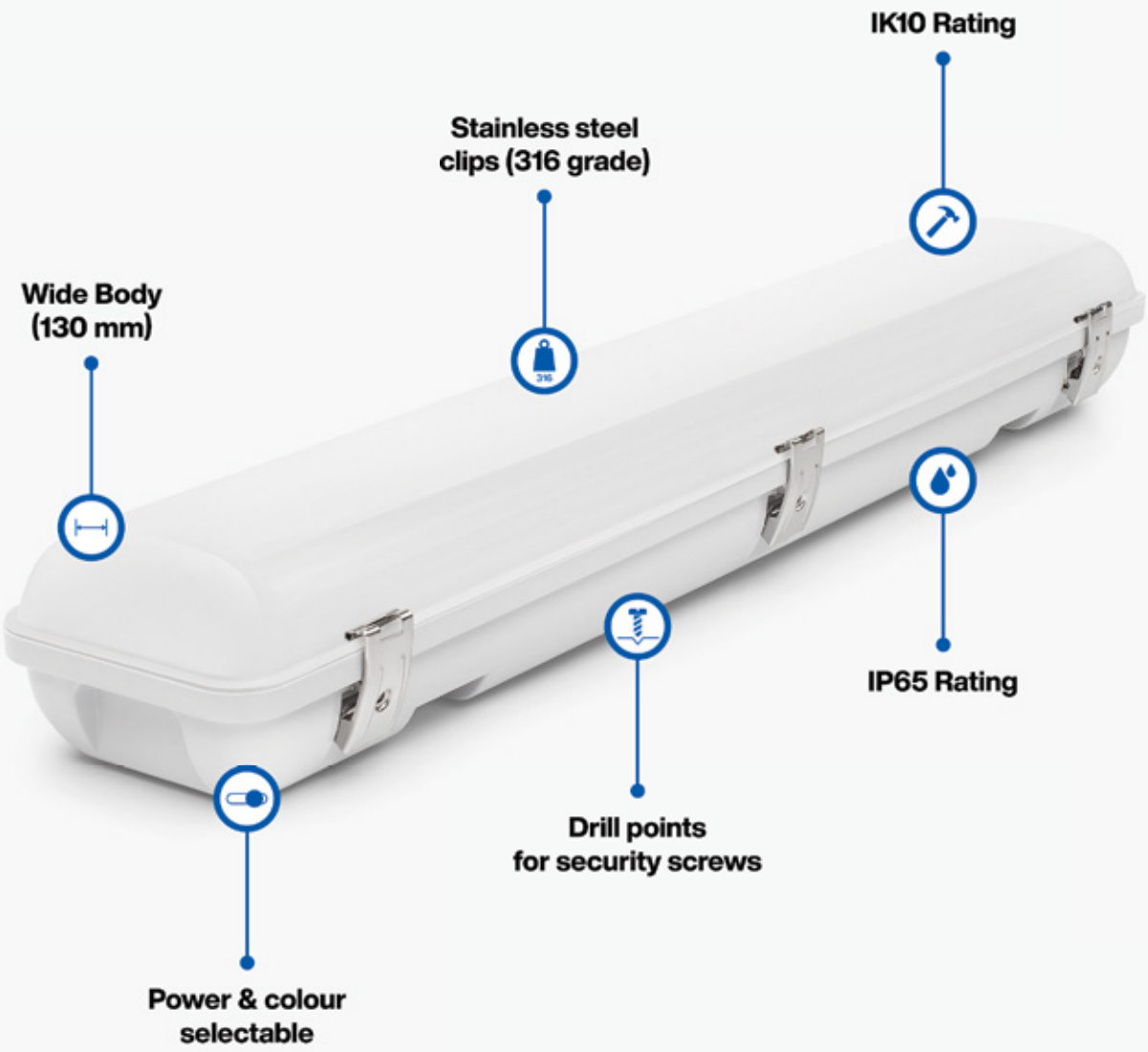
TITAN X



TITAN X

Versions available

- 600 & 1200 mm
- EM / SN / EM & SN
- DALI
- Yellow & green

TITAN X

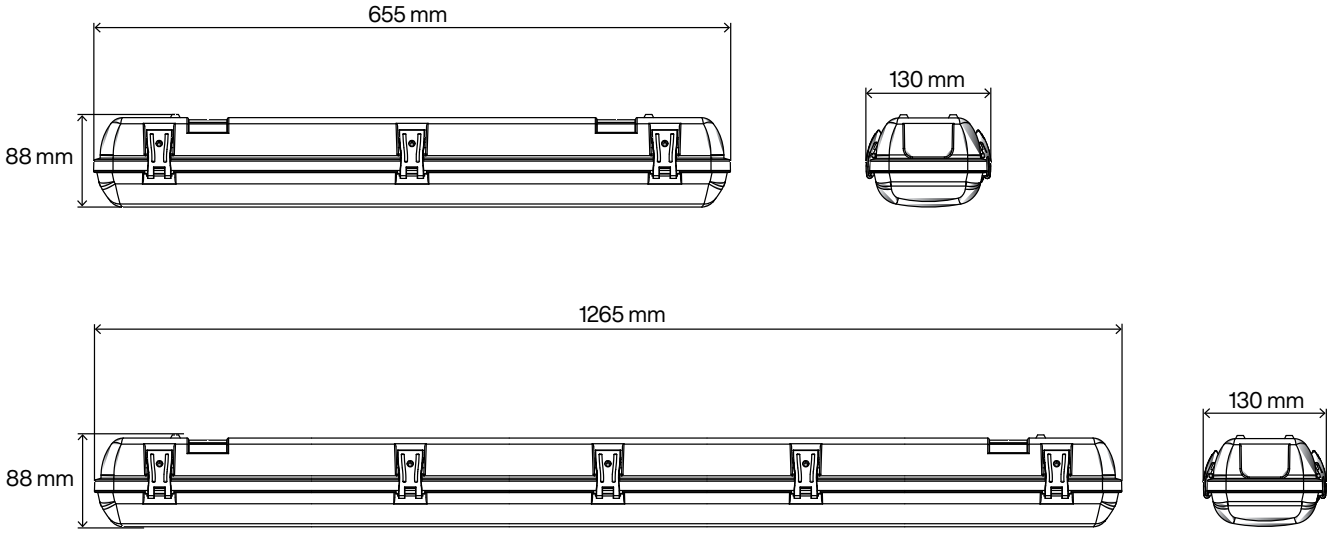
Corrosion Proof LED Battens

The next generation of Titan fittings, the Titan X, has been designed to be even tougher and pack in more features than before. Standard features include: 3 colour selection, multiple power settings, giant terminal blocks, marine grade external hardware, multiple side and rear entry points, and a wide mounting footprint. Sensor models feature 0-10V dimmable drivers with the sensor being tuneable for sensitivity, time, luminance, and a variety of holding patterns. Our innovative Yellow / Green version can switch between yellow or green by the user with an internal switch. Emergency version available on the standard, sensor, and yellow/green models. DALI drivers available as an accessory kit.

5 year warranty

1 year for EM battery

PRODUCT DIMENSIONS



TECHNICAL INFORMATION - STANDARD MODELS

	ML-TN60-X-M	ML-TN60-X-M-EM	ML-TN60-X-M-SN	ML-TN60-X-M-SE
Total Power	11W* / 14W* / 17W */ 20W*	13W* / 16W* / 20W* / 23W*	16W* / 20W*	
Max Lumen Output	**WW** 2215lm** **NW** 2530lm** **W** 2430lm**	**WW** 2000lm** **NW** 2200lm** **W** 2100lm**		**WW** 2114lm** **NW** 2274lm** **W** 2120lm**
Efficacy	**WW** 105lm/W **NW** 125lm/W **W** 115lm/W	**WW** 95lm/W **NW** 105lm/W **W** 100lm/W	**WW** 100lm/W **NW** 110lm/W **W** 105lm/W	**WW** 90lm/W **NW** 100lm/W **W** 90lm/W
Colour Temperature	**WW** 3000K | **NW** 4000K | **W** 6000K			
IP Rating	IP65			
CRI	80			
Beam Angle	120°			
Temperature Range	-20°C to +50°C			
Dimmable	No		Yes, 1-10V dimming	
Power Supply	Tridonic , 220-240V AC 50/60Hz	Osram, 220-240V AC 50/60Hz	Boke, 220-240V AC 50/60Hz	
Average Life	50,000hrs***			
Operating Current	Max 0.085A	Max 0.096A	Max 0.09A	Max 0.1A
Inrush Current	Up to 7 times operating current			
Power Factor	0.95			
IK Rating	IK10			
Charge Time	NA	24hrs	NA	24hrs
Run Time	NA	3hrs	NA	3hrs
Dimensions	L 655mm x W 130mm x H 88mm			
Weight	1.1kg	1.3kg	1.2kg	1.4kg
Warranty	5 Years (1 year for EM batteries)			

* Total power consumed including driver
** Lumen output may vary upon installation environment
*** Average life is calculated on expected average lifespan

	ML-TN120-X-M	ML-TN120-X-M-EM	ML-TN120-X-M-SN	ML-TN120-X-M-SE
Total Power	22W* / 27W* / 34W* / 40W*	23W* / 30W* / 37W* / 43W*	25W* / 40W*	
Max Lumen Output	**WW** 4515lm** **NW** 4800lm** **W** 4600lm**	**WW** 4515lm** **NW** 4900lm** **W** 4730lm**	**WW** 4200lm** **NW** 4800lm** **W** 4400lm**	**WW** 4000lm** **NW** 4600lm** **W** 4200lm**
Efficacy	**WW** 105lm/W **NW** 120lm/W **W** 115lm/W	**WW** 105lm/W **NW** 120lm/W **W** 110lm/W	**WW** 105lm/W **NW** 120lm/W **W** 110lm/W	**WW** 100lm/W **NW** 115lm/W **W** 105lm/W
Colour Temperature	**WW** 3000K | **NW** 4000K | **W** 6500K			
IP Rating	IP65			
CRI	80			
Beam Angle	120°			
Temperature Range	-20°C to +50°C			
Dimmable	No		Yes, 1-10V dimming	
Power Supply	Tridonic , 220-240V AC 50/60Hz	Osram, 220-240V AC 50/60Hz	Boke, 220-240V AC 50/60Hz	
Average Life	50,000hrs***			
Operating Current	Max 0.17A	Max 0.18A	Max 0.17A	Max 0.18AA
Inrush Current	Up to 7 times operating current			
Power Factor	0.95			
IK Rating	IK10			
Charge Time	NA	24hrs	NA	24hrs
Run Time	NA	3hrs	NA	3hrs
Dimensions	L 1265mm x W 130mm x H 88mm			
Weight	1.9kg	2.2kg	2.1kg	2.3kg
Warranty	5 Years (1 year for EM batteries)			

* Total power consumed including driver
** Lumen output may vary upon installation environment
*** Average life is calculated on expected average lifespan

TECHNICAL INFORMATION - YELLOW & GREEN MODELS

	ML-TN60-X-YG	ML-TN60-X-YG-EM	ML-TN60-X-YG-SN	ML-TN60-X-YG-SE
Total Power	11W* / 14W* / 17W* / 20W*	13W* / 16W* / 20W* / 23W*	16W* / 20W*	
Max Lumen Output	**Yellow** 1683lm** | **Green** 1743lm**			
Efficacy	**Yellow** 91lm/W | **Green** 94lm/W			
IP Rating	IP65			
Beam Angle	120°			
Temperature Range	-20°C to +50°C	0° Cto +45°C	-20°C to +50°C	0°C to +50°C
Dimmable	No		Yes, 1-10V dimming	
Power Supply	Tridonic, 220-240V AC 50/60Hz	Osram, 220-240V AC 50/60Hz	Boke driver, 220-240V DC 50/60Hz	
Average Life	50,000hrs***			
Operating Current	Max 0.085A	Max 0.096A	Max 0.09A	Max 0.1A
Inrush Current	Up to 7 times operating current			
Power Factor	0.95			
IK Rating	IK10			
Charge Time	NA	24hrs	NA	24hrs
Run Time	NA	3hrs	NA	3hrs
Dimensions	L 655mm x W 130mm x H 88mm			
Weight	1.1kg	1.3kg	1.2kg	1.4kg
Warranty	5 Years (1 year for EM batteries)			

* Total power consumed including driver
** Lumen output may vary upon installation environment
*** Average life is calculated on expected average lifespan

	ML-TN120-X-YG	ML-TN120-X-YG-EM	ML-TN120-X-YG-SN	ML-TN120-X-YG-SE
Power Selection	22W* / 27W* / 34W* / 40W*	23W* / 30W* / 37W* / 43W*	25W* / 40W*	
Max Lumen Output	**Yellow** 3476lm | **Green** 3590lm			
Efficacy	**Yellow** 80lm/W | **Green** 83lm/W			
IP Rating	IP65			
Beam Angle	120°			
Temperature Range	-20°C to +50°C			
Dimmable	No		Yes (1-10V)	
Power Supply	Tridonic, 220-240V AC 50/60Hz	Osram, 220-240V AC 50/60Hz	Boke driver, 220-240V DC 50/60Hz	
Average Life	50,000hrs***			
Operating Current	Max 0.17A	Max 0.18A	Max 0.17A	Max 0.18A
Inrush Current	Up to 7 times operating current			
Power Factor	0.95			
IK Rating	IK10			
Charge Time	NA	24hrs	NA	24hrs
Run Time	NA	3hrs	NA	3hrs
Dimensions	L 1265mm x W 130mm x H 88mm			
Weight	1.9kg	2.2kg	2.1kg	2.3kg
Warranty	5 Years (1 year for EM batteries)			

* Total power consumed including driver
** Lumen output may vary upon installation environment
*** Average life is calculated on expected average lifespan

TECHNICAL INFORMATION - EMERGENCY CLASSIFICATIONS

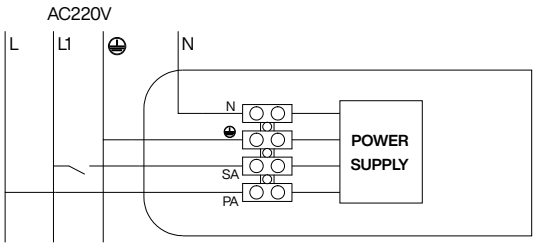
	ML-TN60-X-M-SE	ML-TN120-X-M-SE	ML-TN120-X-M-EM	ML-TN120-X-YG-SE
C0	D50	D63	D50	D50
C90	D40	D40	D32	D32

WIRING DIAGRAM

L: Emergency power (Permanent Active). Must be connected for EM to operate

L1: Switched / Light input (swiched active), loop with L for permanently on. Must be on same phase as L

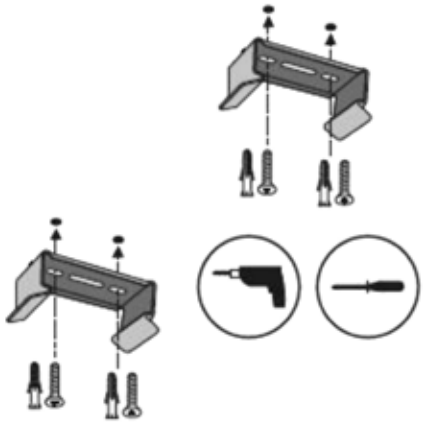
If this fitting has an EM module installed it will require 24hrs for the battery to fully charge. This fitting will run for up to 3 hrs at 3W of power if emergency mode is engaged.

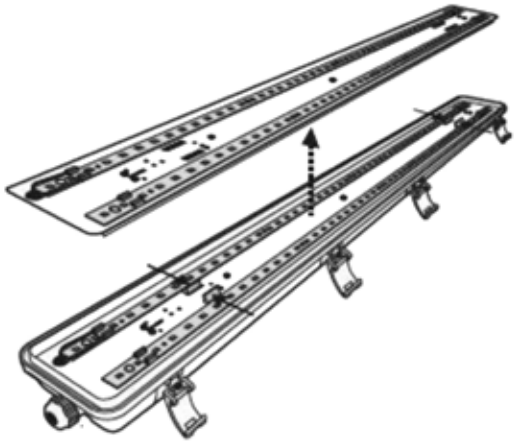


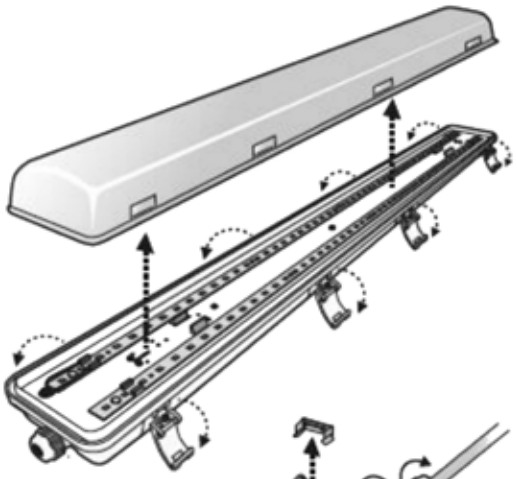
INSTALLATION INSTRUCTIONS

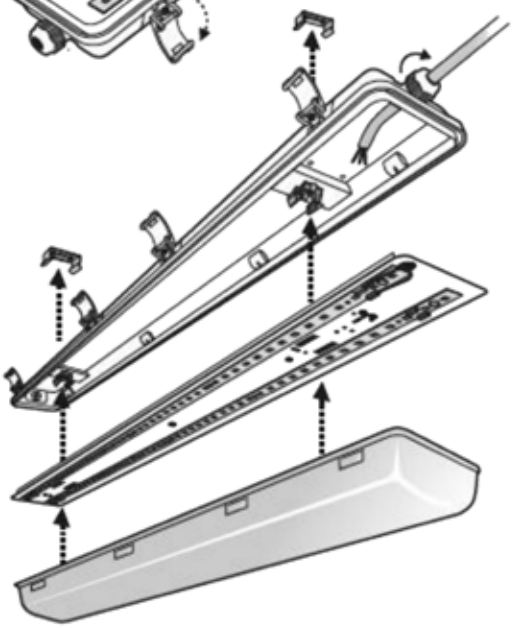
1. Turn power off before commencing installation.
2. Always use suitable fixings for your type of installation.
3. Fix TITAN directly through the back of the unit but be sure to seal all penetrations to prevent water ingress, install the fixing clamp on the location where the TITAN is to be installed (surface mounted or suspended).
4. When running cables into the fitting ensure you use a suitable sealant to prevent any future water penetration.
5. Wire TITAN according to the labels on the terminal.
6. Install gear tray onto internal clips.
7. Install cover onto base and ensure there is an even seal and install security screws to latches.
8. Test and commission.

Suggested installation height (for sensor models):
Wall installation: 1-2m
Ceiling installation: 2.5-6m.

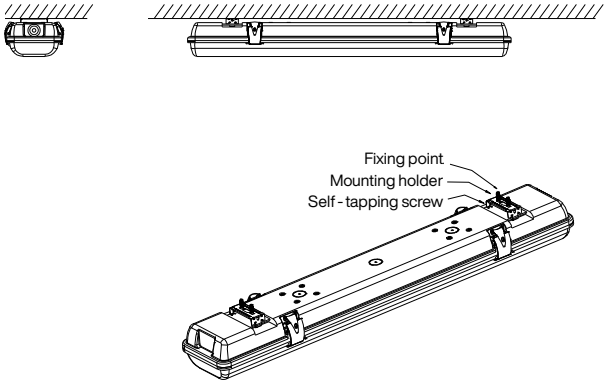




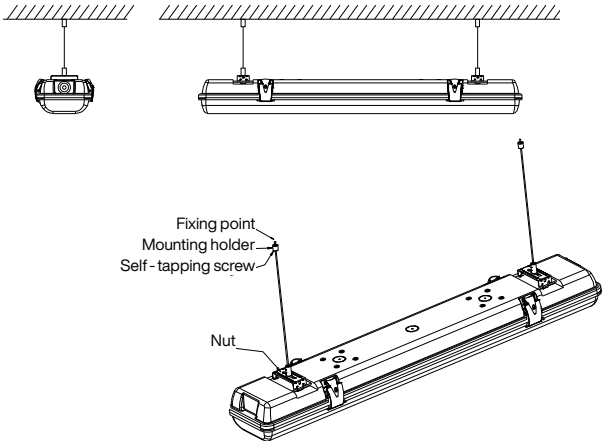




SURFACE MOUNT



SUSPENDED



PLEASE NOTE

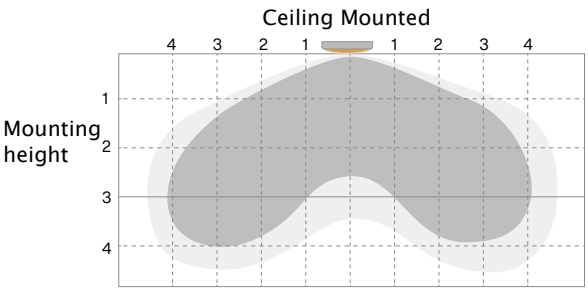
MUST BE INSTALLED BY A LICENSED ELECTRICIAN

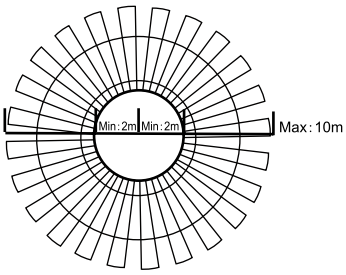
- Wire according to connection diagram correctly.
- Read instructions carefully before attempting to install the fitting. Retain this guide for future reference
- Disconnect power before installing or servicing
- This fitting is for outdoor use and should not be used in areas with limited ventilation or high ambient temperatures
- Do not extend low voltage cables from the output of power supply
- All components must not be mechanically stressed
- Be careful not to damage or destroy conductive paths on the circuit board
- Follow all relevant electrical and safety standards (including AS3000)
- Correct electrical polarity must be observed as the wrong polarity may destroy the product and is not covered under warranty
- Damage by corrosion will not be honoured as a material defect claim. It is the user's responsibility to provide suitable protection against corrosive agents such as moisture, condensation and other harmful elements

MICROWAVE SENSOR

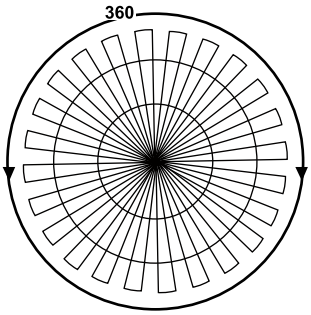
Power Source	12V DC
Transmission Power	<0.2mW
HF System	5.8GHz ± 75MHz
Detection Angle	360°
Detection Range	Ø 4-10m
Installation	Indoors | Ceiling | Mounting height 2.5-4m
Working Temperature	-20°C to +60°C
Stand-by power	Approx 0.5W
Time Setting	Adjustable: 5 Sec ± 3 Sec | 30 Sec ± 10 Sec | 1 Min ± 30 Sec | 10 Min ± 1 Min
Light Control	Adjustable: 2 Lux | 10 Lux | 50 Lux | DISABLED
Stand-by Period	0 Sec | 30 Sec | 20 Min | + ∞
Stand-by Dimming Level	Adjustable: 10% | 20% | 30% | 50%

SENSOR INFORMATION





Height of Installation 2.5m
Detection range



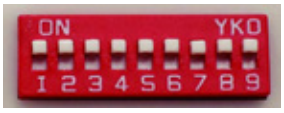
Detection angle

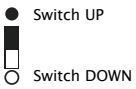
PARAMETER SETTING

There are 4 adjustments available to this sensor:

1. Sensitivity for the detection range of the sensor (S1)
2. On time of the light (S2 + S3)
3. Light level settings (S4 + S5)
4. Stand-by period (S6 + S7)
5. Stand-by dimming level (S8 + S9)

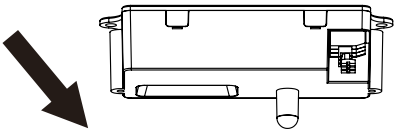
When WHITE DOT is listed on the instructions below it means the dip switch is OFF (down toward the number).
When BLACK DOT is listed it means the dip switch is ON (up toward ON).





PLEASE NOTE!

The high-frequency output of this sensor is <0.2mW- that is just one 5000th of the transmission power of a mobile phone or the output of a microwave oven.



Transmission power <0. 2mW

DETECTION RANGE - SENSITIVITY

Detection range is the term used to describe the detection zone produced on the ground after mounting the sensor light. This range listed below is given as a guide and assumes the mounting height is 2.5m from ground level.

S1	Detection Range
●	5m
○	10m

When using this product please adjust the sensitivity to an appropriate position you need. The following may prevent the motion detection from working normally: blowing leaves, curtains, small animals or even power grid & electrical equipment. If this should happen, simply try to lower the sensitivity appropriately and then test it.

LIGHT LEVEL SETTINGS - LUX

Lux settings can be adjusted so that the sensor will only operate the light when minimum light settings are reached. Alternatively you can set the sensor to 'DISABLE' allowing the sensor to operate continuously.

Adjust the dip switches according to the desired time settings shown in the chart.

S4	S5	LUX
●	●	Disable
●	○	50 LUX
○	●	10 LUX
○	○	2 LUX

STAND-BY DIMMING LEVEL

Dim level can be adjusted during standby period.

Adjust the dip switches according to the desired dim level settings shown in the chart .

S8	S9	LUX
●	●	10%
●	○	20%
○	●	30%
○	○	50%

TIME SETTING (ON TIME)

Stand-by period is a time setting, that keeps the light at preset dimmed level before switching it completely off. Setting it to ∞, the light will be dimmed to a preset dimming level indefinitely (or until movement is detected).

The light can be set to stay ON for periods of time between 5 seconds to 10 minutes. Any movements detected before this time elapses will result in the timer being restarted. Adjust the dip switches according to the desired time settings shown in the chart.

S1	S2	LUX
●	●	5 sec
●	○	30 sec
○	●	1 min
○	○	10 min

PLEASE NOTE!
After the light switches OFF it takes approximately 4 sec before it is able to start detecting movement again.
The light will only switch ON in response to movement detected once this period has elapsed.

STAND-BY PERIOD

Stand-by period is a time setting, that keeps the light at preset dimmed level before switching it completely off. Setting it to ∞, the light will be dimmed to a preset dimming level indefinitely (or until movement is detected).

S6	S7	LUX
●	●	0 sec
●	○	30 sec
○	●	20 min
○	○	∞

WARNING : The following installation situation will lead to nuisance operation!

1. Being installed unevenly or prone to movement (such as loose suspension in a windy area).
2. Moving objects such as curtains.
3. Frequent traffic (people, cars or other objects).
4. Sparks or moving electrical equipment.

EMERGENCY VERSION

PLEASE READ INSTRUCTIONS BEFORE COMMENCING INSTALLATION AND RETAIN FOR FUTURE REFERENCE.

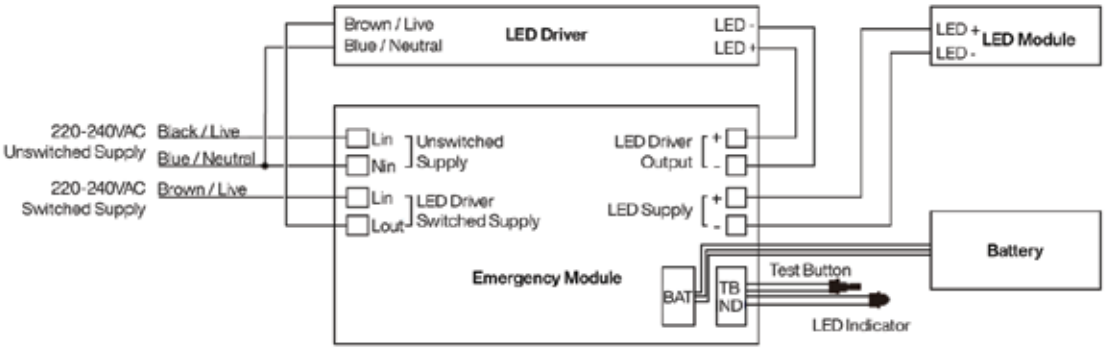
EMERGENCY VERSION

The emergency lighting must be inspected and tested regularly in accordance with regulations and laws. We suggest the following as a minimum.

PLEASE NOTE!

After initial installation please allow 24 hours to ensure the battery is fully charged before commencing tests.

1. Daily check that charge indicator LED is working.
2. Monthly, interrupt mains for a short period and check LED lights.
3. Annual 12 month check, full duration test (longer then 2 hours). Batteries or the fitting should be replaced if they fail to last the 2 hours.
4. Complete record sheet on installation and retain in maintenance file.
5. Update file with ongoing test records for inspection by fire officer or other duly authorised person.

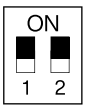


PLEASE NOTE!

Take note of the requirement to dispose of Waste Electrical & Electronic Equipment separately from household waste (WEEE marked with a crossed out wheelie bin symbol).

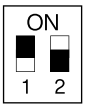
POWER SELECTION DEFAULT 25W

200mAh



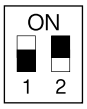
Switch 1 = OFF
Switch 2 = OFF

250mAh



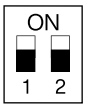
Switch 1 =OFF
Switch 2 = ON

300mAh



Switch 1 = ON
Switch 2 = OFF

350mAh

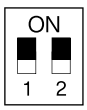


Switch 1 = ON
Switch 2 = ON

OUTPUT CURRENT	MAX POWER
200 mA	10 W
250 mA	13 W
300 mA	16 W
350 mA	19 W

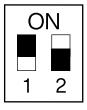
POWER SELECTION DEFAULT 45W

200mAh



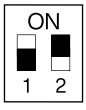
Switch 1 = OFF
Switch 2 = OFF

250mAh



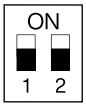
Switch 1 =OFF
Switch 2 = ON

300mAh



Switch 1 = ON
Switch 2 = OFF

350mAh



Switch 1 = ON
Switch 2 = ON

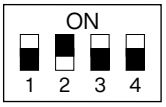
OUTPUT CURRENT	MAX POWER
200 mA	24 W
250 mA	30 W
300 mA	36 W
350 mA	42 W

POWER SELECTION - SENSOR MODELS 30W

350mAh

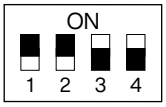
Switch 1 = OFF
Switch 2 = ON
Switch 3 = ON
Switch 4 = ON

400mAh



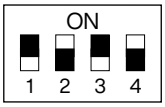
Switch 1 = ON
Switch 2 = OFF
Switch 3 = ON
Switch 4 = ON

450mAh



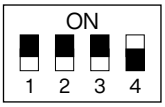
Switch 1 = OFF
Switch 2 = OFF
Switch 3 = ON
Switch 4 = ON

500mAh



Switch 1 = OFF
Switch 2 = ON
Switch 3 = OFF
Switch 4 = ON

550mAh

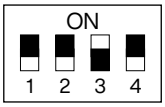


Switch 1 = OFF
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = ON

600mAh

Switch 1 = ON
Switch 2 = ON
Switch 3 = ON
Switch 4 = OFF

650mAh

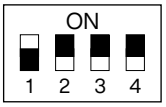


Switch 1 = OFF
Switch 2 = OFF
Switch 3 = ON
Switch 4 = OFF

700mAh

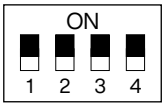
Switch 1 = OFF
Switch 2 = ON
Switch 3 = OFF
Switch 4 = OFF

750mAh



Switch 1 = ON
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = OFF

800mAh



Switch 1 = OFF
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = OFF

OUTPUT CURRENT	MAX POWER
350 mA	15W
400 mA	17W
450 mA	19W
500 mA	21W
550 mA	23W
600 mA	25W
650 mA	27W
700 mA	29W
750 mA	30W
800 mA	31W

POWER SELECTION - SENSOR MODELS 40W

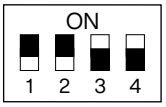
600mAh

Switch 1 = OFF
Switch 2 = ON
Switch 3 = ON
Switch 4 = ON

650mAh

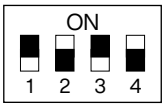
Switch 1 = ON
Switch 2 = OFF
Switch 3 = ON
Switch 4 = ON

700mAh



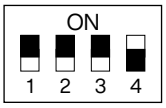
Switch 1 = OFF
Switch 2 = OFF
Switch 3 = ON
Switch 4 = ON

750mAh



Switch 1 = OFF
Switch 2 = ON
Switch 3 = OFF
Switch 4 = ON

800mAh



Switch 1 = OFF
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = ON

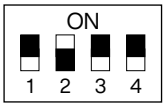
850mAh

Switch 1 = ON
Switch 2 = ON
Switch 3 = ON
Switch 4 = OFF

900mAh

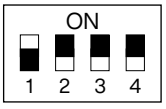
Switch 1 = OFF
Switch 2 = OFF
Switch 3 = ON
Switch 4 = OFF

950mAh



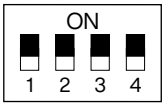
Switch 1 = OFF
Switch 2 = ON
Switch 3 = OFF
Switch 4 = OFF

1000mAh



Switch 1 = ON
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = OFF

1050mAh



Switch 1 = OFF
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = OFF

OUTPUT CURRENT	MAX POWER
600 mA	25W
650 mA	27W
700 mA	29W
750 mA	32W
800 mA	34W
850 mA	36W
900 mA	38W
950 mA	40W
1000 mA	40W
1050 mA	40W

POWER SELECTION - DALI MODELS 30W

200mA

Switch 1 = ON
Switch 2 = ON
Switch 3 = ON
Switch 4 = ON

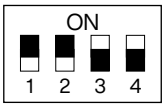
225mA

Switch 1 = OFF
Switch 2 = ON
Switch 3 = ON
Switch 4 = ON

250mA

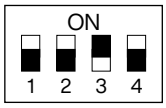
Switch 1 = ON
Switch 2 = OFF
Switch 3 = ON
Switch 4 = ON

275mA



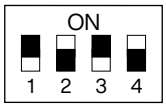
Switch 1 = OFF
Switch 2 = OFF
Switch 3 = ON
Switch 4 = ON

300mA



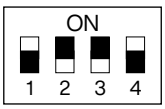
Switch 1 = ON
Switch 2 = ON
Switch 3 = OFF
Switch 4 = ON

325mA



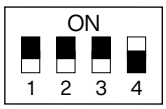
Switch 1 = OFF
Switch 2 = ON
Switch 3 = OFF
Switch 4 = ON

350mA



Switch 1 = ON
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = ON

375mA



Switch 1 = OFF
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = ON

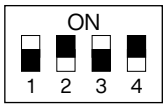
400mA

Switch 1 = ON
Switch 2 = ON
Switch 3 = ON
Switch 4 = OFF

450mA

Switch 1 = OFF
Switch 2 = ON
Switch 3= ON
Switch 4 = OFF

500mA

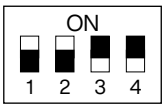


Switch 1= ON
Switch 2 = OFF
Switch 3 = ON
Switch 4 = OFF

550mA

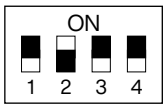
Switch 1 = OFF
Switch 2 = OFF
Switch 3 = ON
Switch 4 = OFF

600mA



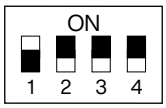
Switch 1 = ON
Switch 2 = ON
Switch 3 = OFF
Switch 4 = OFF

650mA



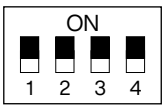
Switch 1 = OFF
Switch 2 = ON
Switch 3 = OFF
Switch 4 = OFF

700mA



Switch 1 = ON
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = OFF

750mA



Switch 1 = OFF
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = OFF

OUTPUT CURRENT	MAX POWER
200 mA	12.8W
225 mA	14.3W
250 mA	15.9W
275 mA	17.3W
300 mA	18.7W
325 mA	20.3W
350 mA	21.7W
375 mA	23.3W
400 mA	24.8W
450 mA	27.9W
500 mA	31.0W
550 mA	34.1W
600 mA	35.9W
650 mA	35.9W
700 mA	36.2W
750 mA	36.2W

POWER SELECTION - DALI MODELS 40W

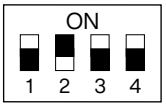
350mAh

Switch 1 = ON
Switch 2 = ON
Switch 3 = ON
Switch 4 = ON

400mAh

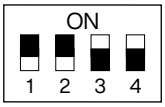
Switch 1 = OFF
Switch 2 = ON
Switch 3 = ON
Switch 4 = ON

450mAh



Switch 1 = ON
Switch 2 = OFF
Switch 3 = ON
Switch 4 = ON

500mAh

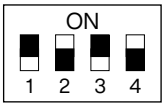


Switch 1 = OFF
Switch 2 = OFF
Switch 3 = ON
Switch 4 = ON

550mAh

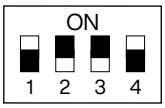
Switch 1 = ON
Switch 2 = ON
Switch 3 = OFF
Switch 4 = ON

600mAh



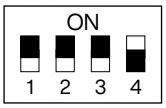
Switch 1 = OFF
Switch 2 = ON
Switch 3 = OFF
Switch 4 = ON

650mAh



Switch 1 = ON
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = ON

700mAh

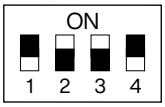


Switch 1 = OFF
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = ON

750mAh

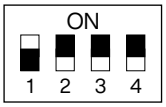
Switch 1 = ON
Switch 2 = ON
Switch 3 = ON
Switch 4 = OFF

800mAh



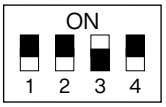
Switch 1 = OFF
Switch 2 = ON
Switch 3 = ON
Switch 4 = OFF

850mAh



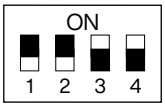
Switch 1 = ON
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = OFF

900mA



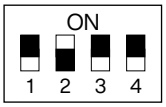
Switch 1 = OFF
Switch 2 = OFF
Switch 3 = ON
Switch 4 = OFF

950mA



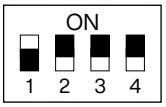
Switch 1 = OFF
Switch 2 = OFF
Switch 3 = ON
Switch 4 = ON

1000mA



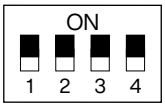
Switch 1 = OFF
Switch 2 = ON
Switch 3 = OFF
Switch 4 = OFF

1050mA



Switch 1 = ON
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = OFF

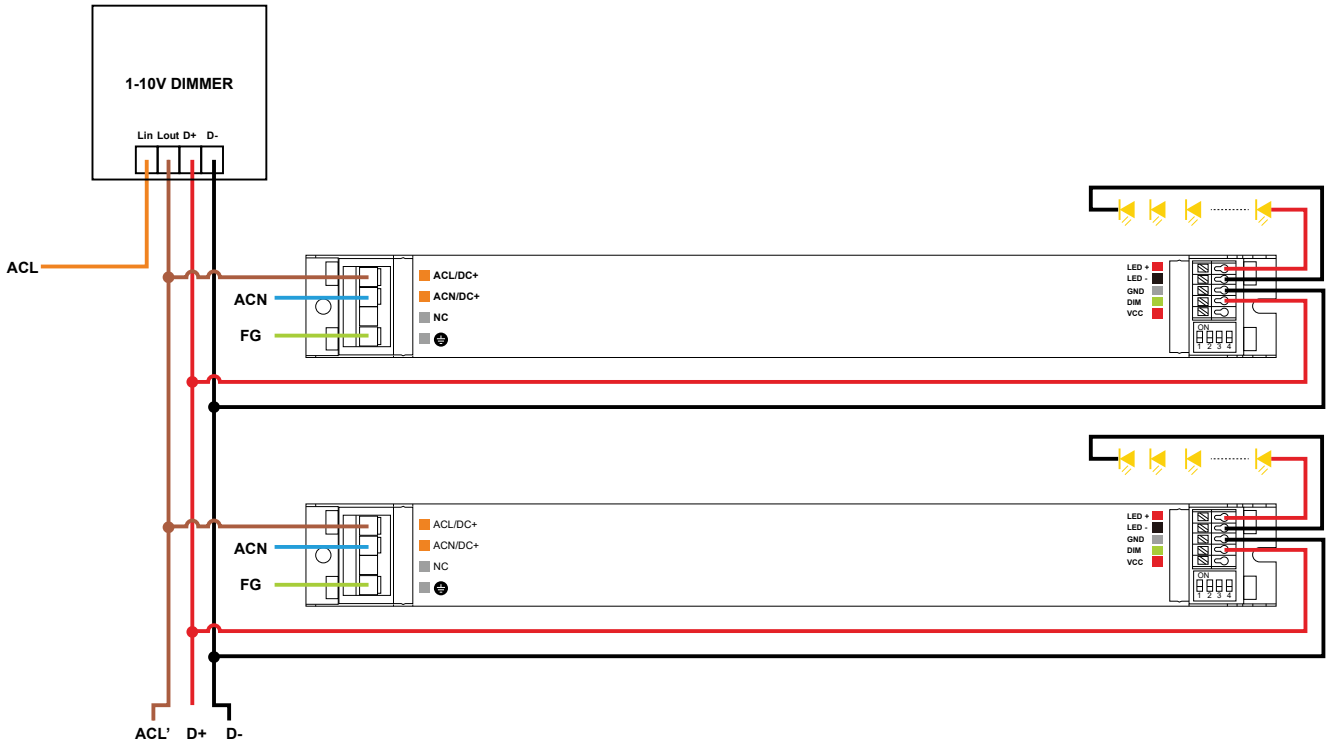
1100mA



Switch 1 = OFF
Switch 2 = OFF
Switch 3 = OFF
Switch 4 = OFF

OUTPUT CURRENT	MAX POWER
350 mA	21.5W
400 mA	24.5W
450 mA	27.5W
500 mA	30.5W
550 mA	33.5W
600 mA	36.5W
650 mA	39.5W
700 mA	42.5W
750 mA	45.5W
800 mA	48.5W
850 mA	49.5W
900 mA	49.5W
950 mA	49.5W
1000 mA	49.5W
1050 mA	49.5W
1100mA	49.5W

DIMMING CONNECTIONS - SENSORS MODELS ONLY 10V/10V PWM DIMMING APPLICATION



NOTES

- Dimming interface characteristics: 0.9V and below are closed, 1V is the darkest, 10V is the brightest, 1-10V is the dimming range.
- The dimming interface distinguishes between positive and negative,DIM is positive,GND is negative,please do not reverse.
- Dimming interface does not support voltage higher than 15V, otherwise it will damage internal components.
- When the dimming interface is open,the driver outputs the maximum current.When the interface is short-circuited, the current output is closed.
- When multiple synchronous dimming is required, the positive poles of the dimming interface of each driver are connected together, and the negative poles are connected together.
- Supports passive dimmer or isolated active dimmer. Dimming does not support non-isolated active dimmer dimming.
- It is recommended that the dimming wires should not be lower than 22AWG wire
- Do not connect the dimming wires alongside high voltage or interference sources.If it is unavoidable,please use shielded wires.

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