Water-Tec.co.uk

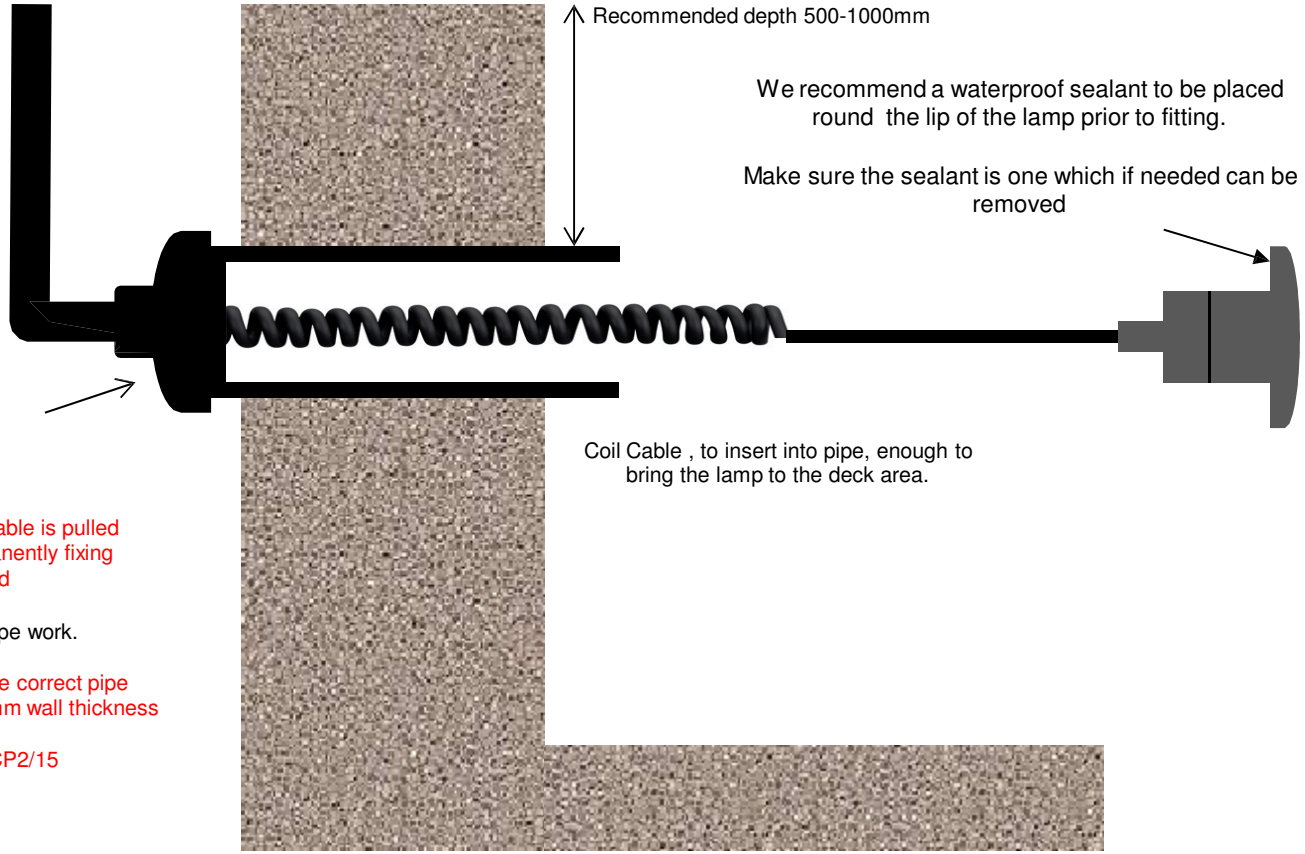
Operation Manual

Index

Index

WT1 & 3-Pipe installation.

The pipe work can be used as conduit for the cable



Note make sure the cable is pulled through before permanently fixing the cap end

1 ¼ & 2" BSP pipe work.

Note you must use the correct pipe
1 ¼ must be PN12 2.2mm wall thickness

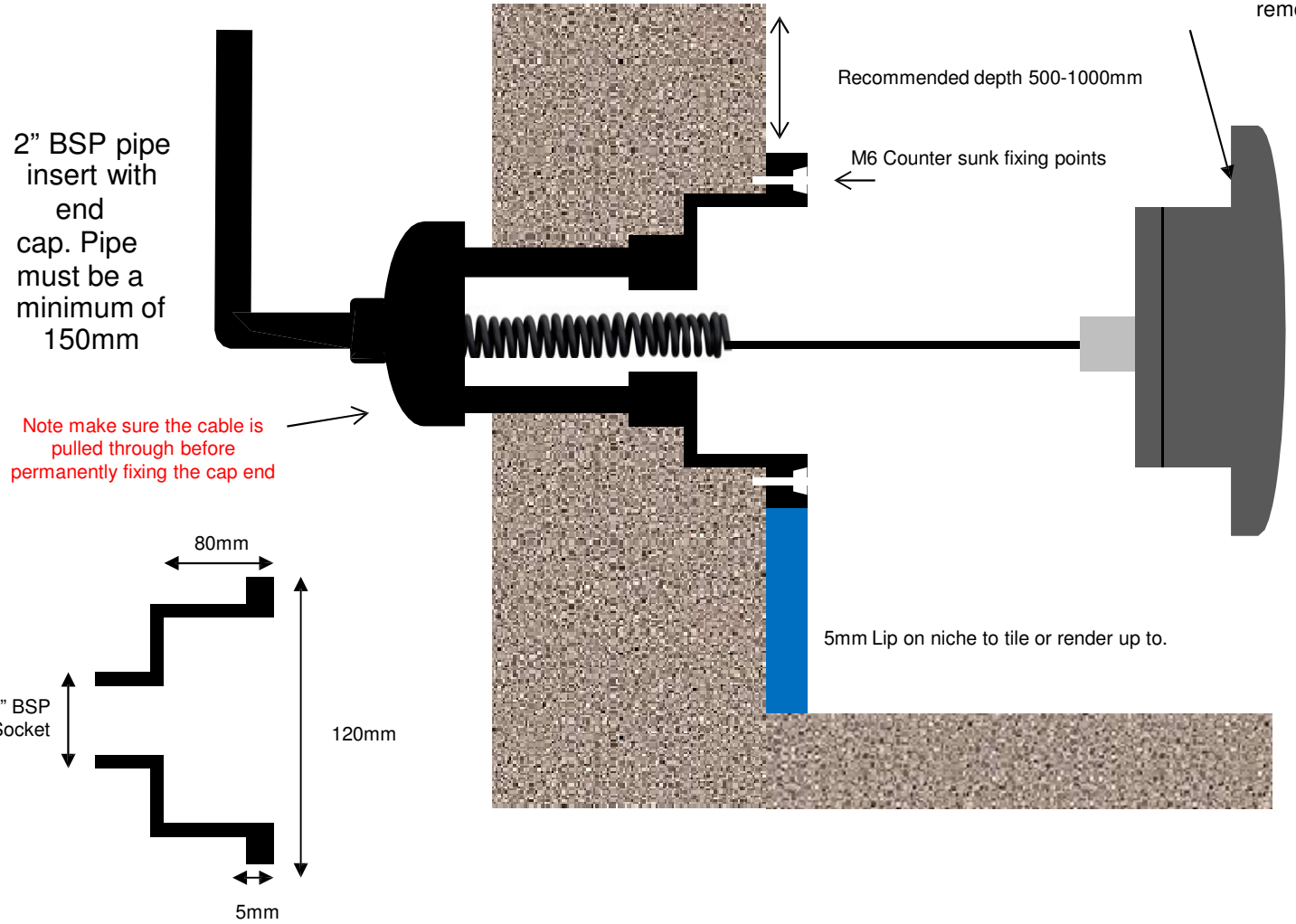
2" I/D 53mm CP2/15

WT4-Niche installation.

We recommend a waterproof sealant to be placed round the lip of the lamp prior to fitting.

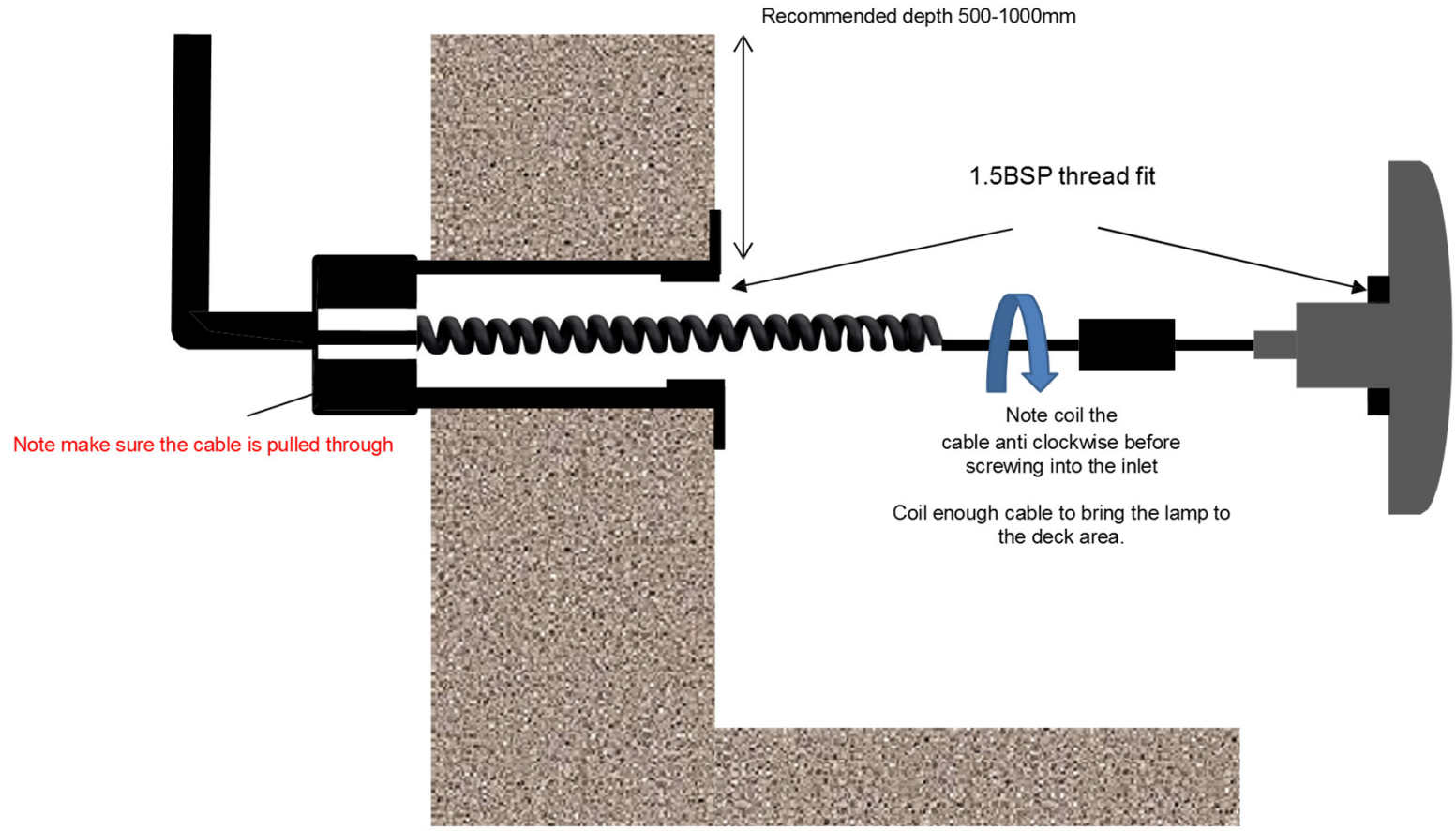
Make sure the sealant is one which if needed can be removed

The pipe work can be used as conduit for the cable

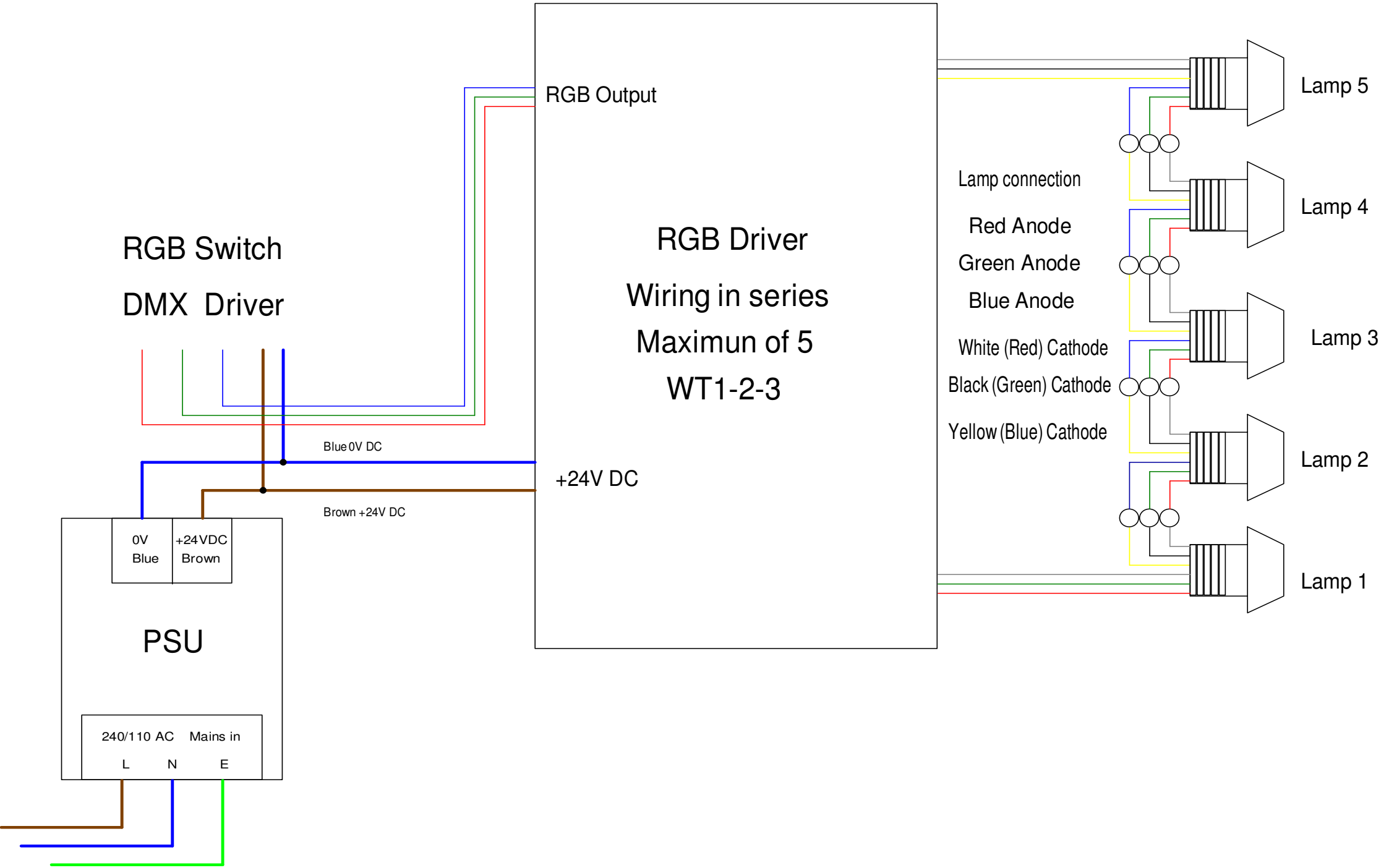


WT2 & 5-Thread Installation.

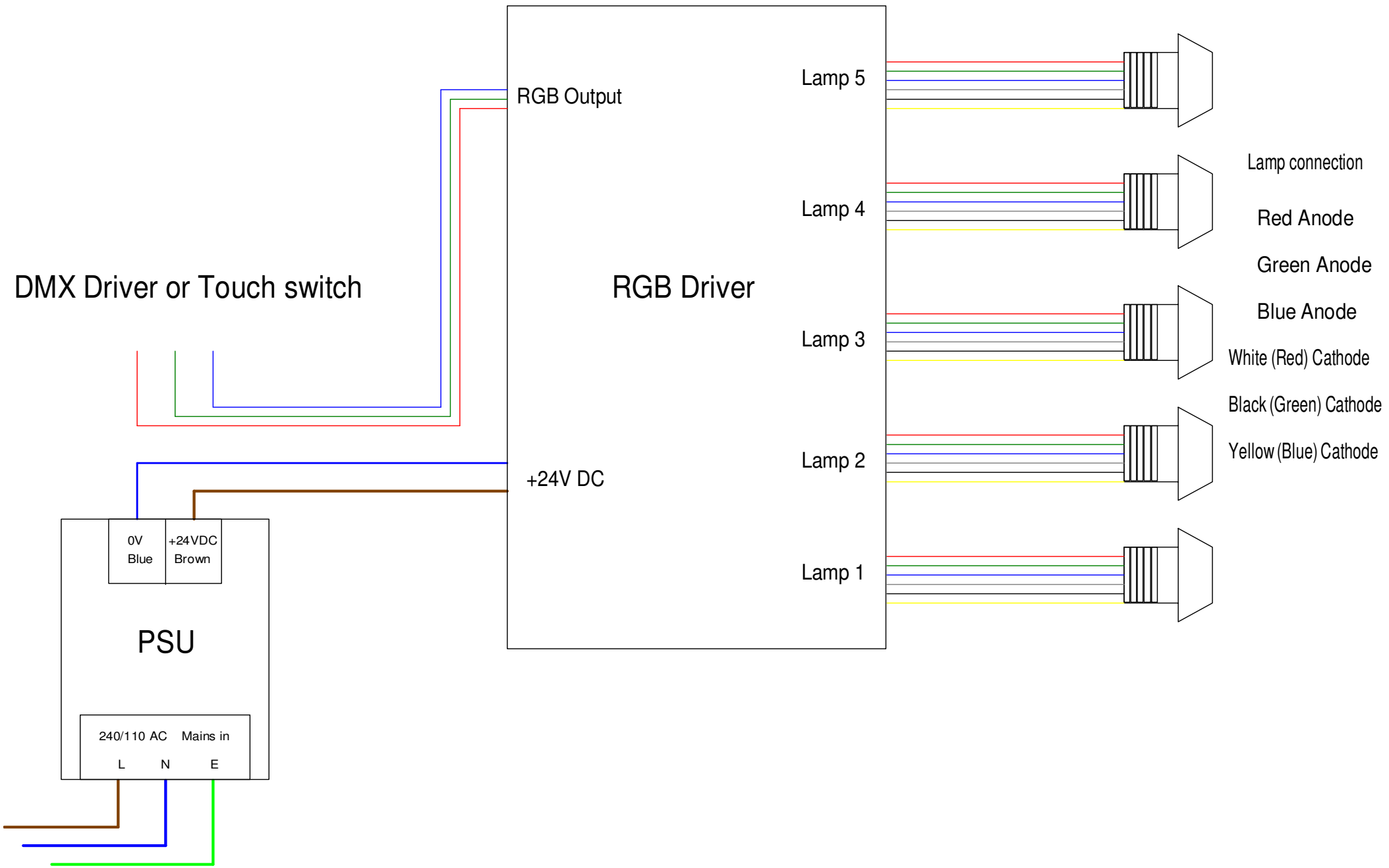
The pipe work can be used as conduit for the cable



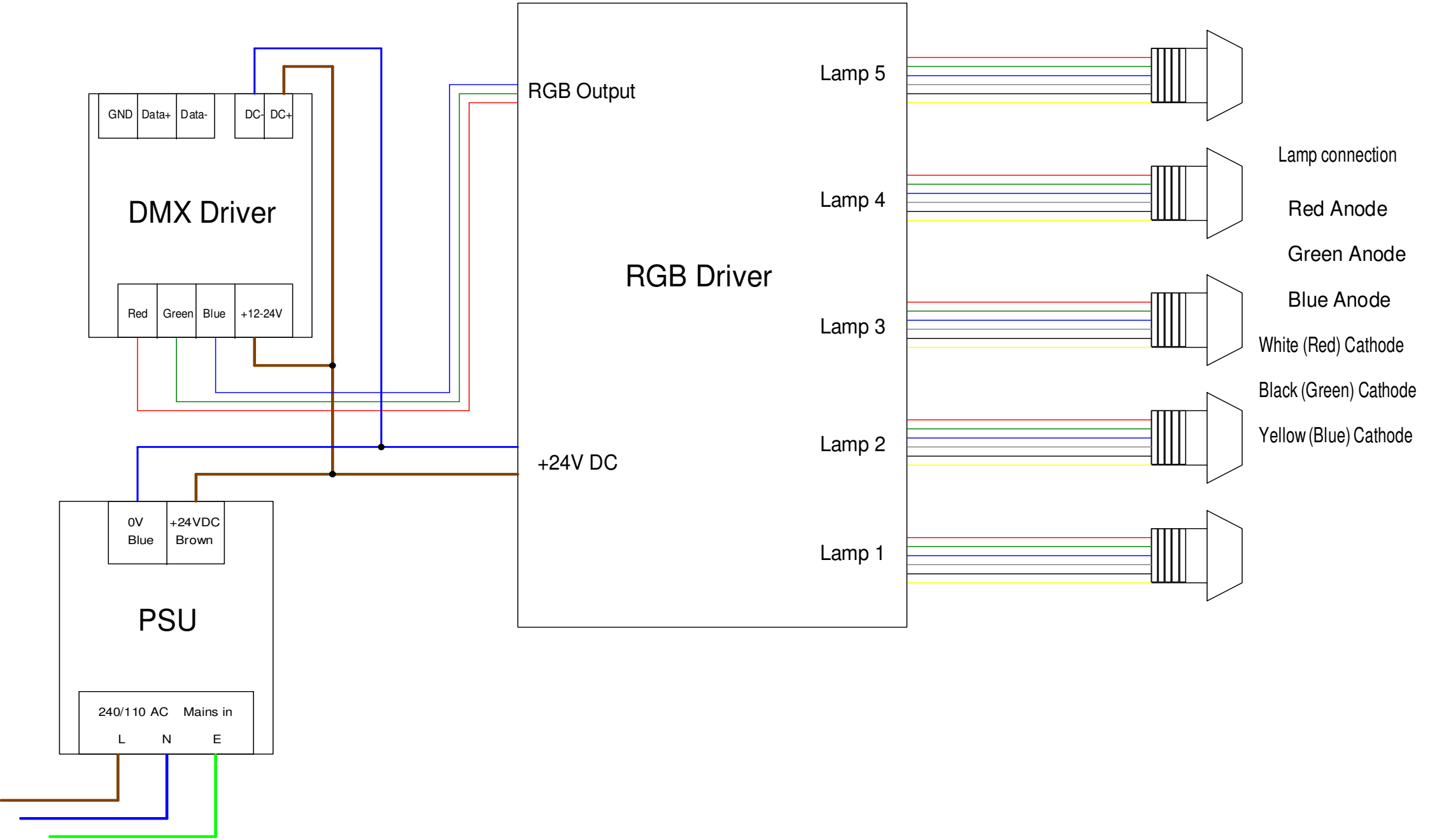
RGB Wiring In series WT1-2-3

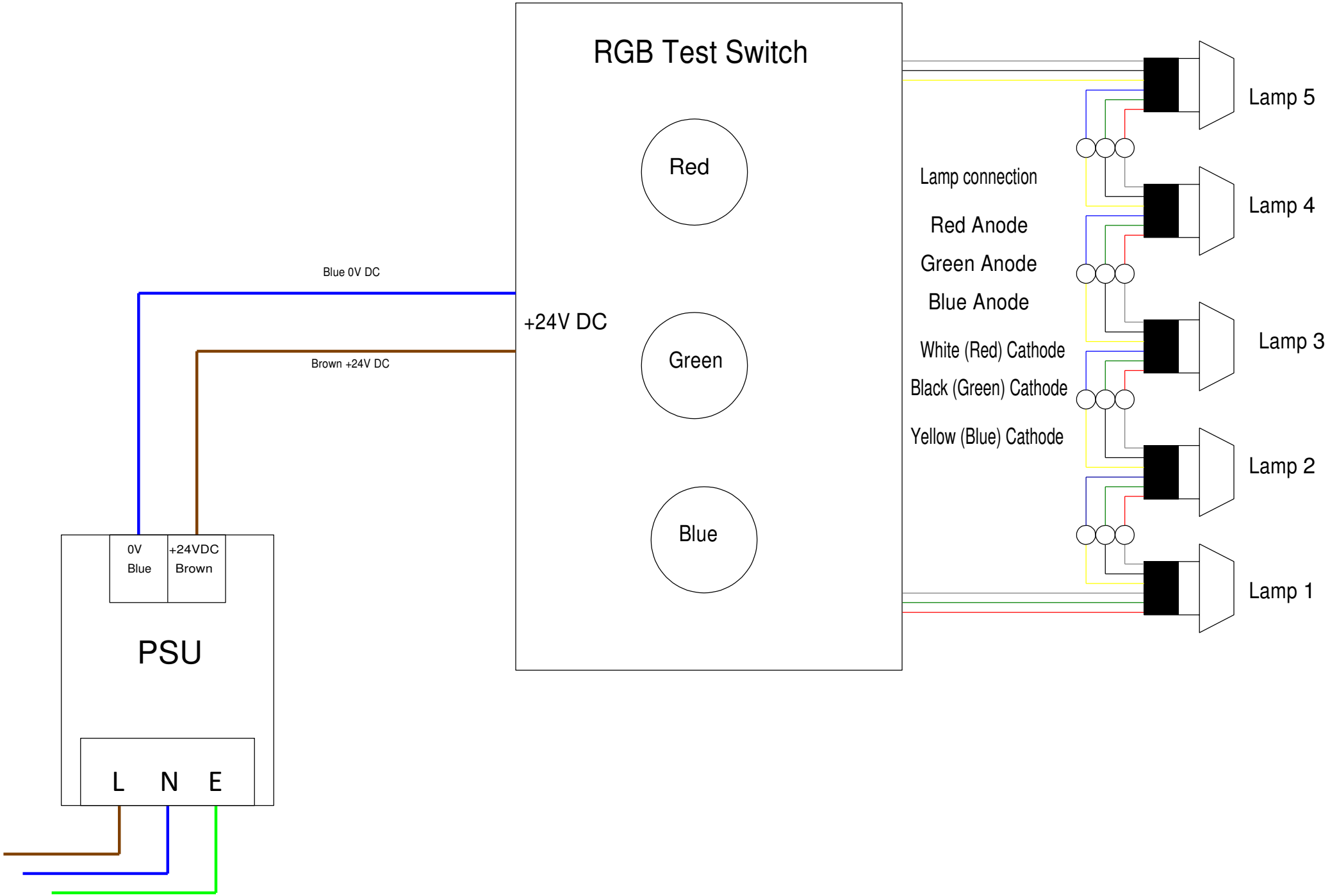


RGB Wiring WT4-5

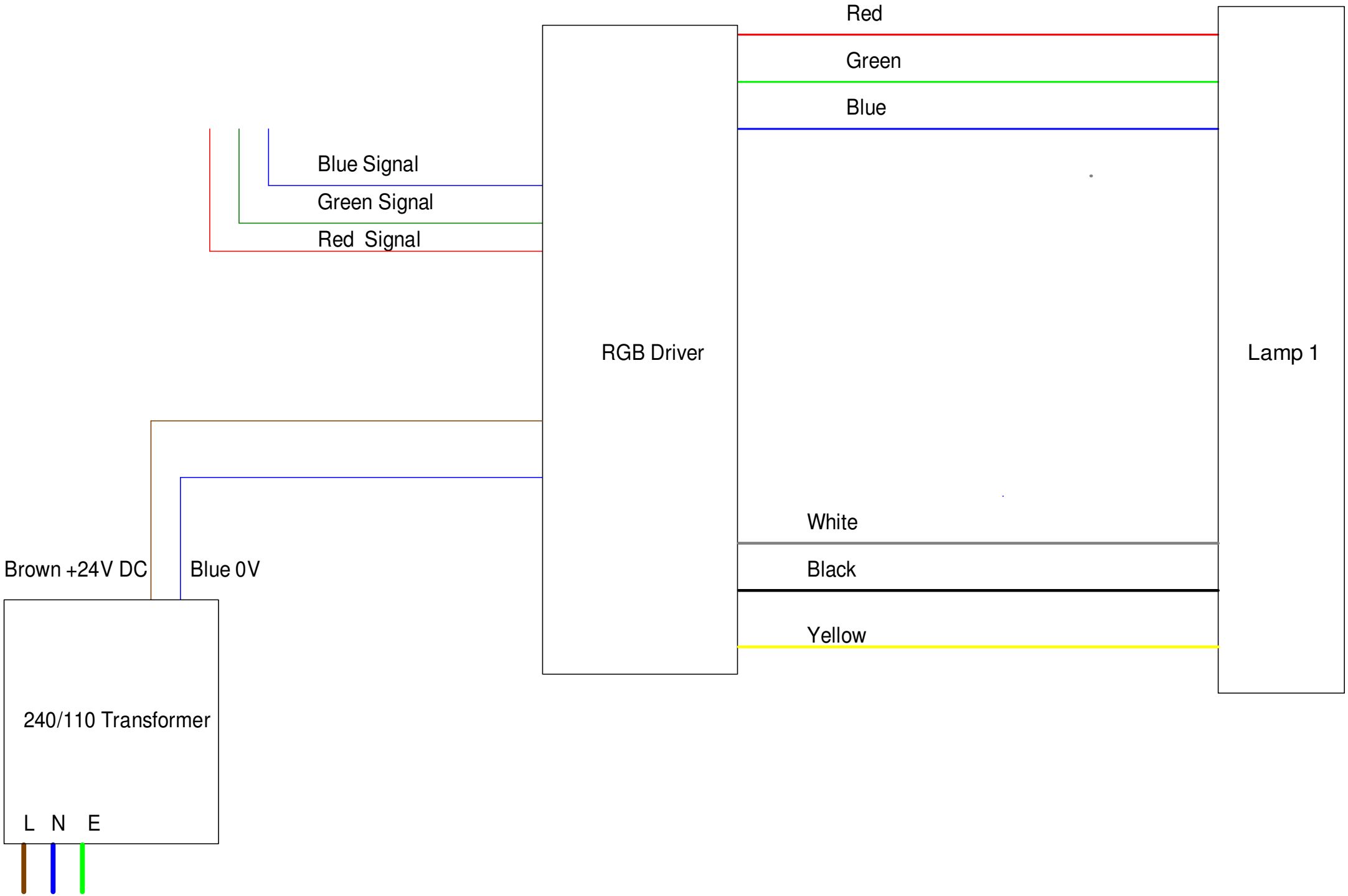


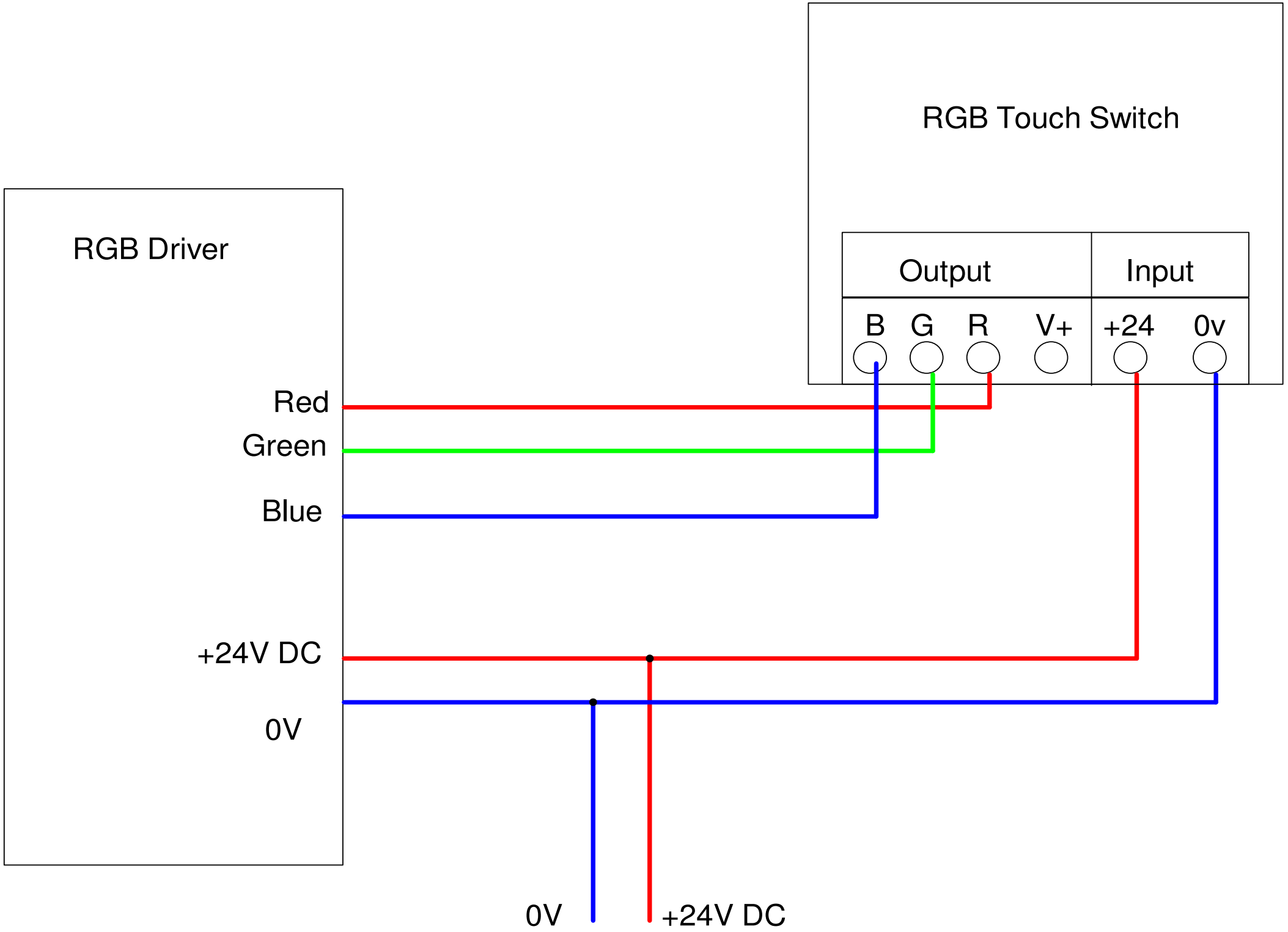
RGB Wiring to DMX Driver WT4-5




RGB Test Switch
Red
Green
Blue
+24V DC
Blue 0V DC
Brown +24V DC
0V
Blue
+24VDC
Brown
PSU
L N E
Lamp connection
Red Anode
Green Anode
Blue Anode
White (Red) Cathode
Black (Green) Cathode
Yellow (Blue) Cathode
Lamp 5
Lamp 4
Lamp 3
Lamp 2
Lamp 1

RGB Single Lamp

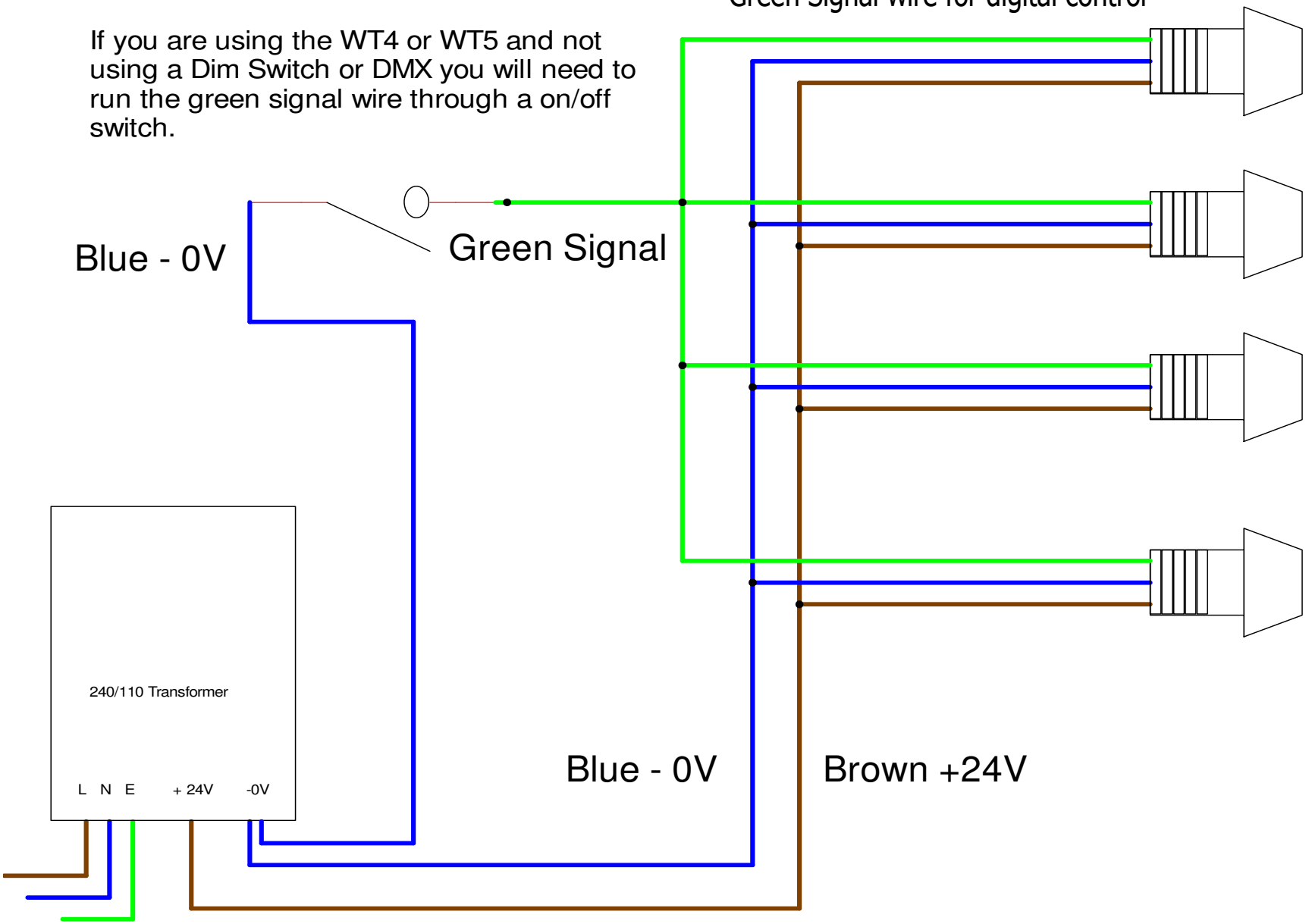



RGB Touch Switch
Output
Input
B
G
R
V+
+24
0v
RGB Driver
Red
Green
Blue
+24V DC
0V
0V
+24V DC

WT-4&5 White only

Note

If you are using the WT4 or WT5 and not using a Dim Switch or DMX you will need to run the green signal wire through a on/off switch.

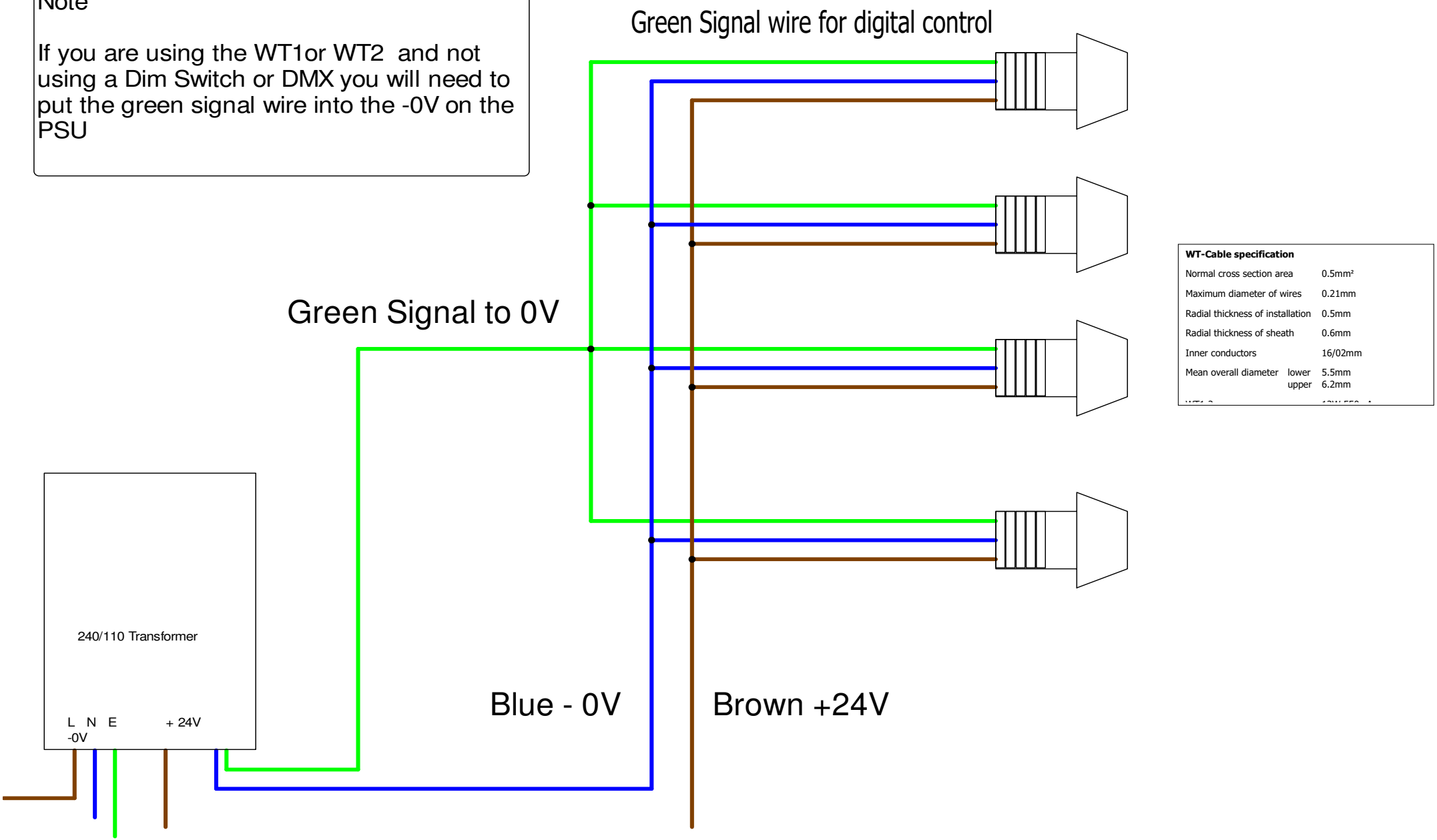


WT-Cable specification		
Normal cross section area		0.5mm²
Maximum diameter of wires		0.21mm
Radial thickness of installation		0.5mm
Radial thickness of sheath		0.6mm
Inner conductors		16/02mm
Mean overall diameter	lower	5.5mm
	upper	6.2mm

WT1&2 -White only using negative signal

Note

If you are using the WT1or WT2 and not using a Dim Switch or DMX you will need to put the green signal wire into the -0V on the PSU



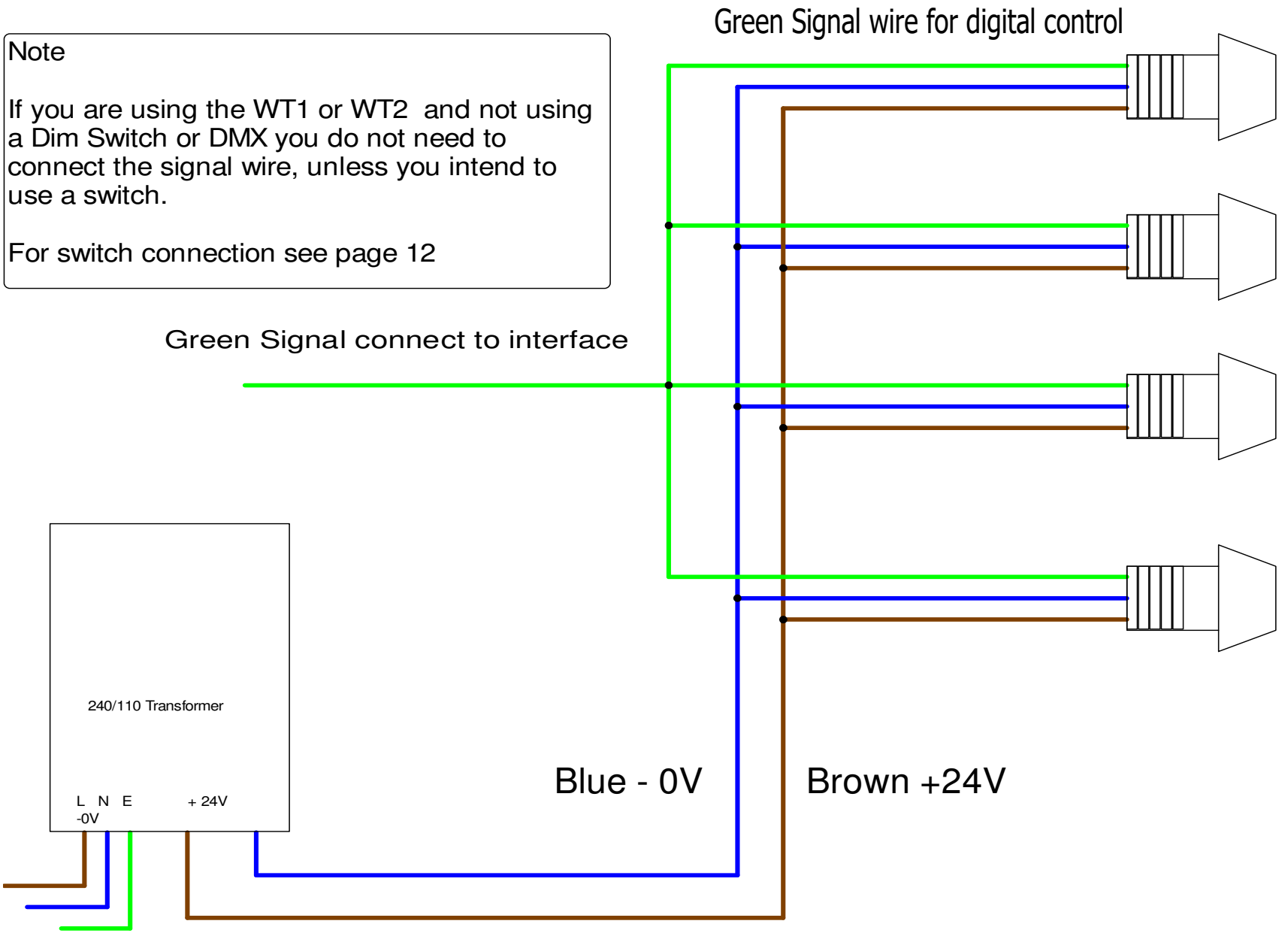
WT-Cable specification		
Normal cross section area		0.5mm²
Maximum diameter of wires		0.21mm
Radial thickness of installation		0.5mm
Radial thickness of sheath		0.6mm
Inner conductors		16/02mm
Mean overall diameter	lower	5.5mm
	upper	6.2mm

WT1&2 -White only using positive signal

Note

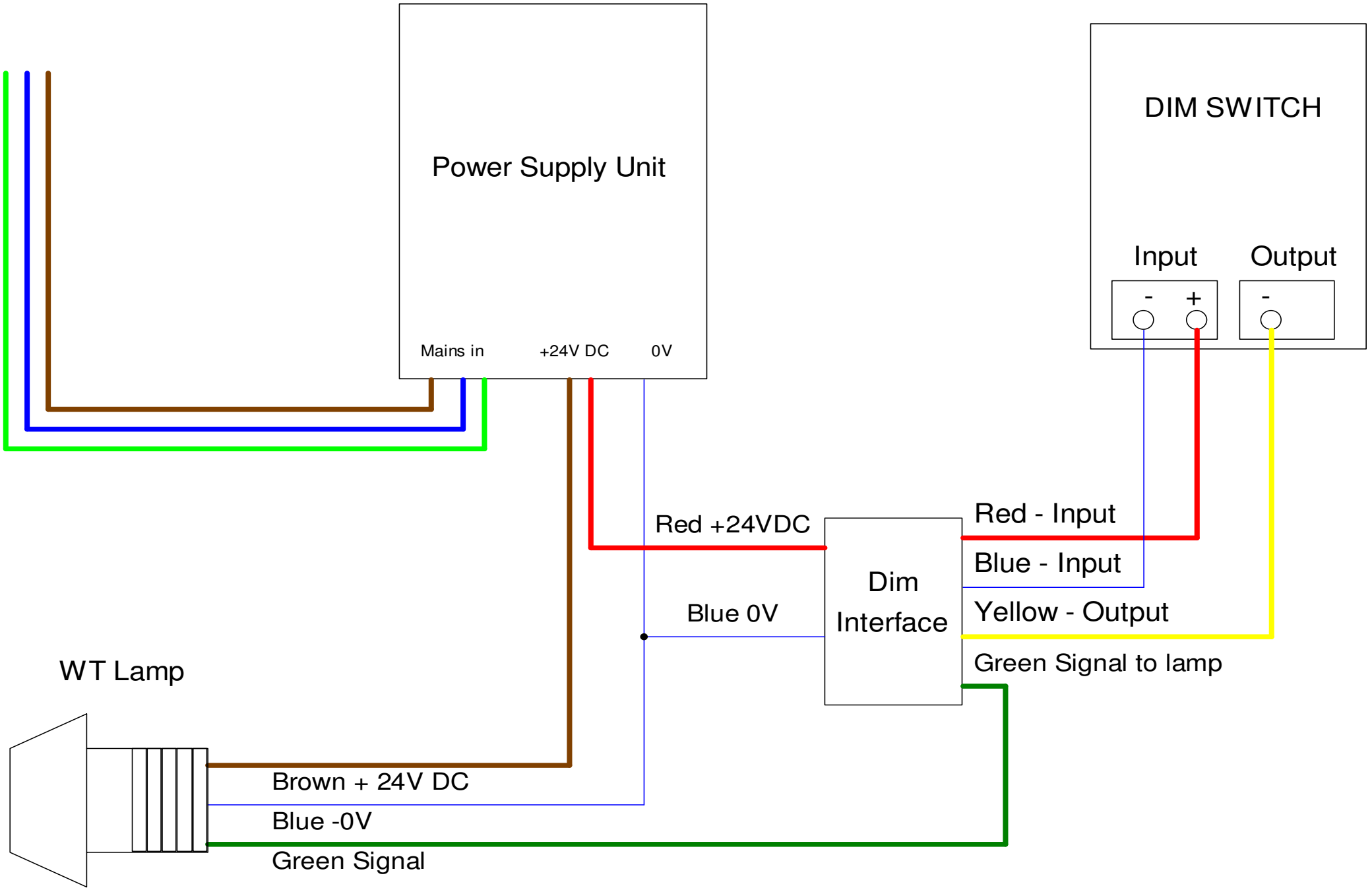
If you are using the WT1 or WT2 and not using a Dim Switch or DMX you do not need to connect the signal wire, unless you intend to use a switch.

For switch connection see page 12

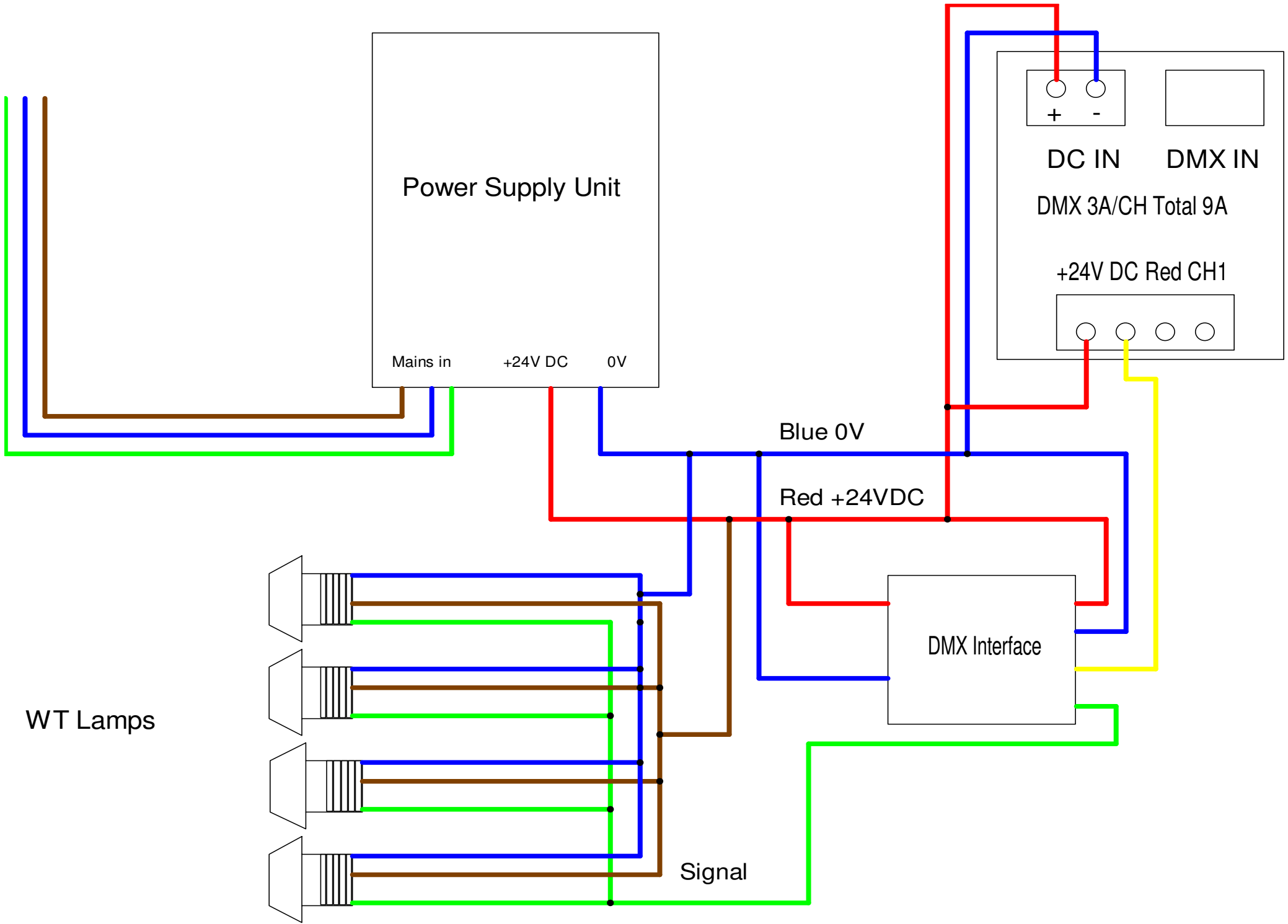


WT-Cable specification		
Normal cross section area		0.5mm²
Maximum diameter of wires		0.21mm
Radial thickness of installation		0.5mm
Radial thickness of sheath		0.6mm
Inner conductors		16/02mm
Mean overall diameter	lower	5.5mm
	upper	6.2mm

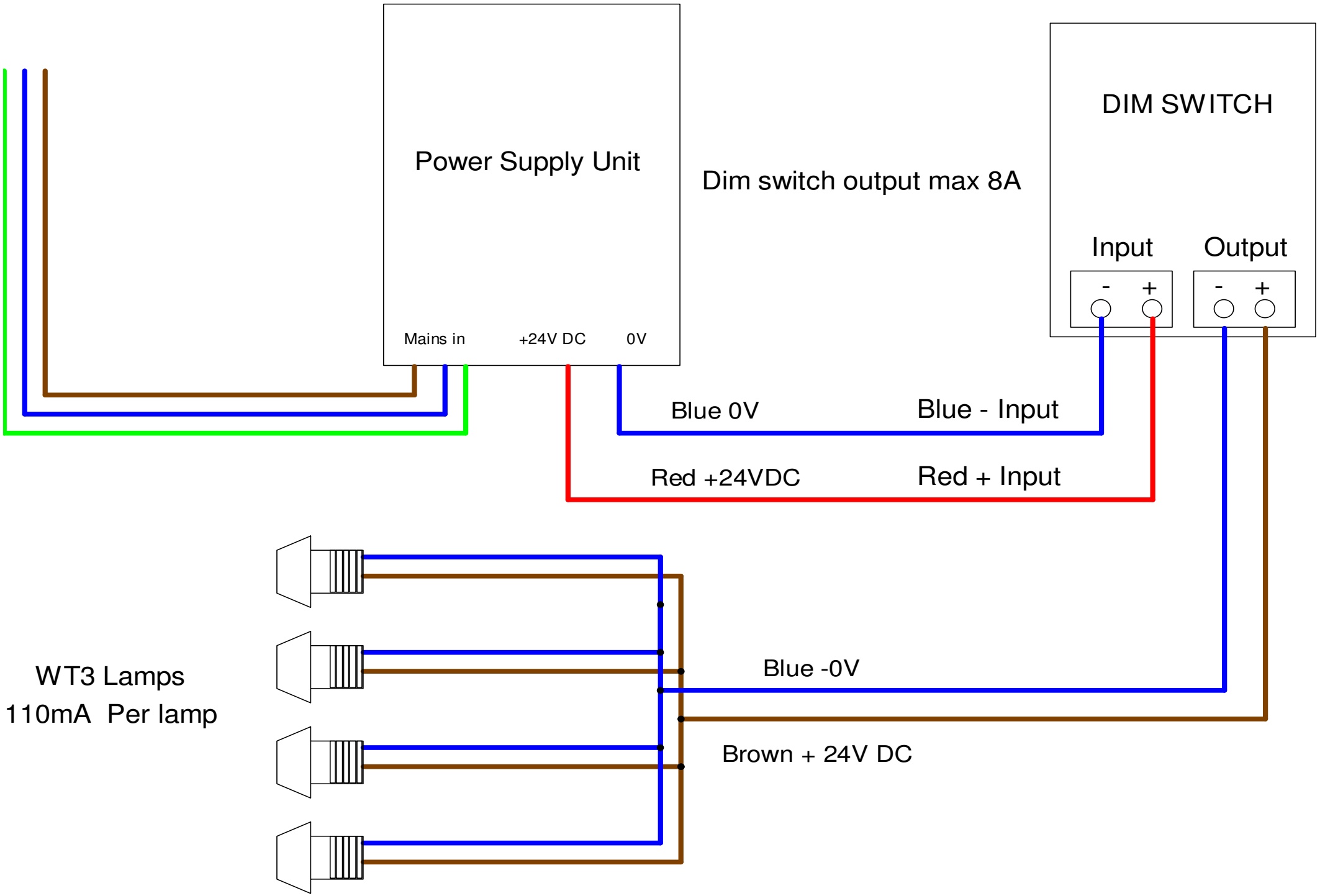
Dim Switch using Interface



DMX using Interface

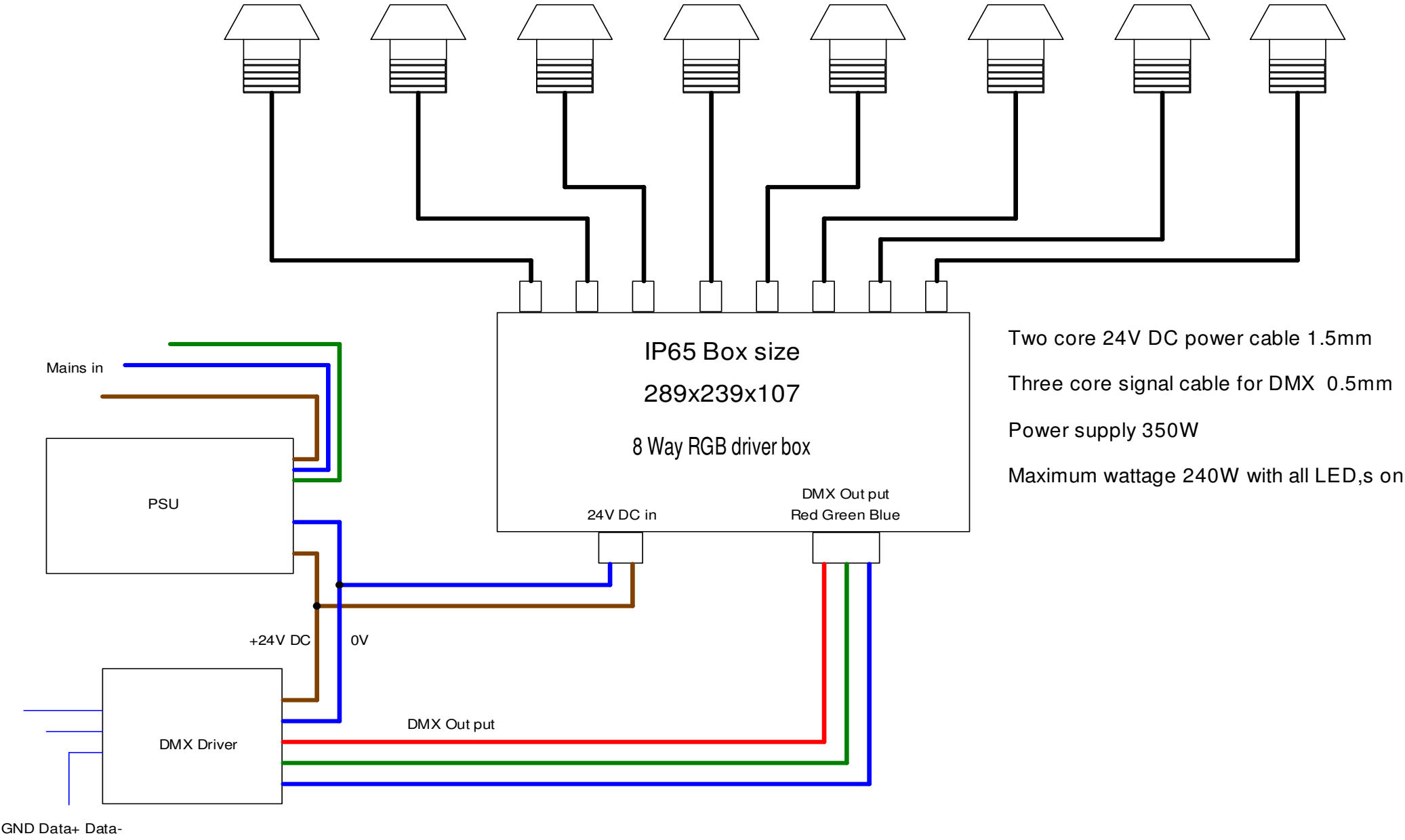


Dim Switch for WT3



Wiring example of 8 X WT4

6 Core RGB cable maximum run 50M



Two core 24V DC power cable 1.5mm

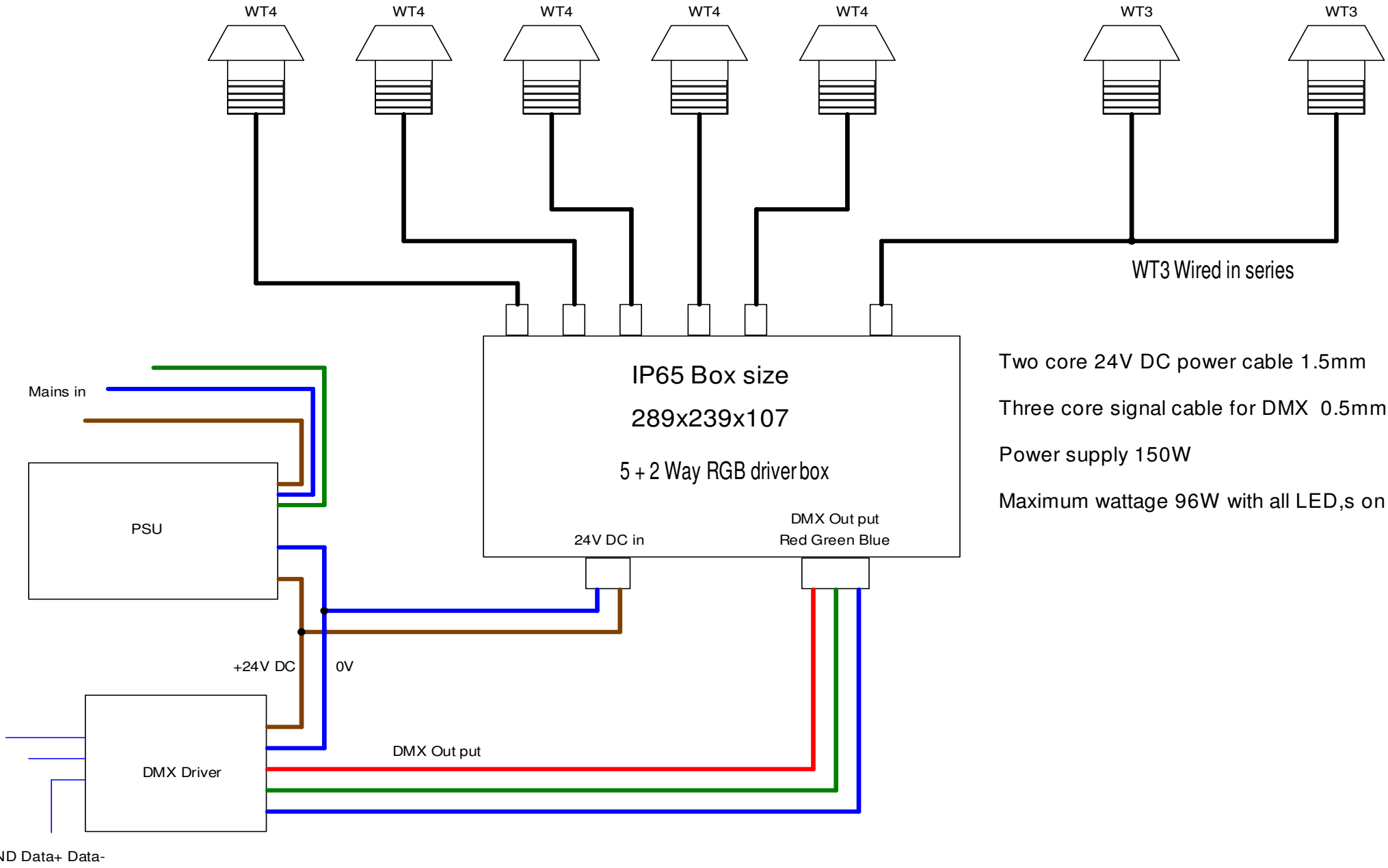
Three core signal cable for DMX 0.5mm

Power supply 350W

Maximum wattage 240W with all LED,s on

Wiring example of WT4 & WT3

6 Core RGB cable maximum run 50M



Two core 24V DC power cable 1.5mm

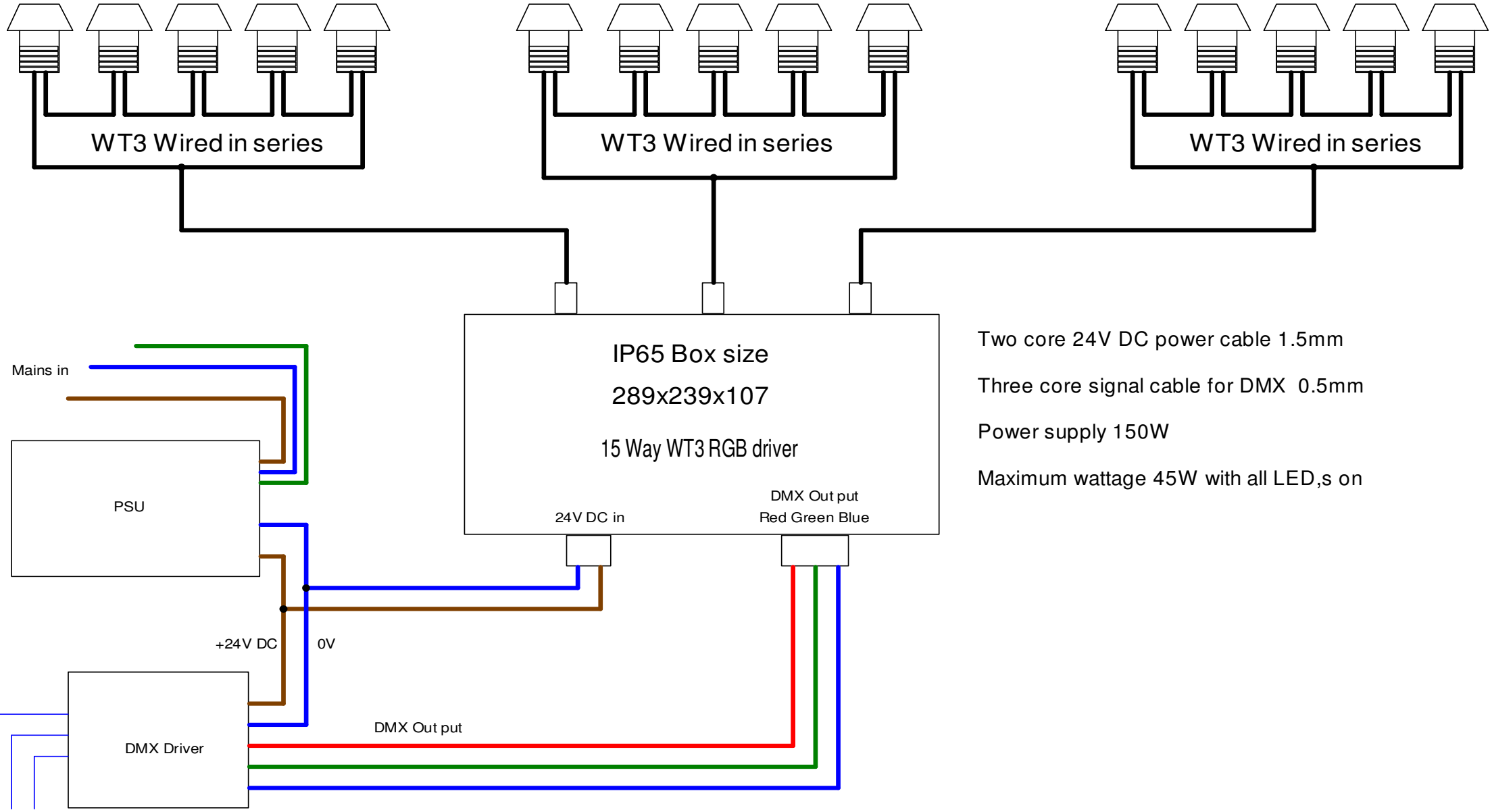
Three core signal cable for DMX 0.5mm

Power supply 150W

Maximum wattage 96W with all LED,s on

Wiring example of 15 X WT3

6 Core RGB cable maximum run 50M



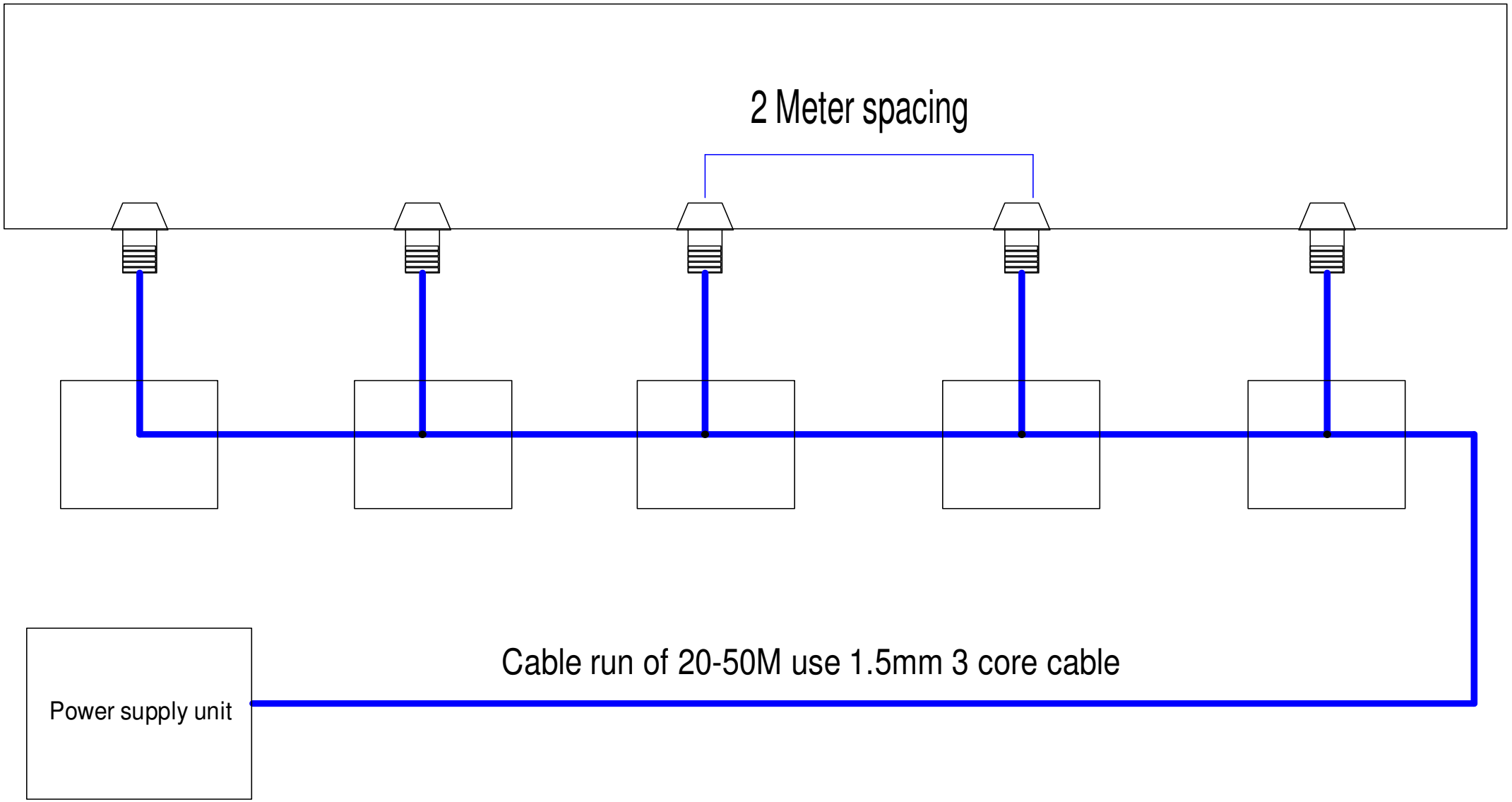
Two core 24V DC power cable 1.5mm

Three core signal cable for DMX 0.5mm

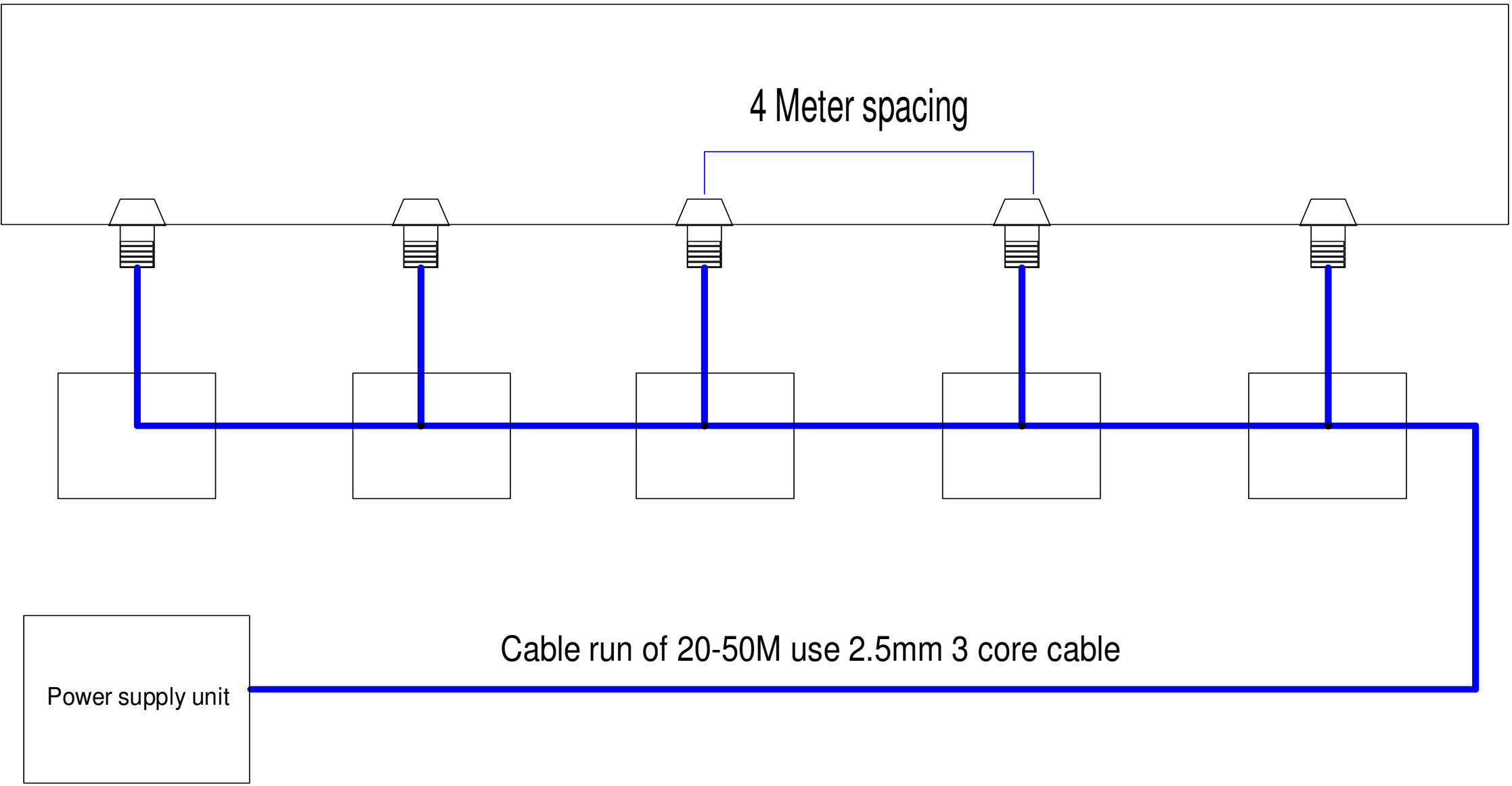
Power supply 150W

Maximum wattage 45W with all LED,s on

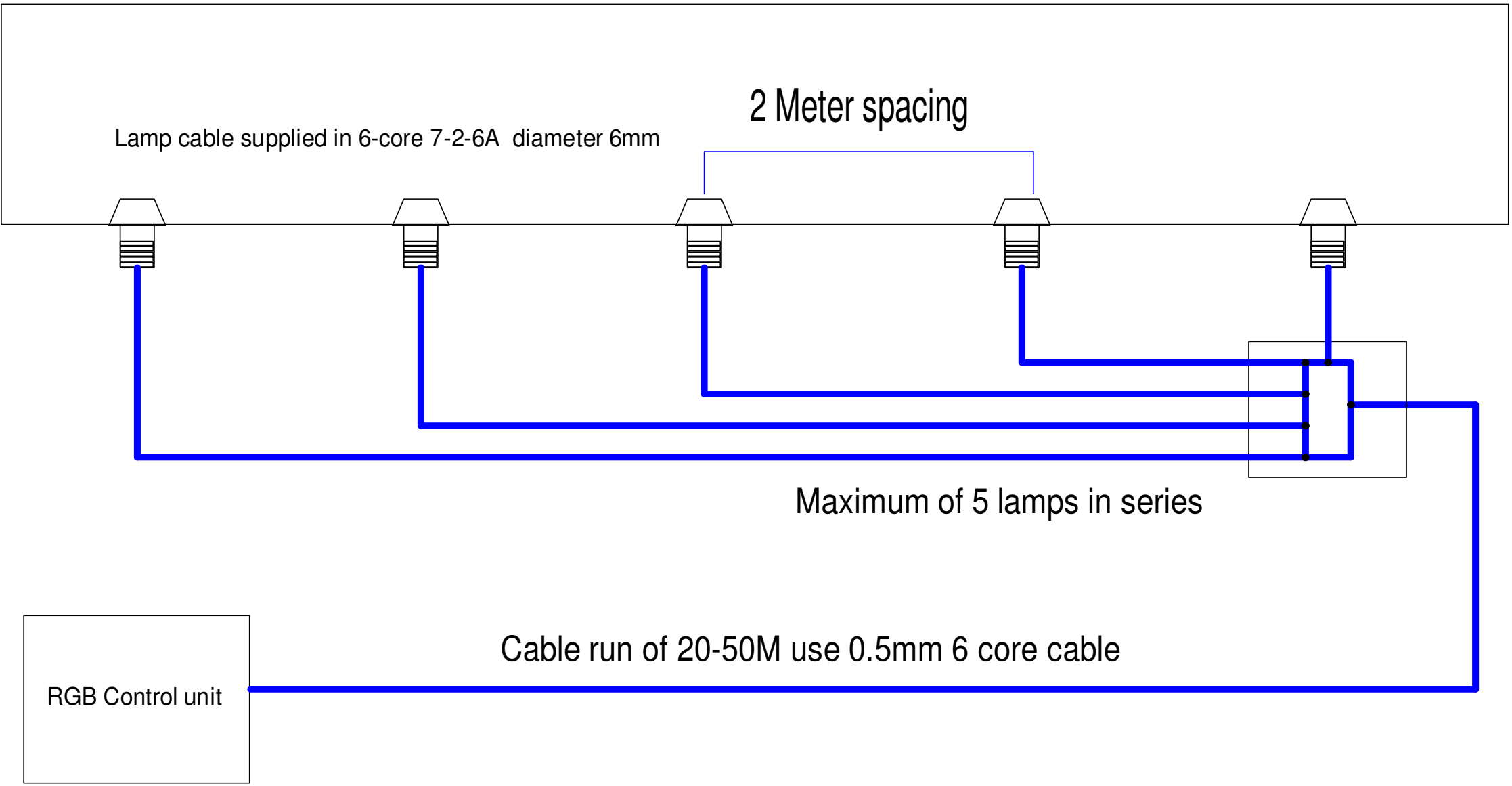
WT1-2 White lamp spacing & cable size



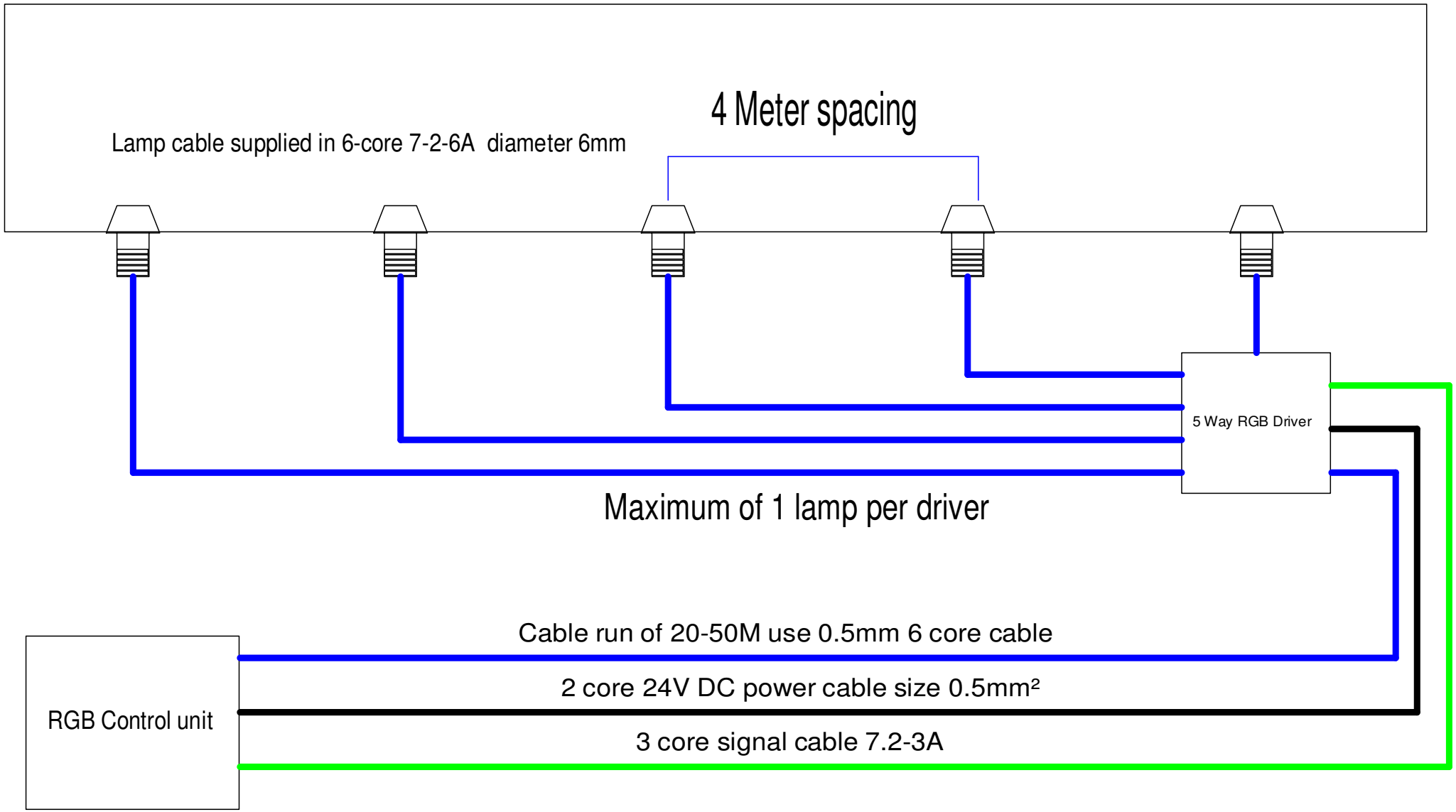
WT4-5 White lamp spacing & cable size



WT1-2-3 RGB lamp spacing & cable size

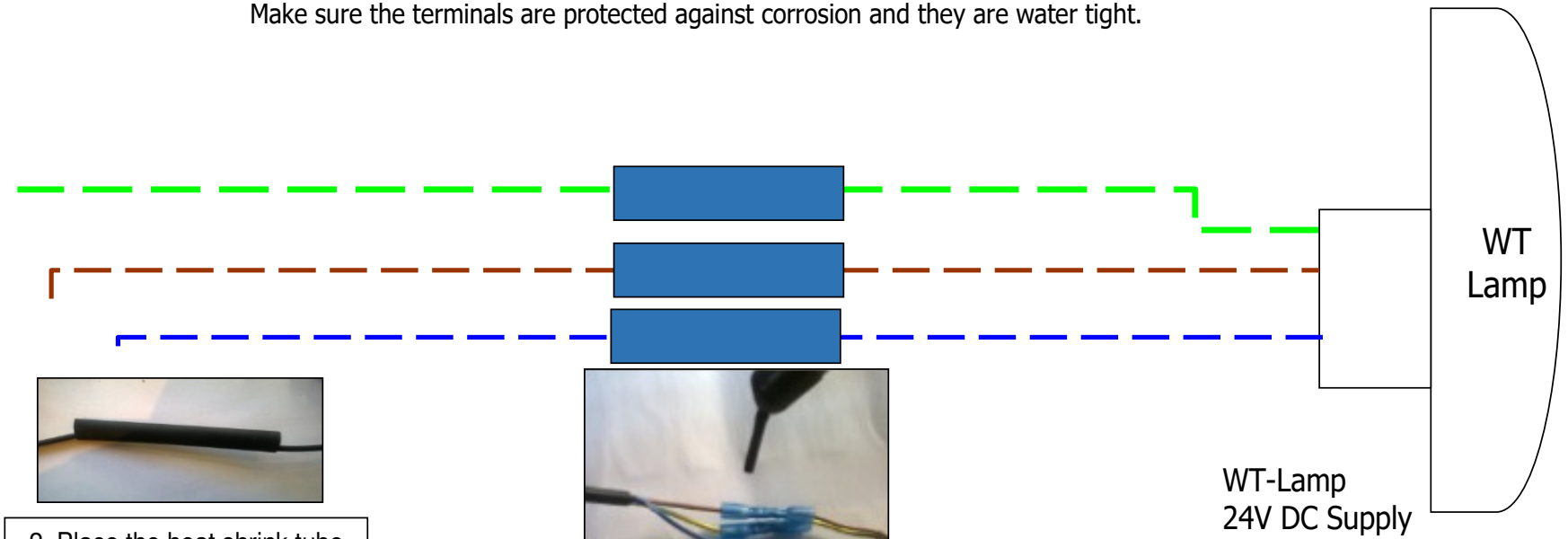


WT4-5 RGB lamp spacing & cable size

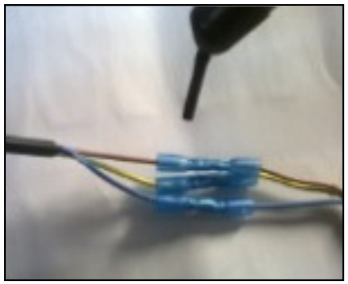


WT-Lamp
Joining connections

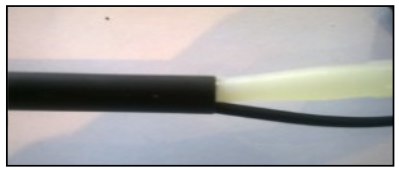
Make sure the terminals are protected against corrosion and they are water tight.



2. Place the heat shrink tube over the crimped cable and also over the black insulation



1. Cut cable and strip back black insulation. The 3 exposed wires can then be joined using the heat shrink crimps. Strip the end of each cable to expose the copper cable place the cable into the crimp, using a crimping tool crimp the end. Once all cable have been joined heat shrink the crimps



3. Put silicon sealant into the end of the heat shrink tube then heat shrink the tube to cover the cable ends, this will prevent water being pulled up through the cable to the lamp.

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Technology Made Simple

MAS Electronics UK Ltd
DRG No: 00013
Tel 01235 536616
Date 01-01-13

TDK-Lambda 150W, 1 Output, Embedded Switch Mode Power Supply

Product Details

150W, Universal Input, Single Output, LS Series

Universal AC input 88-264Vac, LS150 models are switch selectable for 115 or 230Vac
Overcurrent/Overvoltage protection
Power factor correction to EN 61000-3-2
Withstands 300Vac surges (minimum 5s)
Very High efficiency up to 87%
Conducted and radiated EMI: EN55011/EN5502

Note
Operating temperatures are with de-rating
MTBF to MIL-HDBK-217F
Approvals
UL recognised component
Standards
UL 60950-1, EN 60950-1, IEC 60950-1

Output Voltage 24 V
Output Current 6.5A
Power Rating 150W
Input Voltage 248 → 273V dc
Number of Outputs 1
Package Type Enclosed
Ripple And Noise 120mV
Load Regulation 192mV
Line Regulation 96mV
Minimum Temperature -25°C
Maximum Temperature +70°C
Efficiency 86%
MTBF 505393h

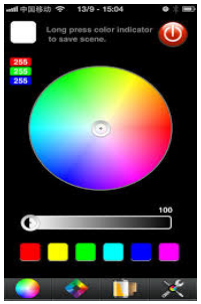
20 x 30 x 13cm door enclosure that is manufactured from ABS to **IP65**. Supplied with a blank, lockable door this enclosure.

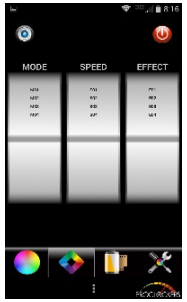
•Tough enclosures for a wide range of uses
•Supplied with lockable, blank doors
•Robust door hinges
•Fitted with galvanised steel back plate
•Door locks fitted as standard, key supplied
•Supplied with wall-mounting brackets
•Sealed to **IP65**

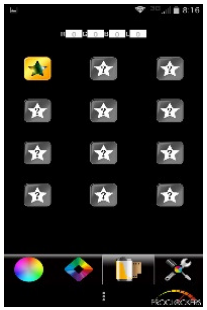
How to connect to FreeColor Phone App

How to connect to RGB-WiFi
Step 1. First you need to download the App **FreeColor**

Step 2. You need to connect to the WiFi go to your WiFi settings find **HX001** and connect.
Step 3. Open the **FreeColor,** the first page is your Color wheel second page is your mode settings third page is your saved settings.







More information can be found in the booklet or online
About the Smart WiFi LED Controller:
"PPCS NEW WIFI-V01 controller appeared with the installation of controlling software on mobile devices with Android or IOS system, it can remote control LED lighting products through WiFi, which makes LED control more intelligent and humanization. One WIFI-V01 controller can be used as dimmer, CT controller, and RGB controller, only need to select the right control interface in the software. In addition, this model has DIY function. Users can get any effect they want based on our controlling software. If you don't have any mobile devices with the controlling software at hand, you could also use our RF remote control to control it. This model designed for constant voltage led products, such as led strip, led modules. For controlling more led products, amplifier is available."

How to connect to Magic Home Phone App

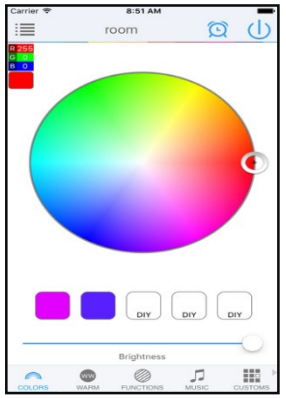
How to connect to RGB-Wi-Fi

Step 1. First you need to download the App **Magic Home**

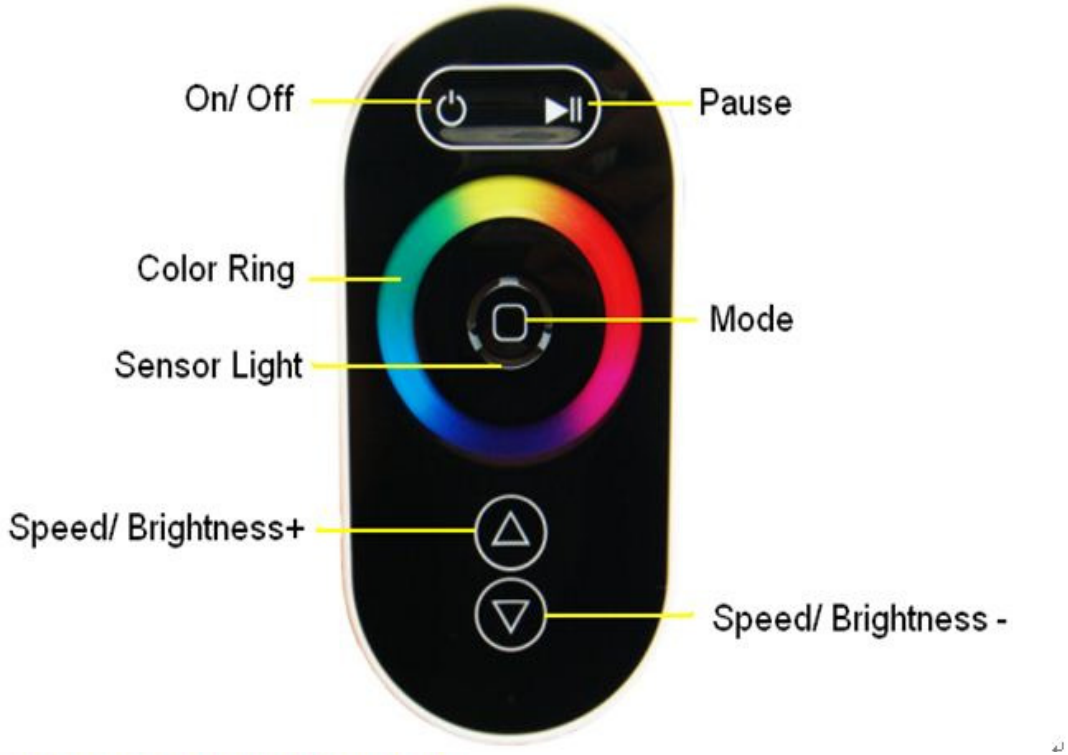
Step 2. You need to connect to the Wi-Fi go to your Wi-Fi settings, find **LEDnet994164** and connect.

Step 3. Open the **Magic Home App,** the first page is your Colour

Along the bottom of the screen are the various functions.
Colours: for manual RGB colour change.
CCT: for white light dim control
Function: for auto colour change.
Music: for selecting the lights to work along with music.
Customs: for creating your own colour mode.
MIC: for sound application working with the lights.
Camera: to capture colours to change the lights.



Remote control



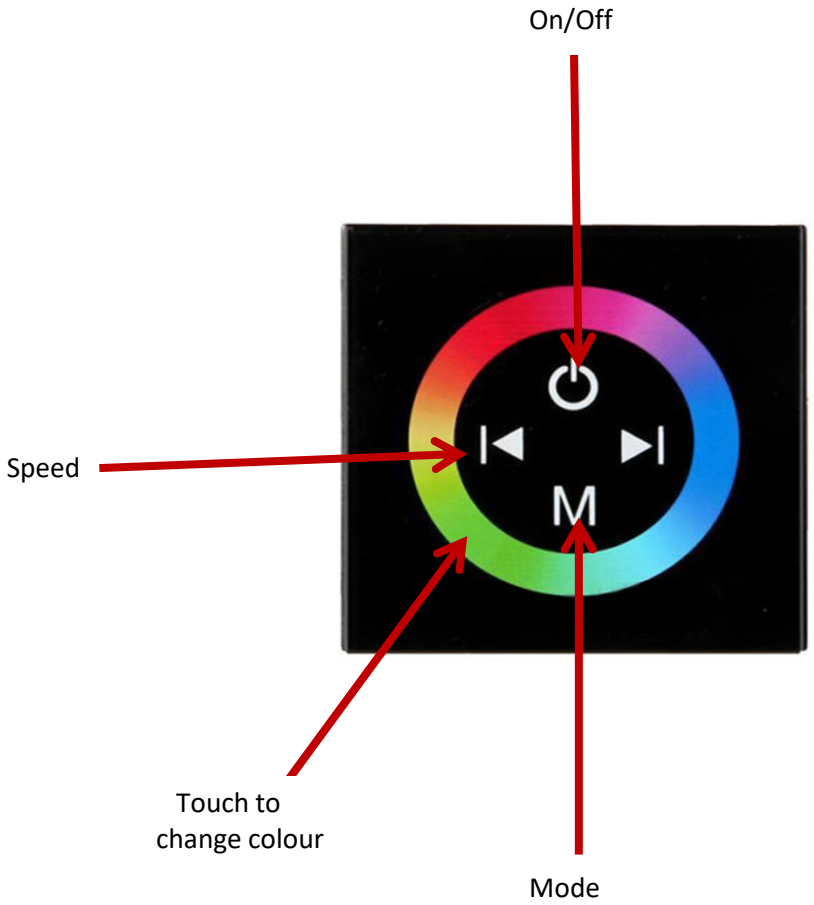
The function of each button as below:

Name of key	Instruction	Remarks
ON/OFF	ON or OFF in any time	
Pause	Pause or Continue	
Mode	The mode will go to next, when you touch the key each time	9 modes in total.
Speed/Brightness +	The Speed/Brightness will add, when you touch the key each time	Speed for dynamic modes, Brightness for static modes.
Speed/Brightness -	The Speed/Brightness will subtract, when you touch the key each time	Speed for dynamic modes, Brightness for static modes.
Color Ring	Touch any color which you want	

Please note: When using the touch switch with the WiFi remote, you must turn off the switch to use the remote or turn off the remote to use the switch. Both cannot work at the same time.

RGB Touch panel

Specifications:
3 channels DC 12V-24V working voltage 8A
Lock lights to your favourite mode or brightness level immediately
Working voltage: DC 12V - 24V 4 functional buttons with a rainbow colour ring for colours and modes controlling
Working temperature: -20-60℃
Supply voltage: DC 12-24V
Output: 3 channels
Connection type: common anode
External dimension: about 86 x 86 x 37 mm (L x W x H)
Static power consumption: less than 1W
Output current: less than 4A (each channel)
Output power: 12V ＜144W, 24V ＜288W.
Switchable power supply.
Adjustable lighting colour, brightness.



Mode

The Mode button offers multiple choice of changing colour from scrolling to dancing colour change.

Speed

The speed button controls the speed of the scroll change.

On/Off

On/Off powers the lamps on and off

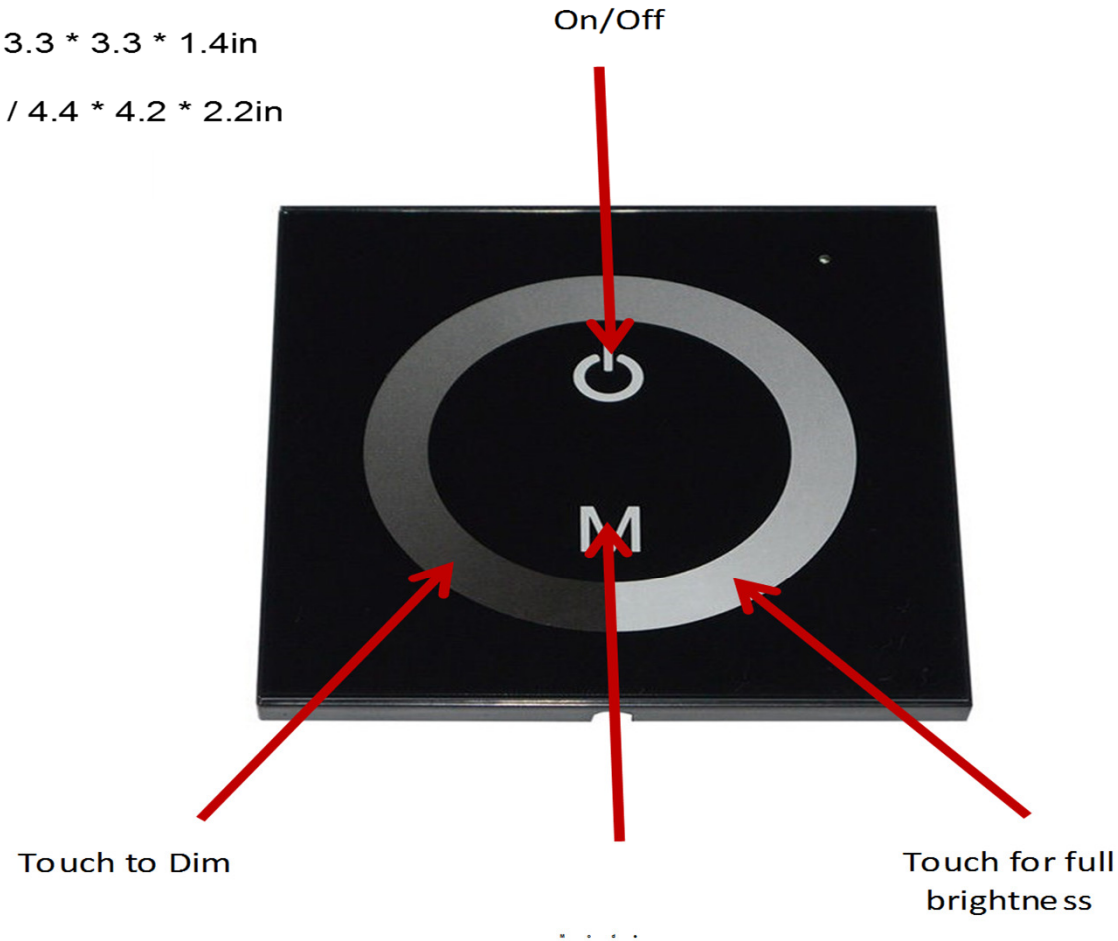
White Touch panel

Features:
Touch panel controller is a new high-quality controller which adopts glass panel design, beautiful and fashionable in appearance.
It adopts high precision capacitance touch control chip, increases the sensitivity of touch panel.
It is used for controlling a variety of LED Lamp, for instance, point source of light, flexible light strip, panel lights, etc.
It has many advantages, such as convenient to connect, easy to use.

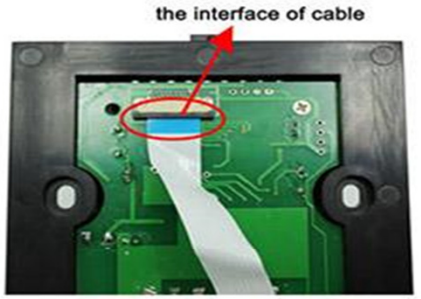
Specifications:
Working temperature: -20-60 °C
Supply voltage: DC12~24V
Connection mode: common anode
Static power consumption: <1W
Output current: <4A
Output power: 12V<96W, 24V<192W
Controller size: approx. 8.6 * 8.6 * 3.6cm / 3.3 * 3.3 * 1.4in
Controller weight: approx. 118g / 4.16oz
Package size: approx. 11.2 * 10.7 * 5.5cm / 4.4 * 4.2 * 2.2in
Package weight: approx. 155g / 5.48oz

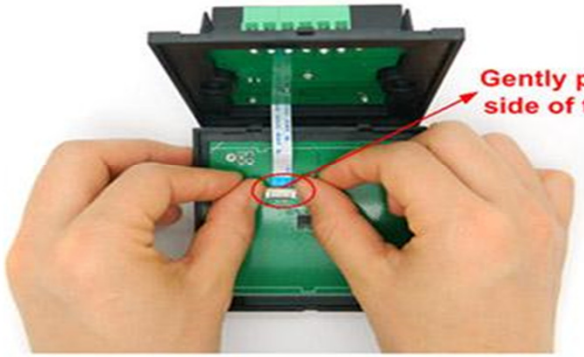
Standard brightness change

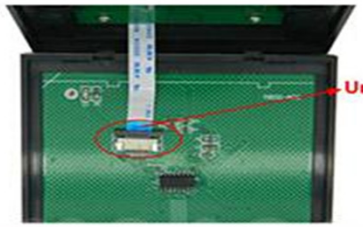
Mode	Function
1	10%
2	20%
3	30%
4	40%
5	50%
6	60%
7	70%
8	80%
9	90%
10	100%



Touch panel installation

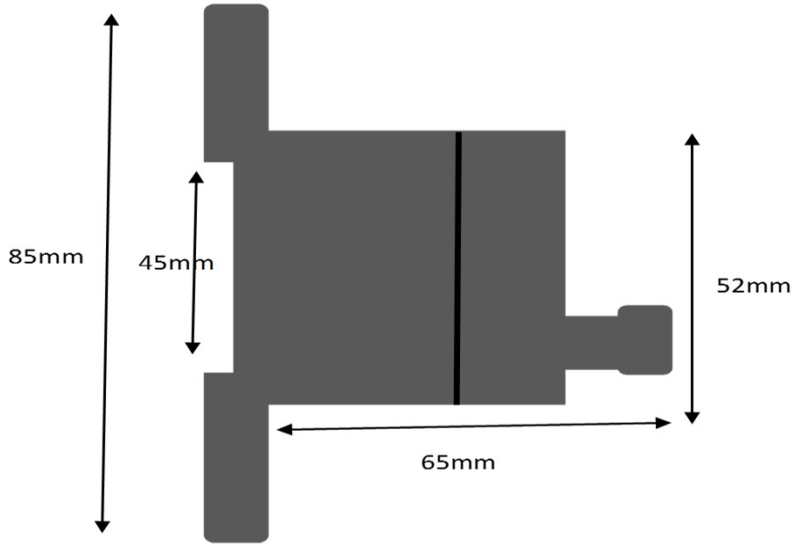






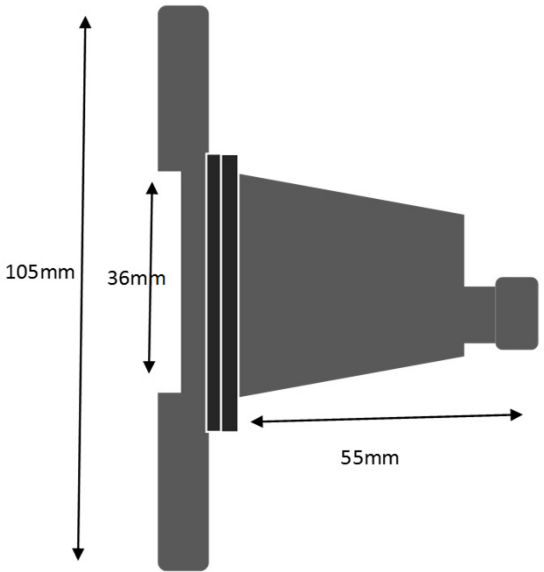
WT1-LED-UWL

Colour	White, Cool
CCT (K)	5000K
Lumens/Watt @ Current - Test	131 lm/W
CRI (Colour Rendering Index)	85
Viewing Angle	115°
Lumens	1570lm
Face Polished 316 stainless	85mm
Body Hard anodised	65mm
Light Emitting area	45mm Diameter
Lens Type	Flat, defused
RGB	9W-3W per colour
RGB cable	6-core 7-2-6a PVC insulation
RGB Lumens	Green 172lm Red 137lm Blue 162 Total 471lm
WT-Driver (inline)	24V DC
Wattage	12W @ 680mA
Driver control via Signal wire	PWM (Dimming)
Fixing 2" pipe	PN9 wall 3.5 I/D53mm
Cable	3 cores, 0.5mm² wire size, 16/0.2mm (Blue Cathode) (Brown Anode) Green (signal)



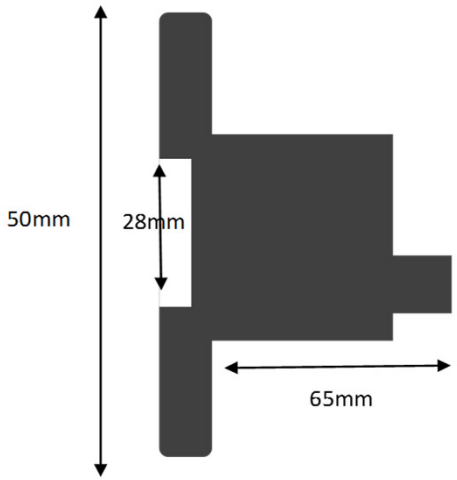
WT2-Inlet-LED-UWL

Colour	White, Cool
CCT (K)	5000K
Lumens/Watt @ Current - Test	131 lm/W
CRI (Colour Rendering Index)	85
Viewing Angle	115°
Lumens	1570lm
Face polished 316 stainless	105mm
Face Liner polished 316 stainless	85mm
Body Hard anodised	55mm
Light Emitting area	36mm Diameter
Lens Type	Flat, defused
RGB	9W-3W per colour
RGB cable	6-core 7-2-6a PVC insulation
RGB Lumens	Green 172lm Red 137lm Blue 162 Total 471lm
WT-Driver (inline)	24V DC
Wattage	12W @ 680mA
Driver control via Signal wire	PWM (Dimming)
Fixing	Thread fit into 1.5BSP
Cable	3 cores, 0.5mm² wire size, 16/0.2mm (Blue Cathode) (Brown Anode) Green (signal)



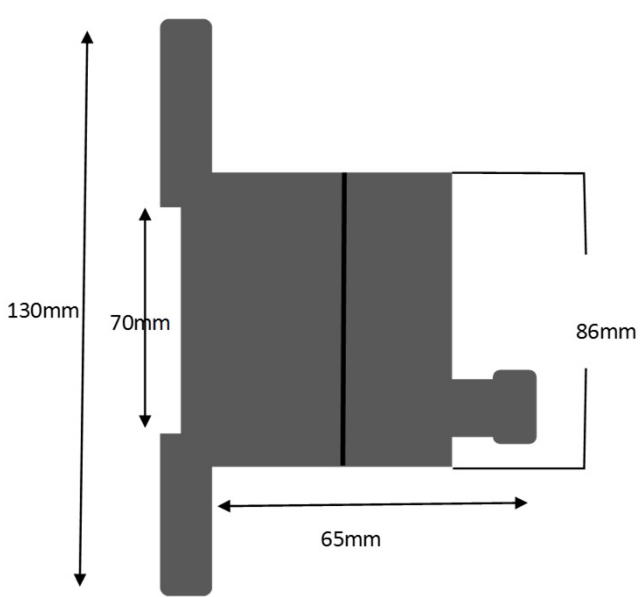
WT3-LED-UWL

Colour	White, Cool
CCT (K)	5000K
Lumens/Watt	125 lm/W
CRI (Colour Rendering Index)	85
Viewing Angle	115°
Lumens	110mA (200lm)
Face polished 316 stainless	50mm
Body Hard anodised	65mm
Light Emitting area	28mm Diameter
Lens Type	Flat, defused
RGB	3W-1W per colour
Power	24V DC
RGB cable	6-core 7-2-6a PVC insulation
Wattage	110mA
RGB Lumens	Green 80lm Red 70lm Blue 65lm Total 215lm
Driver control via SD1 board	DMX 512 constant voltage 24V DC
Fixing 1 ¼ ” Pipe	PN12 wall 2.2mm I/D37mm
Cable	2 cores, 0.5mm² wire size, 16/0.2mm



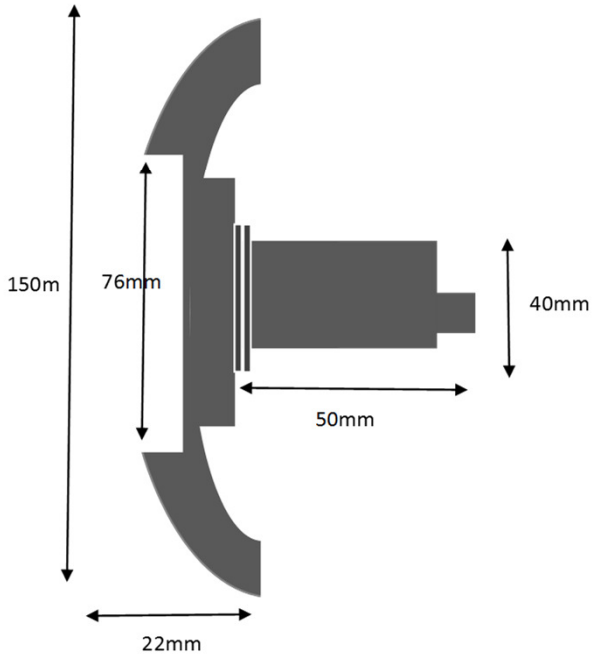
WT4-LED-UWL

Colour	White, Cool
CCT (K)	5000K
Lumens/Watt @ Current - Test	119 lm/W
CRI (Colour Rendering Index)	85
Viewing Angle	115°
Lumens	3800lm
Face polished 316 stainless	130mm
Body Hard anodised	65mm
Light Emitting area	70mm Diameter
Lens Type	Flat, defused
RGB	30W-10W per colour
RGB Lumens	Green 690lm Red 550lm Blue 650 Total 1890lm
WT-Driver	24V DC
Wattage	32W @ 780mA
Driver control via S wire	DMX 512 constant voltage 24V DC
Fixing	WT-Niche
Cable	3 cores, 0.5mm² wire size, 16/0.2mm (Blue Cathode) (Brown Anode) Green (signal)

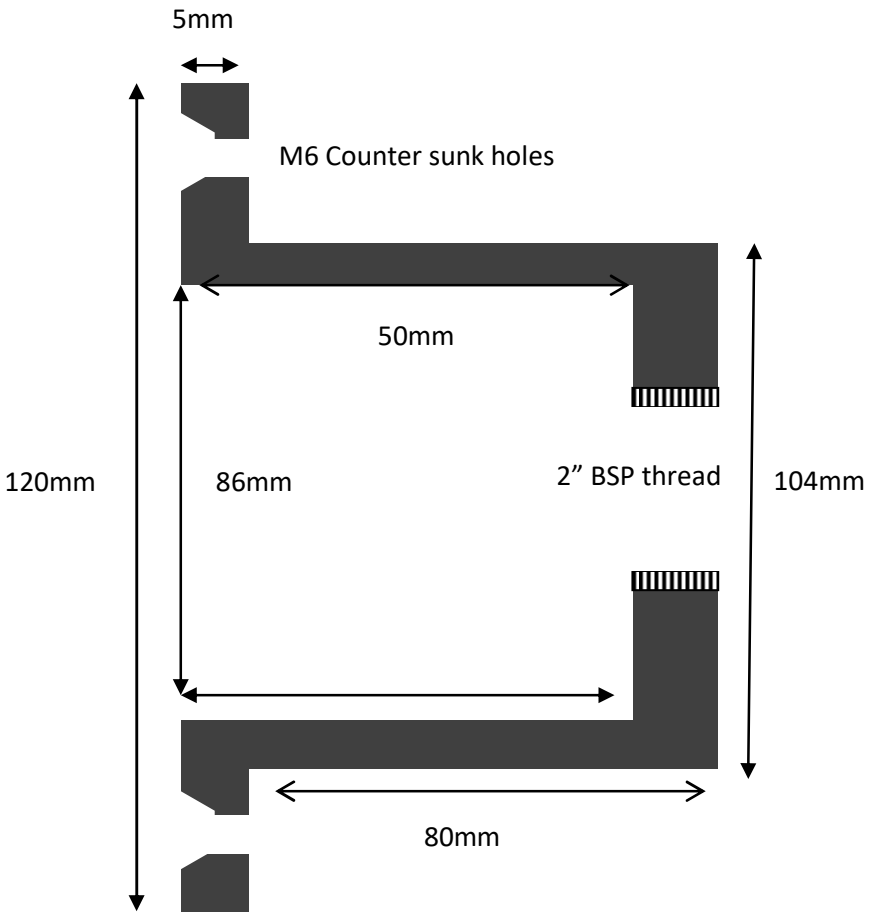


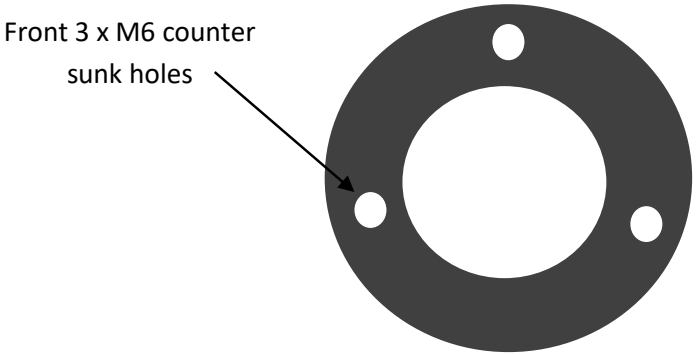
WT5-LED-UWL

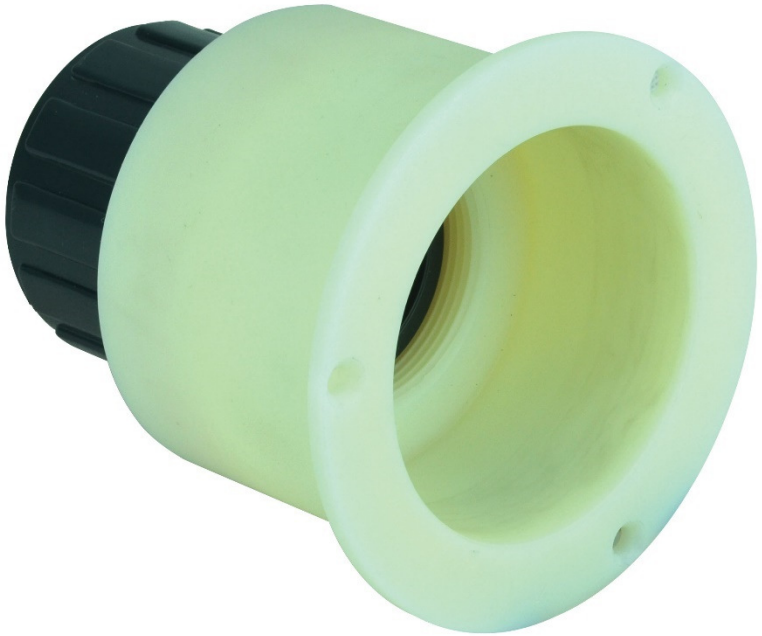
Colour	White, Cool
CCT (K)	5000K
Lumens/Watt @ Current - Test	119 lm/W
CRI (Colour Rendering Index)	85
Viewing Angle	115°
Lumens	3800lm
Face polished 316 stainless	150mm
Body Hard anodised	50mm
Light Emitting area	70mm Diameter
Lens Type	Flat, defused
RGB	30W-10W per colour
RGB cable	6-core 7-2-6a PVC insulation
RGB Lumens	Green 690lm Red 550lm Blue 650 Total 1890lm
WT-Driver (inline)	24V DC
Wattage	32W @ 780mA
Driver control via Signal wire	PWM (Dimming)
Fixing	Thread fit into 1.5BSP
Cable	3 cores, 0.5mm² wire size, 16/0.2mm (Blue Cathode) (Brown Anode) Green (signal)



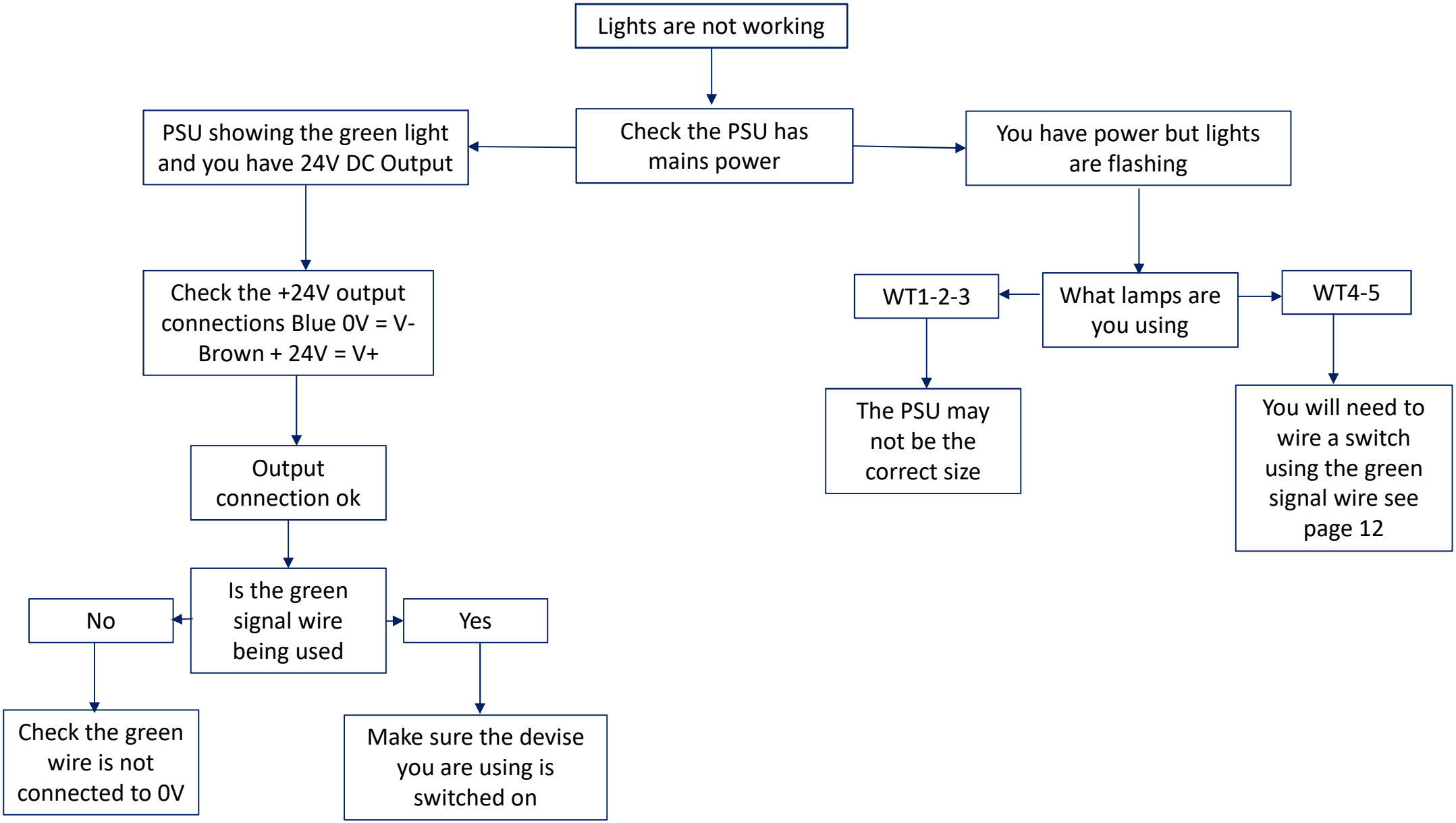
WT4-Niche


5mm
M6 Counter sunk holes
50mm
120mm
86mm
2” BSP thread
104mm
80mm

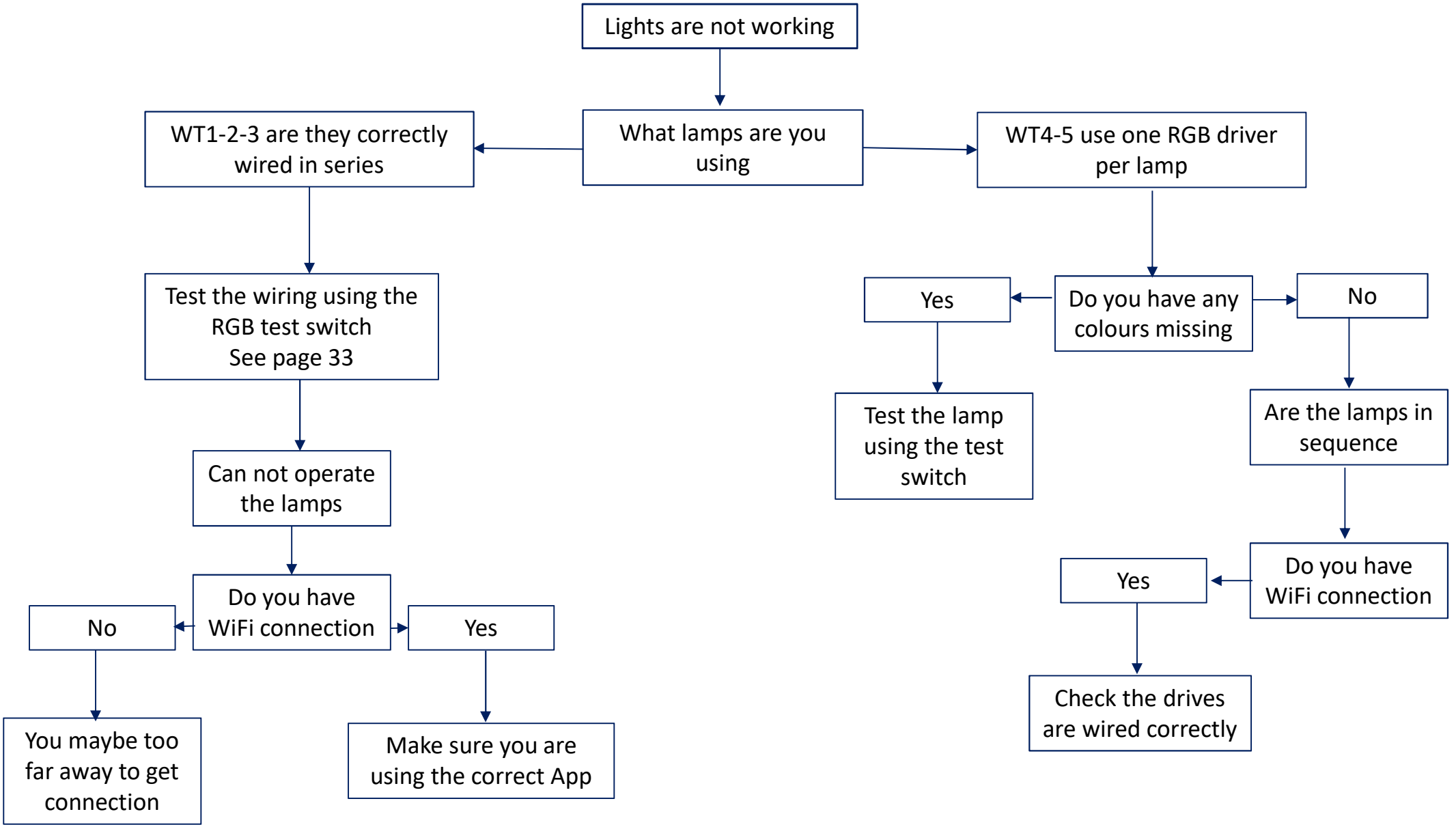

Front 3 x M6 counter
sunk holes



Trouble shooting White lights



Trouble shooting RGB lights



RGB Test Switch.

The RGB test switch is designed to test the wiring without subjecting the driver or LED lamp to incorrect wiring and therefore leading to blowing the driver or lamp.

The prosses of wiring is the same as you would wire up the drivers, this is done in series following the wiring diagram.

The RGB test switch is used in place of the driver to check that all the colours are in sink Before you power up the drivers.

Trouble shooting

If the lamps are not correctly wired, then you can have a range of options.

Turn on the Red switch and you see this

Check the Green and blue Common are not swapped

Turn on the Red switch and you see this

Any one colour not working

Check lamp the cable wiring to the colour which is not working

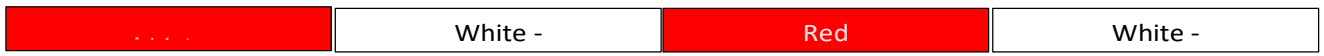
Turn on the Red switch and only the reds work

Check the Blue and green wire at the end of the chain are connected correctly.

The above is a sample of what may occur if the lamps have been incorrectly wire, to sum up if you see a missing colour then check the colour cable which is not working. If all the connections are correct, then test the lamp on its own with the switch to make sure the lamp is functioning correctly

LED lamp in series

Red Line in series



Green Line in series

Blue Line in series

WT-Terms and conditions

Pool Care and maintenance.

You should avoid damage to the lamp by keeping the water at a neutral PH-value. Also the water should be free from metal attacking ingredients to avoid discolouration any material deposits on the lamp must be removed with a suitable non metallic cleaner.

The lamp must not come into contact with any metal effecting cleaners, or acids. Do not use high pressure cleaners directly onto the lamp.

Installation

The Installation of the lamp must be carried out according to the instructions supplied. If any modifications are made to the lamp, the manufacture is discharged from any liability. This includes modifications to the cables; they should not be cut or re-joined. The cables are supplied with the correct lengths specified. If any problems arise after installation by your chosen installer and it is found that the fault was of poor installation the manufacture is discharged from any liability.
The Company accepts no responsibility for any direct or indirect damage as a result, of poor installation.
If the Buyer is overdue in payment for the goods or other goods supplied by the Company, the Company may recover and sell the goods.

If you are not using the WT niche fitting, the manufactures is discharged from any liability. The lamp is equipped with cable lengths requested; the installer must ensure suitable draw wires are installed through the niche/pipe work and conduit.

General

The installation depth should be between 500mm to 700mm. Sufficient cable should be retained in the niche/pipe work to pull the lamp to the surface, and carry out any repairs. The lamps O ring is not a water tight seal therefore we recommend a soft sealant to be placed round the lip of the lamp prior to fitting.

If a lamp should fail then the replacement of an LED lamp should be carried out by a qualified electrician.

WARRANTY AND LIABILITY

(a) Subject to the conditions set out below, the Company warrants that the goods will be free from defects in material and workmanship for a period of 24 months from the date of delivery and shall replace any goods which the Buyer proves to the satisfaction of the Company to be faulty in accordance with this condition.
(b) The warranty given in paragraph (a) is subject to the following conditions.
(i) The Company shall be under no liability in respect of any defect arising from fair wear and tear, wilful damage, negligence, abnormal working conditions, poor installation, failure to follow the Company's instructions, misuse or alteration or repair of the goods without the Company's written approval.
(ii) The Company shall be under no liability under the above warranty if the total price for the goods has not been paid by the due date for payment.
(iii) The above warranty does not extend to parts, materials or equipment not manufactured by the Company, in respect of which the Buyer shall only be entitled to the benefit of any warranty or guarantee provided by the manufacturer thereof to the Company.
(c) Subject as expressly provided in these conditions, all warranties, conditions or other terms implied by statute or common law are expressly excluded to the extent permitted by law.
(d) Except in respect of death or personal injury caused by the Company's negligence (or implied under the Consumer Safety Act 1987) the Company shall not be liable to the Buyer by reason of any representation, implied warranty, condition or other term or under the express terms of the contract for any consequential loss or damage (whether for loss of profit or otherwise), costs, expenses or other claims for consequential compensation whatsoever arising out of the supply of goods and the Company's liability for direct loss (otherwise than for death or personal injury) shall be limited to the value of the invoice for the contract.

WARRANTY AND LIABILITY

All our products are covered by your statutory rights, this warranty is in addition to your statutory rights under either the Sale of Goods Act 1979 or the Supply of Goods and Services Act 1982 .If you are unhappy with the service you receive from water-tec.co.uk please contact us immediately in order that we can rectify the situation. We will keep you informed of everything we are doing to correct the situation until the problem has been resolved. This warranty covers a 24 month period from the date of purchase. Conditions apply see below for details.

Warranty Disclaimer

- This warranty takes immediate effect from the date of purchase.
- Water-tec and MAS Electronics UK Ltd are not responsible for any items that have been damaged due to misuse.
- We are not responsible for the installation of the items; installation must always be carried out by a qualified electrician.
- General maintenance on the Lamps must be carried out at regular intervals, to ensure the highest visibility. We do not take responsibility for any maintenance issues.
- The water should be kept at a neutral Ph-value. The water should be free from any metal attacking ingredients to avoid discolouration.
- Material deposits on the lamp must be removed with a suitable non metallic cleaner.
- Items returned and are found to be damage by any misuse or incorrect fitting; the manufactures are discharged from any liability. There will also be a charge to replace the item.
- This is a water cooled device; therefore, the lamps should not be run dry for long periods of time.

The warranty will be invalid if any modificat