

Capacitive Sensors DOL 21R and 33R

The capacitive sensor is an electronically controlled no-touch switch that is activated by most materials as soon as they get close to the upper end of the sensor.



TYPICAL APPLICATIONS

As “empty”, “full” and “level” indicators in tanks, silos and containers, or as control devices for conveyor belts etc.

The sensors should not be used in areas with danger of explosion.

RELIABILITY

The use of electronic rather than mechanical switches ensures a unique reliability, particularly as the electronics are completely enclosed in special plastic, which gives maximum protection against humidity, dust and other contaminations found in the environment.

TECHNIQUE

Next to the cable entry, the sensitivity (activation distance), and if necessary the time delay can be adjusted. Also, there is a control lamp, which shows the actual state of function of the sensor.

Connections are made via a five-core cable directly to mains voltage and a motor overload relay.

DOL capacitive sensors are available in two different versions, varying from each other in their time-delay functions.

The sensors have been approved by CE and furthermore, they are approved for North America with a common C-UL mark.

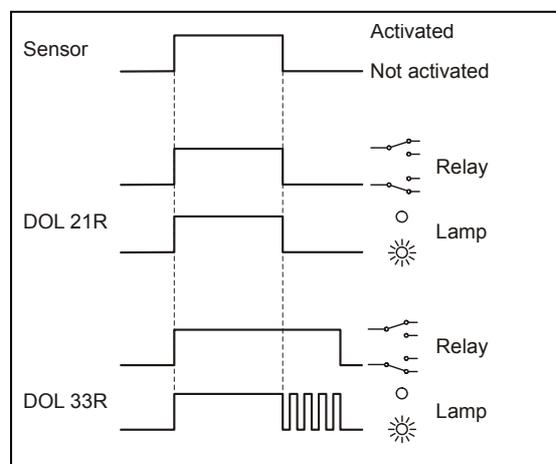
FUNCTIONS

DOL 21R

DOL 21R has no time delay. The relay switches as soon as the sensor is activated and remains in this position until the activating influence stops.

DOL 33R

DOL 33R has delayed switch-off so that the relay switches as soon as the sensor is influenced. When the influence ceases, the time-delay starts, and when the delay period expires, the relay will switch back.

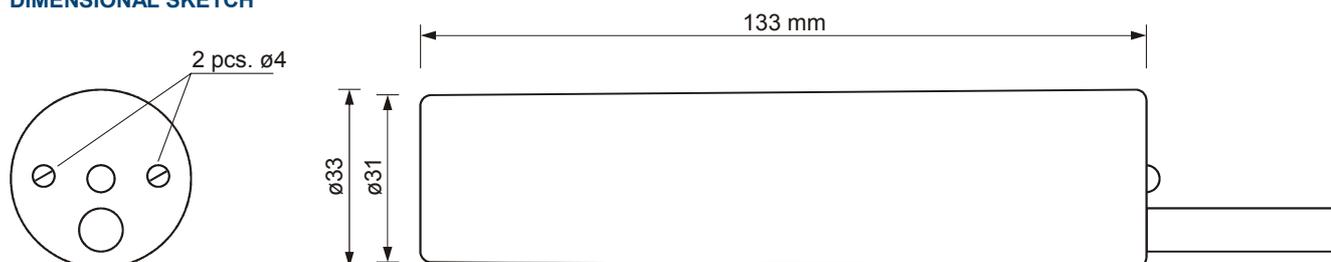


INSTALLATION

The sensor can be mounted in a PG 36 screwed gland, for example in a silo wall. Alternatively, the sensor may be hung from the top of the silo.

Power supply is connected via the blue and brown wires. The three wires of the relay switch are connected as required, provided the maximum 240 V ac/5 Amp is not exceeded.

DIMENSIONAL SKETCH



TECHNICAL DATA

Power supply	230 V ac + 30-25 %
Frequency	45-65 Hz
Consumption	1 VA
Relay switch max. voltage	240 Volt ac
Relay switch max. current	5 A at $\cos \varphi = 1$ 2 A at $\cos \varphi = 0.8$ 0.35 A at $\cos \varphi = 0.4$
Safety	Relay switches and supply voltage are galvanic separated. Test voltage 4 kV ac
Approvals	CE and C-UL
Distance of activation	Adjustable 0-15 mm depending on material. Factory setting for grain
Time delay	Adjustable 1-600 sec. Factory setting 30 sec.
Protection class	IP 67
Surrounding temp., operation	-20 °C to +75 °C
Surrounding temp., storage	-30 °C to +85 °C
Length	133 mm
Diameter	Max. 33 mm
Cable	Five-core 0.75 mm ² Length: 1450 mm Diameter: 8 mm
Weight incl. cable	380 g
Accessories, supplied	Adjusting screwdriver (only DOL 33R)
Optional extras	PG 36 screwed gland, plastic, order no. 140100