The ZoneLite Type $\mathbf{T}$ is a 4 channel lighting control unit designed specifically for classroom applications. There are 15 individual pre-programmed solutions to choose covering virtually any requirement. Simply select the desired program and follow its specific installation instructions.


## How to use this booklet

STEP 1 Use the quick selection guide on pages $2 \& 3$ to choose the lighting layout that best suits your requirements. Your choice will direct you to a more detailed overview.

STEP 2 Review the detailed overview to ensure the chosen lighting layout fully meets your needs. If not other operational variations may exist within that layout. Check that you have all the parts necessary to complete the installation.

STEP 3 Fix the ZoneLite Unit in its final position and make the supply connections as per the instructions on page 36
STEP 4 Return to the detailed overview pages of your chosen lighting layout and plug in all luminaires, sensor heads and switch drops as shown. Now is a good time to select the appropriate position on the program selector switch.

STEP 5 If ZoneLite Units are required to share information with one another i.e. corridor hold, or if remote master switch inputs such as Emergency test, Last man out, All lights on are required then refer to page 34 \& 35

STEP 6 Power up the ZoneLite and test that the lighting is operating broadly as expected.
STEP 7 If there is any daylight linking or if any other changes are required to the operational parameters then refer to the separate setting up leaflet 22/069. (An fzl/rc - ZoneLite set up remote is required for this purpose)

STEP 8 Your installation should now be complete - if you are encountering any problems please refer to the trouble shooting guide on the back page.


Config. 1
See pages 4 \& 5


Config. 2
See pages 6 \& 7


Config. 4
See pages 10 \& 11


Config. 6
See pages 14 \& 15


Config. 3
See pages 8 \& 9


Config. 5
See pages 12 \& 13


Config. 7
See pages 16 \& $17{\underset{c}{2}}_{4}^{4}\left(\frac{1}{2}\right.$


## Config. 8

See pages 18 \& 19


Config. A
See pages 22 \& 23


Config. C
See pages 26 \& 27


## Config. E

See pages 30 \& 31


Config. 9
See pages 20 \& 21 ct


Config. B
See pages 24 \& 25


Config. D
See pages 28 \& 29


Config. F
See pages 32 \& 33


Note: Configuration F is reserved for user specific solutions that when not in use may be replaced by the default configuration below.


## Configuration 1 - detailed overview



## Symbol Key

The channel the luminaire needs to connect to.
 brightness (to indicate daylight linking in action)

fzh/pir
(S) Master occupancy
head

fzh/pir/ls
Master occupancy head + light sensing
fzh/pir/sl
(S) Slave occupancy
head

## Operation [default]

Operates ALL luminaires in the room - On, Off or Dim*.
(Those bound within red dotted line)
Switches the whiteboard light/s independently - On or Off.
(Those bound within blue dotted line)
3 stage offset daylight linking - Referencing from the window row, each subsequent row has a progressively brighter offset. (offset value is adjustable - default 10\%)

On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20min).

* Manually dimming luminaires via a switch temporarily disables daylight linking (until next switch On initiation). If not desired manual dimming can be disabled at set up - Setting up leaflet 22/069

| Table $1 \quad$ Other available operational variations | Action |
| :--- | :--- |
| Daylight linking not required anywhere. | Fit motion only sensor head fzh/pir instead of fzh/pir/ls |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the <br> ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the <br> room. | Add as many switch drops to the same point using fsy/a 'Y' connectors and <br> fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically <br> $5.66 \mathrm{~m} \times 7.42 \mathrm{~m}$ per head) | Add fzh/pir/sl slave heads (max 3) to the same port as the master sensor <br> head. Using fsy/a 'Y' connectors and fsl-- link leads. (fig. 1) |
| The window row is too long to rely on one light level reading to be reliable. it <br> needs to be sampled at both ends. | Add a special fzh/ls (light sensing only head) to port B. This will work with the <br> existing fzh/pir/ls to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but <br> should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn <br> on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a <br> mixture of both). | Each of the 4 channels output DALI by default however any or all channels <br> can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard <br> emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch <br> remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote <br> switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all <br> be adjusted using a setup remote control. See Setting up leaflet 22/069 |

## Connecting up the ZoneLite



Increase occupancy coverage by adding slave heads (max 3) in series with any master head.


Switch channel 2 - ON/OFF
Port W (Short pulses ON/OFF)
Use 1 way retractive (not supplied)

(Switch lead fsw--)

OPTION 1
Switch channel 1, 2, 3 and 4 - ON/OFF and DIM
Port X (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately)

Alternative to option 1 switch wiring.
(Short pulses ON/OFF, long pulses Dim up/down)
Use 3 pos. ctr. off retractive (not supplied)

## Configuration 2 - detailed overview



The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.


## Operation [default]

Operates all luminaires bound within red dotted line - On, Off,
Dim (up/down)*.
Switches the whiteboard light/s independently - On or Off.
(Those bound within blue dotted line)
Operates all luminaires bound within green dotted line - On, Off,
Dim (up/down)*.
Operates all luminaires bound within purple dotted line - On, Off, Dim (up/down)*.

All luminaires in the room daylight link at the same rate.
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20min).

## Symbol Key

The channel the luminaire needs to connect to.

brightness (to indicate daylight linking in action)

fzh/pir
Master occupancy head


## fzh/pir/ls

(S) Master occupancy head + light sensing

## fzh/pir/sl

Slave occupancy head

* Manually dimming luminaires via a switch temporarily disables daylight linking (until next switch On initiation). If not desired manual dimming can be disabled at set up - Setting up leaflet 22/069

| Table 1 Other available operational variations | Action |
| :--- | :--- |
| Daylight linking is not required on one or both of the back rows. | Use non dimming luminaires or don't wire the dimming pair to them. Suggest <br> to also disable manual dimming at the switches see Setting up leaflet 22/069 |
| Daylight linking not required anywhere. | Fit motion only sensor head fzh/pir instead of fzh/pir/ls |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the <br> ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the <br> room. | Add as many switch drops to the same point using fsy/a 'Y' connectors and <br> fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically <br> $5.66 m \times 7.42 m$ per head) | Add fzh/pir/sl slave heads (max 3) to the same port as the master sensor <br> head. Using fsy/a 'Y' connectors and fsl-- link leads. (fig. 1) |
| The window row is too long to rely on one light level reading to be reliable. it <br> needs to be sampled at both ends. | Add a special fzh/ls (light sensing only head) to port B. This will work with the <br> existing fzh/pir/ls to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but <br> should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn <br> on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a <br> mixture of both). | Each of the 4 channels output DALI by default however any or all channels <br> can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard <br> emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch <br> remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote <br> switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all <br> be adjusted using a setup remote control. See Setting up leaflet 22/069 |

## Connecting up the ZoneLite



Switch channel 2 - ON/OFF
Port W (Short pulses ON/OFF)
Use 1 way retractive (not supplied)

Switch channel 1 and 2 - ON/OFF and DIM
Port X (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately) Use 1 way retractive (not supplied)

Switch channel 3 - ON/OFF and DIM
Port Y (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately) Use 1 way retractive (not supplied)

Switch channel 4-ON/OFF and DIM
Port Z (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately)
Use 1 way retractive (not supplied)


OPTION 1

(Switch lead fsw--)

wiring option 2
OPTION 1


| Alternative to option 1 switch wiring. |  |
| :--- | :--- |
| (Short pulses ON/OFF, long pulses Dim up/down) <br> Use 3 pos. ctr. off retractive (not supplied) |  |

## Configuration 3 - detailed overview



The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.


Symbol Key
The channel the luminaire needs to connect to.

' $D$ ' denotes dimmable luminaire otherwise non-dimmable

Shading represents brightness (to indicate daylight linking in action)
(S) ${ }_{\text {master }}^{\text {tzh } / \text { po }}$

Master occupancy head

## fzh/pir/ls

Master occupancy head + light sensing

## fzh/pir/sl

(S) Slave occupancy head

## Operation of space 1 [default]

Operates all luminaires bound within red dotted line - On, Off or Dim (up/down)*

Switches the whiteboard light/s independently - On or Off.
(Those bound within blue dotted line)
2 stage offset daylight linking - Referencing from the window row, both back rows will have a brighter offset. (offset value is adjustable)

On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20 min ).

## Operation of space 2 [default]

Operates all luminaires bound within green dotted line - On, Off or $\operatorname{Dim}$ (up/down)

All luminaires in this space daylight link at the same rate
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20 min ).

* Manually dimming luminaires via a switch temporarily disables daylight linking (until next switch On initiation). If not desired manual dimming can be disabled at set up - Setting up leaflet 22/069

| Table $1 \quad$ Other available operational variations | Action |
| :--- | :--- |
| Daylight linking is not required in a space where it is shown OR is required in <br> a space where it is not shown. | Change the head to occupancy only fzh/pir (for no daylight linking) or <br> change the head to occupancy + light level fzh/pir/ls (for daylight linking) |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the <br> ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the <br> room. | Add as many switch drops to the same point using fsy/a 'Y' connectors and <br> fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically <br> $5.66 m \times 7.42 \mathrm{~m}$ per head) | Add fzh/pir/sl slave heads (max 3) to the same port as the master sensor <br> head. Using fsy/a 'Y' connectors and fsl-- link leads. (fig. 1) |
| The window row is too long to rely on one light level reading to be reliable. it <br> needs to be sampled at both ends. | Add a special fzh/ls (light sensing only head) to port B. This will work with the <br> existing fzh/pir/ls to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but <br> should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn <br> on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a <br> mixture of both). | Each of the 4 channels output DALI by default however any or all channels <br> can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard <br> emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch <br> remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote <br> switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all <br> be adjusted using a setup remote control. See Setting up leaflet 22/069 |




Switch channel 2 - ON/OFF
Port W (Short pulses ON/OFF)
Use 1 way retractive (not supplied)

Switch channel 1, 2, and 3-ON/OFF and DIM
Port X (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately)
Use 1 way retractive (not supplied)

Switch channel 4 - ON/OFF and DIM
Port Z (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately)
Use 1 way retractive (not supplied)
(Sensor lead fsl--)

fzh/pir/ls
Master occupancy head + light sensing


OPTION 1

(Switch lead fsw--)


The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.


## Symbol Key

The channel the luminaire needs to connect to.


Shading represents brightness (to indicate daylight linking in action)
(S) ${ }^{\text {thh/pir }}$ Master oc

## fzh/pir/ls

Master occupancy light sensing

## fzh/pir/sl

Slave occupancy head

## Operation of space 1 [default]

Operates all luminaires bound within purple dotted line - On, Off or $\operatorname{Dim}(u p / d o w n)^{*}$

Operates all luminaires bound within green dotted line - On, Off or $\operatorname{Dim}(u p / d o w n)^{*}$

Operates all luminaires bound within red dotted line - On, Off or Dim (up/down)*

Daylight linking - The window row will daylight link according to the natural light level detected.
$1 \leqslant$
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20min).

## Operation of space 2 [default]

Operates all luminaires bound within blue dotted line - On, Off or Dim (up/down)

All luminaires in this space daylight link at the same rate
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20min).

| Table $1 \quad$ Other available operational variations | Action |
| :--- | :--- |
| Daylight linking is not required in a space where it is shown OR is required in <br> a space where it is not shown. | Change the head to occupancy only fzh/pir (for no daylight linking) or <br> change the head to occupancy + light level fzh/pir/ls (for daylight linking) |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the <br> ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the <br> room. | Add as many switch drops to the same point using fsy/a 'Y' connectors and <br> fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically <br> $5.66 \mathrm{~m} \times 7.42 \mathrm{~m}$ per head) | Add fzh/pir/sl slave heads (max 3) to the same port as the master sensor <br> head. Using fsy/a ' Y ' connectors and fsl-- link leads. (fig. 1) |
| The window row is too long to rely on one light level reading to be reliable. it <br> needs to be sampled at both ends. | Add a special fzh/ls (light sensing only head) to port B. This will work with the <br> existing fzh/pir/ls to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but <br> should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn <br> on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a <br> mixture of both). | Each of the 4 channels output DALI by default however any or all channels <br> can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard <br> emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch <br> remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote <br> switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all <br> be adjusted using a setup remote control. See Setting up leaflet 22/069 |

## Connecting up the ZoneLite




Switch channel 1-ON/OFF and DIM
Port W (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately) Use 1 way retractive (not supplied)

Switch channel 3 - ON/OFF and DIM
Port X (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately) Use 1 way retractive (not supplied)

Switch channel 4 - ON/OFF and DIM
Port Y (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately) Use 1 way retractive (not supplied)

Switch channel 2 - ON/OFF and DIM
Port Z (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately) Use 1 way retractive (not supplied)

fzh/pir/ls Master occupancy head + light sensing
fzh/pir/ls
Master occupancy head + light sensing


OPTION 1


OPTION 1



## Configuration 5 - detailed overview

The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.

Symbol Key
The channel the luminaire
needs to connect to.

Shading represents brightness (to indicate daylight linking in action)
(S) $\underset{\text { Master oc }}{\text { (Sir }}$

Master occupancy head

## fzh/pir/ls

Master occupancy head + light sensing

## fzh/pir/sl

 Slave occupancy head
## Operation of space 1 [default]

Operates all luminaires bound within red dotted line - On, Off or Dim (up/down)*

Operates all luminaires bound within green dotted line - On, Off or $\operatorname{Dim}(u p / d o w n)^{*}$

Operates all luminaires bound within purple dotted line - On, Off or $\operatorname{Dim}$ (up/down)*

All luminaires in this space daylight link at the same rate
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20min).

## Operation of space 2 [default]

Operates all luminaires bound within blue dotted line - On, Off or Dim (up/down)

All luminaires in this space daylight link at the same rate
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20 min ).

* Manually dimming luminaires via a switch temporarily disables daylight linking (until next switch On initiation). If not desired manual dimming can be disabled at set up - Setting up leaflet 22/069

| Table 1 Other available operational variations | Action |
| :---: | :---: |
| Daylight linking is not required in a space where it is shown OR is required in a space where it is not shown. | Change the head to occupancy only fzh/pir (for no daylight linking) or change the head to occupancy + light level fzh/pir/ls (for daylight linking) |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the room. | Add as many switch drops to the same point using fsy/a ' $Y$ ' connectors and fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically $5.66 \mathrm{~m} \times 7.42 \mathrm{~m}$ per head) | Add fzh/pir/sl slave heads (max 3 ) to the same port as the master sensor head. Using fsy/a ' Y ' connectors and fsl-- link leads. (fig. 1) |
| The window row is too long to rely on one light level reading to be reliable. it needs to be sampled at both ends. | Add a special fzh/ls (light sensing only head) to port B . This will work with the existing fzh/pir/s to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a mixture of both). | Each of the 4 channels output DALI by default however any or all channels can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all be adjusted using a setup remote control. See Setting up leaflet 22/069 |

## Connecting up the ZoneLite



fzh/pir/ls Master occupancy head + light sensing

Switch channel 1-ON/OFF and DIM
Port W (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately) Use 1 way retractive (not supplied)

Switch channel 3 - ON/OFF and DIM
Port X (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately) Use 1 way retractive (not supplied)

Switch channel 4 - ON/OFF and DIM
Port Y (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately) Use 1 way retractive (not supplied)

Switch channel 2 - ON/OFF and DIM
Port Z (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately) Use 1 way retractive (not supplied)


OPTION 1


See alternative wiring option 2

OPTION 1



## Configuration 6 - detailed overview



The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.


Shading represents brightness (to indicate daylight linking in action)
(S) $\begin{aligned} & \text { fzh/pir } \\ & \text { Master oc }\end{aligned}$

Master
Master
occupancy head

## fzh/pir/ls

Master occupancy head + light sensing
(5) fzh/pir/sl
(S) Slave occupancy
head

## Operation of space 1 [default]

Operates all luminaires bound within red dotted line - On, Off or Dim (up/down)*

Switches the whiteboard luminaires independently - On or Off.
(Those bound within blue dotted line)
All luminaires in this space daylight link at the same rate

On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20 min ).

* Manually dimming luminaires via a switch temporarily disables
daylight linking (until next switch On initiation). If not desired
manual dimming can be disabled at set up - Setting up leaflet 22/069


## Operation of space 2 [default]

Operates all luminaires bound within green dotted line - On, Off or $\operatorname{Dim}$ (up/down)

All luminaires in this space daylight link at the same rate
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20 min ).

## Operation of space 3 [default]

Operates all luminaires bound within purple dotted line - On, Off or $\operatorname{Dim}(u p / d o w n)$

All luminaires in this space daylight link at the same rate
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20min).

| Table 1 Other available operational variations | Action |
| :---: | :---: |
| Daylight linking is not required on one or both of the back rows. | Use non dimming luminaires or don't wire the dimming pair to them. Suggest to also disable manual dimming at the switches see Setting up leaflet 22/069 |
| Daylight linking is not required in a space where it is shown OR is required in a space where it is not shown. | Change the head to occupancy only fzh/pir (for no daylight linking) or change the head to occupancy + light level fzh/pir/ls (for daylight linking) |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the room. | Add as many switch drops to the same point using fsy/a ' $Y$ ' connectors and fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically $5.66 \mathrm{~m} \times 7.42 \mathrm{~m}$ per head) | Add fzh/pir/sl slave heads (max 3) to the same port as the master sensor head. Using fsy/a ' $Y$ ' connectors and fsl-- link leads. (fig. 1) |
| The window row is too long to rely on one light level reading to be reliable. it needs to be sampled at both ends. | Add a special fzh/ls (light sensing only head) to port B. This will work with the existing fzh/pir/ls to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a mixture of both). | Each of the 4 channels output DALI by default however any or all channels can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all be adjusted using a setup remote control. See Setting up leaflet 22/069 |



Increase occupancy coverage by adding slave heads (max 3) in series with any master head.

Fig. 1

fzh/pir/ls Master occupancy head + light sensing
fzh/pir/ls
Master occupancy head + light sensing


Switch channel 1-ON/OFF
Port W (Short pulses ON/OFF)
Use 1 way retractive (not supplied)

Switch channel 1 and 3 - ON/OFF and DIM
Port X (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately)
Use 1 way retractive (not supplied)

Switch channel 2 - ON/OFF and DIM
Port Y (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately) Use 1 way retractive (not supplied)

Switch channel 4 - ON/OFF and DIM
Port Z (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately)
Use 1 way retractive (not supplied)


OPTION 1


OPTION 1

(Switch lead fsw--)
 wiring option 2


The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.


## Symbol Key

The channel the luminaire needs to connect to.

' $D$ ' denotes
dimmable luminaire otherwise non-dimmable

Shading represents brightness (to indicate daylight linking in action)

Light sensing
fzh/pir/ls
Master occupancy解

## fzh/pir/sl

Slave occupancy head

## Operation [default]

Operates all luminaires bound within red dotted line - On, Off or
Dim (up/down)*
Switches the whiteboard luminaires independently - On or Off.
(Those bound within blue dotted line)
Both window rows daylight link independently of one another

On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20 min ).

* Manually dimming luminaires via a switch temporarily disables daylight linking (until next switch On initiation). If not desired manual dimming can be disabled at set up - Setting up leaflet 22/069

| Table $1 \quad$ Other available operational variations | Action |
| :--- | :--- |
| Daylight linking is not required on one or both window rows. | Use non dimming luminaires or don't wire the dimming pair to them. Suggest <br> to also disable manual dimming at the switches see Setting up leaflet 22/069 |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the <br> ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the <br> room. | Add as many switch drops to the same point using fsy/a 'Y' connectors and <br> fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically <br> $5.66 \mathrm{~m} \times 7.42 \mathrm{~m}$ per head) | Add fzh/pir/sl slave heads (max 3) to the same port as the master sensor <br> head. Using fsy/a ' Y ' connectors and fsl-- link leads. (fig. 1) |
| The window row is too long to rely on one light level reading to be reliable. it <br> needs to be sampled at both ends. | Add a special fzh/ls (light sensing only head) to port B. This will work with the <br> existing fzh/pir/ls to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but <br> should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn <br> on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a <br> mixture of both). | Each of the 4 channels output DALI by default however any or all channels <br> can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard <br> emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch <br> remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote <br> switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all <br> be adjusted using a setup remote control. See Setting up leaflet 22/069 |



Switch channel 2 - ON/OFF
Port W (Short pulses ON/OFF)
Use 1 way retractive (not supplied)


OPTION 1
Switch channel 1, 2, 3 and 4 - ON/OFF and DIM
Port X (Short pulses ON/OFF, long pulses DIM UP/DOWN alternately)


## Configuration 8 - detailed overview



The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.


Symbol Key
The channel the luminaire needs to connect to.


Shading represents brightness (to indicate daylight linking in action)
(S) ${ }_{\text {mash/pir }}^{\text {Mac }}$

Master occupancy head

## fzh/pir/ls

Master occupancy head + light sensing

## fzh/pir/sl

Slave occupancy
head head

## Operation of space 1 [default]

Operates all luminaires bound within red dotted line - On, Off or Dim (up/down)*

2 stage offset daylight linking - Referencing from the window row, both back rows will have a brighter offset. (offset value is adjustable)

On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20min).

* Manually dimming luminaires via a switch temporarily disables
daylight linking (until next switch On initiation). If not desired
manual dimming can be disabled at set up - Setting up leaflet 22/069


## Operation of space 2 [default]

Operates all luminaires bound within green dotted line - On, Off or Dim (up/down)

All luminaires in this space daylight link at the same rate
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20 min ).

## Operation of space 3 [default]

Operates all luminaires bound within blue dotted line - On, Off or Dim (up/down)

All luminaires in this space daylight link at the same rate

On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20 min ).

| Table $1 \quad$ Other available operational variations | Action |
| :--- | :--- |
| Daylight linking is not required on one or both of the back rows. | Use non dimming luminaires or don't wire the dimming pair to them. Suggest <br> to also disable manual dimming at the switches see Setting up leaflet 22/069 |
| Daylight linking is not required in a space where it is shown OR is required in <br> a space where it is not shown. | Change the head to occupancy only fzh/pir (for no daylight linking) or <br> change the head to occupancy + light level fzh/pir/ls (for daylight linking) |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the <br> ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the <br> room. | Add as many switch drops to the same point using fsy/a 'Y' connectors and <br> fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically <br> $5.66 m \times 7.42 m$ per head) | Add fzh/pir/sl slave heads (max 3) to the same port as the master sensor <br> head. Using fsy/a 'Y' connectors and fsl-- link leads. (fig. 1) |
| The window row is too long to rely on one light level reading to be reliable. it <br> needs to be sampled at both ends. | Add a special fzh/ls (light sensing only head) to port B. This will work with the <br> existing fzh/pir/ls to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but <br> should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn <br> on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a <br> mixture of both). | Each of the 4 channels output DALI by default however any or all channels <br> can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard <br> emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch <br> remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote <br> switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all <br> be adjusted using a setup remote control. See Setting up leaflet 22/069 |



fzh/pir/ls Master occupancy head + light sensing
(Sensor lead fsl--)


Master occupancy head + light sensing


Switch channel 1 and 3 - ON/OFF and DIM
Port X (Short pulses ON/OFF, long pulses DIM UP/DOWN alternatively) Use 1 way retractive (not supplied)

Switch channel 2 - ON/OFF and DIM
Port Y (Short pulses ON/OFF, long pulses DIM UP/DOWN alternatively)
Use 1 way retractive (not supplied)

Switch channel 4 - ON/OFF and DIM
Port Z (Short pulses ON/OFF, long pulses DIM UP/DOWN alternatively)
(Short pulses ON/OFF, long pulses
Use 1 way retractive (not supplied)



See alternative wiring option 2

Alternative to option 1 switch wiring.
(Short pulses ON/OFF, long pulses Dim up/down) Use 3 pos. ctr. off retractive (not supplied)


The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.


## Symbol Key

The channel the luminaire needs to connect to.


Shading represents brightness (to indicate daylight linking in action)


Master occupancy
head head

fzh/pir/ls
Master occupancy head + light sensing
fzh/pir/sl
(S) Slave occupancy headfss04l_I_ Scene setting panel

## Scene Setting

Using the Flex Connectors scene setting panel(not supplied) with configuration 9 provides a scene setting solution that uniquely offers the user two standard modes of operation. Simply toggle between either mode at any time.

## Operation [default]

Operates all luminaires - On, Off, Dim (up/down) or recall/set up scenes 1-4 or toggle/dim channels 1-4.

On vacation of the space any luminaires left on will switch off
after an adjustable time-out period (default 20 min ).

Note: Please refer to FSS04 INSTRUCTION (leaflet number 22/094) for operational instructions on using the scene setting panel

| Table $1 \quad$ Other available operational variations | Action |
| :--- | :--- |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the <br> ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the <br> room. | With the exception of the Mode Select switch, additional switches can be <br> added in parallel using fsy/a 'Y' connectors and fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically <br> $5.66 \mathrm{~m} \times 7.42 \mathrm{~m}$ per head) | Add fzh/pir/sl slave heads (max 3) to the same port as the master sensor <br> head. Using fsy/a ' Y ' connectors and fsl-- link leads. (fig. 1) |
| Lights should not only switch off automatically when the room is vacated but <br> should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn <br> on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a <br> mixture of both). | Each of the 4 channels output DALI by default however any or all channels <br> can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote <br> switch/s - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch <br> remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote <br> switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Time out, and more can all be adjusted <br> using a setup remote control. See Setting up leaflet 22/069 |

Increase occupancy coverage by adding slave heads (max 3) in series with any master head.


The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.


## Symbol Key

The channel the luminaire needs to connect to.


Shading represents
brightness (to indicate daylight linking in action)

fzh/pir
Master occupancy head

## fzh/pir/ls



Master occupancy head + light sensing

## fzh/pir/sl

Slave occupancy head

## Operation [default]

Operates all luminaires bound within red dotted line - On, Off, Dim (up/down)*.

Switches the whiteboard light/s independently - On or Off.
(Those bound within blue dotted line)
3 stage offset daylight linking - referencing from the window row, each subsequent row has a progressively brighter offset. (offset value is adjustable - default 10\%)

On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20min).

* Manually dimming luminaires via a switch temporarily disables daylight linking (until next switch On initiation). If not desired manual dimming can be disabled at set up - Setting up leaflet 22/069

| Table $1 \quad$ Other available operational variations | Action |
| :--- | :--- |
| Daylight linking is not required on one or both of the back rows. | Use non dimming luminaires or don't wire the dimming pair to them. Suggest <br> to also disable manual dimming at the switches see Setting up leaflet 22/069 |
| Daylight linking is not required anywhere. | Fit motion only sensor head fzh/pir instead of fzh/pir/ls |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the <br> ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the <br> room. | Add as many switch drops to the same point using fsy/a 'Y' connectors and <br> fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically <br> $5.66 m ~ x ~ 7.42 m ~ p e r ~ h e a d) ~$ | Add fzh/pir/sl slave heads (max 3) to the same port as the master sensor <br> head. Using fsy/a 'Y' connectors and fsl-- link leads. (fig. 1) |
| The window row is too long to rely on one light level reading to be reliable. it <br> needs to be sampled at both ends. | Add a special fzh/ls (light sensing only head) to port B. This will work with the <br> existing fzh/pir/ls to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but <br> should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn <br> on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a <br> mixture of both). | Each of the 4 channels output DALI by default however any or all channels <br> can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard <br> emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch <br> remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote <br> switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all <br> be adjusted using a setup remote control. See Setting up leaflet 22/069 |

## Connecting up the ZoneLite



Switch channel 2 - ON/OFF
Port W (Short pulses ON/OFF)
Use 1 way retractive (not supplied)


OPTION 1
Switch channel 1, 2, 3 and 4 - ON/OFF and DIM
Port X (Short pulses ON/OFF, long pulses DIM UP/DOWN alternatively)

Alternative to option 1 switch wiring.
(Short pulses ON/OFF, long pulses Dim up/down)
Use 3 pos. ctr. off retractive (not supplied)

The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.


## Operation [default]

Operates all luminaires bound within red dotted line - On, Off, Dim (up/down)*.

Switches the whiteboard light/s independently - On or Off.
(Those bound within blue dotted line)
2 stage offset daylight linking - referencing from the window row, both back rows will have a brighter offset. (offset value is adjustable - default 10\%)

On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20 min ).

## Symbol Key

The channel the luminaire needs to connect to.


Shading represents
brightness (to indicate daylight linking in action)

fzh/pir
Master occupancy head

## fzh/pir/ls



Master occupancy head + light sensing

## fzh/pir/sl

Slave occupancy head

* Manually dimming luminaires via a switch temporarily disables daylight linking (until next switch On initiation). If not desired manual dimming can be disabled at set up - Setting up leaflet 22/069

| Table 1 | Other available operational variations |
| :--- | :--- |
| Daylight linking is not required on one or both of the back rows. | Action |
| Daylight linking is not required anywhere. | Use non dimming luminaires or don't wire the dimming pair to them. Suggest <br> to also disable manual dimming at the switches see Setting up leaflet 22/069 |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the <br> ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the <br> room. | Add as many switch drops to the same point using fsy/a 'Y' connectors and <br> fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically <br> $5.66 m \times 7.42 m$ per head) | Add fzh/pir/sl slave heads (max 3) to the same port as the master sensor <br> head. Using fsy/a 'Y' connectors and fsl-- link leads. (fig. 1) |
| The window row is too long to rely on one light level reading to be reliable. it <br> needs to be sampled at both ends. | Add a special fzh/ls (light sensing only head) to port B. This will work with the <br> existing fzh/pir/ls to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but <br> should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn <br> on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a <br> mixture of both). | Each of the 4 channels output DALI by default however any or all channels <br> can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard <br> emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch <br> remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote <br> switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all <br> be adjusted using a setup remote control. See Setting up leaflet 22/069 |

## Connecting up the ZoneLite



Increase occupancy coverage by adding slave heads (max 3) in series with any master head.

fzh/pir/sl




Switch channel 2 and 4 - ON/OFF
Port W (Short pulses ON/OFF)
Use 1 way retractive (not supplied)

(Switch lead fsw--)

OPTION 1
Switch channel 1, 2, 3 and 4 - ON/OFF and DIM
Port X (Short pulses ON/OFF, long pulses DIM UP/DOWN alternatively)


| Alternative to option 1 switch wiring. |
| :--- | :--- |
| (Short pulses ON/OFF, long pulses Dim up/down) |
| Use 3 pos. ctr. off retractive (not supplied) |

The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.


## Symbol Key

The channel the luminaire needs to connect to.


Shading represents brightness (to indicate daylight linking in action)
(S) $\mathrm{fzh} /$ pir
S) Master occupancy head
(S)

## fzh/pir/ls

Master occupancy head + light sensing

## fzh/pir/sl

(S) Slave occupancy head

## Operation of space 1 [default]

Operates all luminaires bound within red dotted line - On, Off or Dim (up/down)*

Switches the whiteboard luminaires independently - On or Off (those bound within blue dotted line)

All luminaires in this space daylight link at the same rate

On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20 min ).

## Operation of space 2 [default]

Operates all luminaires bound within purple dotted line - On, Off or $\operatorname{Dim}$ (up/down)*

Switches the whiteboard luminaires independently - On or Off. (Those bound within the green dotted line)

All luminaires in this space daylight link at the same rate

On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20min).

* Manually dimming luminaires via a switch temporarily disables daylight linking (until next switch On initiation). If not desired manual dimming can be disabled at set up - Setting up leaflet 22/069

| Table 1 Other available operational variations | Action |
| :--- | :--- |
| Daylight linking is not required on one or both of the back rows. | Use non dimming luminaires or don't wire the dimming pair to them. Suggest <br> to also disable manual dimming at the switches see Setting up leaflet 22/069 |
| Daylight linking is not required anywhere. | Fit motion only sensor head fzh/pir instead of fzh/pir/ls |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the <br> ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the <br> room. | Add as many switch drops to the same point using fsy/a 'Y' connectors and <br> fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically <br> $5.66 m ~ x ~ 7.42 m ~ p e r ~ h e a d) ~$ | Add fzh/pir/sl slave heads (max 3) to the same port as the master sensor <br> head. Using fsy/a 'Y' connectors and fsl-- link leads. (fig. 1) |
| The window row is too long to rely on one light level reading to be reliable. it <br> needs to be sampled at both ends. | Add a special fzh/ls (light sensing only head) to port B. This will work with the <br> existing fzh/pir/ls to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but <br> should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn <br> on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a <br> mixture of both). | Each of the 4 channels output DALI by default however any or all channels <br> can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard <br> emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch <br> remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote <br> switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all <br> be adjusted using a setup remote control. See Setting up leaflet 22/069 |

## Connecting up the ZoneLite



Switch channel 2 - ON/OFF
Port W (Short pulses ON/OFF)
Use 1 way retractive (not supplied)


OPTION 1
Switch channel 1 and 2 - ON/OFF and DIM
Port X (Short pulses ON/OFF, long pulses DIM UP/DOWN alternatively)
Use 1 way retractive (not supplied)

Switch channel 4 - ON/OFF
Port Y (Short pulses ON/OFF)
Use 1 way retractive (not supplied)


OPTION 1
Switch channel 3 and 4 - ON/OFF and DIM
Port Z (Short pulses ON/OFF, long pulses DIM UP/DOWN alternatively)
Use 1 way retractive (not supplied)


The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.


## Symbol Key

The channel the luminaire needs to connect to.

' $D$ ' denotes
dimmable luminaire otherwise non-dimmable

Shading represents brightness (to indicate daylight linking in action)


Master occupancy head
fzh/pir/ls
Master occupancy head + light sensing

## fzh/pir/sl

Slave occupancy head

Operation [default]
Operates all luminaires bound within red dotted line - On, Off or
Dim (up/down)*
Switches the whiteboard luminaires (those bound within blue dotted line) independently On or Off
Note that this is only possible when the main lights are on.
4 stage offset daylight linking - referencing from the window row, each subsequent row has a progressively brighter offset. (offset value is adjustable - default $10 \%$ )

On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20min).

* Manually dimming luminaires via a switch temporarily disables daylight linking (until next switch On initiation). If not desired manual dimming can be disabled at set up - Setting up leaflet 22/069

| Table 1 | Other available operational variations |
| :--- | :--- |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the <br> ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the <br> room. | Add as many switch drops to the same point using fsy/a 'Y' connectors and <br> fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically <br> $5.66 \mathrm{~m} \times 7.42 \mathrm{~m}$ per head) | Add fzh/pir/sl slave heads (max 3) to the same port as the master sensor <br> head. Using fsy/a 'Y' connectors and fsl-- link leads. (fig. 1) |
| The window row is too long to rely on one light level reading to be reliable. it <br> needs to be sampled at both ends. | Add a special fzh/ls (light sensing only head) to port B. This will work with the <br> existing fzh/pir/ls to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but <br> should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn <br> on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a <br> mixture of both). | Each of the 4 channels output DALI by default however any or all channels <br> can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard <br> emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch <br> remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote <br> switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all <br> be adjusted using a setup remote control. See Setting up leaflet 22/069 |

## Connecting up the ZoneLite

Increase occupancy coverage by adding slave heads (max 3) in series with any master head.


Important: Special luminaire wiring is required for this configuration. Regardless of which channel, whiteboard luminaires must get their live supply from the switch live (pin 4) and all non-whiteboard luminaires from a permanent live supply (pin 1 or 2)

Where the ZoneLite unit has insufficient outlets use double extender leads to create more outlets.



(Luminaire lead)

The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.


## Operation [default]

Operates all luminaires bound within red dotted line - On, Off, $\operatorname{Dim}(u p / d o w n)^{*}$.

Switches the whiteboard light/s independently - On, Off, Dim (up/down)*. (Those bound within blue dotted line)

2 stage offset daylight linking - referencing from the window row, both back rows will have a brighter offset. (offset value is adjustable - default 10\%)
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20min).

## Symbol Key

The channel the luminaire needs to connect to.


Shading represents
brightness (to indicate daylight linking in action)

fzh/pir
Master occupancy head

## fzh/pir/ls



Master occupancy head + light sensing

## fzh/pir/sl

Slave occupancy head

* Manually dimming luminaires via a switch temporarily disables daylight linking (until next switch On initiation). If not desired manual dimming can be disabled at set up - Setting up leaflet 22/069

| Table 1 Other available operational variations | Action |
| :---: | :---: |
| Daylight linking is not required on one or both of the back rows. | Use non dimming luminaires or don't wire the dimming pair to them. Suggest to also disable manual dimming at the switches see Setting up leaflet 22/069 |
| Daylight linking is not required anywhere. | Fit motion only sensor head fzh/pir instead of fzh/pir/ls |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the room. | Add as many switch drops to the same point using fsy/a ' $Y$ ' connectors and fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically $5.66 \mathrm{~m} \times 7.42 \mathrm{~m}$ per head) | Add fzh/pir/sl slave heads (max 3) to the same port as the master sensor head. Using fsy/a ' $Y$ ' connectors and fsl-- link leads. (fig. 1) |
| The window row is too long to rely on one light level reading to be reliable. it needs to be sampled at both ends. | Add a special fzh/ls (light sensing only head) to port B. This will work with the existing fzh/pir/ls to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a mixture of both). | Each of the 4 channels output DALI by default however any or all channels can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all be adjusted using a setup remote control. See Setting up leaflet 22/069 |

## Connecting up the ZoneLite



Increase occupancy coverage by adding slave heads (max 3) in series with any master head.


OPTION 1




Switch channel 1 and 2 - ON/OFF and DIM
(Short pulses ON/OFF, long pulses DIM UP/DOWN alternatively) Use 1 way retractive (not supplied) Usel way retive (nots

Switch channel 3 and 4 - ON/OFF and DIM
Port X (Short pulses ON/OFF, long pulses DIM UP/DOWN alternatively) Use 1 way retractive (not supplied)


See alternative wiring option 2

OPTION 1


The scenario below and connection instructions opposite are intended to show a typical installation for this configuration. As the precise requirements of any real installation may vary, use table 1 below to help identify adaptions that may be possible and if so how they can be accommodated.

## IMPORTANT: Configuration $F$ is usually reserved for customized user specific configurations. On some occasions when not required for this purpose, the default configuration below may be installed instead.



## Operation of space 1 [default]

Operates all luminaires bound within red dotted line - On, Off or Dim (up/down)*

All luminaires in this space daylight link at the same rate
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20min).

## Operation of space 2 [default]

Operates all luminaires bound within blue dotted line - On, Off or Dim (up/down)*

All luminaires in this space daylight link at the same rate
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20 min ).


All luminaires in this space daylight at the same rate
Space 2


Symbol Key
The channel the luminaire needs to connect to.


Shading represents brightness (to indicate daylight linking in action)
(S) $\begin{aligned} & \text { fzh/pir } \\ & \text { Master oc }\end{aligned}$ Master occupancy head
(5) $\mathrm{fzh} / \mathrm{pir} / \mathrm{ls}$
(S) Master occupancy head + light sensing
fizh/pir/sl
(S) Slave occupancy head

Operation of space 3 [default]
Operates all luminaires bound within green dotted line - On, Off or $\operatorname{Dim}(u p / d o w n)^{*}$

All luminaires in this space daylight link at the same rate
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20min).

## Operation of space 4 [default]

Operates all luminaires bound within purple dotted line - On, Off or $\operatorname{Dim}(u p / d o w n) *$

All luminaires in this space daylight link at the same rate
On vacation of the space any luminaires left on will switch off after an adjustable time-out period (default 20 min ).

| Table 1 $\quad$ Other available operational variations |  |
| :--- | :--- |
| Daylight linking is not required anywhere. | Fit motion only sensor head fzh/pir instead of fzh/pir/ls |
| There are more luminaires than available output sockets. | Add double extender leads to increase the number of available outlets on the <br> ZoneLite Unit. (Fig. 2) |
| The same type of switch operation is required at more than one point in the <br> room. | Add as many switch drops to the same point using fsy/a 'Y' connectors and <br> fsw-- switch drop leads. |
| There is insufficient occupancy coverage for the space. (range is typically <br> 5.66m $\times 7.42 \mathrm{~m}$ per head) | Add a special fzh/ls (light sensing only head) to port B. This will work with the <br> existing fzh/pir/ls to average the light levels at both points. |
| Lights should not only switch off automatically when the room is vacated but <br> should also turn on automatically on entry. | Enable presence detection - Setting up leaflet 22/069. Note: Lights will turn <br> on automatically on entry only if the occupancy time out period had elapsed. |
| The dimming protocol of the luminaires is DSI and not DALI (or there is a <br> mixture of both). | Each of the 4 channels output DALI by default however any or all channels <br> can be reassigned to DSI. See Setting up leaflet 22/069 |
| This room (and others?) require an emergency test switch facility. | Link just this ZoneLite (or multiple ZoneLites linked together) to a standard <br> emergency test key switch - see page 34 \& 35 for further details. |
| This room (and others?) require a 'last man out' or 'all lights on' switch <br> remote from this area. | Link just this ZoneLite (or multiple ZoneLites linked together) to a remote <br> switch/s - see page 34 \& 35 for further details. |
| Other software adjustable parameters not mentioned so far. | Various software parameters such as Light level, Time out, and more can all <br> be adjusted using a setup remote control. See Setting up leaflet 22/069 |

## Connecting up the ZoneLite



fzh/pir/ls Master occupancy head + light sensing
(Sensor lead fsl--)

fzh/pir/ls
Master occupancy head + light sensing
fzh/pir/ls
fzh/pir/ls head + light sensing head + light sensing


There are 3 possible global switch inputs possible using the Link port.
Use none, some or all of these switch inputs for global control of the ZoneLite's channels. These switches may be installed local or remote (at the main exit / entrance to a building for example).

Switch the Emergency (Track) supply.

A single pulse initiates ALL sensor heads attached to the Zonelite to a one off temporary 10s timeout such that they will time out early provided no one is detected. Any Channels not controlled by sensor heads will switch off immediately.

A single pulse initiates ON all channels and takes any that were already on to full bright.


## Emergency test



Note: Do not use the blue fsl_- switch drop lead in the link port - only use fnw_- leads

An example of simple global switching of multiple ZoneLites on a single network


KEY:

$\square=C$
$\square=\mathbf{Y}$
$\square=\mathbf{G}$
$\square=R \quad$ Last man out (Off)
Special ' $Y$ ' adaptor part numbers:
Standard network ' $Y$ ' connectors are referred to as simply fny/a however where one or more wires are deliberately cut to create specials, start with the part number fny/cygro and of the last 5 letters, remove the core colour/s that are not required. thus in the above example where the yellow wire $(y)$ is removed the part number required is fny/cgro

## Types T or G ZoneLites only



Type C ZoneLite only (for circulation areas)

nl-- $\quad$ spare $\rightarrow$

fch8/2 Corridor hold unit 8 input / 2 output

Hold corridor and circulation areas illuminated when adjacent areas are occupied
All type T (classroom) or G (general office) Zonelite units will output a corridor hold signal on their link port whenever a connected sensor head detects occupancy. Type C (circulation areas) ZoneLites can accept this signal as its own detected occupancy. An fch/8/2 corridor hold unit (unpowered) is required to simply marshall the inputs and outputs.


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| Trouble shooting guide |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  | $\stackrel{\otimes}{\oplus}$ © O． E <br> シ <br>  $\stackrel{\omega}{9}$長 N 는0 <br> 18 <br> 8 눈 N 등远 |  |  |  |
| Lights will not operate at all－nothing is happening | $\bigcirc$ |  | $\bigcirc$ |  |  |  |  |  |  |  |  |  |
| Some switches operate correctly but others do not |  |  | － | － | $\bullet$ |  |  |  |  |  |  |  |
| Lights flicker or do not dim correctly |  |  |  |  |  | $\bigcirc$ | $\bigcirc$ |  |  |  |  |  |
| Lights switch but will not dim at all |  |  |  | $\bigcirc$ |  |  |  |  |  |  |  |  |
| Lights that should daylight link either don＇t or are not working as expected． |  |  |  |  |  |  |  | $\bigcirc$ |  |  |  |  |
| The lights keep timing out to quickly |  |  |  |  |  |  |  |  | $\bigcirc$ |  |  |  |
| The lights will not time－out |  | － |  |  |  |  |  |  |  |  | $\bigcirc$ | $\bigcirc$ |
| The lights will not switch off when it is extremely bright outside．They just remain at a dim level． |  |  |  |  |  |  |  |  |  | $\bigcirc$ |  |  |

## Optional extras



User Remote Control－frc／user
The frc／user remote control is a convenient method for the user to control the lighting remotely．Lights can be temporarily overridden ON or OFF dimmed UP or DOWN．In addition，up to six preset light levels can be stored and recalled．

## PELV－Switch Drop

To add additional switches a PELV switch drop lead and a fsy／a will be required to connect the additional switch to the control unit．

## Fsy／a

If your room requires additional sensor heads（fnh／slave）or additional switch drops you will require an fsy／a to link your additional cables into．


Increasing Occupancy Coverage－fzh／pir／slave Occupancy coverage can be increased by adding up to a maximum of three slave sensor heads（fzh／pir／slave）to your existing sensor head．The fzh／pir／slave comes complete with a＇Y＇adaptor to facilitate connection．
A connecting lead may also be required，part number fslXX （ $\mathrm{XX}=$ length $/ 5 \mathrm{~m}$ ）．

## Increasing Occupancy Coverage－

Occupancy coverage can be increased by adding up to a maximum of three slave sensor heads（fzh／pir／sl）to your existing sensor head．The fzh／pir／sl comes complete with a＇$Y$＇adaptor to facilitate connection．
A connecting lead may also be required，part number fslXX （ $\mathrm{XX}=$ length $/ 5 \mathrm{~m}$ ）．

## Technical

Nominal 230V～16A，50Hz，Class 1
Manufactured in black PA6 UL94 V－0 rated，PC／ABS，and Anodised Aluminium．
7 contacts per outlet，each rated at 16 amps ，using the Flex7 outlet format Total system rating 16A
Operating range -10 to $40^{\circ} \mathrm{C}$
$3 \times 2.50 \mathrm{~mm}^{2}, 2 \times 4.00 \mathrm{~mm}^{2}$ or $1 \times 6.00 \mathrm{~mm}^{2}$ conductors

Per Channel Load
Fluorescent \＆Incandescent Lighting ：6A
Compact Fluorescent Lighting ：3A
IP20
LVD－2006／95／EC Compliance
EMC－2004／108／EC Compliance
Maximum number of Ballasts
DSI Digital control ： 25
flex7，Ruscombe Business Park，Ruscombe Lane，Twyford，Berkshire，RG10 9LR，UK
Telephone：＋44（0） 2085801066 Fax：＋44（0） 2085801062
Website：www．flex7．co．uk Email：info＠flex7．co．uk
Leaflet reference number：22／070 issue 16 08／03／2017

