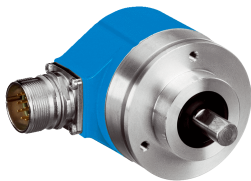


# ARS60-F4M00360

ARS60 SSI/Parallel

**ABSOLUTE ENCODERS**

**SICK**  
Sensor Intelligence.



## Ordering information

Type	Part no.
ARS60-F4M00360	1035244

Other models and accessories → [www.sick.com/ARS60\\_SSI\\_Parallel](http://www.sick.com/ARS60_SSI_Parallel)

Illustration may differ



## Detailed technical data

## Performance

<b>Max. number of steps per revolution (max. resolution)</b>	360  Any number of steps from 00002 to 32768 possible. Always 5 characters in cleartext.
<b>Error limits G</b>	0.035°, 0.046° (binary number of steps, non-binary number of steps) <sup>1)</sup>
<b>Repeatability standard deviation <math>\sigma_r</math></b>	0.005° <sup>2)</sup>

<sup>1)</sup> 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.

<sup>2)</sup> In accordance with DIN ISO 55350-13; 68.3% of the measured values are inside the specified area.

## Interfaces

<b>Communication interface</b>	Parallel data world
<b>Initialization time</b>	80 ms <sup>1)</sup>
<b>SSI</b>  Code sequence parameter adjustable	CW (clockwise), Increasing, when turning the shaft For clockwise rotation, looking in direction "A" (see dimensional drawing) increasing when viewing the clockwise rotating shaft

<sup>1)</sup> Valid positional data can be read once this time has elapsed.

## Electrical data

<b>Connection type</b>	Cable, 22-wire, radial, 5 m
<b>Supply voltage</b>	10 V DC ... 32 V DC
<b>Reverse polarity protection</b>	✓
<b>Short-circuit protection</b>	✓
<b>MTTFd: mean time to dangerous failure</b>	300 years (EN ISO 13849-1) <sup>1)</sup>

<sup>1)</sup> 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

<b>Mechanical design</b>	Solid shaft, face mount flange
<b>Shaft diameter</b>	10 mm
<b>Wave length</b>	18 mm
<b>Housing material</b>	Aluminum die cast

<b>Start up torque</b>	0.4 Ncm
<b>Operating torque</b>	0.3 Ncm
<b>Permissible Load capacity of shaft</b>	20 N / radial 10 N / axial
<b>Moment of inertia of the rotor</b>	54 gcm <sup>2</sup>
<b>Bearing lifetime</b>	3.6 x 10 <sup>9</sup> revolutions
<b>Angular acceleration</b>	≤ 500,000 rad/s <sup>2</sup>

#### Ambient data

<b>EMC</b>	According to EN 61000-6-2 and EN 61000-6-3 <sup>1)</sup>
<b>Enclosure rating</b>	IP66 (according to IEC 60529)
<b>Permissible relative humidity</b>	90 % (condensation of the optical scanning not permitted)
<b>Operating temperature range</b>	-20 °C ... +85 °C
<b>Storage temperature range</b>	-40 °C ... +100 °C
<b>Resistance to shocks</b>	50 g, 11 ms (according to EN 60068-2-27)
<b>Resistance to vibration</b>	20 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)

<sup>1)</sup> EMC according to the standards quoted is achieved if shielded cables are used.

#### Classifications

<b>ECI@ss 5.0</b>	27270502
<b>ECI@ss 5.1.4</b>	27270502
<b>ECI@ss 6.0</b>	27270590
<b>ECI@ss 6.2</b>	27270590
<b>ECI@ss 7.0</b>	27270502
<b>ECI@ss 8.0</b>	27270502
<b>ECI@ss 8.1</b>	27270502
<b>ECI@ss 9.0</b>	27270502
<b>ETIM 5.0</b>	EC001486
<b>ETIM 6.0</b>	EC001486
<b>UNSPSC 16.0901</b>	41112113




### Face mount flange, radial plug connection M12 and M23



① R = min. bending radius 40 mm

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4 ENCODERS | SICK

	Brief description	Type	Part no.
	Bellows coupling, shaft diameter 10 mm/10 mm; maximum shaft offset: radial +/- 0.25 mm, axial +/- 0.4 mm, angular +/- 4°; max. revolutions 10,000 rpm, -30° to +120 °C, max. torque 80 Ncm; material: stainless steel bellows, aluminum clamping hubs	KUP-1010-B	5312983
	Spring washer coupling, shaft diameter 10 mm / 10 mm, maximum shaft offset, radial ± 0.3 mm, axial ± 0.4 mm, angle ± 2.5°, torsion spring stiffness 30 Nm/rad; material: aluminum flange, glass-fiber reinforced polyamide membrane and hardened steel coupling pin	KUP-1010-F	5312986
	10 mm / 12 mm; maximum shaft offset: radial +/- 0.25 mm, axial +/- 0.4 mm, angular +/- 4°; max. revolutions 10,000 rpm, -30° to +120 °C, max. torque 80 Ncm; material: stainless steel bellows, aluminum clamping hubs	KUP-1012-B	5312984

## 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](http://www.sick.com)