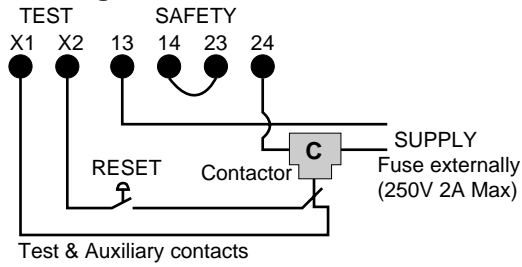
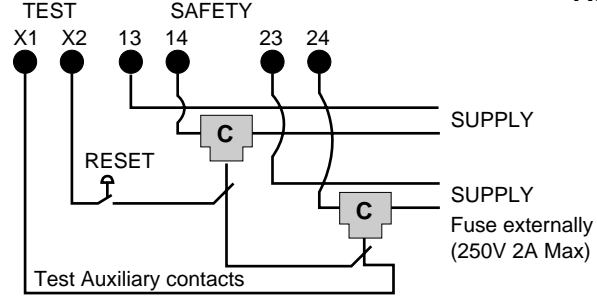


3 Machine Control Connections

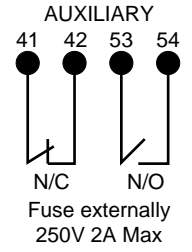
Single Contactor Machines



Dual Contactor Machines

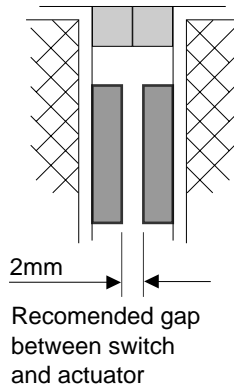
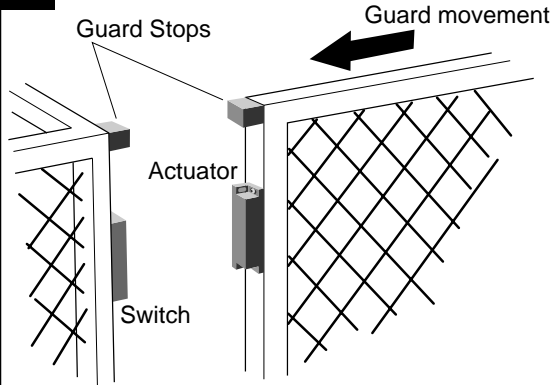


Auxiliary Connections

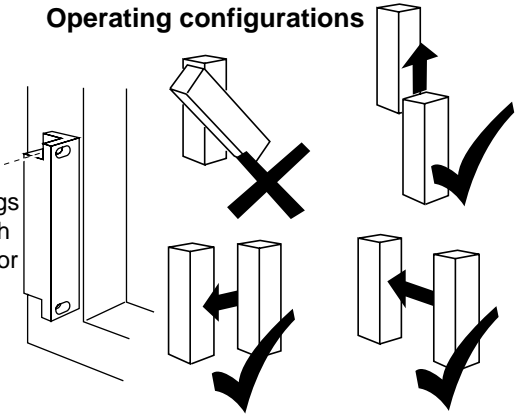


41 & 42 N/C Normally Closed with indicator unit and therefore N/C is OFF.
53 & 54 N/O Normally Open will indicate machine is ON

4 Sensor head installation



Operating configurations

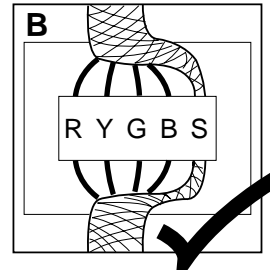
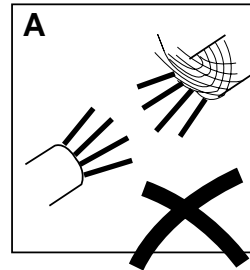
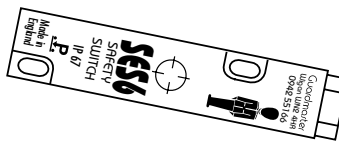
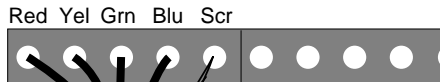


The Sentinel sensor and actuator are mounted by M4 Resistorx anti-tamper screws (supplied). The switch and actuator **MUST NOT** touch and a gap of **2mm** is recommended. If necessary guard stops should be used. Actuator movement should be as shown above.

5 Wiring from Switch to Sensor

Wiring from Switch to Sensor

Guard Sensor 1 Guard Sensor 2

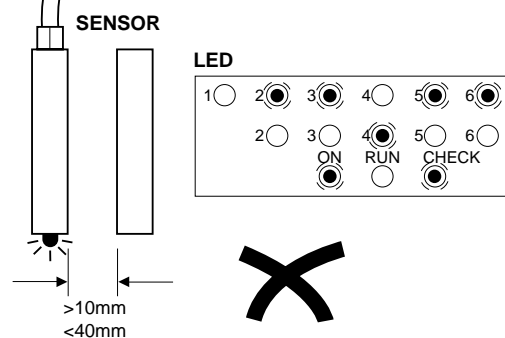
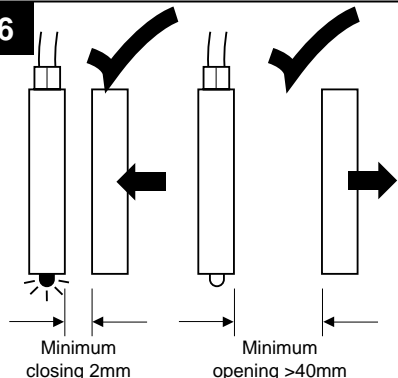


Connect the first guard sensor to input no. 1, sensor 2 to no. 2 and so on. Do not connect to de-selected inputs. Connect all 5 cores including the screen. The screened cable prevents interference and nuisance tripping.

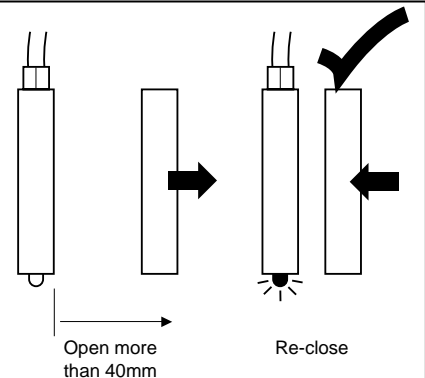
Under **NO** circumstances should the cable be connected to unscreened cable, fig: A.

Extensions to the cable may be achieved by termination in a suitable housing (metal or plastic) and using suitable screened cable. Continue the screen but **do not** earth to the box, fig: B.

6



FAILURE TO DO SO WILL RESULT IN THIS

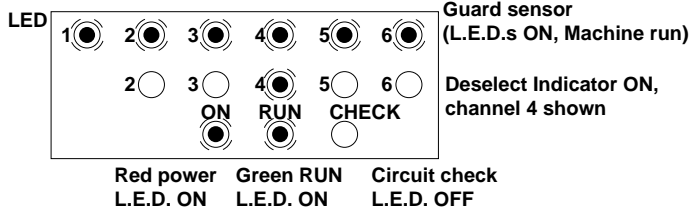


To correct the condition simply open the guard more than 40mm and re-close.

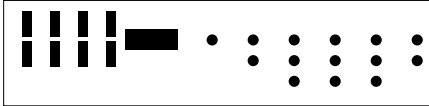
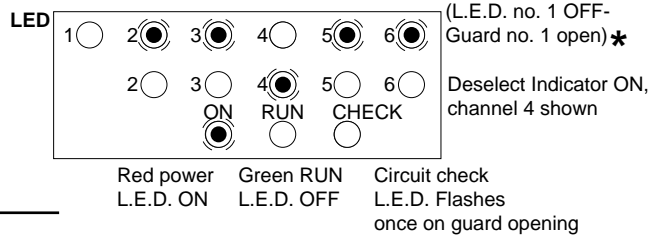
IMPORTANT: For correct operation and for both circuits to be checked, the guard must be opened more than 40mm.

7 IMPORTANT: All examples are shown with channel 4 deselected

Normal Operating Conditions



Machine Stop

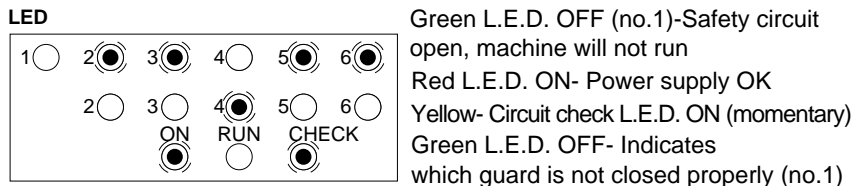


Remote mimic panel (Optional)

* NOTE: When guard door on channel 1 is opened, any deselected channels (i.e. channel 4) will also be checked and the L.E.D.s extinguished.

8a

Fault Finding and Check List

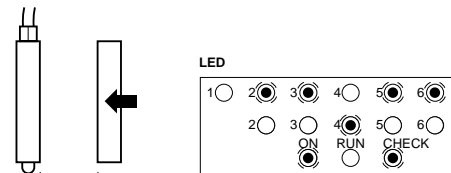


Door is not completely shut, to reset see fig: 6

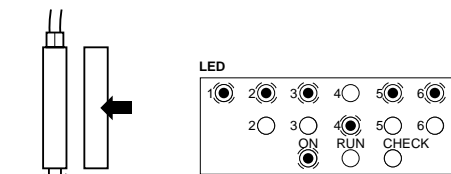
Note: The door must be opened more than 40mm to complete the Dual Circuit Safety Check. Failure to open more than 40mm results in incorrect function and the machine will not start.

Closing door

At 40mm distance the primary circuit activates the Yellow check L.E.D. (ON). The Guard sensor head L.E.D. is OFF.

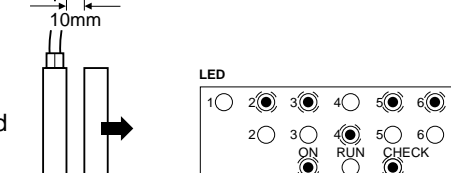


At 10mm the secondary circuit is operated and checks the primary circuit. If OK the guard sensor L.E.D. is ON. Machine will run.

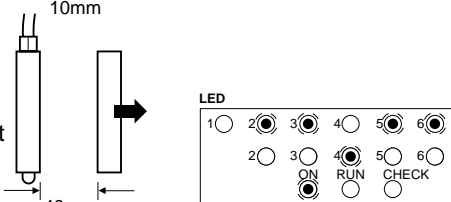


Opening door

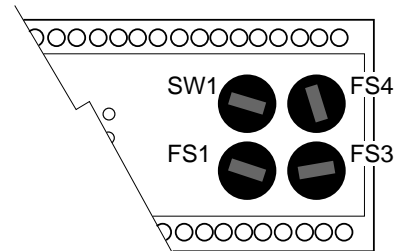
At 10mm of opening the secondary circuit is de-activated and is checked by the primary circuit. The guard sensor L.E.D. is OFF and the machine is stopped. The secondary circuit L.E.D. is ON.



At 40mm the primary circuit is de-activated. Both dual circuit checks are OFF and guard sensor L.E.D. is OFF



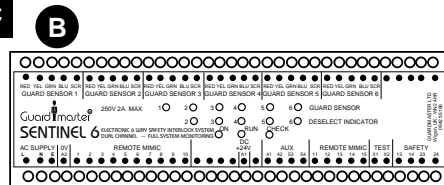
8b



All L.E.D.s OFF

- A. Check power supply using suitable test equipment
- B. If power supply is OK, check FS1 for 110/220V supply and replace if necessary. **Isolate power supply before removing fuse.**
- C. Check safety output Fuses FS3 & FS4.

8c

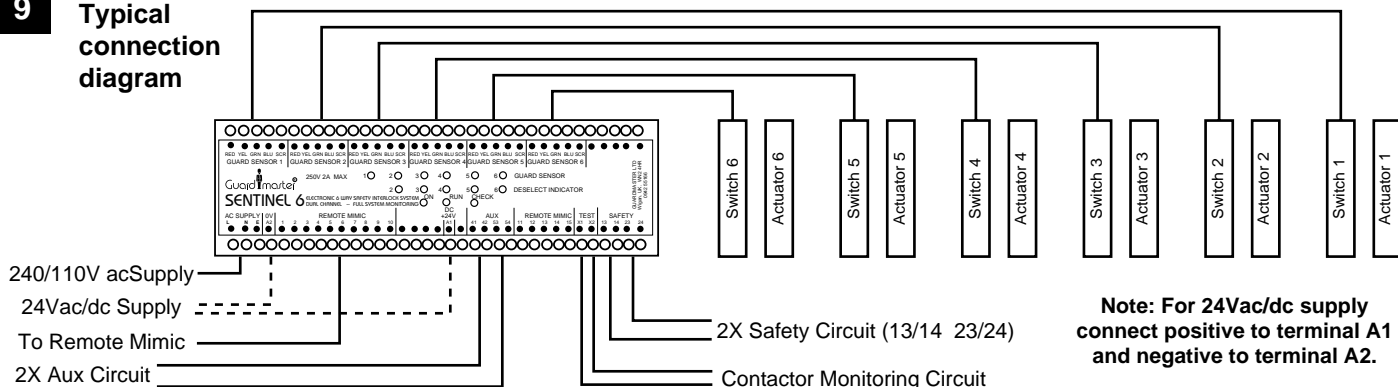


Intermittent Nuisance Tripping

- A. Check the unit is correctly earthed.
- B. Check the screen is correctly connected to the guard input terminals.
- C. Check the screen is maintained without interruption, directly between the Control Unit and each sensor head.

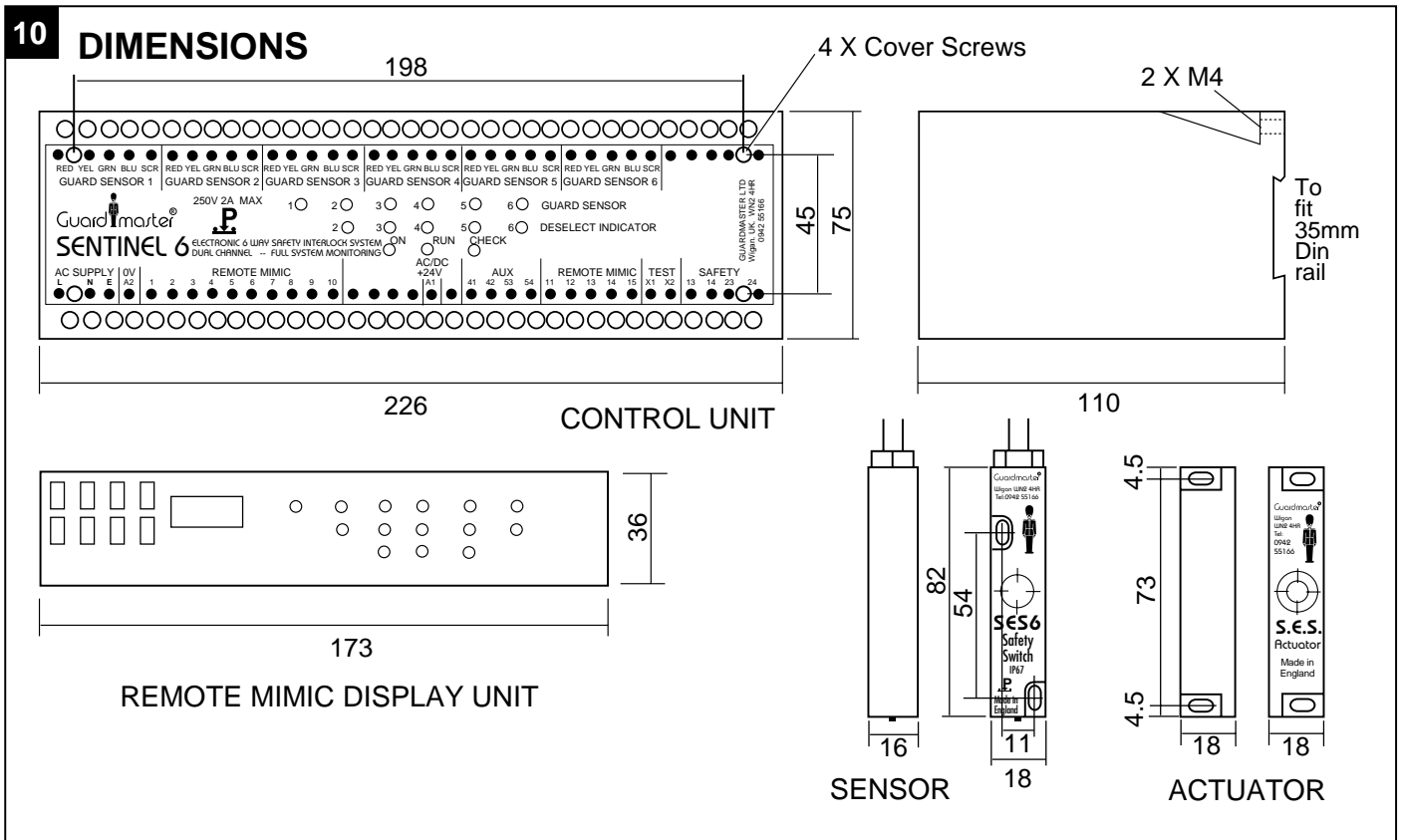
9

Typical connection diagram



Note: For 24Vac/dc supply connect positive to terminal A1 and negative to terminal A2.

10 DIMENSIONS



TECHNICAL SPECIFICATIONS

Control Unit

Supply Voltage: 240/110Vac, 24Vac/dc
 Safety Contacts: 2 x N/O volt free 250V 2A
 Auxiliary Contacts: 250Vac/dc 2A max
 1 x N/O, 1 x N/C
 Mounting: Any position
 Temperature rating: -10°C to +55°C
 Case: Polycarbonate
 Protection: IP 20
 Fixing: 35mm Din rail mounting
 or 2 x M4

Safety Sensors

Operating distance: Make 10mm - break 12mm
 Misalignment tolerance: Make ± 6 mm (12mm total)
 Break ± 10 mm (20mm total)
 Temperature rating: -10°C to +55°C
 Case: Moulded ABS (red)
 Protection: IP 67
 Cable: Pre wired 5m 4 core screened
 7/0.2mm(0.22mm²)
 Core/screen capacitance
 (nominal) 160pF per m.
 Fixing: M4 x 20 tamper resistant (supplied)
 No. of operations: $> 10 \times 10^6$

ORDERING INFORMATION

Control Unit : Pt. no. **15036**
 Sensor &
 Actuator: Pt. no. **15035**

NOTE: Sensor/Actuator will work with previous control unit models (ie. Sentinel 4 & 4+) but previous sensor/actuators pt. no. 15007 will **NOT** work with the Sentinel 6 control unit due to the modifications required for the latest EMC approval.



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