

AKUSENSE



Slot Type

KIM Series

V1.1

User's Manual

Thank you for choosing AkuSense .Please read the manual carefully before using this product.

1. The product should be applied by someone with a certain level of electrical knowledge.
2. Please read and make sure that you understand how to operate the product before using it.
3. Please keep this manual readily accessible for future reference when needed.

SYMBOL

The following symbols are important information in this manual, please be sure to observe the following.

	There is the risk of causing malfunction or fire, please do not exceed the rated voltage when using.
	There is a risk of rupture, do not use AC power.
	Danger of burns at high temperatures. .

SAFETY PRECAUTIONS

To ensure your safety, be sure to observe the following.

- Do not use in flammable, explosive gas environment.
- Do not use in water, oil, chemical droplets environment, and exposure to steam environment. Please do not disassemble, repair, rebuild this product.
- Do not use beyond the rated voltage and current range. Do not use beyond the rated environment.
- Please pay attention to the polarity of the working power, do not take the wrong line. Please connect the load correctly.
- Do not short-circuit the load.
- Please do not use the case damaged. When discarded, dispose of as industrial waste. Do not use in direct sunlight.
- Depending on the operating conditions (ambient temperature, supply voltage, others), the temperature of the sensor surface may increase. In operation and cleaning, please note that there is a danger of burns.

NOTICE FOR USE

- Do not use in the following places :
 - Daylight direct place
 - High humidity, easy to open places
 - Place containing corrosive gases
 - Vibration, shock directly to the product body of the place
- This product wire and power lines used in the same piping, will be disturbed, malfunction or even destroyed.
- The extension wire must use a wire with a cross-sectional area of 0.3 mm² or more and a length of 100 m or less. When the Korean S-mark certification model is used as a certification product, please set it below 10m.
- For the force applied to the wire, please refer to: below 40N, 0.1N.m torque less, 20N or less, and 3Kg below the bending.
- When the power is turned on, the product can be detected within 200ms. So if the load and product connected to a different power supply, you must first turn on the product power.
- When the power is turned off, the output pulse may be generated, so please cut off the power supply of the load or load line.
- Please do not use thinner, gasoline, acetone, kerosene and other solvents to clean up.

PACKAGE CONTENTS

- Sensor 1 piece
- User's manual 1 piece

SPECIFICATION

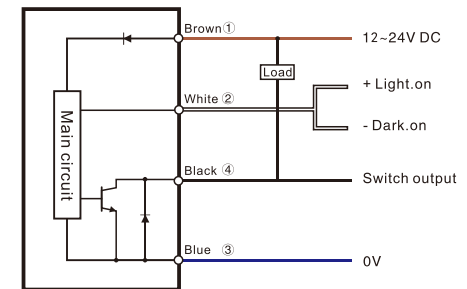
Model No.	KIM30-0304N/P	KIM30-0304N/P-J
Detection method	Thru-beam	
Sensing distance	30mm	
Output mode	NPN and PNP open collector	
Switch mode	Selectable L.on/D.on	
Standard test object	Opaque objects diameter>2mm	
Output instructions	Yellow LED	
Response time	≤1ms	
Light source	Infrared LED (modulation)	
Operating voltage	12~24V DC	
Residual voltage	≤2.5V DC	
Current consumption	≤15mA	
Load current	≤200mA	
Circuit protection	Reverse polarity protection, short circuit protection	
Ambient temperature	-15℃~+55℃	
Withstand voltage	1000V/AC 50/60Hz 1 minute	
Impact resistance	500m/s ² (50G), 3 times in XYZ direction	
Insulation resistance	≥50MΩ/500V DC	
Degree of protection	IP60	
Material	Aluminum alloy	
Connection	2M 4core cable	
Housing material	black	black/yellow

Model No.	KIM07-0204NP
Sensing distance	2mm
Slot depth	42mm
Slot width	3mm
Llight source	Infrared light (940nm)
Switch mode	Selectable L.on/D.on
Operating voltage	12~24V DC±10%
No-load current	40mA
Load current	100mA
Response frequency	10KHz
Response time	≤20μs
Protection circuit	Reverse prolarity protection, Output short circuit protection; Interference suppression
Protection degree	IP65
Material	Aluminum
Connection method	M8 4-pin connector
Weight	35g
Output method	NPN/PNP
Ambient brightness	Sunlights≤10000Lux

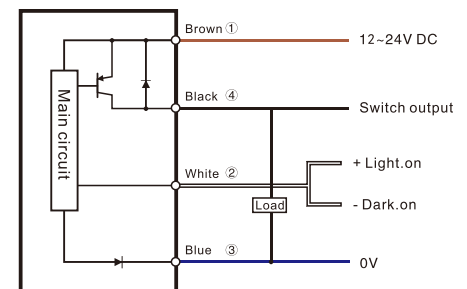
CIRCUIT DIAGRAM

KIM30-0304N/P

NPN

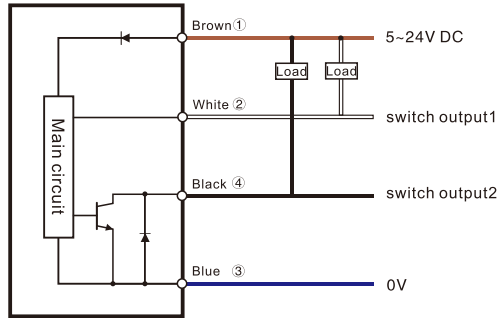


PNP

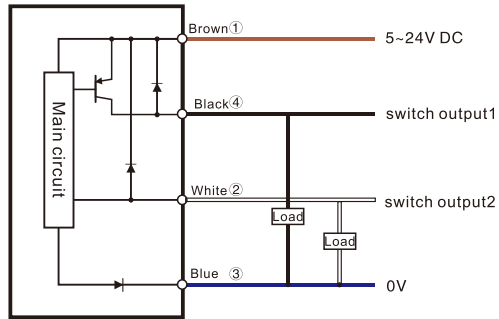


KIM30-0304N/P-J

NPN

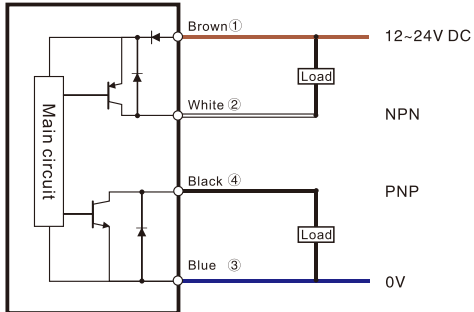


PNP



KIM07-0204NP

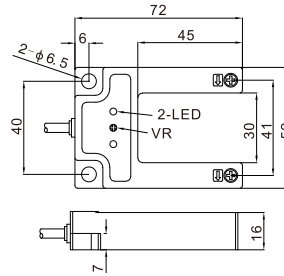
NPN/PNP



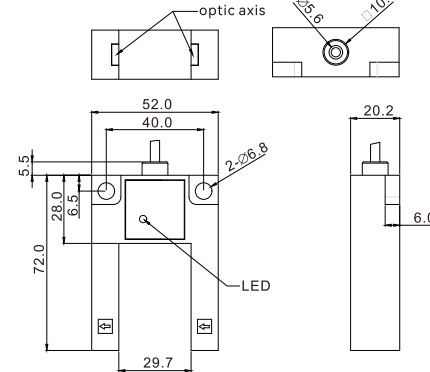
DIMENSION

(mm)

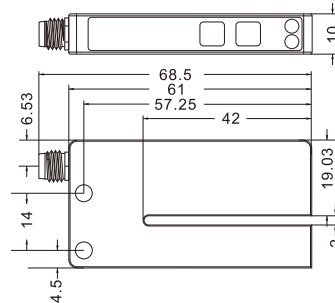
KIM30-0304N/P



KIM30-0304N/P-J



KIM07-0204NP



OPERATION METHOD (Only for KIM07-0204NP)

Detection setting

Place the label bottom paper in the detection slot marked with an arrow, press the '+' button simultaneously with both hands until the indicator light flashes, then release at the same time; move the sensor on the label so that the arrow is on the label to be tested. Press the '-' button until the flashing light is off.

Output setting

In the state where there is no detection object in the sensor slot, press the '+' button at the same time, and then release it at the same time for 6 seconds to switch between L.ON and D.ON;

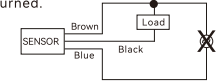
Key lock

In the state where there is no detection in the sensor slot, press the '+' button at the same time, and then release it for 3 seconds, then you can switch the button lock and unlock.

DISTRIBUTION CONSIDERATIONS

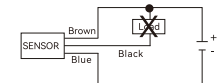
Voltage

Do not exceed the voltage range above the use of input over the voltage range or DC power input AC power supply will be broken or burned.



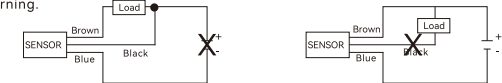
Load short circuit

Do not short-circuit the load will be broken or burned. The load short-circuit hold function is the function that is used within the rated voltage under the correct polarity of the power supply.



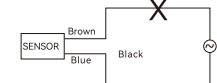
Miswiring

The polarity of the power supply, etc. Do not match the wrong line, fear of cracking or burning.



No load connection

No load power supply directly into the internal prime fear will be broken or burned. So please add the load and then wiring.



WARRANTY

Warranty period

- The product warranty period is one year, from the date of delivery of the product to the date of purchase.

Warranty range

- AkuSense will repair the product free of charge if there is a malfunction caused by AkuSense Company in the above warranty period. But the following is not covered by the warranty.
 - Not in accordance with the operating instructions, the user manual or the purchaser and the AkuSense company specifically reached the technical requirements of the conditions specified in the environment under the incorrect operation, or improper use of appropriate failure.
 - Failure is not due to product defects, but the purchaser equipment or the purchaser software design caused.
 - Malfunctions caused by modifications or repairs by non-AkuSense company personnel.
 - In accordance with the operating instructions or user manual correct repair or replacement of wearing parts and other provisions can be completely avoided failure.
 - In the product from the AkuSense company after delivery, due to unpredictable changes in science and technology and other factors caused by the failure.
- Due to fire, earthquake and floods and other natural disasters, or abnormal voltage and other external factors caused by the fault AkuSense company is not responsible for the warranty.

- The warranty is limited to the conditions specified in Article (1), and Akusense Company shall not be liable for any indirect loss (damage to equipment, loss of opportunity, loss of profits, etc.) or other loss caused by its equipment.