

Liquid level detection capacitive sensor DCE 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 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

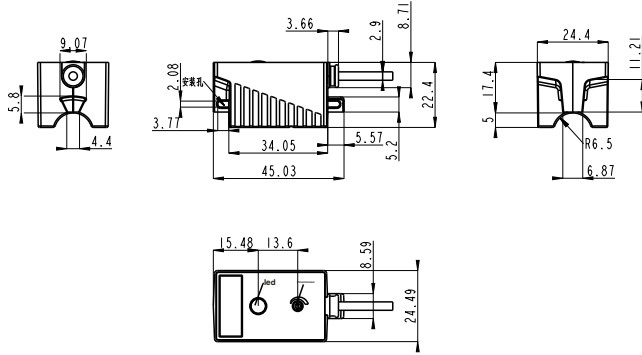
- Capacitive Sensors one
- Accessories set
- User Manual one

Technical specifications

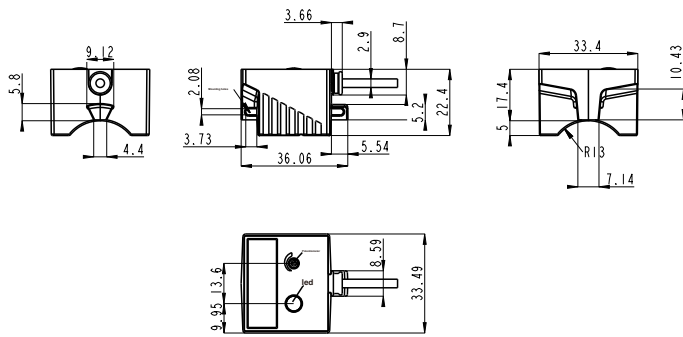
Basic features:	How it works	capacitance	
	Shell style	Square	
	Installation	Tie the cable to the housing of the liquid to be tested	
	Detection distance	Sensing distance is adjustable (depending on the liquid being measured)	
	Detection object	Non-metallic pipes (liquids)	
	Detection of pipe size	φ8-φ11mm	φ12-φ26mm
	Detect pipe wall thickness	1mm and below	1.5mm and below
	Indicator Lights	Output indication: Red LED	
	Detection distance adjustment	Multi-turn potentiometer, adjustable sensing distance	
Electrical data	Switch mode	Normally open or normally closed	
	Output Mode	NPN or PNP open collector	
	Response time	-	
	Switching frequency	-	
	Repeatability	±0.2mm or less	
	Hysteresis (hysteresis)	0.6-5mm	0.3-3mm
	Operating voltage	10-30V DC	
	Current consumption	<10mA	
	Residual voltage	≤1.5V	
	Load current	≤100mA	
	Leakage Current	<0.01mA	
	Insulation resistance	≥50MΩ (500VDC)	
	Pressure resistance	AC 500V 1 minute <0.1mA	
Protection Circuit	Power reverse polarity protection, surge protection, short circuit protection		
Environmental conditions	Operating temperature	0-55°C	
	Working environment humidity	When in use and when stored: 25 to 85% RH (no condensation)	
	Vibration resistance	10-55Hz sweep frequency, 1.5mm amplitude, 2 hours each in X, Y, and Z directions	
	Protection level	IP67	
Mechanical data	Connection	2m PVC cable	
	Dimensions (W x H x D)	45.03*24.49*22.4mm	36.06*33.49*22.4mm
	Material	ABS	
	weight	0.046kg	0.047kg
	Accessories	Cable ties, metal screwdriver, PVC hose	
Model	NPNNormally Open	DCE15-13 	DCE30-26 
	other	 NPN Normally Closed  PNP Normally Closed  PNP Normally Open  NPN Normally Open	

Product size

DCE15-13 □□

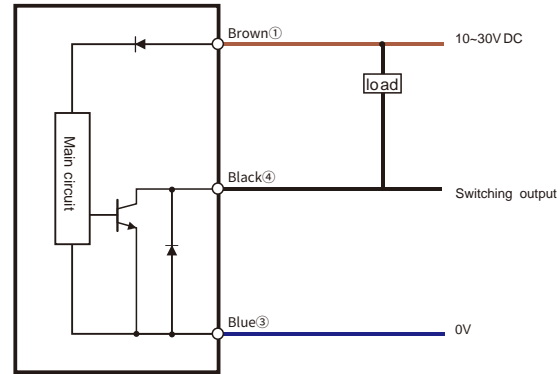


DCE30-26 □□

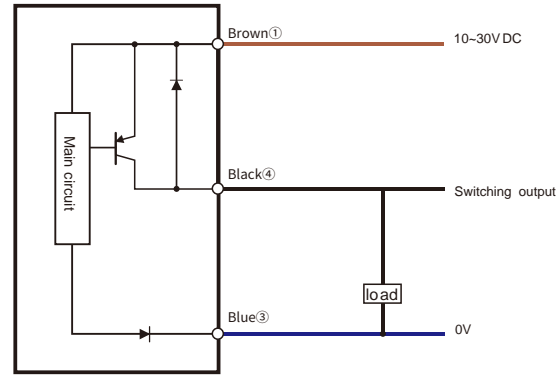


Circuit Diagram

NPN



PNP



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) If a fault occurs during the warranty period stated above and caused by Degson, 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 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 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 require highly reliable equipment that operates continuously 24 hours a day.