CEFL PIR

Ceiling Flush Mounted PIR Occupancy Switch (Presence detection)

Input: 220-240 Vac 50Hz

PLEASE READ THESE INSTRUCTIONS BEFORE INSTALLING THE PRODUCT

DANLERS ceiling flush passive infra-red occupancy switches (PIR) can be flush mounted into suspended and plasterboard ceilings (diagram A). They include a 2 metre connecting flex to make installation quicker and easier.

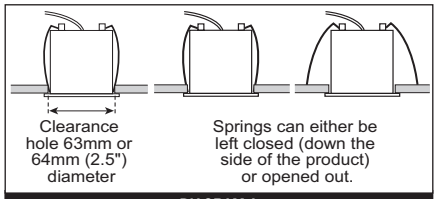

DIAGRAM A

These PIR switches incorporate a passive infra-red quad sensor to detect movement of a warm body within their detection zone (diagram B) and a photocell to monitor the ambient light level.

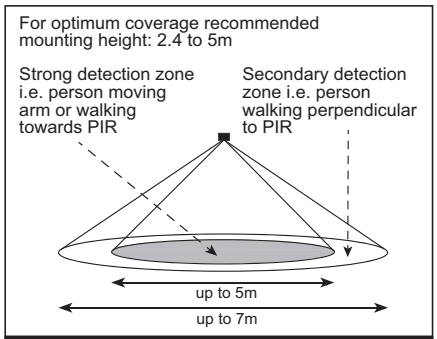

DIAGRAM B (DETECTION)

Upon detecting movement, if the ambient light is dark enough, the PIR switch will turn the load on. The ambient threshold can be set by the user to between approximately 30 lux and 1000 lux and maximum (photocell inactive) at the PIR via the LUX adjuster (diagram C).

If no more movement is detected within a pre-selected time, then the PIR switch will turn the load off. This time lag can be set via the TIME adjuster to 10 seconds, 20 seconds, 40 seconds, 80 seconds, 2 minutes 30 seconds, 5 minutes,10 minutes, 20 minutes or 40 minutes (diagram C).

INSTALLATION PROCEDURE

1. Please read these notes carefully before commencing work. In case of doubt please consult a qualified electrician.
2. POSITIONING: The PIR occupancy switch (PIR) should be installed to achieve correct coverage of the area, see diagram B. If the photocell override facility is required, the switch must be located above an area where daylight can give greater illumination than the artificial light. Avoid locating this product where it is exposed to draughty conditions (exposed lobbies, open ceiling voids or near fans) or near heat sources. To cover large areas PIRs should be spaced in a 5 metre grid formation.
3. The greatest energy savings will be achieved if each PIR controls an independent set of lamps. They can be wired in parallel but this should ideally be limited to three, see diagram E.
4. Make sure the power is isolated from the circuit. The PIR should be connected as shown in diagrams D & E:

   Brown: L (Live in). Blue: N (Neutral in).
   Black: SL(Switched Line out).

NOTE: Terminate the mains cable with the supplied terminal block (terminal blocks must comply with EN 60998-1 or EN 60998-2-1 and be suitable for 0.75-1.5mm2 conductors). In order to comply with wiring regulations, the terminal block must be enclosed in a suitable wiring box (This should comply with EN 60670-1 or EN 60670-22).

LOADING

See overleaf for loading details.

START-UP MODE

When the PIR is powered up, the PIR will switch on the lighting load for 1 minute then switch it off. After 2 seconds it will switch on again if it detects movement. With Time set to minimum the load will stay on for 10 seconds so the detection range can be easily assessed. If a manual override-off switch is positioned before the PIR in the circuit (diagrams D & E, note 1) it will do this each time the wall switch is switched on. Alternatively, if the wall switch is placed after the PIR (diagrams D & E, note 2) it will not enter the start-up mode each time.

TIME AND LUX SET UP

For convenience, ensure that the TIME is set to the minimum when setting up the LUX level. Afterwards set the TIME to a value suitable for the application.

The LUX is best set up when the local ambient light is at approximately the minimum desired working light level, a lux meter placed on the surface under the PIR may help. With the LUX set fully clockwise wait for the PIR to switch off. Rotate the LUX adjuster slowly anticlockwise (- to +), whilst waving your hand approximately 1m below the PIR, until the load switches on.

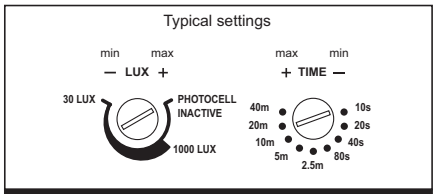

DIAGRAM C (ADJUSTING TIME AND LUX)

TROUBLESHOOTING

The load will not switch on:

- The LUX adjuster is set too low and is inhibiting the switch.
- The moving body is not emitting more IR than the background. (Person wearing insulating clothing in a warm environment)
- Person is too far from the PIR switch, see detection diagram.
- Person is moving unusually slowly (perhaps when testing).

The load switches on when nobody is present:

- Heater causing infra-red variations in a small cold room. Re-site the CEFL PIR.
- Please contact DANLERS for further technical support.

VARIANTS - MAINS VOLTAGE

CEFLPPIR	Includes a Klik-AX plug.
CEFLPIR10A	Up-rated to switch 10A resistive loads.
CEFLPIRSEALED	Suitable for bathrooms zones 2 and 3.
CEFLAPIR	Flush mounted PIR absence switch

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WIRING DIAGRAMS

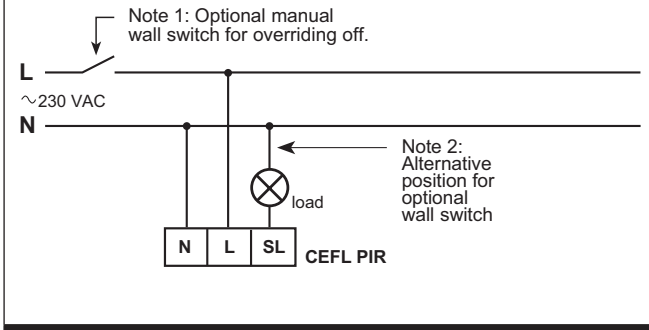

DIAGRAM D (WIRING A SINGLE PIR)

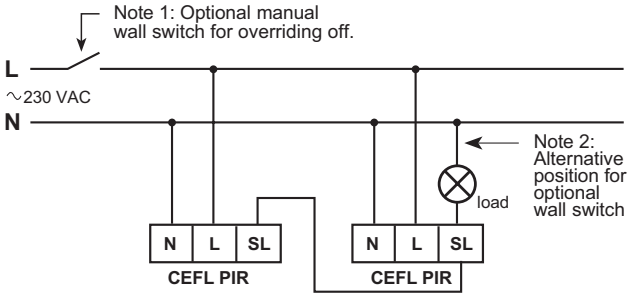

DIAGRAM E (WIRING IN PIRS IN PARALLEL)

TECHNICAL DETAILS

INPUT:	
Voltage:	220 - 240Vac
Frequency:	50Hz
Max. mains current:	0.05A
LOADING:	
Resistive loads:	6 amps (1500W)
Fluorescent:	6 amps (1500W)
LED Drivers and LED lamps and fittings:	6 amps (1500W)
Electronic and wire wound transformer:	3 amps (1500W)
CFL and 2D lamps:	2 amps (500W)
Fans:	1 amp (250W)
Minimum load	2W resistive, suitable for most energy saving lamps, LEDs and emergency fittings.
OPERATING CONDITIONS:	
The temperature difference between the detection target and the background must be at least 4 °C.	
Ambient temperature:	-20... +40 °C (Iout 0.05 A)

Max. case temperature:	+70 °C
Storage temperature:	-25... +75 °C
Max. relative humidity:	0... 80%, non cond.
CONNECTORS:	
Terminal block Wire size:	0.5mm² - 2.5mm² solid or stranded
Wire strip length:	6-7mm
Tightening torque:	0,4 Nm/4 Kgf.cm
MECHANICAL DATA:	
Dimensions:	72mm x 72mm x 68mm
Weight:	246g (unpacked)
Degree of protection:	IP20
Protection class:	Built-in Class 2
Material (casing)	Flame-retardant polycarbonate
Finish / Colour	Matt /White (RAL 9003)
Protection class:	Built-in Class 2

CONFORMITY AND STANDARDS:	
EMC emission:	EN60669-2-1:2004 inc. A12:2010
EMC immunity:	EN60669-2-1:2004 inc. A12:2010
Safety:	EN60669-2-1:2004 inc. A12:2010
Environment:	Complies with WEEE and RoHS directives
VARIANTS - LOW VOLTAGE:	
DANLERS also design and manufacture an extensive range of Ceiling Flush Mounted PIR Occupancy Switch variants some of which are listed below:	
CEFL PIR 12VAC CEFL PIR 12VDC CEFL PIR 24VAC CEFL PIR 24VDC	12V or 24V (ac or dc) operation
CEFL PIR 12VACVF CEFL PIR 12VDCVF CEFL PIR 24VACVF CEFL PIR 24VDCVF	12V or 24V (ac or dc) operation Volt Free contacts

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.

Other DANLERS Product ranges

- Remotely adjusted PIR occupancy switches
- Manually adjusted PIR occupancy switches
- Daylight linked dimming controls
- Photocell switches
- Time lag switches
- Outdoor security switches
- Dimmer switches inc. LED dimming
- HVAC controls
- Radio remote (RF) controls

Please call for more information or visit our website.

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

MADE IN THE UK

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