



## Absolute encoders ARS60 SSI/Parallel

ARS60-A4A12800



**Model Name** > [ARS60-A4A12800](#)  
**Part No.** > [1031476](#)



**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:	12,800
Max. number of revolutions:	1
Resolution power:	12,800 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 <sup>1)</sup>

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

**Mechanical data**

Mechanical interface:	Solid shaft, Face mount flange
Shaft diameter:	10 mm
Mass:	0.3 kg
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) <sup>1)</sup>
Moment of inertia of the rotor:	54 gcm <sup>2</sup>
Bearing lifetime:	3.6 x 10 <sup>9</sup> revolutions
Max. angular acceleration:	500,000 rad/s <sup>2</sup>
Operation of zero-set:	≥ 100 ms <sup>2)</sup>

<sup>1)</sup> If the shaft seal has been removed by the customer <sup>2)</sup> Only with shaft stationary (note initialisation time)

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#### Electrical data

Operating voltage range:	10 V DC ... 32 V DC
Operating power consumption (no load):	60 mA

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#### Interfaces

Electrical interface:	Connector M23, 12-pin, radial
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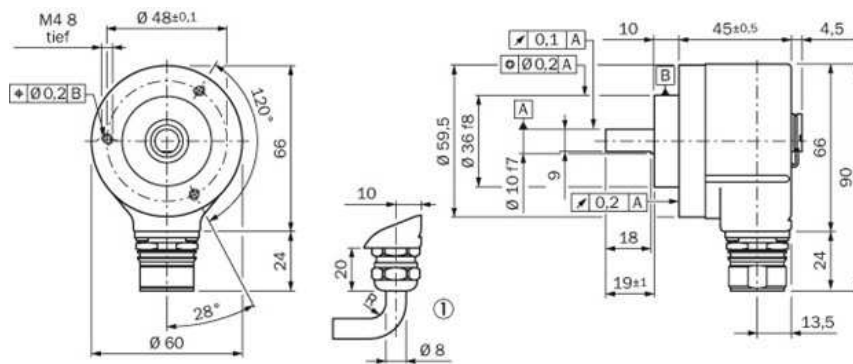
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#### Ambient data

EMC:	According to EN 61000-6-2 and EN 61000-6-3 <sup>1)</sup>
Enclosure rating:	IP 65, according to IEC 60529, with mating connector fitted
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)

<sup>1)</sup>

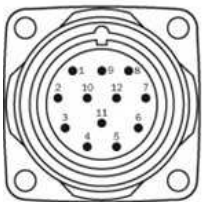
## Dimensional drawing



## PIN assignment

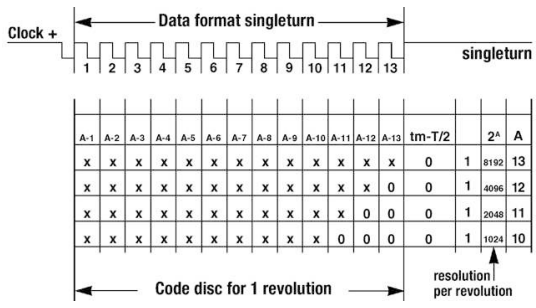
- Anschlussbelegung für Ausführung mit 12-poligem Stecker; SSI-Schnittstelle

Signal	12-poliger Gerätestecker	11-adriger Leitungsabgang
GND	1	Blau
Daten (+)	2	Weiß
Taktl (+)	3	Gelb
N. C.	4	-
V/R	5	Rosa
N. C.	6	-
N. C.	7	-
$U_s$	8	Rot
SET	9	Orange
Daten (-)	10	Braun
Taktl (-)	11	Violett
N. C.	12	-



Ansicht Gerätestecker M23, 12-polig am Encoder, SSI

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