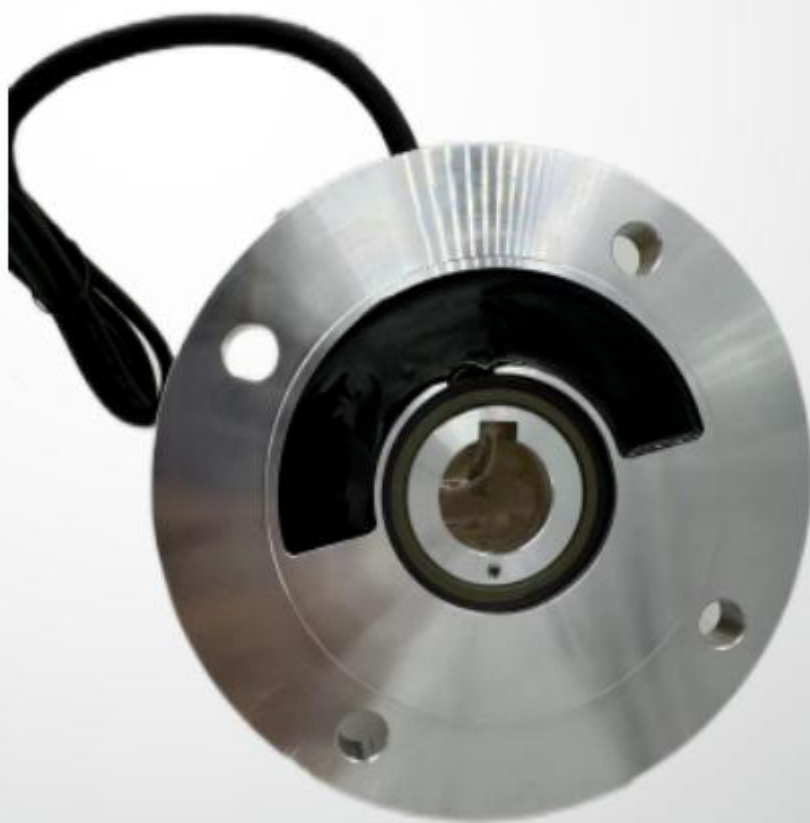


# Product selection manual

Product selection guide



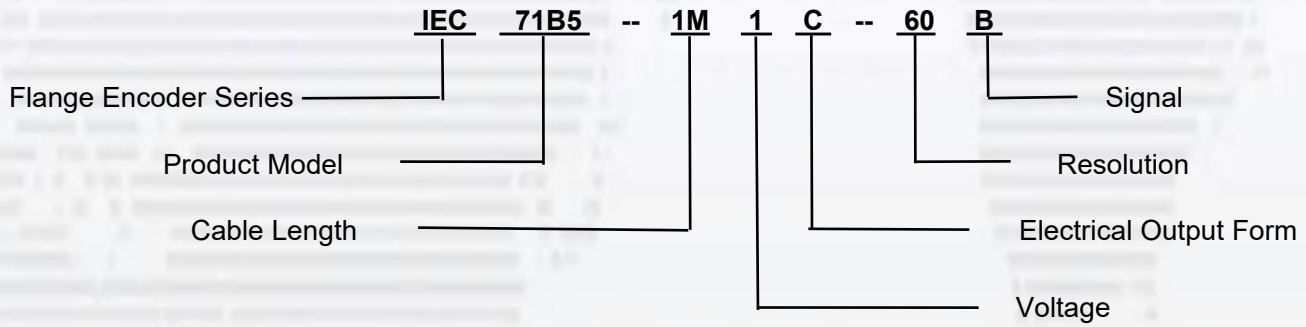
**IEC Series Flange Encoder**

## Product Overview

The IEC series flange encoder provided by our company. Our IEC flange encoder is based on the principle of split magnetic-electric. As the rotor rotates with the motor shaft, it generates a changing magnetic field, which is detected by the Hall sensor on the stator to output incremental signals. The electronic components are fully encapsulated in epoxy resin, ensuring the encoder remains unaffected by external factors. We can customize the cable length and other requirements, such as different sizes and mounting holes, according to customer needs.



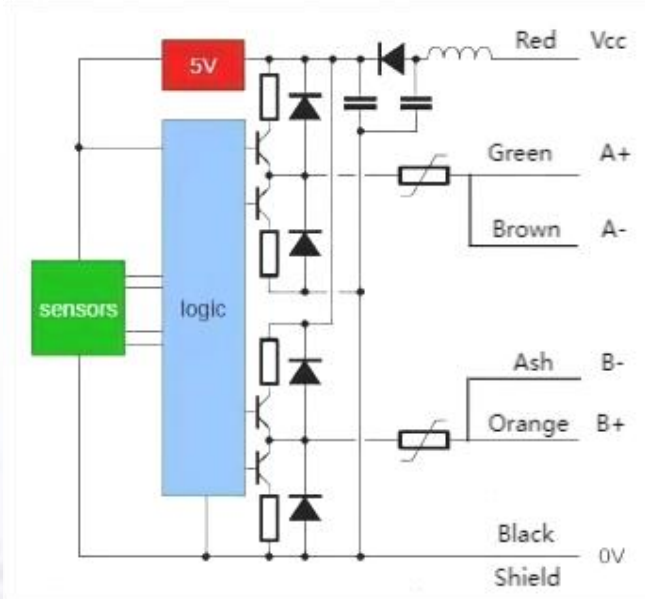
## Model Definition



	Regulations
Product model	IEC 63~160, B14 or B5. Refer to the attached drawings for specific model specifications and dimensions
Cable length	The standard cable length is 0.75 meters, and the cable length can be customized.
Service voltage	1:5V 2:12~24V 3:10~30V
Electrical output form	C: NPN open circuit P: PNP open circuit
Resolution ratio	60、30、15、10、6、5、3、2、1 (Optional 64、128、256、512、1024、2048)
signal	A and B are two signal outputs with a phase difference of 90°

## Wiring Definition

Line color	Red	Black	Green	Brown	Orange	Ash	Shield
Definition	VCC	0V	A+	A-	B+	B-	G



The universal output of an encoder can control both PNP and NPN input signals.

**PNP Application:**

In a PNP application, there is a virtual switch within the encoder, located between +24V and the output. Current flows from the sensor to the PLC and then through the PLC to 0V (0 Volts). The typical current for PLC input is 4mA.

**NPN Application:**

In an NPN application, there is a virtual switch within the encoder, located between 0V and the output. Current first flows from +24V through the PLC, then to the sensor, and finally through the sensor to 0V.

With a potential-free input, this input can be used as either an NPN or PNP input.

The power supply voltage enters through the coil and is routed via the capacitor to prevent interference. A diode can prevent reverse connection of the power supply voltage.

The output signal is transmitted by two transistors from a push-pull circuit. Multiple fuses (10 mA self-healing fuses) are connected in series. The output is also equipped with a protection diode, which can safeguard the output from reverse connection of the power supply voltage as well as large interference signals.

The power supply voltage is converted to 5 volts for use by the sensor and internal logic.

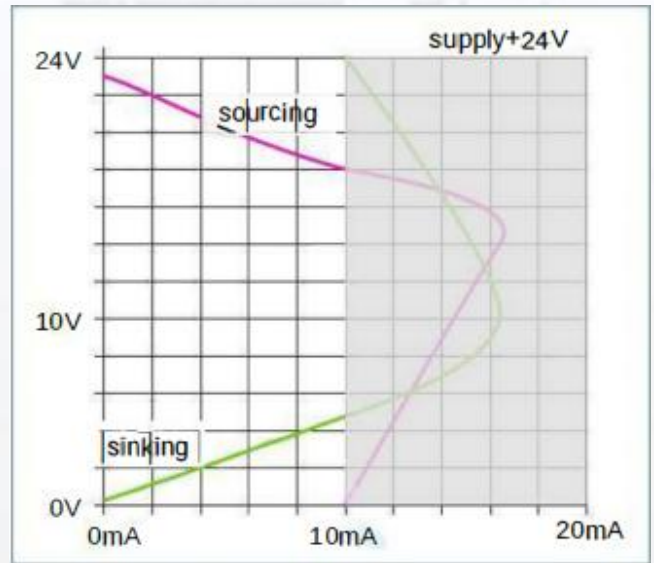


Figure 1 AB output signal

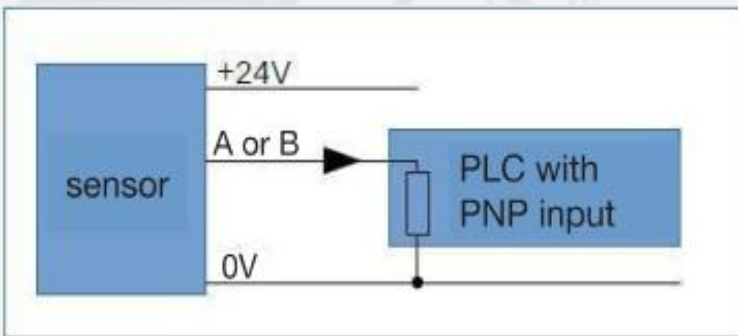


Figure 2 PNP application, sensor rising

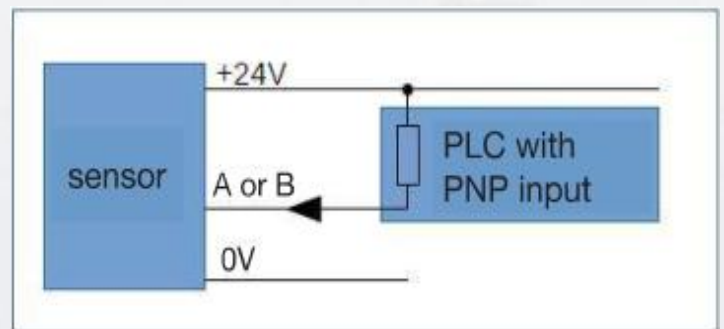


Figure 3 NPN application, sensor is sinking

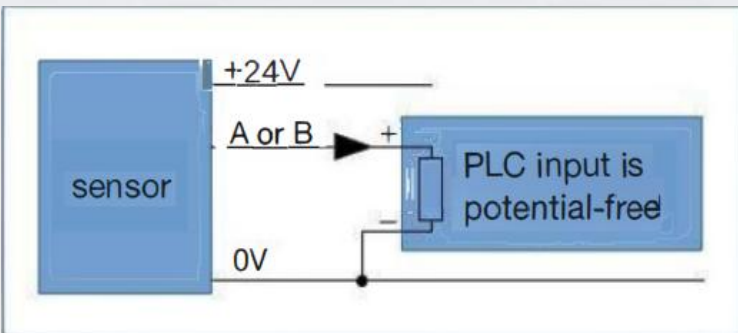


Figure 4 Potential free input, as PNP input.

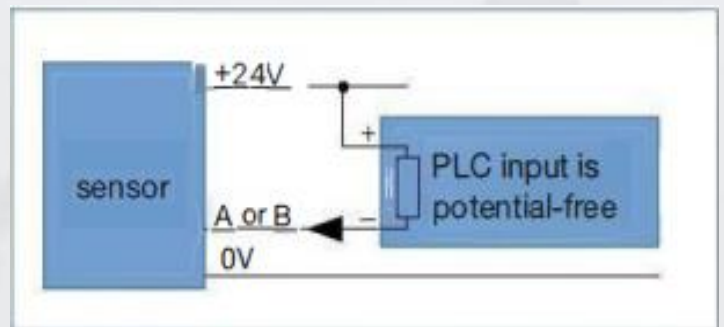
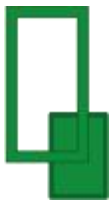
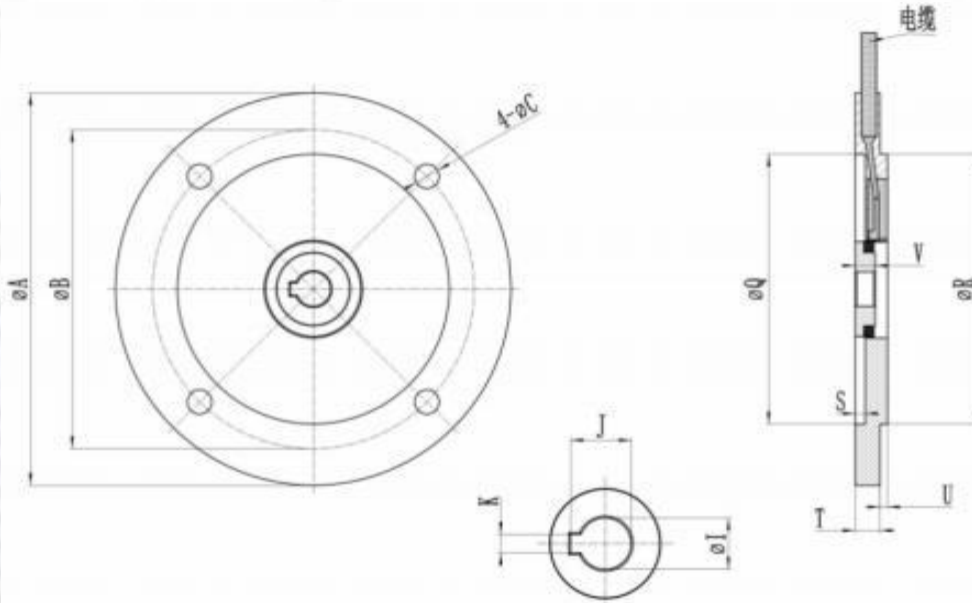


Figure 5 Potential free input, as NPN input.



**Mechanical Dimension Reference Table**



**IEC Flange Encoder**

#	63B5	71B5	80B5	90B5	100/112B5	130B5	160B5
A	140	160	200	200	250	300	350
B	115	130	165	165	215	265	300
C	10	10	12	12	14	14	16
I	11G7	14G7	19G7	24G7	28G7	38G7	42G7
J	12.8	16.3	21.8	27.3	31.3	41.3	45.3
K	4	5	6	8	8	10	12
Q	95j6	110j6	130j6	130j6	180j6	230j6	250j6
R	95H7	110H7	130H7	130H7	180H7	230H7	250H7
S	3.5	4	4	4	4.5	4.5	5.5
T	9	9.5	9.5	9.5	10	10	11
U	3	3.5	3.5	3.5	4	4	5
V	7.5	8	8.5	8.5	8.5	9.5	9.5

**IEC Flange Encoder**

#	63B14a	71B14a	80B14a	90B14a	100/112B14a	130B14a
A	90	105	120	140	160	200
B	75	85	100	115	130	165
C	5	8.3	8	10	10	12
I	11G7	14G7	19G7	24G7	28G7	38G7
J	12.8	16.3	21.8	27.3	31.3	41.3
K	4	5	6	8	8	10
Q	60j6	70j6	80j6	95j6	110j6	130j6
R	60H7	70H7	80H7	95H7	110H7	130H7
S	2.5	3	3.5	3.5	4	4
T	6.5	8.5	9	9	9.5	9.5
U	3.5	2.5	3	3	3.5	3.5
V	7.5	8	8.5	8.5	8.5	9.5