

LED Strips Connections

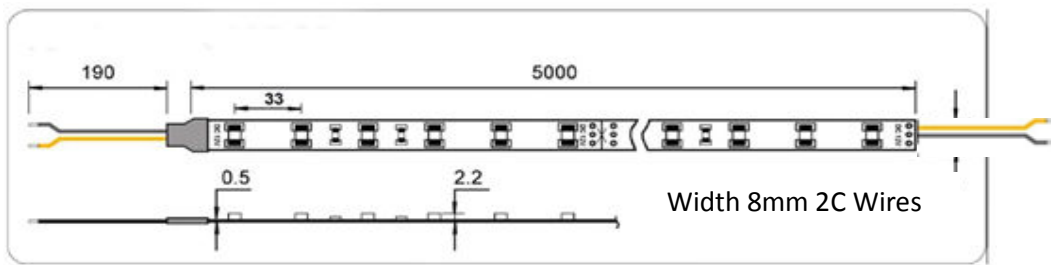


Step 1 Type of Strips

Chose the type of strips required. Two Choices:

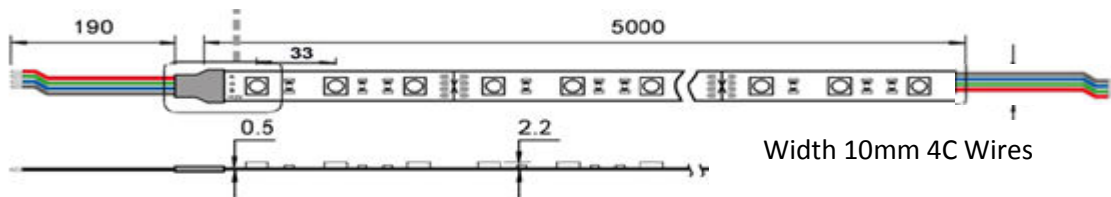
A) LST60

Static Colour. 5m Roll Flexi LED Strip 12V 60LED/M 240lm/M IP65 120° **4.8W/M**



B) LST30

Colour Changing. 5m Roll Flexi LED Strip 12V 30LED/M 360lm/M IP65 RGB 120° **7.2W/M**



Further Data:

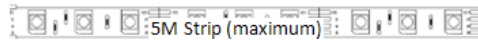
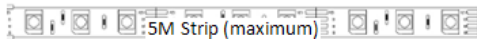
Part Number	Dimension	LED Type	LEDs / Metre	Power (W/meter)	Operating Voltage	IP Rating	Lumens per Meter
LST60 + * Colour	5M (L) x 8mm(W)	SMD3528	60	4.8 W	12V	IP65	240LM
LST30RGB	5M (L) x 10mm(W)	SMD5050	30	7.2 W	12V	IP65	360LM
<p>*CW=Cool White W=White WW=Warm White B=Blue G=Green R=Red Y=Yellow PUR=Purple RGB= Colour Changing</p>							

Step 2 Length of Strips

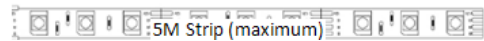
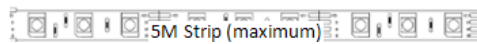
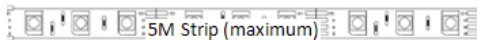
Determine the length and number of runs required.

For Example 2 runs, one at 10M and one at 15M

Run 1) 10M



Run 2) 15M



Step 3 Power Requirement

Work out the power required. For LST60 4.8W per Meter and for LST30 7.2W per Meter.

For Run 1) power required, 48W for LST60 and 72W for LST30

Step 4 Controllers and Amplifiers

Chose a controller if required. LST30 and Dimmable LST60 both require controllers.

Non Dimmable LST60 don't require any controller only Power drivers.

Type of controllers:

a) **DL-RGB Infra-Red Controllers 144W max capacity**

Pros :

- User Friendly
- Low Price
- Ideal for Individual runs
- Can handle up to 144w without need of amplifiers.



Cons.

- Infra-Red, Can only work if controller is in direct line view with Areal wire on receiving unit, hence end of Areal wire must visible within the room.
- Relatively short range

2) Rj45-RGB RJ45 Linkable Radio Frequency controller 240W max capacity

Pros.

- Ease of use
- Wide range of functions including colour mixtures
- Instant synchronisation – Colour synchronisation only on Radio Frequency or Full functions synchronisation with RJ45 Ethernet cables links.
- Can be linked to multiple long range runs (Via RJ45 cables)
- Can handle up to 240W output without need of amplifiers.
- Radio Frequency. Receiver units can be hidden away.
- Handset Uses standard AAA batteries
- Durable Handsets



Cons.

Price

3) AMP12 Amplifiers. Power and Signal Amplifiers 144W Max

Amplifiers are required if power requirement Exceeds 144W With DL-RGB .

Divide power requirement over 144W to determine no of AMP12 required.



For RJ45-RGB if power exceeds 180W (highest capacity power driver available). Then Further RJ45-RGB units are required. Divide Power Requirement over 180W to determine no of RJ45-RGB required.

Examples

Power Requirements	Required controllers
120W	(1x DL-RGB) or (1x RJ45-RGB) No AMP12
180W	Either (1x DI-RGB + 2x AMP12) or (1x RJ45-RGB)
350W	Either (1x DI-RGB + 3x AMP12) or (2x RJ45-RGB)

Step 5. Power Drivers :

Power Drivers Capacity must be at least equal or over power requirements.

For Colour changing Strips or dimmable LED strips, individual Power drivers must cover Controllers Power requirements.

For Non – dimmable Led strips. Powerdrivers must cover Led strips power requirements.

Powerdrivers range:



12V-12DC	<u>12V 12W DC SEALED POWER DRIVER IP67 Prewired</u>
12V-25DC	<u>Term. Power Driver 25W Mains In/12V DC Out Const. Volt. IP20</u>
12V-30DC	<u>12V 30W IP67 DC SEALED POWER DRIVER Prewired</u>
12V-40DC	<u>Term. 40W Mains In/12V DC Out Const. Volt. IP20 110x80x35mm</u>
12V-60DC	<u>12V DC Const. Voltage P/driver IP67 prewired L180x W60X H45</u>
12V-120DC	<u>Term. Power Driver 120W Mains In/12V DC Out Cst. Volt. IP20</u>
12V-180DC	<u>Term. 180W Mains In/12V DC Out Cst. Volt. IP20 198x98x42mm</u>

Step 6 Wiring and connections:

LED strips can only be wired in series up to a Maximum of 5 Metre Length

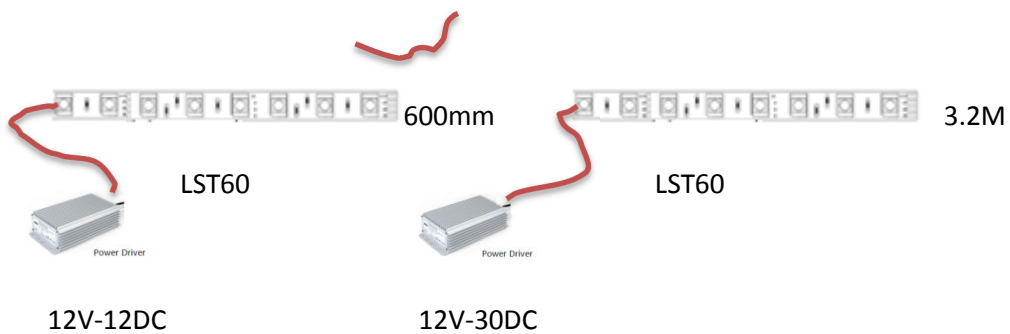
If individual runs exceed 5M, they must be wired in Parallel in multiples of 5 Metre lengths.

Wiring Example.

Non dimmable Led Strips: (4.8W/M)

600mm and 3.2M Runs

ELV (12V) Power Cable



Or



Or

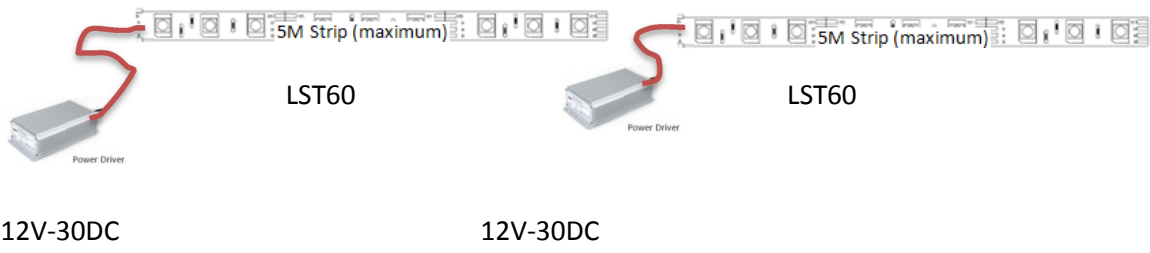


12V-30DC

600mm + 3.2M lengths can be linked in series as total lengths do not exceed 5M

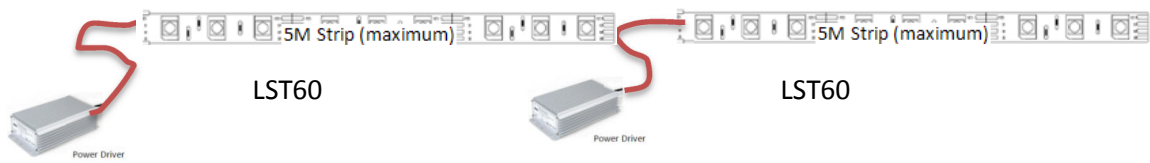
25M Run

Either



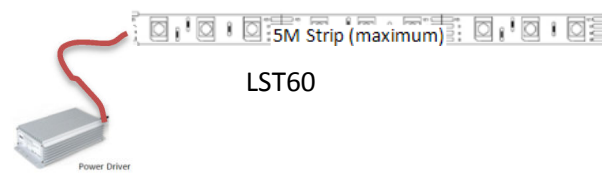
12V-30DC

12V-30DC

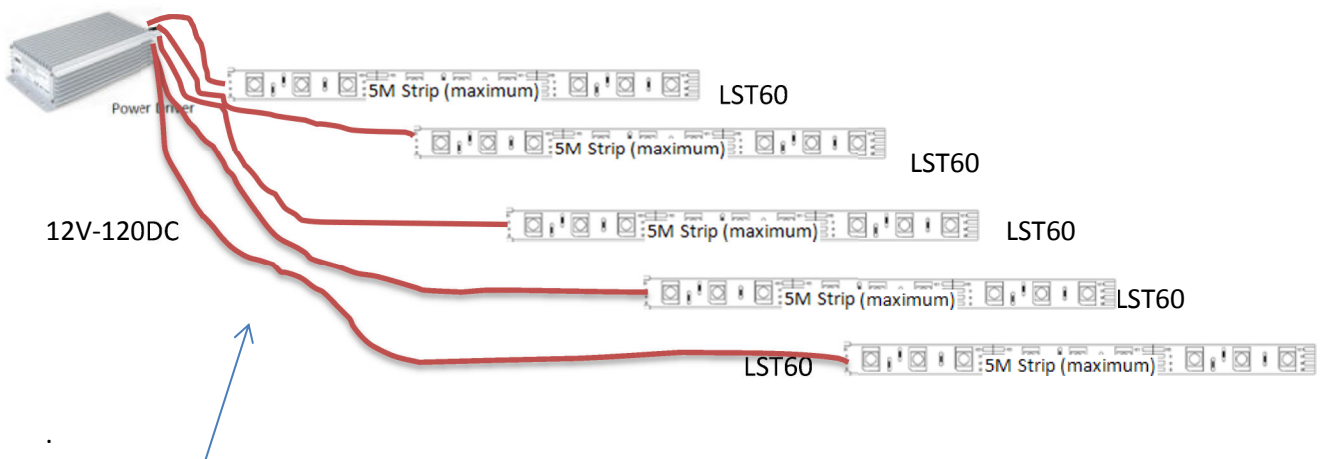


12V-30DC

12V-30DC



OR



Cables could be combined into one Cat5/Cat6 cable, but amount of wires must doubled

Dimmable LST60 (4.8W/M)

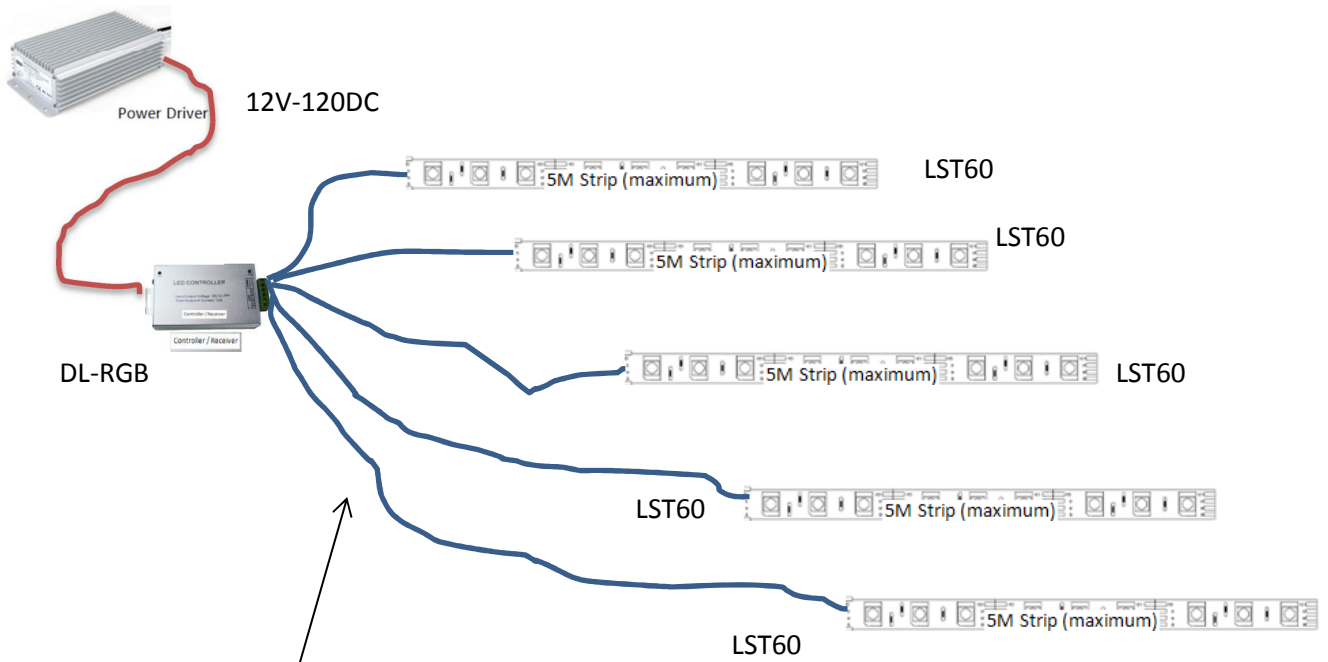
Signal Cable



ELV (12V) Power Cable

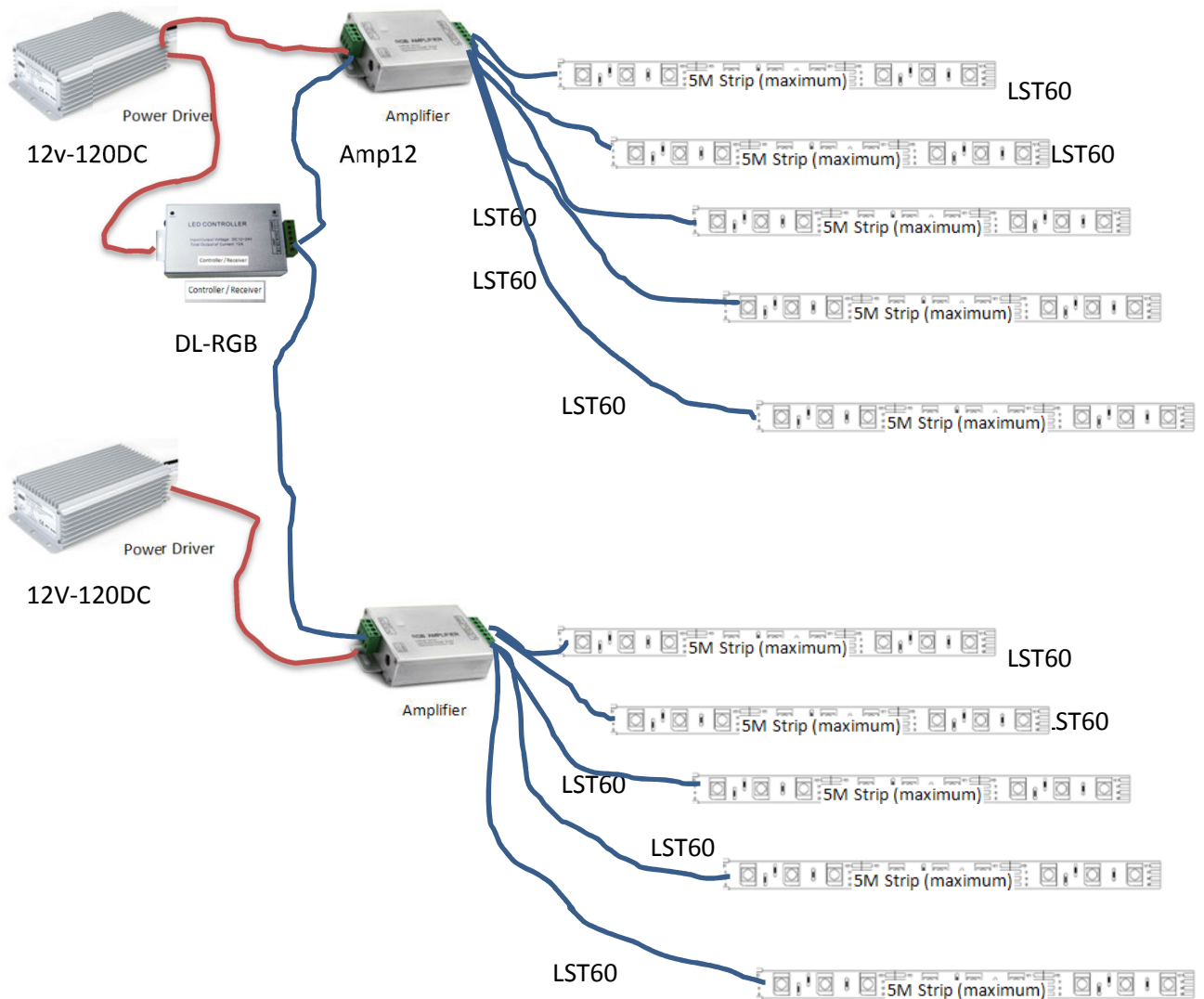


Up To 30Meters using DL-RGB controller (144W MAX)



Signal Cables could be combined into one Cat5/Cat6 cable, but amount of wires must doubled

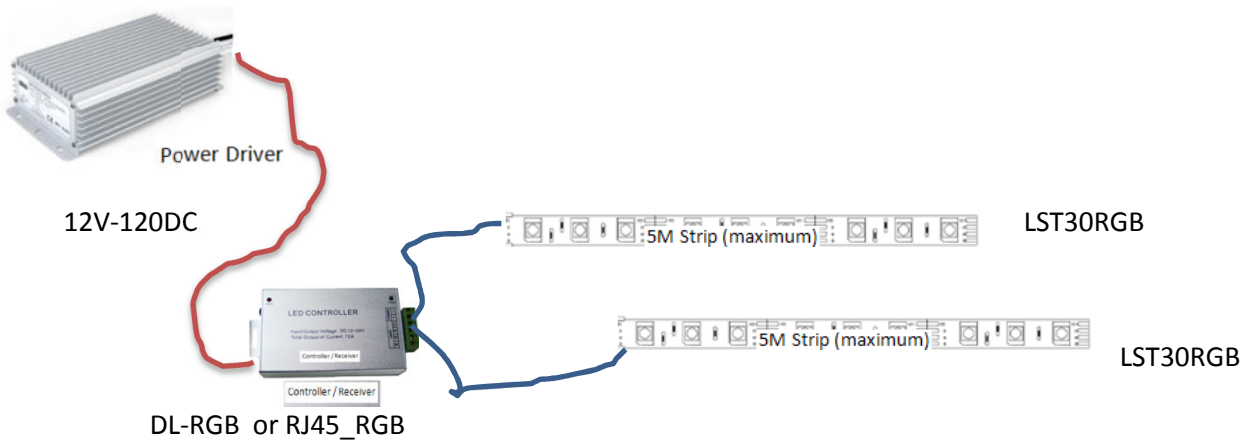
Up To 50 Meters using DL-RGB controller (144W MAX)



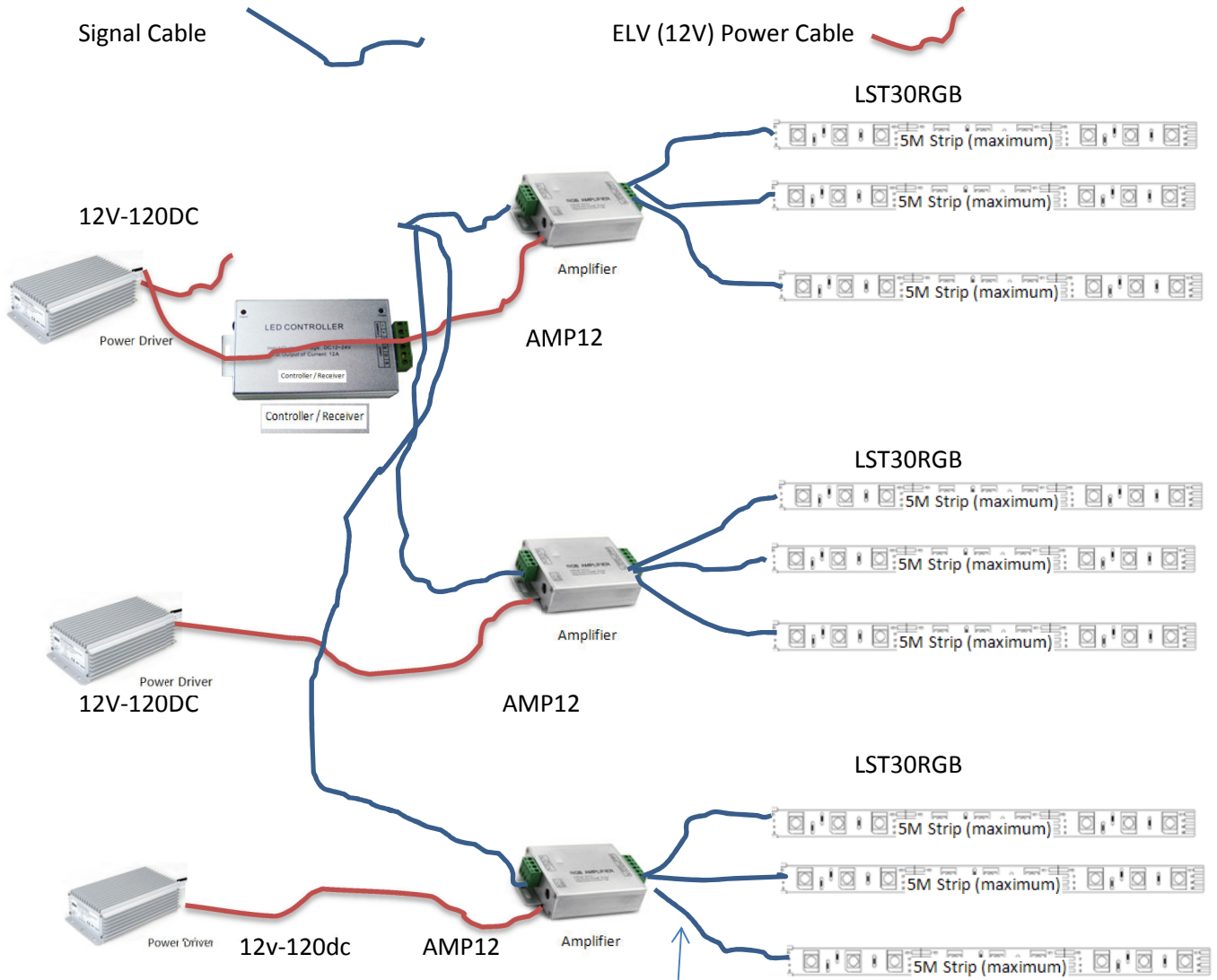
Signal Cables could be combined into one Cat5/Cat6 cable, but amount of wires must doubled

Colour Changing Strips

10M LST30RGB Using either DL-RGB or RJ45-RGB controllers

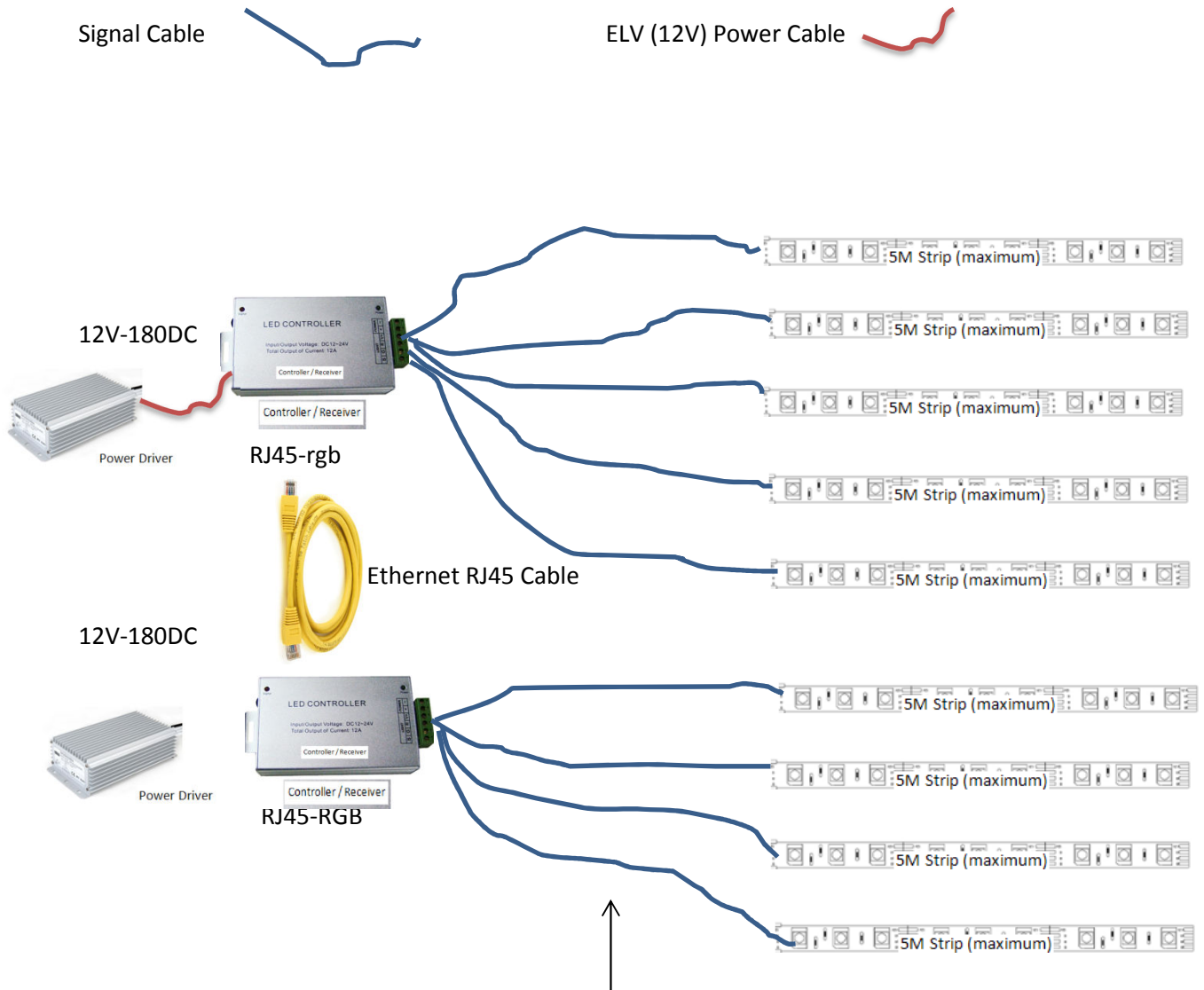


45M Using DI-RGB Controllers (144W max.)



Signal Cables could be combined into one Cat5/Cat6 cable, but amount of wires must be doubled

45M Using RJ45-RGB controller



Signal Cables could be combined into one Cat5/Cat6 cable, but amount of wires must be doubled

RJ45-RGB synchronisation – Colour synchronisation only on Radio Frequency or Full functions synchronisation with RJ45 cables links.