

Variants

Low voltage variants can be supplied, coded by the following suffixes:

- | | |
|---------|-----------------------------|
| • 12VAC | 12V - (ac supply) operation |
| • 12VDC | 12V - (dc supply) operation |
| • 24VAC | 24V - (ac supply) operation |
| • 24VDC | 24V - (dc supply) operation |

Trouble shooting

The lamp switches off about 1 minute after it switches on.

- Unit has not been calibrated
- To much artificial light is entering the Twilight Switch.

The lamp switches on too early in the evening.

- Move the Lux adjuster further towards clockwise.

The lamp switches on too late in the evening.

- Move the lux adjuster further anticlockwise.

The TWSW stops working.

- Ensure the unit is mounted correctly so that no water can enter.

Precautions and Warranty

This product conforms to BS EN 60669-2-1 and BS EN 55015.

Please ensure the most recent edition of the appropriate local wiring regulations are observed and suitable protection is provided e.g. a 10 amp circuit breaker and voltage surge protection. Please ensure that this device is disconnected from the supply if an insulation test is made.

This product is covered by a warranty which extends to 5 years from the date of manufacture.

Products available from DANLERS

- PIR occupancy switches • Daylight linked dimmers • Manual high frequency dimmers
- Photocells • Radio remote controls • Time lag switches • Outdoor security switches
- Dimmers • Heating, ventilation and air-conditioning controls • Bespoke / O.E.M. products

Please call for more information or a free catalogue.

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DANLERS

Installation notes

Twilight Switch with Intelligent Photocell

TWSWINT

DANLERS TWSWINT is IP66 rated and can be surface mounted onto an external wall. It will switch a lamp load on only during the hours of darkness (Twilight mode). The light level at which the lamp will switch on and off is set by a lux adjuster. TWSWINT has a new 'intelligent' calibration process which will remove the site specific addition of artificial light from any decision to switch the lights on/off."

Loading

The switch should only be connected to a 230V 50Hz AC supply.

These switches can switch up to:

6 amps (1500W) of resistive loads. 6 amps (1500W) of fluorescent loads.

3 amps (750W) of electronic and wire wound transformer loads.

2 amps (500W) of CFL, 2D lamps, LED Drivers and LED lamps and fittings.

1 amp (250W) of fans

Minimum load 2W resistive, suitable for most energy saving lamps, LEDs and emergency fittings.

Installation procedure

1. Please read these notes carefully before commencing work.
In case of doubt please consult a qualified electrician.
2. The switch should be sited such that it can receive more daylight than artificial light. Ensure that any artificial lights are not too close to the switch or shining into it.
3. The switch must be mounted via the four pre-formed holes only, no additional holes should be drilled through the enclosure. The spindle must point downwards, with room below to adjust it.
4. Make sure the power is isolated from the circuit.
5. The detector should be connected as shown in diagram C.
L - Live in, N - Neutral in, SL - Switched Line out.
6. IMPORTANT - Replace terminal cover.
7. Once the wiring has been completed and verified, switch on the supply and test the operation.

TWSWINT Lux set-up

Calibration is recommended to take place when ambient light levels are low (preferably at night or with daylight excluded as far as possible, from the calibration measurement).

Set up of the switching level on the lux switch should take place when the ambient lux is "as required" from natural daylight.

This product, when set up and calibrated), inhibit the artificial lights from switching on, if the ambient measured lux is greater than the user set threshold. If the artificial lights are ON and the LUX then rises greater than the set threshold (plus the Stored Calibrated Hysteresis) the product will then switch the artificial lights off **after the 1 minute fixed time delay**.

1. Rotate the LUX pot fully clockwise. (Minimum control Lux)
2. Press and hold the MODE push button for 4 seconds. The status LED flashes RED/GREEN. The unit will go into calibration mode, where it measures the addition of LUX from the controlled artificial light source. This eliminates the possibility of artificial lights switching on, then off (cycling) after the under/over lux time windows have elapsed. Lux sampling is complete after 5 minutes allowing the artificial light source to warm up to full operating lux output.
3. Ensure area is not occupied when calibration is taking place. Ensure the product is sited such that the lux cell can see only the reflected light of the source it is controlling, NOT other switched/ varying artificial light sources.
4. If moved from its original calibration site, it will need to be re-calibrated.
5. After approx. 5 minutes the LED will stop flashing RED/GREEN and should go fixed GREEN (above threshold) OR will not be illuminated (below threshold). The controlled lamps will be held off for 1 minute. Then the current lux will determine the switch state. (if the current lux level is below the lowest inhibit threshold of 10 LUX, the controlled lights will be switched on. If the current lux level is above the lowest inhibit threshold, the load will be forced off.
6. If the LED is fixed green, this indicates that the current LUX control setting in addition to the artificial LUX (as calibrated) is "in range" of the product (1000 LUX maximum on the cell) and can be controlled without lamp cycling.
7. If the LED is fixed RED, this tells the user that the current LUX control point (pot setting) in addition to the artificial LUX (measured in calibration) is nearing the range limit / is OUT of range of the product, (1000 LUX maximum on the cell) and the lights MAY / WILL cycle.

Note: As the lux potentiometer is moved anticlockwise it may be that the LED goes from fixed green to fixed red before it goes off. This informs the user that the current LUX control point (pot setting) in addition to the artificial LUX is either in range or out of range. When moving the pot anticlockwise, if the LED goes RED before it goes out then the LUX control

point needs to be adjusted lower OR the unit repositioned with respect to the controlled load, so that it is NOT seeing as much artificial light and then recalibrated.

Note: if the LED fails to illuminate (after calibration) either RED or Green and the load switches on (after a minute), the current ambient lux is lower than the minimum 10 Lux (at the cell) and the switch cannot be inhibited off. Solution: site the LUX switch in a position that sees more natural light!

8. After calibration: (With the load inhibited off). When the ambient lux has reduced to the level you require the lamps to switch on, assuming the LED is fixed green (pot fully clockwise), move the pot anticlockwise until the LED goes off. This needs to be done in small increments by adjusting the pot and moving well out the way of the LUX cell. Ensure the LED is still off when full natural daylight is seen by the cell at that particular time. i.e. not shaded by the commissioning "body". After 1 minute the load should switch on.
9. The unit is now set up. I.e. At the time of setup: any brighter than the current LUX level, the product will inhibit switch on.

