+)	3	Yellow
N. C.	4	–
V/R	5	Pink
N. C.	6	–
N. C.	7	–
U_s	8	Red
SET	9	Orange
Data (–)	10	Brown
Clock (–)	11	Lilac
N. C.	12	–



View of the connector M23 fitted to the encoder body SSI

Maximum revolution range



Recommended accessories

Other models and accessories ➜ www.sick.com/ARS60_SSI_Parallel

	Brief description	Type	Part no.
Shaft adaptation			
	Collet for blind hollow shaft, shaft diameter 6 mm, outer diameter 15 mm	SPZ-006-AD-A	2029174
	Collet for blind hollow shaft, shaft diameter 8 mm, outer diameter 15 mm	SPZ-008-AD-A	2029176
	Collet for blind hollow shaft, shaft diameter 10 mm, outer diameter 15 mm	SPZ-010-AD-A	2029178
	Collet for blind hollow shaft, shaft diameter 12 mm, outer diameter 15 mm	SPZ-012-AD-A	2029179
	Collet for blind hollow shaft, shaft diameter 1/2" (12.7 mm), outer diameter 15 mm	SPZ-1E2-AD-A	2029180
	Collet for blind hollow shaft, shaft diameter 1/4" (6.35 mm), outer diameter 15 mm	SPZ-1E4-AD-A	2029175
	Collet for blind hollow shaft, shaft diameter 3/8" (9.525 mm), outer diameter 15 mm	SPZ-3E8-AD-A	2029177

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com