

UDM and UDM·W

aria[™]
WIRELESS DMX

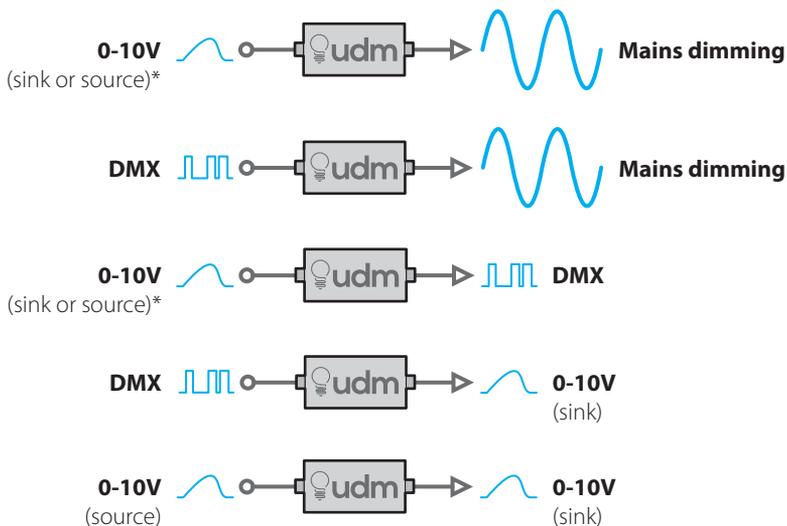
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INTRODUCTION

WELCOME

Welcome to the Universal Dimming Module or *UDM* from Acclaim Lighting. The UDM is effectively a problem solving device, designed to 'fill the gap' between differing control methods in your lighting installation. The UDM can accept various inputs and convert them into the required output:

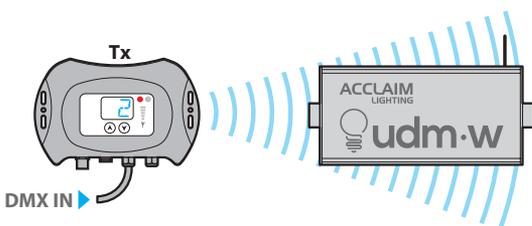


The UDM houses a mains dimmer based upon an Insulated Gate Bipolar Transistor (IGBT) to deliver mains dimming for loads up to 1000W.

The UDM is configured using a combination of internal switches and/or Remote Device Management (RDM) via the DMX interface. See pages 13, 14 and 15 for details.

The UDM•W model adds wireless DMX capability so that the unit can be remotely controlled from an Acclaim Lighting Aria™ transmitter.

Note: RDM signals cannot be transferred via the wireless DMX link.



* *Note: There are two forms of 0-10V analog control: **Current source** and **current sink**. The former was commonly used for theatrical dimming prior to the advent of digital techniques, such as DMX; the latter is used mainly as a control technique for fluorescent dimming ballasts. The primary difference between the two schemes lies with where the control voltage should be generated: **Current source** requires the controlling device to provide (source) the control voltage; whereas **Current sink** mandates that the controlled fixture must provide the voltage. As an example, the Acclaim Lighting AL Driver units support only the **current source** variant (ESTA E1.3).*

*The UDM can accept either variant of 0-10V signal as an input and produces a **current sink** output in response. See page 12 for details.*

UDM AND UDM•W DIFFERENCES

In this guide, the standard UDM and the wireless-equipped UDM•W will be discussed collectively (unless otherwise stated) and referred to simply as UDM. The physical differences between the two models are:

- The internal circuit board of the UDM•W is inverted inside the casing when compared to the standard UDM, but otherwise has a very similar layout.
- The UDM•W has a short external antenna, which should be given a prominent position with direct line of sight to the transmitter device where possible.

IMPORTANT: Do not cut or modify the antenna in any way.

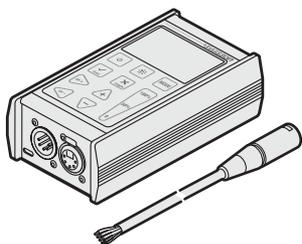
- The UDM•W can accept either wired OR wireless DMX inputs. It has an extra 4-way switch block (see page 14) to determine the control source:
 - If all four switches are set to all ON, then the **wired** input is enabled.
 - Any other combination of the four switches enables **wireless** operation and determines the Aria radio channel to be used.
- The UDM•W has a micro USB socket at the input end for firmware updating.

Before installing Aria wireless devices, such as the UDM•W, we strongly recommend you carry out a radio spectrum survey to determine any potential sources of temporary or permanent interference issues.

SAFETY

- Ensure that the power input is supplied from a correctly fused, grounded and environmentally protected location.
- Providing the end panels are correctly refitted and suitable conduit connections made, the casing will provide IP64 ingress protection: Suitable for use in damp locations.
- The casing has internal mains components close to the edges, particularly at the input end where the fuse is exposed. Exercise great care if configuring the unit while power is applied.

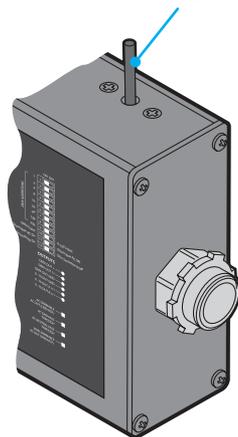
OPTIONAL EXTRAS



DMX/RDM tool plus male 5pin XLR lead

[XMT350]

**UDM•W
wireless
antenna
DO NOT
REMOVE
OR MODIFY**



INSTALLATION

The UDM and UDM•W units can be fixed in any orientation to suitable mounting surfaces. There are Ø0.201" (Ø5mm) mounting holes in each corner of the integral end brackets (see page 19 for dimensions). When the foam seals are correctly in place at each end of the casing, the UDM achieves ingress protection to IP64 (damp location). To fully comply, however, ensure that all external connections are made within suitable 3rd party IP-rated junction boxes. The cable access holes at each end are terminated with ½" conduit glands.

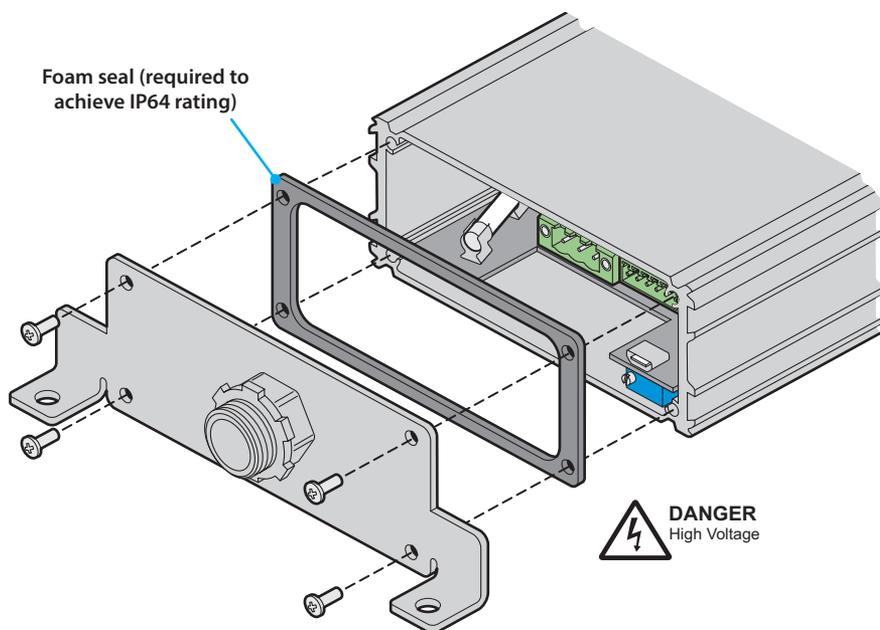
OPENING AND CLOSING THE CASING

Access is gained by removing one or both of the end brackets. All input connections are based at one end, while all outputs (and the configuration switches) are located at the other - see the front panel label for details.

TO OPEN THE CASING

IMPORTANT: If the UDM has already been installed and used, ensure the power supply is fully isolated before opening.

- 1 At the appropriate end, remove the four screws that hold the end bracket in place.
- 2 Safely store the screws and the foam seal for re-installation later.



TO CLOSE THE CASING

- 1 Secure and check all connections.
- 2 Carefully place the end bracket and foam seal against the end of the chassis - ensure that the seal is correctly positioned (it should be glued in position).
- 3 Insert and tighten the four screws.
- 4 Make the required conduit connection to the cable gland.
- 5 Repeat steps 1 to 4 at the other end.
- 6 Mount the UDM, as required.

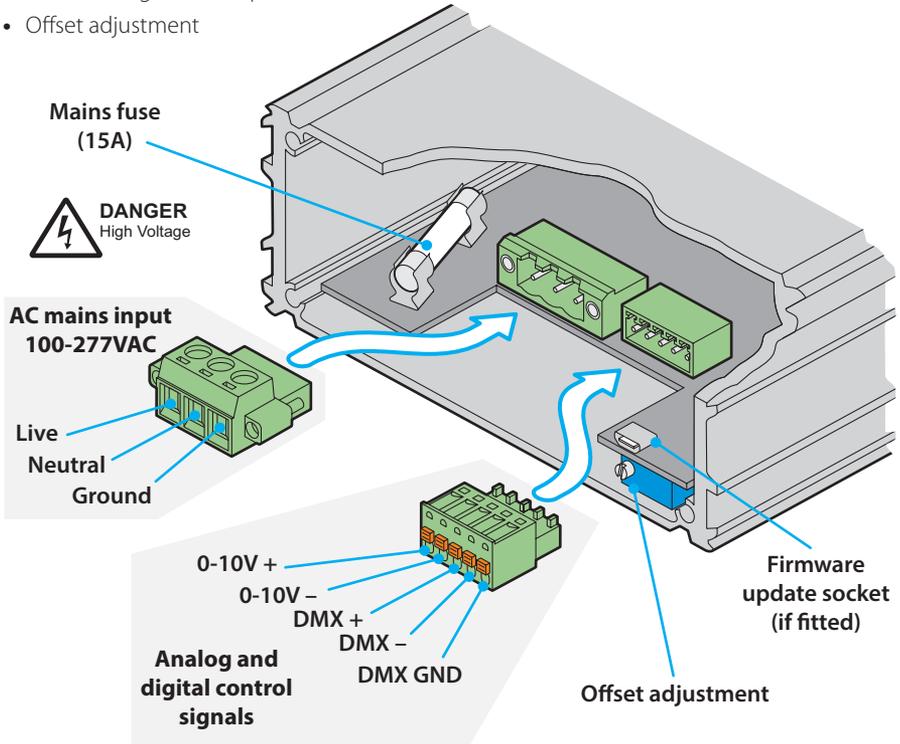
MAKING CONNECTIONS

The UDM houses all inputs at one end and all outputs (plus the configuration switches) at the other.

INPUTS

At the Input end of the UDM casing, there are the following items:

- Mains power input (100 to 277VAC 50/60Hz)
- Mains fuse (Ø6.3 x 32mm - F15A/500VP - ceramic fast blow)
- DMX digital control input
- 0-10V analog control input
- Offset adjustment



OFFSET ADJUSTMENT

The small offset adjuster allows you to match the mains dimming level with the control input. The adjuster increases dimmed output when it is turned counter clockwise.



IMPORTANT: This procedure requires the casing to be open while mains is applied. The UDM has mains components close to the edges, particularly at the input end where the fuse is exposed.

TO ADJUST

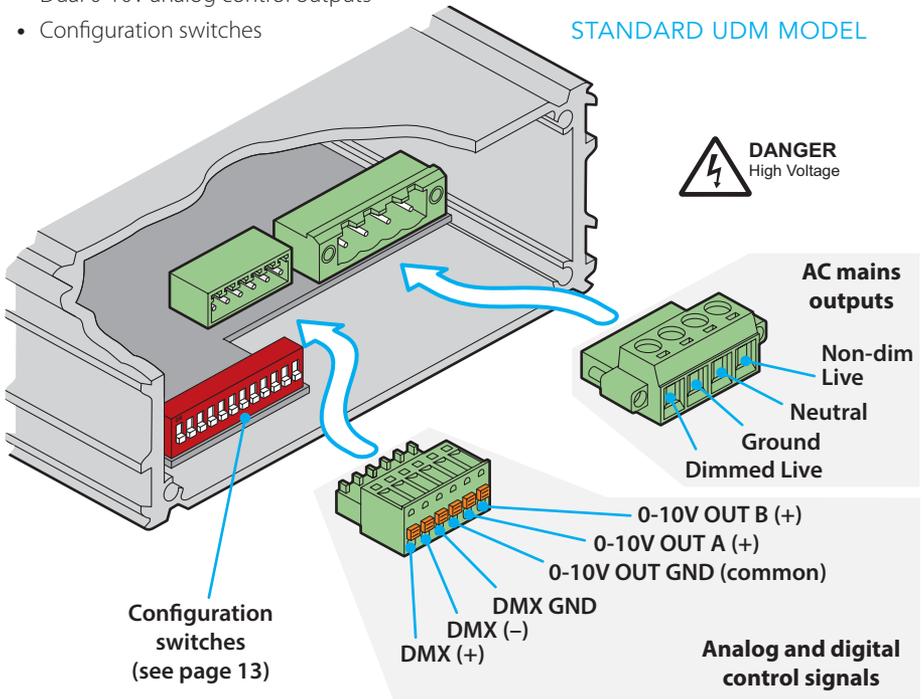
- 1 Connect a DMX or 0-10V control input and a mains dimmed load.
- 2 Set the control input to zero and adjust the offset screw clockwise until the connected load has no output.

OUTPUTS

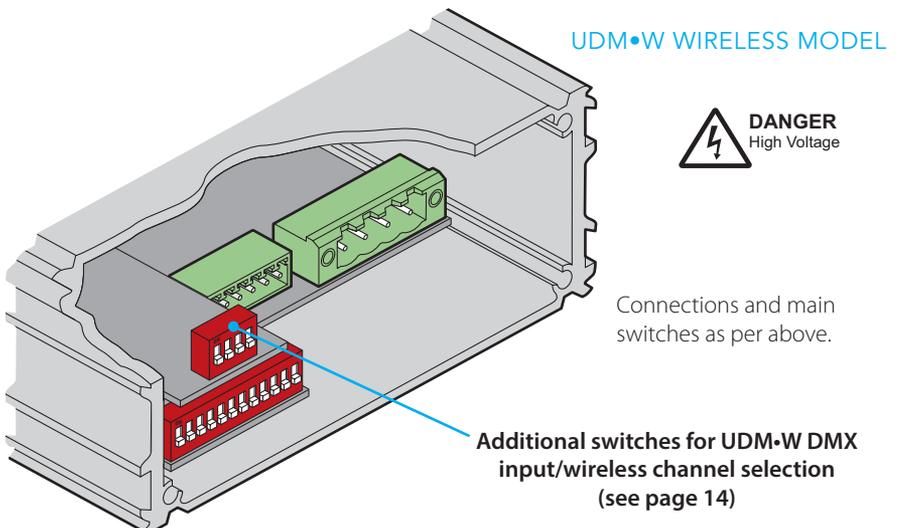
At the Output end of the UDM casing, there are the following items:

- Mains hot and dimmed power outputs
- DMX digital control output
- Dual 0-10V analog control outputs
- Configuration switches

STANDARD UDM MODEL



UDM•W WIRELESS MODEL

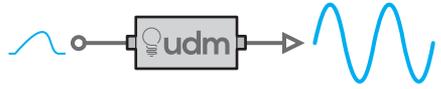


CONFIGURATION

This chapter provides connection and configuration details for each of the five main uses of the UDM:

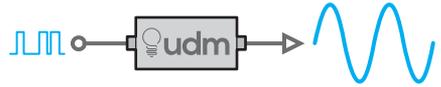
- **0-10V (sink or source) to mains dimming**

see page 8



- **DMX (wired or wireless) to mains dimming**

see page 9



- **0-10V (sink or source) to DMX**

see page 10



- **DMX (wired or wireless) to 0-10V (sink)**

see page 11



- **0-10V (source) to 0-10V (sink)**

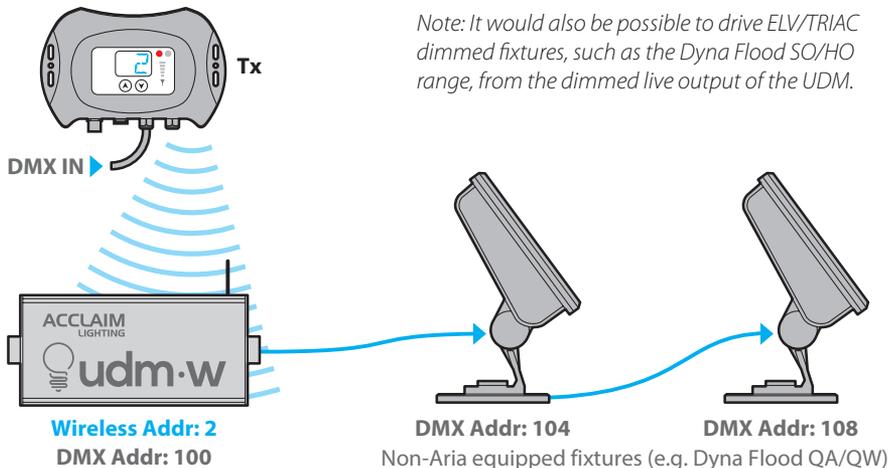
see page 12



UDM•W - To use wireless DMX control, choose the required DMX configuration (as shown above) and then use the 4-way switch block to determine the Aria radio channel (see page 14). When any Aria radio channel is selected, the wired DMX input will be disabled.

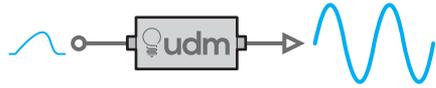
USING UDM•W AS A WIRELESS HUB

When a UDM•W unit is configured to receive a wireless input, it will automatically output the full received DMX universe on its output wires. This means that you can wire through and control up to 32 non-Aria DMX fixtures (such as Dyna Flood QA/QW), or more, if an active repeater is used.



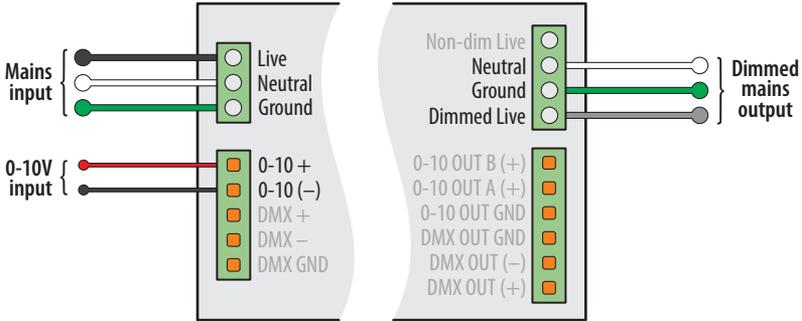
0-10V TO MAINS DIMMING

In this mode the 0-10V (sink or source) input determines the level of output from the in-built mains dimmer unit. The dimmed mains output at 100% will match that of the mains input, which can be in the range 100 to 277VAC 50/60Hz.



REQUIRED CONNECTIONS

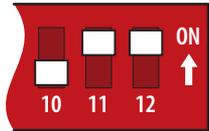
The required connections are as follows:



SWITCH SETTINGS

The switch settings allow you to configure a base setting for the UDM. If required, certain switch settings can be overridden using RDM. The relevant switch settings for this configuration are:

- Switch 10: **OFF** - 0-10V Input
- Switch 11: **ON** - Dimmable AC On



Note: Optionally, to achieve smoother dimming, set switch 12 to ON (see page 13)

Note: No address is required for 0-10V operation

RDM CONFIGURATION

Using RDM, via the DMX input, you can alter the DMX address and mode of operation. Any changes made will override the switch settings. For full details about RDM, see page 15.

Note: The DMX input remains active, even when 0-10V mode is selected, to allow RDM configuration.

UDM	
▶ LABEL:	UDM 1745.0030
MODEL:	UDM
MAN:	ACCLAIM LIGHTING
▶ DMX START ADDRESS:	001
▶ DMX PERSONALITY:	DMX+IGBT
DMX SLOTS:	1

UDM 001 CH	
001:	DMX
002:	DMX+IGBT
003:	ZTEN
● 004:	ZTEN+IGBT

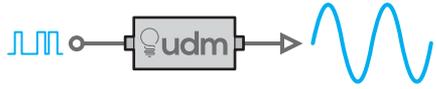
Choose the mode of operation here:
ZTEN+IGBT for 0-10V controlled mains dimming

OTHER NOTES

The dual 0-10V outputs are also active in this mode (matching the input signal) and can be used alongside the dimmed mains output. The non-dim live output is also available for pass-through to power fixtures (the combined dimmed and non-dim loads must not exceed the stated maximum for the UDM as a whole).

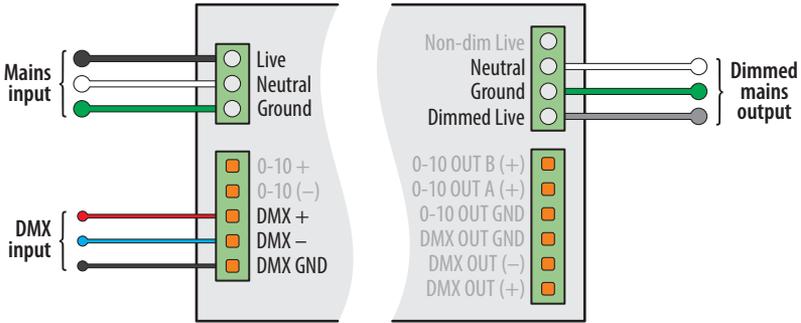
DMX TO MAINS DIMMING

In this mode the DMX input determines the level of output from the in-built mains dimmer unit. The dimmed mains output at 100% will match that of the mains input, which can be in the range 100 to 277VAC 50/60Hz.



REQUIRED CONNECTIONS

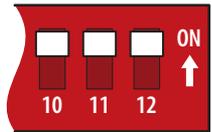
The required connections are as follows:



SWITCH SETTINGS

The switch settings allow you to configure a base setting for the UDM. If required, certain switch settings can be overridden using RDM. The relevant switch settings for this configuration are:

- Switches 1 to 9: *DMX address* (see page 13)
- Switch 10: **ON** - *DMX Input*
- Switch 11: **ON** - *Dimmable AC On*



Note: Optionally, to achieve smoother dimming, set switch 12 to ON (see page 13)

RDM CONFIGURATION

Using RDM, via the DMX input, you can alter the DMX address and mode of operation. Any changes made will override the switch settings. For full details about RDM, see page 15.

UDM	
▶ LABEL:	UDM 1745.0030
MODEL:	UDM
MAN:	ACCLAIM LIGHTING
▶ DMX START ADDRESS:	001
▶ DMX PERSONALITY:	DMX+IGBT
DMX SLOTS:	1

DMX ADDRESS:

001

Choose the DMX address here.

UDM		001 CH
001:		DMX
● 002:		DMX+IGBT
003:		ZTEN
004:		ZTEN+IGBT

*Choose the mode of operation here: **DMX+IGBT** for DMX controlled mains dimming.*

Note: It is not possible to configure the Aria radio channel via RDM.

OTHER NOTES

To use a wireless DMX input, choose the required Aria radio channel (see page 14). The DMX and dual 0-10V outputs are also active in this mode (matching the 0-10V input signal) and can be used alongside the dimmed mains output. The non-dim live output is also available for pass-through to power fixtures (the combined dimmed and non-dim loads must not exceed the stated maximum for the UDM as a whole).

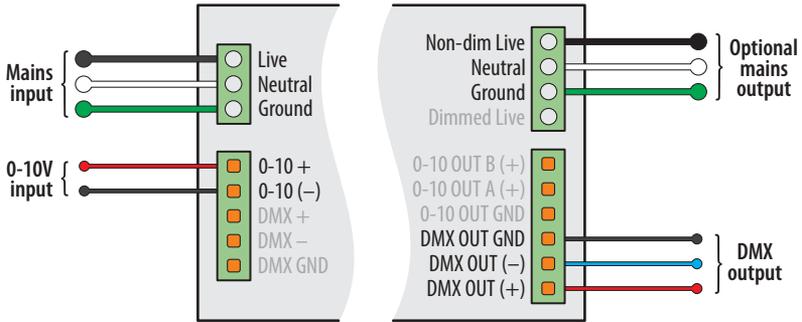
0-10V TO DMX

In this mode, the dimming range of the 0-10V (sink or source) input is converted into a DMX output signal, ranging in value from 0 to 255. The DMX output is delivered at the channel address determined by the switches and/or RDM configuration.



REQUIRED CONNECTIONS

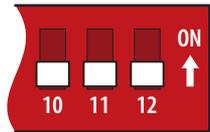
The required connections are as follows:



SWITCH SETTINGS

The switch settings allow you to configure a base setting for the UDM. If required, certain switch settings can be overridden using RDM. The relevant switch settings for this configuration are:

- Switches 1 to 9: *DMX address* (see page 13)
- Switch 10: **OFF** - 0-10V Input
- Switch 11: **OFF** - Dimmable AC Off



RDM CONFIGURATION

Using RDM, via the DMX input, you can alter the DMX address and mode of operation. Any changes made will override the switch settings. For full details about RDM, see page 15.
Note: The DMX input remains active, even when 0-10V mode is selected, to allow RDM configuration.

UDM	
▶ LABEL:	UDM 1745.0030
MODEL:	UDM
MAN:	ACCLAIM LIGHTING
▶ DMX START ADDRESS:	001
▶ DMX PERSONALITY:	DMX+IGBT
DMX SLOTS:	1

DMX ADDRESS:	
	001

Choose the DMX address here.

UDM		001 CH
● 001:		DMX
002:		DMX+IGBT
003:		ZTEN
004:		ZTEN+IGBT

Choose the mode of operation here: **DMX** for 0-10V to DMX conversion.

OTHER NOTES

The non-dim live output is available for pass-through to power fixtures. The non-dim load must not exceed the stated maximum for the UDM.

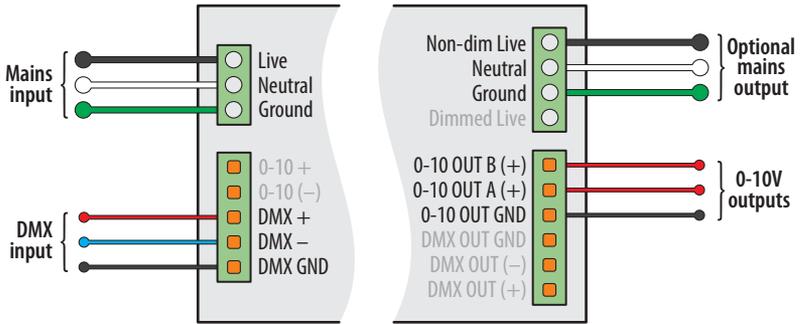
DMX TO 0-10V

In this mode, the DMX input is converted into a 0-10V (sink) output signal with voltage values in accordance with the input range of 0 to 255. The DMX input is taken from the address determined by the switches and/or RDM configuration.



REQUIRED CONNECTIONS

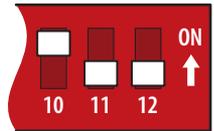
The required connections are as follows:



SWITCH SETTINGS

The switch settings allow you to configure a base setting for the UDM. If required, certain switch settings can be overridden using RDM. The relevant switch settings for this configuration are:

- Switches 1 to 9: *DMX address* (see page 13)
- Switch 10: **ON** - *DMX Input*
- Switch 11: **OFF** - *Dimmable AC Off*



RDM CONFIGURATION

Using RDM, via the DMX input, you can alter the DMX address and mode of operation. Any changes made will override the switch settings. For full details about RDM, see page 15.

UDM	
▶ LABEL:	UDM 1745.0030
MODEL:	UDM
MAN:	ACCLAIM LIGHTING
▶ DMX START ADDRESS:	001
▶ DMX PERSONALITY:	DMX+IGBT
DMX SLOTS:	1

Note: It is not possible to configure the Aria radio channel via RDM.

DMX ADDRESS:	
	001

Choose the DMX address here.

UDM		001 CH
001:		DMX
002:		DMX+IGBT
● 003:		ZTEN
004:		ZTEN+IGBT

Choose the mode of operation here: ZTEN for DMX to 0-10V conversion.

OTHER NOTES

To use a wireless DMX input, choose the required Aria radio channel (see page 14). The non-dim live output is available for pass-through to power fixtures. The non-dim load must not exceed the stated maximum for the UDM.

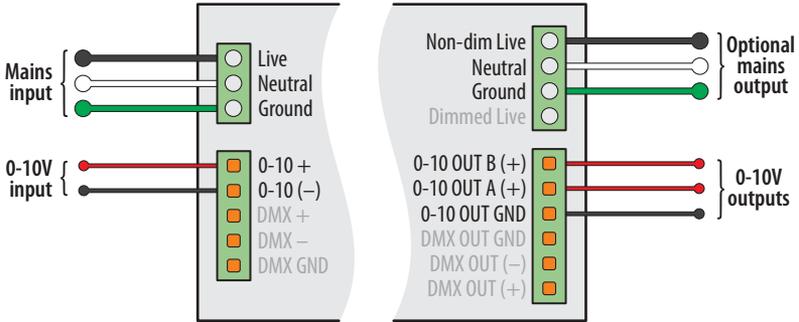
0-10V SOURCE TO 0-10V SINK

In this mode, the 0-10V source input is converted into a corresponding 0-10V sink output signal.

The single input is replicated on two outputs, which can be fed to different devices.

REQUIRED CONNECTIONS

The required connections are as follows:

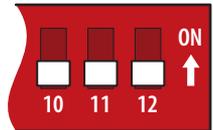


SWITCH SETTINGS

The switch settings allow you to configure a base setting for the UDM. If required, certain switch settings can be overridden using RDM. The relevant switch settings for this configuration are:

- Switch 10: **OFF** - 0-10V Input
- Switch 11: **OFF** - Dimmable AC Off

Note: No address is required for 0-10V operation.



RDM CONFIGURATION

Using RDM, via the DMX input, you can alter the DMX address and mode of operation. Any changes made will override the switch settings. For full details about RDM, see page 15.

UDM	
▶ LABEL:	UDM 1745.0030
MODEL:	UDM
MAN:	ACCLAIM LIGHTING
▶ DMX START ADDRESS:	001
▶ DMX PERSONALITY:	DMX+IGBT
DMX SLOTS:	1

UDM		001 CH
001:		DMX
002:		DMX+IGBT
● 003:		ZTEN
004:		ZTEN+IGBT

Choose the mode of operation here: **ZTEN** for 0-10V to 0-10V conversion.

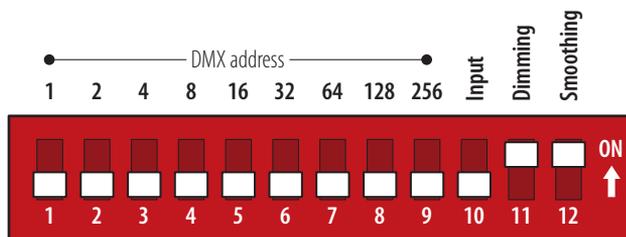
OTHER NOTES

The non-dim live output is available for pass-through to power fixtures. The non-dim load must not exceed the stated maximum for the UDM.

SWITCH SETTINGS

The switch block, located at the output end, is used to configure the basic elements of the UDM. Most of the switch settings can be optionally overridden later using RDM commands issued through the DMX input, removing the need to open the casing once fitted.

Note: This switch block is consulted when the UDM is powering on, so a power reset will be needed whenever changes are made.



- Switches 1 to 9: **DMX base address**
- Switch 10: **Input mode**

OFF	0-10V input
ON	DMX input
- Switch 11: **Dimming**

OFF	Mains dimming disabled
ON	Mains dimming enabled
- Switch 12: **Smoothing**

OFF	Dim smoothing disabled
ON	Dim smoothing applied to mains output

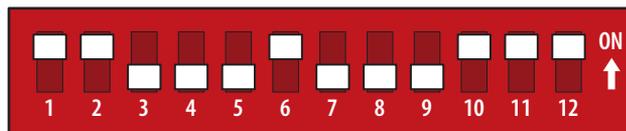
Smoothing helps to eradicate any visible stepping between dimmed mains levels by adding intermediate values between the 255 (8-bit) steps.

CONFIGURATION EXAMPLE

To configure the UDM for the following:

- *DMX address: 35*
- *DMX input enabled*
- *Mains dimming enabled*
- *Dim smoothing enabled*

The switch block would need to be configured like this:



RESETTING THE SWITCH BLOCK

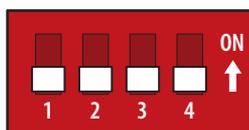
Once an RDM configuration is sent to the UDM, it remains dominant. To clear all RDM input, dimming and smoothing settings, set switches 10 to 12 OFF and then cycle the power input. To clear the DMX address, do the same with switches 1 to 9.

DMX SOURCE/WIRELESS CHANNEL SETTINGS (UDM•W ONLY)

UDM•W models have an additional 4-way switch block located above the main 12-way configuration block (at the output end). This additional switch block is used to choose between wired OR wireless DMX inputs and also to determine the Aria radio channel - the same channel must also be configured on the transmitting device. The radio channel can only be chosen using this switch block, it is not possible to reconfigure it using RDM commands.

Note: This switch block is consulted when the UDM is powering on, so a power reset will be needed whenever changes are made.

●— Radio channel —●



Note: To enable the wired DMX input, ensure all four switches are set to ON.

Radio channel	sw1	sw2	sw3	sw4
0	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF
4	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF
7	ON	ON	ON	OFF
8	OFF	OFF	OFF	ON
9	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON
11	ON	ON	OFF	ON
12	OFF	OFF	ON	ON
13	ON	OFF	ON	ON
14	OFF	ON	ON	ON
Wired DMX input	ON	ON	ON	ON

For further details about using wireless DMX:

- “Optimizing signal strength via channel selection” on page 16
- “Choosing the right location” on page 17

RDM SETTINGS

The use of RDM (Remote Device Management) with the UDM is optional but offers the great advantage of allowing configuration changes to be made without the need to open the casing. The following items can be configured via RDM:

- DMX address
 - DMX input mode
 - Mains dimming mode
- Note: It is not possible to configure the Aria radio channel via RDM.*

Various third party DMX/RDM tools are available; Acclaim Lighting recommends the XMT-350 for this task.

TO CONFIGURE THE UDM USING AN XMT-350

- 1 Connect the XMT-350 to the DMX input line of the UDM and power on both.
- 2 On the XMT-350, press the **MODE** button, then use the arrow buttons to highlight the **RDM** function and press the button to select. The XMT-350 will search for RDM devices and after a short while the XMT-350 will display a list of all located fixtures:

MAIN	PATCH	OPTIONS	001/001
UDM			001

Note: The UDM does not flash its outputs to identify itself.

- 3 On the XMT-350, with the **MAIN** tab highlighted, press the button to display the main configuration screen:

UDM	
▶ LABEL:	UDM 1745.0030
MODEL:	UDM
MAN:	ACCLAIM LIGHTING
▶ DMX START ADDRESS:	001
▶ DMX PERSONALITY:	DMX+IGBT
DMX SLOTS:	1

- 4 If required, highlight **DMX START ADDRESS**, press the button and set the DMX address.
- 5 To change the operation mode, highlight **DMX PERSONALITY** and press the button:

UDM	001 CH
001:	DMX
● 002:	DMX+IGBT
003:	ZTEN
004:	ZTEN+IGBT

Note: The ● marker indicates which mode is currently configured within the UDM.

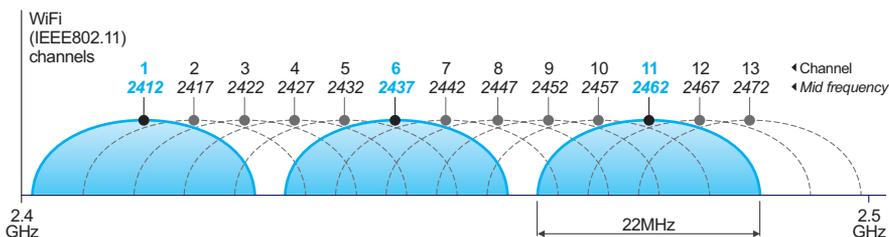
- 6 Highlight the required option:
 - **DMX** - Enables DMX input but disables mains dimming.
 - **DMX+IGBT** - Enables DMX input and routes received values to the mains dimming.
 - **ZTEN** - Enables 0-10V input but disables mains dimming.
 - **ZTEN+IGBT** - Enables 0-10V input and routes received values to the mains dimming.
- 7 Press the button to send the command to the UDM.
- 8 Press the button to return to the main configuration screen.

FURTHER INFORMATION

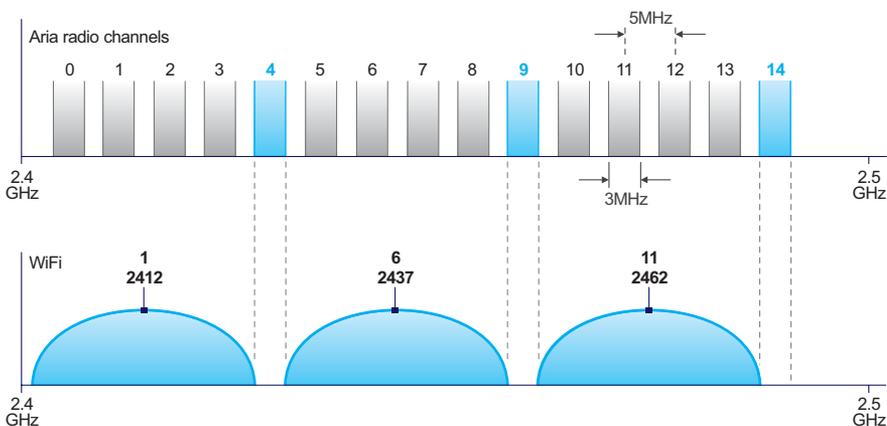
OPTIMIZING SIGNAL STRENGTH VIA CHANNEL SELECTION

Aria™ wireless transceivers use radio frequencies contained within the Industrial Scientific and Medical (ISM) band that runs between 2.4GHz and 2.5GHz. As one of the few license-free radio bands agreed upon in most countries, many other devices also use this band, most notably WiFi. Aria units use the ISM band in a different manner than WiFi and the two can coexist. However, where distances between Aria units are great and WiFi access points are reasonably close, then interference can become an issue.

WiFi uses the IEEE802.11 standard, which divides the ISM band into 13 (sometimes 14) channels, each of which is 22MHz wide. However, the channels overlap and so cannot all be used simultaneously. Hence, most WiFi access points settle upon channels 1, 6 and 11 to avoid any overlap:



Aria uses the IEEE802.15.4 standard, with channels that are 3MHz in width and not overlapping. Many Aria channels do, however, coincide with the common WiFi channels. The notable exceptions are Aria channels 4, 9 and 14, which fall into the gaps between the most commonly used WiFi channels:



Before installing Aria wireless devices, such as the UDM-W, we strongly recommend you carry out a radio spectrum survey to determine any potential sources of temporary or permanent interference issues.

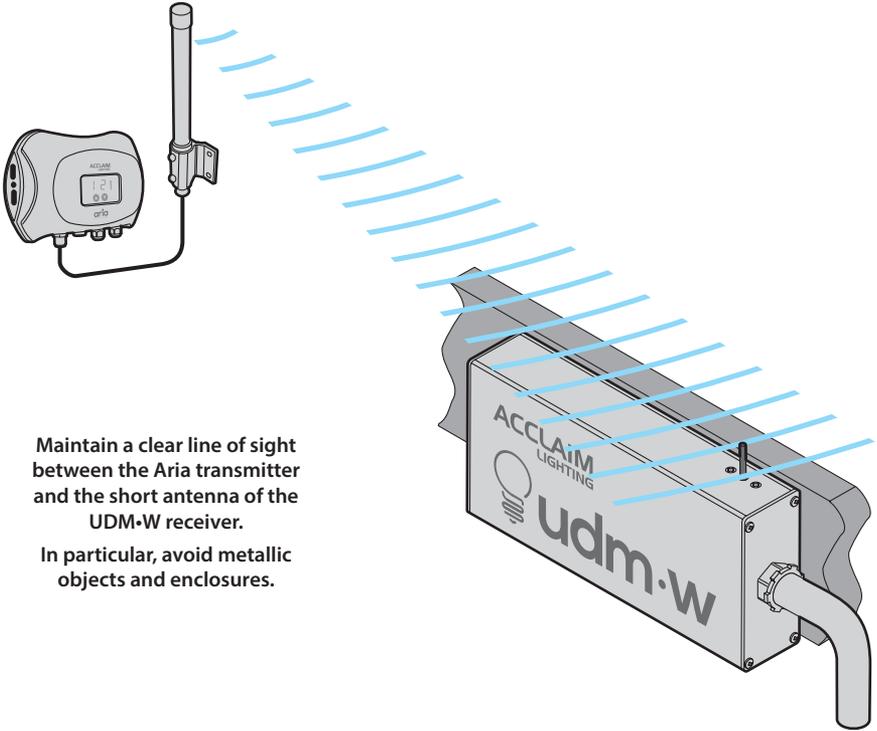
If you have control over the nearest WiFi access points, it is suggested that you lock them down to one or more of the common channels (to prevent them from roaming) and select radio channels that sit comfortably alongside.

Note: The Aria channel notations (0 to 14) are directly equivalent to the IEEE802.15.4 channels 11 to 25, inclusive.

CHOOSING THE RIGHT LOCATION

Your choice of installation locations for your Aria transmitter(s) and UDM•W receiver(s) can have a significant effect on their range and speed of communication.

- Avoid installing either the Aria transmitter or the UDM•W receiver unit inside metal enclosures or near to metallic objects.
- Maintain a clear 'line of sight' path between the Aria transmitter and the UDM•W.



Maintain a clear line of sight between the Aria transmitter and the short antenna of the UDM•W receiver.

In particular, avoid metallic objects and enclosures.

INTERFERENCE CREATED BY OBJECTS

The composition of nearby objects can have a significant impact on the quality of the RF signal. Here are a few examples:

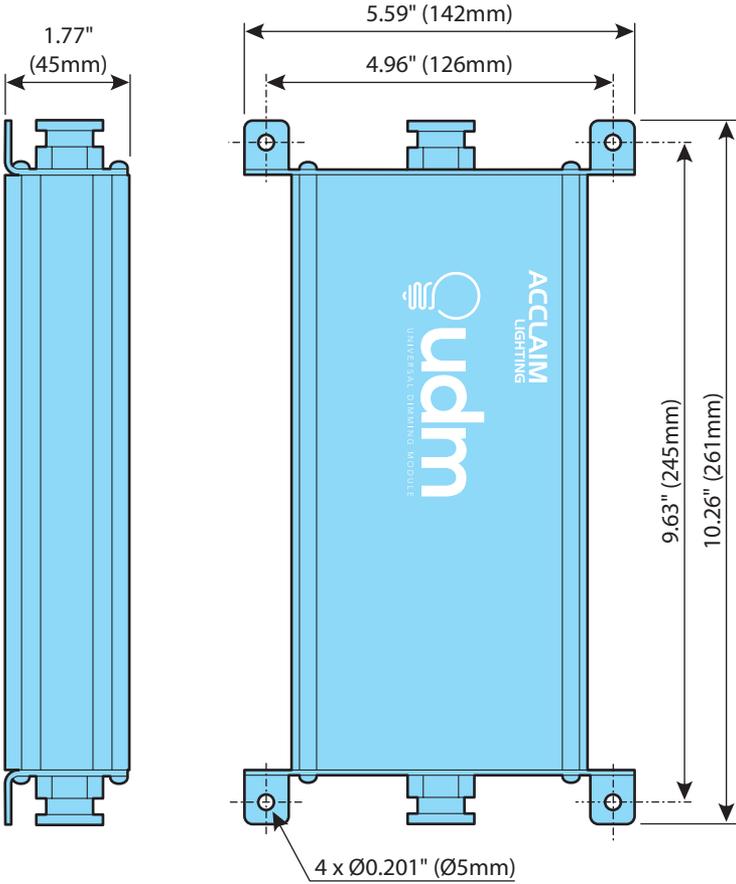
- Standard drywall does not present much of an issue to the 2.4GHz wireless spectrum. However, things inside or attached to the drywall, such as copper pipe, electrical conduit, and circuit breaker panels, will partially block RF signal propagation.
- Hollow cement block walls will dampen the RF signal.
- Reinforced concrete walls typically contain rebar that will contribute to significant RF signal strength loss.
- Large metal structures such as metal cabinets, HVAC units, machinery, brew kettles, etc. may partially or completely block the RF signal.

SPECIFICATIONS

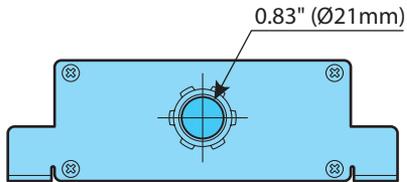
Input voltage range	100-277VAC, 50/60Hz	
Output voltage	As per input	
Power rating	1000W maximum	
Input protocols	DMX + RDM, 0-10V (source or sink)	
Output protocols	DMX + RDM, 0-10V, IGBT digital line voltage dimming	
AC supply options	100-277V pass through	
Configuration	Via on-board switches and/or RDM	
Dim Smoothing	Available via dip switch setting	
0-10V sink power	Up to 25mA	
Aria™ wireless protocol (<i>UDM•W</i>)	2.4GHz, IEEE802.15.4	
Estimated transmission range	Clear line of sight:	2600 feet (792m)
	Through obstructions (walls, etc):	300 feet (91m)
Selectable radio channels	15	
Aria signal encryption	AES 128	
Housing material	Aluminum	
Finish	Black	
IP Rating	IP64, Damp Location - Connections to be made in 3rd party junction box or conduit	
Operating Temperature	-31° F to 122° F (-35° C to 50° C)	
Certifications		



DIMENSIONS



Weight:
1 lb (0.45 kg)



LIMITED PRODUCT WARRANTY

A. Acclaim Lighting™ hereby warrants, to the original purchaser, Acclaim Lighting finished products to be free of manufacturing defects in material and workmanship for a standard period of:

- Fixtures: 5 Years (1,825 days) from the date of purchase.
- Drivers, power supplies and accessories: 5 Years (1,825 days) from the date of purchase.
- Flex Products: 3 Years (1,095 days) from the date of purchase.
- Controllers: 2 Years (730 days) from the date of purchase.

It is the owner's responsibility to establish the date and place of purchase and warranty terms by acceptable evidence, at the time service is sought.

B. For warranty service, send the product only to the Acclaim factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, Acclaim Lighting will pay return shipping charges only to a designated point within the United States. If the entire instrument is sent, it must be shipped in its original package. No accessories should be shipped with the product. If any accessories are shipped with the product, Acclaim Lighting shall have no liability whatsoever for loss of or damage to any such accessories, nor for the safe return thereof. Acclaim reserves the right to replace the item with same or similar product at its discretion.

C. This warranty is void if the serial number has been altered or removed; if the product is modified in any manner which Acclaim concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the Acclaim Lighting factory unless prior written authorization was issued to purchaser by Acclaim Lighting; if the product is damaged because not properly maintained as set forth in the instruction manual.

D. This is not a service contract, and this warranty does not include maintenance, cleaning or periodic check-up nor do we guarantee as part of this warranty any lumen performance during period. Parts not covered by this warranty include: fuses, external power supplies, third party items not manufactures by Acclaim lighting. During the period specified above, Acclaim Lighting will replace defective parts at its expense, and will absorb all expenses for warranty service and repair labor by reason of defects in material or workmanship. The sole responsibility of Acclaim Lighting under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of Acclaim Lighting. At no time will installation or re-installation or products labor or liability costs will be assumed by Acclaim Lighting. All products covered by this warranty were manufactured after January 1, 2012, and bear identifying serial number marks to that effect.

E. Acclaim Lighting reserves the right to make changes in design and/or improvements upon its products without any obligation to include these changes in any products theretofore manufactured. No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with products describe above. Except to the extent prohibited by applicable law, all implied warranties made by Acclaim Lighting in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty period set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said period has expired.

F. Marine or extreme weather location applications using Acclaim lighting products are subject to a 2 year limited warranty and Acclaim must be notified prior to delivery of units for such applications so that preventative treatment can be made to the products to ensure proper performance and product life with a special marine code coating / sealing process at an additional cost.

G. The consumer's and or dealer's sole remedy shall be such repair or replacement as is expressly provide above; and under no circumstances shall Acclaim Lighting be liable for any loss or damage, direct or consequential, arising out of the use of, or inability to use, this product. This warranty is the only written warranty applicable to Acclaim Lighting products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

www.acclaimlighting.com