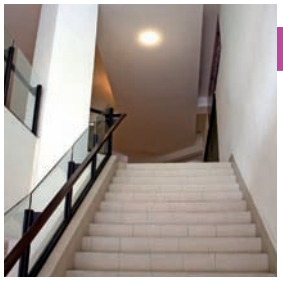
TIME LAG SWITCHES



These electronic time lag switches are designed to switch lights, or other loads ON, and then to switch them OFF automatically after the set time lag has elapsed. Their energy saving benefits make these switches ideal for use in stairwells, store rooms and in many other applications.

Functions

Activated by pressing the push button or touch pad.

The time lag settings can be adjusted by a spindle on the bottom edge of the product. The adjustment spindle is inside the waterproof housings for the exterior time lag switches.

The interior time lag switches can be used for multi-way switching using the slave push buttons.

Selecting the appropriate time lag switch

	2 wire versions **No neutral wire needed**		**3 wire versions** (live, neutral and switched line)			**Slave switches** (normally open push buttons)
Adjustable time lags:	1-10 minutes	1-120 minutes	2-20 minutes	1-120 minutes	12-120 minutes	
Exterior, 6 amp max. load			 **EXTLSW**			
Exterior, 16 amp max. load			 **EXTLSW 16A**			
Single push button	 **TLSW 10**		 **TLSW A20**		 **TLSW A120**	 **SS 1SL**
Single illuminated push button	 **TLSW 10 ILM**		 **TLSW A20 ILM**		 **TLSW A120 ILM**	
Double push button						 **SS 2SL**
Module for MK Grid Plus		 **GRTL MK**		 **GRTLA MK**		 **SSGS MK**
Module for MK Grid Plus, illuminated push button		 **GRTL MK ILM**		 **GRTLA MK ILM**		
Module for Crabtree grid		 **GRTL CB**		 **GRTLA CB**		 **SSGS CB**
Module for Crabtree grid, illuminated push button		 **GRTL CB ILM**		 **GRTLA CB ILM**		
Module for Eurodata plates		 **GRTL EU**		 **GRTLA EU**		 **SSGS EU**
Module for Eurodata plates, illuminated push button		 **GRTL EU ILM**		 **GRTLA EU ILM**		

Order code:
EXTLSW

Exterior time lag switches

EXTLSW

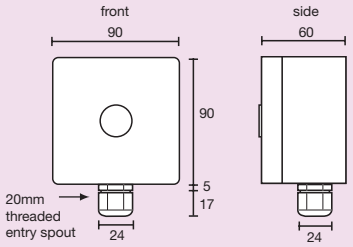
Ideal for energy saving control of exterior heaters and exterior lighting. Also suitable for damp areas indoors.

Pressing the button brings the connected load on. The load is then switched off automatically after the time lag has elapsed.

Illuminated push button for easy location in the dark.

Tough, hard wearing, IP66 rated polycarbonate moulding.

Dimensions in mm



Specification

The time lag is adjustable from 2 to 20 minutes.

Supply voltage:	230VAC
Weatherproof:	IP66 rating
Maximum load:	6 amps (1500W) of any type of heating load, or resistive, fluorescent or inductive lighting load
Wiring diagram:	See diagrams 49 and 50 below
Dimensions:	90 x 90 x 60mm

Order code:
EXTLSW 16A

EXTLSW 16A

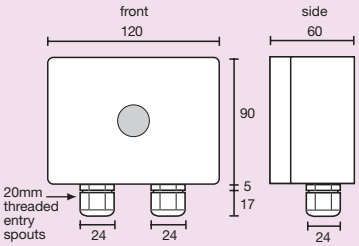
Ideal for energy saving control of exterior heaters and exterior lighting. Also suitable for damp areas indoors.

Pressing the touch sensitive area brings the connected load on. The load is then switched off automatically after the time lag has elapsed.

Illuminated touch area for easy location in the dark.

Tough, hard wearing, IP66 rated polycarbonate moulding.

Dimensions in mm



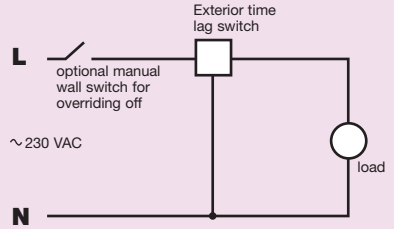
Specification

The time lag is adjustable from 2 to 20 minutes.

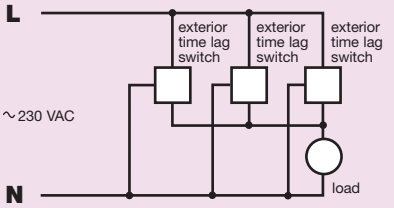
Supply voltage:	230VAC
Weatherproof:	IP66 rating
Maximum load:	16 amps (4000W) of any type of heating load, or resistive, fluorescent or inductive lighting load
Wiring diagram:	See diagrams 49 and 50 below
Dimensions:	120 x 90 x 60mm

Wiring diagrams

49. Exterior time lag switch



50. Several exterior time lag switches wired in parallel



Order code:
TLSW 10

Order code:
TLSW 10 ILM

Plated time lag switches - 2 wire versions

TLSW 10, TLSW 10 ILM
No neutral wire needed

Direct replacements for existing wall switches.

No neutral wire is needed. Hence they are very quick and inexpensive to install.

The TLSW 10 ILM has an illuminated push button for easy location in the dark.

Specification

The time lag is adjustable from 1 to 10 minutes.

Maximum load:	6 amps (1500W) of resistive, fluorescent or inductive lighting loads, or up to 1 amp (250W) of fans
Minimum load:	40W of resistive, or for wiring in parallel 40W per time lag switch in the circuit. Load capacitors (order code CAPLOAD) can be supplied to augment small or non-resistive loads
Wiring diagrams:	See page 45, diagrams 51-56
Dimensions:	86 x 86 x 12mm Wall box depth 16mm

Slave push buttons

These are normally open (push to make) push buttons. They can be used as slave switches to operate a DANLERS time lag switch, as shown in the appropriate wiring diagrams.

SS 1SL is a 1 gang version on a square plate.

SS 2SL is a 2 gang version, with 2 push buttons on a square plate.

These square plated versions both fit into plaster depth (16mm) wall boxes. Dimensions as below.

Also available as grid modules (for dimensions see below):

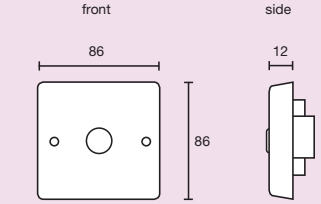
SSGS MK for MK Grid Plus. Minimum wall box depth 35mm.

SSGS CB for Crabtree grid. Minimum wall box depth 40mm.

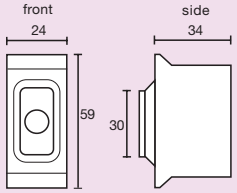
SSGS EU for Eurodata plates. Minimum wall box depth 35mm.

Dimensions in mm

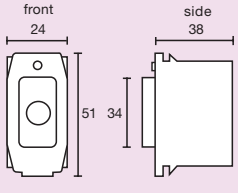
TLSW 10, TLSW 10 ILM, SS 1SL, SS 2SL



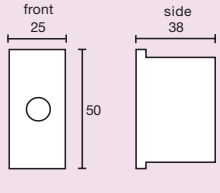
SSGS MK



SSGS CB

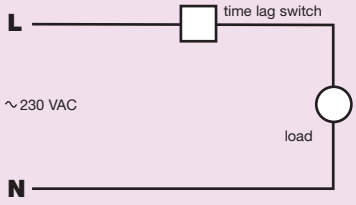


SSGS EU

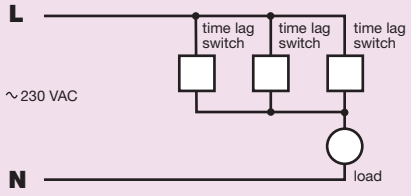


Wiring diagrams - Plated time lag switches - 2 wire versions

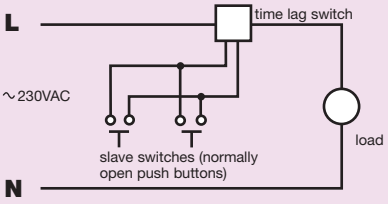
51. Single time lag switch with no neutral wire (e.g. TLSW 10)



52. Several TLSW 10 wired in parallel e.g. in a stairwell



53. TLSW 10 with slave push buttons



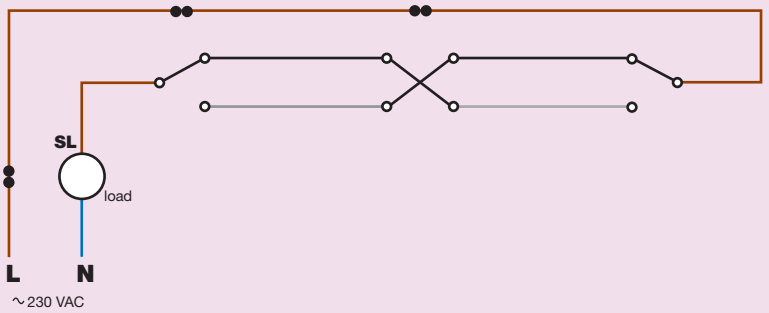
Circuit diagrams - Plated time lag switches - 2 wire versions into 2-way circuit

The circuit diagrams opposite illustrate a 2-way wiring configuration typical of those found on location. They also demonstrate how DANLERS Plated Time lag switches (2-wire versions) and DANLERS Slave switches can be incorporated.

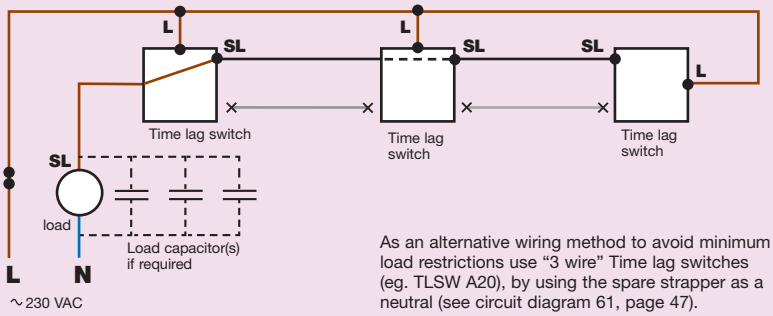
These circuit diagrams use the BS 7671:2001 harmonised colour coding with the triple-and-earth colours of brown, black and grey for the lines. For clarity all earth wires are omitted. They show the physical connections with • or •• as appropriate. They use brown and blue for the line and neutral feeds to the circuit. They use twin-brown and earth for the feed to the first 2-way switch. Any unused wires are terminated with the x symbol.

NOTE:
These circuits are only recommendations and the contractor remains responsible for their own work.

54. Existing 2-way circuit

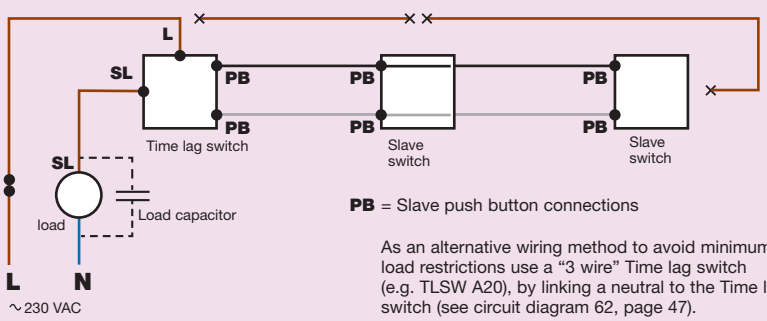


55. Time lag switches with no neutral wire, wired in parallel (minimum load restrictions apply).
To achieve minimum load restriction, supplement one load capacitor (CAPLOAD) per TLSW 10 (ILM) as shown below.



As an alternative wiring method to avoid minimum load restrictions use "3 wire" Time lag switches (eg. TLSW A20), by using the spare strapper as a neutral (see circuit diagram 61, page 47).

56. Time lag switch with no neutral wire, with slave push buttons (minimum load restrictions apply).
To achieve minimum load restriction, supplement one load capacitor (CAPLOAD) as shown below.



PB = Slave push button connections

As an alternative wiring method to avoid minimum load restrictions use a "3 wire" Time lag switch (e.g. TLSW A20), by linking a neutral to the Time lag switch (see circuit diagram 62, page 47).

Order codes:
TLSW A20
TLSW A120

Order codes:
TLSW A20 ILM
TLSW A120 ILM

Plated time lag switches - 3 wire versions

These 3 wire versions are economical switches which need neutral wires.

The TLSW A20 ILM and TLSW A120 ILM have illuminated push buttons for easy location in the dark.

Specification

The time lags are adjustable:

TLSW A20:	2 to 20 minutes
TLSW A20 ILM:	2 to 20 minutes
TLSW A120:	12 to 120 minutes
TLSW A120 ILM:	12 to 120 minutes

Loading:	Up to 6 amps (1500W) of resistive, fluorescent or inductive lighting loads, or up to 1 amp (250W) of fans. No minimum load
Wiring diagrams:	See page 47, diagrams 57-62
Dimensions:	86 x 86 x 12mm. Wall box depth 16mm

Slave push buttons

These are normally open (push to make) push buttons. They can be used as slave switches to operate a DANLERS Time lag switch, as shown in the appropriate wiring diagrams.

SS 1SL is a 1 gang version on a square plate.

SS 2SL is a 2 gang version, with 2 push buttons on a square plate.

These square plated versions both fit into plaster depth (16mm) wall boxes. Dimensions as below.

Also available as grid modules (for dimensions see below):

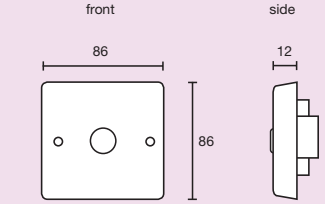
SSGS MK for MK Grid Plus. Minimum wall box depth 35mm.

SSGS CB for Crabtree grid. Minimum wall box depth 40mm.

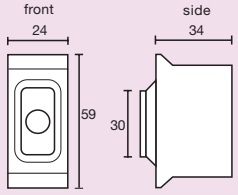
SSGS EU for Eurodata plates. Minimum wall box depth 35mm.

Dimensions in mm

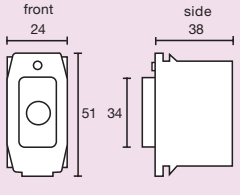
TLSW A20, TLSW A120, TLSW A20 ILM TLSW A120 ILM, SS 1SL, SS 2SL



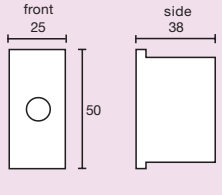
SSGS MK



SSGS CB

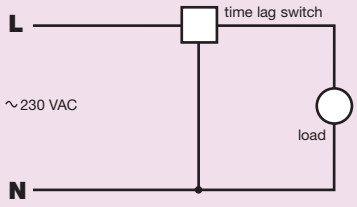


SSGS EU

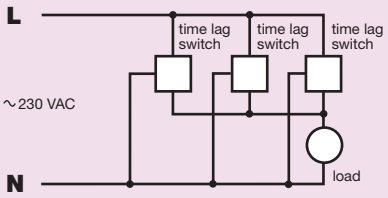


Wiring diagrams - plated time lag switches - 3 wire versions

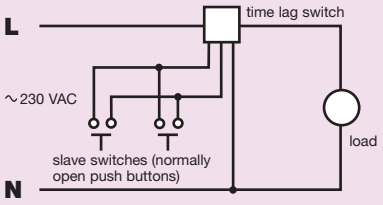
57. Single time lag switch with neutral wire (e.g. TLSW A20)



58. Several time lag switches with neutral wires, wired in parallel



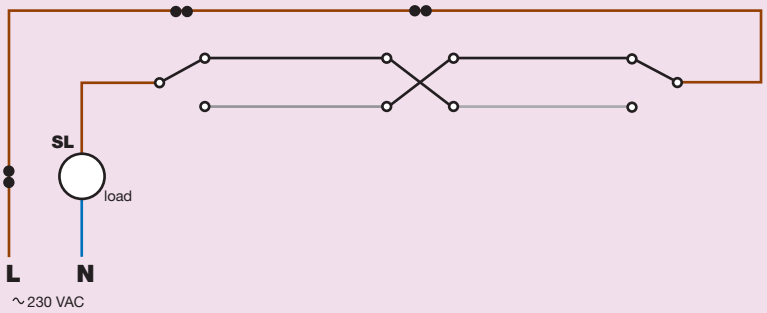
59. Time lag switch with neutral wire, with slave push buttons



Circuit diagrams - plated time lag switches - 3 wire versions into 2-way circuit

The circuit diagrams opposite illustrate a 2-way wiring configuration typical of those found on location. They also demonstrate how DANLERS Plated Time lag switches (3-wire versions) and DANLERS Slave switches can be incorporated.

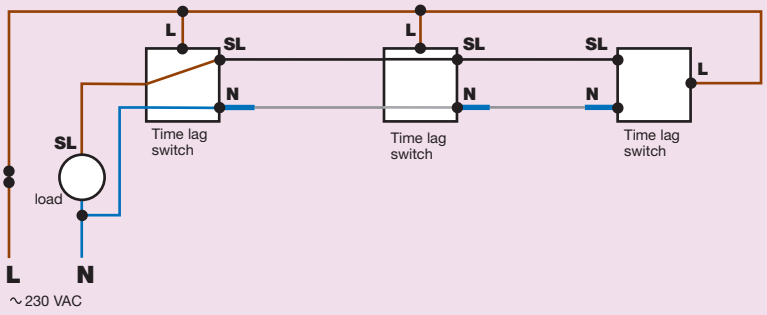
60. Existing 2-way circuit



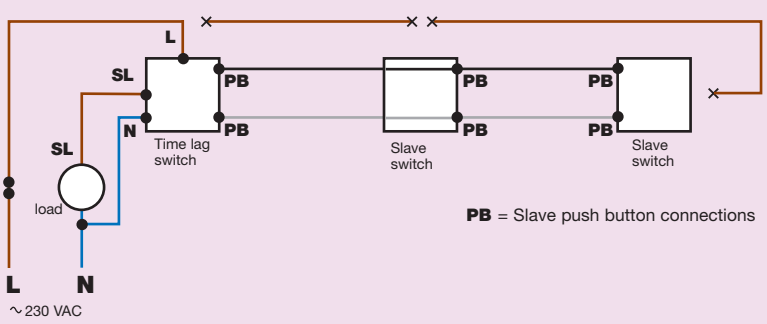
These circuit diagrams use the BS 7671:2001 harmonised colour coding with the triple-and-earth colours of brown, black and grey for the lines. For clarity all earth wires are omitted. They show the physical connections with • or •• as appropriate. They use brown and blue for the line and neutral feeds to the circuit. They use twin-brown and earth for the feed to the first 2-way switch. Any unused wires are terminated with the x symbol.

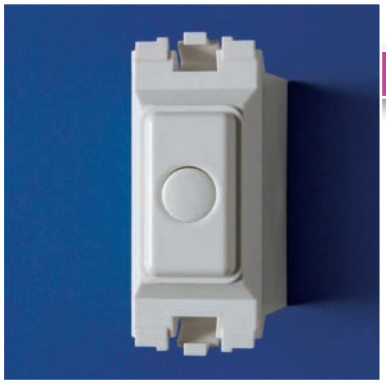
NOTE:
These circuits are only recommendations and the contractor remains responsible for their own work.

61. Time lag switches with neutral wire, wired in parallel (no minimum load)



62. Time lag switch with neutral wire, with slave push buttons (no minimum load)





For MK Grid Plus
Order code:
GRTL MK

Order code:
GRTL MK ILM

For Crabtree grid
Order code:
GRTL CB

Order code:
GRTL CB ILM

For Eurodata plates
Order code:
GRTL EU

Order code:
GRTL EU ILM

These time lag switches are in grid module formats.

Grid time lag switches - 2 wire versions

DANLERS manufacture three versions, one to suit the MK Grid Plus, one to suit the Crabtree grid and one to suit Eurodata plates. They may be placed in any position on the appropriate grid or plate.

These Grid time lag switches can be operated by slave push buttons, as listed on page 46 (see wiring diagrams 64 and 66 opposite).

The GRTL MK ILM, GRTL CB ILM and GRTL EU ILM have illuminated push buttons for easy location in the dark.

Specification

Time lag:	1 to 120 minutes (adjustable)
Maximum load:	6 amps (1500W) of resistive, fluorescent or inductive lighting loads, or up to 1 amp (250W) of fans
Minimum load:	2W of resistive. A load capacitor (order code CAPLOAD) can be supplied to augment small or non-resistive loads
Wiring diagrams:	See page 49, diagrams 63-66b
Dimensions:	Module for MK Grid Plus: 59 x 24 x 34mm. Minimum wall box depth 35mm
Dimensions:	Module for Crabtree grid: 51 x 24 x 38mm. Minimum wall box depth 40mm
Dimensions:	Module for Eurodata plates: 50 x 25 x 38mm. Minimum wall box depth 35mm

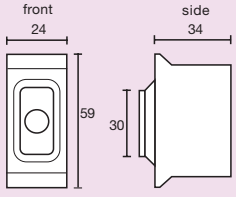
MK Grid Plus

Crabtree Grid

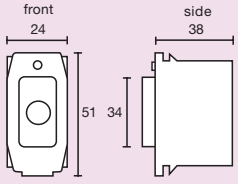
Eurodata plate

Dimensions in mm

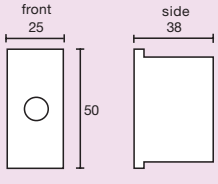
GRTL MK, GRTL MK ILM, SSGS MK
Requires wall box depth of 35mm



GRTL CB, GRTL CB ILM, SSGS CB
Requires wall box depth of 40mm

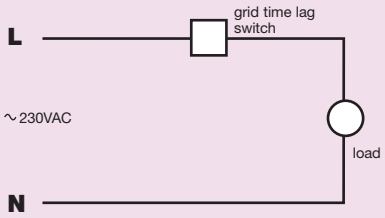


GRTL EU, GRTL EU ILM, SSGS EU
Requires wall box depth of 35mm

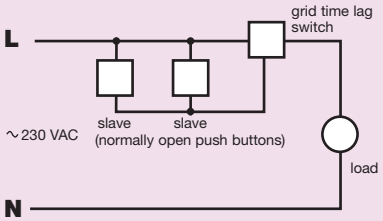


Wiring diagrams - Grid time lag switches - 2 wire versions

63. Single Grid time lag switch with no neutral wire (e.g. GRTL MK)



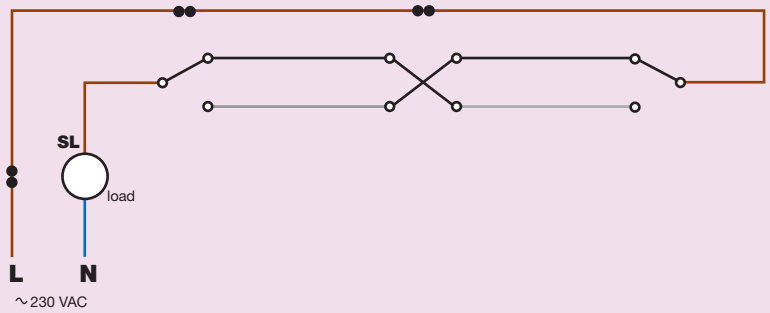
64. Single Grid time lag switch with no neutral wire, with slave push buttons



Circuit diagrams - Grid time lag switches - 2 wire versions into 2-way circuit

The circuit diagrams opposite illustrate a 2-way wiring configuration typical of those found on location. They also demonstrate how DANLERS Grid Time lag switches (2-wire versions) and DANLERS Slave switches can be incorporated.

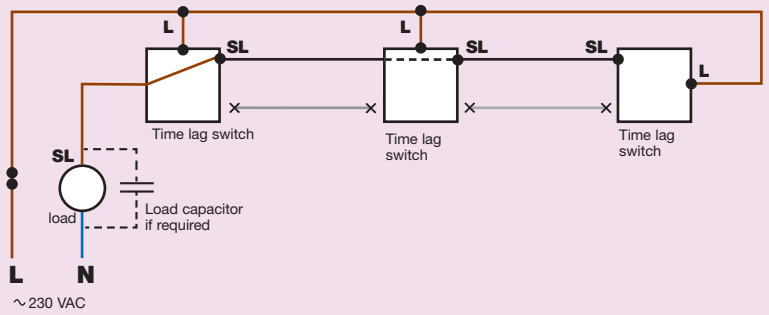
65. Existing 2-way circuit



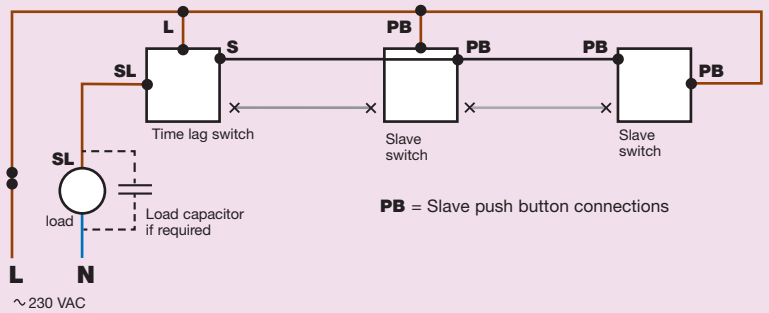
These circuit diagrams use the BS 7671:2001 harmonised colour coding with the triple-and-earth colours of brown, black and grey for the lines. For clarity all earth wires are omitted. They show the physical connections with • or •• as appropriate. They use brown and blue for the line and neutral feeds to the circuit. They use twin-brown and earth for the feed to the first 2-way switch. Any unused wires are terminated with the x symbol.

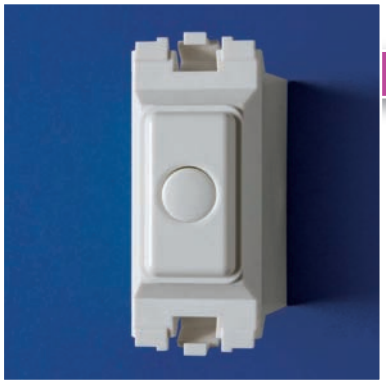
NOTE:
These circuits are only recommendations and the contractor remains responsible for their own work.

66a. Grid time lag switches with no neutral wire, wired in parallel
To achieve minimum load restriction, supplement one load capacitor (CAPLOAD) as shown below.



66b. Grid time lag switch with no neutral wire, with slave push buttons
To achieve minimum load restriction, supplement one load capacitor (CAPLOAD) as shown below.





For MK Grid Plus
Order code:
GRTLA MK

Order code:
GRTLA MK ILM

For Crabtree grid
Order code:
GRTLA CB

Order code:
GRTLA CB ILM

For Eurodata plates
Order code:
GRTLA EU

Order code:
GRTLA EU ILM

These time lag switches are in grid module formats.

Grid time lag switches - 3 wire versions

DANLERS manufacture three versions, one to suit the MK Grid Plus, one to suit the Crabtree grid and one to suit Eurodata plates. They may be placed in any position on the appropriate grid or plate. These grid time lag switches can be wired in parallel to operate the same load.

The GRTLA MK ILM, GRTLA CB ILM and GRTLA EU ILM have illuminated push buttons for easy location in the dark.

Specification

Time lag:	1 to 120 minutes (adjustable)
Loading:	6 amps (1500W) of resistive, fluorescent or inductive lighting loads, or up to 1 amp (250W) of fans. No minimum load
Wiring diagrams:	See page 51, diagrams 67-70
Dimensions:	Module for MK Grid Plus: 59 x 24 x 34mm. Minimum wall box depth 35mm
Dimensions:	Module for Crabtree grid: 51 x 24 x 38mm. Minimum wall box depth 40mm
Dimensions:	Module for Eurodata plates: 50 x 25 x 38mm. Minimum wall box depth 35mm

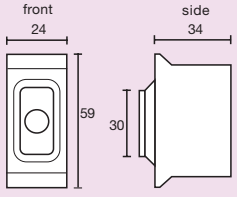
MK Grid Plus

Crabtree Grid

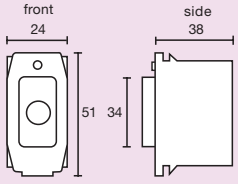
Eurodata plate

Dimensions in mm

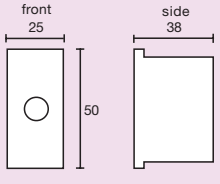
GRTLA MK, GRTLA MK ILM
Requires wall box depth of 35mm



GRTLA CB, GRTLA CB ILM
Requires wall box depth of 40mm

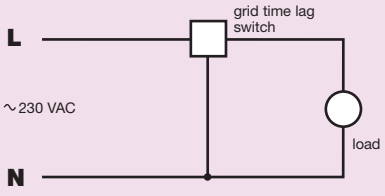


GRTLA EU, GRTLA EU ILM
Requires wall box depth of 35mm

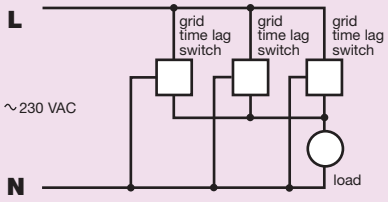


Wiring diagrams - Grid time lag switches - 3 wire versions

67. Single grid time lag switch with neutral wire (e.g. GRTLA MK)



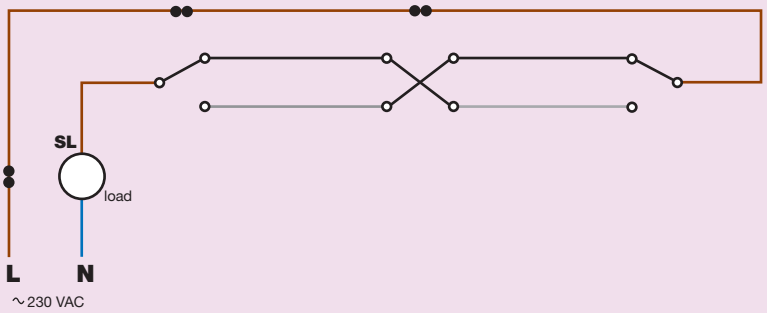
68. Several grid time lag switches with neutral wires, wired in parallel



Circuit diagrams - Grid time lag switches - 3 wire versions into 2-way circuit

The circuit diagrams opposite illustrate a 2-way wiring configuration typical of those found on location. They also demonstrate how DANLERS Grid Time lag switches (3-wire versions) and DANLERS Slave switches can be incorporated.

69. Existing 2-way circuit



These circuit diagrams use the BS 7671:2001 harmonised colour coding with the triple-and-earth colours of brown, black and grey for the lines. For clarity all earth wires are omitted. They show the physical connections with • or •• as appropriate. They use brown and blue for the line and neutral feeds to the circuit. They use twin-brown and earth for the feed to the first 2-way switch. Any unused wires are terminated with the x symbol.

NOTE:
These circuits are only recommendations and the contractor remains responsible for their own work.

70. Grid time lag switches with neutral wire, wired in parallel