

User Manual

Thank you for choosing Degson products. Please read this instruction manual carefully before using the product.

- It is intended to be used by personnel with certain electrical knowledge.
- Before using this product, please read this manual carefully and use it correctly after fully understanding the product.
- For your convenience, please keep this manual properly so that you can refer to it at any time.

symbol

The following symbols are important reminders in this manual. Please be sure to comply with the following.

	There is a risk of malfunction or fire. Please do not exceed the rated voltage when using.
	Do not use AC power as there is a risk of rupture.
	There is a risk of burns due to high temperatures.

Safety Tips

To ensure your safety, please be sure to follow the following.

- Do not use in an environment with flammable or explosive gases.
- Do not use the product in an environment with water, oil, chemical droplets, or in contact with steam.
- Do not disassemble, repair, or modify the product without authorization.
- Do not exceed the rated voltage and current range during use.
- Do not use in environments beyond the rated value.
- Please pay attention to the polarity of the working power supply and do not connect the wrong wires.
- Please connect the load correctly.
- Do not short-circuit the load.
- Do not use if the casing is damaged.
- When discarding, please treat it as industrial waste.
- Do not use in direct sunlight.
- Due to the use conditions (ambient temperature, power supply voltage, etc.), the sensor surface temperature may rise. Please be careful when operating or cleaning it, as there is a risk of burns.

Instructions for use

- Do not use in the following places:
 - Locations exposed to direct sunlight
 - Places with high humidity and easy condensation
 - Places with corrosive gases
 - Locations where vibration and shock are directly transmitted to the product body
- When the lead wires of this product are installed in the same conduit as the power wires and electric power wires, they may be interfered with, malfunction or even be damaged.
- Extension cables must have a cross-sectional area of 0.3mm² or more and a length of 100m or less. When using Korean S-mark certified models as certified products, please set the length to 10m or less.
- The forces applied to the conductors are as follows: tension less than 40 N, torque less than 0.1 N·m, pressure less than 20 N, bending less than 3 kg.
- After the power is turned on, the product is in a detectable state within 200ms. Therefore, if the load and the product are connected to different power supplies, the power of the product must be turned on first.
- After cutting off the power supply, output pulses may occur, so please cut off the power supply of the load or load line first.
- Please do not use solvents such as thinner, gasoline, acetone, kerosene, etc. to clean.

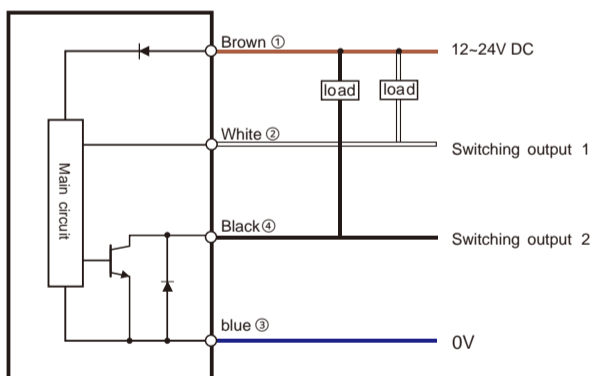
Confirmation of packaging contents

- sensor one
- User Manual one

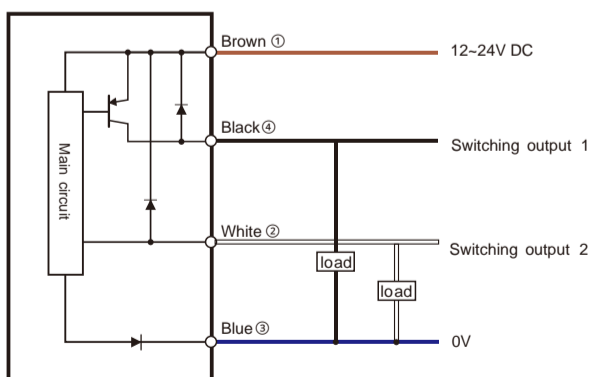
Circuit Diagram

DSE30-0304N/P

NPN



PNP

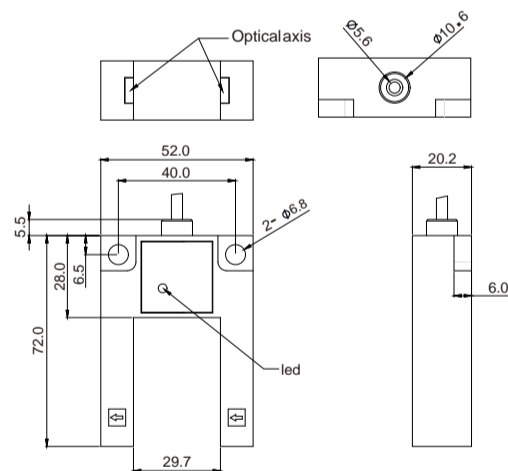


Technical specifications

Basic features:	How it works	Photoelectric Sensors
	Shell style	U-Shape
	Optical working principle	Shooting
	light source	Infrared LED, 940nm (modulated)
	Slot width	30mm
	Groove depth	44mm
	Detection object	2mm
Electrical data	Indicator Lights	Output function: Yellow LED
	Switch mode	L.on(light-incomingaction) / D.on(light-blockingaction)switchable
	Output Mode	NPN or PNP open collector
	Response time	1ms
	Switching frequency	2kHz
	Repeatability	<0.03mm
	Hysteresis (Return/Response)	<0.03mm
	Operating voltage	12-24V DC±10%
	Current consumption	≤15mA
	Residual voltage	≤2.5V (100mA)
	Load current	≤100mA (24VDC)
	Insulation resistance	≥50MΩ (500VDC)
	Pressure resistance	1000VAC (50/60Hz)
Protection Circuit	Reverse polarity protection/short circuit protection	
Environmental conditions	Operating temperature	-15~55°C (no freezing)
	Storage temperature	-25~80°C (no freezing)
	Working environment humidity	35~95%RH (no condensation)
	Storage humidity	35~95%RH (no condensation)
	Ambient illumination	LED light ≤500Lux
	Vibration resistance	10~50Hz, amplitude 1.5mm, X/Y/Z axis, 2 hours each
	Protection level	IP60
Mechanical data	Connection	2m/ 4-core cable
	Dimensions (W x H x D)	52.0x20.2x72.0mm
	Material	ABS
	weight	0.065kg/0.019kg
	Accessories	-
Model	NPN	DSE30-0304N
	PNP	DSE30-0304P

Dimensions

DSE30-0304N/P



Product Commitment

Degson's products undergo strict factory inspection. If a fault occurs, please contact the nearest Degson office and provide detailed information so that we can solve it as soon as possible.

Warranty

- The product warranty period is one year, starting from the date the product is shipped to the place designated by the purchaser.

Warranty coverage

- (1) In the event of a malfunction caused by Degson during the above warranty period, Degson will repair the product free of charge. However, the following cases are not covered by the warranty.
- Failure to comply with the conditions and environment specified in the operating manual, user manual, or technical requirements specifically agreed between the buyer and Degson. Improper operation, or improper use of the appropriate malfunction.
 - The failure is not due to a defect in the product, but to the design of the Buyer's equipment or Buyer's software.
 - Failure caused by modifications or repairs carried out by personnel other than Degson.
 - Faults that can be completely avoided by properly repairing or replacing wearing parts in accordance with the operating instructions.
 - After the product is shipped from Degson, it is caused by unforeseen changes in the level of science and technology and other factors.
 - Degson Corporation is not responsible for faults due to natural disasters such as fires, earthquakes, and floods, or external factors such as abnormal voltages.
- (2) The warranty covers only the situations specified in Article (1). Degson shall not be liable for any indirect losses (damage to equipment, loss of opportunity, loss of profits, etc.) or other losses caused to the purchaser by its equipment.

Product Suitability

Degson's products are designed and manufactured as general-purpose products for general industries. Therefore, Degson's products must not be used for the following applications and are not suitable for their use. However, if the purchaser consults Degson in advance about the use of the product with a responsible attitude and understands the technical specifications, grades and performance of the product, and takes necessary safety measures, the product can be used. In this case, the product warranty scope is the same as above.

- Uses that may result in chemical contamination or electrical interference, or use under conditions or environments not described in the product catalog, instruction manual, etc.
- Atomic power control equipment, incineration equipment, railway, aviation, vehicle equipment, safety devices, and administrative agencies and equipment manufactured in accordance with the regulations of individual industries.
- Machinery, systems and devices that may endanger life or property.
- Gas, water, and electricity supply systems require highly reliable equipment that operates continuously 24 hours a day.