TIMEGUARD®

2 Wire Electronic Time Delay Switch

Model: DS1

2 Wire Slave Switch

Model: DSS

3 Wire Electronic Time Delay Switch

Model: DS2

Installation & Operating Instructions

1. General Information

These instructions should be read carefully and retained for further reference and maintenance.

2. Safety

- Before installation or maintenance, ensure the mains supply to the delay switch is switched off and the circuit supply fuses are removed or the circuit breaker turned off.
- It is recommended that a qualified electrician is consulted or used for the installation of this delay switch and install in accordance with the current IEE wiring and Building Regulations.
- Check that the total load on the circuit including when this delay switch is fitted does not exceed the rating of the circuit cable, fuse or circuit breaker.

3. Technical Specifications

- Mains Supply: 230V AC 50Hz
- Temperature Range: -10°C to 40°C
- Minimum Box Depth: 16mm
- Standby Consumption: Less than 2VA
- CE Compliant
- EC Directives: Conforms to latest directives

DS1

- Permissible Loads: Filament Lamps: 1.5kW
  Low Voltage: 20-200W,
  Resistive: 1.5kW
  LED: 10W

  This Product requires to be permanently charged which is achieved through the switched Live.
  As such some LED and CFL lamps may glow or flash whilst this product is in the 'OFF' state.
  This glow/flash can be eliminated by adding the Timeguard ZV900 Automatic Switch Load Controller to the circuit.

  The LED switching capabilities of this product can be increased up to 200W by the addition of the Timeguard ZV900 Automatic Switch Load Controller. The ZV900 is sold separately.

- Delay Time: 10 Sec to 10 min (Nominal) Adjustable by tamper proof potentiometer. (Normal times may vary by up to +33%)

- Terminations: Suitable for 1mm^2 and 1.5 mm^2 solid conductors and stranded equivalents
- Illuminated Push Button: Orange
- Dimensions (H x W x D): 84 x 84 x 38mm

Note: Not suitable for use with discharge lighting

DSS

- Terminations: Suitable for 1mm^2 and 1.5mm^2 solid conductors and stranded equivalents
- Multiple Slave Units: Up to 10 DSS units (Max) can be connected with one DS1
- Illuminated Push Button: Orange
- Dimensions (H x W x D): 84 x 84 x 38mm

DS2

- Permissible Loads: Filament Lamps: 1.5kW
  Low Voltage: 20-200W,
  Resistive: 1.5kW,
  Inductive 4A
  LED: 10W

The LED switching capabilities of these products can be increased up to 200W by the addition of the Timeguard ZV900 Automatic switch load controller – sold separately.

Heating: 1.5kW
Motor – 1hp

- Delay Time: 4 ranges selectable by tamper proof two gang switch: 3sec to 30sec (nominal)
  12sec to 2min.4sec (nominal)
  1min. 36sec. to 16min.
  31sec (nominal)
  12min. 26sec. to 2hrs.
  12min (nominal) All adjustable by tamper proof potentiometer (Normal times may vary by up to +25%)
- Terminations: Suitable for 1mm^2 and 1.5mm^2 solid conductors and stranded equivalents
- Illuminated Push Button: Orange
- Dimensions (H x W x D): 84 x 84 x 38mm

Note: Not suitable for use with discharge lighting

Several DS2's can be wired in parallel to control a single load but the DS2 cannot be used in conjunction with DSS's.

4. DS1 Instructions for Installation and use

- If you have a DS2 please refer to separate instructions on page 14.

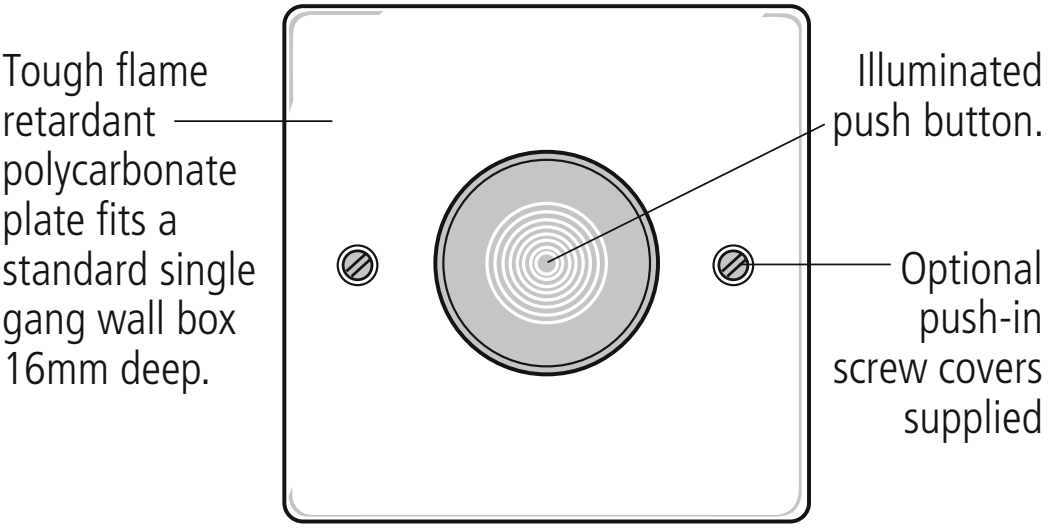

Fig 1 – Front of DS2

Installation (Replacement of Single ON/OFF Switches Only). FOR INSTALLATION OF DS1 & DSS's IN 2 WAY AND INTERMEDIATE SWITCHING CONFIGURATIONS – SEE SECTION 5 REPLACING 2 WAY AND INTERMEDIATE SWITCHES.

1. IMPORTANT Switch off the electricity at the fuse box by removing the relevant fuse or switching off the circuit breaker before proceeding with the installation.
2. Disconnect the existing light switch from the back box using a screwdriver to undo the plate fixing screws holding the old switch to the back box.

3. Remove the existing 230 V AC 50Hz mains supply cable and note or tag which cables represent live (COM or equivalent) and switched live (L1 or equivalent). Do not disturb any earthing wire connected to the back box terminal.
4. On the rear of the DS1 shown below in figure 2 you will notice the terminals "L (Live)" and "SL (Switched Live)", connect the 230V AC 50Hz mains supply to terminal "L (Live)" and the switched live feed cable to "SL (Switched Live"). Ensure the terminals are tight.

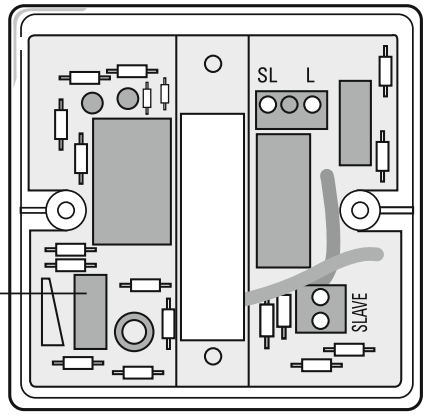

Fig 2 – Rear of DS1

5. Align the unit to the back box then insert and tighten the two plate fixing screws supplied with the two adjacent holes which will align with your back box.
6. Turn ON the 230V AC 50Hz mains supply and the light will now illuminate.
7. Press the push button on the DS1 and the lights under control should stay ON for a further 10 seconds and then switch off, during the time

the light is on the neon behind the push button will not illuminate.

8. Having established that the DS1 and any DSS's are working correctly disconnect the 230V AC 50Hz mains supply and remove the two fixing screws from the unit. The DS1 can then be pulled away from the wall to enable access to the delay time adjuster.
9. The delay time adjuster can then be set to the required level and the DS1 fixed to the wall using the two fixing screws. The push-in screw covers can now be fitted if required. Turn on the 230V AC 50Hz mains supply and press the push button to ensure the delay time is correct.

4a New Installation of a DS1 and up to 10 DSS's.

In a new installation the DS1 and DSS's can be wired to give control of a single lamp load by any of the switches. This is shown in fig 3.

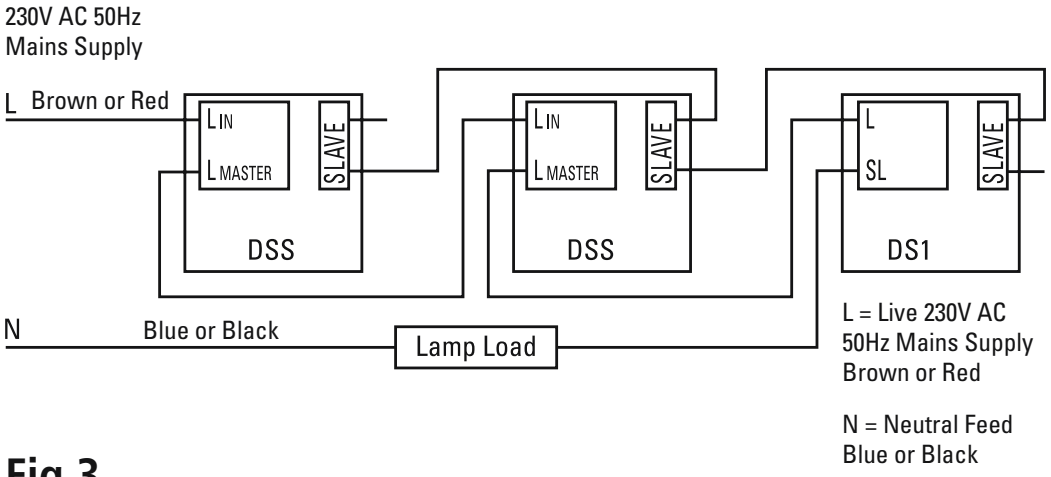

Fig 3

1. IMPORTANT Switch off the electricity at the fuse box by removing the relevant fuse or switching off the circuit breaker before proceeding with the installation.
2. Disconnect the existing light switch from the back box using a screwdriver to undo the two plate fixing screws holding the old switch to the back box.
3. Remove the existing 230 V AC 50hz mains supply cable and note or tag which cables represent live (COM or equivalent) and switched live (L1 or equivalent). Do not disturb any earthing wire connected to the back box terminal.
4. On the rear of the DSS shown in figure 4 you will notice terminals "L in (Live)" and "L master (Live feed to the next unit)", connect the 230V AC 50Hz mains supply to terminal "L in (Live)" and the live feed cable to the next unit "(L master)" making sure that the cables are sleeved appropriately and polarities checked.

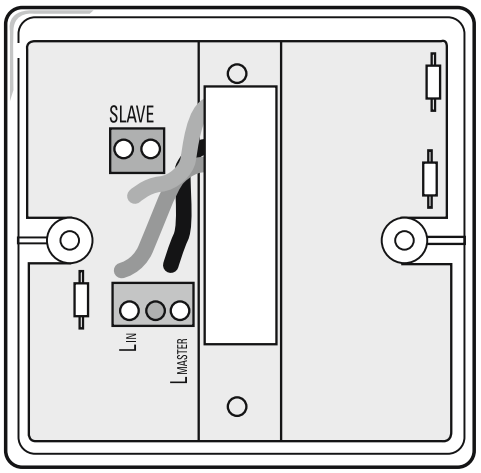

Fig 4 – Rear of DSS

5. If you wish to connect the DS1 at the point please refer to number 8 of this set of instructions.

   Note that a single DS1 can be used with up to 10 DSS units.

6. To attach an additional DSS unit connect the L master feed from the first DSS unit to L in of the second DSS unit making sure that the cables are sleeved appropriately and polarities checked. Insure that the previous switch has been removed before attempting this.
7. Connect the slave output of the first DSS unit to the slave input of the second DSS unit as shown on figure 3. To add additional units follow instruction numbers 6 and 7 back to back until the correct amount of slaves on the circuit has been achieved.
8. Connect the L master supply from the final DSS slave unit to terminal L of the DS1 unit and the slave supply from the output of the DSS unit to the slave input of the DS1 unit as shown in figure 3.
9. The terminal SL (Switched Live) will be the live feed to the luminaire, connect the supply cable between the live of the luminaire and the switched live of the DS1. Ensure all the terminals are tight.
10. Align the unit to the back box then insert and tighten the two plate fixing screws supplied the two adjacent holes which will align with your back box.

11. Turn ON the 230V AC 50Hz mains supply and the light will now illuminate.
12. Press the push button on the DS1 and the lights under control will stay ON for a further 10 seconds and then switch off, during the time the light is ON the neon behind the push button will not illuminate. If there are multiple DSS's installed repeat this test at each switch. Note that fluorescent lamps will not switch on immediately and the light intensity may be reduced initially.
13. Having established that the DS1 and any DSS's are working correctly disconnect the 230V AC 50Hz mains supply and remove the two fixing screws removed from the unit. The DS1 can then be pulled away from the wall to enable access to the delay time adjuster.
14. The delay time can then be set to the required level and the DS1 fixed to the wall using the two fixing screws. The push-in screw covers can now be fitted if required. Turn on the 230V AC 50Hz mains supply and press the push button to ensure the delay time is correct.

5. Replacing 2 way and intermediate switches.

- This involves wire identification and tracing. Switch installation should be left to a competent electrician who will be able to relate to the circuit diagrams shown in figures 5 to 12 to the practical installation.
- There are two main ways of achieving 2 way switching – Strapping Cable and Remote Live Access. The circuits for these are shown in figs 5 and 6. They are shown with a single intermediate switch giving 3 way switching. Further intermediate switches can be added.

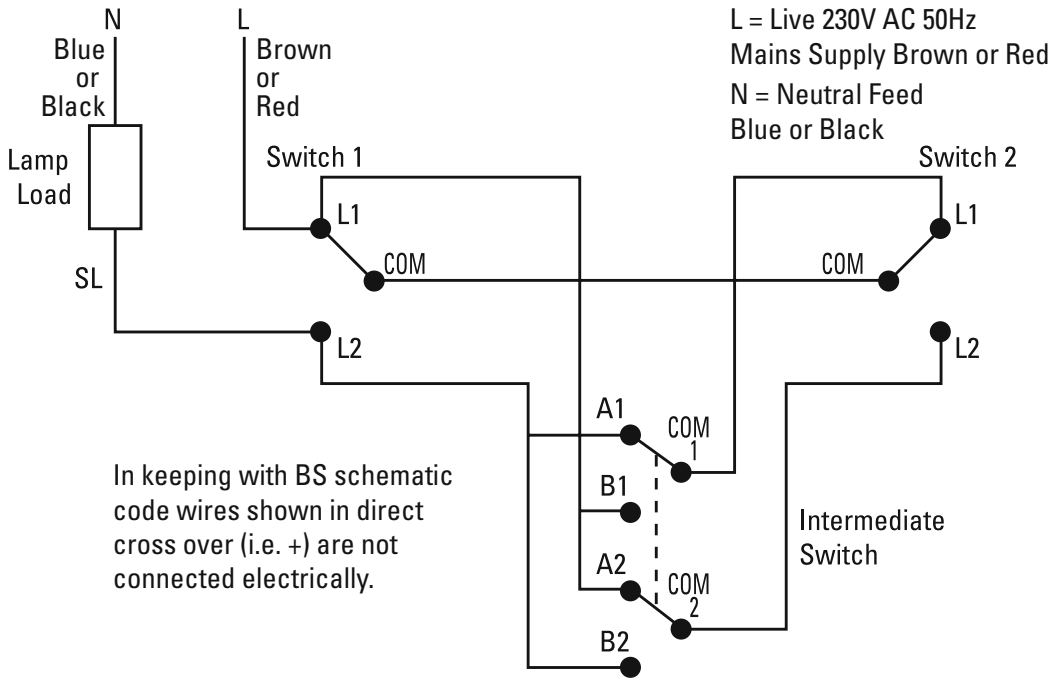

Fig 5 – Strapping Cable & One Intermediate Switch

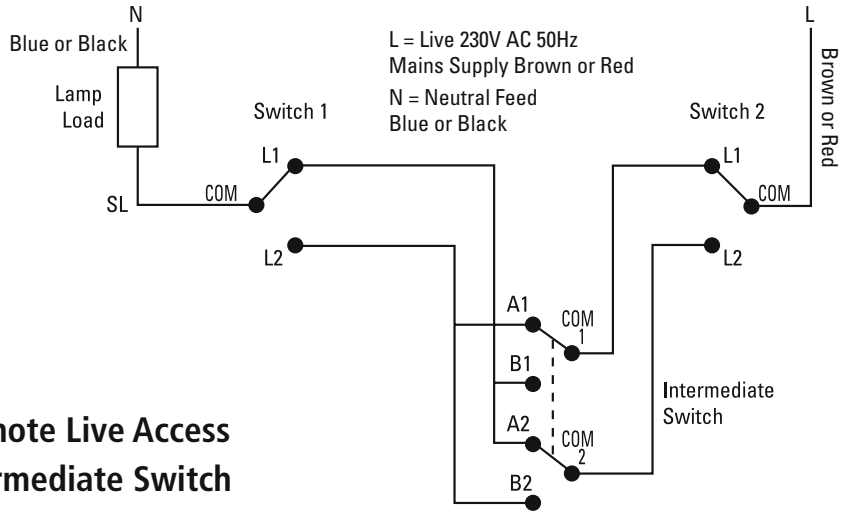

Fig 6 – Remote Live Access and One Intermediate Switch

- A DS1 and two DSS's can be used to replace these switches for both wiring systems to give time delayed momentary switching at all three switch locations. The DS1 should not be located at a former intermediate switch location.
- The circuits for both wiring systems with the replacement switches are shown in figs 7 and 8. No wiring alterations are required but to establish which wires are connected to which terminals the wires must be identified and traced. An in-line connector is required for the Strapping Cable System to provide continuity for the SL connection.

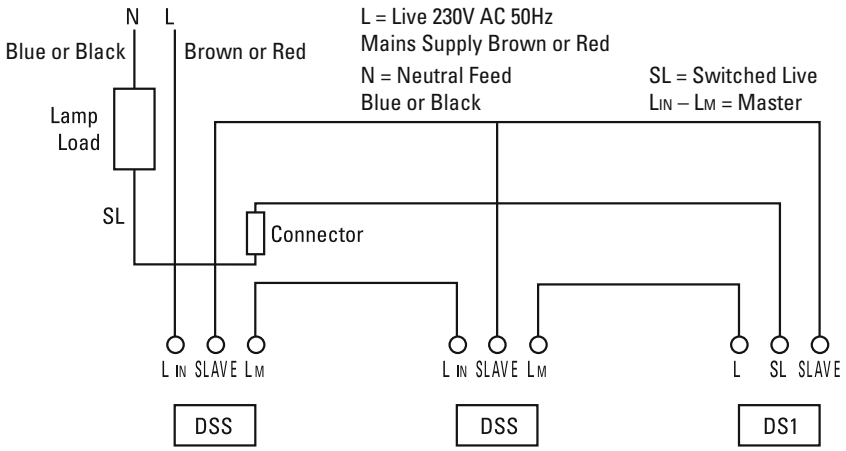

Fig 7 – Replacement Delay Switches fitted to circuit shown in fig. 5

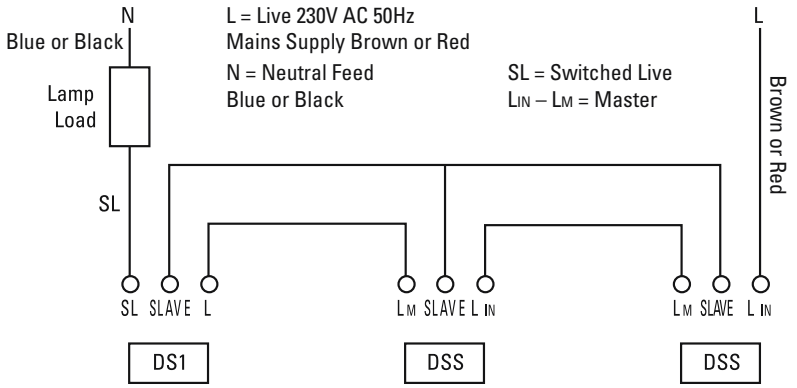

Fig 8 – Replacement Delay Switches fitted to circuit shown in fig. 6

- Further DSS's can be added to replace any further intermediate switches in the system. If there are no intermediate switches (2 way switching) the before and after connections for both systems are shown in figs 8 to 11. Note that an in-line connector is required for the Strapping Cable System to provide continuity for the SL connection.

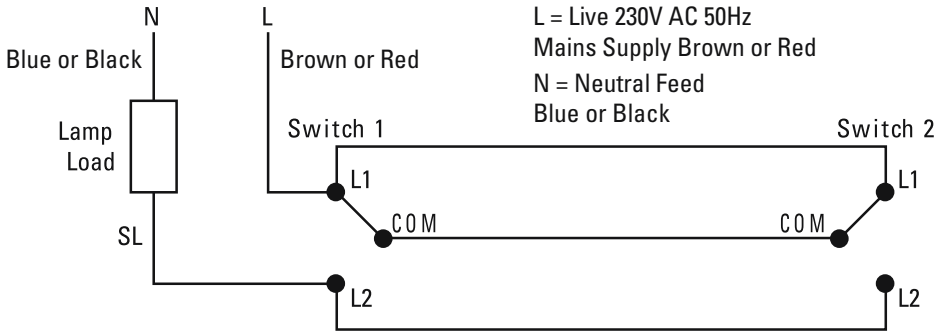

Fig 9 – 2 Way Switching – Strapping Cable

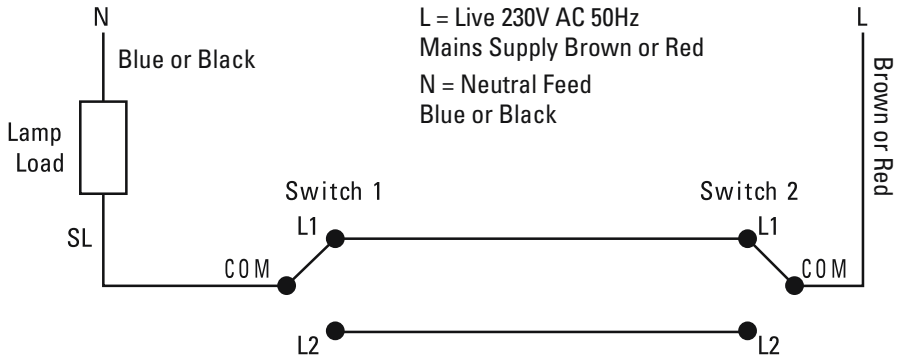

Fig 10 – 2 Way Switching – Remote Live Access

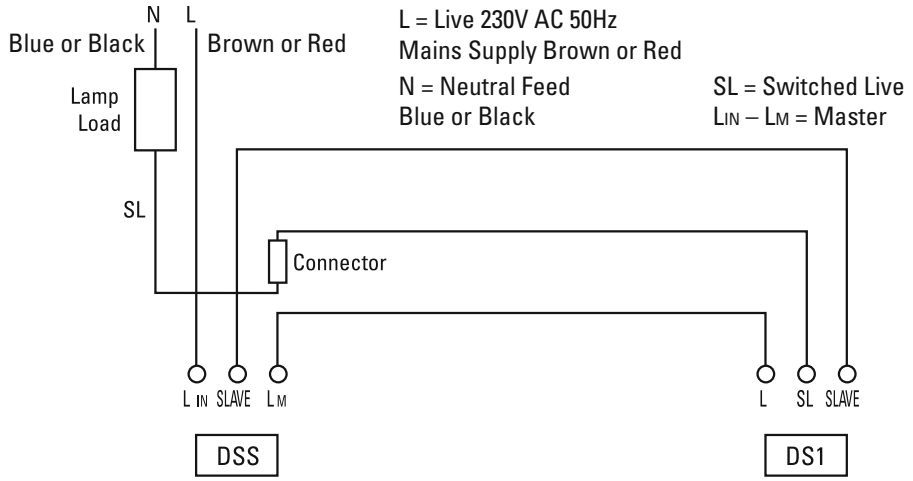

Fig 11 – Replacement Delay Switches fitted to circuit shown in fig. 9

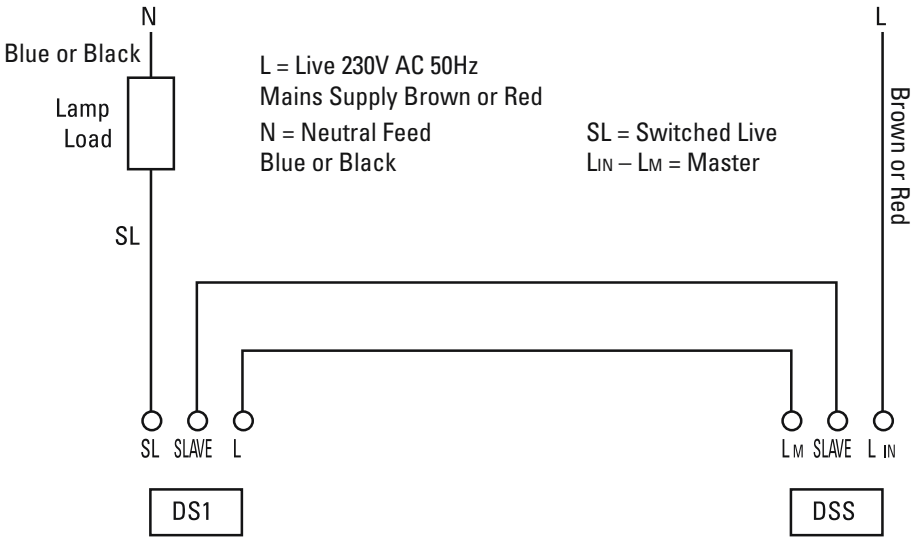

Fig 12 – Replacement Delay Switches fitted to circuit shown in fig. 10

6. DS2 Instructions for Installation and use

- If you have a DS1 working alone please refer to section 4 and with one or more DSS's please refer to section 4a.

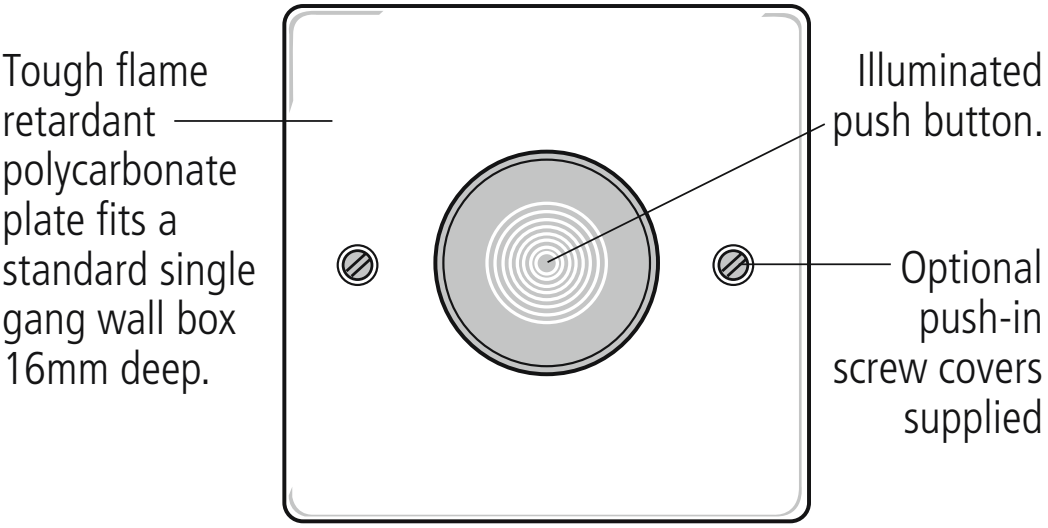

Fig 13 – Front of DS2

1. IMPORTANT Switch off the electricity at the fuse box by removing the relevant fuse or switching off the circuit breaker before proceeding with the installation.
2. Disconnect the existing light switch from the back box using a screwdriver to undo the threaded screws holding the old switch to the back box.
3. Remove the existing 230V AC 50Hz mains supply cable and note or tag which cables represent live (COM or equivalent), switched live (L1 or equivalent) and neutral (N). Do not disturb any earthing wire connected to the back box terminal. If two wires were connected to any terminal on the original switch they must be kept together and connected to the appropriate terminal on the DS2.

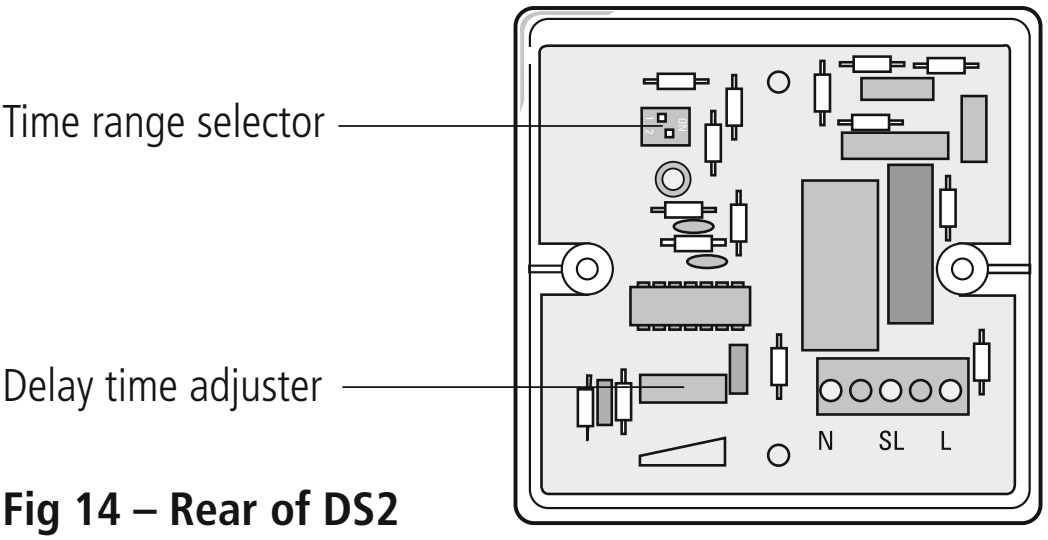

Fig 14 – Rear of DS2

4. On the rear of the DS2 shown below in figure 14 you will notice the terminals "L (Live)", "SL (Switched Live)" and "N (Neutral)", connect the 230V AC 50Hz mains supply to terminal "L (Live)" and the neutral feed of both the load and supply to terminal "N (Neutral)" making sure that the cables are sleeved appropriately and polarities checked.
5. The terminal labelled "SL (Switched Live)" will be the switched live output to the load, ensure that all three terminals are tight.

   Connect the three wires to the appropriate terminals.

   Mains Live – L
   Switch Live – SL (to load)
   Neutral – N

6. Make sure that the back box is earthed if it is metal.
7. If further DS2's are required to control the same load they must have all corresponding terminals wired in parallel with these on the first DS2.

8. Turn ON the 230V AC 50Hz mains supply and the light will now illuminate for approximately 3 seconds. During this time the neon behind the push button switches off.
9. Test the unit by pressing the push button and the light(s)/appliance(s) under control should come ON for approximately another 3 seconds. During this time the neon behind the push button switches off.
10. If the load under control is low energy or fluorescent lamps they will not switch ON immediately and the light intensity may be reduced initially.
11. Having established that the DS2 is working correctly the turn OFF the 230V AC 50Hz mains supply remove the two fixing screws removed from the unit. The DS2 can then be pulled away from the wall to enable access to the delay time adjuster and 2 gang range switch (see fig 14).
12. The delay time can then be set to the required level by setting the 2 gang range switch according to the table below and then adjusting the delay time adjuster.

2 Gang Range Switch Position	Adjuster Min.	Adjuster Max.
	3 sec.	30 sec.
	12 sec.	2 min.
	1 min. 30 sec.	16 min. 30 sec.
	12 min. 30 sec.	2hrs. 10 min.

All delay times accurate to ±25%. Black – switch lever.

13. The DS2 can then be fixed to the wall again using the two plate fixing screws supplied. The push in screw covers can now be fitted if required.
14. Turn on the 230V AC 50Hz mains supply and press the push button on the unit, the light(s)/appliance(s) under control will remain ON for the set delay time.

3 Year Guarantee

In the unlikely event of this product becoming faulty due to defective material or manufacture within 3 years of the date of purchase, please return it to your supplier in the first year with proof of purchase and it will be replaced free of charge. For the second and third years or any difficulty in the first year telephone the helpline on 020 8450 0515.

Note: A proof of purchase is required in all cases. For all eligible replacements (where agreed by Timeguard) the customer is responsible for all shipping/postage charges outside of the UK.
All shipping costs are to be paid in advance before a replacement is sent out.

If you experience problems, do not immediately return the unit to the store.
Telephone the Timeguard Customer Helpline;

HELPLINE

020 8450 0515

or email helpline@timeguard.com

Qualified Customer Support Co-ordinators will be on-line to assist in resolving your query.

TIMEGUARD®

A theben Group Company

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