



# Multiplex Integration Schematic

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## 2022 Allegro Bus

35 CP 37 AP 40 AP 40 IP 45 OPP









**SPYDER**  
CONTROLS CORP

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! COMPONENTS ARE NOT TO SCALE !

## Schematic Connections Legend









	Constant Ground
	Constant 12V+
	Switched Ground
	Switched 12V+
	Reverse Polarity
	Signal
	120V AC Line
	Network

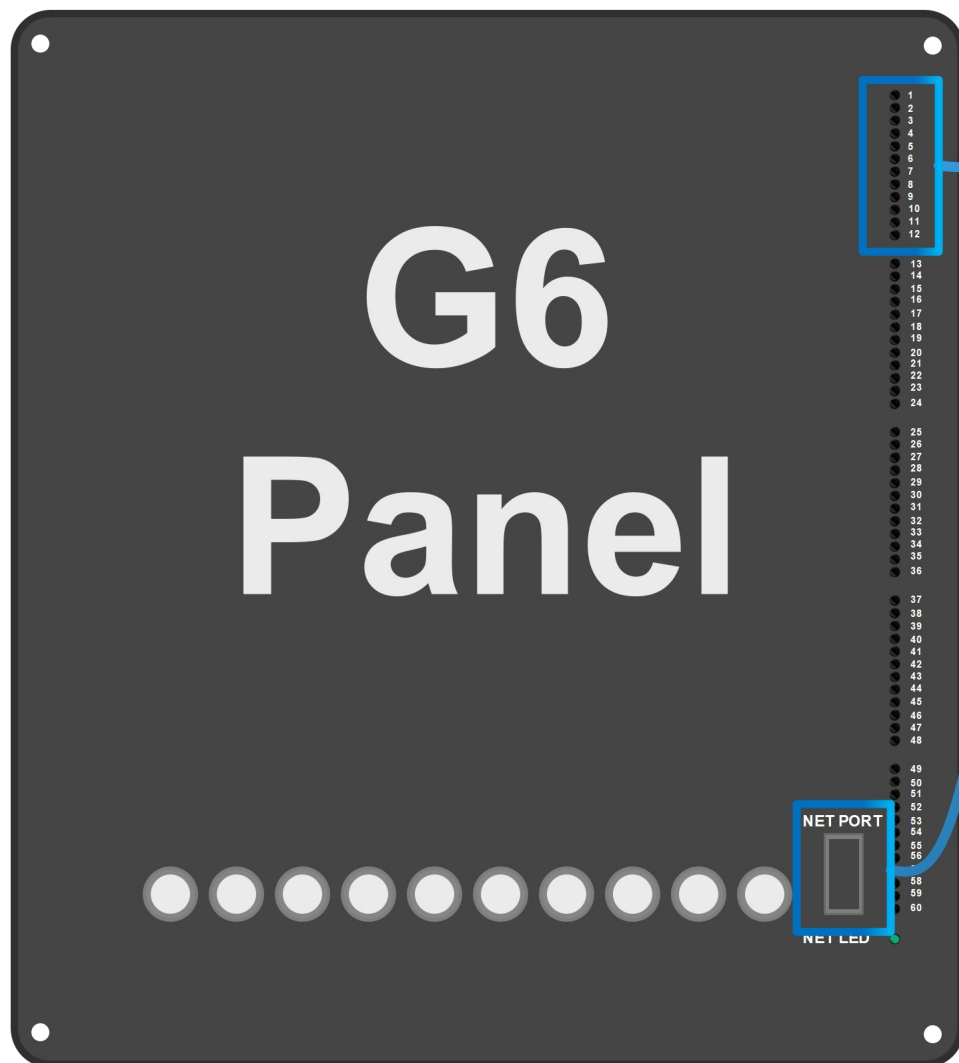
# Table of Contents

17	MORryde TV Lift (Optional)	24	Generator
18	Main Shades	25	Mechanical
19	Cockpit Shades	26	Merge Logic
20	EMS	27	Merge System
21	Blue Network	28	Inverter Assist
22	Yellow Network	29	Wireless Switch
23	Orange Network	30	Connectors

! COMPONENTS ARE NOT TO SCALE !

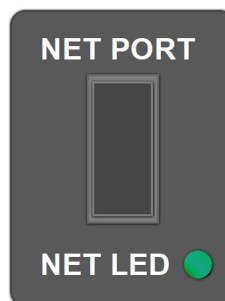
## Schematic Connections Legend

	Constant Ground
	Constant 12V+
	Switched Ground
	Switched 12V+
	Reverse Polarity
	Signal
	120V AC Line
	Network



### The CHANNEL LED

corresponds with the circuit listed on the house or chassis G6A panels. The LED will turn on or off indicating whether the circuit is on or off. Please refer to the house or chassis panel pinouts for a complete channel list.



The NET PORT is a helpful diagnostic tool. Spyder may ask you to use this port to troubleshoot network issues. The NET LED reports the network status of the G6 panel.

## Spyder Controls Website

To access more information on your coach or to contact us by email please navigate to: <http://spydercontrols.com/customer-login/>

**Username: Tiffin**

**Password: Motorhomes**

**G6A CONTROL PANEL LAYOUT**  
 Tiffin PN: 5114027 Spyder PN: BENCZ52DJ  
 2022 BUS/PHTN - HOUSE Rev 0vA  
PINOUT DIAGRAM - 2021.02.25

**Back View**

- CONNECTOR 4**
- 4-1 (G6 LED 13) REAR BATH/MID SINK CEILING LIGHTS
  - 4-2 (G6 LED 14) TASK LIGHTS
  - 4-3 (G6 LED 15) MID BATH CEILING LIGHTS
  - 4-4 (G6 LED 16) MID BATH VANITY LIGHTS

- CONNECTOR 5**
- 5-1 (G6 LED 17) REAR BATH/MID SINK VANITY LIGHTS
  - 5-2 (G6 LED 18) TV ACCENT LIGHTS
  - 5-3 (G6 LED 19) FR ACNT LIGHTS
  - 5-4 (G6 LED 20) FR ACNT LIGHTS

- CONNECTOR 6**
- 6-1 (G6 LED 21) BED ACCENT
  - 6-2 (G6 LED 22) CLOSET LIGHT
  - 6-3 (G6 LED 23) RR ACNT LIGHTS
  - 6-4 (G6 LED 24) RR ACNT LIGHTS

- CONNECTOR 10**
- 10-1 (G6 LED 37) FLR HT ZONE 1
  - 10-2 (G6 LED 38) FLR HT ZONE 2
  - 10-3 (G6 LED 39) CEILING FAN LO
  - 10-4 (G6 LED 40) CEILING FAN HI

- CONNECTOR 11**
- 11-1 (G6 LED 41) BED LIFT UP
  - 11-2 (G6 LED 42) BED LIFT DN
  - 11-3 (G6 LED 43) FR TV LIFT UP
  - 11-4 (G6 LED 44) FR TV LIFT DN

- J17 --- FR TV LIFT COMMON
- J18 --- FR TV LIFT COMMON
- J19 --- RR TV LIFT COMMON
- J20 --- RR TV LIFT COMMON

- CONNECTOR 12**
- 12-1 (G6 LED 45) BED TV LIFT UP
  - 12-2 (G6 LED 46) BED TV LIFT DN
  - 12-3 (G6 LED 47) FIREPLACE OVERRIDE
  - 12-4 (G6 LED 48)

- CONNECTOR 17**
- 17-6
  - 17-5 REAR AC THERMISTOR
  - 17-4 MID AC THERMISTOR
  - 17-3 FRONT AC THERMISTOR
  - 17-2 REAR FLOOR HT THERMISTOR
  - 17-1 FRONT FLOOR HT THERMISTOR

- CONNECTOR 14 (12V+ INPUTS)**
- 14-1 WTR HTR STATUS
  - 14-2 GEN FAULT STATUS 12V+
  - 14-3
  - 14-4 BED LIFT PLUNGER
  - 14-5

- CONNECTOR 15 (GND INPUTS)**
- 15-1
  - 15-2 BEDROOM LIGHT SWITCH
  - 15-3 CLOSET LIGHT SW
  - 15-4 DASH ACNT LT ON
  - 15-5 DASH ACNT LT OFF

- CONNECTOR 18**
- 18-1 - BREAKER #67
  - 18-2 - BREAKER #68
  - 18-3 - BREAKER #69
  - 18-4 BRKR TO RR SLIDE - BREAKER #70
  - 18-5 FRIDGE - BREAKER #71
  - 18-6 - BREAKER #72

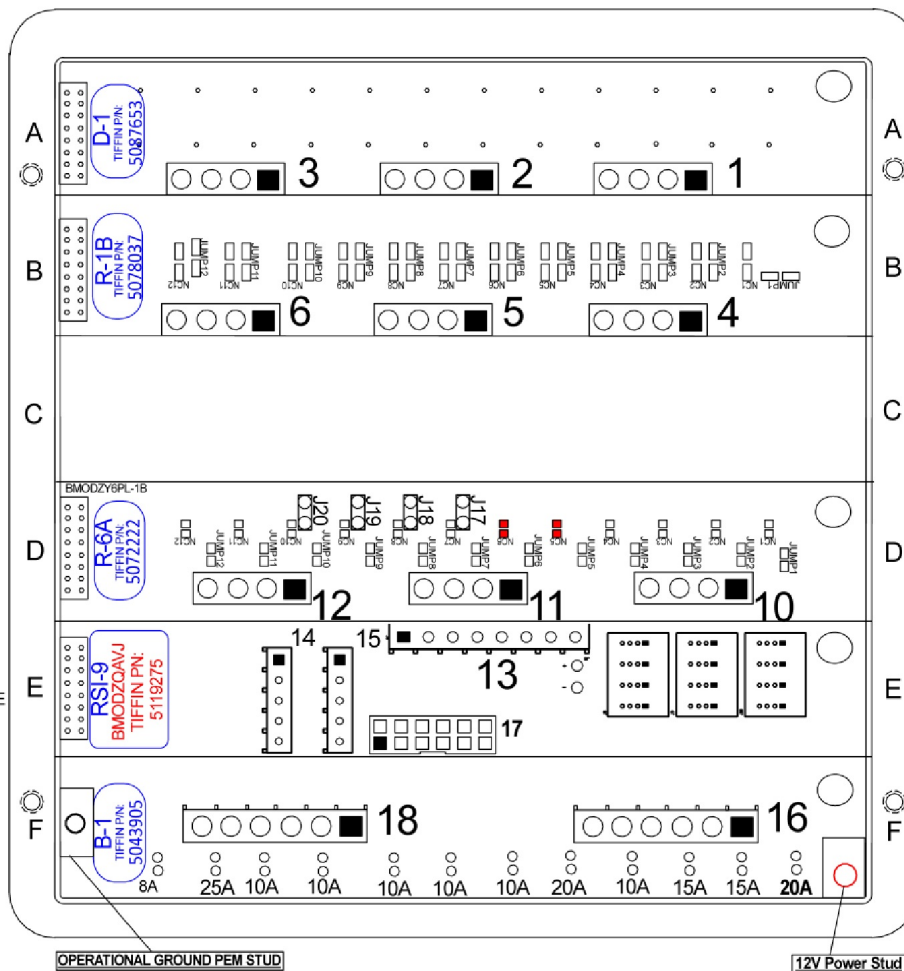
- CONNECTOR 16**
- 16-1 - BREAKER #61
  - 16-2 FRONT FURNACE - BREAKER #62
  - 16-3 REAR FURNACE - BREAKER #63
  - 16-4 SWITCHER / LP/IR - BREAKER #64
  - 16-5 OUTSIDE TV - BREAKER #65
  - 16-6 - BREAKER #66

- CONNECTOR 1**
- 1-1 (G6 LED 1) MAIN O/H / LIV RM LIGHT
  - 1-2 (G6 LED 2) ENTRY / FLOOR LIGHT
  - 1-3 (G6 LED 3) PS CEILING LIGHTS
  - 1-4 (G6 LED 4) DS CEILING LIGHTS

- CONNECTOR 2**
- 2-1 (G6 LED 5) HALL / DASH ACCENT LTS
  - 2-2 (G6 LED 6) PS SLIDE LIGHTS
  - 2-3 (G6 LED 7) SCONCE
  - 2-4 (G6 LED 8) DS SLIDE LIGHTS

- CONNECTOR 3**
- 3-1 (G6 LED 9) FR CRTSY LIGHTS
  - 3-2 (G6 LED 10) RR CRTSY LIGHTS
  - 3-3 (G6 LED 11) BED SCONCE LIGHTS
  - 3-4 (G6 LED 12) BEDROOM LIGHTS

- CONNECTOR 13**
- 13-1
  - 13-2 CONSTANT 12V+ (BATT)
  - 13-3 GND (COMMON FOR SENSORS)
  - 13-4 LPG SENSOR INPUT
  - 13-5 BLACK TANK SENSOR
  - 13-6 GREY TANK SENSOR
  - 13-7 FRESH TANK SENSOR
  - 13-8



**R=RELAY CARD**  
**B=BREAKER CARD**  
**RSI-9=INPUT MODULE**  
**D=DIMMER CARD**  
**■ = JUMPED**

NOTE: CONNECTORS ARE SHOWN HERE IN THE LOADED (REAR) VIEW.

**G6A CONTROL PANEL LAYOUT**  
**Tiffin PN: 5113998 Spyder PN: BENCZ54DJ**  
**2022 BUS/PHTN/ZEPHYR - CHASSIS Rev 1v0**  
**PINOUT DIAGRAM - 2021.02.04**

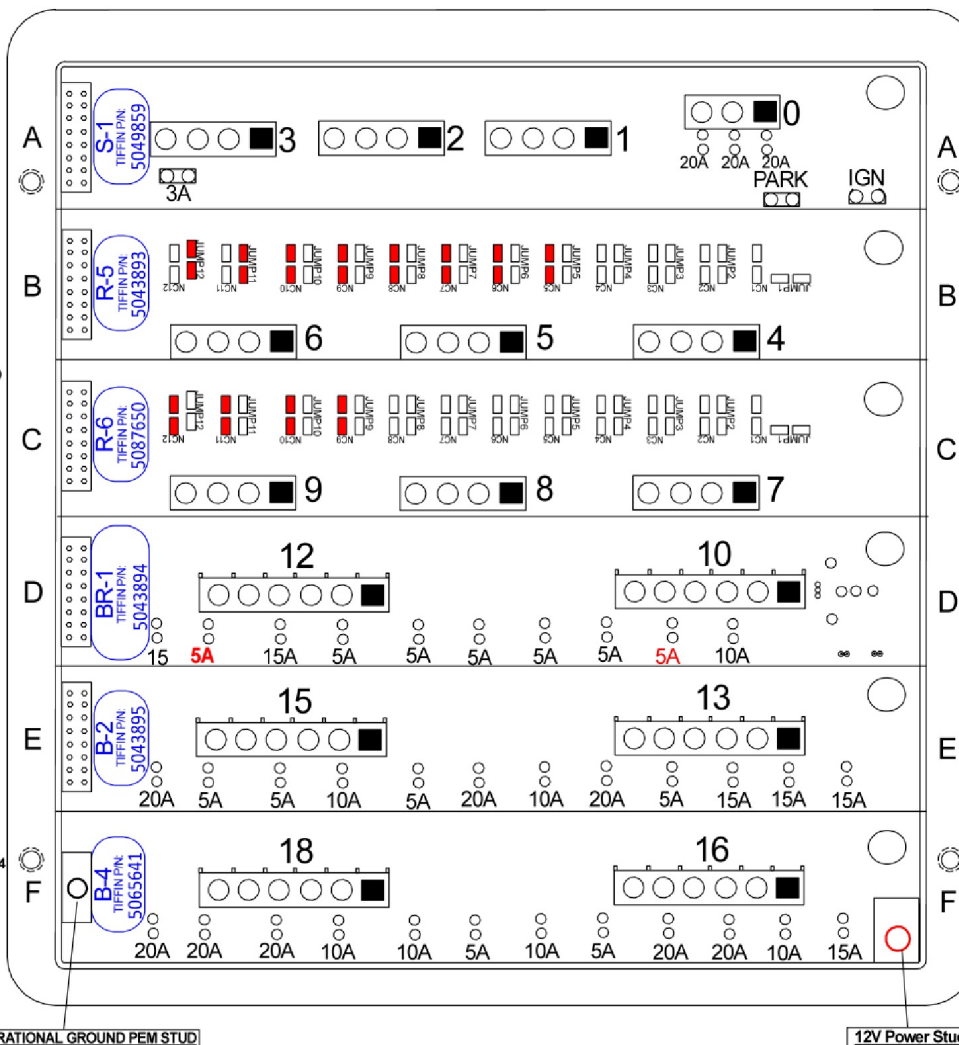
**Back View**

**MUST HAVE SIDE MOUNTING TABS ON G6 PANEL**

Card Legend

- R=RELAY CARD
- B=BREAKER CARD
- BR=BREAKER/RELAY CARD
- D=DIMMER CARD
- J=JUMPERED

- CONNECTOR 4**
  - 4-1 (LED 13) AWNING LIGHT
  - 4-2 (LED 14) HEADLIGHTS (INDICATION FLASH)
  - 4-3 (LED 15) DOOR / ASSIST HANDLE
  - 4-4 (LED 16) SPARE
- CONNECTOR 5**
  - 5-1 (LED 17) SOFA DAY SHD UP
  - 5-2 (LED 18) SOFA DAY SHD DN
  - 5-3 (LED 19) SOFA NIGHT SHD UP
  - 5-4 (LED 20) SOFA NIGHT SHD DN
- CONNECTOR 6**
  - 6-1 (LED 21) STEP EXT
  - 6-2 (LED 22) STEP RET
  - 6-3 (LED 23) GEN START
  - 6-4 (LED 24) GEN STOP
- CONNECTOR 7**
  - 7-1 (LED 25) U-COACH ACNT (PARK)
  - 7-2 (LED 26) WNDCHLD ACNT LT
  - 7-3 (LED 27) MAP LT
  - 7-4 (LED 28) SPARE
- CONNECTOR 8**
  - 8-1 (LED 29) PASSENGER FAN HI
  - 8-2 (LED 30) PASSENGER FAN LO
  - 8-3 (LED 31) ROAD LIGHT
  - 8-4 (LED 32) PORCH LIGHT
- CONNECTOR 9**
  - 9-1 (LED 33) SPARE
  - 9-2 (LED 34) SPARE
  - 9-3 (LED 35) GLY NIGHT SHD UP
  - 9-4 (LED 36) GLY NIGHT SHD DN
- CONNECTOR 13**
  - 13-1 MAP LT / RADIO / FANS - BREAKER #49
  - 13-2 DASH USB POWER - BREAKER #50
  - 13-3 - BREAKER #51
  - 13-4 ENTRY STEP SWITCH - BREAKER #52
  - 13-5 ENTRY STEP POWER - BREAKER #53
  - 13-6 KEYLESS ENTRY POWER - BREAKER #54
- CONNECTOR 15**
  - 15-1 POWER SEAT #1 - BREAKER #55
  - 15-2 CB - BREAKER #56
  - 15-3 ELEC STEP COVER - BREAKER #57
  - 15-4 SATELITE - BREAKER #58
  - 15-5 DASH SHADE MODULE - BREAKER #59
  - 15-6 POWER SEAT #2 - BREAKER #60

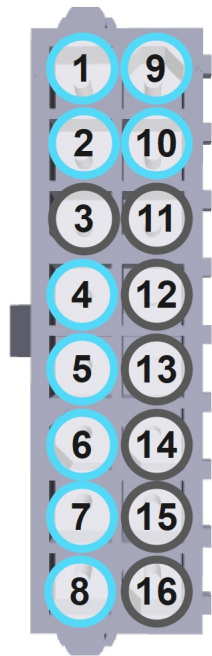


- CONNECTOR 0**
  - 0-1 FRONT SLIDE MODULE
  - 0-2 VANITY SLIDE MODULE
  - 0-3 BED SLIDE MODULE
- CONNECTOR 1**
  - 1-1 (LED 1) D/S FR SLIDE RET
  - 1-2 (LED 2) D/S FR SLIDE EXT
  - 1-3 (LED 3) P/S FR SLIDE RET
  - 1-4 (LED 4) P/S FR SLIDE EXT
- CONNECTOR 2**
  - 2-1 (LED 5) D/S RR SLIDE RET
  - 2-2 (LED 6) D/S RR SLIDE EXT
  - 2-3 (LED 7) P/S RR SLIDE RET
  - 2-4 (LED 8) P/S RR SLIDE EXT
- CONNECTOR 3**
  - 3-1 (LED 9) HYDRAULIC PMP - D/S SLIDE
  - 3-2 (LED 10) HYDRAULIC PMP - P/S SLIDE
  - 3-3 (LED 11) PORCH/DOOR AWNING CONST
  - 3-4 (LED 12) SPARE
- CONNECTOR 3A**
  - 3A-1
- CONNECTOR 10**
  - 10-1 - BREAKER #37
  - 10-2 - BREAKER #38
  - 10-3 DENSO A/C PWR IGN(YLW) - BREAKER #39
  - 10-4 DRIVERS MIRROR PWR - BREAKER #40
  - 10-5 CAMERA IGN - BREAKER #41
  - 10-6 JACK BUZZER - BREAKER #42
- CONNECTOR 12**
  - 12-1 PANEL LAMP/HEADLT LED - BREAKER #43
  - 12-2 FRIDGE - BREAKER #44
  - 12-3 ENTRY STEP IGN - BREAKER #45
  - 12-4 DOCK LIGHT - BREAKER #46
  - 12-5 PASS SIDE MIRROR PWR - BREAKER #47
  - 12-6 POWER WINDOW OPTION - BREAKER #48
- CONNECTOR 16**
  - 16-1 RADIO MEMORY / XM PWR - BREAKER #61
  - 16-2 DENSO A/C POWER - BREAKER #62
  - 16-3 12V+ OUTLET #1 - BREAKER #63
  - 16-4 12V+ OUTLET #2 - BREAKER #64
  - 16-5 ENGINE PREHEAT SWITCH - BREAKER #65
  - 16-6 PASS USB / TRIMARK HANDLE - BREAKER #66
- CONNECTOR 18**
  - 18-1 - BREAKER #67
  - 18-2 - BREAKER #68
  - 18-3 - BREAKER #69
  - 18-4 - BREAKER #70
  - 18-5 - BREAKER #71
  - 18-6 - BREAKER #72

NOTE: CONNECTORS ARE SHOWN HERE IN THE LOADED (REAR) VIEW.

# J10

Input / Output



- 1 Generator (12V+)
- 2 Ignition (12V+)
- 4 Water Pump Switch (GND)
- 5 Park Brake (GND)
- 6 Merge Sense (GND)
- 7 Door Pin Sw (Logic A) (GND)
- 8 Door Pin Sw (Logic B) (GND)
- 9 CHS Voltage (12V+)
- 10 House Disconnect Sense (12V+)

# J8

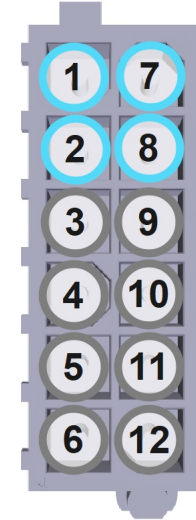
High Current + Rev Pol Outputs



- 1 Door Awning Extend
- 2 Door Awning Retract
- 3 Bay Doors Lock
- 4 Bay Doors Unlock
- 5 Water Pump
- 7 Entry Door Lock
- 8 Entry Door Unlock

# J3

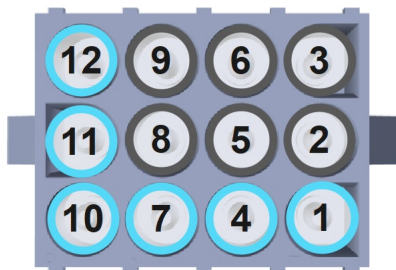
Thermistors



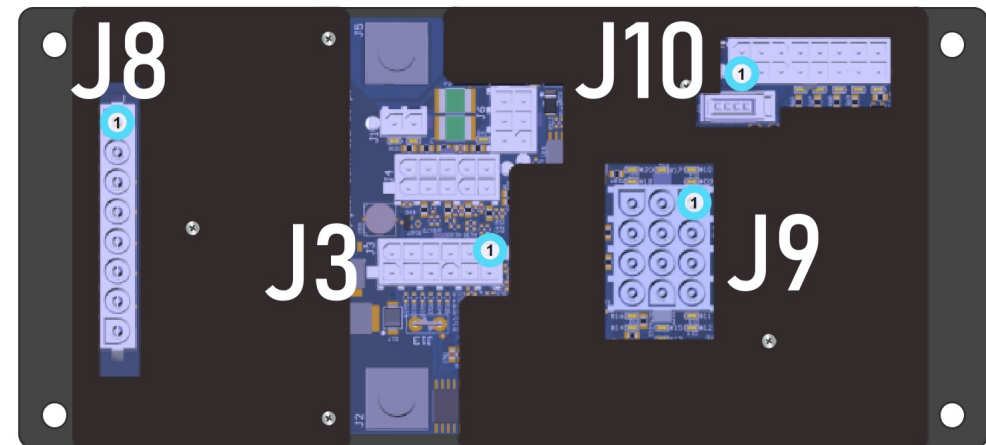
- 1 Bay Temp
- 2 EXT Temp
- 7 Bay Temp GND
- 8 EXT Temp GND

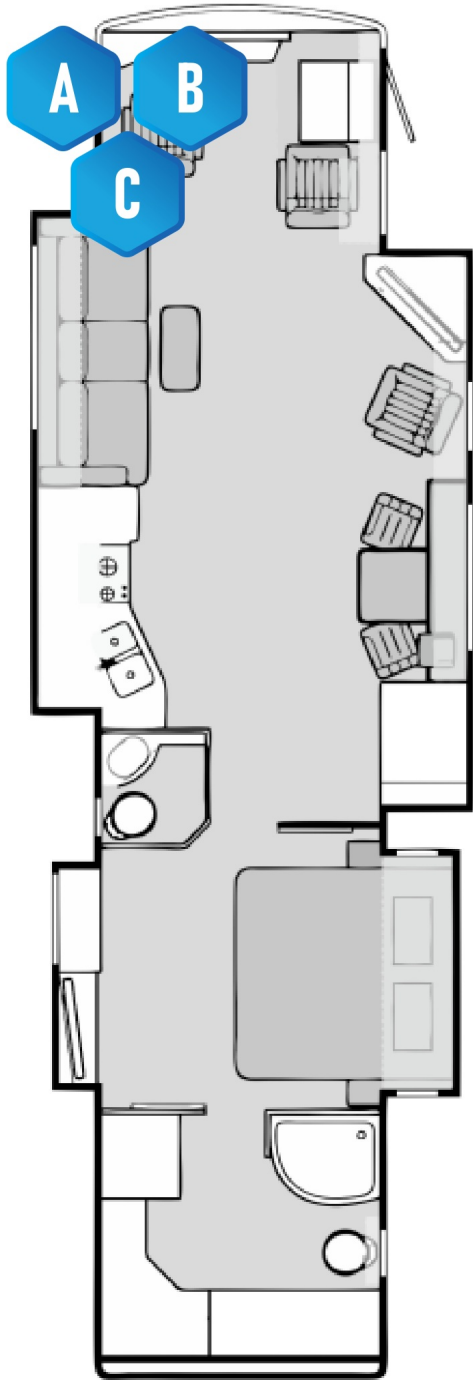
# J9

High/Low Current Outputs



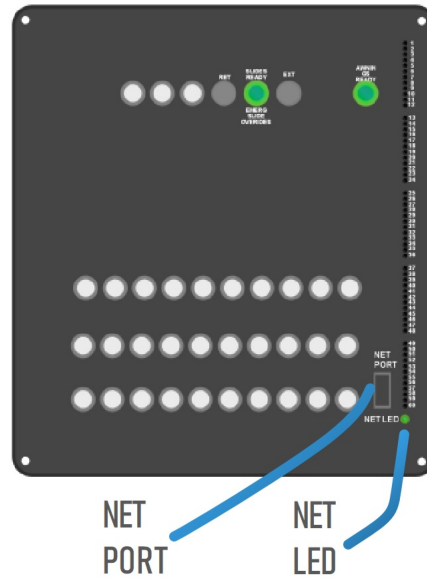
- 1 Electric Water Heater
- 4 Diesel Water Heater
- 7 Engine Pre-Heat
- 10 FR FURN./AQUAHOT
- 11 RR FURN./AQUAHOT
- 12 Door Bell Chime





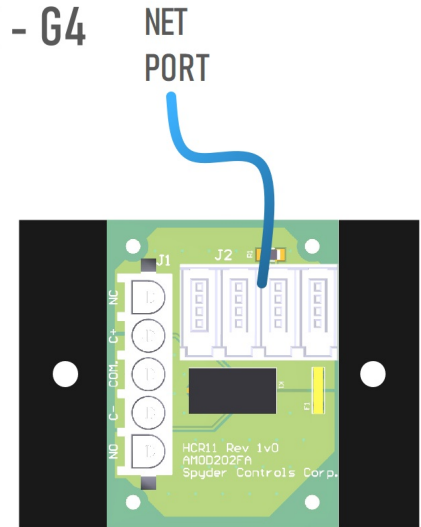
**A** G6 CHASSIS PANEL

**i**  
 Spyder Part Number  
 BENCZ54DJ  
 Tiffin Part Number  
 5113998  
 Dimensions  
 10" X 10"



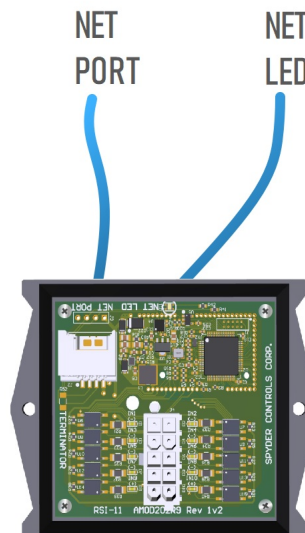
**C** HCR-11 - G4

**i**  
 Spyder Part Number  
 BMODZGAN6  
 Tiffin Part Number  
 5105426  
 Dimensions  
 2.5" X 2.0"



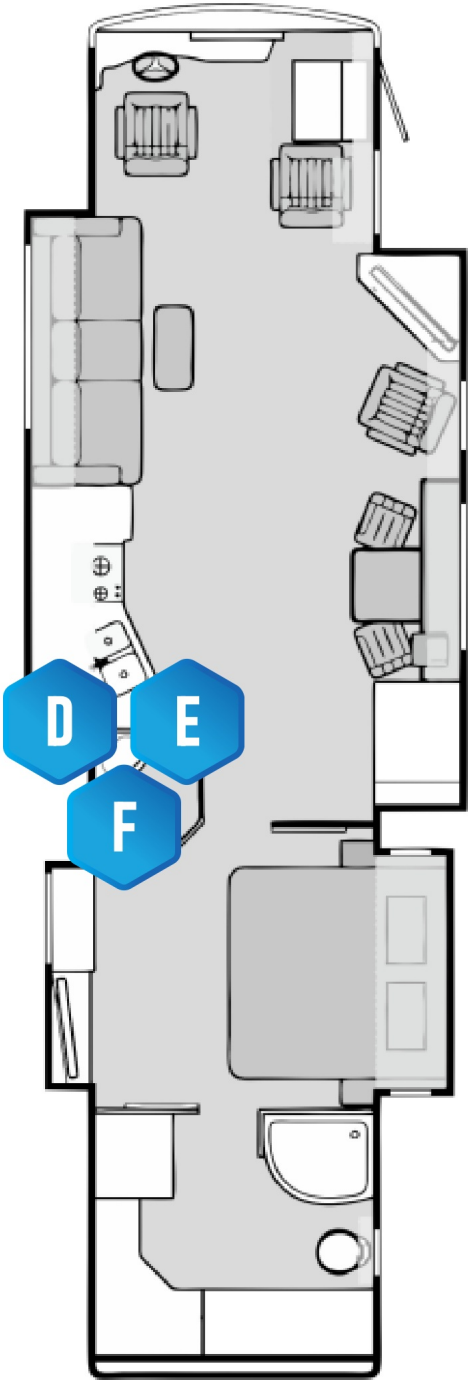
**B** RSI-11 Module

**i**  
 Spyder Part Number  
 BMODZQCA-D  
 Tiffin Part Number  
 5092109  
 Dimensions  
 2.7" X 2.7"



Components A, B, C are located in the front drivers side exterior compartment.

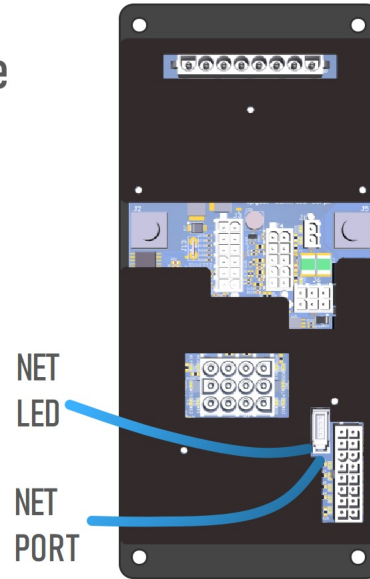
The RSI-11 (B) and HCR-11-G4 (C) are located behind the G6 Chassis Panel (A)



### G8 Module



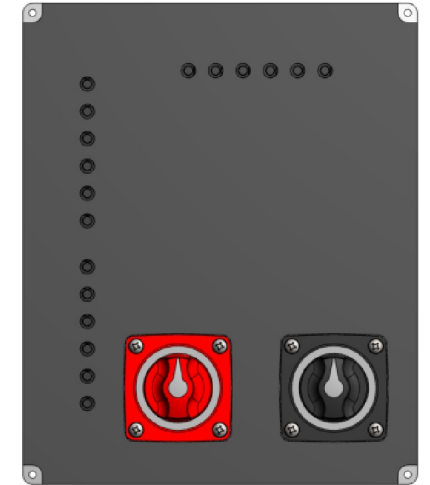
**Spyder Part Number**  
BMODZTGJV  
**Tiffin Part Number**  
5115794  
**Dimensions**  
8.5" X 3.8"



### DCD Panel



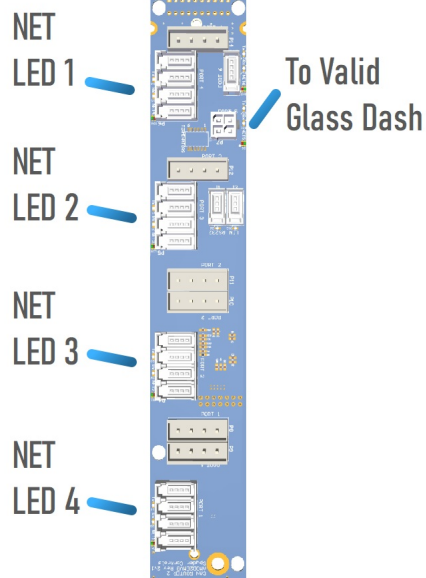
**Spyder Part Number**  
BENCZ38DF  
**Tiffin Part Number**  
5114012  
**Dimensions**  
8" X 3"



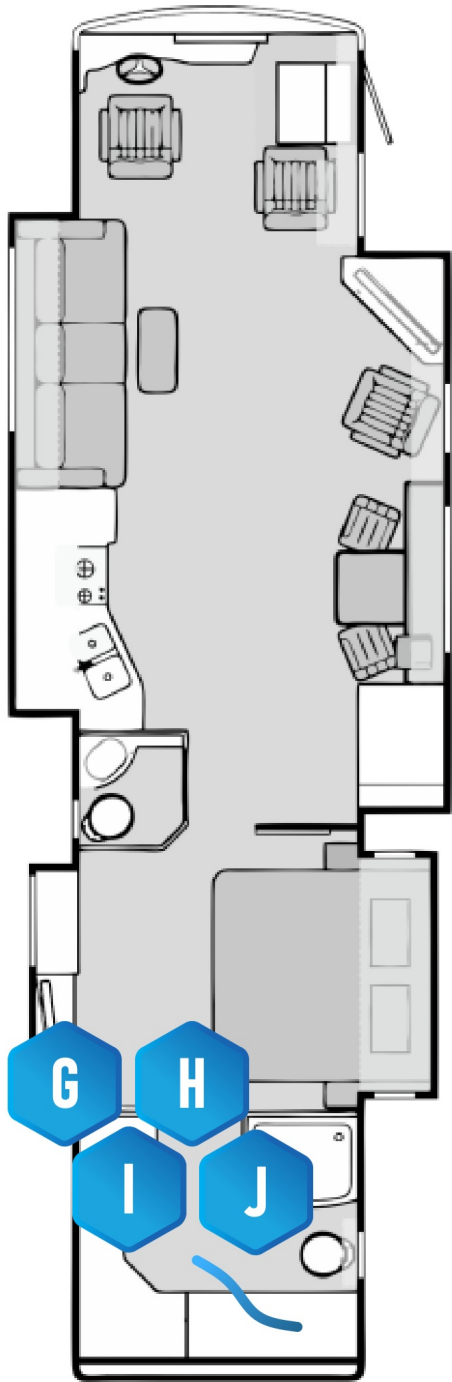
### CAN-Router 2



**Spyder Part Number**  
BMODZY6Q4-B2  
**Tiffin Part Number**  
5105677  
**Dimensions**  
9" X 1.4"



Components D, E, F are located in the inverter bay mounted to the ceiling of the bay.



**G6 House Panel**



**Spyder Part Number**

BMODZXXX

**Tiffin Part Number**

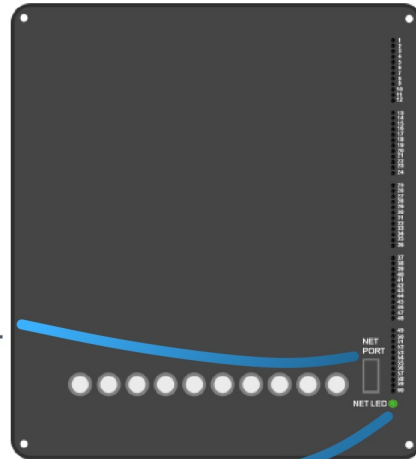
52XXXX

**Dimensions**

10" X 10"

NET  
PORT

NET  
LED



**HCR-12**



**Spyder Part Number**

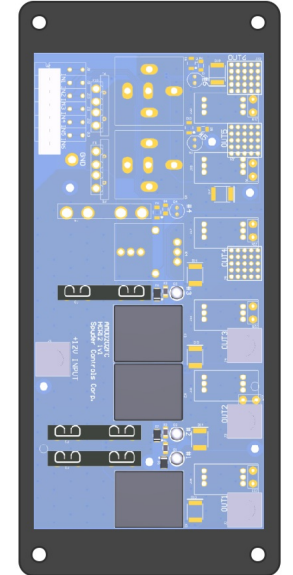
BMODZJ2T0

**Tiffin Part Number**

5076028

**Dimensions**

8" X 3"



**HCR-15**



**Spyder Part Number**

BMODZQFCM

**Tiffin Part Number**

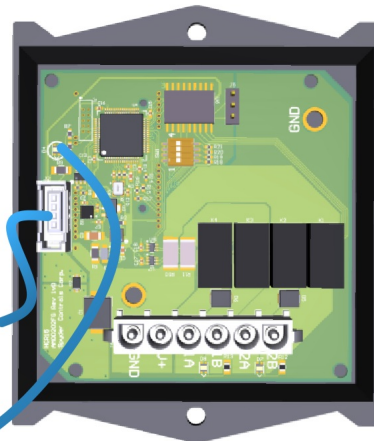
5092297

**Dimensions**

2.7" X 2.7"

NET  
PORT

NET  
LED



**ACR3**



**Spyder Part Number**

BMODZYACG-A (24")

BMODZYACG-A (60")

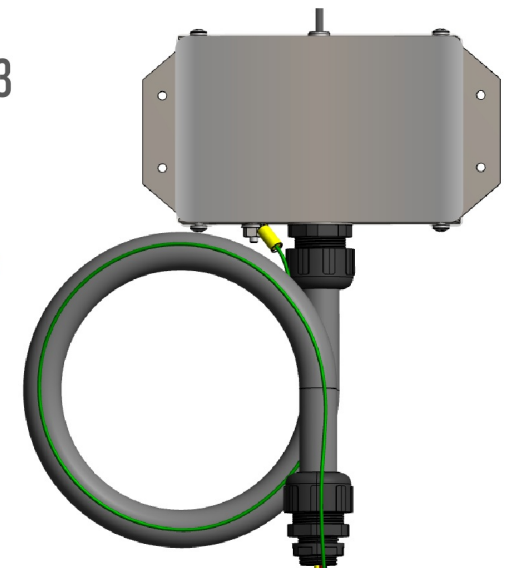
**Tiffin Part Number**

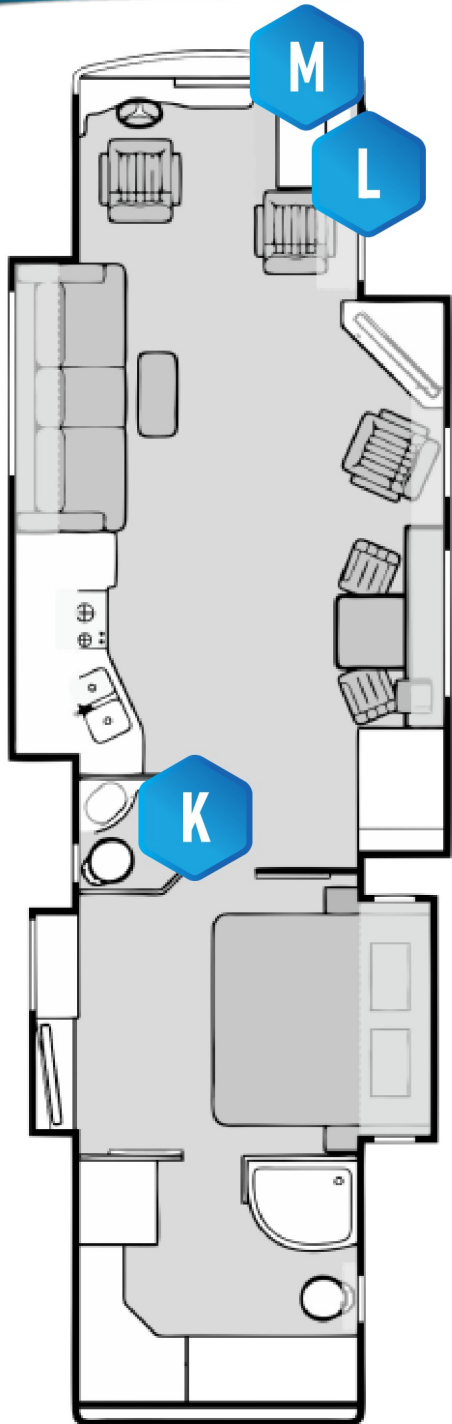
5091113 (24")

5091114 (60")

**Dimensions**

6" X 4.8"



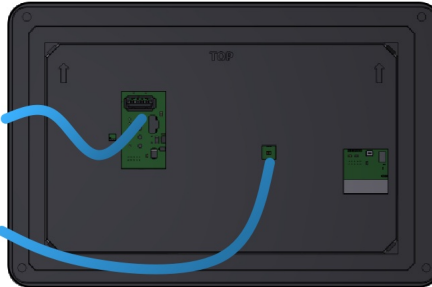
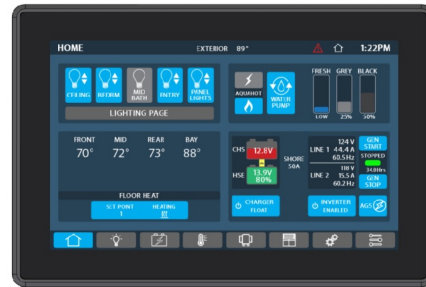


**K** 10" LCD



**Spyder Part Number**  
BSSPZZUDT  
**Tiffin Part Number**  
5114021  
**Dimensions**  
6.7" X 10.6"

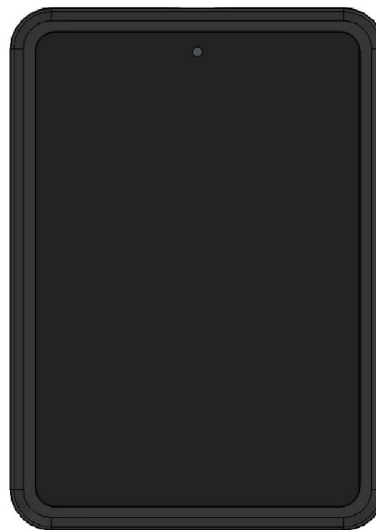
USB  
Port  
  
NET  
LED



**L** Exterior  
5" LCD



**Spyder Part Number**  
BSSPZZSEA  
**Tiffin Part Number**  
5114010  
**Dimensions**  
2.7" X 2.7"



**M** Mira Module



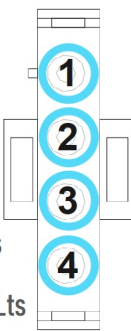
**Spyder Part Number**  
BMODZ56VF  
**Tiffin Part Number**  
5114034  
**Dimensions**  
4" X 2.5"



# CON 4

Dimming Lights

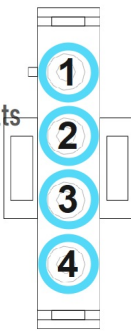
- 1 G6 LED 13 - RR Bath Lts
- 2 G6 LED 14 - Task Lts
- 3 G6 LED 15 - Md Bth Ceil Lts
- 4 G6 LED 16 - Md Bth Vanity Lts



# CON 5

Dimming Lights

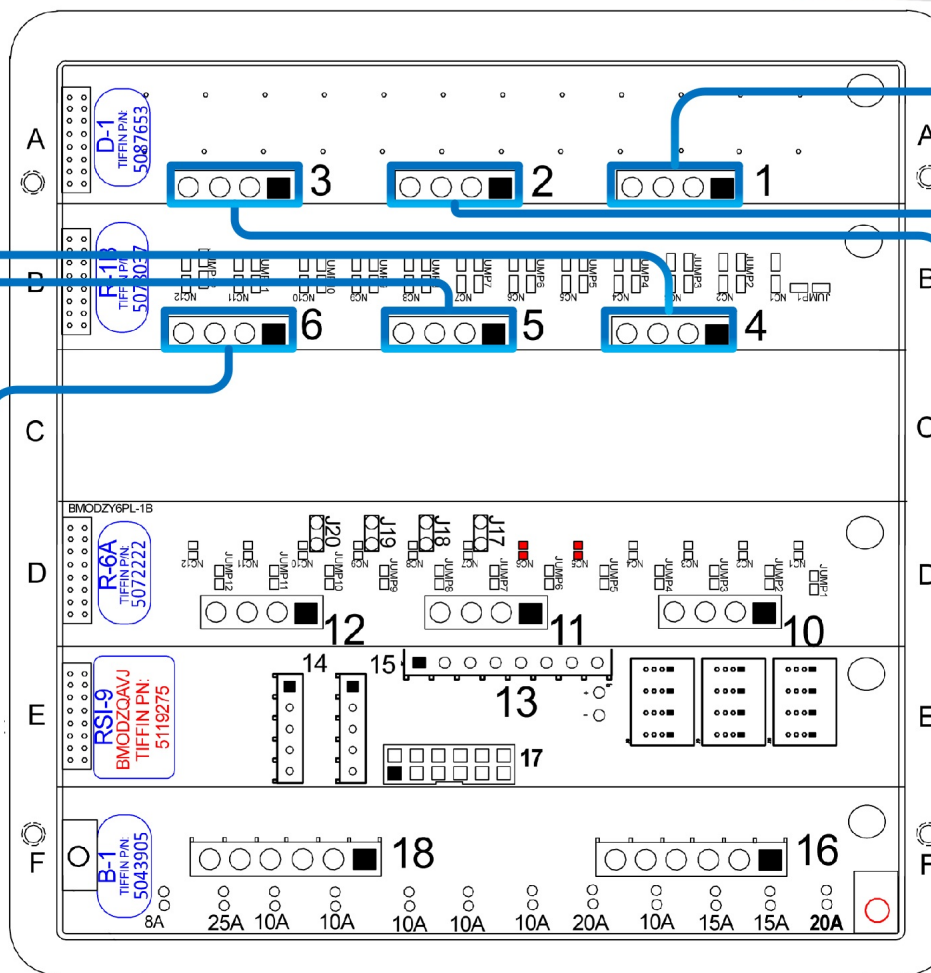
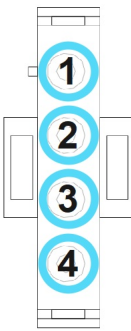
- 1 G6 LED 17 - RR Bth Vanity Lts
- 2 G6 LED 18 - TV Accent Lts
- 3 G6 LED 19 - FR Accent Lts
- 4 G6 LED 20 - FR Accent Lts



# CON 6

Dimming Lights

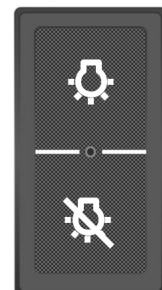
- 1 G6 LED 21 - Bed Accent Lts
- 2 G6 LED 22 - Closet Lt
- 3 G6 LED 23 - RR Accent Lts
- 4 G6 LED 24 - RR Accent Lts



## G6 HOUSE PANEL

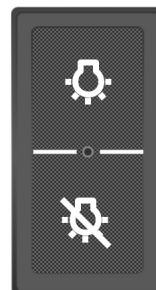
@ Rear Closet

Bedroom Light Switch



Tiffin P/N: 5089762

Closet Light Switch

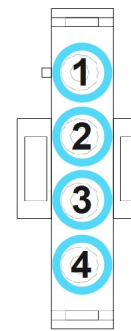


Tiffin P/N: 5089762

# CON 1

Dimming Lights

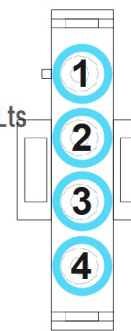
- 1 LED 1 - Main OH Lts
- 2 LED 2 - Entry / Floor Lts
- 3 LED 3 - P/S Ceil Lts
- 4 LED 4 - D/S Ceil Lts



# CON 2

Dimming Lights

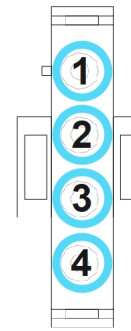
- 1 LED 5 - Hall/Dash Acct Lts
- 2 LED 6 - P/S Sld Lts
- 3 LED 7 - Sconce Lts
- 4 LED 8 - D/S Sld Lts

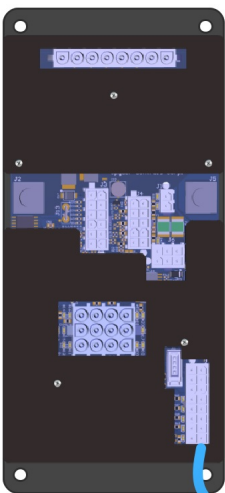
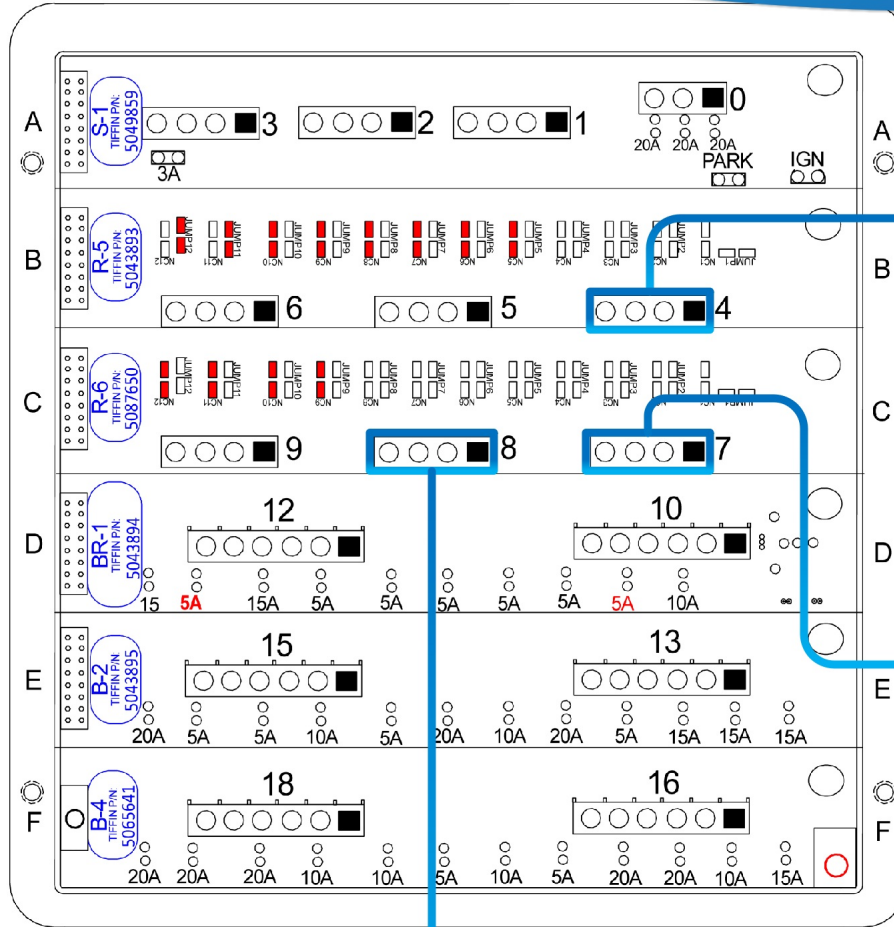
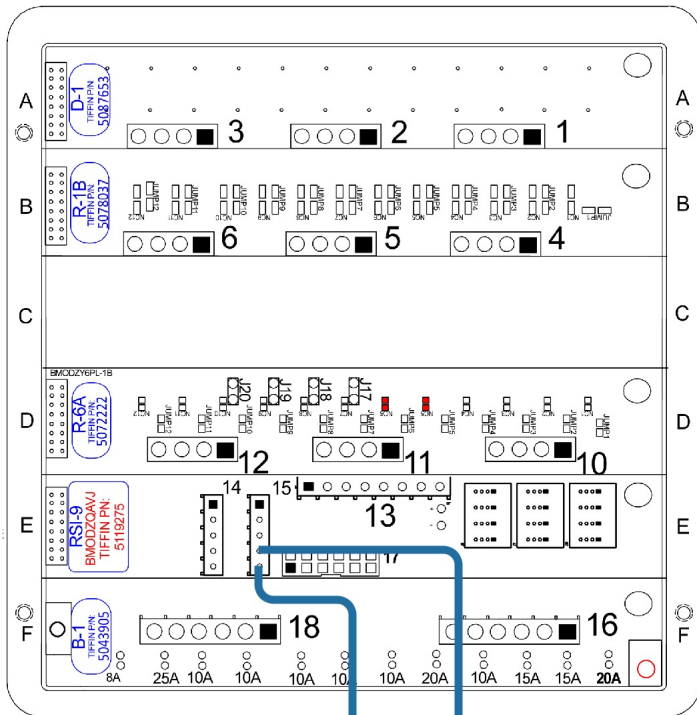


# CON 3

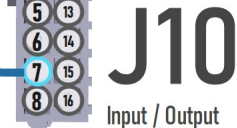
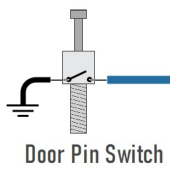
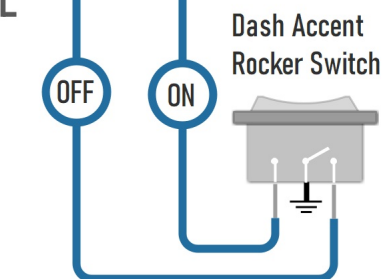
Dimming Lights

- 1 LED 9 - FR Crtsy Lts
- 2 LED 10 - RR Crtsy Lts
- 3 LED 11 - Bed Sconce Lts
- 4 LED 12 - Bedroom Lts





**G8 MODULE**  
@ Inverter Bay



**Door Pin Switch**

When the door is opened, the Entry Light turns on for 2 minutes, the Door Shade lifts, and panel lights on the Entry switch panel turn on.

**CON 4**  
Non-Dimming Lights

- 1 LED 13 - Awning Lts
- 2 LED 14 - Headlights Flash
- 3 LED 15 - Door/Assist Handle

**CON 7**  
Non-Dimming Lights

- 1 LED 25 - Undercoach Lts
- 2 LED 26 - Wndshld Acnt Lts
- 3 LED 27 - Map Lt

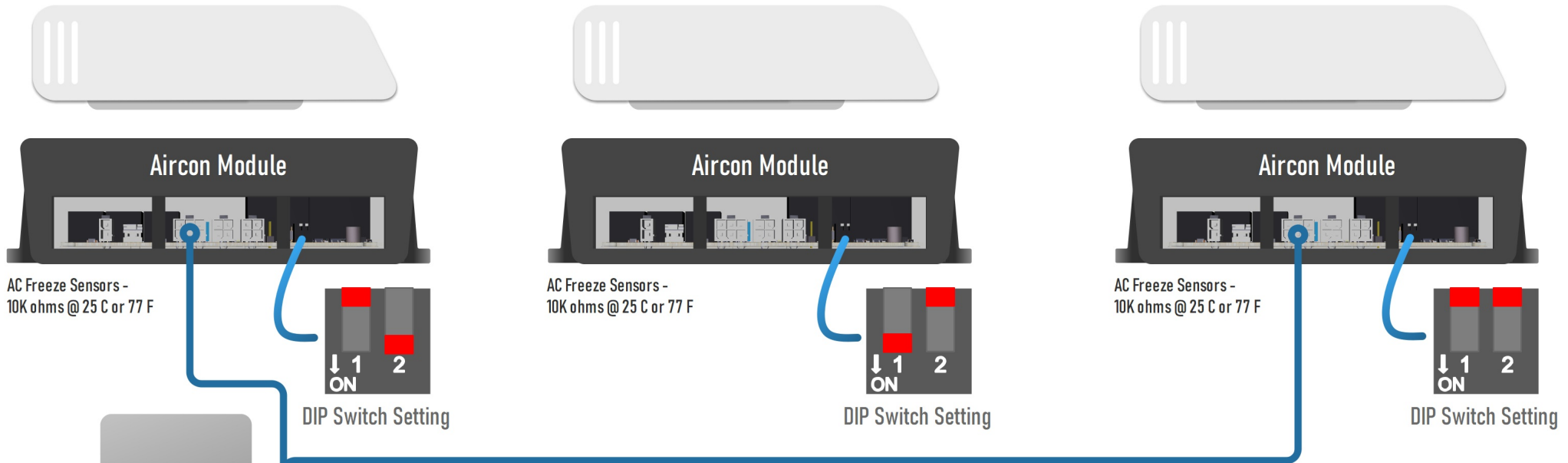
**CON 8**  
Non-Dimming Lights

- 3 LED 31 - Road Lt
- 4 LED 32 - Porch Lt

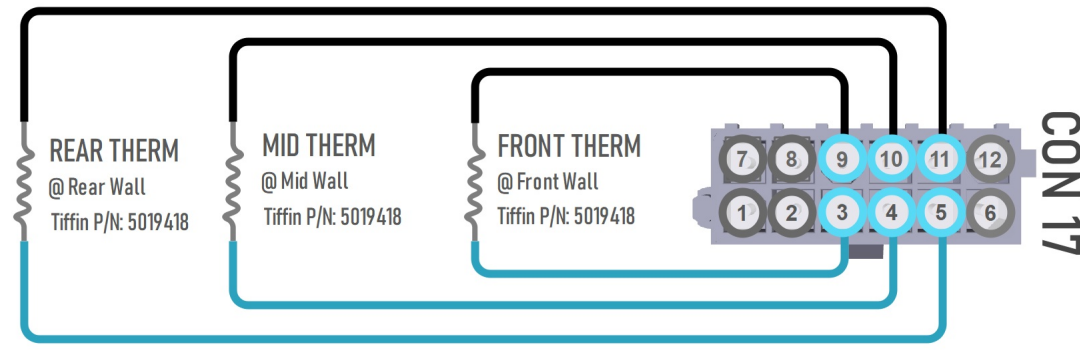
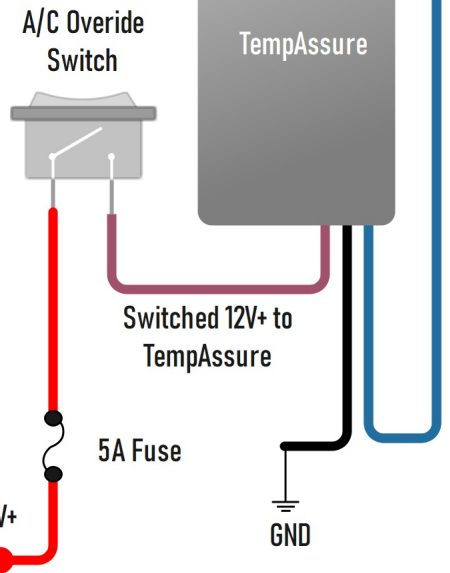
**REAR AC**  
@ Roof

**MID AC**  
@ Roof

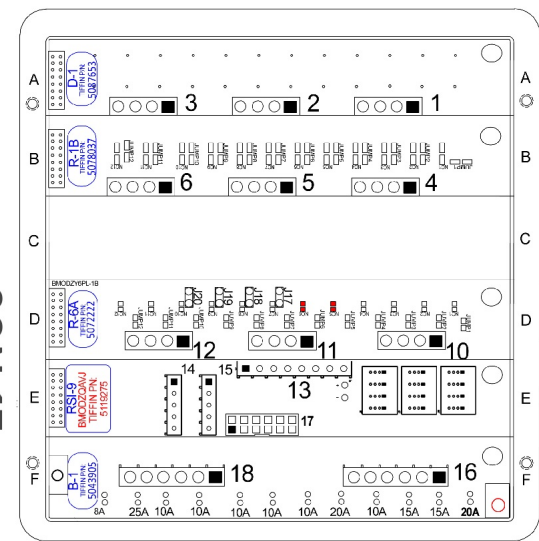
**FRONT AC**  
@ Roof



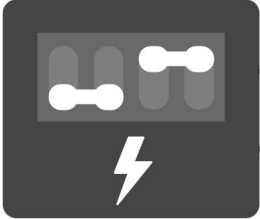
Switched GND to Aircon Override Pin



HVAC thermistors - 100K ohms @ 25 C or 77 F  
NOTE: As the temperature increases the resistance lowers

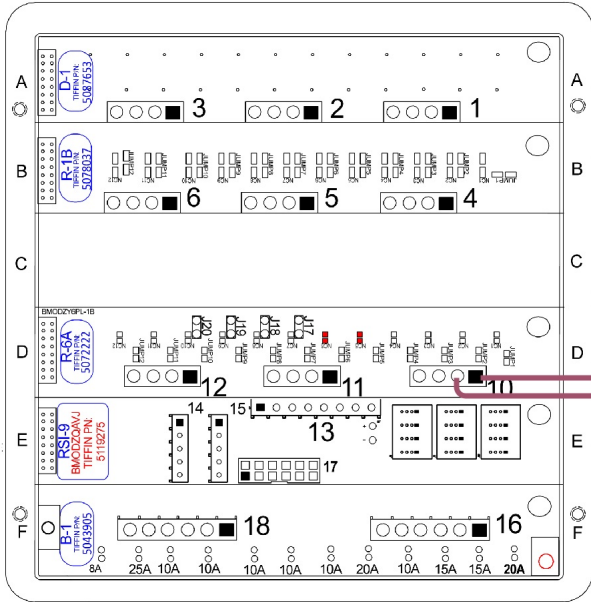


**G6 HOUSE PANEL**  
@ Rear Closet



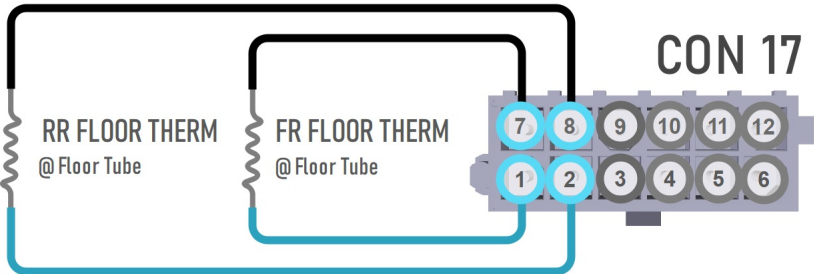
**120V BREAKER PANEL**

@ Rear Closet



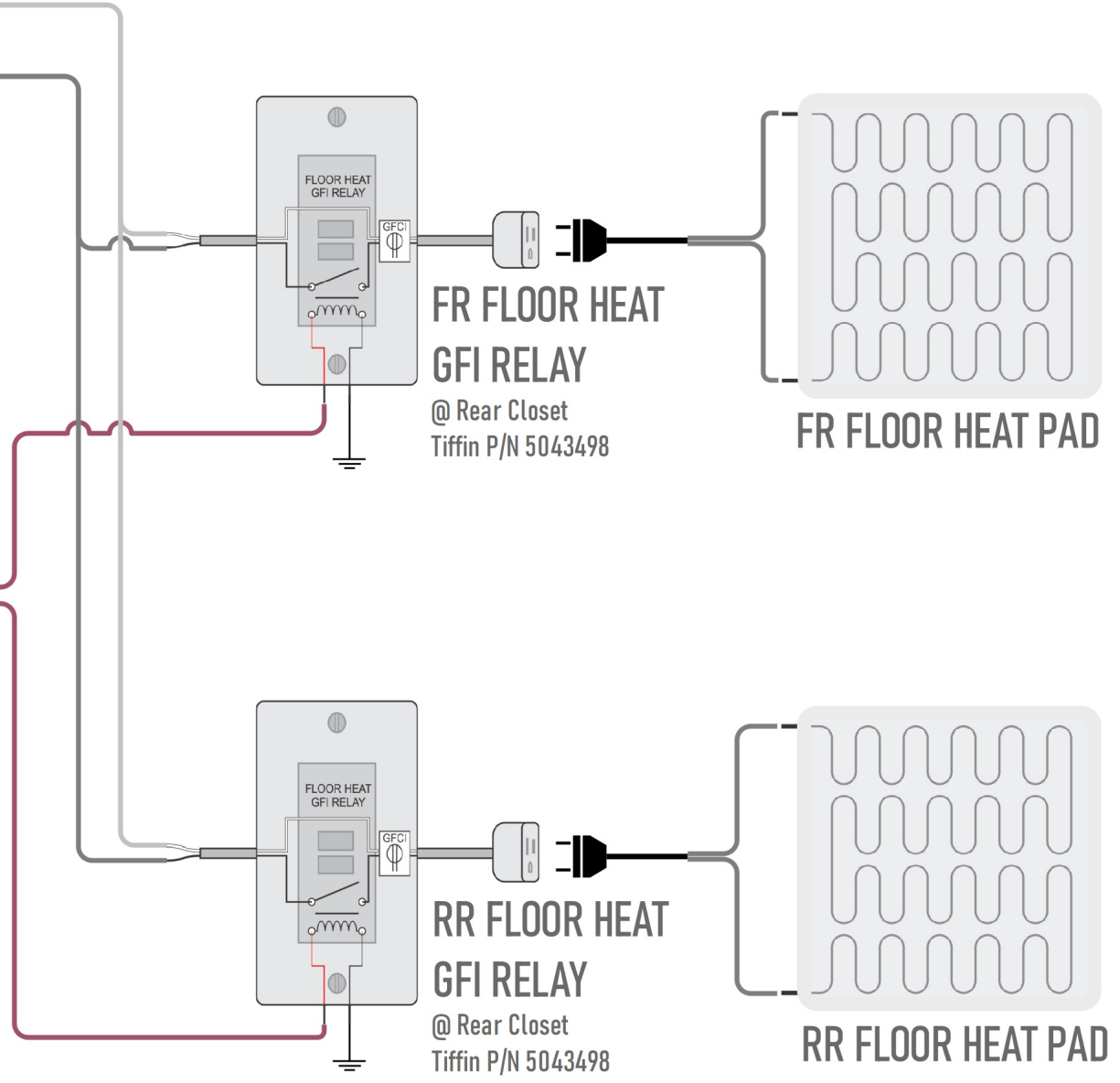
**G6 HOUSE PANEL**

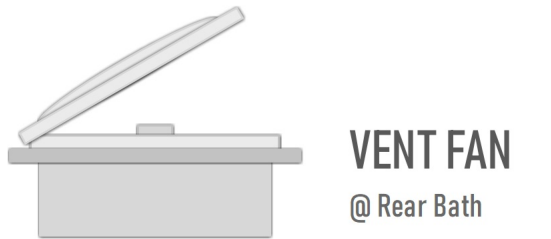
@ Rear Closet



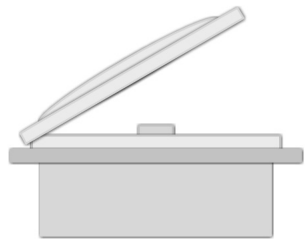
HVAC thermistors - 10K ohms @ 25 C or 77 F

**NOTE:** As the temperature increases the resistance lowers

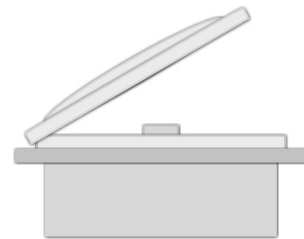




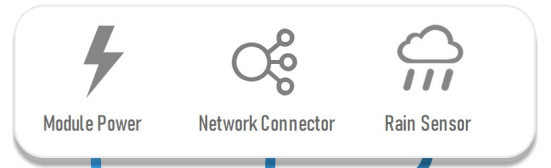
**VENT FAN**  
@ Rear Bath



**VENT FAN**  
@ Mid Bath

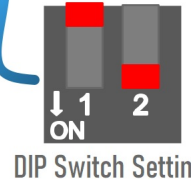


**VENT FAN**  
@ Front Bath

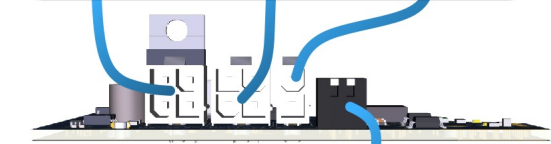


**MAXXFAN VENT FAN CONTROLLER**

@ Inside Vent Fan

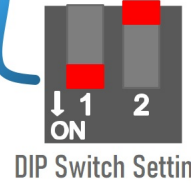


DIP Switch Setting



**MAXXFAN VENT FAN CONTROLLER**

@ Inside Vent Fan

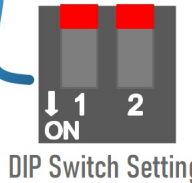


DIP Switch Setting

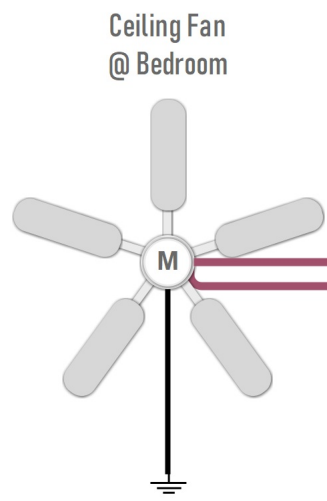


**MAXXFAN VENT FAN CONTROLLER**

@ Inside Vent Fan



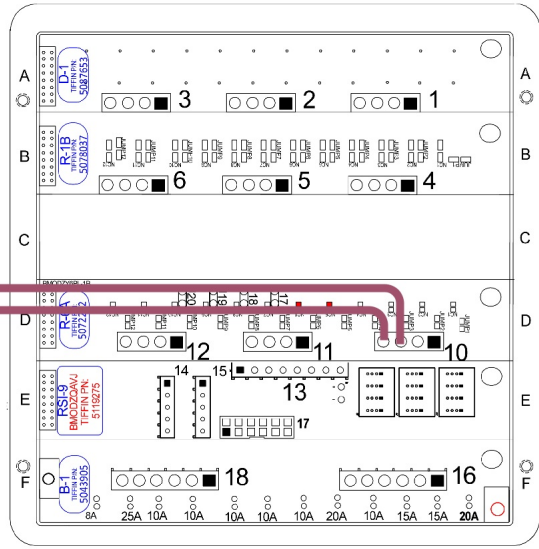
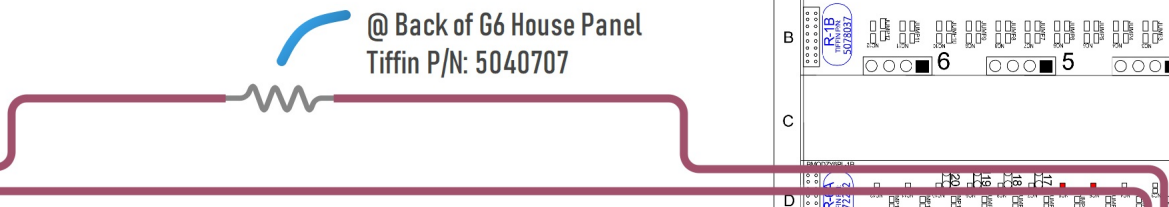
DIP Switch Setting



**Ceiling Fan**  
@ Bedroom

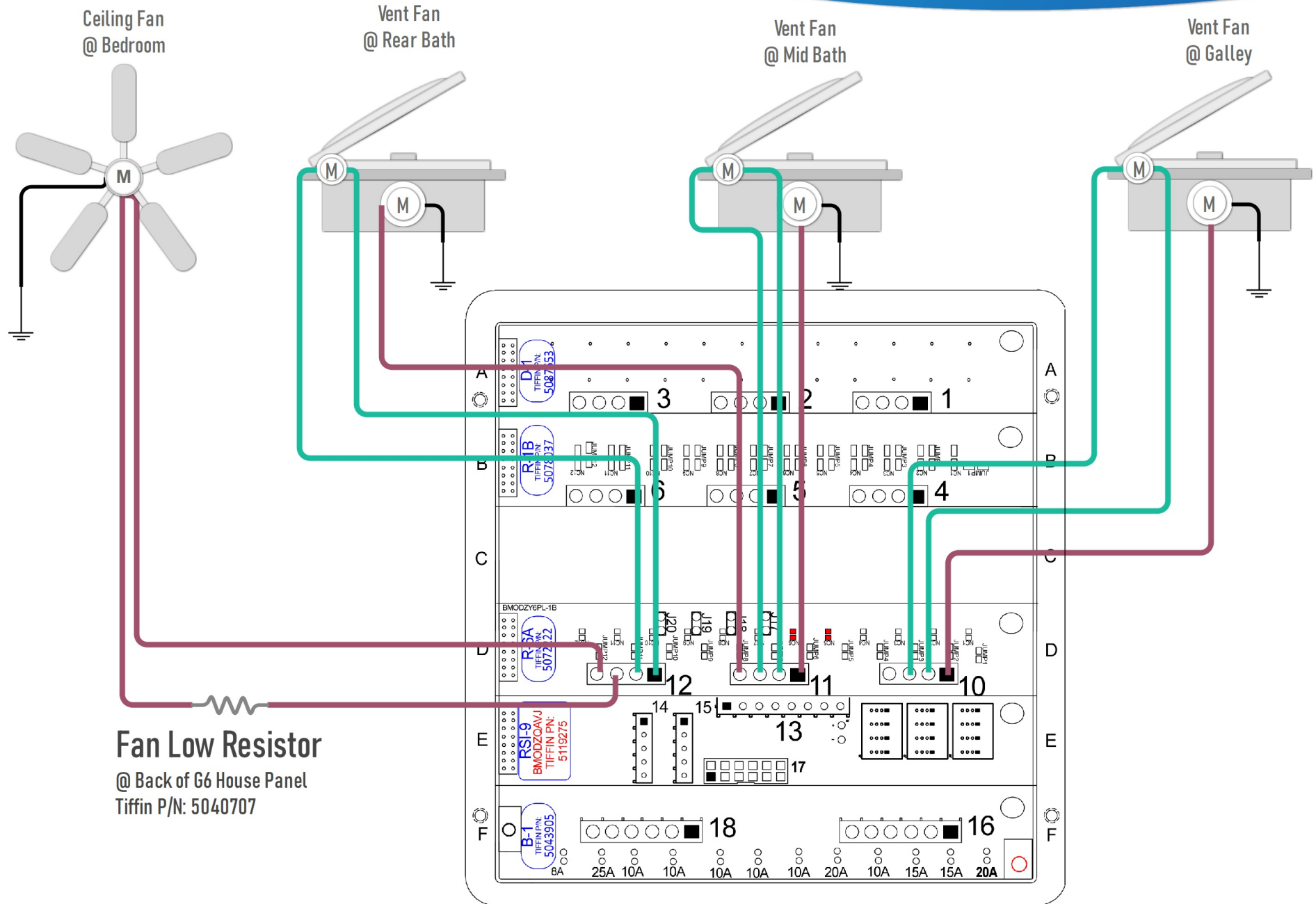
**Fan Low Resistor**

@ Back of G6 House Panel  
Tiffin P/N: 5040707



**G6 HOUSE PANEL**

@ Rear Closet



**Fan Low Resistor**  
@ Back of G6 House Panel  
Tiffin P/N: 5040707

**G6 HOUSE PANEL**  
@ Bathroom Vanity

10" LCD  
@ Main Hall



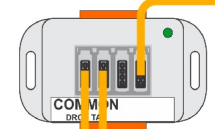
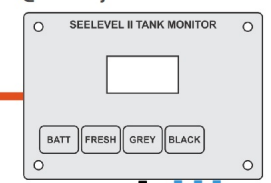
### CAN-ROUTER 2

@ Inverter Bay



### SeeLevel Tank Sensor System

@ Wet Bay



ENTRY 5" LCD  
@ Stairwell TERMINATOR



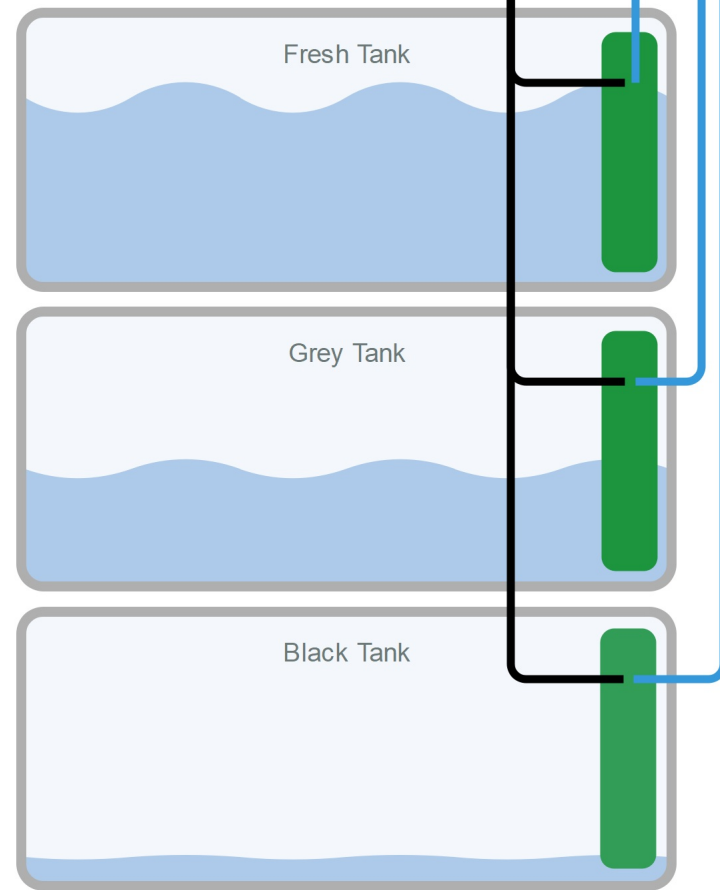
PASSENGER 5" LCD  
@ Passenger Console



FR BED 5"  
@ Bedside



RR BED 5"  
@ Bedside



### Front Slide Outputs

- Power Input
- D/S Front Slide Retract
- D/S Front Slide Extend
- P/S Front Slide Retract
- P/S Front Slide Extend

### Hydraulic Pumps

- Hydraulic Pump
- Power Input

### Rear Slide Outputs

- Power Input
- P/S Rear Slide Extend
- P/S Rear Slide Retract
- D/S Rear Slide Extend
- D/S Rear Slide Retract

### G6 CHASSIS PANEL

@ EXT D/S Comp



**D/S Front Slide Switch**

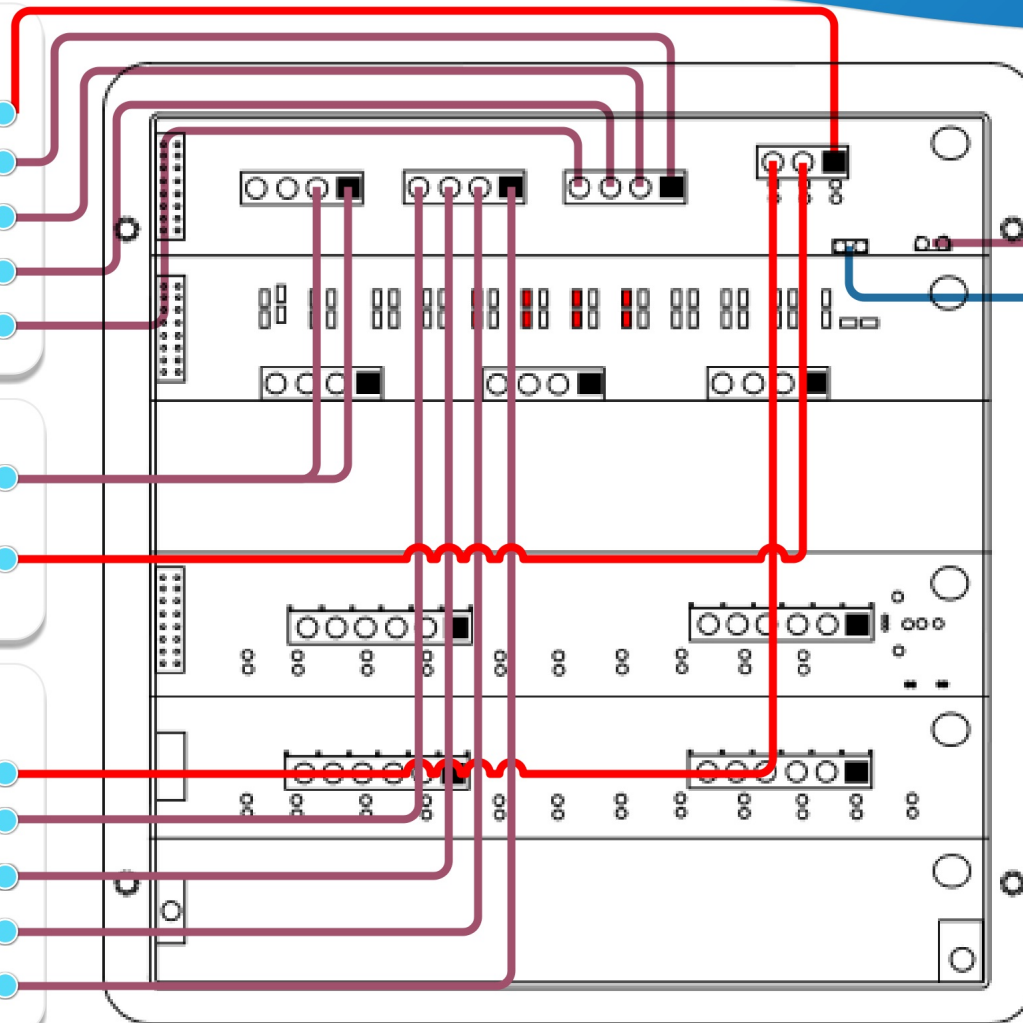
@ D/S Seat



**P/S Front Slide Switch**

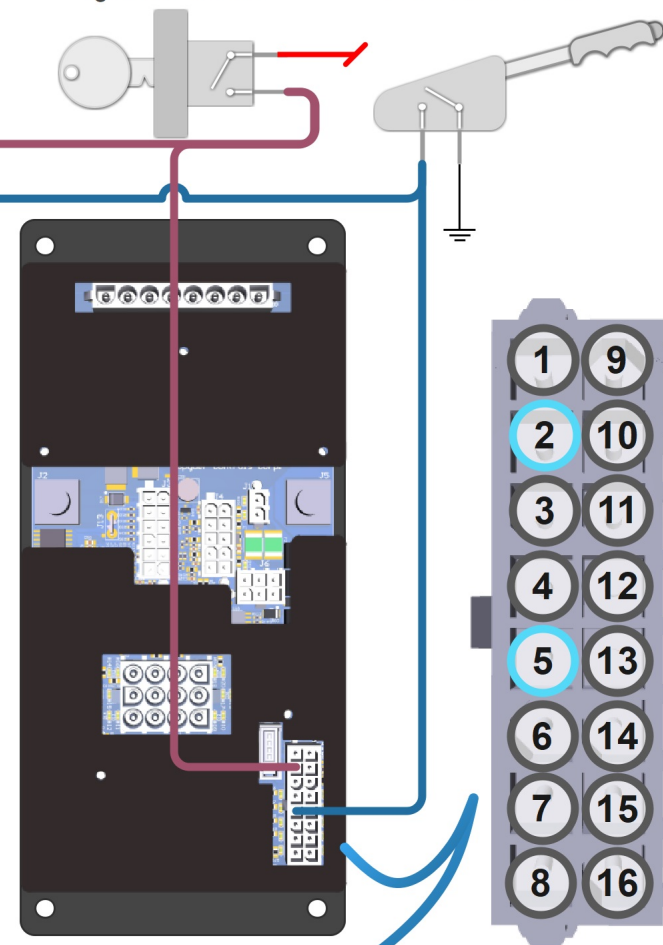
@ P/S Seat

***Emergency Override***  
Park brake and ignition must be on for slides to operate. In case of a system failure, use manual overrides on front of G6 Chassis panel to operate slides. Engage overrides using a pen or other pointed object.



Ignition Switch

Park Brake Switch



### J10

Input / Output

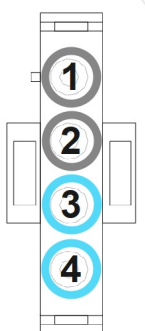
- 2** Ignition (12V+)
- 5** Park Brake (GND)

FRONT TV LIFT COMMON

CON 11

Front TV Lift Outputs

- 3 LED 43 - FR TV Lift Up
- 4 LED 44 - FR TV Lift Down

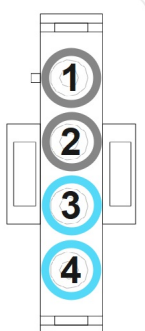


REAR TV LIFT COMMON

CON 12

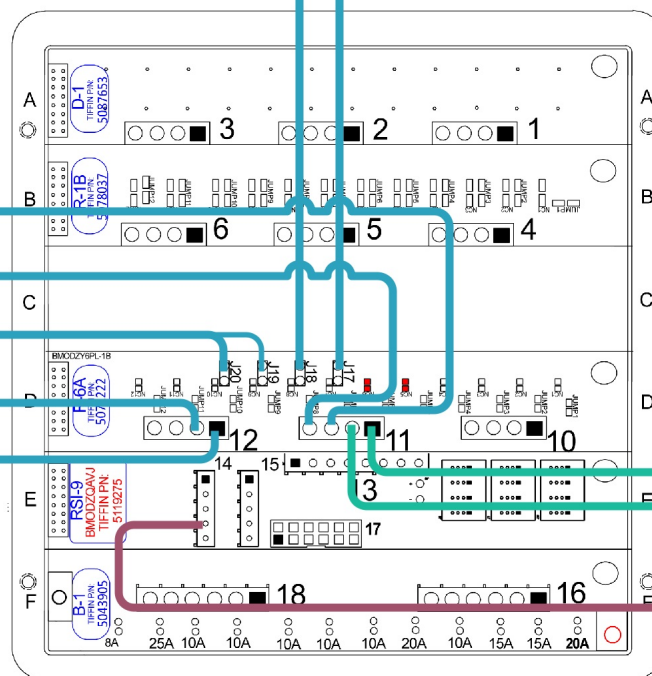
Rear TV Lift Outputs

- 3 LED 45 - Bed TV Lift Up
- 4 LED 46 - Bed TV Lift Dn



TV Lift Operation

- Press the control to raise the TV lift.
- Press and hold the control to lower the TV lift.



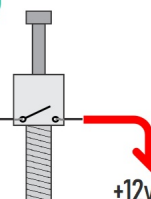
G6 HOUSE PANEL

@ Rear Closet



BED LIFT MOTOR

@ Bed



Bed Lift Plunger

@ Bed

Bed Lift Plunger

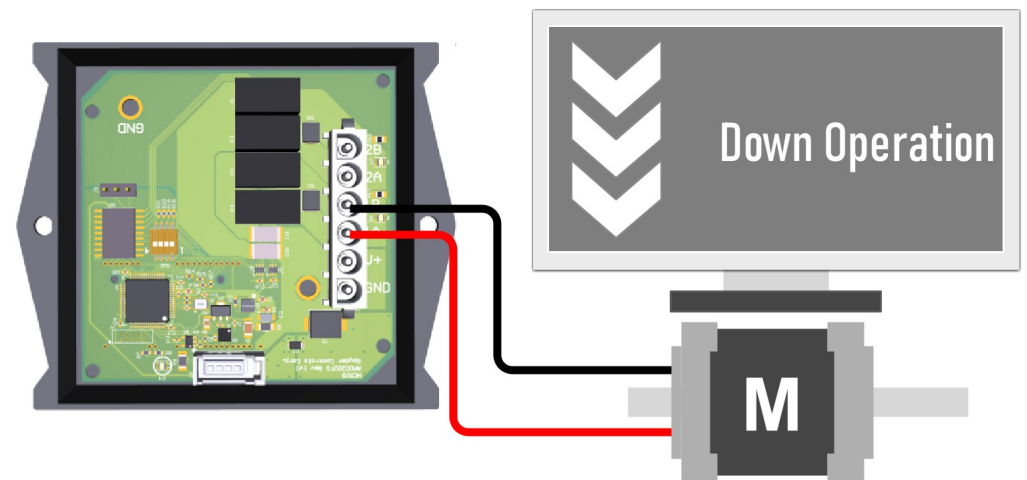
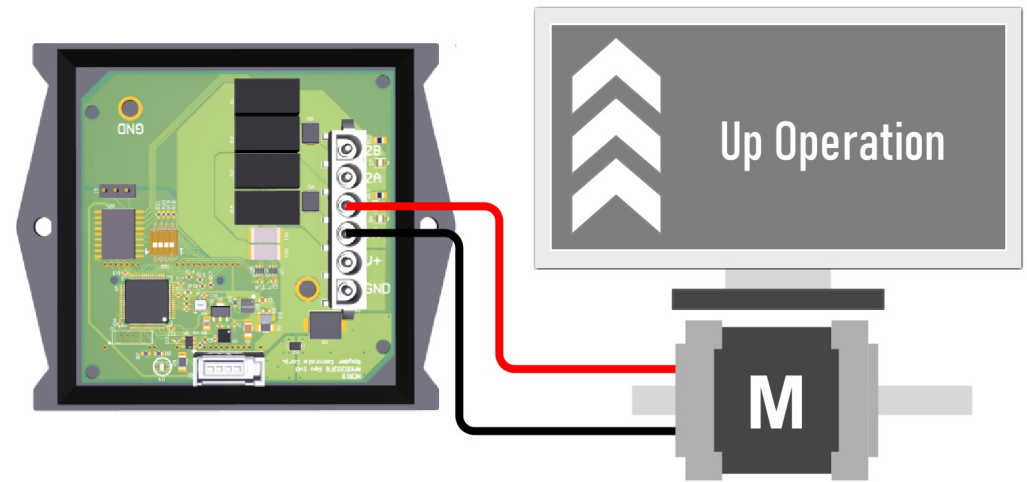
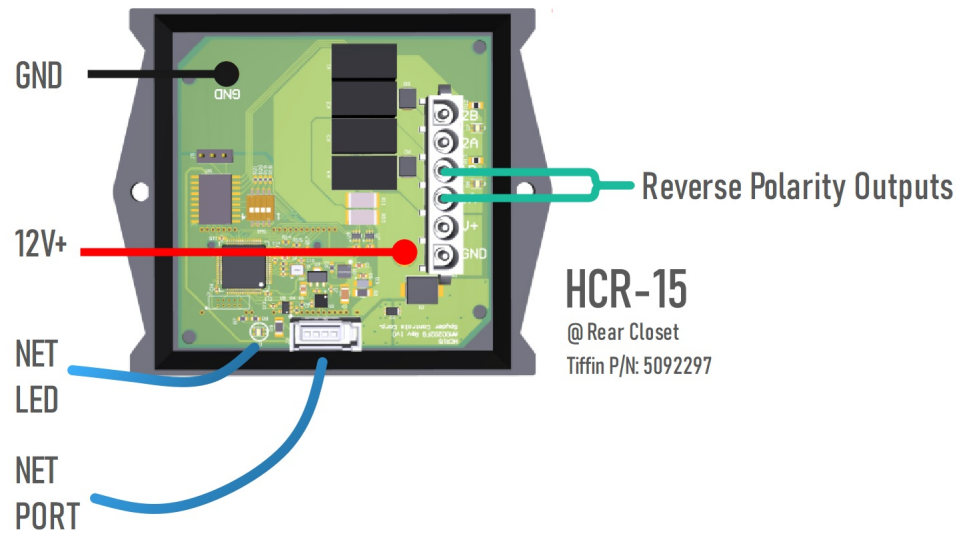
When depressed the bed lift plunger will provide 12V+ to Connector 14 Pin 4 on the RSI-9, allowing the slides to run. If this plunger is not depressed and no 12V+ signal is being received at the RSI-9 input, the slides will not run.

## Trouble Shooting

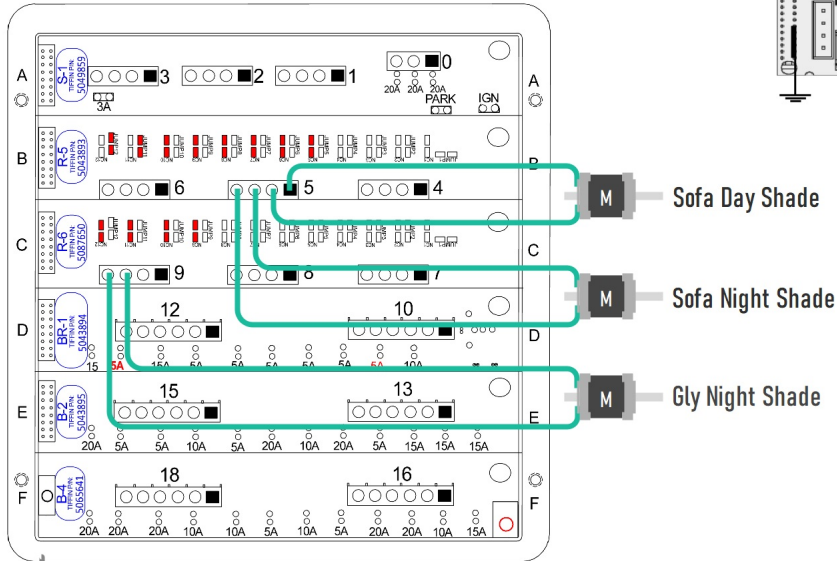
This information is only applicable to coaches with a MORryde TV Lift. The module above is a HCR-15 and is responsible for providing reverse polarity output to the MORryde TV Lift Motor.

If the TV lift is not raising or lowering check to ensure the NET LED on the HCR-15 is on solid green. If it is flashing or off completely there is an issue with network connectivity. If the module is online (solid green LED) and the TV lift still fails to work, use a multimeter to probe the connector.

Remove the white 6 position header and insert one probe into 1A and the other probe into 1B. Correct function would have the module output 12V+ one direction and ground the other direction. If this is not occurring please call Spyder Controls.

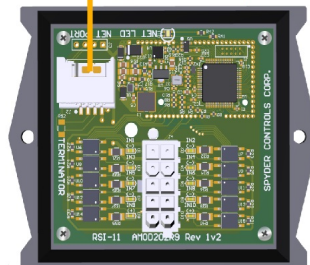


### CAN-ROUTER 2 @ D/S Storage Bay Ceiling

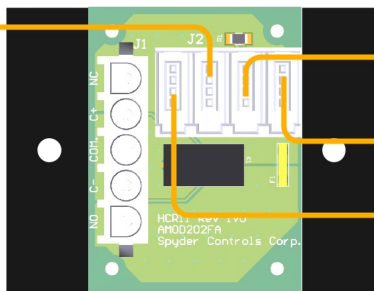


### G6 CHASSIS PANEL

### RSI-11 @ FR D/S Compartment

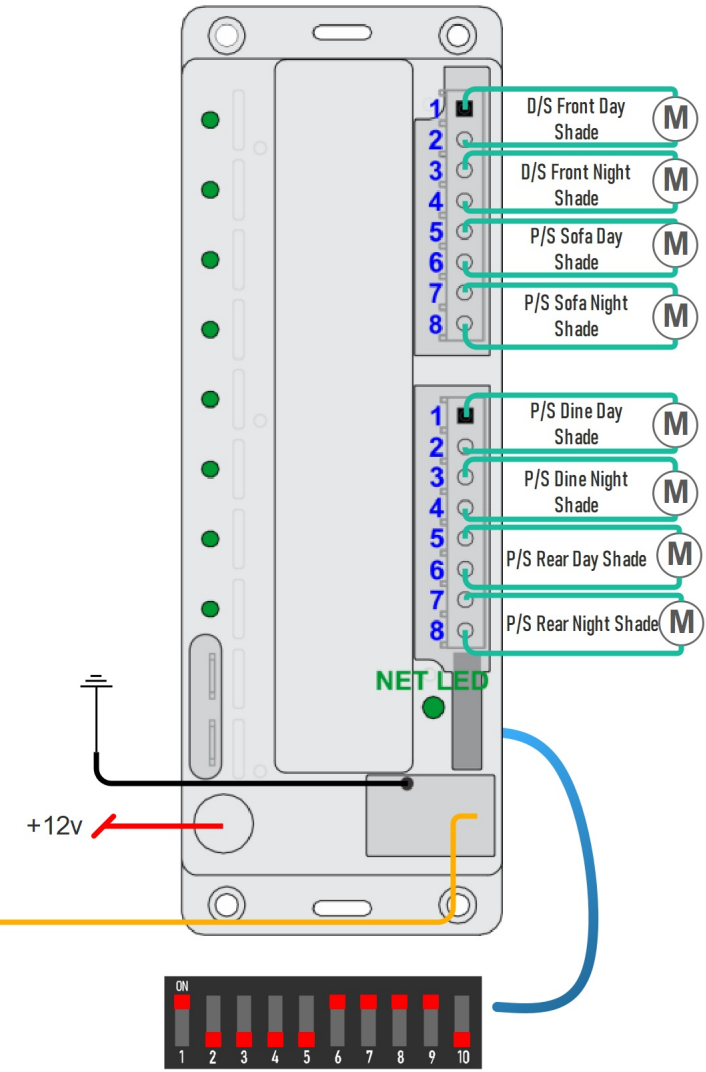


### HCR-11 DROP TAP @ FR D/S Exterior Compartment

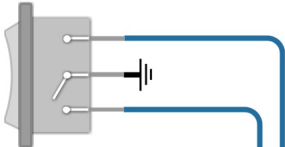


### MAIN G5 SHADE MODULE @ Overhead Cabinet Above Sofa

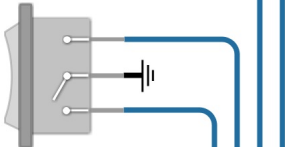
@ Overhead Cabinet Above Sofa



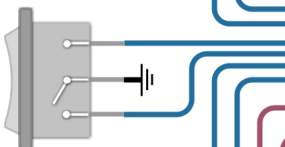
Toll Day Shade Switch



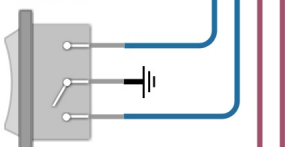
Toll Night Shade Switch



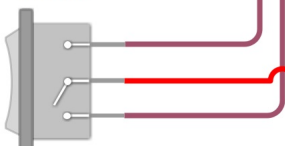
Wind Day Shade Switch



Wind Night Shade Switch

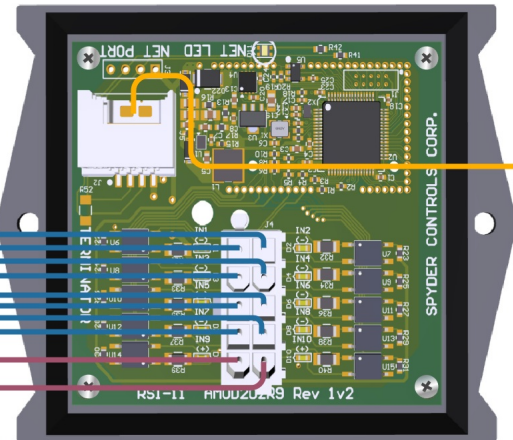


Step Cover Switch



RSI-11

@ FR D/S Exterior Compartment



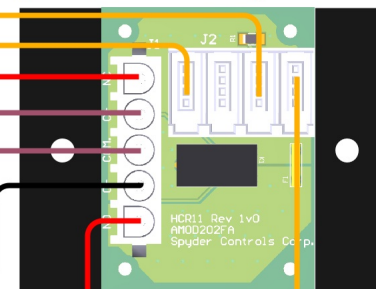
CAN-ROUTER 2

@ D/S Storage Bay Ceiling



HCR-11 DROP TAP

@ FR D/S Exterior Compartment



Chassis Controller

+12v

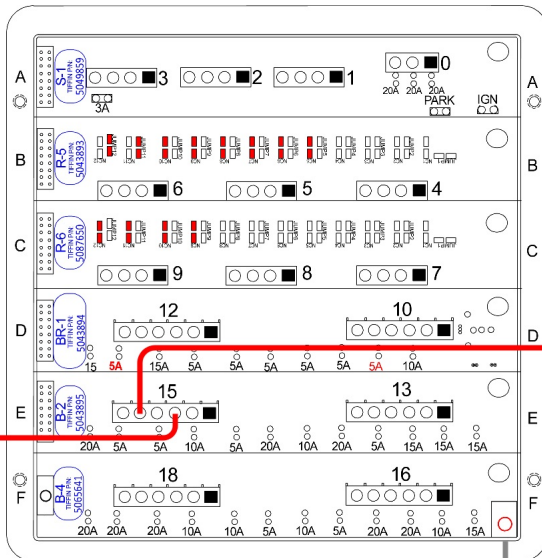
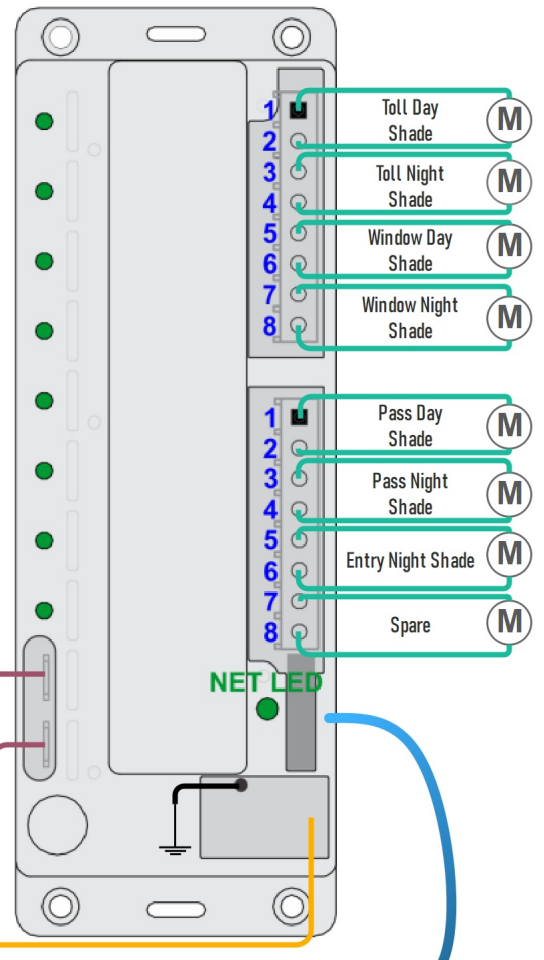
IGN Switch

NOTE

Only momentary operation allowed for lowering shades while ignition is on.

Cockpit G5 Shade Module

@ Cockpit - Overhead Cabinet by Entry Door



G6 CHASSIS PANEL



DIP Switch Setting

## What is EMS?

The EMS or Energy Management System is designed to keep your coach from tripping the shore or generator breaker while using shore or generator power.

## How does it work?

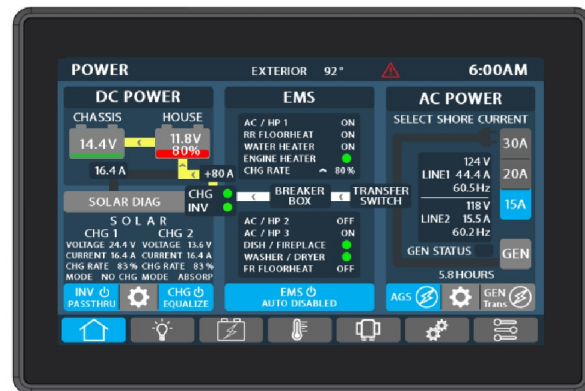
The EMS works by allowing or disallowing AC power to specific loads. Keep in mind that not all AC loads are controlled by the EMS. All loads that can be controlled by EMS are displayed in the center column of the Power Page on the main hall LCD. EMS must be enabled to view this page.

## What does "SHED" mean?

When EMS has disallowed AC power to a load we consider that load "SHED". This simply means that there currently is not enough AC power available for the load and the EMS will provide power when it is available.

## 10" LCD

@ Main Hall



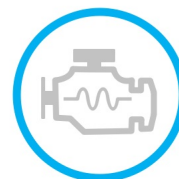
## Loads that can "SHED"



Dishwasher



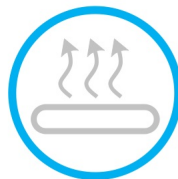
Washer / Dryer



Engine Preheat



All AC Units



All Floorheat



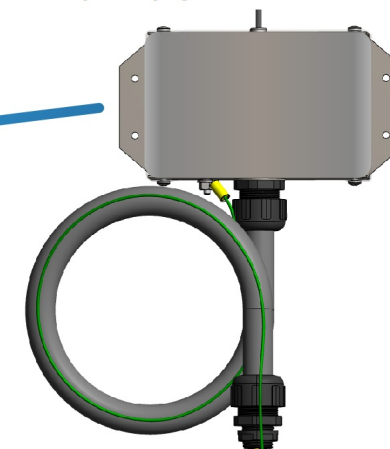
Fireplace



## TRC TRANSFER SWITCH

@ Exterior Compartment

The TRC Transfer switch provides the AC power readings found on the power page.



## ACR3

@ Rear Closet

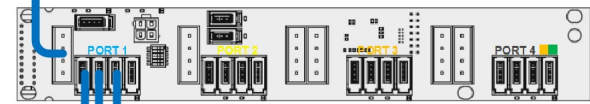
The ACR3 allows the EMS to "SHED" the washer/dryer, dishwasher, fireplace and the engine preheat when required.



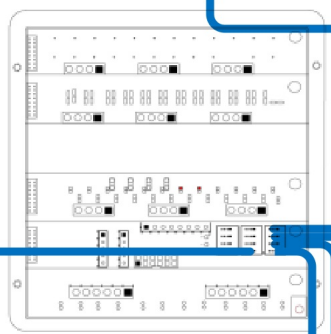
TRC TRANSFER SWITCH  
@ D/S RR EXT Comp



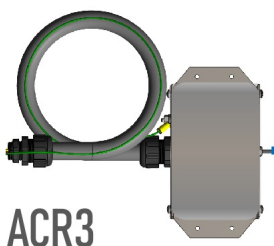
MAGNUM RV-C BRIDGE  
@ Inverter Bay



CAN-ROUTER 2  
@ Inverter Bay



G6 HOUSE PANEL  
@ Rear Closet

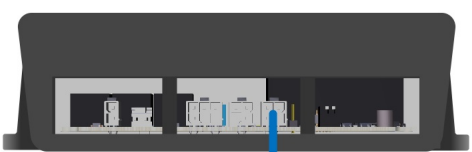


ACR3  
@ Rear Closet

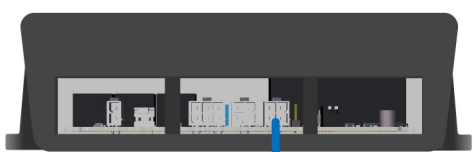


10" LCD  
@ Hall Wall  
TERMINATOR

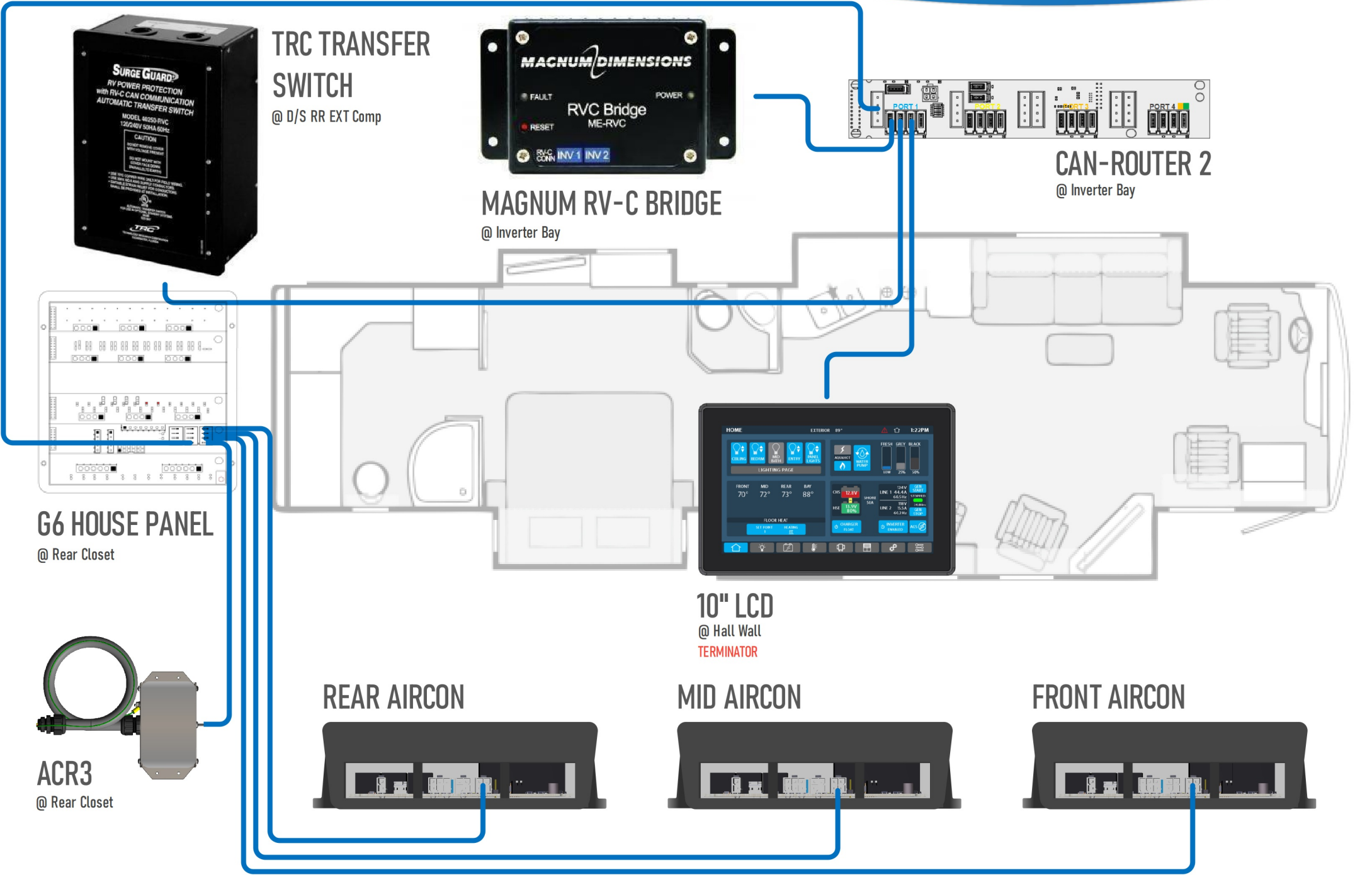
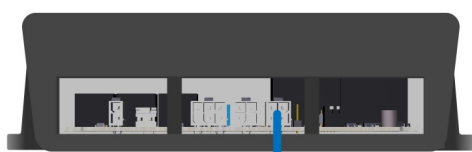
REAR AIRCON

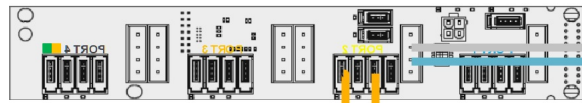


MID AIRCON

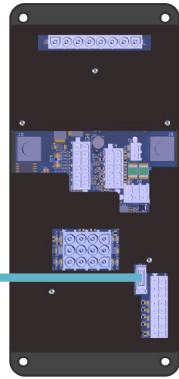


FRONT AIRCON

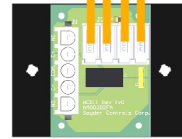




**CAN-ROUTER 2**  
@ Inverter Bay



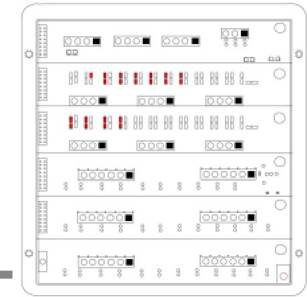
**G8 MODULE**  
@ Inverter Bay



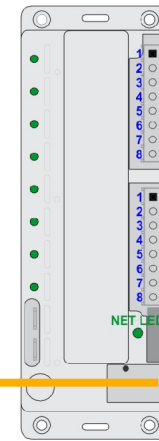
**HCR-11 DROP TAP**  
@ FR D/S Compartment



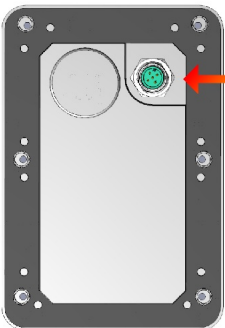
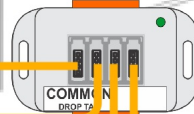
**RSI-11**  
@ FR D/S Compartment



**G6 CHASSIS PANEL**  
@ FR D/S Compartment



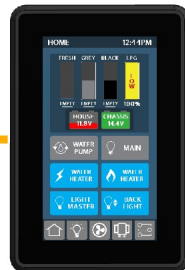
**COCKPIT G5 SHADE MODULE**  
@ Cockpit - Overhead Cabinet by Entry Door



**EXTERIOR 5" LCD**  
@ Outside Entry Door (Backside Shown)



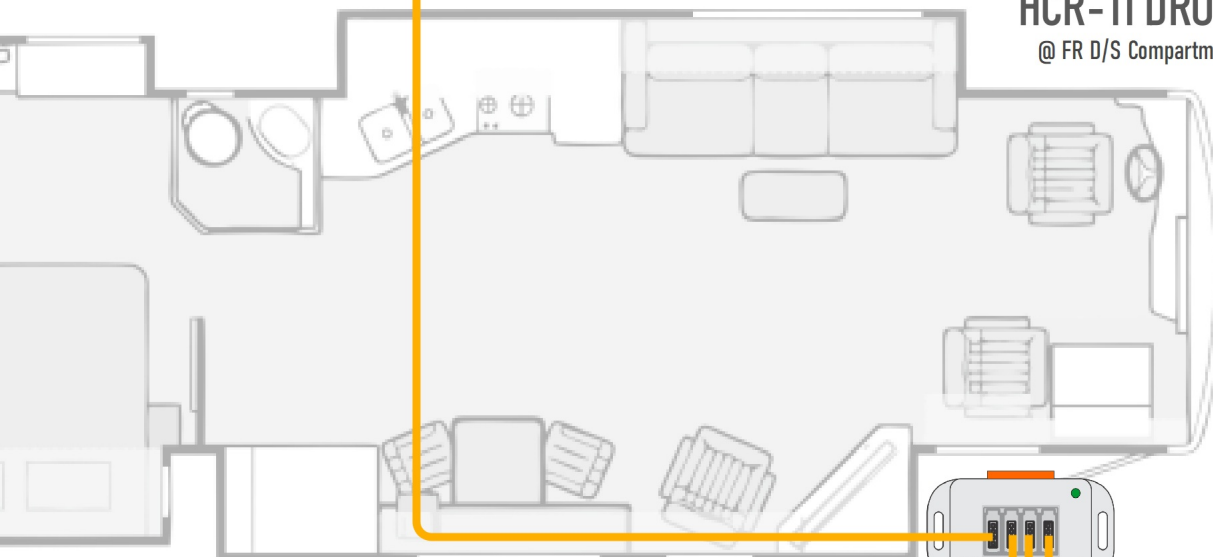
**EXT LCD HARNESS**  
Tiffin P/N 5119087

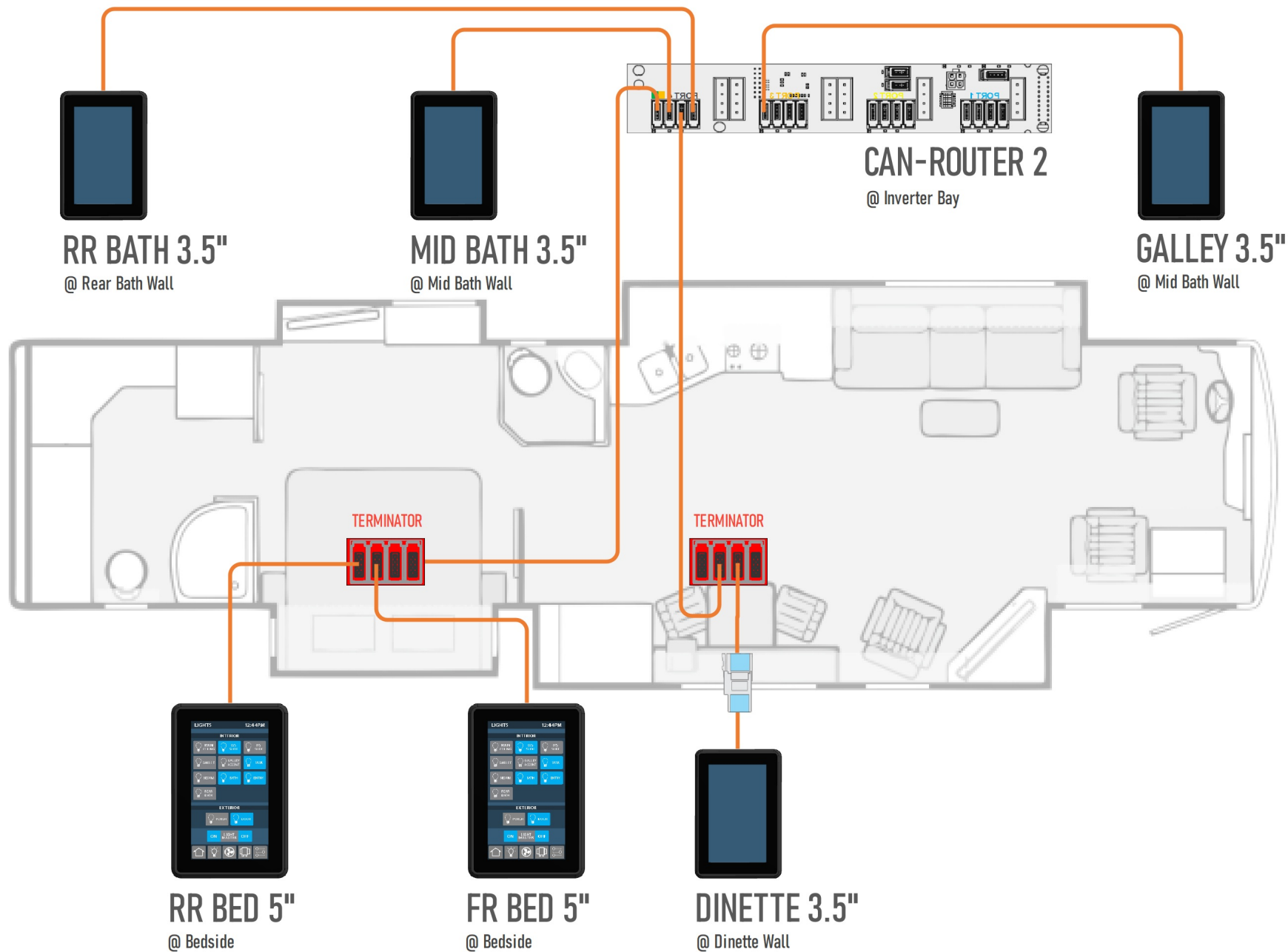


**ENTRY 5" LCD**  
@ Stairwell **TERMINATOR**



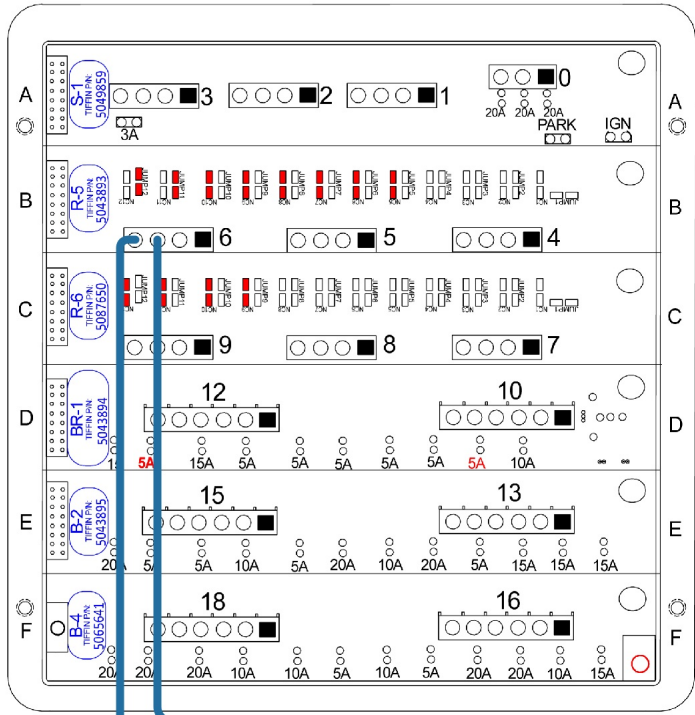
**PASSENGER 5" LCD**  
@ Passenger Console





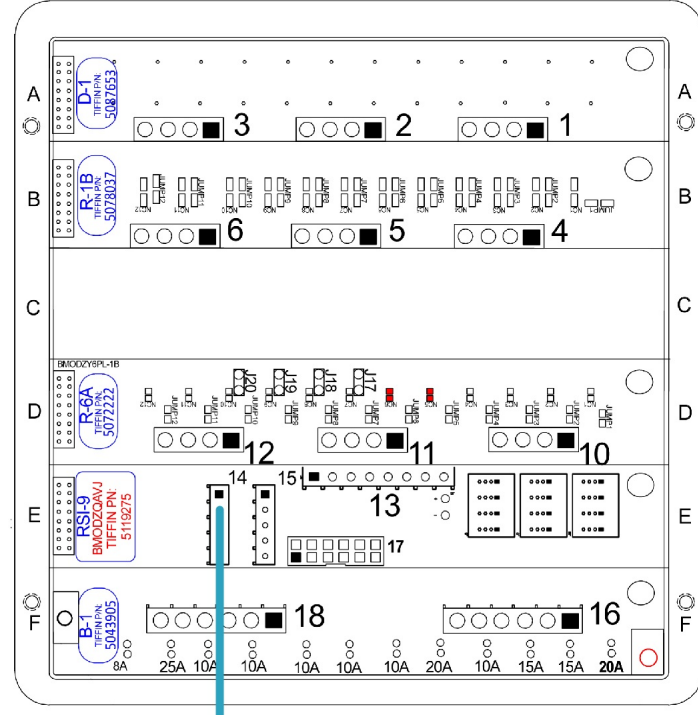
## G6 CHASSIS PANEL

@ FR D/S Compartment

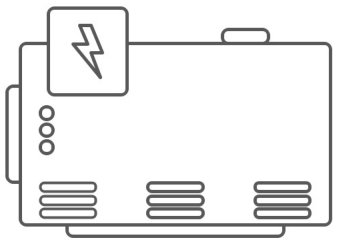


## G6 HOUSE PANEL

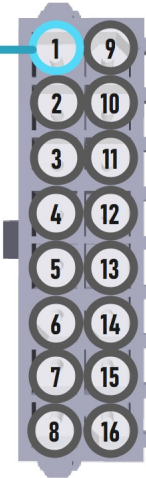
@ Rear Closet



## Generator



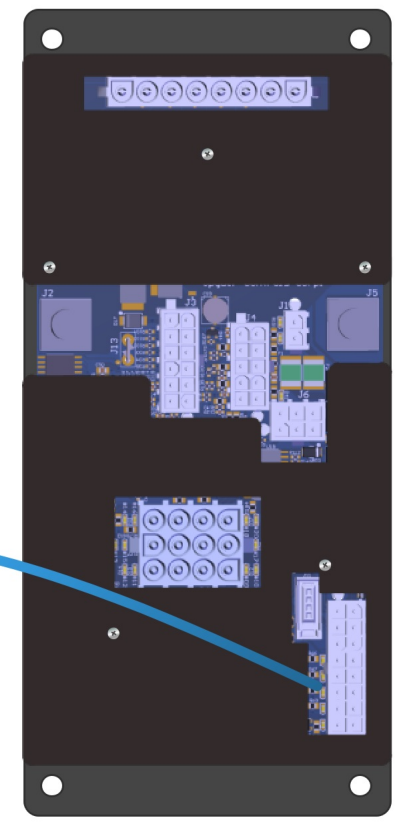
- Gen Stop ———— ●
- Gen Start ———— ●
- Gen Fault Status ———— ●
- Gen Running Status ———— ●

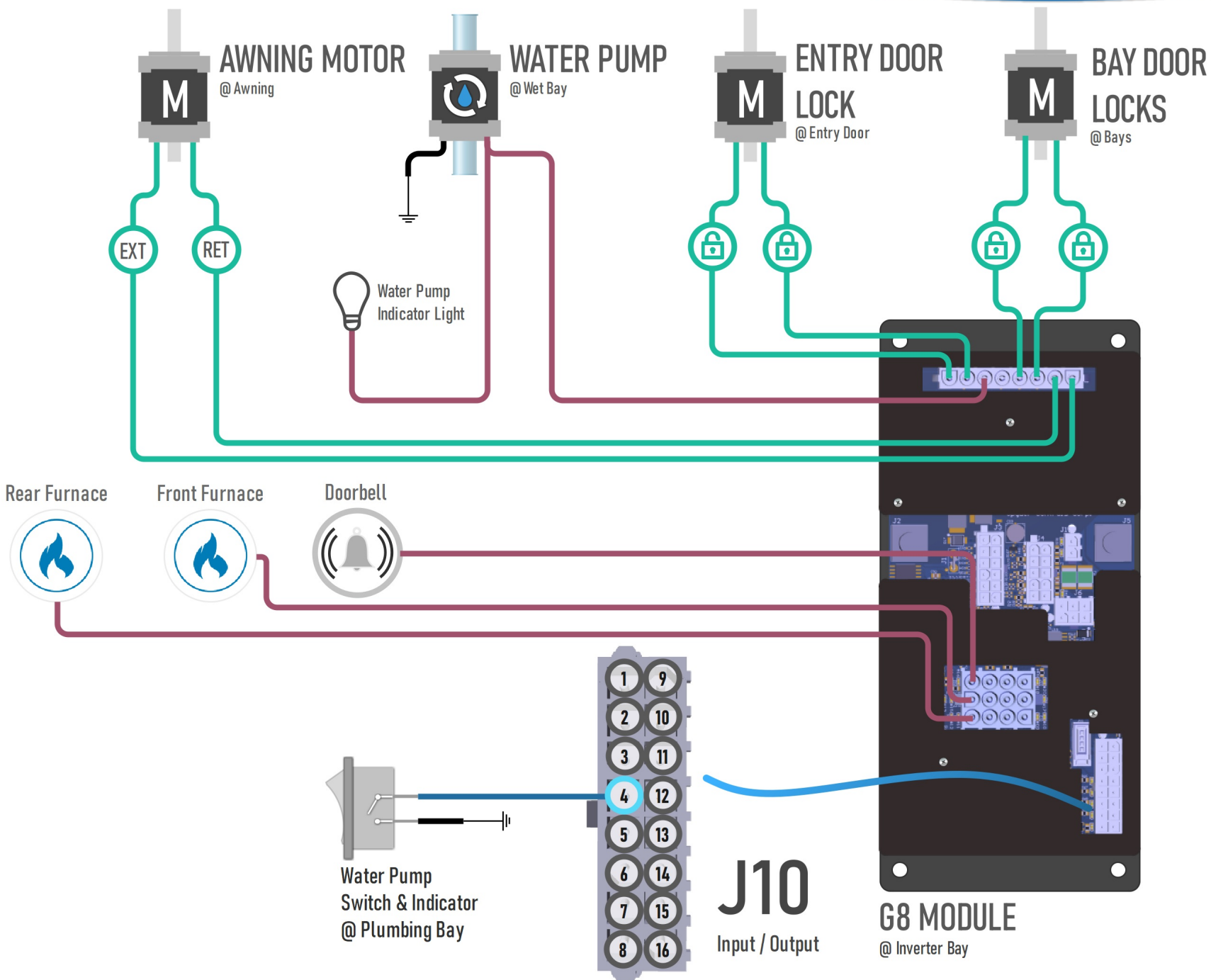


**J10**  
Input / Output

## G8 MODULE

@ Inverter Bay





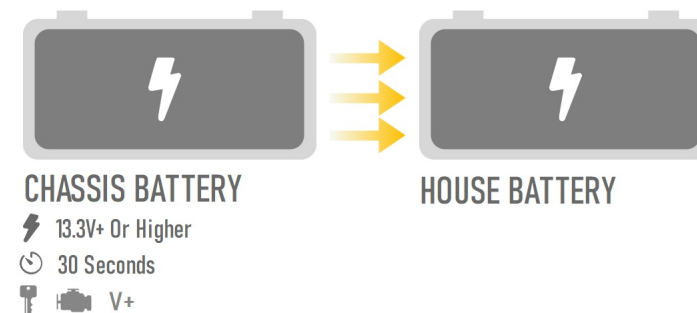
## MERGE LOGIC - CHASSIS CHARGING HOUSE

The merge solenoid will engage if the following conditions are present:

- Engine run or ignition signal is present and chassis voltage is above 13.3V (charging) for 30 seconds

The merge solenoid will disengage under either of the following conditions:

- Engine run or ignition signal is removed
- Chassis voltage drops below 12.6V for more than 30 seconds (unmerge until the engine is shut off and started again)



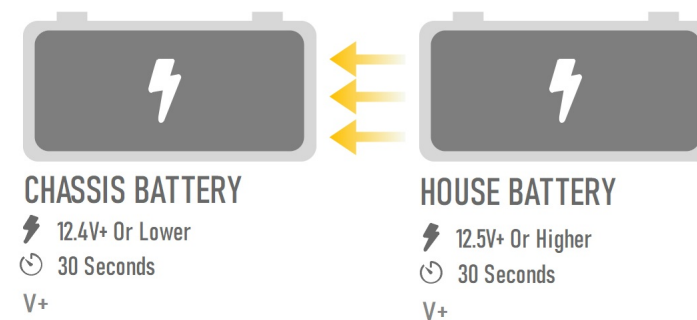
## MERGE LOGIC - HOUSE CHARGING CHASSIS

The merge solenoid will engage if the following conditions are present:

- House voltage is above 12.5V (charging) and chassis voltage is below 12.4V (low battery voltage) for 30 seconds

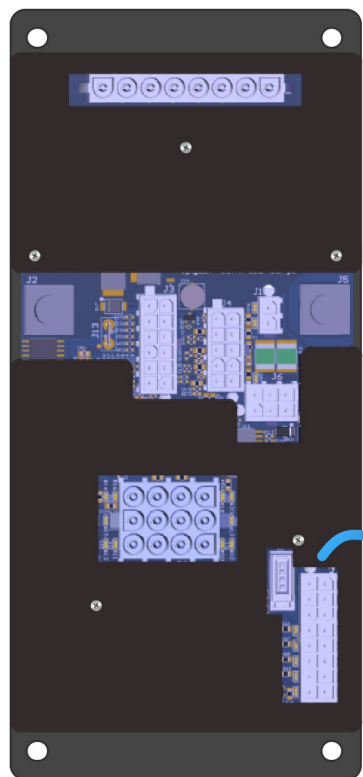
The merge solenoid will disengage under either of the following conditions:

- House voltage drops below 12.2V for more than 30 seconds, OR
- 60 minutes timed battery merge period expires. Re-merge will occur again if the merge conditions are still present



## MERGE LOGIC - NOTE

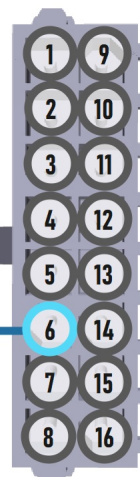
Note: The voltages used in this spec are what are read directly at the MergeMan which is installed at the DCD panel and may vary from the voltages displayed on the LCD screens for general informational purposes.



**G8 MODULE**  
@ Inverter Bay

# J10

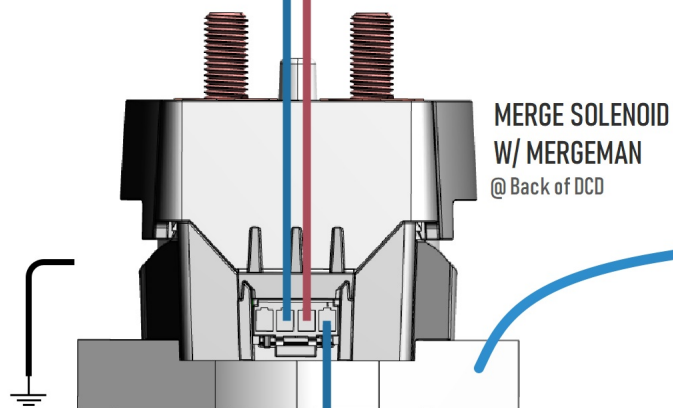
Input / Output



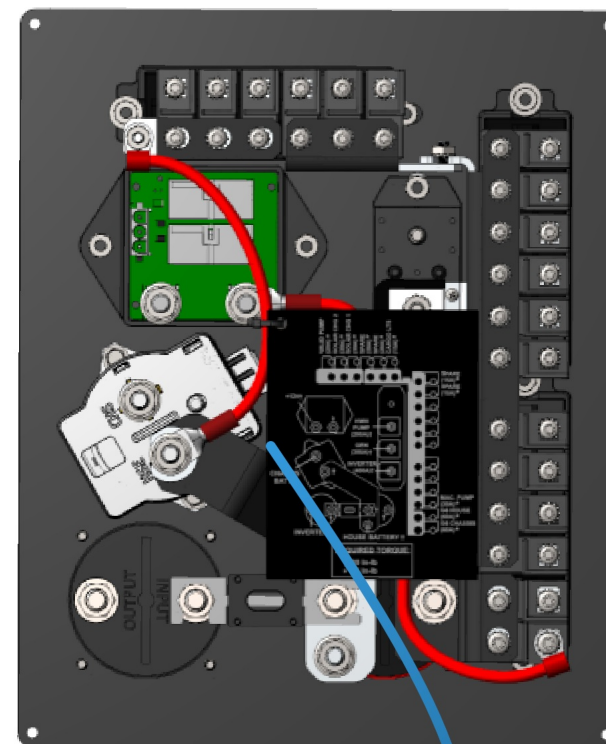
Auto / Manual Merge Input (GND)

## COACH RUNNING INPUT

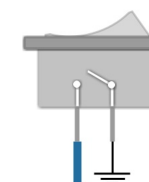
Depending on the chassis used in the coach the coach running input will either come from the engine (switched GND) or from the ignition (switched 12V+)



**MERGE SOLENOID  
W/ MERGEMAN**  
@ Back of DCD



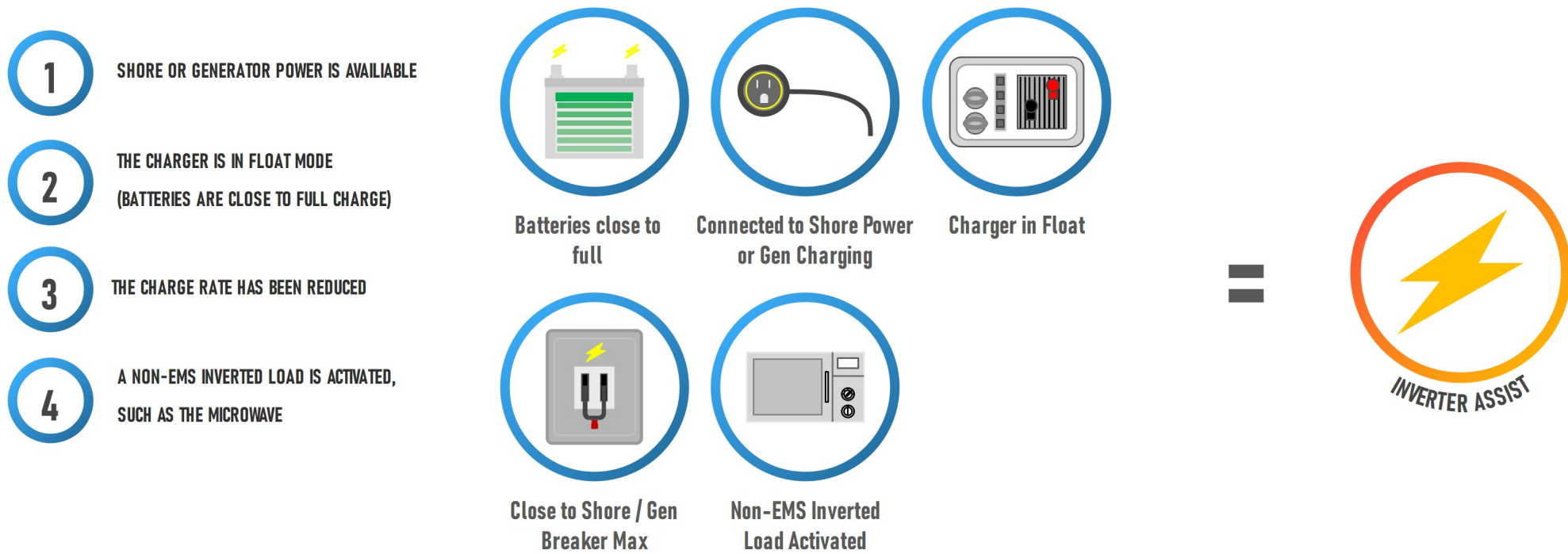
**DCD PANEL**  
@ Inverter Bay



**Manual Merge  
Override Switch**  
@ Dash

**IF ENABLED INVERTER ASSIST WILL ACTIVATE IF THE FOLLOWING CONDITIONS ARE TRUE**

Inverter assist is a state in which power is temporarily drawn from the batteries to keep EMS loads from shedding.



**!** If the conditions above are true. To keep any EMS load from shedding the inverter will go from passthrough to inverting to temporarily invert for 5 minutes. Please note inverter assist will temporarily decrease your battery voltage. This is normal the voltage will stabilize relatively quickly once the inverter assist period has expired. Please note inverter assist can only occur once every charge cycle. Therefore, the coach will not frequently be in inverter assist mode.

**!** Inverter assist can be enabled or disabled from the inverter settings page. On you main LCD navigate to the power page > inverter settings > advanced battery settings > inverter assist.

## To Replace The Battery

To replace the battery firmly grasp the outside edge of the wireless rocker switch.

Pull to the left or right until the switch snaps off the wall. Use a pen or other thin object to push the coin cell out of the retaining clip. Insert new battery with the + symbol facing upwards, ensure battery is seated into retaining clip all the way.

Use the up arrows on the back of the switch panel to orientate placement back onto the mounting bracket. Snap the wireless rocker switch back into place.

Test the switch and dispose of the old battery responsibly.

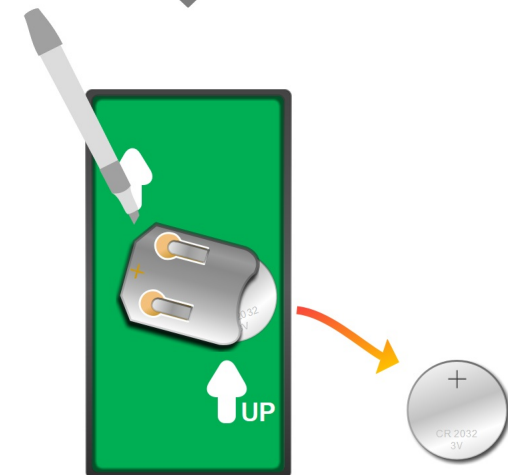
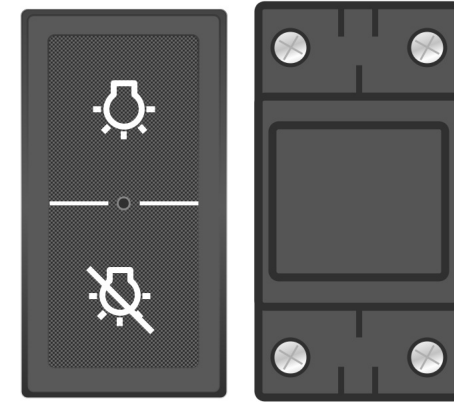
### WARNING

ONLY REPLACE THE COIN CELL BATTERY WITH A **CR2032**. DOING OTHERWISE WILL VOID THE PANEL WARRANTY AND COULD DAMAGE THE PANEL



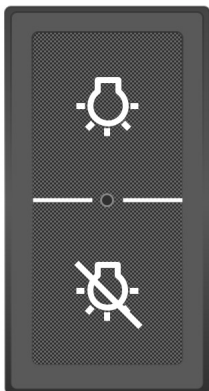
Insert Battery with + sign facing up.

Snaps on and off wall bracket



A green LED will turn on when a button is pressed. This is the transmit LED and confirms that the switch panel is transmitting information. This LED will flash occasionally indicating the switch panel is transmitting it's battery status.

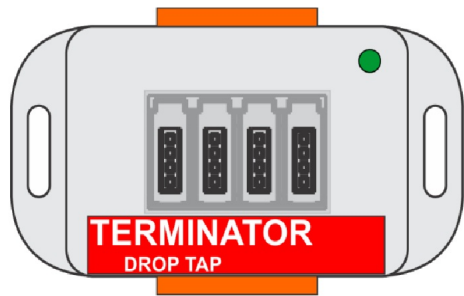
Not Transmitting



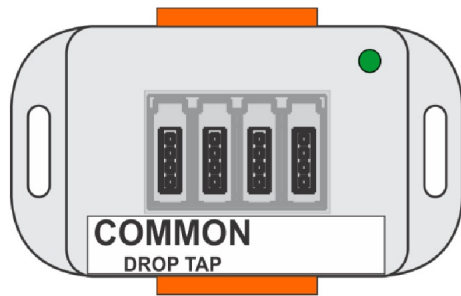
Transmitting



G3 Terminator Tap  
Tiffin P/N: 5051935



G3 Common Tap  
Tiffin P/N: 5027834



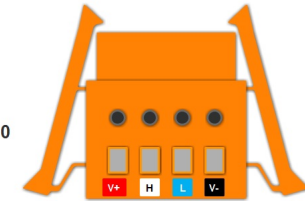
G4 Common Drop Tap  
Tiffin P/N: 5016592



G4 Terminator Drop Tap  
Tiffin P/N: 5051936



4 Pos Wago Connector  
Tiffin P/N: 5015508



Wago Hook Tool  
Wago P/N: 231-131



Mini-Clamp Plug  
Tiffin P/N: 5066157  
3M P/N: 37104-2165-000 FL 100



Mini-Clamp Socket  
Tiffin P/N: 5066158  
3M P/N: 37304-2165-000 FL 100

