

AHK5

MAGNETIC ANALOG ABSOLUTE SINGLE TURN ENCODERS

Introduction

AHK5 is a new magnetic absolute single turn encoders generation. It characterizes itself by its strong robustness of the mechanical and electromagnetic parts.



Features

- Application fields: agriculture, construction, forestry vehicles, medical applications, solar panels. . .
- Magnetic technology, contactless.
- Strong robustness with its reinforced bearing block and its stopped bearings.
- 58mm encoder – blind shat 14 mm – 15mm option – reduction hub available.
- Power supply from 10 to 30Vdc.
- Available output interfaces: 0..10V, 0.5..4.5V, 4..20mA.
- Available resolution up to 12 bits per revolution.
- Standard M12 or cable output – radial or axial.
- Available in option: Extended temperature range (up to -40..+125°C), IP67/IP69K. . .
- Also available: PWM, SSI and CANopen outputs.

SPECIFICATIONS

Mechanical

Material	Cover: Zinc Alloy Body: Aluminum Shaft: Stainless Steel
Bearings	6 803 series
Maximal Loads	$\leq 2,2 \cdot 10^{-6} \text{ kg.m}^2$
Shaft Inertia	$\leq 6 \cdot 10^{-3} \text{ N.m}$
Permissible Max. Speed	9,000 min ⁻¹
Continuous Max. Speed	6,000 min ⁻¹
Shocks (EN60068-2-27)	$\leq 500 \text{ m.s}^{-2}$ (during 6 ms)
Vibrations (EN60068-2-6)	$\leq 100 \text{ m.s}^{-2}$ (55 ... 2,000 Hz)
EMC	EN 61000-6-4, EN 61000-6-2
Isolation	500 Veff
Encoder Weight (Approx.)	0,300 kg

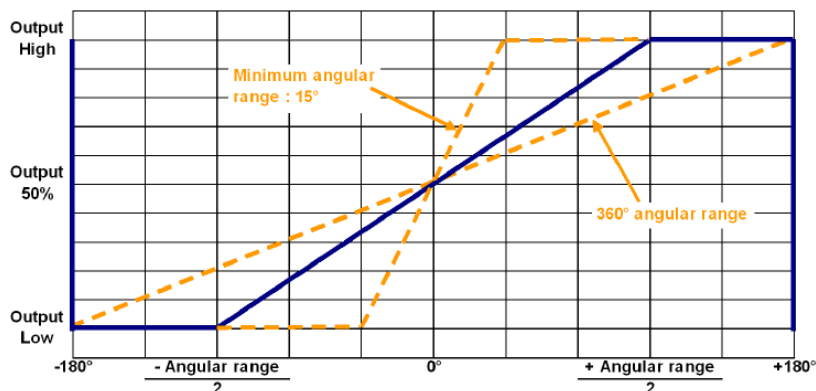
Operating Temperature	- 20 ... + 85°C (encoder T°)
Storage Temperature	- 40 ... + 85°C
Protection (EN 60529)	IP 65
Torque (Ring Pressure Screw)	Nominal: 1.5 N.m Break: 2.0 N.m
Theoretical mechanical lifetime 109 turns (F_{axial} / F_{radial})	
10N / 25N	230
20N / 50N	29

Electrical

Power Supply	5V or 10–30Vdc or 15-30Vdc
Consumption Without Load	< 40mA (at 24Vdc)
Resolution	12 bits
Accuracy	± 0.3 %
Repeatability	± 0.1 %
Introduction	< 1 s
Response Time	< 10 ms (5L2 & 3L1 electronic)
	< 1ms (other electronics)
Advised Load	> 10k Ohms (Voltage output)
	500 Ohms (current output)



ANALOG OUTPUT



CONNECTION

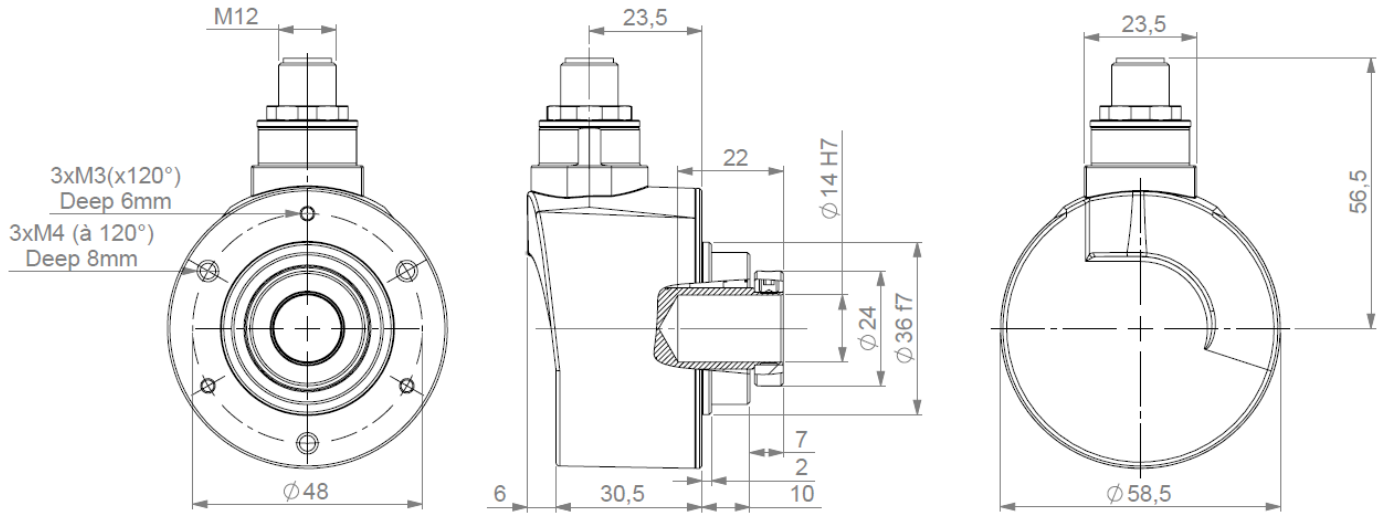
		0V	+Vcc	Analog Output	Ground
L3	3 wire cable PVC 8230/022	White WH	Brown BN	Green GN	General Shielding
L4	M12 connector 4 pinouts	1	2	3	Connector Body

* Note: pinout number 4 is not connected - If extension cable is used: please refer to its wiring arrangement / wire colors



DIMENSIONS

All dimensions are in millimeters [inches]



ORDERING OPTIONS

Example : AHK5-14-3L1-1-00360-L3-R020

	AHK5	14	3L1	1	00360	L3	R020
Family	AHK5						
Shaft Ø	14: 14mm (Reduction hubs available) 15: 15 mm option						
Supply Output Stage	3L1: 15 to 30 Vdc 0..10V output 5L2: 10 to 30 Vdc 0.5..4.5V output 3L3: 15 to 30Vdc 4..20mA output 2LR: 5V +/- 5% Ration 10...90% voltage supply						
Direction	1: CW Clockwise 2: CCW Counter-clockwise						
Resolutions	00360: Analog output calibrated on 360° Other: Consult Us						
Connection	L3: 3 wires cable PVC L4: M12 Connector 4 pinouts						
Connection Orientation	A020: Axial Cable 2m R020: Radial Cable 2m A: Axial R: Radical						



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