

ONLINE DATA SHEET
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Absolute encoders
ARS60 SSI/Parallel

ARS60-AAA01000



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ARS60 SSI/Parallel

Model Name > ARS60-AAA01000
Part No. > 1036503





Illustration may differ

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

- Optical and magnetic variants for the widest range of requirements
- Reduced maintenance costs thanks to magnetic, wearless scanning in single and multiturn design
- High level of productivity due to optical encoders with a high level of precision and fast calculation of positions
- Robust design for maximum system availability, even in extreme environmental conditions
- Absolutely compact - specially suited in cases where installation space is tight
- Flexible integration in all common networks

Performance

Max. number of steps per revolution:	1,000
Max. number of revolutions:	1
Resolution power:	1,000 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:	Blind hollow shaft

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Shaft diameter:	6 mm 8 mm 10 mm 12 mm 14 mm 15 mm 1/4 " 3/8 " [1)] 1/2 "
Mass:	0.3 kg
Start up torque:	0.6 Ncm
Operating torque:	0.4 Ncm
Maximum operating speed:	3,000 /min
Bearing lifetime:	3.6 x 10^9 revolutions
Max. angular acceleration:	500,000 rad/s²
Permissible movement axial static/dynamic:	± 0.5 mm, ± 0.2 mm
Permissible movement radial static/dynamic:	± 0.3 mm, ± 0.1 mm
Operation of zero-set:	≥ 100 ms [2)]

[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. [2)] Only with shaft stationary (note initialisation time)

Electrical data

Operating voltage range:	10 V DC ... 32 V DC
Operating power consumption (no load):	60 mA
MTTFd: mean time to dangerous failure:	300 a (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.

Interfaces

Electrical interface:	Connector M23, 12-pin, radial

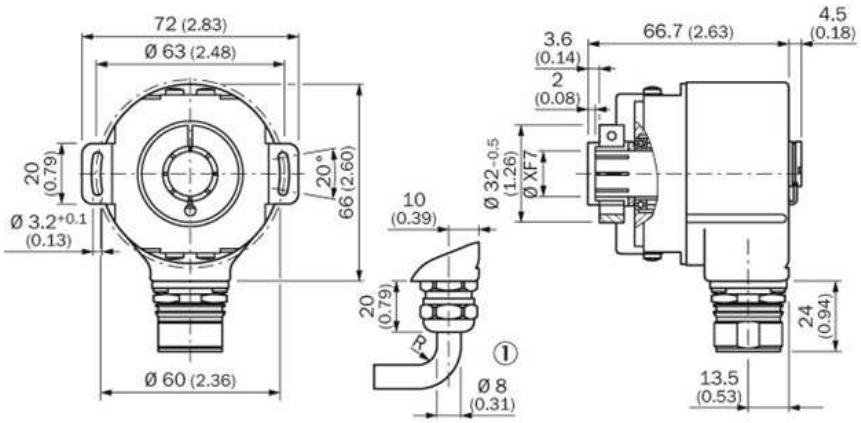
Ambient data

EMC:	(according to EN 61000-6-2 and EN 61000-6-3) [1)]
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)

[1)]

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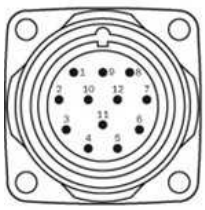
Dimensional drawing



PIN assignment

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

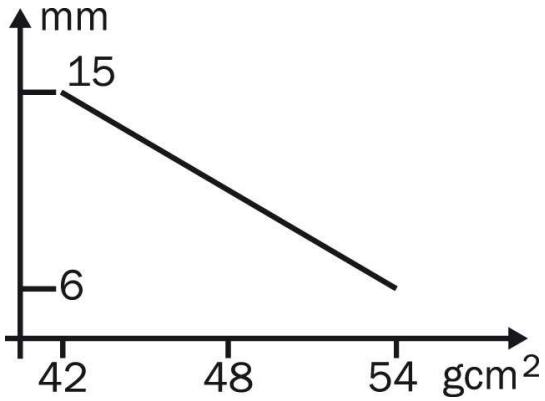
Signal	12-pin connector	11-core cable outlet
GND	1	Blue
Data (+)	2	White
Clock (+)	3	Yellow
N. C.	4	–
V/R̄	5	Pink
N. C.	6	–
N. C.	7	–
U_s	8	Red
SET	9	Orange
Data (–)	10	Brown
Clock (–)	11	Lilac
N. C.	12	–



View of the connector M23 fitted to the encoder body SSI

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Drehzahlbetrachtung



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