

COMPLETING THE INSTALLATION

1. Once the jumper and time settings has been set to the desired position, screw the sensor back into the lid using the four screws.
2. Connect the other end of the cable to the control equipment following the connection details on the previous page.
3. Apply power to the system. When first powered, the sensor will take approximately 1 minute to settle down into normal operation.
4. Walk in front of the sensor and ensure the detection area is being covered adequately. Adjust the pan and tilt of the sensor to the desired position and use the screw on the front of the enclosure to lock in position. (Do not over-tighten as this may prevent you from making changes in the future).

WARRANTY

This product has a **2 Year** parts and labour warranty. In the unlikely event that you encounter a problem with this product, it should be returned direct to Voltek, or to the place of purchase.

Voltek Helpline : 01282 695500

SPECIFICATION

Operating Voltage	12Vdc Nominal
Current Consumption	33mA (standby) 40mA (alarm)
Sensor	Dual element thermally stabilised
Relay type	Single pole change over
Relay Contact rating	1A (24V dc), 0.5A (120V ac)
Transistor Output	npn with 22K pull up and 100R in series
Transistor rating	80mA (sink only)
Alarm duration	2 sec. To 5 min. (Relay) 2 sec. minimum (transistor)
Weatherproofing	IP55 (suitable for outside use)
Dimensions	80mm W x 110mm H x 115mm D
Total package weight	0.2Kg
Approvals	CE Directive 93/68/EEC EMC Directive 89/336/EEC BS EN 50081-1, BS EN 50082-1



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Issue 3

Installation Instructions

1816, 1816LR AUTOSWITCH

This product is a high quality PIR sensor which has suitable outputs and controls for use with your alarm panel, CCTV equipment, radio pagers and lighting controllers.

CONTENTS

- Autoswitch PIR Sensor
- Fixing kit containing 2 screws, 2 plastic wall plugs and a cable tie.

FEATURES

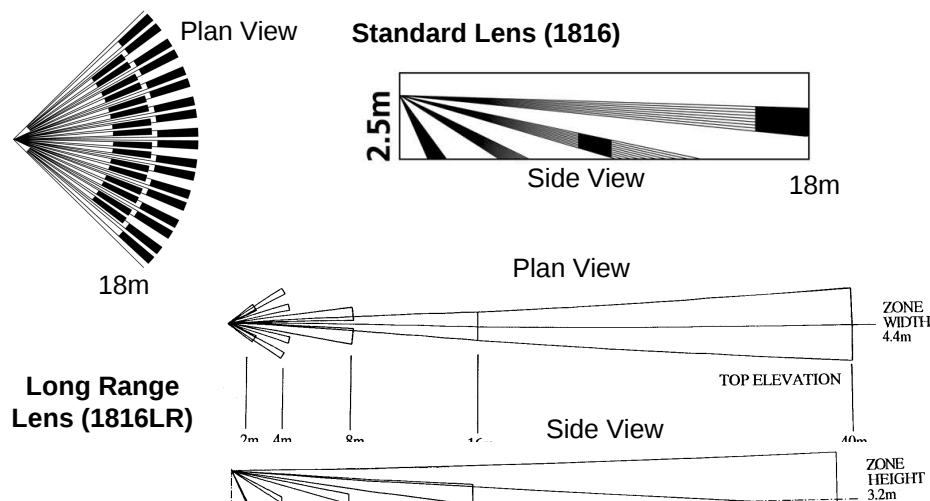
- 12V dc operating voltage.
- 18 metre(max), 90° detection range (standard lens).
- 40 metre(max), 12° detection range (long range lens).
- LED movement indicator (can be disabled).
- Normally open and normally closed relay output.
- Adjustable relay alarm time (2 sec. to 5 mins.)
- Transistor output (-ve signal in alarm).
- Selectable pulse count 1, 2, 3 or 4.
- Adjustable Time Frame 5, 10, 20 or 30 sec.
- Relay output will go into alarm on removal of power.
- Relay & transistor will go into alarm if the PIR input is disconnected.
- Tamper Switch

SITING THE PIR SENSOR

- We recommend that the sensor is mounted at a height of between 2.5 to 3 metres to obtain the best coverage pattern.
- Place the sensor so that movement is across the face of the sensor, rather than straight towards it. A person would cross more of the detection beams this way and therefore increase the sensors sensitivity. (see detection patterns)
- The unit should be fixed to a rigid, vibration free, vertical surface.
- Do not locate the device in site of heater flues or air conditioning equipment as they may cause a false alarm.

Use the detection pattern shown on the next page to help determine the best location for the sensor.

You may wish to do a scaled plan view sketch of the property and add the detection patterns to the sketch to ensure that all approaches to the property have been covered.

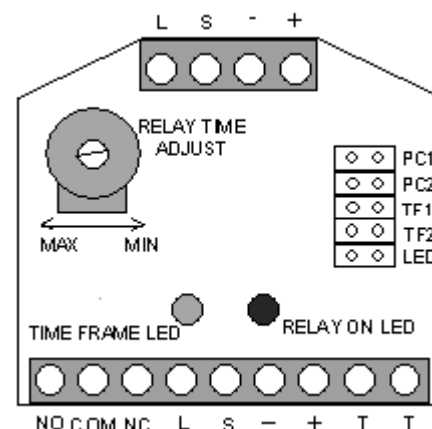


INSTALLATION

1. Loosen the four screws beneath the top enclosure and remove the lid.
2. Screw the lid to the chosen surface using the enclosed fixing kit.
3. Run a cable from the control unit to the location of the sensor. (Alarm cable is suitable for a distance of up to 100 metres. For further distances a larger cable core is required.)
4. Pierce the grommet with a small hole and push the wire through the grommet.
5. Strip approximately 30mm of outer insulation from the cable and then strip approximately 5mm of insulation from each of the conductors.
6. Connect the cable to the Autoswitch as follows ; (A space has been provided for you to record the colour of the wires used for future reference)

Connector	Description	Wire colour
+	+ 12V dc	
-	0V	
S	Signal (transistor)	
L	Light Level Sensor	
NC	Normally Closed	
COM	Common	
NO	Normally Open	

7. Strain relieve the cable by putting the cable tie supplied around the cable just above the grommet. This should prevent the cable from being pulled back through the grommet.
8. Set the Relay alarm time, Time frame and pulse count setting to the desired position as follows ;



PC1	○ ○	1 PULSE
PC2	○ ○	
PC1	—	2 PULSES
PC2	○ ○	
PC1	○ ○	3 PULSES
PC2	—	
PC1	—	4 PULSES
PC2	—	
TF1	○ ○	5 SECONDS
TF2	○ ○	
TF1	—	10 SECONDS
TF2	○ ○	
TF1	○ ○	20 SECONDS
TF2	—	
TF1	—	30 SECONDS
TF2	—	
LED	○ ○	LED'S DISABLED
LED	—	LED'S ENABLED

9. The PIR LED can be disabled by cutting the white wire (make sure the cut wire does not touch anything else within the unit)

UNIT OPERATION

- The 1816 will ignore any PIR pulses that are shorter than 0.2 seconds
- When the first pulse is received from the PIR, the Time Frame starts, indicated by the green LED. The duration of the time frame can be altered using the jumpers as shown above.
- If enough pulses are received while the time frame is on, the relay output and the transistor output will switch on.
- The transistor output is a momentary type output, i.e. it will only stay on for as long as movement is being detected (minimum 2 seconds).
- The relay output time can be adjusted between 2 seconds and 5 minutes using the potentiometer. This is a resetable type timer, i.e. each time the correct number of pulses are received from the PIR, the timer will restart.
- The tamper switch terminals (marked T) will give a normally closed circuit when the lid is firmly screwed down.

Please Note : A large source of RFI emitted close to this unit may cause the Autoswitch to produce a false alarm.