Chroma-Q®
Inspire Mini™
Terminal Strip

User Manual

Version 1.1 March 2016, Software Version 1.01

Warranty Statement

Chroma-Q warrants to the original purchaser, with proof of purchase, that its delivered products shall be free from defects in material and workmanship under normal use for a period of 36 months from date of shipment.

Chroma-Q will repair, or at its option, provide an equivalent item or replace, the defective product during the stated warranty period. This warranty applies only to the repair or replacement of the product and only when the product is properly handled, installed and maintained according to Chroma-Q instructions. This warranty excludes defects resulting from improper handling, storage, installation, acts of God, fire, vandalism or civil disturbances. Purchaser must notify Chroma-Q in writing within 14 days of noticing the defect. This warranty excludes field labour or service charges related to the repair or replacement of the product.

The warranty contained herein shall not extend to any finished goods or spare parts from which any serial number has been removed or which have been damaged or rendered defective (a) as a result of normal wear and tear, wilful or accidental damage, negligence, misuse or abuse; (b) due to water or moisture, lightning, windstorm, abnormal voltage, harmonic distortion, dust, dirt, corrosion or other external causes; (c) by operation outside the specifications contained in the user documentation; (d) by the use of spare parts not manufactured or sold by Chroma-Q or by the connection or integration of other equipment or software not approved by Chroma-Q unless the Customer provides acceptable proof to Chroma-Q that the defect or damage was not caused by the above; (e) by modification, repair or service by anyone other than Chroma-Q, who has not applied for and been approved by Chroma-Q to do such modification, repair or service unless the Customer provides acceptable proof to Chroma-Q that the defect or damage was not caused by the above; (f) due to procedures, deviating from procedures specified by Chroma-Q or (g) due to failure to store, install, test, commission, maintain, operate or use finished goods and spare parts in a safe and reasonable manner and in accordance with Chroma-Q's instructions (h) by repair or replacement of engines without factory training.

The warranty contained herein shall not apply to finished goods or spare parts which are sold "as is", as "second-hand", as used", as "demo" or under similar qualifications or to Consumables ("Consumables" is defined as any part(s) of goods or part(s) for use with goods, which part(s) of goods or part(s) for use with goods are consumed during the operation of the goods and which part(s) of goods or part(s) for use with goods require replacement from time to time by a user such as, but not limited to, light bulbs).

The warranty contained herein shall not apply, unless the total purchase price for the defective finished goods or spare parts has been paid by the due date for payment.

The warranty contained herein applies only to the original purchaser and are not assignable or transferable to any subsequent purchaser or end-user.

This warranty is subject to the shipment of the goods, within the warranty period, to the Chroma-Q warranty returns department, by the purchaser, at the purchasers' expense. If no fault is found, Chroma-Q will charge the purchaser for the subsequent return of the goods.

Chroma-Q reserves the right to change the warranty period without prior notice and without incurring obligation and expressly disclaims all warranties not stated in this limited warranty.

Disclaimer

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Chroma-Q products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent. Chroma-Q sole warranty is that the product will meet the sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

Chroma-Q reserves the right to change or make alteration to devices and their functionality without notice due to our on going research and development.

The Chroma-Q Inspire Mini range has been designed specifically for the lighting industry. Regular maintenance should be performed to ensure that the products perform well in the entertainment environment.

If you experience any difficulties with any Chroma-Q products please contact your selling dealer. If your selling dealer is unable to help please contact support@chroma-q.com. If the selling dealer is unable to satisfy your servicing needs, please contact the following, for full factory service:

Outside North America:	North America:
Tel: +44 (0)1494 446000	Tel: 416-255-9494
Fax: +44 (0)1494 461024	Fax: 416-255-3514
support@chroma-q.com	support@chroma-q.com

For further information please visit the Chroma-Q website at www.chroma-q.com.

Chroma-Q and Inspire Mini are trademarks, for more information on this visit www.chroma-q.com/trademarks.

The rights and ownership of all trademarks are recognised.

Important Notice:

As per the requirements in the Occupational Safety and Health Administration standards for product approval, please refer to the OSHA web pages http://www.osha.gov/dts/otpca/nrtl/ for information on the list of Nationally Recognized Testing Laboratories (NRTLs) and the scope of recognition.

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1. Product overview
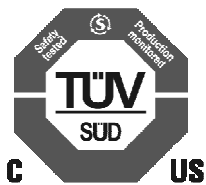
The new Chroma-Q® Inspire Mini™ LED house light is a powerful and compact, multi-purpose creative lighting tool that compliments the award-winning Inspire™ fixture. The Inspire Mini continues to utilise some of the innovative core technologies found in the incredibly popular Chroma-Q Color Force™ range. The fixture has a wide 65 degree beam angle and features a shorter housing designed for venues with low ceilings or balconies. The Inspire Mini provides a choice of beautiful whites, soft pastels and bold saturates - all from one fixture. By incorporating industry standard DMX-512 control to the external control box, the Inspire Mini is able to integrate seamlessly with an existing DMX infrastructure and can be controlled by any DMX supported lighting console. The Inspire Mini provides an excellent selection of stunning mixed colours and 'true' whites with no unsightly colour separation shadows. The Inspire Mini also features an energy-efficient LED design providing reduced maintenance and running costs.

The fixture is built with an internal power supply and controlled remotely from the Inspire External Control Box through the ANSI E1.11 USITT DMX 512-A protocol.
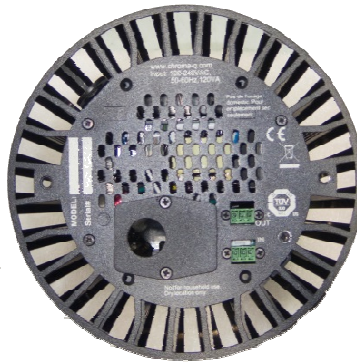
Note: HANDHELD COLOUR METERS

Handheld Colour Meters provide a limited measuring range for LED fixtures, which results in inconsistent and unreliable data.

All photometric values listed in this document are based on testing and measurements conducted by certified independent laboratories with reference to the IES standards.

1.1 Inspire External Control Box

The Inspire External Control Box is a 19" rack mount external remote addressing unit for the control of the Inspire Mini Terminal Strip fixture via DMX 512.

Three control data output ports are available for the control of up to 32 daisy-chained fixtures from each port. DMX data input and through connections from an external DMX control console are via XLR 5-pin.

The Inspire External Control Box is built with Plug-in Terminal Block connectors for AC power input, Emergency power input, control data output signals and XLR DMX In and Thru connections.

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2. Operation

2.1 Unpacking the Units

The Inspire Mini Terminal Strip package includes:

- 1 fixture unit
- Safety chain
- Quick Start Guide
- 2 plug-in terminal blocks for DMX control data in/through
- 1 plug-in terminal block for AC power input

We recommend that you keep the original packaging in case the item needs to be returned.

2.2 Cabling

System:

The Inspire External Control Box has 3 control data outputs (Port 1, 2, 3). Each control data output provides remote control for up to 32 daisy-chained Inspire Mini Terminal Strip fixtures. The maximum length of the DMX cable from each data output of the External Control Box to the **first** Terminal Strip fixture must not exceed 500 ft (152 m).

Figure 1: System Diagram
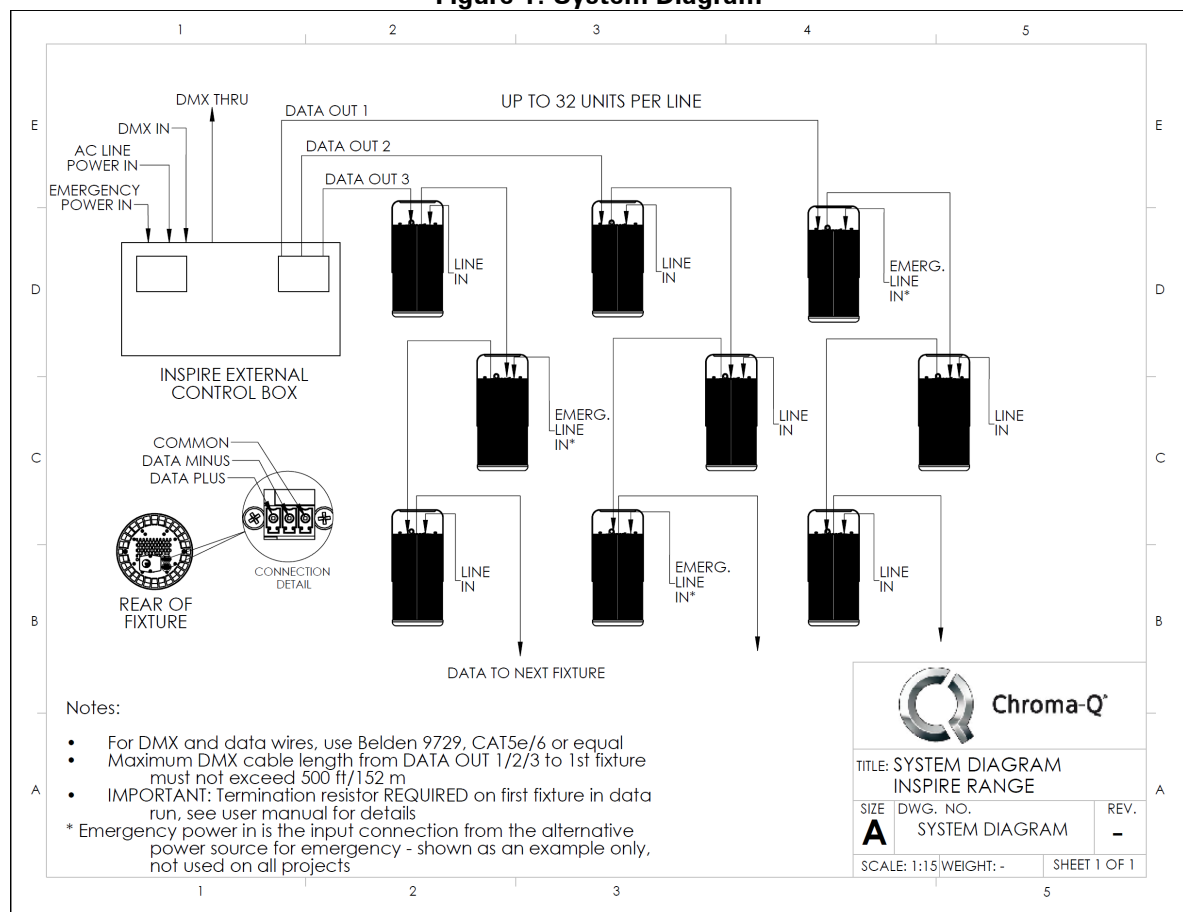
Inspire Mini Terminal Strip fixture wiring:

To connect the wiring of the AC power input cable:
1. Remove the Power Input Cover Plate (Figure 2)
2. Insert the power cable with the appropriate cable strain relief through the cover plate
3. Unplug the Terminal Block Plug from the Header and connect the wiring for the AC power input through the hole and into the Terminal Block Plug (Figure 3)
4. Plug the wired Terminal Block Plug into the Terminal Block Header (Figure 3)
5. Put back and fasten the cover plate

To connect the wiring of the control data cables:
1. Connect the wiring for the control data cables (In/Out) into the Terminal Block Plugs (Figure 4)
2. The control cable connected to the **first** fixture from each data output **MUST** be terminated with a 120 Ω resistor. See Inspire Mini Terminal Strip Data Cable Termination on the next section.
3. Plug the wired Terminal Block Plugs into the Terminal Block Headers (Figure 4)

Note: The control cable connected to the **first** fixture from each data output **MUST** be terminated with a 120 Ω resistor. See Inspire Mini Terminal Strip Data Cable Termination on the next section.
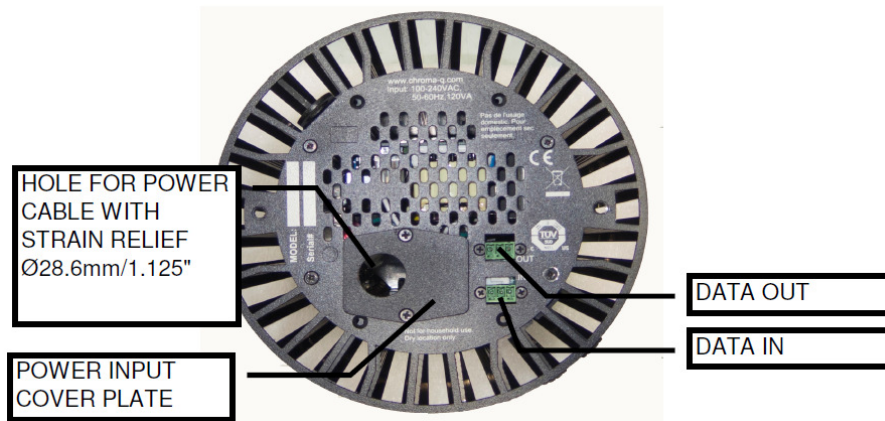
Figure 2

Figure 3: AC Power Cable Wiring

MAINS PCB HEADER

Not for household use.
Dry location only.

TERMINAL BLOCK

LIVE
NEUTRAL
GROUND

CAUTION!
REFER TO THE MARKS ON THE MAINS PCB HARNESS FOR WIRING CONNECTIONS.
SEE DIAGRAM BELOW.

LIVE   NEUTRAL   GROUND

TERMINAL BLOCK

CAUTION!
REFER TO THE MARKS ON THE MAINS PCB HARNESS FOR WIRING CONNECTIONS.

MAINS PCB HARNESS
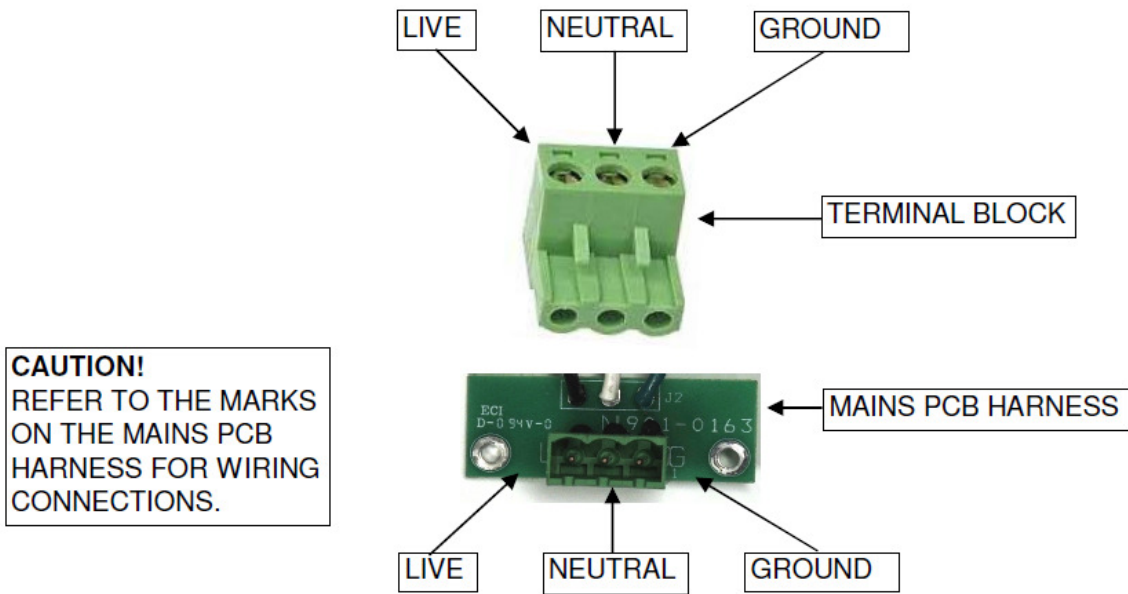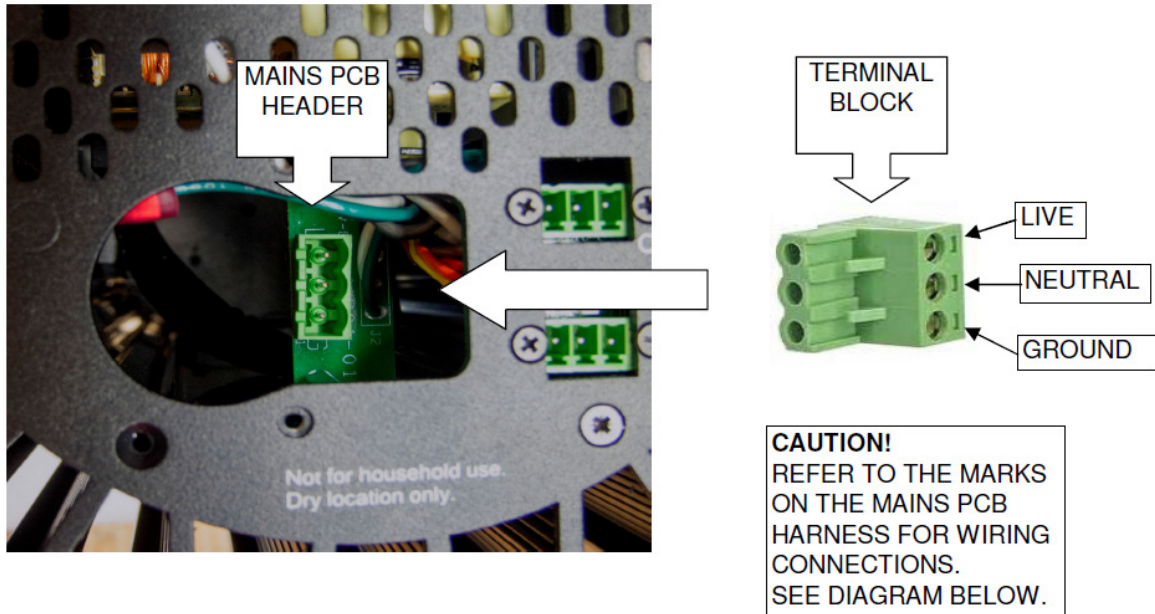
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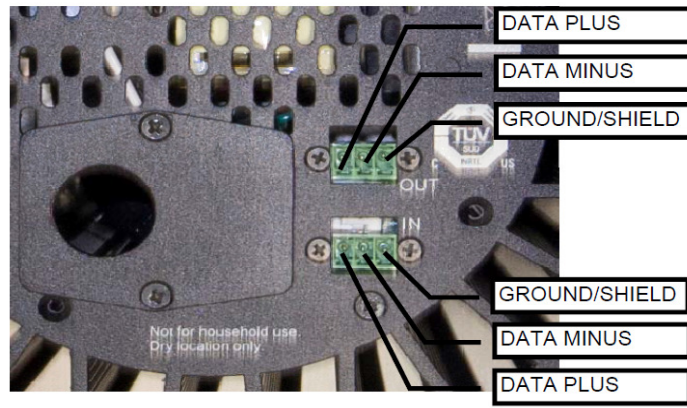
LIVE   NEUTRAL   GROUND

Figure 4: Data Cable Wiring

IMPORTANT! Inspire Mini Terminal Strip Data Cable Termination:

The data cable connection from each Data Output of the External Control Box to the **first** Inspire Terminal Strip fixture MUST be terminated with a 120 ohm resistor. Insert a 120 ohm resistor into the Terminal Block Plug (Data Plus and Data Minus) and then plug into the DMX IN header of the **first** Inspire Terminal Strip fixture. (Figure 5 & 6)
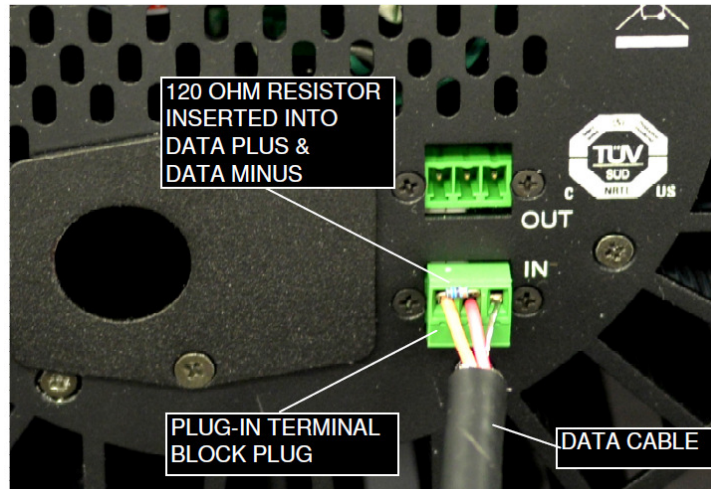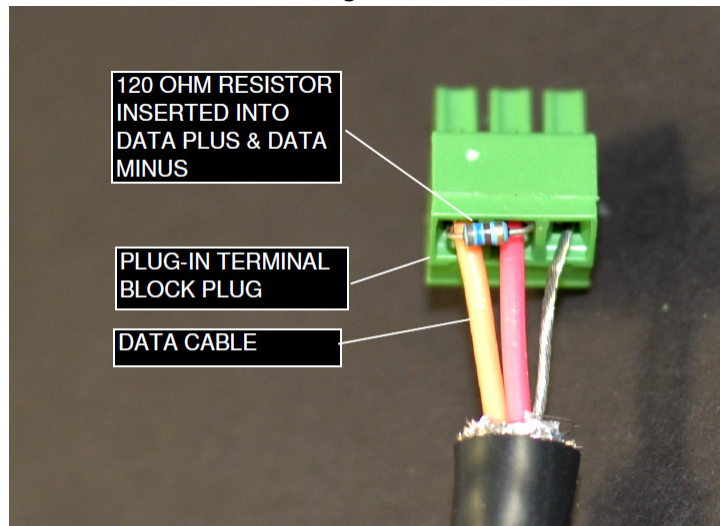
Figure 5

Figure 6

XLR 5-pin Cable:

Pin#	Function
1	Common (Screen)
2	Data Minus
3	Data Plus
4	Spare Data Minus
5	Spare Data Plus

Power Cable Color Code:

EU	North America	Connections	
Green and Yellow	Green	Earth (E)	Ground (Green)
Blue	White	Neutral (N)	Neutral (Silver)
Brown	Black	Live (L)	Hot (Gold)

Important Notice:
The maximum length of the data cable from each data output of the External Control Box to the first Terminal Strip fixture must not exceed 500 ft (152 m).

The use of an opto-splitter for DMX signal distribution is highly recommended when several control boxes are not plugged into the same power source.

2.3   Mounting

The Inspire Mini Terminal Strip fixture is built with a mounting bracket for overhead hanging applications. The mounting bracket has a 1/2" hole suitable for M10 & M12 bolts.

Secure the fixture with a safety cable. A provision for a fixing hold is built into the fixture.

2.4   Optics

The Inspire Mini Terminal Strip fixture is built with Wide lens with a beam angle of approximately ~ 65°.

2.5   Control

The Inspire Mini Terminal Strip fixture is controlled remotely through the Inspire External Control Box via DMX protocol. For control menu details see the User Manuals for the Inpire External Control and Inspire External Control UL924 units.

## 2.6   Thermal Performance

The internal cooling system of the Inspire Mini Terminal Strip is by convection and the fixture is built with automatic protection. The fixture's automatic protection reduces the output when the internal temperature reaches the maximum limit due to extreme ambient conditions.

2.7   Updating the LED engine software

The software for the LED engine module of the Terminal Strip can be uploaded directly into the fixture through the Uploader using an XLR5 to Terminal Block cable adaptor. The upload process can be performed to one fixture at a time only. (See diagram below)

1. Download and extract the "module_rgbw1_Inspire_v2.2.hex" from http://www.chroma-q.com/support/downloads.asp under the "Software" column.
2. Connect the Chroma-Q Uploader to your PC.
3. Erase the previous file and copy the "module_rgbw1_Inspire_v2.2.hex" into the Uploader.
4. Connect the Uploader to the fixture with a XLR 5-pin to Terminal Block cable adaptor.
5. Power-up the fixture.
6. The Uploader display shows the software name and version, and "Ready".
7. Press the GO button once to execute the uploading.
8. The Red indicator light on the GO button blinks and the Uploader display shows a simulated arrow indicating the uploading process.
9. All the green LEDs of the fixture will light up (low intensity) to indicate completion of a successful Upload.
10. The Uploader display shows "DONE" upon completion of the upload.
11. Power-cycle the fixture.
12. Repeat step 6 to step 10 if the uploading process is interrupted (power and/or data).

(See the Quick Start Guide of the Chroma-Q Uploader)

Cable Adaptor:
XLR5 to Terminal Block
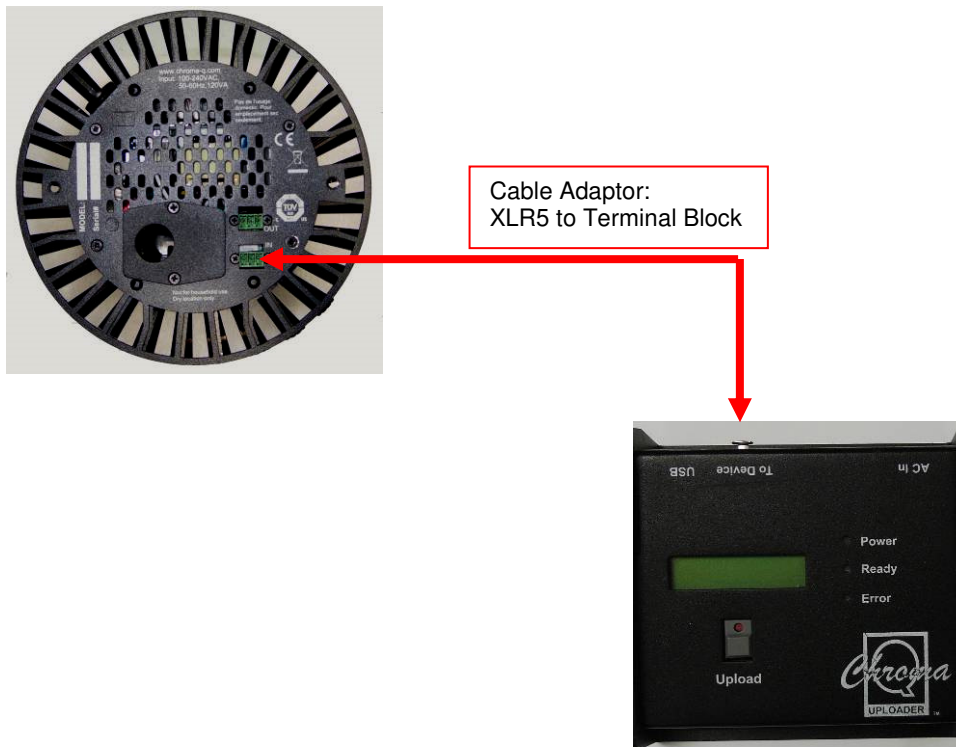
3. Troubleshooting

Troubleshooting is a process of elimination. First, rule out the other field factors (i.e. bad connections, faulty cables and power supplies). For technical support and/or parts, please contact your selling dealer or the offices listed in this manual.

| Symptom	Possible Cause	Solution
Fixture does not respond to DMX control.	• The External Control Box is set to the wrong or different DMX address. • Bad cable connecting DMX control and External Control Box. • Bad cable connecting DMX control and fixture. • Bad in/through connection between daisy-chained fixtures. • Bad in/through connection between daisy-chained External Control Boxes.	• Check DMX address and Mode settings. • Check/replace DMX run from the console to the External Control Box. • Check/replace DMX runs from the External Control Box to the fixtures. • Check/replace DMX runs between daisy-chained fixtures. • Check/replace DMX runs between daisy-chained External Control Boxes.
Low LED output.	• Internal temperature of the fixture is over the limit.	• Check area ventilation.
Flicker	• No termination resistor	• Check the first fixture in each run if it has the 120 Ω terminating resistor.

4. Specification
4.1 Technical Specifications

Inspire Mini Terminal Strip

Net Dimensions** (Without Fixings - Width x Height x Depth)	181mm x 251mm x 181mm / 7" x 10" x 7"
Net Weight (Without Fixings)	3kgs / 6.7lbs
Shipping Dimensions – Width x Height x Depth	310mm x 390mm x 310mm / 12.25" x 15.5" x 12.25"
Shipping Weight	4.5kgs / 10lbs
Power & Connections	
Power Supply	Built-in
Power Input Rating	100-240V AC 50-60Hz 120VA
Power Factor	0.9
Power Consumption	75W @ 120/230V AC (max.)
Inrush Current	32A @ 120V AC; 68A @ 230V AC
Idle Power Consumption	3.5W @ 120V AC; 5W @ 230V AC
Typical Power & Current	Measurements done with all LEDs at maximum intensity. Measurements made at nominal voltage. Allow for a deviation of +/- 10%.
Power connector Input	Terminal Block: plug-in screw connector (Input only)
Data Connectors In/Out	Terminal Block: plug-in screw connector
Control Protocol	ANSI E1.11 USITT DMX 512-A
Cooling System	Convection
Operating Temperature	0°C to 40°C
Construction	Anodised aluminium extrusion
Colour	Black
Built-In Hardware	Mounting bracket
IP Rating	IP20
Approvals (Pending)	CISPR 22/EN55022 & CISPR 24/EN55024, ICES-003 Issue 4:2004 / FCC Part 15 Subpart B:2010, CSA C22.2 No. 166-M1983: R2008, UL 1573:2003 (R2010), IEC 60598-2-17
Control & Photometric	
LEDs	12 x Neutral White + 6 x RGB
LED Engines	1
LEDs Per Engine	30
Total LEDs	30
Control Modes	RGBW single, RGBW output, Tungsten, LookStore
Dimming Curve	Theatrical
Variable Effects Engine	Yes
Hot Lumen Output (Combined)	3010
Optics	Fully Homogenised
Beam Angle	65° (approx.)
Beam Distribution	Symmetrical direct illumination
CCT	Adjustable 1,000 – 10,000K
Colour Gamut	Performance enhanced
CRI	90
Lamp Life	L70 at 50,000 hours

**For exact measurements please refer to the line drawings below

CE

4.2 Drawings – Dimensions
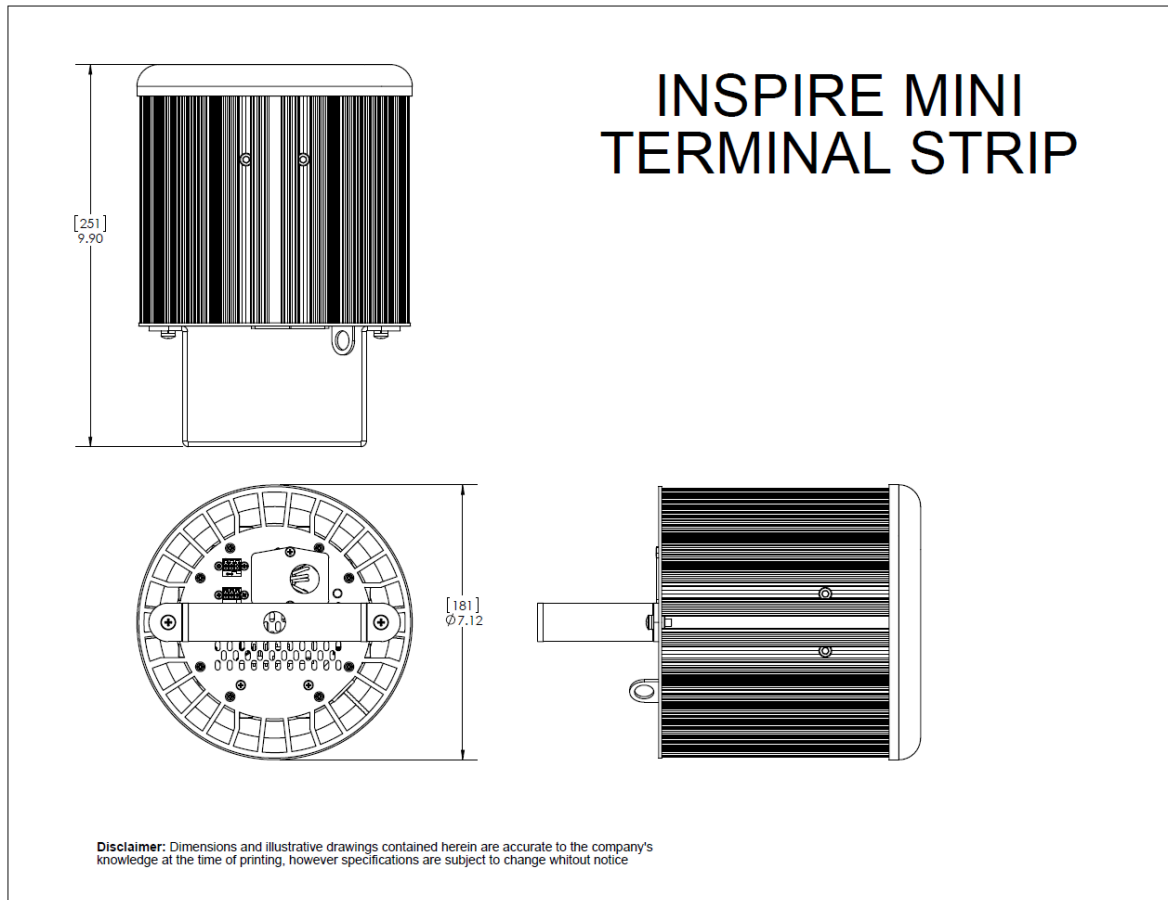
5. Maintenance

With care, the Inspire Mini Terminal Strip fixture and external control box requires little maintenance. However, as the unit is likely to be used in a stage environment we recommend periodical internal inspection and cleaning of any resulting dust and cracked oil residue.

Do not spray liquids on the front or rear panel. If the front enclosure requires cleaning, wipe with a mild detergent on a damp cloth.