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DATA SHEET

ACS36-L1K0-K01

ACS/ACM36
Absolute encoders

SICK Sensor Intelligence



Illustration may differ

ABSOLUTE ENCODERS

ACS36-L1K0-K01

ORDERING INFORMATION

Type	part no.
ACS36-L1K0-K01	6052345

Further device versions and accessories at www.sick.com/ACS_ACM36

DETAILED TECHNICAL DATA

SAFETY-RELATED PARAMETERS

$MTTF_D$ (mean time to dangerous failure)	900 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.

PERFORMANCE

Number of steps per revolution (max. resolution)	3,723
Resolution per measuring step	2.7 mV ... 25.1 mV [1]
Resolution	0.09° ... 0.1° [1]
Measurement range	0° ... 360°, programmable
Minimum measuring range	≥ 35°
Accuracy	± 0.2 % based on the programmed angle [1]

[1] See measuring step diagram/calculation formula for details.

INTERFACES

Communication interface	-
Communication Interface detail	Voltage
Code sequence parameter adjustable	CW (clockwise) [1]
Load resistance	≥ 10 kΩ

[1] Default clockwise - CCW possible via Keyboard programming.

ELECTRONICS

Connection type	Cable, radial, 1.5 m
Supply voltage	19 ... 33 V DC

Current consumption	< 80 mA
Reverse polarity protection	✓
Electrical wiring	3-wire

MECHANICS

Mechanical design	Solid shaft, Servo flange
Shaft diameter	6 mm
Shaft length	12.4 mm
Characteristics of the shaft	With flat
Weight	0.1 kg
Shaft material	Stainless steel 1,4305
Flange material	AlMgSi
Housing material	AlMgSi
Material, cable	PVC
Start up torque	0.5 Ncm (+20 °C)
Operating torque	0.2 Ncm (+20 °C)
Permissible shaft loading	40 N (radial) 20 N (axial)
Operating speed	≤ 3,000 min^{-1}
Moment of inertia of the rotor	10 gcm^2
Bearing lifetime	1 x 10^6 revolutions
Angular acceleration	≤ 500,000 rad/s^2

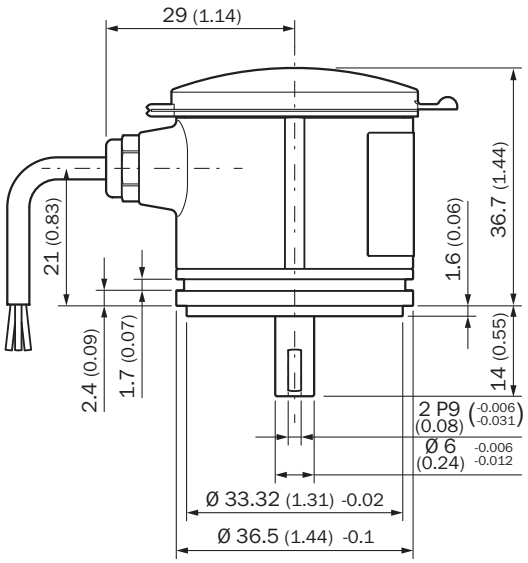
AMBIENT DATA

EMC	According to EN 61000-6-2 and EN 61000-6-4
Enclosure rating	IP65
Permissible relative humidity	90 % (Condensation not permitted)
Operating temperature range	–30 °C ... +80 °C
Storage temperature range	–40 °C ... +100 °C, without package
Resistance to shocks	25 g, 11 ms (EN 60068-2-27)
Resistance to vibration	4 g, 5 Hz ... 100 Hz (EN 60068-2-6)

CERTIFICATES

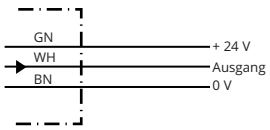
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓

DIMENSIONAL DRAWING

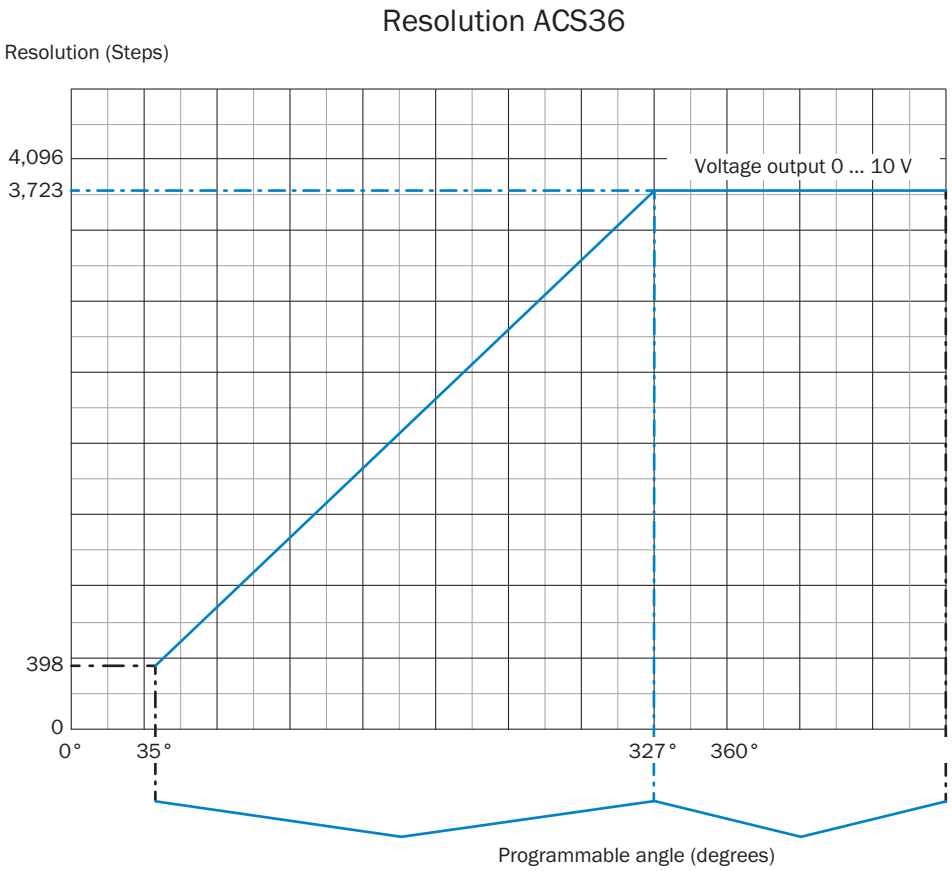


Dimensions in mm (inch)

PIN ASSIGNMENT



RESOLUTION DIAGRAM SINGLETURN, VOLTAGE OUTPUT



Calculation formula for number of steps in angle range

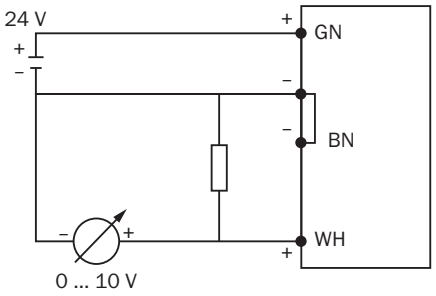
$$Steps = \frac{Angle \times 1024}{360°}$$

Number of steps in angle range

Steps (0 ... 10 V) = 3723

Configured range (α) must be at least 10°

ELECTRICAL WIRING VOLTAGE OUTPUT



for an accurate measurement, the internal resistance of the measuring device must be equal to 10 kOhm.

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6052345

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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