DADISICK®

TECHNICAL DATA SHEET

PHOTOELECTRIC SENSOR

DK-GF18 series

Diffuse Reflection
Through-beam
Retro-reflection



Figure can vary

Contents

- Technical Parameters
- Size parameters
- Wiring method

DADISICK TECHNOLOGY LIMITED

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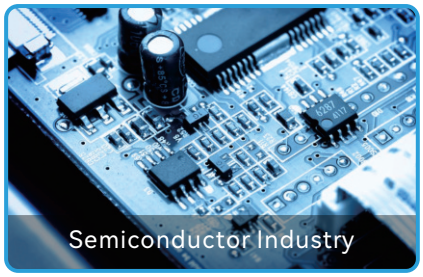
We reserve the right to make technical changes

2026-04-20

Product Introduction

DADISICK photoelectric sensor is an electronic device that detects the presence, position, color, or other characteristics of an object by sensing changes in light. It typically consists of a transmitter that emits a light beam and a receiver that detects the reflected or transmitted light.When an object enters the light beam, it either blocks or reflects part of the light, causing a change in the amount of light reaching the receiver. The sensor detects this change and converts it into an electrical signal. These electrical signals can be further processed to control other devices or systems.

Photoelectric sensors feature high sensitivity, non-contact detection, and fast response speeds, making them widely used in industrial automation, logistics, packaging, and other fields.













Photoelectric sensor model specifications

DK-G | F | 18 | 400 | NO | Z | C | A (DK-GF18-400NO-ZCA)

- A: Voltage: A: 10-30V B: 12-240VDC/24-240VAC
- C: Detection method: A: diffuse reflection B: through-beam C: retro-reflection
- Z: Connection method: Y: plug-in type Z: cable type
- NO: Output mode: NC: NPN NC; PC: PNP NC; J: Relay Output; NO: NPN NO; PO: PNP NO; A: Analog current; NS: NPN NO+NC; PS: PNP NO+NC; V: Analog voltage
- 400: Detection distance:4000mm
- 18: Size: 18mm
- F: Series: M: cylindrical type F: general square type P: flat type B: background suppression type S: ultra-thin type T: transparent body detection type C: color mark/color detection type
- DK-G: photoelectric sensor

Photoelectric Sensor
DK-GF18 series

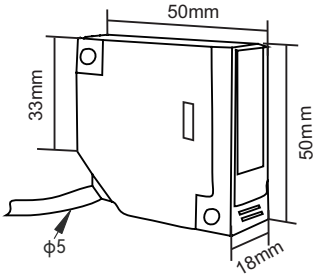
DC 3-wire/4-wire Diffuse Reflection

CE
RoHS



Sensing distance		30-500mm (adjustable)	30-1500mm (adjustable)
Standard detection object		200*200mm white cardboard	
Light source		850nm infrared light	
Casing material		ABS	
With LED light or not		Red LED	
Model	NPN NO	DK-GF18-50NO-ZAA	DK-GF18-150NO-ZAA
	NPN NC	DK-GF18-50NC-ZAA	DK-GF18-150NC-ZAA
	PNP NO	DK-GF18-50PO-ZAA	DK-GF18-150PO-ZAA
	PNP NC	DK-GF18-50PC-ZAA	DK-GF18-150PC-ZAA
	NPN NO+NC	DK-GF18-50NS-ZAA	DK-GF18-150NS-ZAA
	PNP NO+NC	DK-GF18-50PS-ZAA	DK-GF18-150PS-ZAA
Operating voltage		10-30V DC	
No-load current		⩽30mA	
Maximum load current		150mA	
Leakage current		<0.01mA	
Voltage drop		<1.5V	
Switching frequency		100Hz	
Response time		5ms	
Switching hysteresis		<15%(Sr)	
Repeat accuracy		<5%(Sr)	
Protection level		IP55	
Working environment temperature		0°C...+55°C	
Temperature drift		<10%(Sr)	
Short circuit protection		Yes	
Overload current protection point		300mA	
Connection method		Φ6.5mm 2m PVC cable, 3*0.33mm²/4*0.33mm²	
Weight		About 93g	
Certification		CE ROHS	

The product size is for reference only,
please refer to the actual measurement.



Photoelectric Sensor
DK-GF18 series

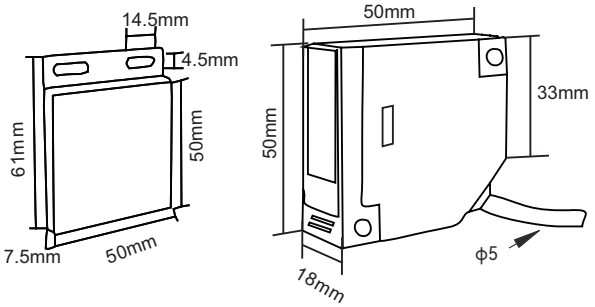
DC 3-wire/4-wire Retro-reflection

CE
RoHS



Sensing distance		30-4000mm (adjustable)
Standard detection object		200*200mm white cardboard
Light source		940nm infrared light
Casing material		ABS
With LED light or not		Red LED
Model	NPN NO	DK-GF18-400NO-ZCA
	NPN NC	DK-GF18-400NC-ZCA
	PNP NO	DK-GF18-400PO-ZCA
	PNP NC	DK-GF18-400PC-ZCA
	NPN NO+NC	DK-GF18-400NS-ZCA
	PNP NO+NC	DK-GF18-400PS-ZCA
Operating voltage		10-30V DC
No-load current		<15mA
Maximum load current		150mA
Leakage current		<0.01mA
Voltage drop		<1.5V
Switching frequency		100Hz
Response time		5ms
Switching hysteresis		<15%(Sr)
Repeat accuracy		<5%(Sr)
Protection level		IP55
Working environment temperature		0°C...+55°C
Temperature drift		——
Short circuit protection		Yes
Overload current protection point		300mA
Connection method		Φ6.5mm 2m PVC cable, 3*0.33mm²/4*0.33mm²
Weight		About 97g+10g reflective board
Certification		CE ROHS

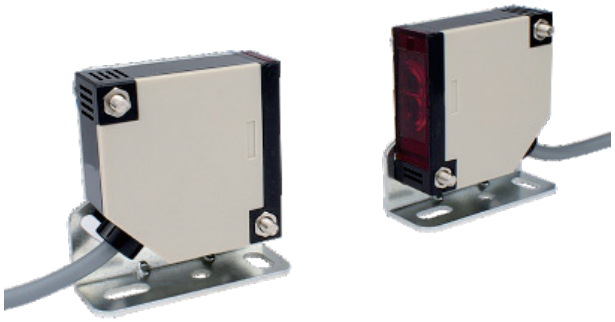
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Photoelectric Sensor
DK-GF18 series

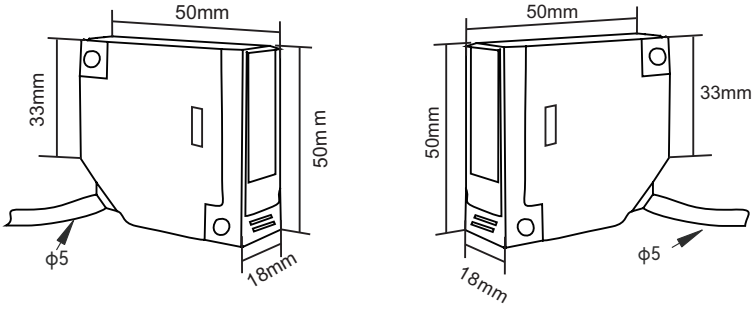
DC 3-wire/4-wire Through-beam

CE
RoHS



Sensing distance		15000mm
Standard detection object		200*200mm white cardboard
Light source		850nm infrared light
Casing material		ABS
With LED light or not		Red LED
Model	NPN NO	DK-GF18-1500NO-ZBA
	NPN NC	DK-GF18-1500NC-ZBA
	PNP NO	DK-GF18-1500PO-ZBA
	PNP NC	DK-GF18-1500PC-ZBA
	NPN NO+NC	DK-GF18-1500NS-ZBA
	PNP NO+NC	DK-GF18-1500PS-ZBA
Operating voltage		10-30V DC
No-load current		<30mA
Maximum load current		150mA
Leakage current		<0.01mA
Voltage drop		<1.5V
Switching frequency		100Hz
Response time		5ms
Switching hysteresis		<15%(Sr)
Repeat accuracy		<5%(Sr)
Protection level		IP65
Working environment temperature		0°C...+55°C
Temperature drift		——
Short circuit protection		Yes
Overload current protection point		300mA
Connection method		Φ5mm 2m PVC cable, Transmitter:2*0.33mm², Receiver:3*0.33mm²/4*0.33mm²
Weight		About 84gx2
Certification		CE ROHS

The product size is for reference only,
please refer to the actual measurement.



Photoelectric Sensor
DK-GF18 series AC/DC

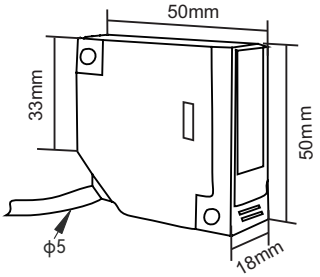
5-wire Relay Output Diffuse Reflection

CE
RoHS



Product model	DK-GF18-50J-ZAB	DK-GF18-150J-ZAB
Sensing distance	80-500mm (adjustable)	100-1500mm (adjustable)
Standard detection object	200*200mm white cardboard	
Light source	850nm infrared light	
Casing material	ABS	
With LED light or not	Red LED	
Relay output	Yes	
Operating voltage	12-240VDC/24-240VAC	
No-load current	⩽20mA	
Maximum load current	3A/30VAC,1A/220VAC	
Voltage drop	⩽2.5V	
Switching frequency	10Hz	
Response time	20ms	
Switching hysteresis	<15%(Sr)	
Repeat accuracy	<5%(Sr)	
Protection level	IP55	
Working environment temperature	0°C...+55°C	
Temperature drift	<10%(Sr)	
Short circuit protection	—	
Overload current protection point	—	
Connection method	Φ6.5mm 2m PVC cable, 3*0.33mm²	
Weight	About 95g	
Certification	CE ROHS	

The product size is for reference only,
please refer to the actual measurement.



Photoelectric Sensor
DK-GF18 series AC/DC

5-wire Relay Output Retro-reflection

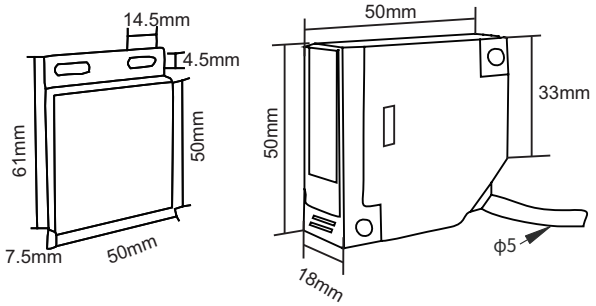
CE
RoHS





Product model	**DK-GF18-400J-ZCB**
Sensing distance	**30-4000mm (adjustable)**
Standard detection object	200*200mm white cardboard
Light source	940nm infrared light
Casing material	ABS
With LED light or not	Red LED
Relay output	Yes
Operating voltage	12-240VDC/24-240VAC
No-load current	⩽20mA
Maximum load current	3A/30VAC,1A/220VAC
Voltage drop	⩽2.5V
Switching frequency	10Hz
Response time	20ms
Switching hysteresis	<15%(Sr)
Repeat accuracy	<5%(Sr)
Protection level	IP55
Working environment temperature	0°C...+55°C
Temperature drift	—
Short circuit protection	—
Overload current protection point	—
Connection method	Φ6.5mm 2m PVC cable, 3*0.33mm²
Weight	About 97g+10g reflective board
Certification	CE ROHS

The product size is for reference only,
please refer to the actual measurement.



Photoelectric Sensor
DK-GF18 series AC/DC

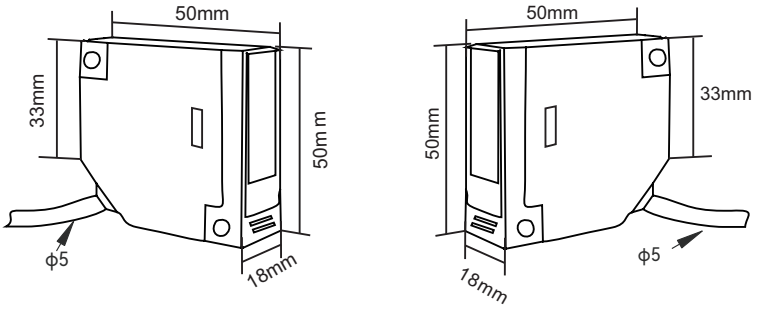
5-wire Relay Output Through-beam

CE
RoHS



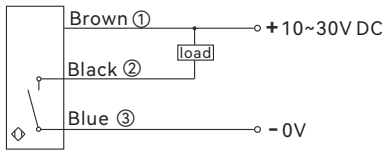
Product model	**DK-GF18-400J-ZBB**
Sensing distance	**15000mm (adjustable)**
Standard detection object	200*200mm white cardboard
Light source	850nm infrared light
Casing material	ABS
With LED light or not	Red LED
Relay output	Yes
Operating voltage	12-240VDC/24-240VAC
No-load current	⩽20mA
Maximum load current	3A/30VAC,1A/220VAC
Voltage drop	⩽2.5V
Switching frequency	10Hz
Response time	20ms
Switching hysteresis	<15%(Sr)
Repeat accuracy	<5%(Sr)
Protection level	IP55
Working environment temperature	0°C...+55°C
Temperature drift	—
Short circuit protection	—
Overload current protection point	—
Connection method	Transmitter end: ϕ5.0mm 2m PVC cable, 2*0.33mm² Receiver end: ϕ6.5mm 2m PVC cable, 5*0.33mm²
Weight	About 89g*2
Certification	CE ROHS

The product size is for reference only,
please refer to the actual measurement.

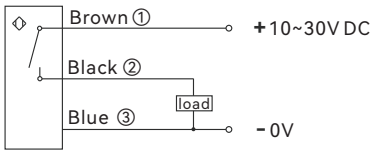


Wiring

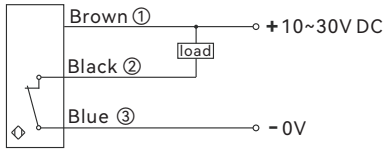
DC 3-wire NPN NO



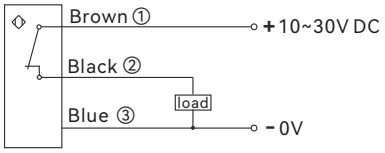
DC 3-wire PNP NO



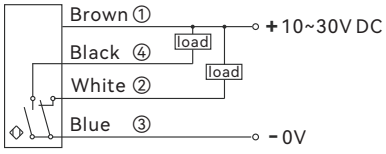
DC 3-wire NPN NC



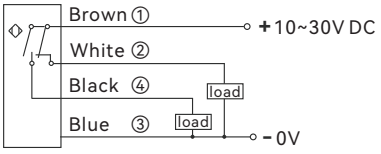
DC 3-wire PNP NC



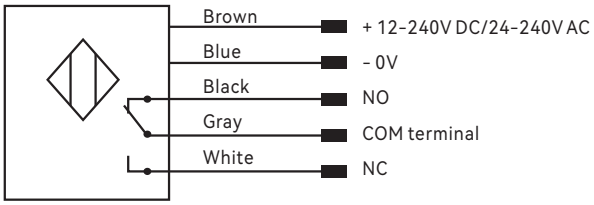
DC 4-wire NPN NO & NC



DC 4-wire PNP NO & NC



Relay Output



Note: Both AC and DC require 4 wires, NO or NC