VERTICALLY URBAN

HORTI-BLADE™
TUNABLE

INSTALLATION INSTRUCTIONS

⚠️

PLEASE ENSURE YOU HAVE READ THE FOLLOWING INSTRUCTIONS THOROUGHLY AND CAN UNDERTAKE THE REQUIRED ACTIONS BEFORE COMMENCING INSTALLATION.

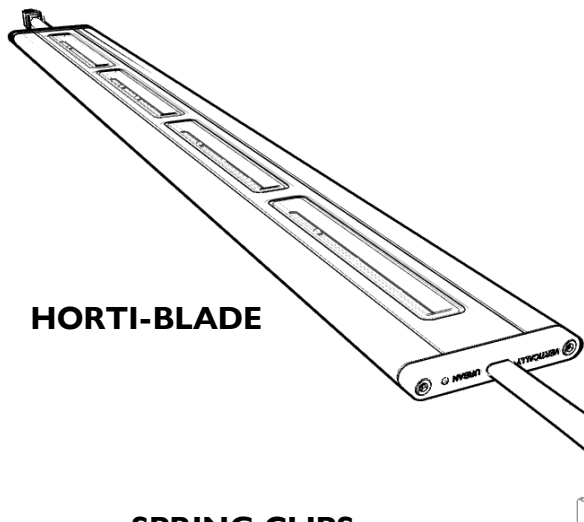IF YOU HAVE ANY QUERIES, PLEASE CONSULT VERTICALLY URBAN TECHNICAL SUPPORT DEPARTMENT BEFORE PROCEEDING.

THIS PRODUCT SHOULD BE INSTALLED BY A CERTIFIED ELECTRICIAN AND FOLLOW LOCAL REGULATIONS.

017369

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REVISION TABLE				
REVISION	**DATE**	**COMMENTS**	**AUTHOR**	**APPROVED BY**
A	15/12/2022	DOCUMENT CREATED	M. ASH	M. BRUMPTON
B	02/02/2023	SPECTRA DRIVE CONNECTIONS UPDATED	M. ASH	M. BRUMPTON
C	08/02/2023	CONNECTION NOTE ADDED	M. ASH	M. BRUMPTON
D	05/09/2023	VERTICAL MOUNTING BRACKET ADDED	M. BRUMPTON	L. GIBSON
E	08/10/2023	HOT PLUGGING WARNING UPDATED	M. BRUMPTON	L.GIBSON
F	25/10/2023	AMENDED UNITS PER PSU TABLE	L. GIBSON	M. BRUMPTON
G	25/012024	ADDITION OF HBT02	M.BRUMPTOIN	L.GIBSON

CONTENTS

COMPONENTS LIST

HORTI-BLADE

PSU

SPRING CLIPS
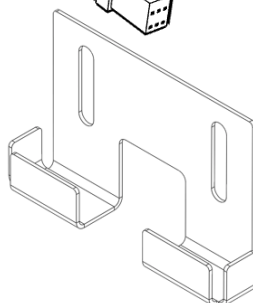
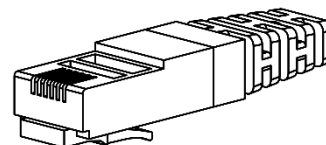**VERTICAL CLIP/SUPPORT**
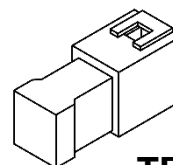
TERMINATOR
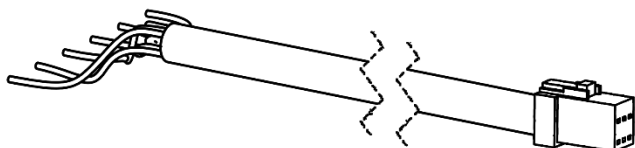
STARTER CABLE

RJ45 TERMINATOR

VU-SPECTRA-DRIVE-6-MODBUS (015138)

OR
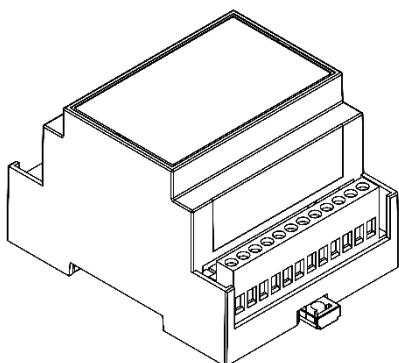
VU-SPECTRA-DRIVE-6-DMX (012252)

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Page **3** of **16**
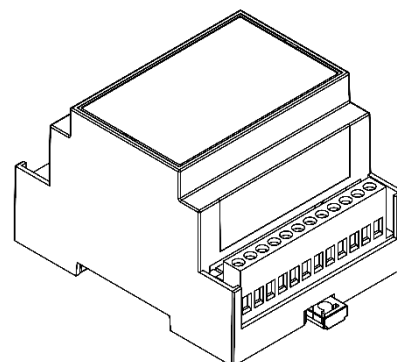
SPECIFICATIONS

HORTI-BLADE™ TUNABLE

Part No.	Spectrum	Length (mm)	Compatible PSU	Compatible Driver	Power (W)	Input Voltage	Units per PSU
014854		612			20		1-9
014855	HBT01	1188	013998	012252 / 015138	40	48VDC	1-4
014856		1764			60		1-3
014857		2340			80		1-2
020324		612			23		1-8
020325	HBT02	1188	013998	012252 / 015138	46	48VDC	1-4
020326		1764			69		1-2
020327		2340			92		1-2

CONTACT VERTICALLY URBAN IF MIXING VARIOUS LENGTHS OF FITTINGS

WARNING:

Do <u>NOT</u> hot-plug, use dimmers, or switches on the DC side. Doing so will invalidate the warranty.

Always ensure that the power source is <u>**completely disconnected**</u> before handling any plugs or making any connections to avoid the risk of electrical shock or damage to the equipment.

SPRING CLIPS

[11/16"]
17.26mm

[2 15/32"]
63.00mm

[1 1/4"]
31.50mm

[13/32"]
10.00mm

[3/16"]
5.00mm

[3/16"]
⌀ 4.50mm

1

*USE APPROPRIATE M4 SCREW

2

2340mm

1764mm

1188mm

612mm

3

4

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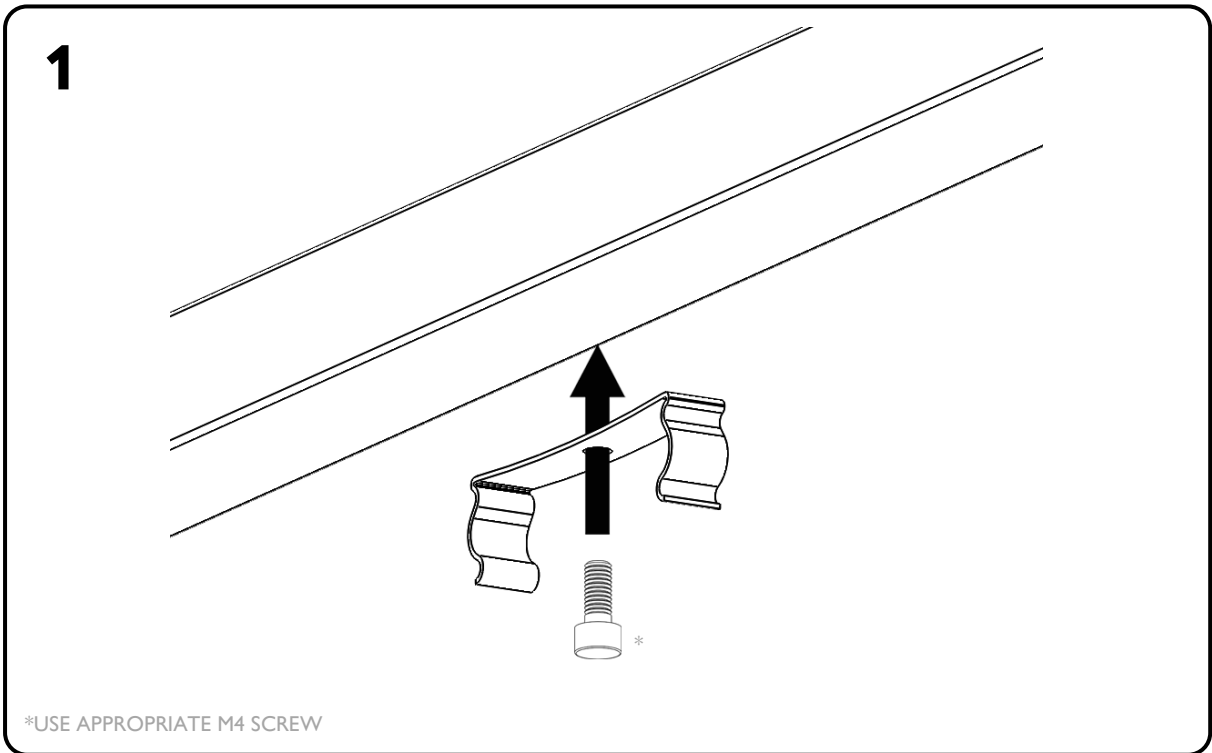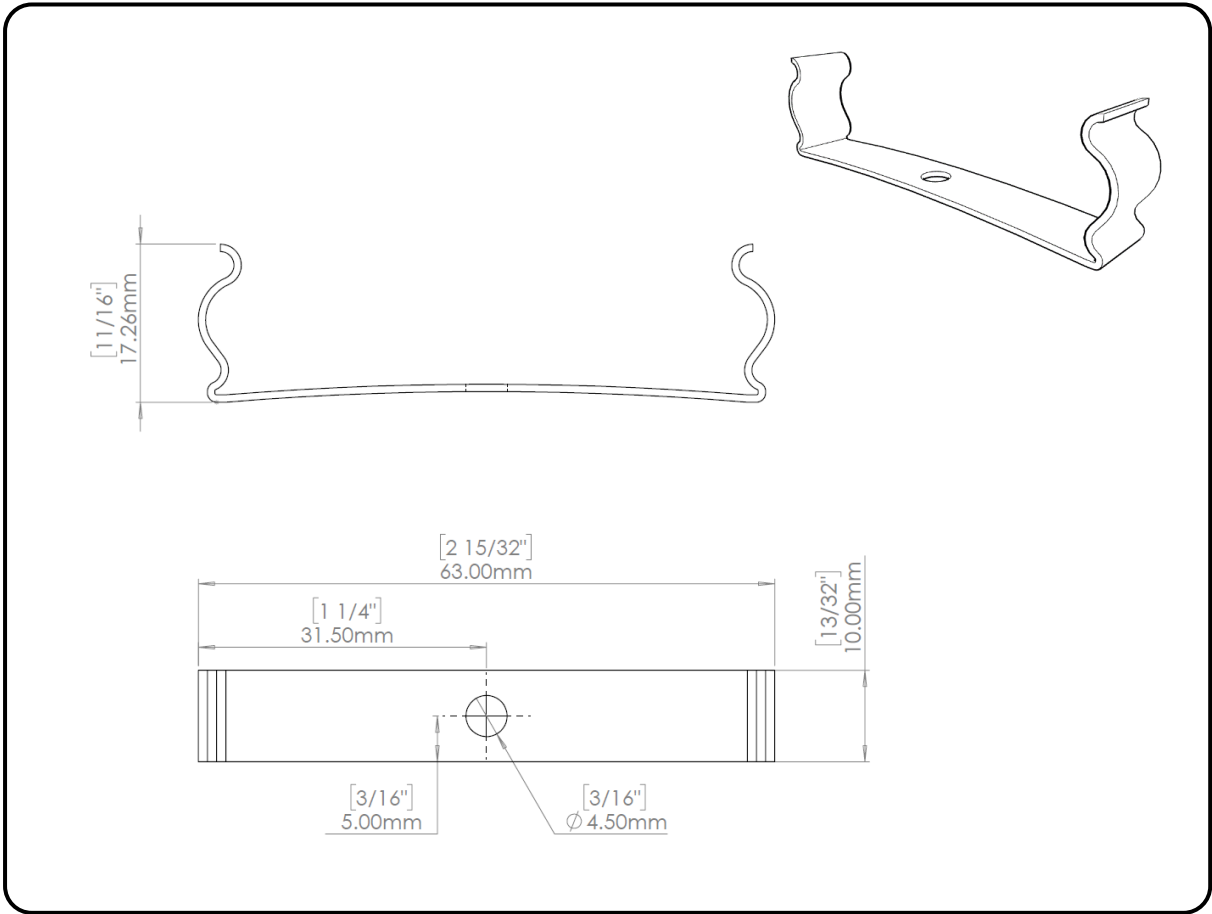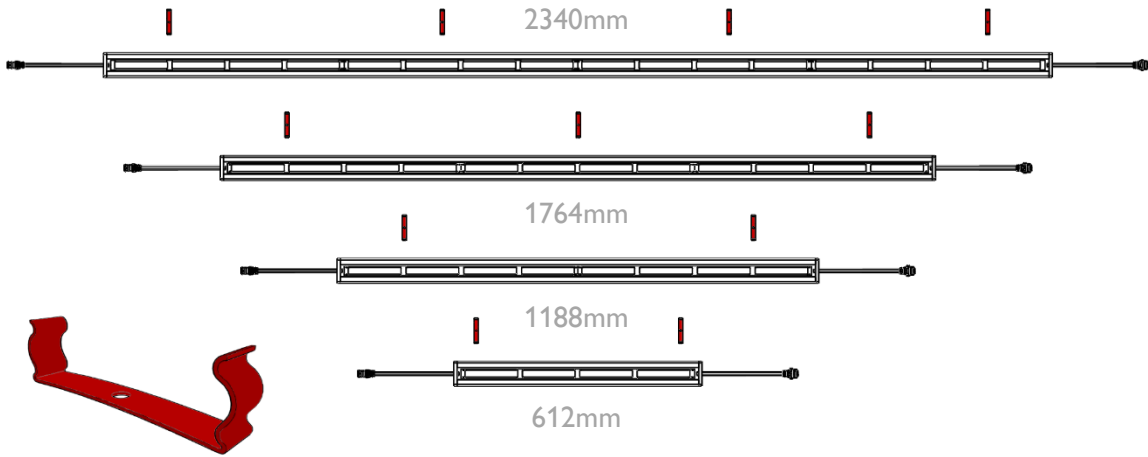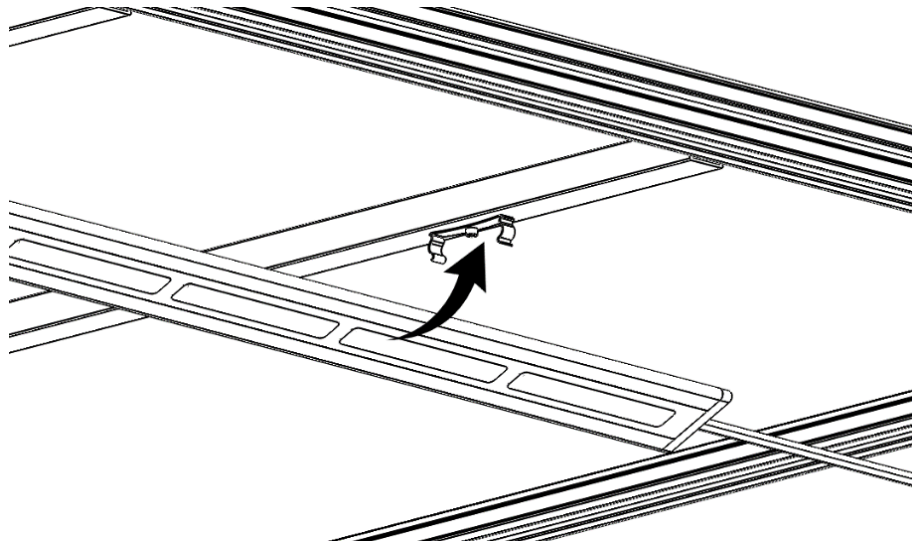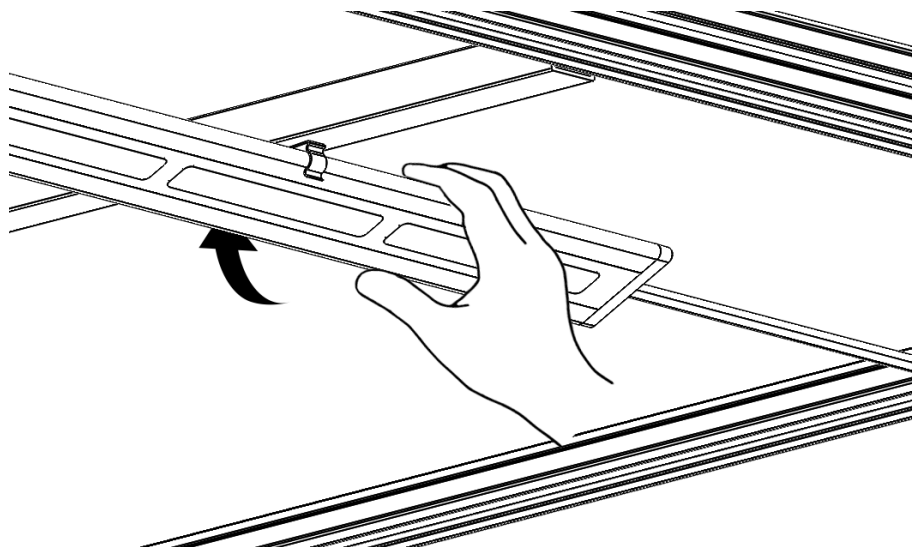
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CLIPS – VERTICAL INSTALLATION

1

2

3

4

2340mm

1764mm

1188mm

612mm

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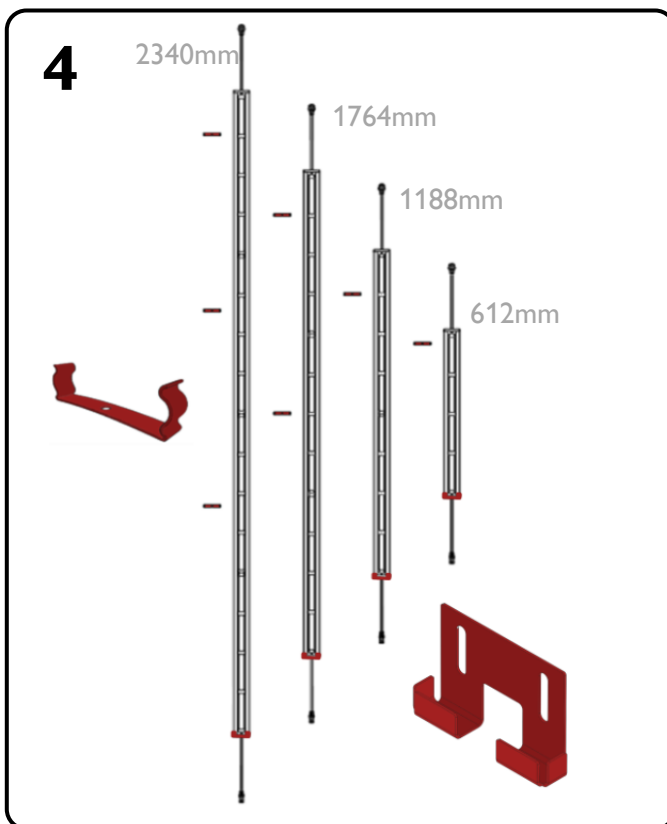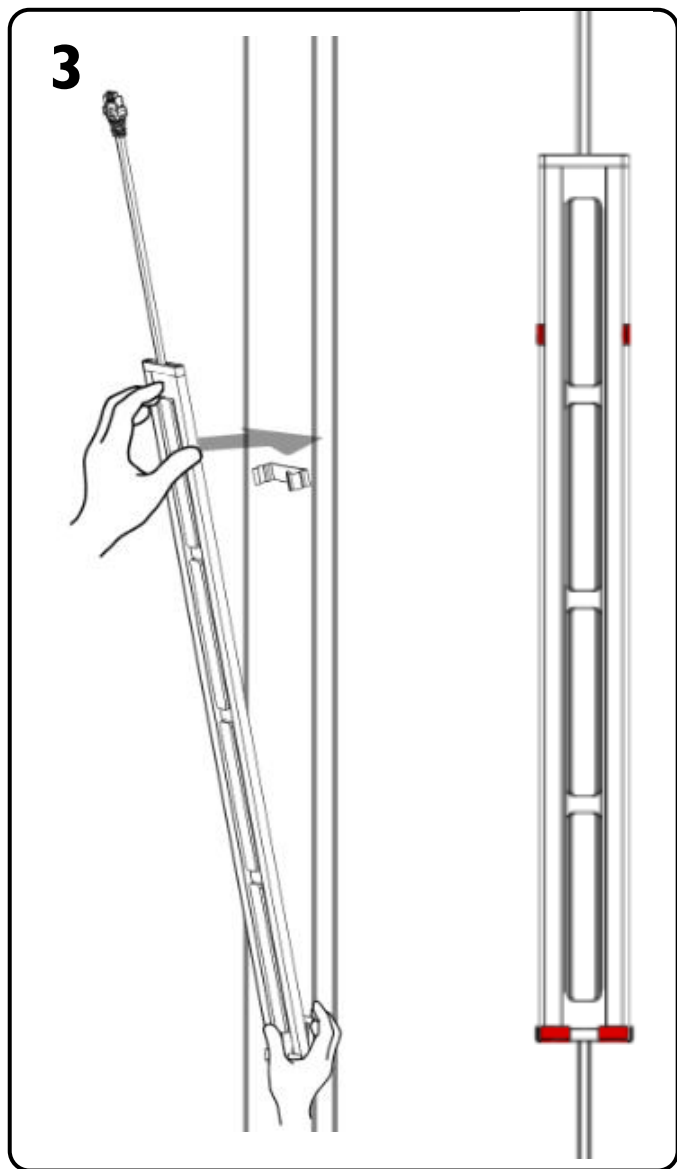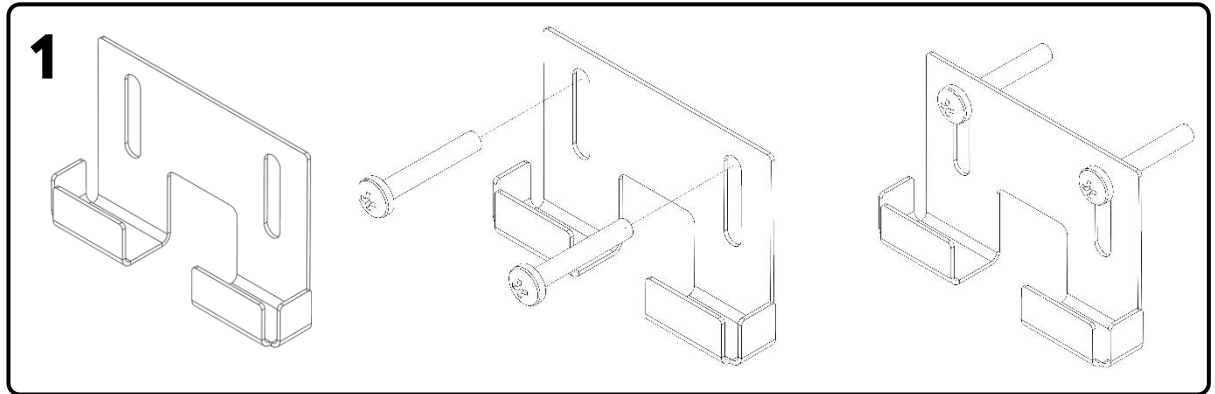
RECOMMENDED CONNECTION METHODS

⚠ Do <u>NOT</u> reverse polarity

⚠ Do <u>NOT</u> exceed max. VU Spectra Drive chain length *(31)*

⚠ Only use specified PSU *(as shown on Page 4)*

⚠ Maximum cable length from Spectra Drive to luminaire is 20m

> **WARNING!**
> RISK OF ELECTRICAL SHOCK.
> **DISCONNECT POWER BEFORE SERVICING OR INSTALLATION**

STARTER CABLE TO SPECTRA DRIVE (DIRECT)

NOT IP RATED
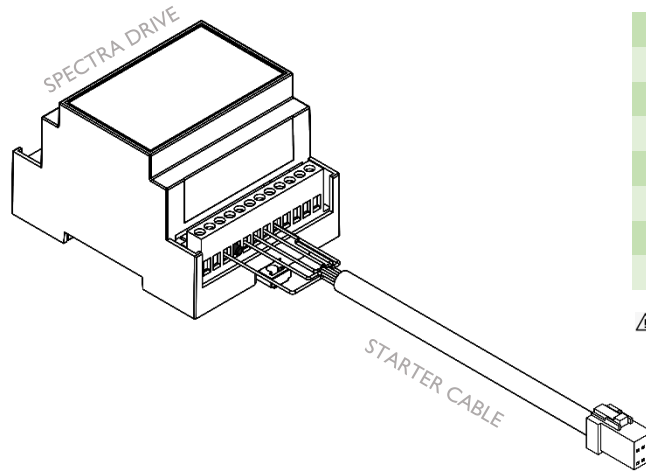
Starter Cable	Spectra Drive
Black & Yellow	+ Common
Red	CH 1
Green	CH 2
Blue	CH 3
-	BLANK
White	CH 4
-	CH 5
-	CH 6

⚠ If using external control system, please make note of table above.

OR

STARTER CABLE TO EXTENSION CABLE (EXTENDED)

NOT IP RATED
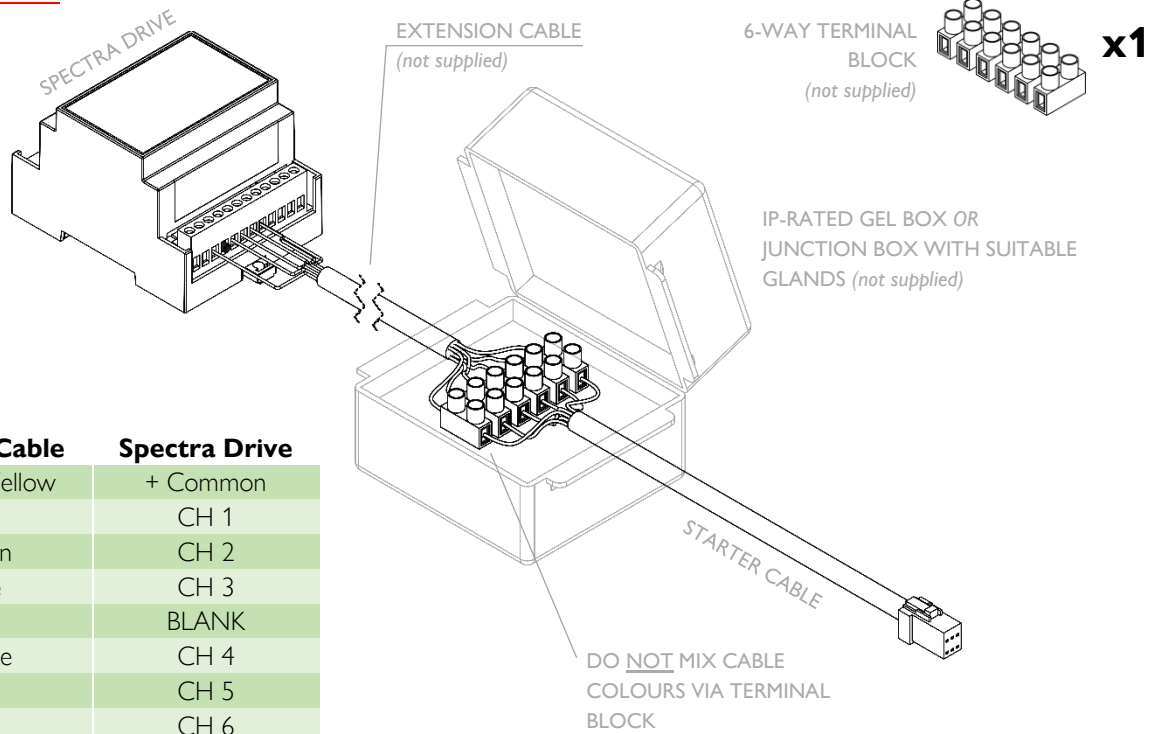
EXTENSION CABLE *(not supplied)*

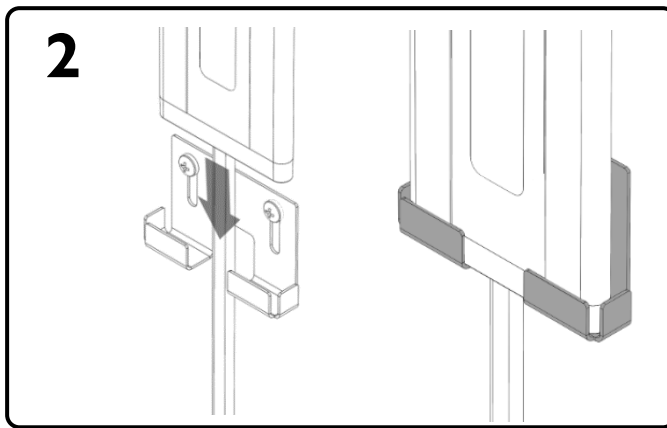6-WAY TERMINAL BLOCK *(not supplied)* **x1**

IP-RATED GEL BOX *OR* JUNCTION BOX WITH SUITABLE GLANDS *(not supplied)*

DO <u>NOT</u> MIX CABLE COLOURS VIA TERMINAL BLOCK

Starter Cable	Spectra Drive
Black & Yellow	+ Common
Red	CH 1
Green	CH 2
Blue	CH 3
-	BLANK
White	CH 4
-	CH 5
-	CH 6

⚠ If using external control system, please make note of table above.

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⚠ Always ensure the connection has an appropriate IP rating for install location
(Refer to page 7 for more information on extending cables)

⚠ Vertically Urban recommends starter cables are linked to extension cables with gel boxes *or* junction boxes with suitable glands for both cables.

⚠ When extending sheathed cables, ensure that the outer sheath is encased in the gel box to retain the IP rating.

⚠ Extension cable CSA and length should be calculated to ensure the luminaire's voltage does not drop below that specified in the datasheet. Any difficulties or questions, please contact Vertically Urban support.

⚠ Use appropriate IP-rated connectors for any extensions to retain warranty.

Gel box example: http://www.raytech.it/catalogo/en/gel-box-line.pdf

SPECTRA DRIVE TO PSU

PSU Cable	Spectra Drive
Vo -	V Neg
Vo +	V +
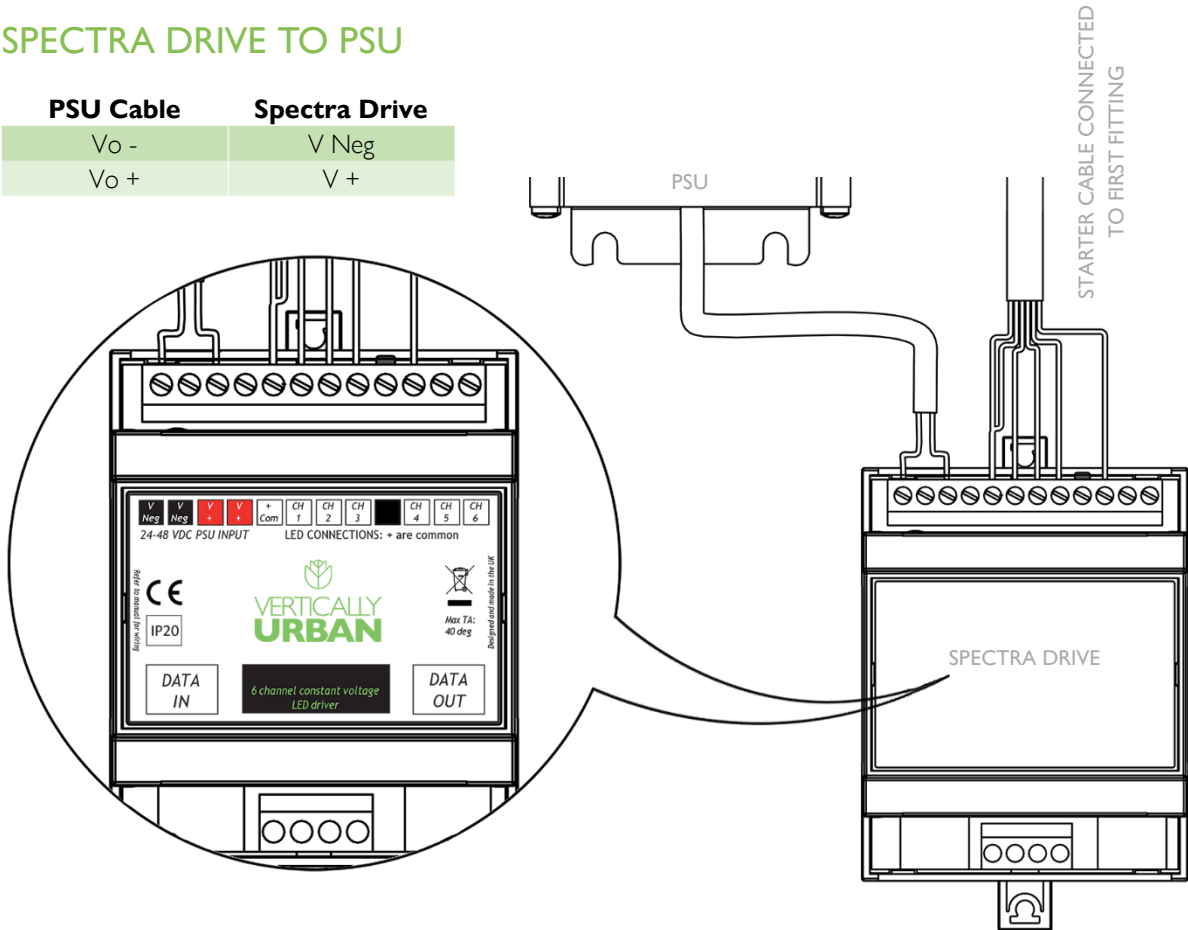
SPECTRA DRIVE LOAD GUIDELINES

Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Total Current
6						6 Amps
6	6					12 Amps
4	4	4				12 Amps
3	3	3	3			12 Amps
2	2	2	2	2	2	12 Amps

⚠ Do NOT exceed **6 Amps per channel** OR **total current** of **12 Amps per spectra drive**

DMX SETUP

ADDRESSING SHOULD BE DONE <u>INDIVIDUALLY</u> AND <u>NOT</u> WHEN MULTIPLE SPECTRA DRIVES ARE CONNECTED TOGETHER

1

ON

ON

DMX TESTING TOOL

VU SPECTRA DRIVE

DMX OUT TO RJ45 CABLE

WARNING!
DO NOT LOOK AT LIGHT

2

MODE — PRESS TO OPEN MENU

CH + — PRESS TO NAVIGATE MENU

(func) — PRESS TO SELECT 'RDM'

RECEIVE   SEND   RDM
F. FINDER   TRACER   TIMINGS

3

MAIN PATCH OPTIONS   000/001

HYBRIDDRIVE 6

MODE — PRESS TO CONFIRM

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4

```
                              +swisson
 ┌──────────────────────────────────┐
 │ HYBRIDDRIVE 6                     │
 │ ▶LABEL:                   TEST1   │
 │ MODEL:             HYBRIDDRIVE 6  │
 │ MAN.:                 VEXICA LTD  │
 │ DMX STARTADDR:            001     │
 │ DMX PERSONALITY:          N/A     │
 │ DMX                         6     │
 └──────────────────────────────────┘
```
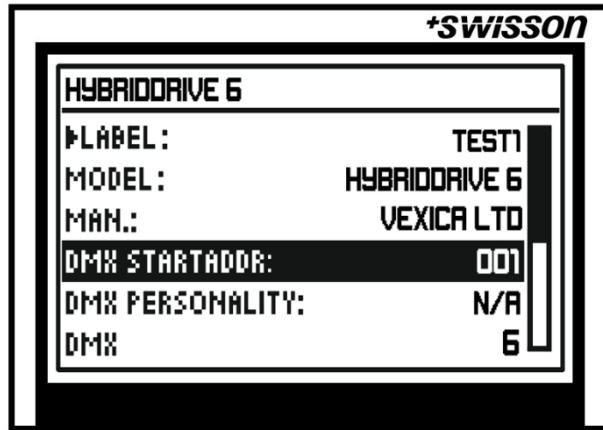
MODE — PRESS TO SELECT

Spectra Drive	DMX Channels
SD 1	001 – 004
SD 2	005 – 008
SD 3	009 - 012
….	….

NOTE: Horti-Blade™ Tunable utilises four channels which correspond to four following DMX addresses assigned to that Spectra Drive (SD). The DMX start address of each SD should be in **sequences of 4**, i.e. SD 1 utilises channels 001, 002, 003, 004. If a different output is required, SD 2 will then start at channel 005 to 008 and so on with _no overlapping channels_.

5

```
                              +swisson
 ┌──────────────────────────────────┐
 │                                  │
 │  DMX ADDRESS:                    │
 │                                  │
 │ ┌──────────────────────────────┐ │
 │ │ ENTER DESIRED DMX START ADDRESS│ │
 │ └──────────────────────────────┘ │
 │                                  │
 └──────────────────────────────────┘
```
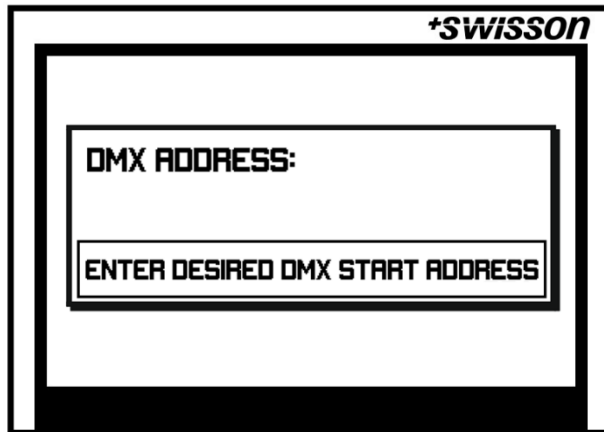
+ / − — PRESS TO CHANGE VALUE

MODE — PRESS TO CONFIRM

MODE — PRESS TO RETURN TO MENU

ONCE CONFIRMED, CYCLE POWER TO RESET SPECTRA DRIVE

DMX CHANNEL EXAMPLE

START ADDRESS 001
001	R
002	FR
003	B
004	W

0 — 225 (100%)

OUTPUT

PURPLE

START ADDRESS 005
005	R
006	FR
007	B
008	W

0 — 225 (100%)

PINK

SPECTRA DRIVE SET TO START ADDRESS…

ADDRESS — OUTPUT

001
005
001
005
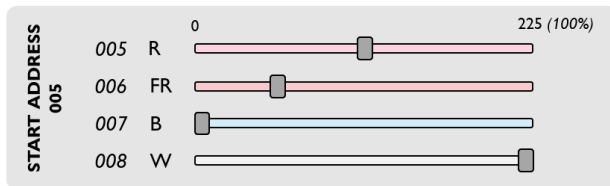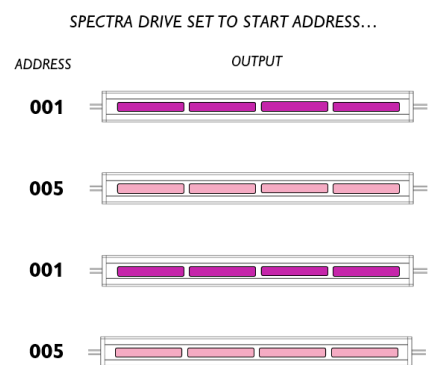
PROCEED TO PAGE 13 FOR LINKING SPECTRA DRIVES

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MODBUS SETUP
SPECTRA DRIVE CONFIGURATION EXPLANATION

Start Register – *First holding register*
Baud Rate – *Baud rate of the Master*
Slave ID – *Slave ID of the VU-Spectra-Drive* →
No. of Holding Registers - *Each channel is represented by one Holding Register. Value of holding register is value from 0 to 255; 0 being OFF and 255 representing 100% Brightness* →
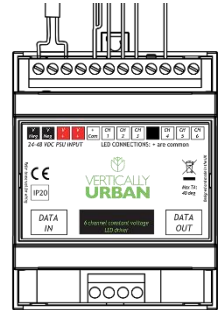**Save** – *Saves settings and restarts driver*

SLAVE ID: *1*
NO. HOLDING REG: *4*
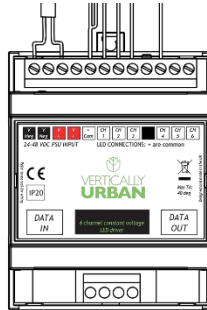
SLAVE ID: *2*
NO. HOLDING REG: *4*
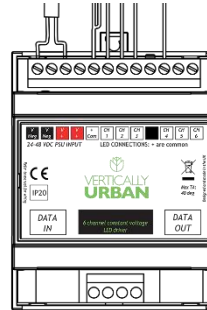
SLAVE ID: *3*
NO. HOLDING REG: *4*

1

ON

IMPORTANT
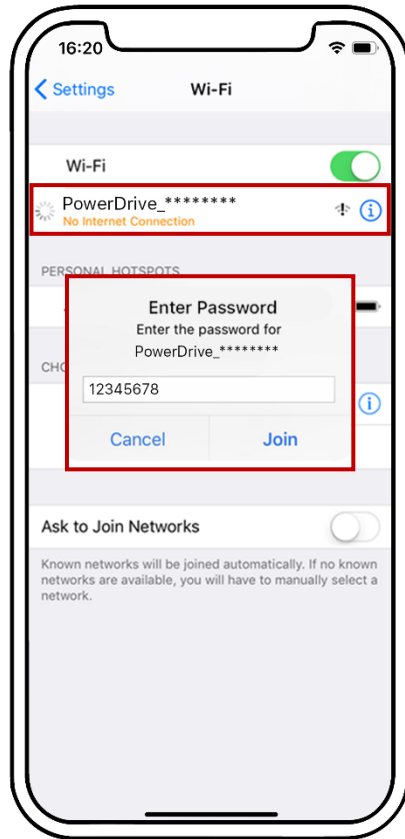ENSURE LUMINAIRE IS WIRED CORRECTLY, THEN POWER ON

2

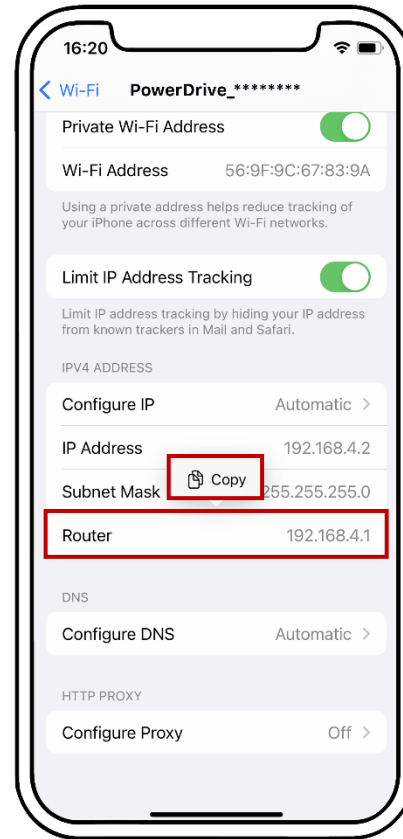*RE-APPLY LID WHEN SETUP COMPLETE*

QUICK PRESS
(*THEN WAIT 10s*)

iOS SETUP INSTRUCTIONS

⚠ It may be necessary to disable Wi-Fi Assist to connect to MODBUS
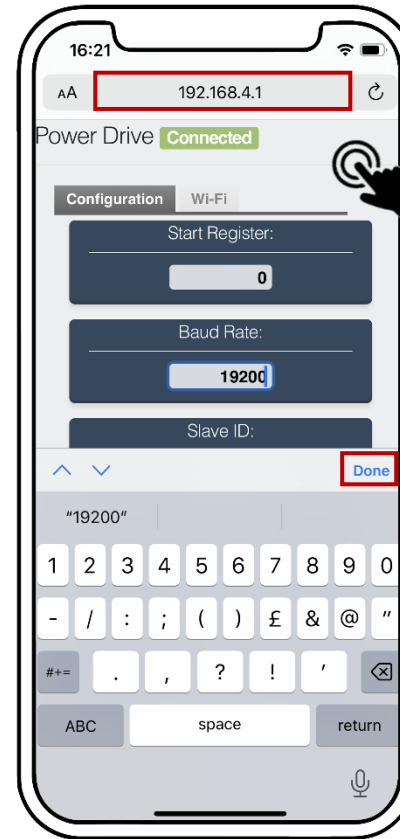*(Settings > Cellular OR Settings > Mobile Data > Wi-Fi Assist)*

1. Connect to PowerDrive_********
using password **12345678**

(where '' will be a randomly assigned
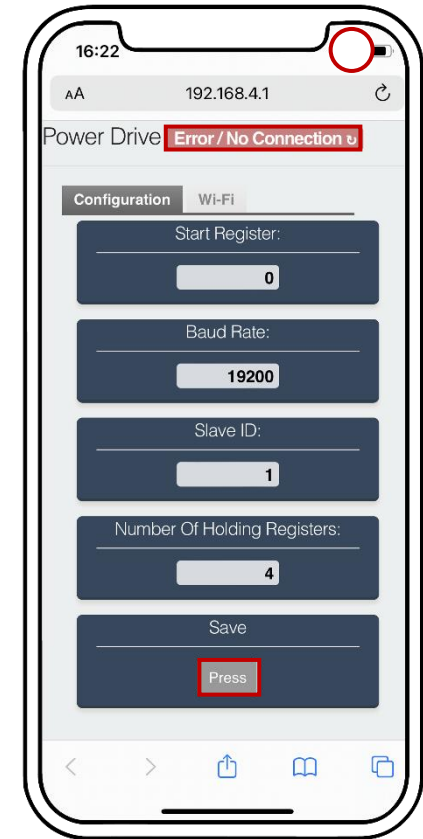letter/number combination*

2. Click ⓘ next to the Wi-Fi name,
scroll to the bottom of this page, and
hold to copy Router IP address

3. Open Safari and paste IP address
into search bar.

IMPORTANT: Once value is entered
into the field, press 'Done' on the
keyboard to hide and tap on an empty
space on the webpage to confirm
entry into field

4. Once fields are correct, press the
'Press' button in the 'Save' field *once*.
Wi-Fi will then disconnect.

5. Cycle power to restart device.
MODBUS setup is now complete.

ANDROID SETUP INSTRUCTIONS

1. Connect to PowerDrive_******** using password 12345678

(where '' will be a randomly assigned letter/number combination)*

2. Click ⚙ next to the Wi-Fi name, scroll to the bottom of this page, and hold to copy Gateway IP address.

3. Open Browser and paste IP address into search bar.

IMPORTANT: Once value is entered into the field, tap on an empty space on the webpage to confirm entry into field.
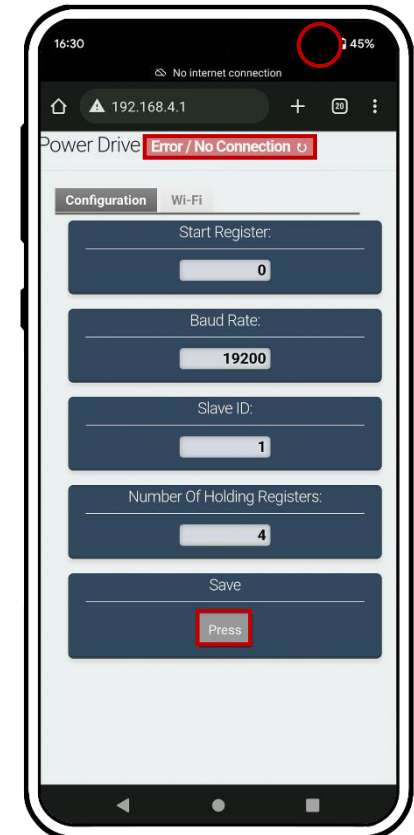
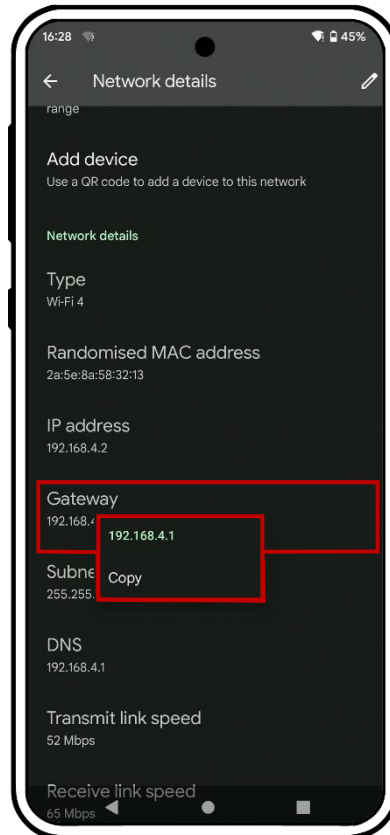**4.** Once fields are correct, press the 'Press' button in the 'Save' field *once*. Wi-Fi will then disconnect.

5. Cycle power to restart device. MODBUS setup is now complete.

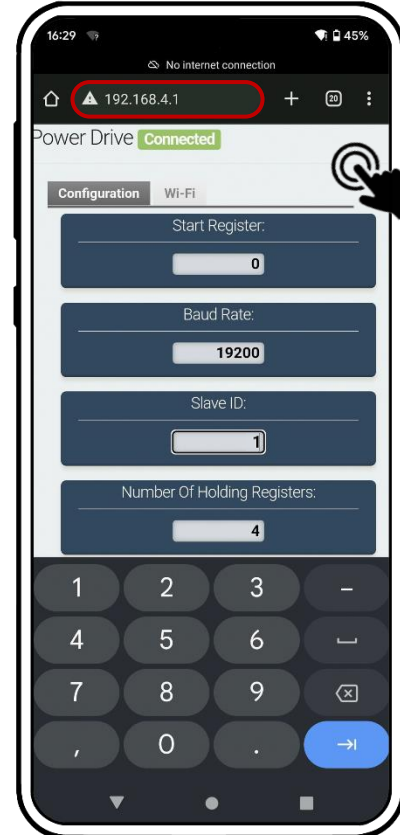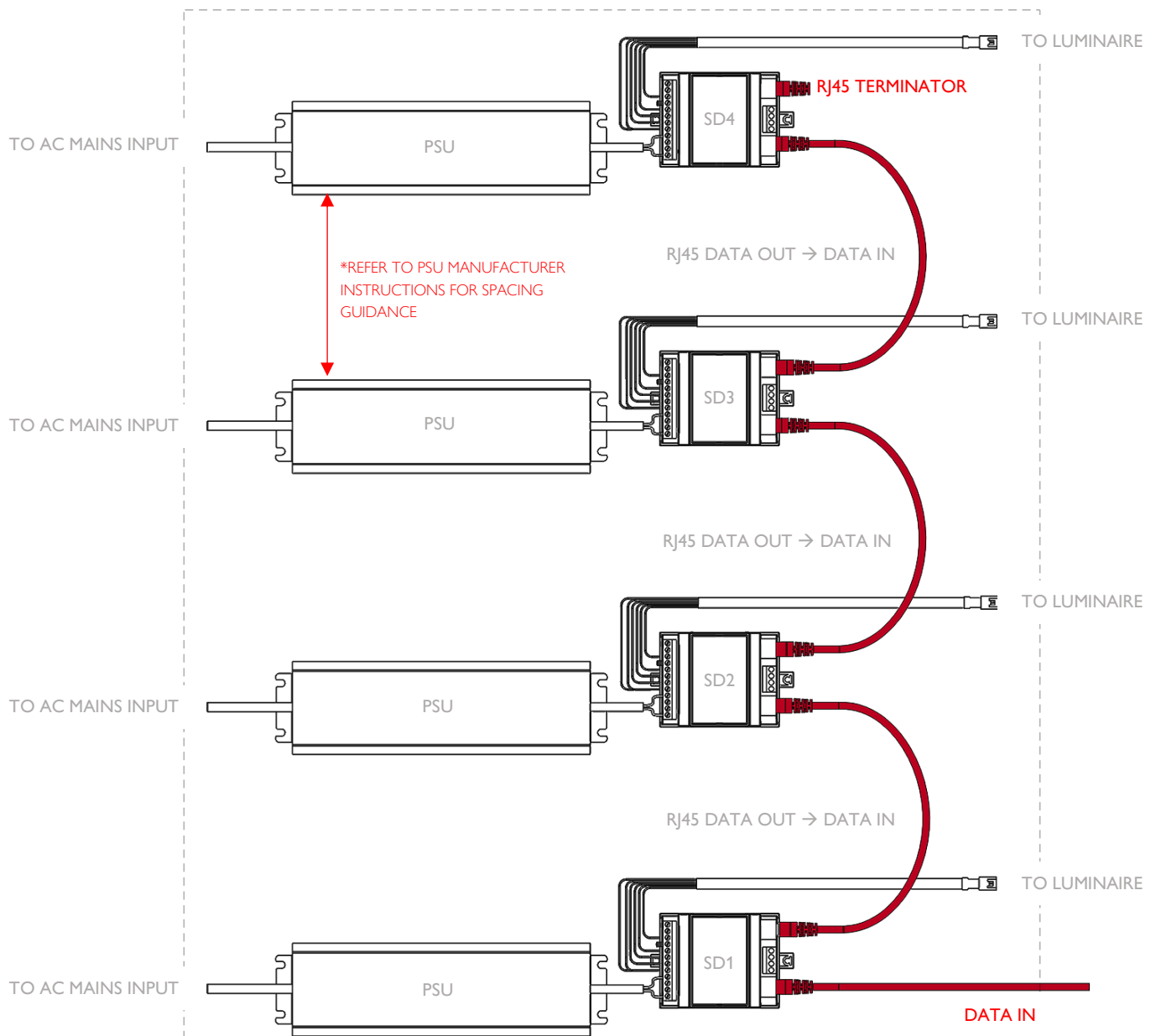# LINKING SPECTRA DRIVES (RJ45 CONNECTORS)

WIRING EXAMPLE _(NOT IP RATED)_

TO LUMINAIRE

RJ45 TERMINATOR

SD4

TO AC MAINS INPUT

PSU

*REFER TO PSU MANUFACTURER
INSTRUCTIONS FOR SPACING
GUIDANCE

RJ45 DATA OUT → DATA IN

TO LUMINAIRE

SD3

TO AC MAINS INPUT

PSU

RJ45 DATA OUT → DATA IN

TO LUMINAIRE

SD2

TO AC MAINS INPUT

PSU

RJ45 DATA OUT → DATA IN

TO LUMINAIRE

SD1

TO AC MAINS INPUT

PSU

DATA IN

MAKE SURE SPECTRA DRIVES ARE ARRANGED IN SAME ORDER AS ADDRESSED

MAXIMUM CHAIN LENGTH IS 31 x VU SPECTRA DRIVES _(SD)_ CONNECTED

*   Refer to PSU datasheet for detailed install data

⚠   Do NOT exceed maximum load for supplied fittings _(see table on Page 8)_

⚠   RJ45 cable should be wired as per T-568B Standard with the Orange as Data -, Orange/White as Data +, and Brown and Brown/White as Ground

PROCEED WITH DMX SCENE CONFIGURATION USING CUSTOMER CONTROL SYSTEM

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CAUTIONS

⚠ Do <u>NOT</u> coil any power wires.

⚠ Please take note of luminaire and PSU ingress protection rating when deciding location.

⚠ Always allow sufficient slack not to overstretch the cable. Do <u>NOT</u> bend the cable beyond its specified bend radius.

⚠ Make sure all connections made are tight with no loose strands and with an appropriate IP rating.

⚠ Do <u>NOT</u> hot-plug – isolate all power before adding or removing fittings.

⚠ Do <u>NOT</u> reverse polarity.

⚠ Always allow sufficient slack on the supply cable to remove the luminaire from its position for any further maintenance.

⚠ Make sure cables are not in contact with any sharp objects; do <u>NOT</u> leave cables or any connectors exposed to rain/moisture for any period.

DISCLAIMER

⚠ All images are representative and may not be the actual product supplied, depending on the ordering options.

⚠ **WARNING**: Never attempt to hot plug the LED horticulture light or engage with any control system while power is connected. Always ensure that the power source is **completely disconnected** before handling any plugs or making any connections to avoid the risk of electrical shock or damage to the equipment.

⚠ Avoid staring directly into light beam.

⚠ The product should be installed by a *certified electrician* and *follow local regulations*.

⚠ Take extreme care when working with mains voltages.

⚠ There are no user-serviceable parts inside this unit. Do <u>NOT</u> attempt any repairs yourself. Doing so voids your manufacturer's warranty.

⚠ During operation, the housing may become hot. Avoid touching the unit with bare hands while in use.

⚠ Do <u>NOT</u> allow the product to operate in ambient temperatures above the maximum ambient stated on the datasheet. Doing so will void any warranty.

⚠ Do <u>NOT</u> use aggressive cleaning agents. Any warranty will not cover any chemical damage to the seals.

⚠ Do <u>NOT</u> hot-plug the LED fittings or PSUs. Doing so will invalidate the warranty.

⚠ Ensure the chosen location provides adequate airflow to allow passive cooling.