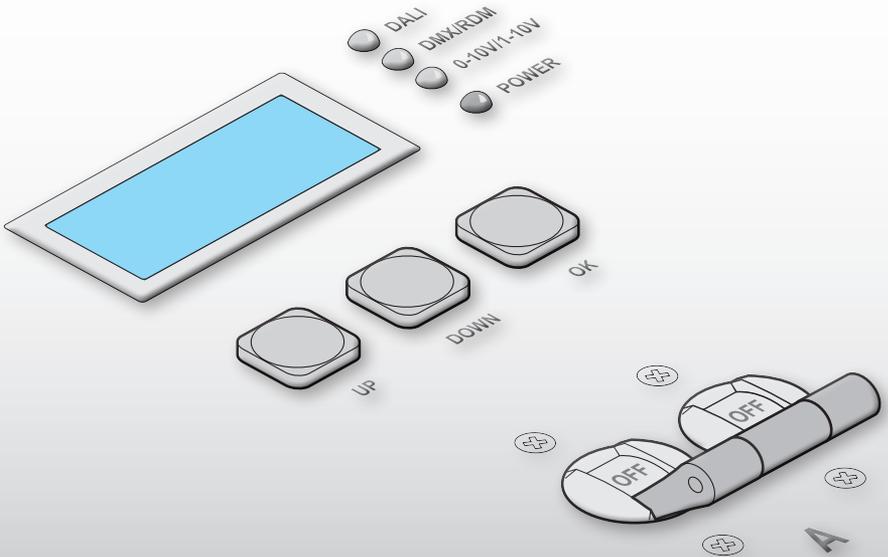


XTRLINK 
TECHNOLOGY



XTR Driver

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INTRODUCTION

WELCOME

Welcome to the XTR 4000 and 8000 Drivers from Acclaim Lighting. These specialized driver modules allow continuous runs (up to 700'/213m) of high intensity linear LED fixtures to be installed. Control formats such as DMX512/RDM, DALI or 0-10V/1-10V are supported. All connected linear LED fixtures must conform to the Acclaim Lighting XTR Link standard.

SAFETY

- Ensure that the power input is supplied from a correctly fused, earthed and environmentally protected location.
- Ensure that the power input is supplied from an environmentally protected location, is correctly fused and has a **valid protective earth that is tied to true earth**.



HIGH VOLTAGE

WARNING - HIGH VOLTAGE

This device produces high voltage outputs (up to 400VDC) which could cause severe personal injury or death if misused:

- **Always** isolate power before connecting or disconnecting links.
- Installation to be carried out by **certified electricians** only.
- Use only **approved** cables and connectors.
- Check all connections are correctly made **before** energizing.
- **Do not** open the driver enclosure, even when isolated.

MAINTENANCE

CAUTION: Always isolate mains power before starting maintenance operations.

- Ensure that all mounting (and device) screws/bolts are fully tight and free of corrosion.
- Ensure there is no deformation to the housing, lenses or fixing points.
- Check that all power supply cables are free from physical damage or material fatigue.
- Use only genuine spare parts supplied by Acclaim Lighting.

CLEANING

- Use a moist, lint-free cloth when cleaning each fixture.
- Never use alcohol or solvents.

SUPPLIED ITEMS

XTR Driver 4000

plus 2x output tails (19'/6m)

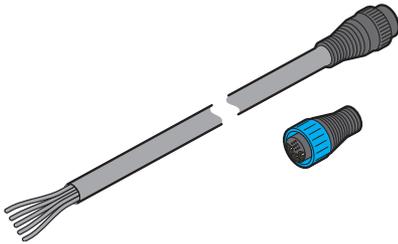


XTR Driver 8000

plus 4x output tails (19'/6m)

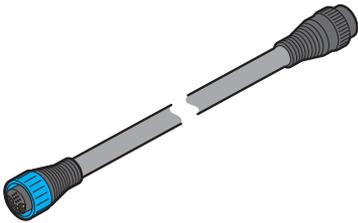


OPTIONAL ACCESSORIES



Feed cables (incl terminator end cap)

10' (3m)	[XTRFC10]
50' (15m)	[XTRFC50]
100' (30m)	[XTRFC100]



Link cables

6" (15cm)	[XTRLC0.5]
1' (30cm)	[XTRLC1]
5' (1.5m)	[XTRLC5]
10' (3m)	[XTRLC10]
50' (15m)	[XTRLC50]
100' (30m)	[XTRLC100]



Terminator end cap

[XTREC]

INSTALLATION

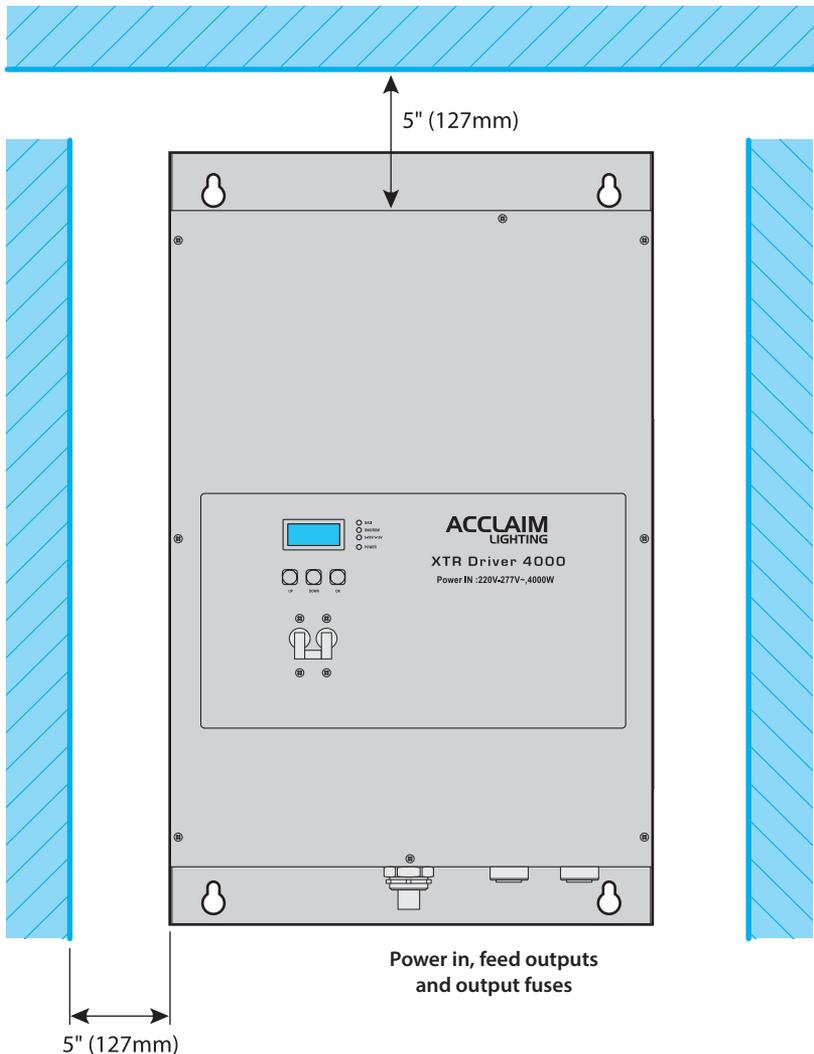
MOUNTING

Each XTR Driver must be mounted vertically on a secure mounting surface in the correct orientation within a dry atmosphere with low ambient temperature (see 17). See pages 18 and 19 for sizing and spacing dimensions for the four mounting cutouts.

SPACING

Each XTR Driver produces heat when in operation, which is dissipated by internal fans via the top and side vents. It is important to allow sufficient spacing on each side and above the driver to allow free flow of air. Please see below.

Note: Allow sufficient space underneath each XTR Driver to easily access the output fuses.



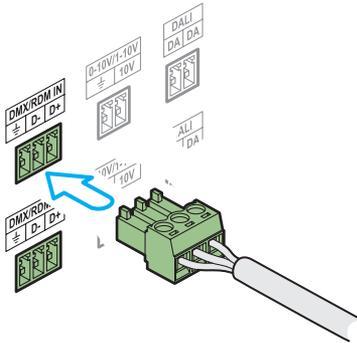
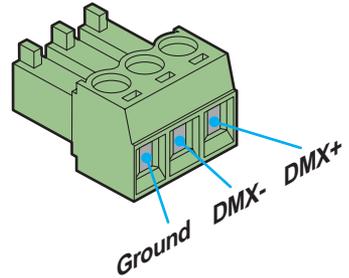
CONTROL INPUT CONNECTIONS

The fixtures connected to each XTR Driver can be controlled by any of four external signal types: DMX, DALI, 1-10V or 0-10V. DMX allows multiple channels to be addressed, whereas DALI, 0-10V and 1-10V control a single channel to which all connected fixtures will respond equally (see page 7).

DMX/RDM

A DMX IN port as well as a DMX THRU port (for optionally linking to other controllers). Each uses a 3-pin terminal block (supplied). See below for useful DMX tips. Connect your DMX cables to the terminal blocks as shown here:

Insert the terminal block into the **DMX/RDM IN** socket and ensure that it fully clicks into place. Repeat for the **DMX/RDM THRU** if the control signal needs to be fed to another device.



DMX CABLE RECOMMENDATIONS

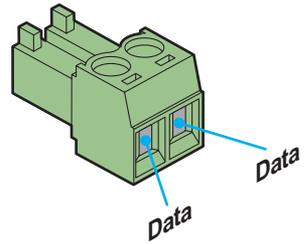
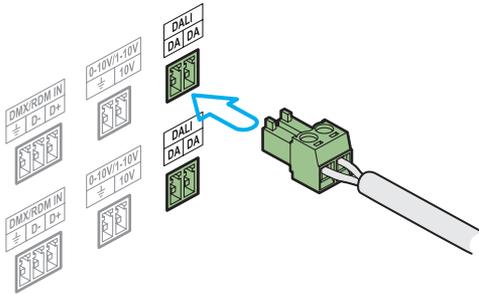
- Indoor exposed or inside conduit above grade: Belden 9842
- Indoor plenum: Belden 82842
- Outdoor exposed, direct burial, or inside conduit below grade: Belden 3107DB

Note: Acclaim Lighting can also approve equivalent cable options

DALI

Each XTR Driver has two DALI ports (In and Thru) that use 2-pin terminal blocks (supplied). For best results always use mains rated cables with 600V isolation and core with at least 1mm cross section. DALI signals are not polarity dependent and so can be connected either way round:

Insert the terminal block into either **DALI** socket and ensure that it fully clicks into place.

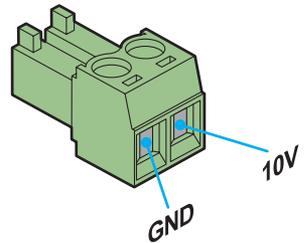
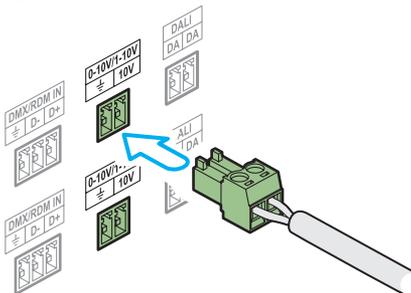


Optionally connect a link to the next DALI-controlled device using the other socket.

0-10V AND 1-10V

Each XTR Driver has two 0-10V / 1-10V control ports providing an input and thru output in either direction. Both ports use a 2-pin terminal block (supplied). Current sink and source inputs are supported at either port - see page 7. For best results use shielded cables and connect as follows:

Insert the terminal block into either **0-10V/1-10V** socket and ensure that it fully clicks into place.



Optionally connect a link to the next analog-controlled device using the other socket.

CONTROL INPUT BEHAVIORS

All XTR-compatible fixtures use solely DMX as their native control method. If DALI or 0-10V/1-10V control inputs are applied to the XTR Driver then their single dimming value will be internally converted into an equivalent value across all 512 DMX channels and duplicated across all of the output feeds: two outputs on the 4000 model and four outputs on the 8000 model.

[Fixtures with white emitters only] If no control protocol is present, white light fixtures will default to full on.

Once power has been applied, you need to use the front panel menu to choose the control input method being used: DMX, DALI, 0-10V (source) or 1-10V (sink). See page 15 for details.

XTR FIXTURE ADDRESSING

RDM signals are passed transparently across all XTR Driver ports so that individual fixtures can be uniquely addressed. Various third party DMX/RDM tools are available; Acclaim Lighting recommends the XMT-350. Please refer to the user guide(s) of your particular XTR fixtures (and RDM tool) for further details about RDM addressing.

DMX/RDM

When a DMX input is applied to the XTR Driver, it is duplicated across all of the fixtures on all of the output feeds. Multichannel XTR fixtures can be fully controlled.

DALI

When a DALI input is applied to the XTR Driver, it must use **broadcast** mode so that one channel controls all fixtures equally. Therefore only single channel XTR fixtures can be used.

0-10V / 1-10V

When a 0-10V (source) or 1-10V (sink) input is applied to the XTR Driver, it will control all fixtures equally. Therefore only single channel XTR fixtures can be used.

0-10V (AND 1-10V): CURRENT SOURCE AND CURRENT SINK

There are two arrangements of 0-10V analog control: *current source* (labeled on the XTR Driver as 0-10V) and *current sink* (labeled on the XTR Driver as 1-10V). Current source was commonly used for theatrical dimming prior to the advent of digital techniques, such as DMX. Current sink is most often used in architectural/commercial settings. The primary difference between the two schemes lies with where the control voltage is generated:

- **current source** (0-10V) requires the controlling device to provide (source) the control voltage,
- **current sink** (1-10V) mandates that the controlled fixture (ie the XTR Driver) must provide the voltage.

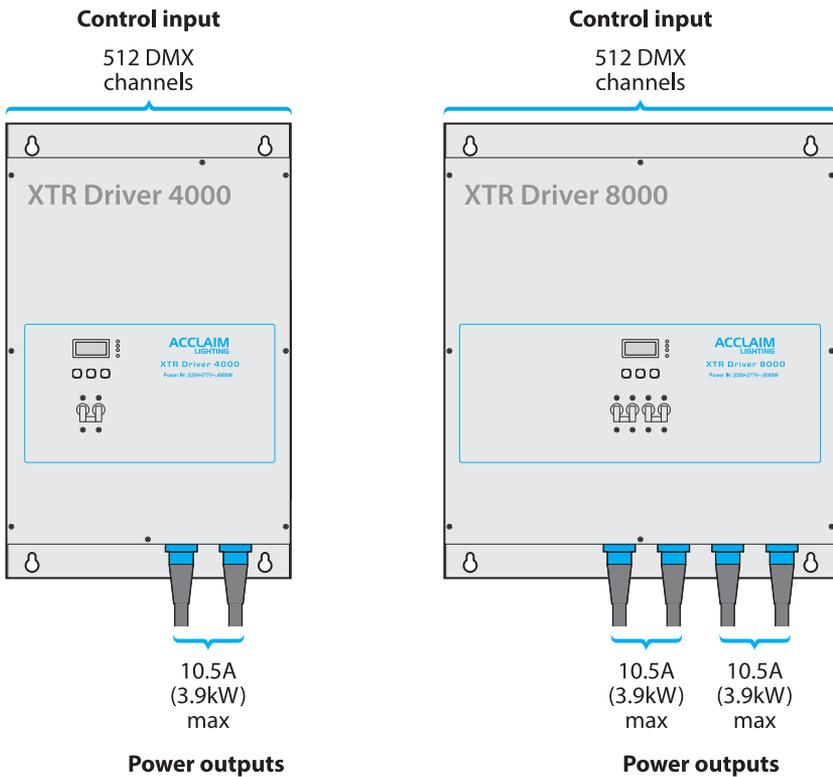
The XTR Driver can accept either current source (0-10V) or current sink (1-10V) inputs.

FIXTURE LIMITS

The total number of fixtures that can be driven and uniquely addressed by a single XTR Driver (in DMX mode) is determined by the power requirements for each fixture together with their emitter types and control modes. Different types of XTR Linear fixtures can easily be mixed within a single run. Please refer to the user guide of each XTR fixture for further details.

CONTROL INPUT CONSIDERATIONS

The single DMX universe input is duplicated across all outputs, meaning there are a total of 512 unique addresses available within each XTR Driver. The maximum number of fixtures that can be uniquely addressed by each XTR Driver is determined by the length, emitter type and operation mode of each linear fixture. This could vary from a single channel for a 1' (305mm) linear fixture with white emitters to 16 channels for a 4' (1220mm) fixture with RGBW emitters, operating in 4 Group mode. This produces a corresponding range of uniquely controlled fixtures from 512 to 32 respectively. Additionally, any grouping of fixtures can be set to the same control addresses, as required.



POWER OUTPUT CONSIDERATIONS

Independently of control considerations, the maximum number of fixtures that can actually be driven by each XTR Driver is determined by the collective power requirements for the fixtures. Each pair of XTR Driver output ports (XTR Driver 4000: one pair, XTR Driver 8000: two pairs) can supply a maximum current of 10.5A between them (3.9kW). For instance, 700' (213m) of Linear XTR **EO** fixtures (5W per foot) can be driven from a single pair of outputs (all from one output or shared between the pair); whereas a run of Linear XTR **SO** fixtures (12W per foot) would face a limit of 300' (91m) across a pair of outputs.

OUTPUT FEEDS

XTR Drivers provide either two (XTR Driver 4000) or four (XTR Driver 8000) output ports for connection to daisy-chains of XTR-compatible fixtures. Each output port combines power and DMX control signals within the same multi-cored cables.

To support such long daisy-chains of many fixtures, XTR Drivers create and output a special high voltage direct current feed. This high voltage means that extra care must be taken when installing and using XTR devices.



HIGH VOLTAGE

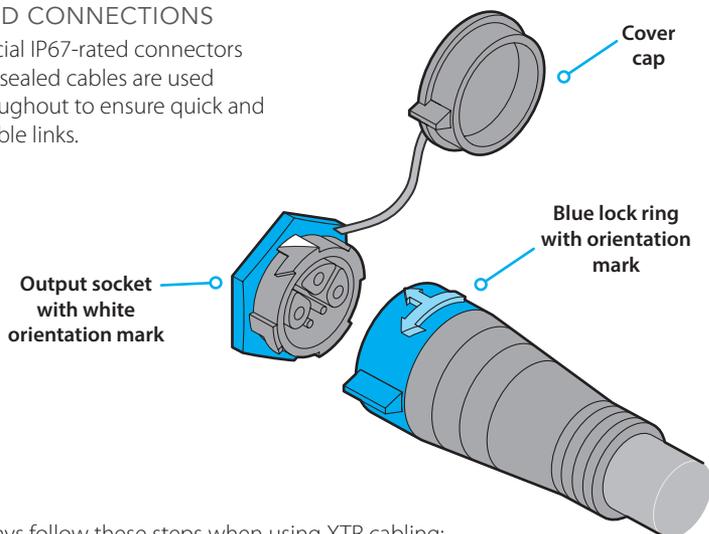
WARNING - HIGH VOLTAGE

This device produces high voltage outputs (up to 400VDC) which could cause severe personal injury or death if misused:

- **Always** isolate power before connecting or disconnecting links.
- Installation to be carried out by **certified electricians** only.
- Use only **approved** cables and connectors.
- Check all connections are correctly made **before** energizing.
- **Do not** open the driver enclosure, even when isolated.

FEED CONNECTIONS

Special IP67-rated connectors and sealed cables are used throughout to ensure quick and reliable links.



Always follow these steps when using XTR cabling:

- **Ensure that the XTR Driver is isolated from the mains supply.**
- At each connection, release the cover caps from both the socket and plug.
- Align the orientation marks of the socket and plug - and then push them together so that the blue lock ring clicks fully into place.
- As each connection is made, ensure that the connector is fully locked onto the socket.
- **Any unused output ports on the XTR Driver must have their cover cap securely fixed in place.**
- **At the final fixture in a daisy-chain run, install an XTR End Cap (see page 3) to seal off the power bus and also correctly terminate the DMX control feed.**
- Wherever possible, make the connection to the XTR Driver as the final link.
- To release a connection, ensure that the XTR Driver is isolated, then twist the blue lock ring of the plug counter-clockwise to release the connection.



RUN LENGTHS

As discussed in “Power output considerations” on page 8, the maximum number of fixtures that can actually be driven by each XTR Driver is determined by the collective power requirements for the connected fixtures. Further details can be found within the user guides for the XTR fixtures being used.

In addition to remaining within the maximum permitted length of *fixtures* in a single run (or dual runs across a shared pair of XTR Driver outputs), further consideration must be given to the overall length of the **whole installation**, ie the total length fixtures in the run **plus** all their additional feed and link cabling. For an XTR Driver, a single run (or dual runs across a shared pair of XTR Driver outputs):

- The overall maximum run length (fixtures plus all extra cabling) must not exceed **800’ (243m)**.

IMPORTANT: Ensure the voltage drop across the entire run does not exceed 9%.



IMPORTANT CABLING CONSIDERATIONS

During installation, protection of the XTR cabling must always be fully considered:

- Wherever possible, cable runs should be positioned to make them beyond normal reach within any installation.
- For long cable runs, external runs and in areas where public contact and/or accidental damage is possible, the XTR cabling should be contained within protective conduit. Minimum spec: Schedule 40, 1.5” (ID: Ø1.61”, OD: Ø1.74”).
- Additional power cabling: Where power feeds require the use of non-XTR cabling, the power cores should be 14 AWG minimum.
- Additional DMX control cabling: For initial control runs leading to the XTR Driver, these are recommended:
 - Indoor exposed or inside conduit above grade: Belden 9842
 - Indoor plenum: Belden 82842
 - Outdoor exposed, direct burial, or inside conduit below grade: Belden 3107DB
- Please consult and adhere to all relevant local codes.

Schedule 40
1.5” conduit

XTR cabling

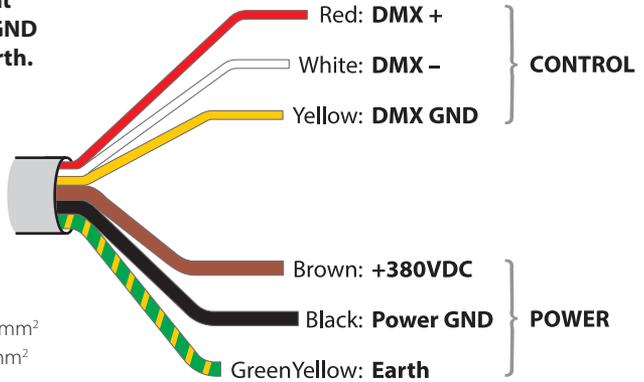
OUTPUT TAILS

The supplied output tails are used when connections to non-XTR cables need to be made from the XTR Driver. The color designations of the output tails (and also the optional feed cables) are as follows:

IMPORTANT: Ensure that power earth and DMX GND are both tied to true earth.

XTR output tails and optional XTR feed cables both use these colors for their internal wires:

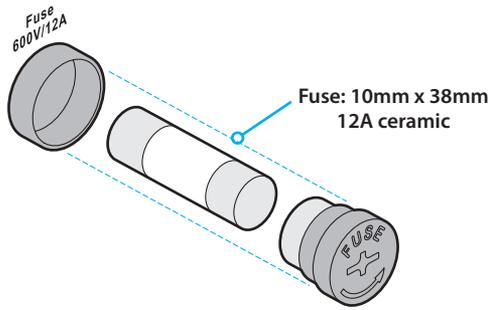
Control cores: 24 AWG / 0.25mm²
Power cores: 14 AWG / 2.5mm²



OUTPUT FUSES

Each XTR Driver output has an adjacent protective fuse.

IMPORTANT: Do not attempt to remove the fuse while the XTR Driver is powered on. Always isolate power fully before changing a fuse.



HIGH VOLTAGE

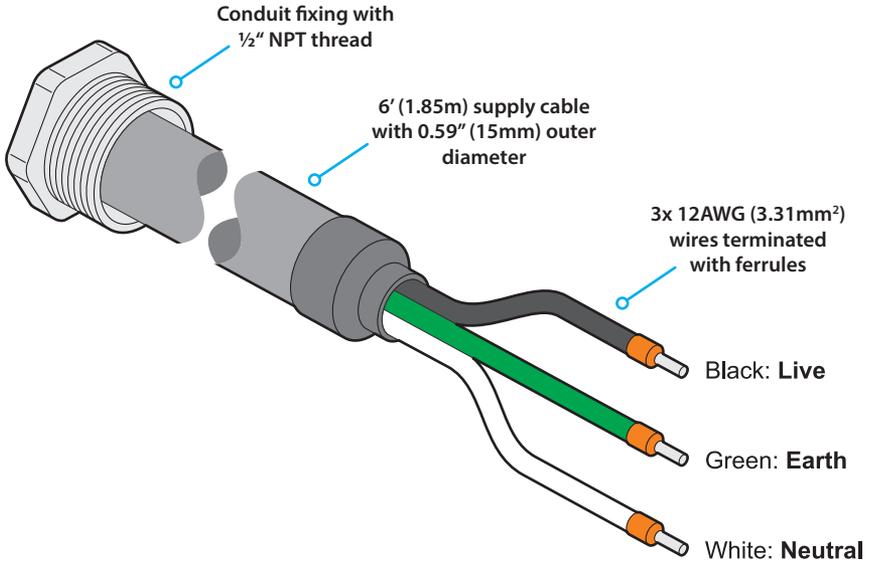
WARNING - HIGH VOLTAGE

This device produces high voltage outputs (up to 400VDC) which could cause severe personal injury or death if misused:

- **Always** isolate power before connecting or disconnecting links.
- Installation to be carried out by **certified electricians** only.
- Use only **approved** cables and connectors.
- Check all connections are correctly made **before** energizing.
- **Do not** open the driver enclosure, even when isolated.

POWER INPUT(S)

- XTR Driver 4000 models require a single 220-277VAC supply, up to 20A.
- XTR Driver 8000 models require dual 220-277VAC supplies, up to 20A each.
- Power inputs should be supplied via suitable protective breakers.

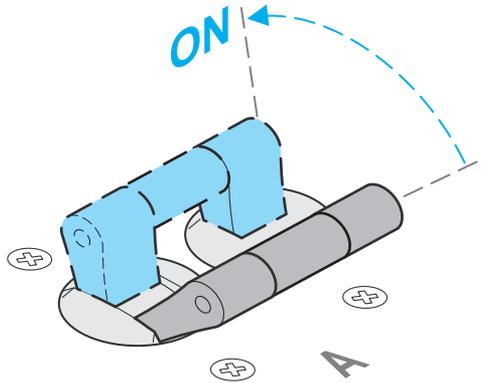


POWERING ON AND OFF

- On XTR Driver 4000 models, both output ports are controlled by the single breaker on the front panel.
- On XTR Driver 8000 models, the left hand two output ports are controlled by breaker A and the right hand two outputs are controlled by breaker B.

TO POWER ON

- 1 Check that all connections have been made correctly (see page 9) and all fixtures within the daisy-chain(s) are ready to be powered.
- 2 Enable any external feed breakers on the power supply side.
- 3 Raise the breaker on XTR Driver front panel to the ON position.
The outputs will be energized and the internal cooling fans will start.
- 4 On XTR Driver 8000 models, repeat step 3 for the second pair of feed outputs, if necessary.



TO POWER OFF

- 1 Wherever possible, fade the fixtures to zero for a short period to reduce the power draw on the driver circuitry.
- 2 Click the front panel breaker to the OFF position.
The cooling fans will continue for a short period to ensure the power components are sufficiently cooled and the affected output ports will fade down to zero.
- 3 On XTR Driver 8000 models, repeat step 1 for the second pair of feed outputs, if necessary.



HIGH VOLTAGE

WARNING - HIGH VOLTAGE

This device produces high voltage outputs (up to 400VDC) which could cause severe personal injury or death if misused:

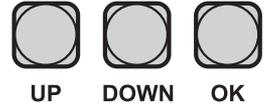
- **Always** isolate power before connecting or disconnecting links.
- Installation to be carried out by **certified electricians** only.
- Use only **approved** cables and connectors.
- Check all connections are correctly made **before** energizing.
- **Do not** open the driver enclosure, even when isolated.

OPERATION

Once power has been applied (see page 14) you need to ensure that the control type shown on the XTR Driver menu matches the control input method being used: DMX, DALI, 0-10V (source) or 1-10V (sink). This is done using the front panel menu.

USING THE MENU

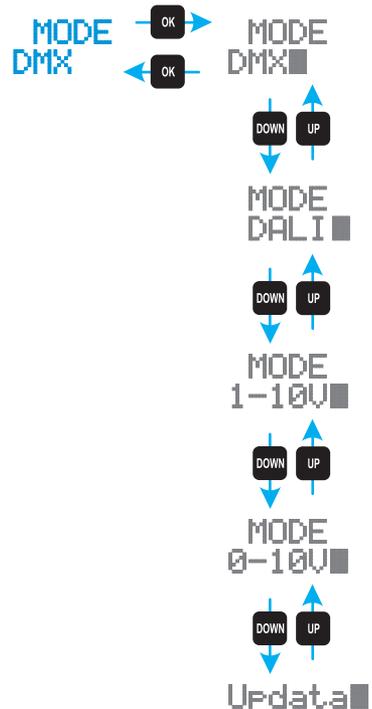
Use the three control buttons to choose the required control method. The display has a backlight timeout and will go dark roughly 30 seconds after the last button press - tap any key to restore.



TO CHOOSE A CONTROL METHOD

- 1 Press the **OK** button to enter the menu. A flashing ■ character will be shown.
- 2 Use the **UP** and **DOWN** buttons to step through the control options.
- 3 When the required control method is displayed, press the **OK** button to fix it and exit the menu. The chosen method will be retained.

Note: The final option (Updata) is for internal use only when firmware updates need to be applied.



FRONT PANEL INDICATORS

The four front panel indicators provide useful status information.

DALI	Flashing Off	Signal OK No signal
DMX	Flashing	DMX mode enabled
0-10V/1-10V	Flashing	Analog mode enabled
POWER	On	Power enabled

-  DALI
-  DMX/RDM
-  0-10V/1-10V
-  POWER

FURTHER INFORMATION

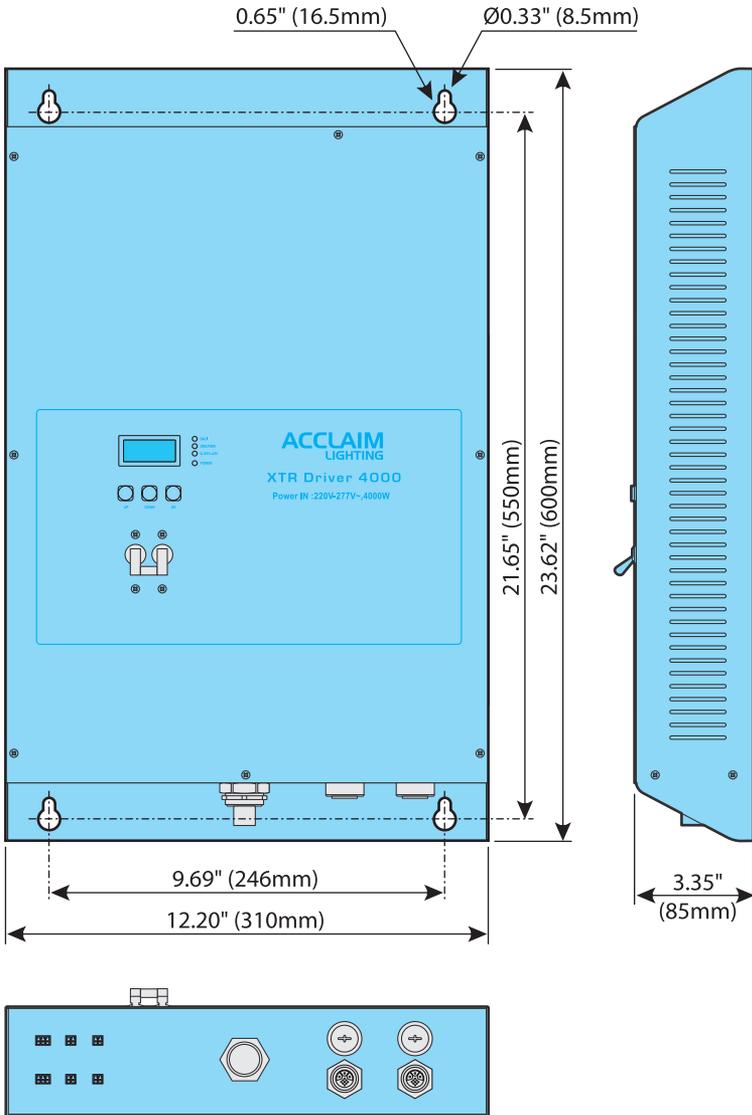
SPECIFICATIONS

Power input(s)	200-277VAC, 50/60Hz (XTR Driver 8000 model requires dual inputs)
Control inputs	DMX/RDM, DALI, 0-10V (source) or 1-10V (sink) via individual screw terminal connectors
Outputs	4000: 1 x 3.9kW, 380VDC (10.5A maximum) + DMX/RDM (shared between two output ports) 8000: 2 x 3.9kW, 380VDC (10.5A maximum) + DMX/RDM (each shared between two output ports; four in total) via multipin IP67-rated XTR connectors
Ingress protection	IP20, dry location
Impact protection	IK02, protection against 0.2 joule impact
Operating temperature	14°F to 131°F (-10°C to 55°C)
Weight	4000: 21 lbs (9.52 kg) 8000: 42 lbs (19.0 kg)
Certifications	

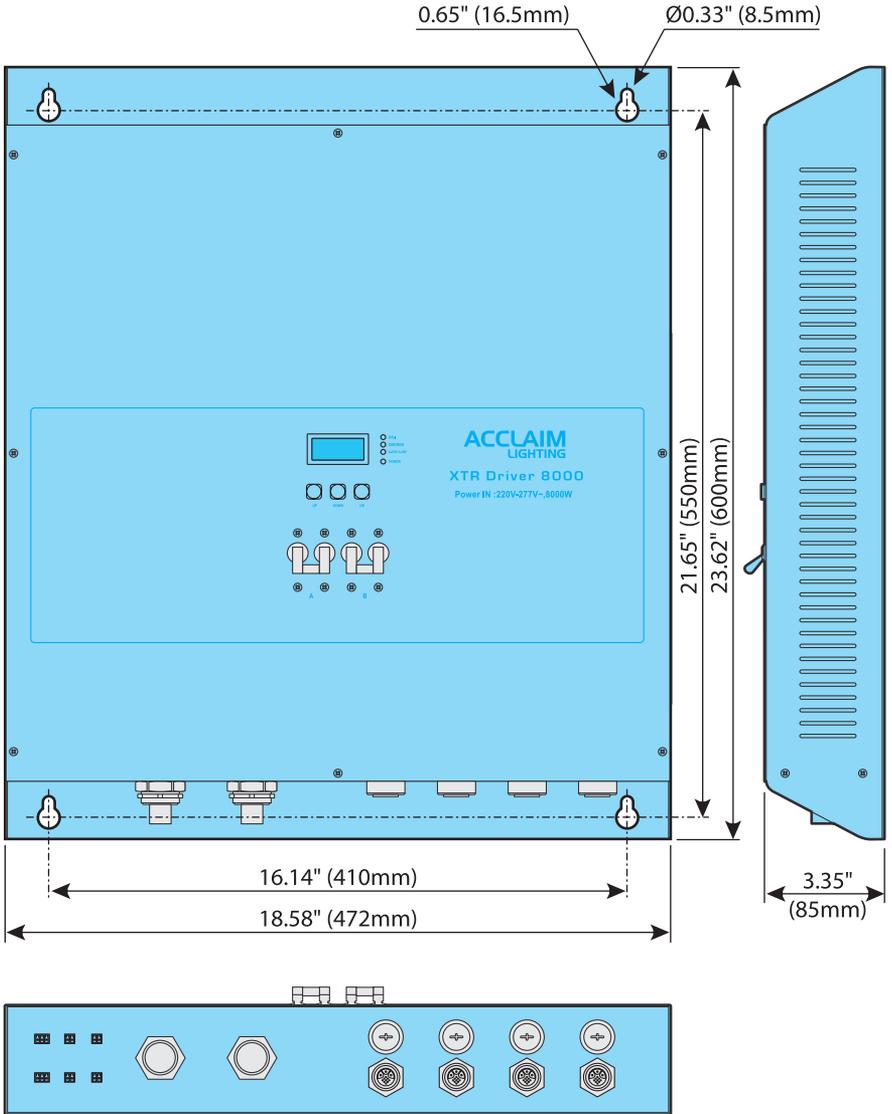


DIMENSIONS

XTR DRIVER 4000



XTR DRIVER 8000



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