

TotalCount TC – 8 People Counter

The kit comprises:

- GL10 Photo Electric Sensor complete with Counter Module
- 12-volt Switchmode Plug-Pack,
- Reflector and Reflector Bracket,
- 1 x Multi Directional Black Sensor Bracket,
- 2 Reset Magnets,
- Screws and
- Instruction Sheet.

The workings of the system are simple. As a preliminary, to see the system in action, using the 12 volt plug pack supplied plug the Counter module into a 240-volt power-point. Switch the power point on. A red LED on the TC Counter Module will light up on the face of the sensor. Position the reflector 20cm or so in front of the red face of the sensor – the red LED will go out when the sensor can see the reflector.

The system is now ready to count. Each time something goes between the sensor and the reflector the beam will be broken, this LED will light up and the counter will advance one count. Each time the beam is broken there is a brief reset period before the counter is ready to count again. When a person walks passed the sensor one count only will register – if the sensor is at leg height the first leg only would be counted, if at waist height arms would not be counted. For general shop installations it is suggested to mount the Sensor and Reflector at a height of **1.25 metres** to miss small children and shopping trolleys.

If people enter and leave by the same doorway the counter will count them as they enter and as they leave so the count needs to be divided by 2 to determine the correct count.

To reset the counter to zero – touch one of the magnets against the counter box to the right of the numbers (to the right of LCD).

INSTALLATION INSTRUCTIONS:

STEP 1

The TC-8 Sensor is positioned on one side of the space to be detected across and the reflector is positioned on the other side. The system comes with a multidirectional bracket. The Sensor can be mounted horizontally or vertically and has a number of mounting holes in the bracket to help position the Sensor in the direction you want. The distance between the Sensor and the reflector should not exceed 8.0 metres.

The first thing to do is to decide where to position the Sensor and its reflector. Moving objects – swinging doors or swaying plants should not interrupt the beam between the Sensor and its reflector.

If you want to detect through glass it is suggested to have the beam going through the glass at an angle. This is so the beam doesn't hit the glass at a right angle. Even a 15° tilt of the sensor looking slightly up or down to the reflector will help with the quality of the beam through the glass. The reflector should be at the same angle – so the beam hits the reflector at a right angle.

Another situation where glass is involved – the Photo Electric sensor may be positioned behind a window looking through the window and across, for example, a corridor – here place the sensor near to the glass – say 1 cm or closer. When this is done the Sensor may not need to go through the glass at an angle.

Another consideration on location is the proximity of a power-point. The unit has 2 metres of cable from the counter to the 12-volt plug-pack. If this is insufficient use an extension cord or cut the cable and lengthen it using figure 8 speaker cable – be careful to match the colours correctly and using electricians tape to cover the joins – also soldering the joins is suggested.

STEP 2

Take the Sensor and its bracket; hold them in the proposed installation point with the Sensor pointing towards the proposed reflector installation point. Decide whether to have the bracket vertical or horizontal and which holes on the bracket are to be used to position the Sensor.

Make sure that the Sensor bracket can be screwed to the mounting surface and that the counter can also be screwed to the mounting surface below or next to the Sensor and that it is clear of obstruction to where the reflector is to be mounted. Screw the Sensor bracket to the mounting surface and lightly bolt the Sensor to the underneath surface of the bracket using the holes decided on.

STEP 3

Plug the 12-volt plug-pack into the power-point. A red LED will light up on the face of the Counter Module and go out when sensor is lined up pointing at the reflector. It is best if the reflector is in the centre of the beam from the Sensor, so watching the LED on the Counter Module move the reflector by hand to ascertain where the centre point is. You may need to swivel the Sensor on its bracket to position both the sensor and reflector where you want them. Mark the position where the reflector is to be fixed.

STEP 4

Once you are satisfied with this lining up, carefully tighten the bolts connecting the Sensor to its bracket. At this point you could again check your reflector positioning to ensure that you haven't moved the sensor as you tightened it.

STEP 5

Affix the reflector to the position you have marked. A bracket is provided which may be of use. If this Bracket is used either affix the Reflector to it using the Double-Sided Tape already on the Reflector or remove this tape and bolt the Reflector to the Bracket using the 4 mm bolts and nuts provided – this will get the reflector out 50mm or so from the wall – ideal to allow the sensor to see passed auto-doors or roller door guides.

STEP 6

As you walk past the beam the LED will light up on the Counter Module.

STEP 7

The TC-8 is now installed. Carefully screw the People Counter to the mounting surface next to or below the Sensor.

STEP 8

By this time there will be a count on the People Counter – clear this by touching one of the magnets supplied - to the right or below the number on the LCD. The count will clear to zero. Walk past the Sensor – and the counter will register one count.