



Micro Detectors

Italian Sensors Technology



Application:
photovoltaic panels presence
and position detection

CE, CT, C18, C30, CQ50, CQ55
Capacitive Sensors



Proximity Sensors

Application note

CAT3E001264101

Application note - capacitive models - English - Ed.01/2012



MARKET SECTORS

DESCRIPTION OF THE MARKET SECTOR AND ITS TYPICAL ACTIVITY

APPLIED SOLUTION

SPECIFICATIONS

TECHNICAL FEATURES

Solar panel industry

During productions of solar panels it is necessary to detect position or presence of panels. Photoelectric and ultrasonic sensors could have problems in the detection of the panels because of the transparency and tilt.

M.D. Micro Detectors' Capacitive Sensors can detect the panel (glass+thin metallic layer) without any problems.

C18

- DC or AC supply voltage
- High noise immunity
- Shielded and unshielded models
- Adjustable sensitivity
- Plastic housing

CE

- DC supply voltage
- Shielded and unshielded models
- Adjustable sensitivity
- Metallic housing
- Self monitoring models

CT

- DC supply voltage
- Adjustable sensitivity

C30

- DC or AC supply voltage
- High noise immunity
- Shielded and unshielded models
- Adjustable sensitivity
- Plastic or metallic housing

CQ50

- DC supply voltage
- High noise immunity
- Adjustable sensitivity

CQ55

- Capacitive water level sensor

		Capacitive Sensors						
		Cylindrical				Cubic		
		C18	CE	CT	C30	CQ50	CQ55	
dimensions		M18	∅ 20 mm	M30	M30	7 x 30 x 50 mm	15 x 35 x 55 mm	
standard shielded		3...8 mm	10 mm	—	2...16 mm	—	—	
standard unshielded		3...12 mm	—	—	4...25 mm	—	—	
long distance shielded		—	—	15 mm	—	5/6/7/10 mm	4...25 mm	
long distance unshielded		—	—	20 mm	—	—	—	
standard housing		•	•	•	•	•	•	
short housing		—	—	—	—	—	—	
miniaturized housing		—	—	—	—	—	—	
supply voltage		Vdc	•	•	•	•	•	
		Vac	•	—	—	•	—	—
output type		NPN - NO	—	—	•	—	—	
		NPN - NC	—	—	•	—	•	
		PNP - NO	—	—	•	—	•	
		PNP - NC	—	—	•	—	—	
		PNP - NO + NC	•	—	—	•	—	•
		NPN - NO + NC	•	•	—	•	—	•
		DECOU [®]	—	—	—	—	—	—
		SCR	•	—	—	•	—	—
0...10 V		—	—	—	—	—	—	
4...20 mA		—	—	—	—	—	—	
temperature range		-25°C...+80°C	-25°C...+70°C	-25°C...+70°C	-25°C...+80°C	-0°C...+60°C	-25°C...+80°C	
protection degree		IP67	IP65	IP65	IP67	IP67	IP67	
housing material		PE	stainless steel	nickel plated brass	PE / stainless steel	Noryl	PC	
active head material		PE	LPG	PBT	PE	Noryl	PC	
output		cable	•	•	•	•	•	
		M8 plug	—	—	—	—	—	
		M12 plug	•	•	•	•	—	•
other certifications		UL LISTED CE	CE	CE	UL LISTED CE	CE	UL LISTED CE	

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