



Micro Detectors

Italian Sensors Technology



Area sensors for vending machine CST539

Area Sensors

Data sheet

Cod. CAT3ECST1257901

Datasheet - CST539 - english - Ed.01/2012



GENERAL DESCRIPTION

TECHNICAL SPECIFICATIONS

CST-539

- High resolution detection of very small objects both in freefall and standing in front of photoelectric curtains optics.
- LED for sensors diagnosis of error status and LED for excess gain signal.
- Excellent immunity to the environmental light, allowing the correct sensor functioning also in open air applications: immunity to neon lamp and reflected light coming from mechanical components of the machine, as lift or anti-theft blade.
- Performances guaranteed in the following working conditions: up to 42°C of temperature and 90% of humidity outside vending machine and up to 2°C and 50% of humidity inside the vending machine.



Model	CST539-L	CST539-S
Nominal sensing distance (Sn)	530 mm	420 mm
Controlled area	180 mm	
Optics number	16	
Beams spacing	10 mm minimum, 14 mm maximum	
Minimum detectable object	10x10 mm central area ⁽¹⁾ 11x11 mm intermediary area ⁽¹⁾ 13x13 mm edge of area ⁽¹⁾	11x11 mm central area ⁽¹⁾ 12x12 mm intermediary area ⁽¹⁾ 14x14 mm edge of area ⁽¹⁾
Emission	infrared	
Voltage supply	20-30 Vdc; 24 Vac	
No load supply current	120 mA	
Output current	20 mA	
Voltage drop	0.7 V	
Output type	optoisolata 20 mA	
Time delay before availability	500 ms	
Temperature range	0 - 50 °C	
Sensibility adjustment	No	
External lights interference	15,000 lux (incandescent light) / 300 lux (modulated lamp)	
Protection degree	IP67	
LED indicators	Yellow: output status and diagnostic ⁽¹⁾ / Green: excess gain ⁽²⁾	
Housing materials	Crystal polystyrene	
Cable material	Precabled emitter and receiver with a 580 mm PVC cable. 250 mm PVC CABLE exit receiver	Precabled emitter and receiver with a 470 mm PVC cable. 250 mm PVC CABLE exit receiver

⁽¹⁾ Refer to isoareas diagrams

⁽¹⁾ Yellow LED

LED off in standard working condition
LED on for 100 ms in the case of object detected
LED always on in the case of error status

⁽²⁾ Green LED

Receiver excess gain

ISOAREAS DIAGRAMS, ELECTRICAL DIAGRAMS OF THE CONNECTIONS

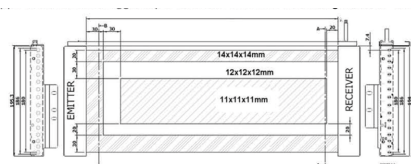
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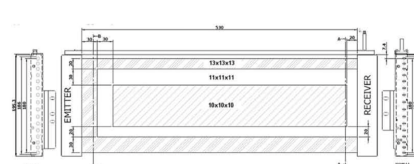
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Isoareas diagrams:
detecting area for 420 mm box



Isoareas diagrams:
detecting area for 530 mm box



* all measures are in mm

Electrical diagrams of the connections

Pin n°	Colour	Connection	Description
1	brown	supply voltage	20 - 30 Vdc; 24 Vac max. 1A
2	red	ground	0 V
3	orange	OUT 1 ground	GND
4	yellow	OUT 1 (detection)	NPN optoisolated output (open collector between pin 4 and pin 3) to detect the target: close on the pin 3 for 100 ms when the object is detected.
5	green	ground OUT 2	GND
6	blue	OUT 2 (alarm)	NPN optoisolated output (open collector between pin 6 and pin 5) for sensors diagnosis: open if the area sensor works correctly, close if the curtain is in error status

