

Installation Instructions

M102 Sensor Beams (for Merlin G openers only)

Merlin M102 sensor beams will only function correctly on Merlin's G model openers. They will work no matter which way their wiring is connected.

M102 sensor beams send a coded signal down their power supply wiring, so only a Merlin opener can provide the correct power supply and decode the state of the beams correctly.

Use Merlin M103 sensor beams for Merlin's Powerlift openers or gate openers. M103 is general purpose, using a separate power input and a configurable relay contact output.

The infra-red light beam carries a coded signal, so the receiving sensor can not be fooled by ambient light. The receiving sensor must see the transmitting sensor, so reflective objects will still be detected.

Direct sunlight has high levels of infra red light, and can 'blind' the receiving sensor, preventing it from seeing the transmitting sensor. The receiving sensor operates best out of direct sun.

Fit the beams to the door opening

To comply with AS/NZS 3350-2-95 the beams must be fitted within 300 mm of the door's opening, and no more than 100 mm above ground level.

Identify the receiving sensor by removing the bayonet caps. The receiving sensor has a green rectangular component at its centre. Place this sensor on the side of the door's opening that will not see direct sunlight.

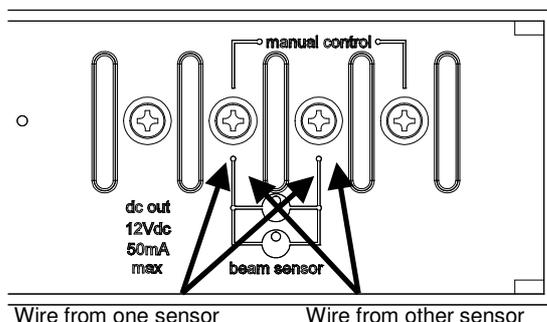
Locate the sensors where they will not be splashed with mud, submerged by water or knocked by vehicles or garden implements. Ensure the movement of the door will not interrupt the infra-red light beam. Fit the wiring where it will not be subject to damage during the life of the opener. Damage to the wiring may prevent the door from closing.

The sensors should face each other. Internal fine adjustment of $\pm 5^\circ$ is provided.

Connect the wiring to the Merlin opener

Remove the wiring cover panel on the Merlin opener to expose the screw terminals.

The wiring cover panel is located either on the rear of the overhead door opener or under the base of the roller door opener, inside the lamp cover.



Attach the wires from each sensor to the terminals marked beam sensor. The wiring is polarity independent.

Replace the wiring cover panel.

Test and align the beam

The red LED inside each sensor should be lit if the wiring is intact.

When the bayonet caps are fitted it should be possible to determine whether the red LEDs are flashing or lit continuously. If they are flashing then the sensors are misaligned or there is an obstruction.

Remove the obstruction or align the sensors.

The internal fine alignment adjusters require a Philips screwdriver. One screw adjusts vertically and the other adjusts horizontally.

After adjustment, replace the bayonet caps and observe the LED. The LED should stay on continuously.

Beam function

Continuously shining LED in either sensor

Beam is not obstructed or misaligned.

Slow flashing LED in either sensor

Beam is obstructed or misaligned. Either remove the obstruction or realign the beams.

Door will not close, or reverses while closing

Beam may be obstructed or misaligned. Either remove the obstruction or realign the beams.

To force the door closed when the beam is obstructed

Press and hold the manual control button for more than three seconds. The door will continue to close only while the button is held. The door will not close from the remote control, and it will not close from the auto-close timer.

Auto-close function

To enable auto-close

Remove the green control panel cover and move the auto-close option switches. Select 30 seconds, 60 seconds or both for 90 seconds of delay.

The door will close automatically after opening. Sensor beams must be fitted and functioning. Force sensing provides some safety. Always be present to observe a closing door.

Auto-close timers will only work if the beam is fitted, and only if the beam is functioning and is not obstructed.

Auto-close stops functioning

Beam may be obstructed or misaligned. When the obstruction is removed then the auto-close timer will recommence.

Door is open and main lamp is flashing

If the door hits a physical obstruction while auto-closing then it will reverse back to the open state. For improved safety and for the protection of property the door will not continue to auto-close onto the physical obstruction. At each time that the auto-close fails the main lamp on the opener will flash three times, until the door is operated deliberately by either the remote control or a manual control.