



ACM36-K1K0-K01

ACS/ACM36

ABSOLUTE ENCODERS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	Part no.
ACM36-K1K0-K01	6039751

Other models and accessories → www.sick.com/ACS_ACM36



Detailed technical data

Performance

Number of steps per revolution (max. resolution)	2,979
Number of revolutions	16
Max. resolution (number of steps per revolution x number of revolutions)	2,979 X 16
Resolution per measuring step	≥ 5.2 μA ¹⁾
Resolution	0.11° ... 1.93° ¹⁾
Measurement range	0° ... 5,760°, programmable
Minimum measuring range	≥ 336°
Accuracy	± 0.2 % based on the programmed angle ¹⁾

¹⁾ See measuring step diagram/calculation formula for details.

Interfaces

Communication interface	Analog
Communication Interface detail	Current / 4...20 mA
Code sequence parameter adjustable	CW (clockwise) ¹⁾
Load resistance	≤ 600 Ω

¹⁾ Default clockwise - CCW possible via Keyboard programming.

Electrical data

Connection type	Cable, radial, 1.5 m
Supply voltage	19 ... 33 V DC
Power consumption	< 80 mA
Reverse polarity protection	✓
MTTFd: mean time to dangerous failure	850 years (EN ISO 13849-1) ¹⁾
Electrical wiring	3-wire

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	Solid shaft, Servo flange
Shaft diameter	6 mm

Shaft length	12.4 mm
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 Load capacity of shaft	40 N / radial 20 N / axial
Operating speed	≤ 10,000 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

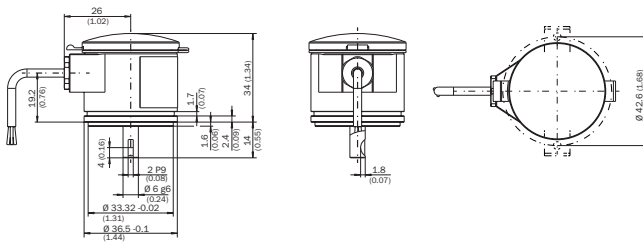
Ambient data

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)

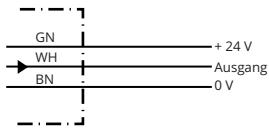
Classifications

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
ECl@ss 10.0	27270502
ECl@ss 11.0	27270502
ETIM 5.0	EC001486
ETIM 6.0	EC001486
ETIM 7.0	EC001486
ETIM 8.0	EC001486
UNSPSC 16.0901	41112113

Dimensional drawing (Dimensions in mm (inch))

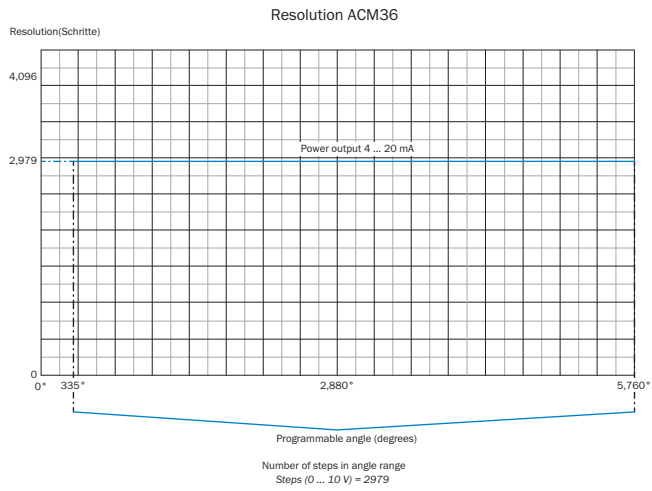


PIN assignment



Resolution diagram

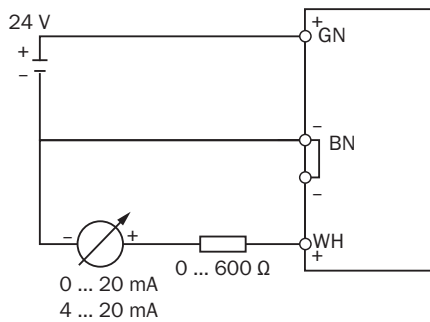
Multiturn, current output



Configured range (α) must be at least 10°

Electrical wiring

Current output













3-wire technology

At a supply voltage of 18 V, the internal resistance of the measuring device must not exceed 600 ohm.

Recommended accessories

Other models and accessories → www.sick.com/ACS_ACM36

	Brief description	Type	Part no.
Other mounting accessories			
	Servo clamps, small, for servo flange (clamping claws, mounting eccentric), 3 pcs, without mounting hardware, without mounting hardware	BEF-WK-RESOL	2039082
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight Cable: unshielded	DOS-1205-G	6009719
	Head A: male connector, M12, 5-pin, straight Cable: unshielded For field bus technology	STE-1205-G	6022083
Shaft adaptation			
	Bellows coupling, shaft diameter 6 mm / 6 mm, maximum shaft offset: radial ± 0.25 mm, axial ± 0.4 mm, angular $\pm 4^\circ$; max. speed 10,000 rpm, -30°C to $+120^\circ\text{C}$, max. torque 80 Ncm; material: stainless steel bellows, aluminum hub	KUP-0606-B	5312981
	Double-loop coupling, shaft diameter 6 mm / 6 mm, maximum shaft offset: radial ± 2.5 mm, axial ± 3 mm, angular $\pm 10^\circ$; max. speed 3,000 rpm, -30°C to $+80^\circ\text{C}$, max. torque 1.5 Nm; material: polyurethane, galvanized steel flange	KUP-0606-D	5340152
	Cross-slotted coupling, shaft diameter 6 mm / 6 mm, maximum shaft offset: radial ± 0.3 mm, axial ± 0.2 mm, angle $\pm 3^\circ$; max. speed 10,000 rpm, -10° to $+80^\circ\text{C}$, max. torque 80 Ncm; material: fiber-glass reinforced polyamide, aluminum hub	KUP-0606-S	2056406
	Bar coupling, shaft diameter 6 mm / 8 mm, maximum shaft offset radial ± 0.3 mm, axial ± 0.2 mm, angle $\pm 3^\circ$, max. speed 10,000 rpm, torsion spring rigidity 38 Nm/wheel; material: fiber-glass reinforced polyamide, aluminum hub	KUP-0608-S	5314179
	Bellows coupling, shaft diameter 6 mm / 10 mm, maximum shaft offset: radial ± 0.25 mm, axial ± 0.4 mm, angular $\pm 4^\circ$; max. speed 10,000 rpm, -30°C to $+120^\circ\text{C}$, max. torque 80 Ncm; material: stainless steel bellows, aluminum hub	KUP-0610-B	5312982

	Brief description	Type	Part no.
	Double loop coupling, shaft diameter 6 mm / 10 mm, max. shaft offset: radially +/- 2,5 mm, axially +/-3 mm, angle +/- 10 degrees;max. speed 3.000 rpm, -30 to +80 degrees Celsius, torsional spring stiffness of 25 Nm/rad	KUP-0610-D	5326697
	Spring washer coupling, shaft diameter 6 mm / 10 mm, Maximum shaft offset: radial +/- 0.3 mm, axial +/- 0.4 mm, angular +/- 2.5°; max. speed 12,000 rpm, -10° to +80 °C, max. torque 60 Ncm; material: aluminum flange, glass fiber-reinforced polyamide membrane and hardened steel coupling pin	KUP-0610-F	5312985
	Bar coupling, shaft diameter 6 mm / 10 mm, max. shaft offset: radial ± 0,3 mm, axial ± 0,3 mm, angular ± 3°; max. speed 10.000 rpm, -10° to +80 °C, max. torque: 80 Ncm, material: fiber-glass reinforced polyamide, aluminum hub	KUP-0610-S	2056407

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.”

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