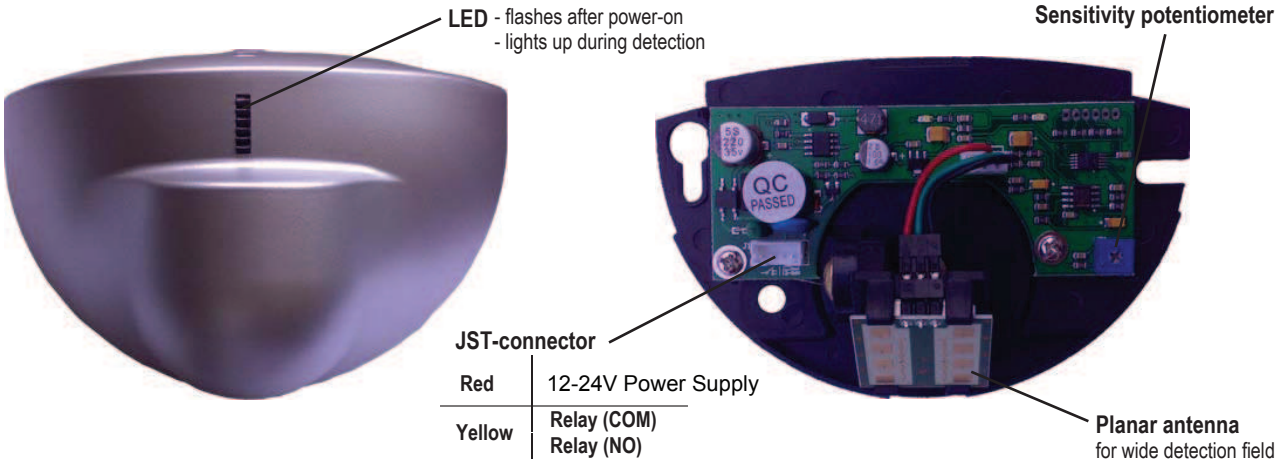
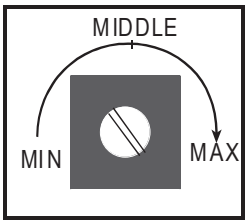
21. Connecting Microwave sensors

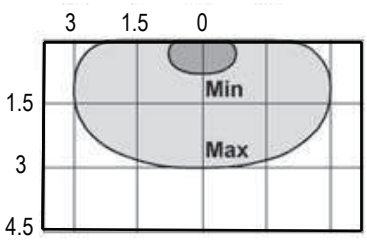
1 General information



2 Adjustments

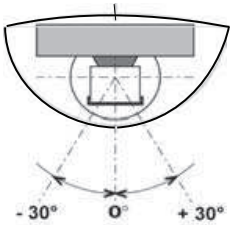
1 The sensitivity settings determine the size of the sensing field

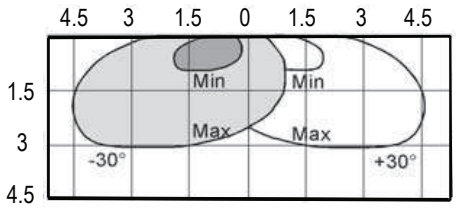




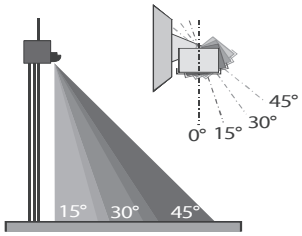
vertical angle: 30°, mounting height: 2.2m

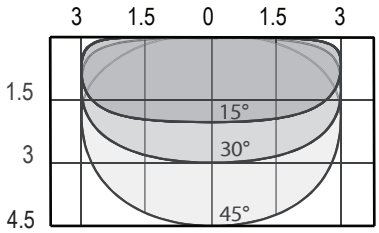
2 The lateral angle of the planar antenna determines the position of the sensing field





3 The vertical angle of the planar antenna determines the depth of the sensing field





sensitivity: maximum

21. Connecting Microwave sensors

3 Installation tips


Avoid vibrations!


Do not cover the sensor!


Avoid moving objects in proximity of the sensor!


Avoid HF lamps or fluorescent lighting in proximity of the sensor!


Avoid touching electronics!


Revolve the potentiometer slowly with small strength.

4 Troubleshooting

SYMPTOMS	PROBABLE CAUSES	CORRECTIVE ACTION
The door will not open and no red LED lights up.	The sensor power is off.	Check the wiring and the power supply.
The door opens and closes constantly.	The sensor "sees" the door moving.	Increase the tilt angle and/or reduce the sensitivity.
	When closing, the door creates vibrations picked up by the sensor.	Make sure that the sensor is correctly fixed. Reduce the sensitivity.
The door will not close. Red LED is OFF.	ON-OFF switch at door control is in wrong position or faulty. Improper output configuration.	Make sure that the ON-OFF switch for the door is in the ON or AUTOMATIC position. Check the output configuration setting on each sensor connected to the door operator.

5 Technical specifications

Technology	: microwave and microprocessor
Transmitter frequency	: 24.125GHz
Transmitter radiated power	: ＜20dBm EIRP
Transmitter power density	: ＜5mW/cm²
Maximum mounting height	: 3.5 m
Tilt angles	: 0° to 90° vertical and -30° to + 30° lateral
Detection field (mounting height=2.2m)	: 6m (W) x 3m (D)
Detection mode	: motion
Minimum speed	: 5 cm/s (measured in the sensor axis)
Supply voltage	: 12V to 30V AC/DC +30% / -10%
Mains frequency	: 50 to 60 Hz
Power consumption	: < 2W (VA)
Output relay (free of potential change-over contact)	
Max. contact voltage	: 42V AC- 60V DC
Max. contact current	: 1A (resistive)
Max. switching power	: 30W (DC) / 60VA (AC)
Hold time	: 1.0 s
Temperature range	: -25°C to +55°C
Degree of protection	: IP54
Norm Conformity	: R&TTE 1999/5/EC; EMC 89/336/EEC
Material	: ABS
Color of housing	: black smoked, aluminium finish
Dimensions	: 120mm (W) x 80mm (H) x 50mm (D)
Weight	: 0.265kg
Length of cable	: 2.5m

22. The Abnormal Status and the Resolving Methods

When the auto-door unconventionally runs, please cut off the power supply for a few seconds, and then turn on again.

Nº	Abnormal Status	Possible cause	Resolving Methods
1	The door cannot move	1. Power failure 2. Door blocked 3. Damaged fuse 4. Cables desconnected	1. Check the 230V power supply. 2. Separate the door from belt and check if door can be moved by hand 3. Check fuse M1201 4. Make sure the cables are securely connected
2	Door open and close with very low speed	1. Leafs with friction 2. Cradels with damaged bearings 3. M0201Group tensioner with damaged bearings 4. Defective control unit 5. Motor with stuck reducer	1. Move the door manually, without being attached to belt and verify proper operation. 2. Repeat the previous step 3 Remove belt and check by hand if the movement is correct. 4.Change the position of the potentiometers D and C see whether the unit changes the operation. 5. Without the belt and without power, make sure the motor turns manually
3	Door cannot be closed	1. Sensor sending continued signal 2. Photocells always open	1.Unplug one radar ,one by one to see if the door close 2. Check if the cables connecting photocells module to control unit (1 and 2) close the circuit NO.Install an shunt between point 1 and 2 and make sure the door close.In case it closes verify power suplly cables
4	Door reverse direction when closing	1. There are obstacles in the sensor detection area. 2. The door leaves are within the detection area. 3. Photocells misaligned 4. There is friction in some door components	1. Remove obstacles in the area of the detection sensor. 2. Adjust the sensor detection area and sensitivity 3. Align the photocells 4. Check, moving leaves by hand, where exists contact between components
5	Door leafs slam violently	- Lack of stoppers - Faulty control board	- Check if the stoppers are tight and in place; - Change the position of the potentiometers C and D in order to see whether the switch changes control unit operation. - Reset control board by disconnecting batteries and 230V power supply for 5seconds.Power on again, the door will start new programming.