

## Capacitive Sensors DCK Series






### User Manual

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











The following contents are necessary to ensure safe use, please be sure to comply.

- Do not use in an environment with flammable, volatile or explosive gases. Do not disassemble, repair or modify this product.
- About power supply voltage:  
Do not use the product beyond the specified voltage. If you use a voltage higher than the rated voltage or apply AC power to a product that can only use DC power, it may cause the product to explode or burn.
- For short circuit at load end:  
Do not short-circuit the load. Do not connect the load end directly to the power supply. Otherwise, the product may explode or burn.
- About wiring:  
Do not make mistakes such as mistaking the power polarity or miswiring. Otherwise, the product may explode or burn. Regarding
- Regarding wiring when there is no load:  
If the power is turned on without connecting a load, there is a risk of internal components rupturing or burning, so please connect the wires and turn on the power after connecting a load.

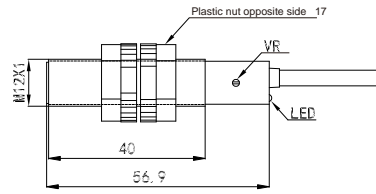
### Confirmation of packaging contents

- Capacitive Sensors one
- Nuts set
- User Manual one

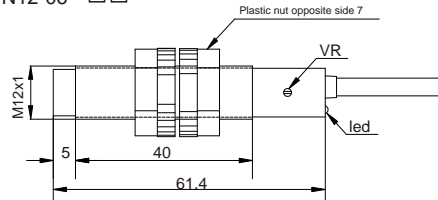
## Technical specifications

Basic features:	How it works	Capacitive Sensors					
	shell style	Cylindrical					
	Install Way	Flush			Non-flush		
	Detection distance	3.0mm	8.0mm	20mm	6.0mm	15mm	30mm
	Thread specification	M12	M18	M30	M12	M18	M30
	Sensing surface material	PBT					
	Detection object	Materials such as metal, liquid, powder, wood, paper, plastic, etc.					
	Indicator Lights	Operating status: LED					
	Detection distance adjustment	have					
	Electrical data	Switch mode	Normally open or normally closed				
Output Mode		NPN or PNP open collector					
External Input		none					
Switching frequency		0.1kHz					
Repeatability		5%					
Hysteresis (hysteresis)		15%					
Operating voltage		10~30V DC±10%					
Current consumption		≤10mA					
Residual voltage		≤2V					
Load current		150mA	300mA	150mA	300mA		
Leakage Current		<0.01mA					
Insulation resistance		Between power terminal and housing ≥50MΩ (500VDC)					
Pressure resistance		1000VAC (50/60Hz), 1 minute between power terminals and case					
Vibration resistance		10~55Hz, amplitude 1.5mm, X/Y/Z axis, 2 hours each					
Environmental conditions		Protection Circuit	Short circuit protection				
	Operating temperature	- 25~75°C					
	Working environment humidity	35~85%					
	Protection level	IP67					
Mechanical data	Connection	2m/3-wire cable					
	size	M12x56.9mm	M18x72.5mm	M30x87.0mm	M12x61.4mm	M18x76.0mm	M30x85.0mm
	Material	PBT					
	weight	0.05kg	0.08kg	0.12kg	0.05kg	0.08kg	0.12kg
	Accessories	Nut M12x1.0	Nut M18x1.0	Nut M30x1.5	Nut M12x1.0	Nut M18x1.0	Nut M30x1.5
Model	NPN Normally Open	DCK-F12-03 	DCK-F18-08 	DCK-F30-20 	DCK-N12-06 	DCK-N18-15 	DCK-N30-30 
	other	 NPN Normally Open	 NPN Normally Closed	 PNP Normally Open	 PNP Normally Closed		

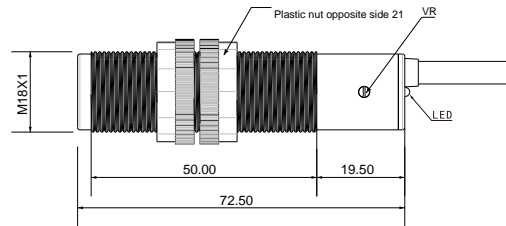
DCK-F12-03 □□



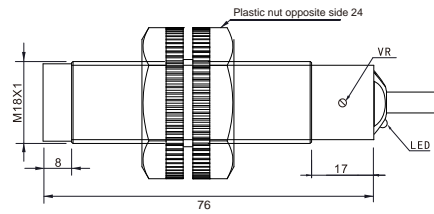
DCK-N12-06 □□



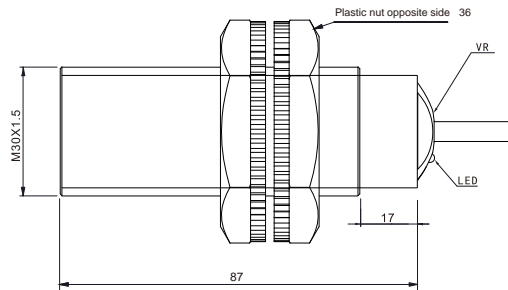
DCK-F18-08 □□



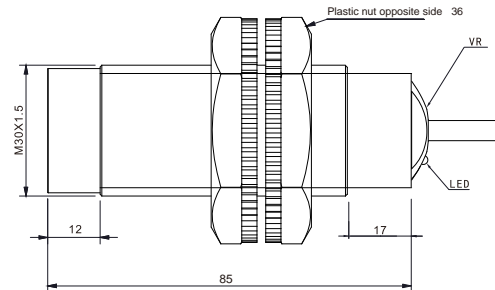
DCK-N18-15 □□



DCK-F30-20 □□



DCK-N30-30 □□



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) If a fault occurs during the warranty period, Degson will repair the product free of charge. However, the following situations are not covered by the warranty.

- Failure caused by improper operation or improper use under conditions or environments not specified in the operating instructions, user manual or technical requirements specifically agreed upon between the purchaser and Degson.
- The failure is not due to a product defect but is caused by the design of the purchaser's equipment or software.
- The failure is caused by modification or repair performed by someone other than Degson.
- Failures that can be completely avoided by properly repairing or replacing wearing parts in accordance with the operating instructions or user manual.
- Failures caused by unforeseen changes in the level of science and technology after the product is shipped from Degson.
- Failures caused by natural disasters such as fire, earthquake and flood or external factors such as abnormal voltage are not covered by Degson.

(2) The warranty is limited to the (1). In the circumstances specified in Article 11, Degson shall not be liable for any indirect losses (equipment damage, loss of opportunity, loss of profit, etc.) or other losses caused to the purchaser by its equipment.

Product Suitability

Degson's products are designed and manufactured for general use in 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 energy 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
- Equipment that requires high reliability, such as systems that operate continuously for 24 hours.