

Encoder AK02

KEY FEATURES

- High-accuracy absolute magnetic rotary angle sensor
- On-axis sensing
- Built around AKM's AK7452 14-bit ultra-low-noise integrated circuit
- 400 kHz 3V3 I2C interface
- Flexible cable connects directly to ActPack 4.1

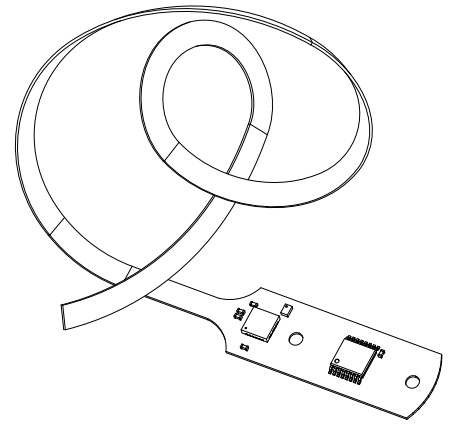


TABLE 1. SPECIFICATIONS

Voltage	3.3 V
Current	30 mA
Communication	400 kHz 3V3 I2C
Connector	6 positions, 0.5 mm pitch FFC
Magnet	Diametrical (ex.: K&J D42DIA-N52). Not included.
Sensor Specs & Performance	Refer to AK7452 datasheet: www.akm.com/global/en/products/rotary-encoder/angle-sensor/ak7452/
PCB Type	Flexible with FR-4 Stiffener
Stiffened PCB Dimensions	11 mm × 32.8 mm
Flexible PCB Dimensions	3.5 mm × 150 mm
Mounting Holes	2x 2 mm diameter

FIGURE 1. ENCODER DIMENSIONS

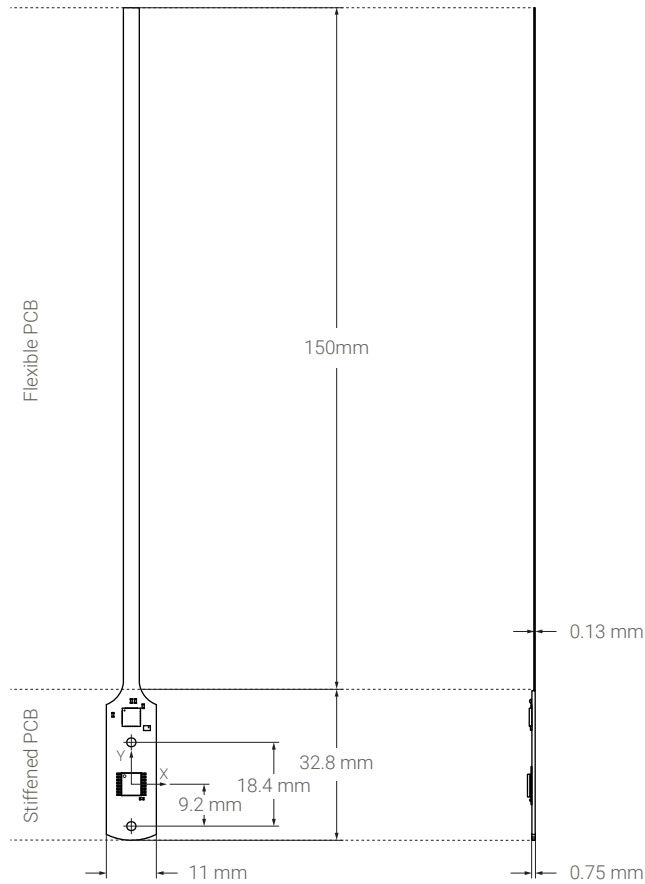


TABLE 2. PINOUT – FFC CONNECTOR

Pin	Function
1	GND
2	SCL
3	SDA
4	Unused
5	Unused
6	+3V3

TABLE 3. ENCODER VERSION COMPARISON

	AK01	AK02
Designed to be used with:	ActPack 0.2B	ActPack 4.1
Voltage	5 V	3.3 V
Connector	1 mm FFC	0.5 mm FFC
Flexible Cable Length	176 mm	150 mm

Date	February 28, 2021
Revision	v1