











Multiplex Integration Schematic

2019 Allegro Bus

Schematic Connections Legend

 Constant Ground	 Reverse Polarity
 Constant 12V+	 Signal
 Switched Ground	 120 VAC Line
 Switched 12V+	

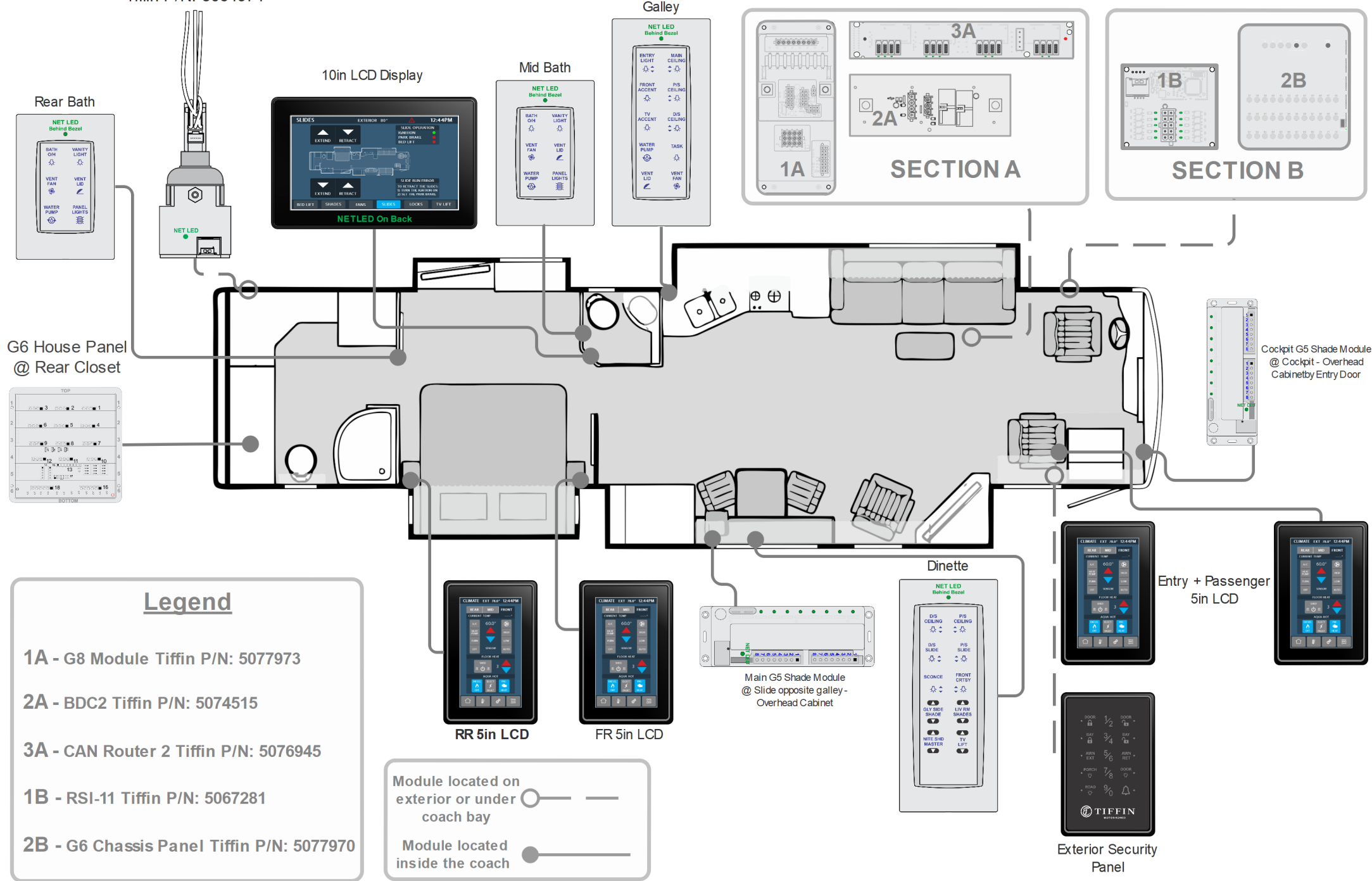
Network Connections Legend

 Critical Network
 Switch / Screen
 Module Network

2019 Tiffin Bus General Component Locations Diagram

(Components not to scale)

AC Power Monitor
@ Transfer Switch
Tiffin P/N: 5064974



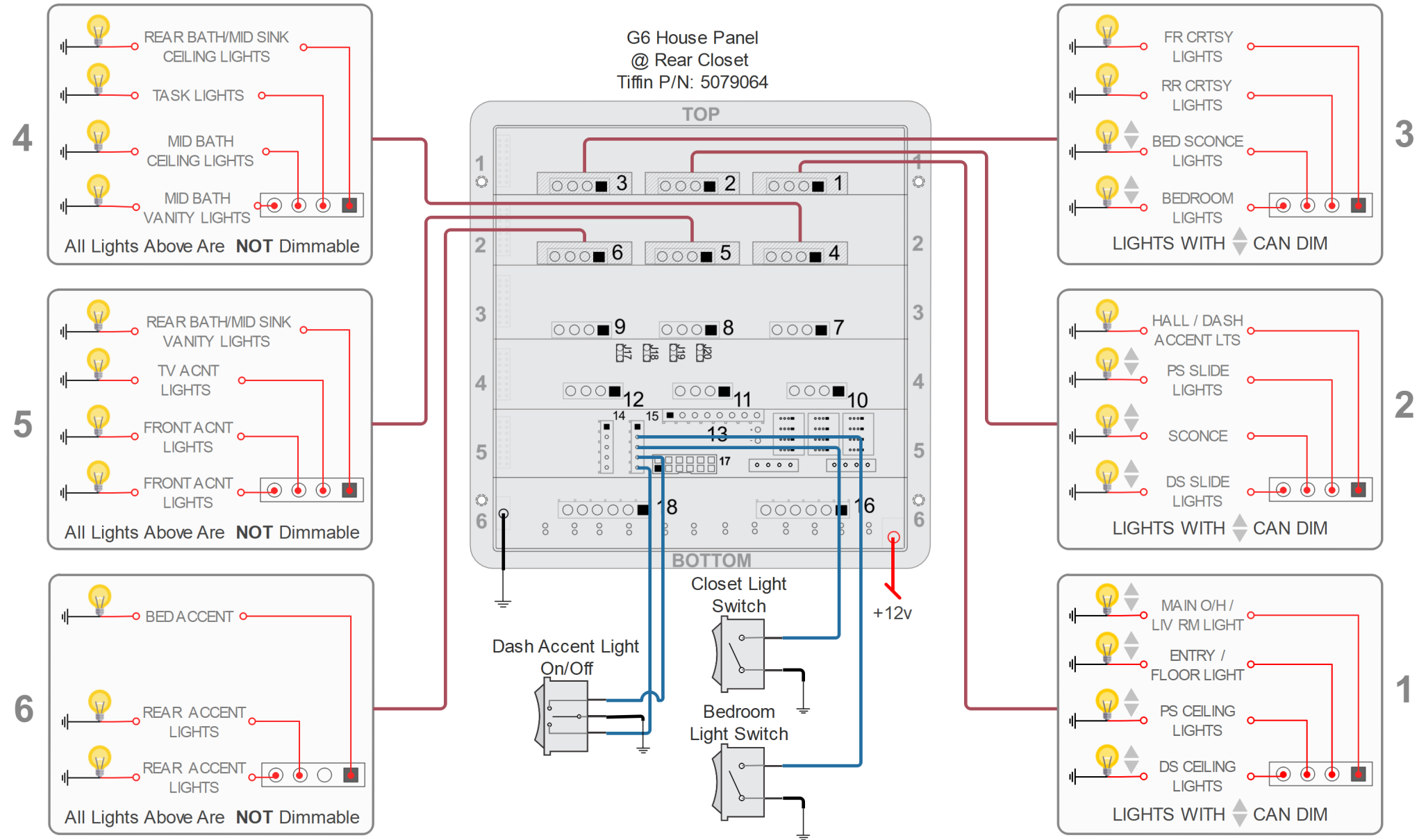
Legend

- 1A - G8 Module Tiffin P/N: 5077973
- 2A - BDC2 Tiffin P/N: 5074515
- 3A - CAN Router 2 Tiffin P/N: 5076945
- 1B - RSI-11 Tiffin P/N: 5067281
- 2B - G6 Chassis Panel Tiffin P/N: 5077970

Module located on exterior or under coach bay

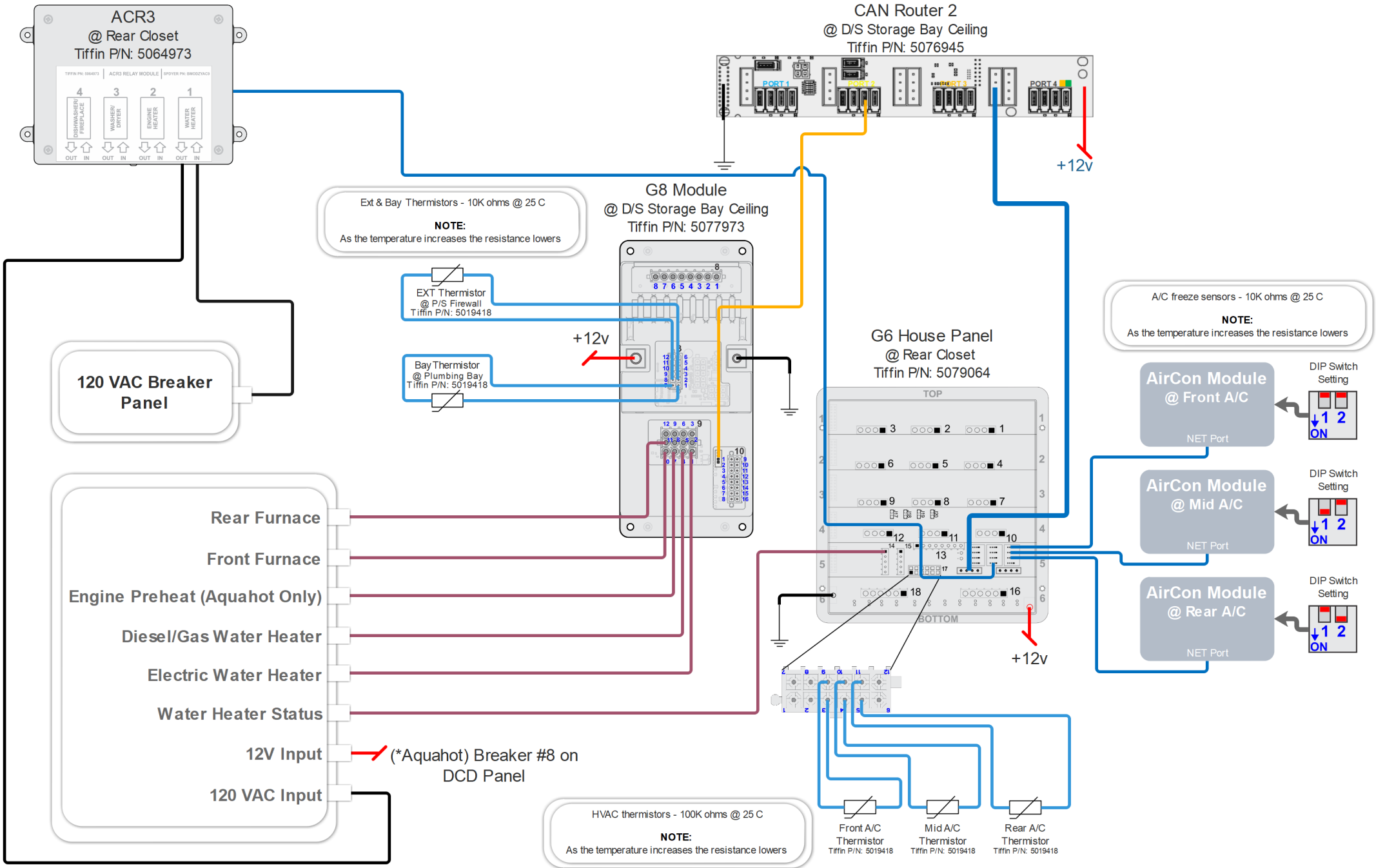
Module located inside the coach

2019 Tiffin Bus Lighting System (Components not to scale)

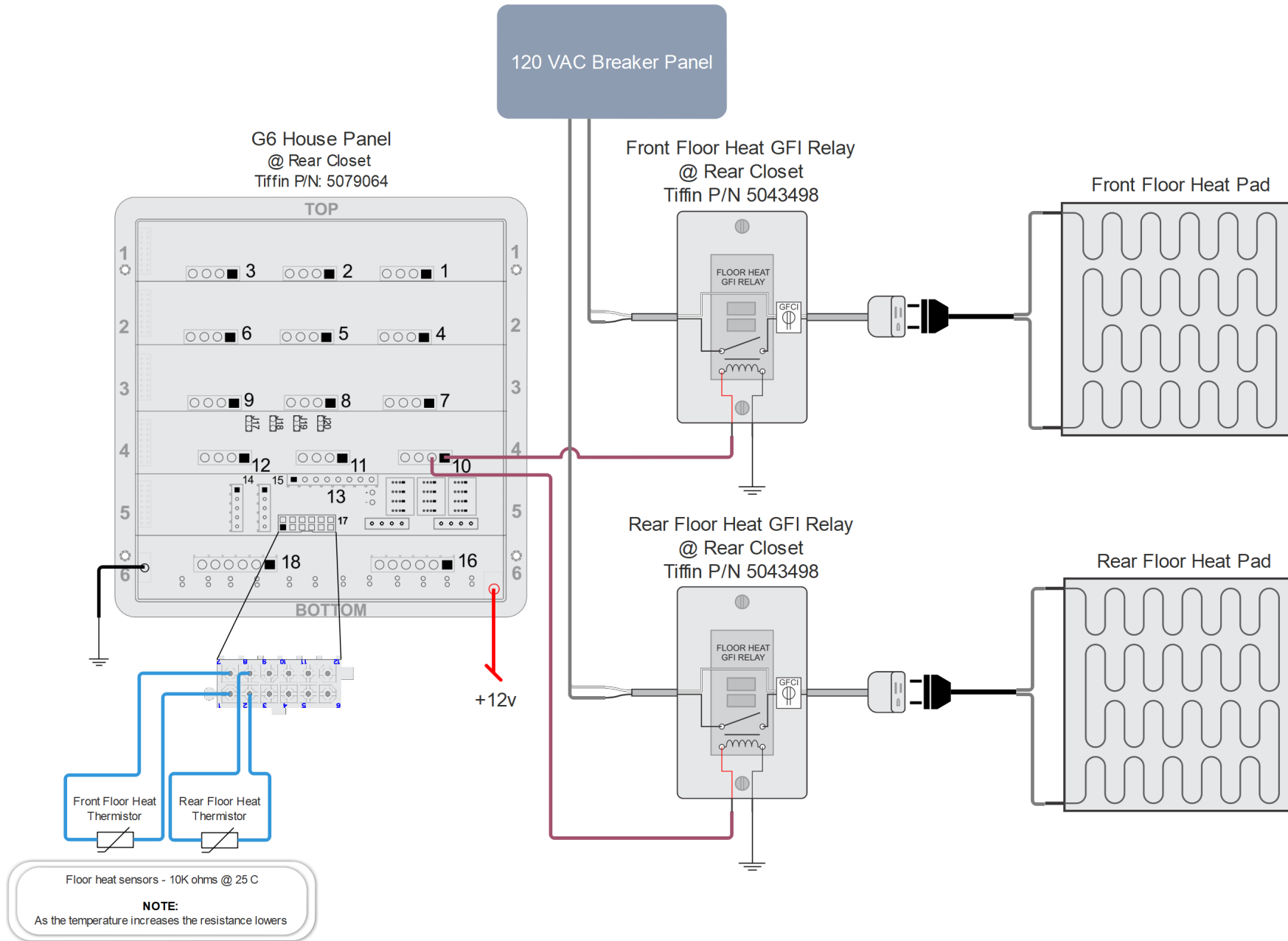


2019 Tiffin Bus HVAC System

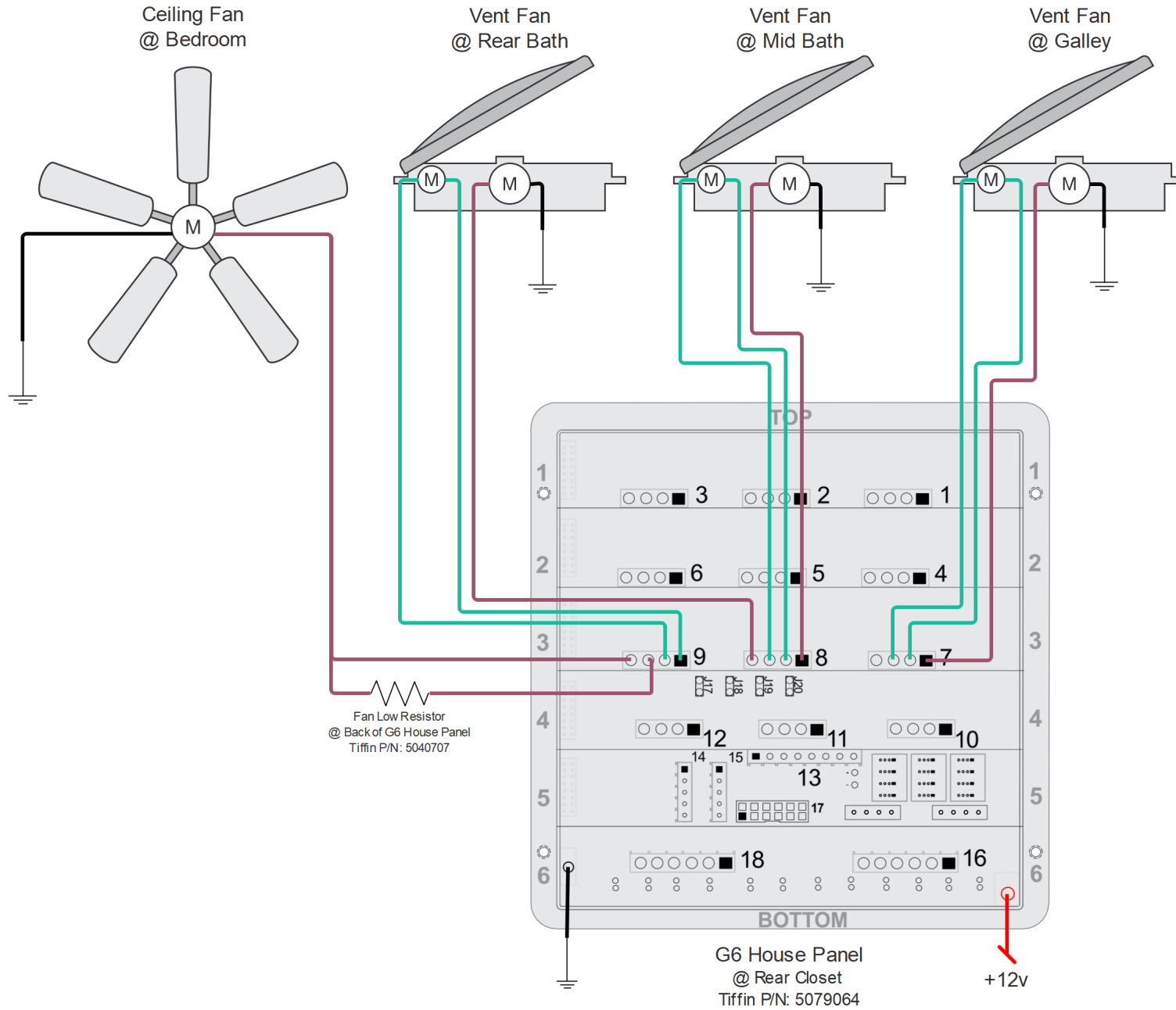
(Components not to scale)



2019 Tiffin Bus Floor Heat System (Components not to scale)

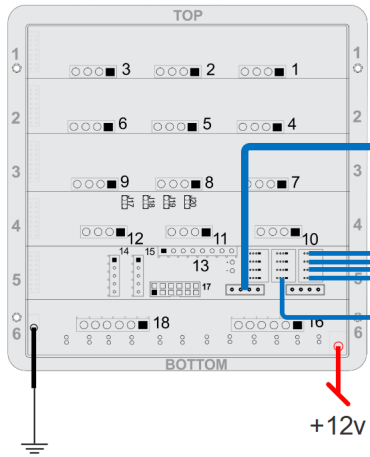


2019 Tiffin Bus Vent Fan & Ceiling Fan System (Components not to scale)

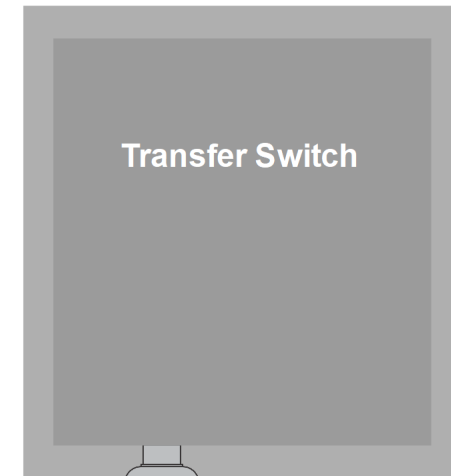
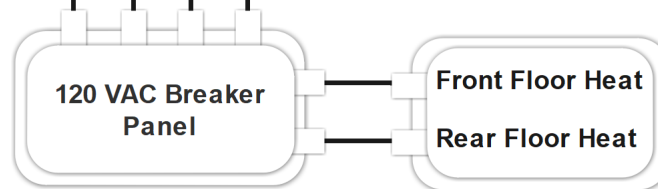
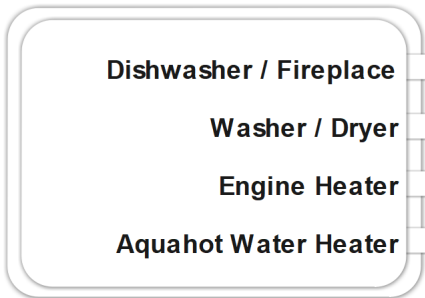
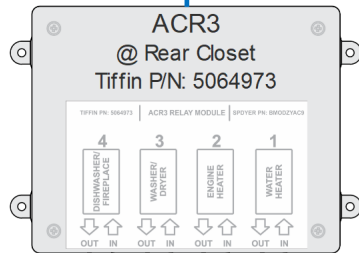
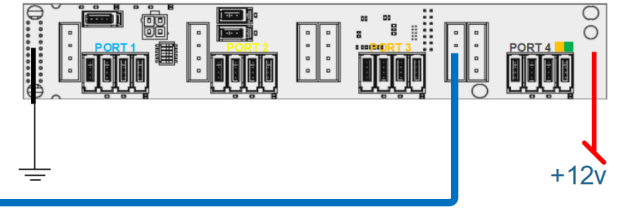


2019 Tiffin Bus EMS System (Components not to scale)

G6 House Panel
@ Rear Closet
Tiffin P/N: 5079064

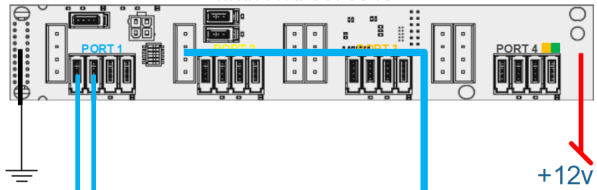


CAN Router 2
@ D/S Storage Bay Ceiling
Tiffin P/N: 5076945



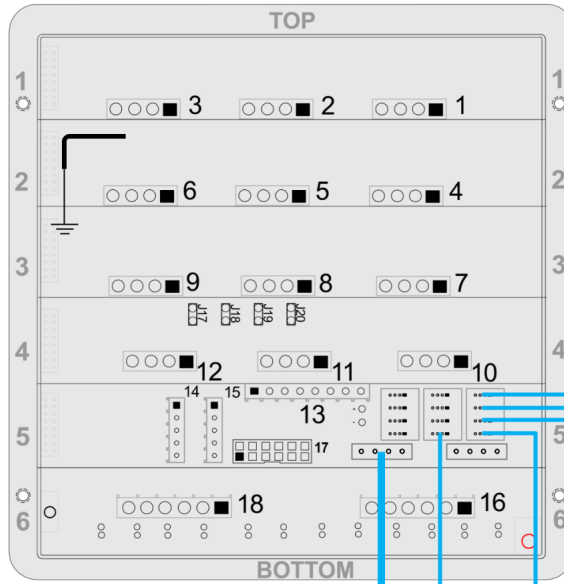
AC Power Monitor
@ Transfer Switch
Tiffin P/N: 5064974

CAN Router 2
@ D/S Storage Bay Ceiling
Tiffin P/N: 5076945

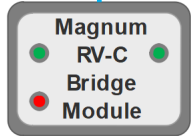


2019 Tiffin Bus Blue Network (Components not to scale)

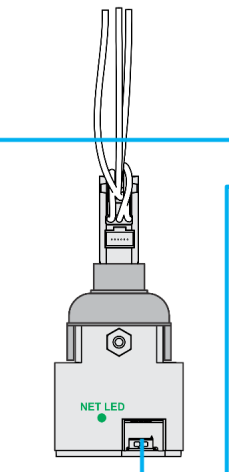
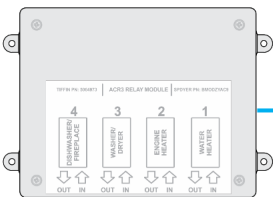
G6 House Panel
@ Rear Closet
Tiffin P/N: 5079064



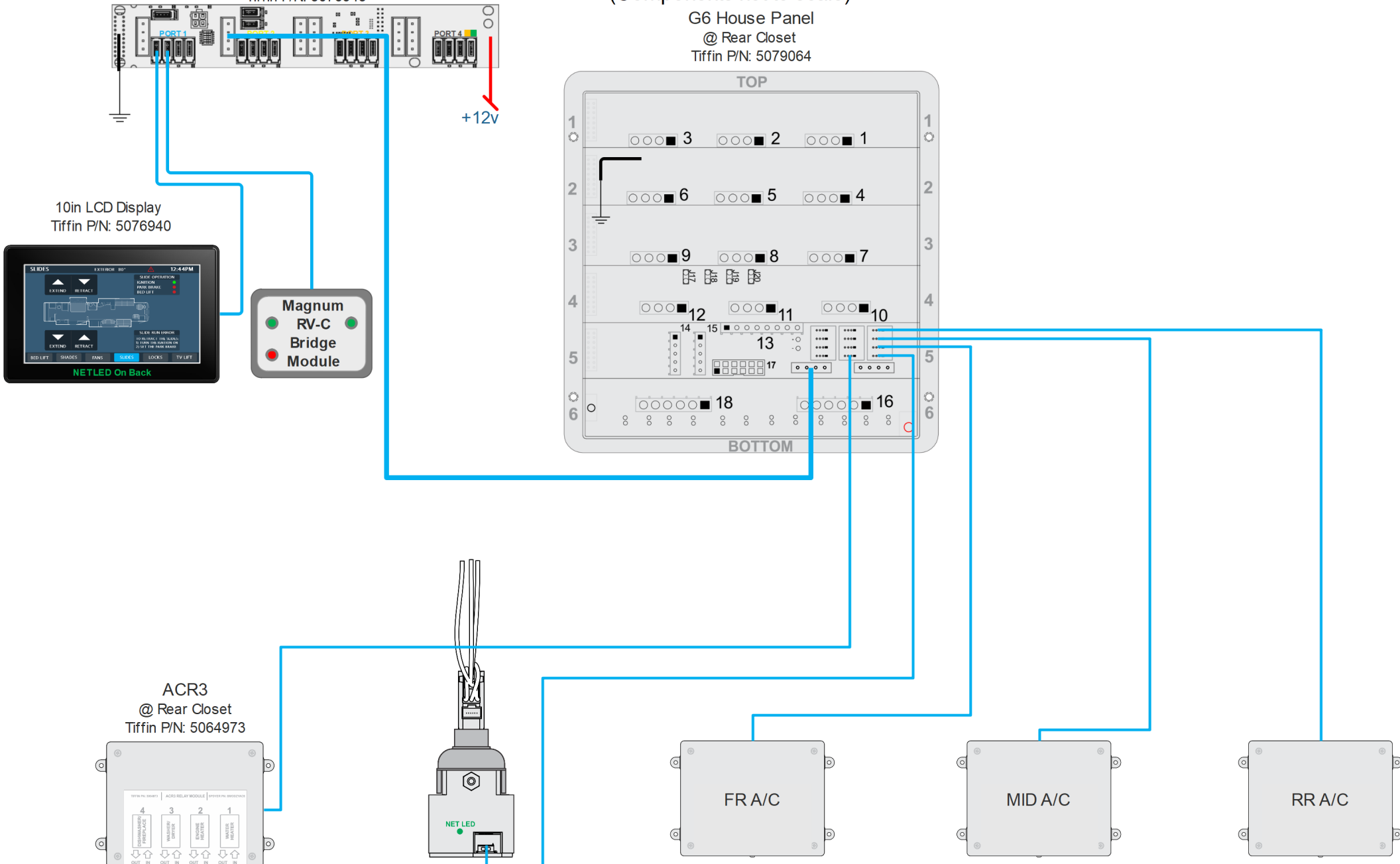
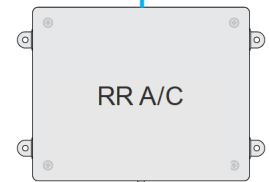
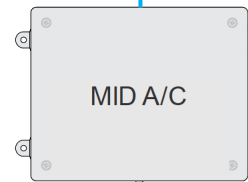
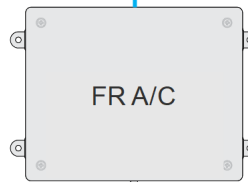
10in LCD Display
Tiffin P/N: 5076940



ACR3
@ Rear Closet
Tiffin P/N: 5064973

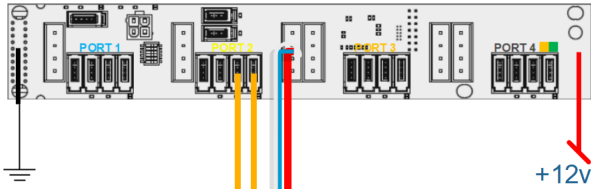


AC Power Monitor
@ Transfer Switch
Tiffin P/N: 5064974

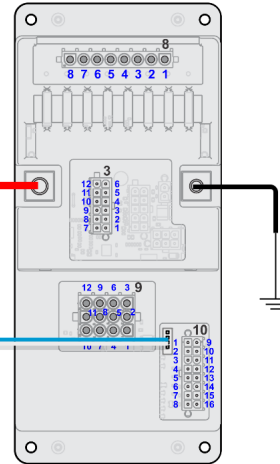


2019 Tiffin Bus Yellow Network (Components not to scale)

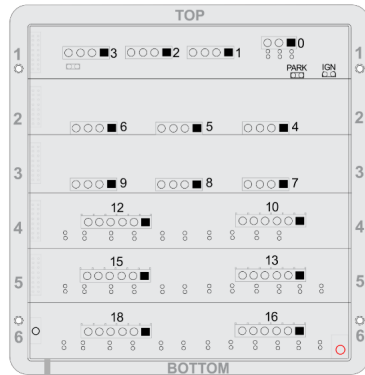
CAN Router 2
@ D/S Storage Bay Ceiling
Tiffin P/N: 5076945



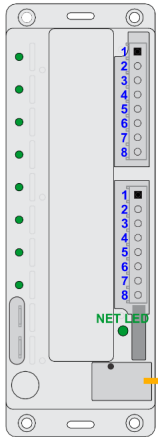
G8 Module
@ D/S Storage Bay Ceiling
Tiffin P/N: 5077973



G6 Chassis Panel
@ D/S Front Electrical Bay
Tiffin P/N: 5077970



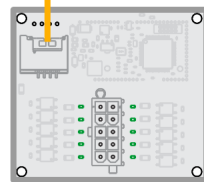
Cockpit G5 Shade Module
@ Cockpit - Overhead
Cabinetry Entry Door



G4 Terminator Drop Tap
Tiffin P/N: 5051936



RSI-11
@ D/S Front Electrical Bay
Tiffin P/N: 5067281



2019 Tiffin Bus Slide System

(Components not to scale)

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.

HWH Slide Controller

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

D/S Rear Slide Controller

- Retract Input
- Extend Input
- Power Input

P/S Rear Slide Controller

- Retract Input
- Extend Input
- Power Input

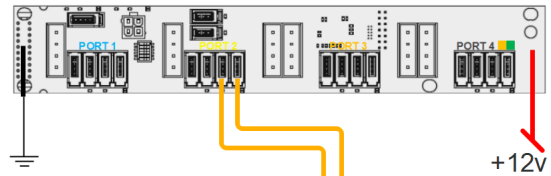
Park Brake Switch

If one of the front slides is electric, the corresponding Hydraulic Pump wire should not be connected.

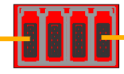
P/S and D/S slide module power wires may be swapped.

G8 Module
 @ D/S Storage Bay Ceiling
 Tiffin P/N: 5077973

CAN Router 2
 @ D/S Storage Bay Ceiling
 Tiffin P/N: 5076945

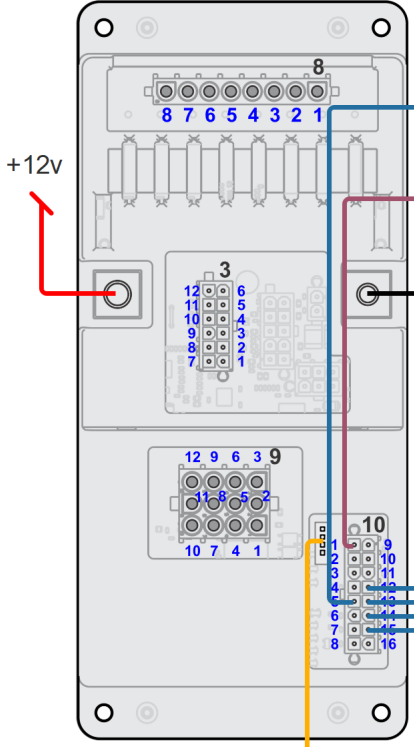


G4 Terminator Drop Tap
 @ D/S Front Electrical Bay
 Tiffin P/N: 5051936



Bed Lift Plunger Override

If the slide is not retracting and the bed lift plunger is depressed, hold the slide retract button on the screen for 8 seconds. This will cause the slide to retract.

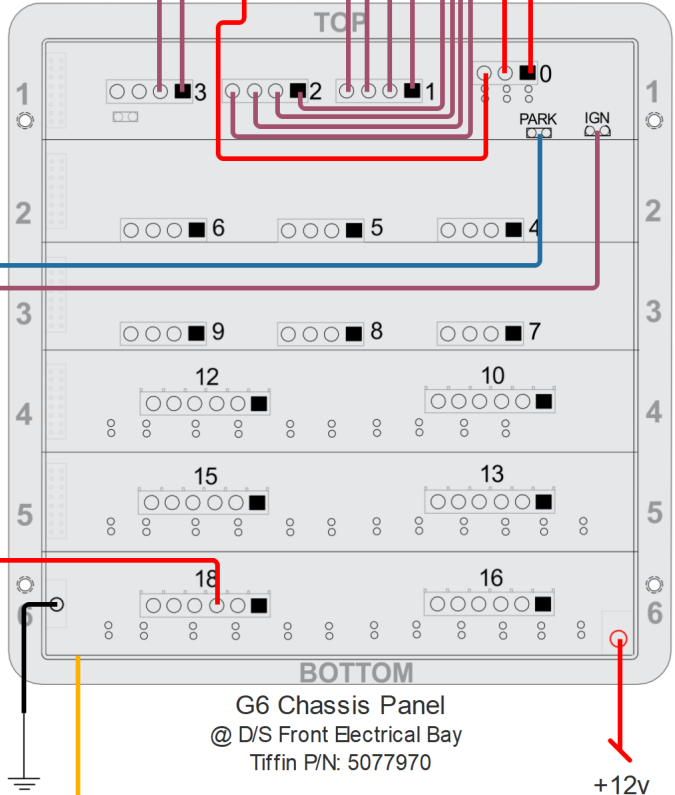


Ignition Switch

+12v

P/S Front Slide Switch

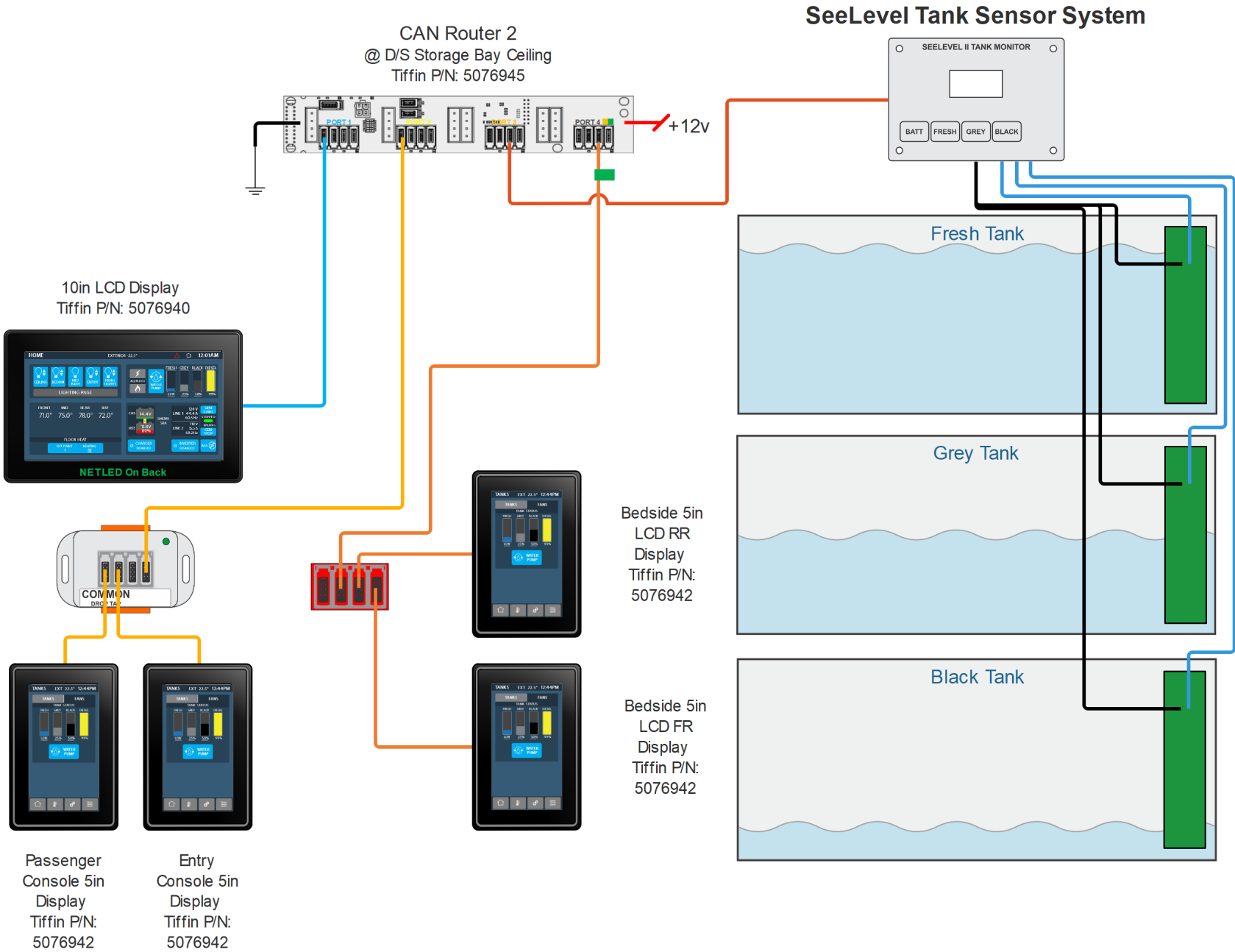
D/S Front Slide Switch



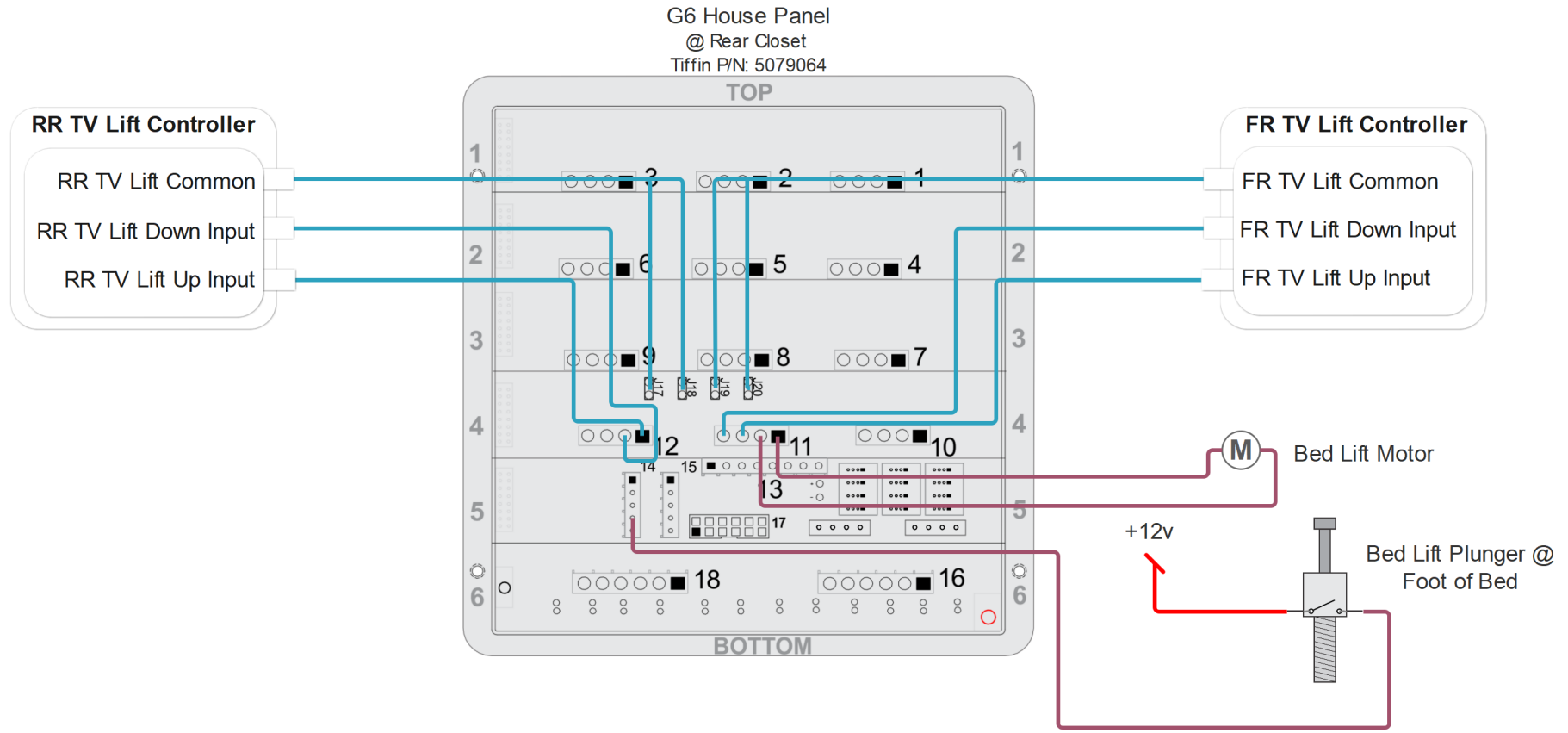
G6 Chassis Panel
 @ D/S Front Electrical Bay
 Tiffin P/N: 5077970

+12v

2019 Tiffin Bus Tank Level System (Components not to scale)



2019 Tiffin Bus Bed Lift & TV Lift System (Components not to scale)



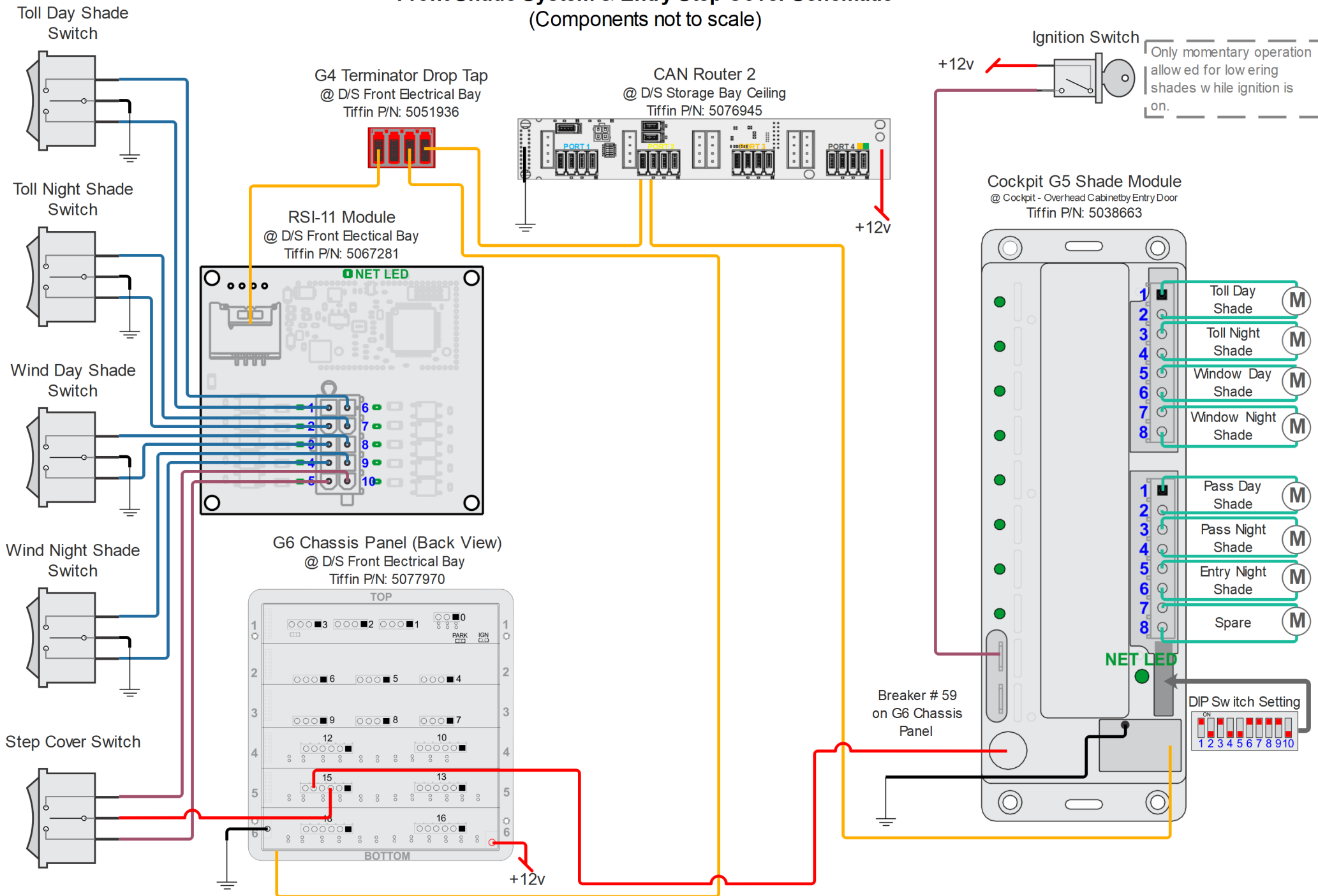
Normal operation of any TV lift will be as follows:

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

Bed Lift Plunger Function

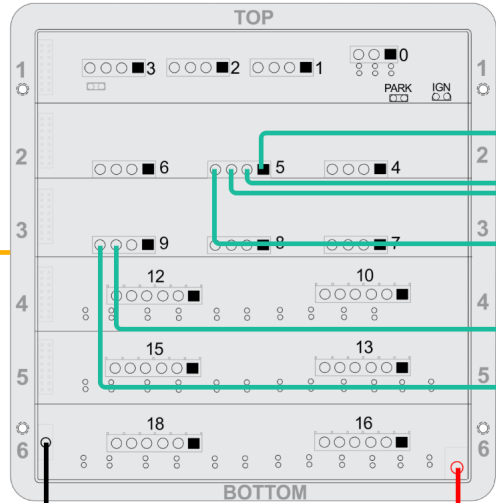
When depressed the bed lift plunger will provide 12V+ to Connector 14 Pin 4 on the RSI-9, allowing the slides to run. If this pin is not depressed and no 12V+ signal is being received at the RSI-9 input, the slides will not run.

2019 Tiffin Bus Front Shade System & Entry Step Cover Schematic (Components not to scale)



2019 Tiffin Bus House Shade System Schematic (Components not to scale)

G6 Chassis Panel (Back View)
@ D/S Front Electrical Bay
Tiffin P/N: 5077970



- 2 (M) Sofa Day Shade
- 3 (M) Sofa Night Shade
- 5 (M) Gly Night Shade

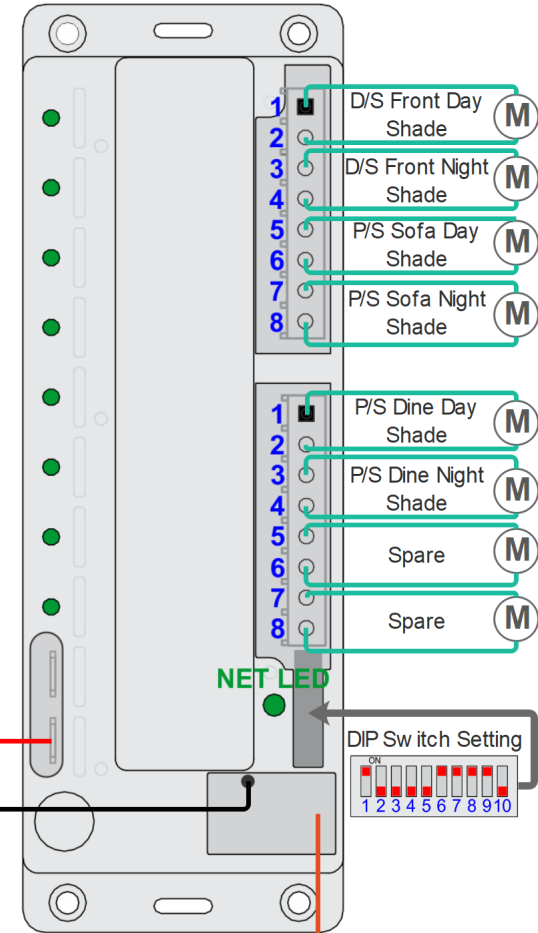
G4 Terminator Drop Tap
@ D/S Front Electrical Bay
Tiffin P/N: 5051936



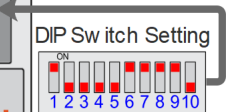
CAN Router 2
@ D/S Storage Bay Ceiling
Tiffin P/N: 5076945



Main G5 Shade Module
@ Slide opposite galley - Overhead Cabinet
Tiffin P/N: 5038663



- 1 (M) D/S Front Day Shade
- 2 (M) D/S Front Night Shade
- 3 (M) P/S Sofa Day Shade
- 4 (M) P/S Sofa Night Shade
- 1 (M) P/S Dine Day Shade
- 2 (M) P/S Dine Night Shade
- 3 (M) Spare
- 4 (M) Spare



G4 Terminator Drop Tap
Tiffin P/N: 5051936



2018-2019 Allegro Bus / Phaeton / Zephyr Battery Merge Logic

Case 1 – CHASSIS CHARGING HOUSE batteries

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

- Ignition signal present for 30 seconds; AND
- Chassis voltage is above 13.3V (charging)

The merge solenoid will dis-engage if under the following conditions:

- Generator starts – unmerge and lockout all merge functionality until the generator running signal is removed (or until the ignition signal is removed); OR
- Ignition signal is removed; OR
- Chassis voltage drops below 12.6V for more than 30 seconds, unmerge until the ignition signal is cycled

Case 2 – HOUSE CHARGING CHASSIS batteries

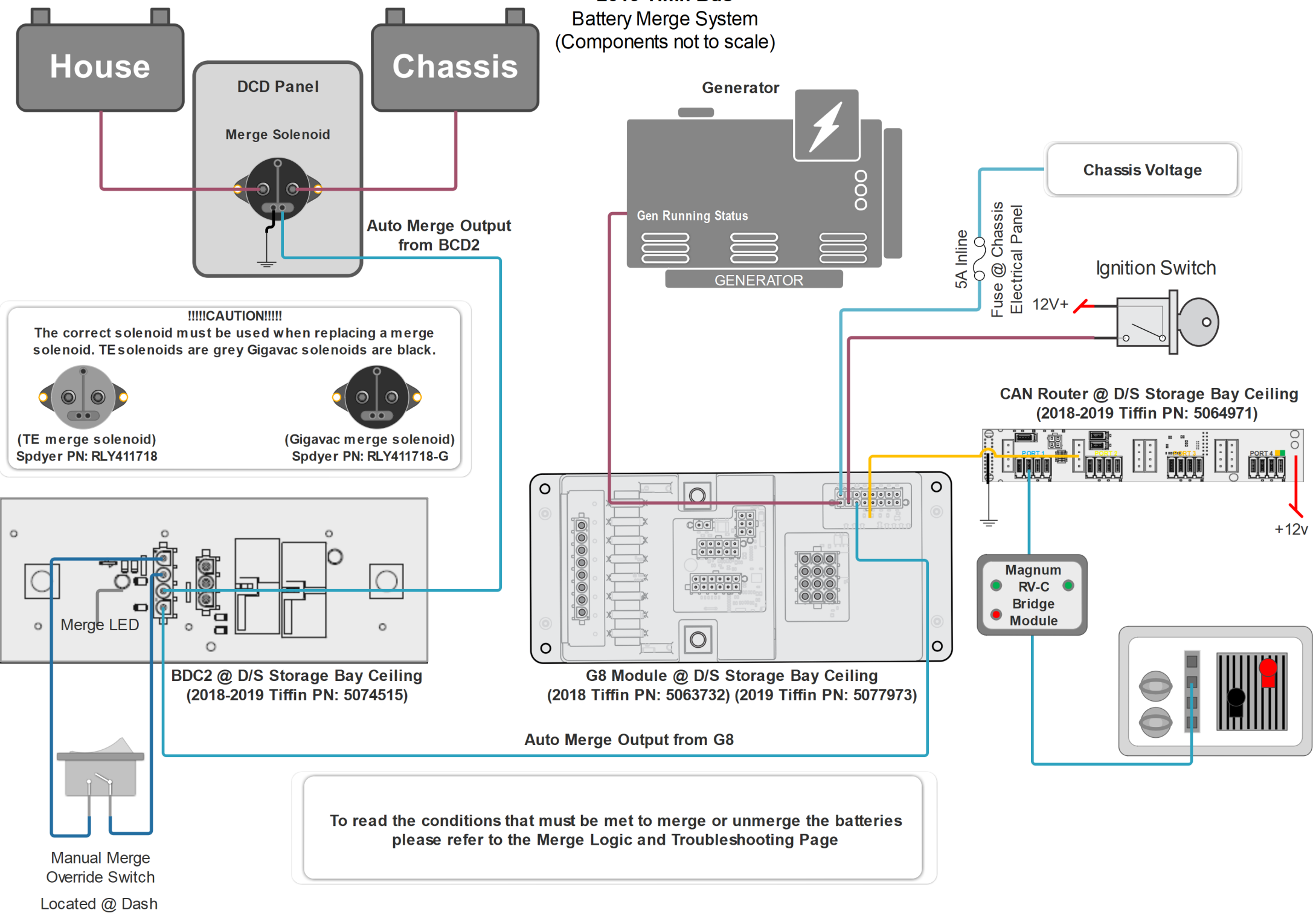
The merge solenoid will engage if the following conditions are present:

- House voltage is above 12.5V (charging); AND
- Chassis voltage is below 12.4V (low battery voltage) for 30 seconds AND
- **The Magnum Charger is charging**

The merge solenoid will dis-engage if under the following conditions:

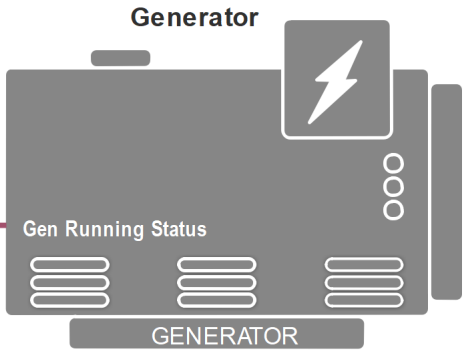
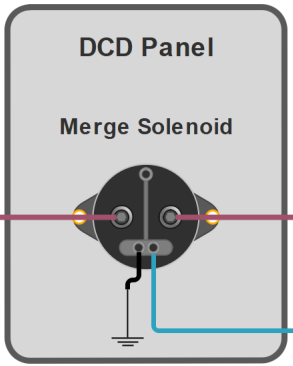
- House voltage drops below 12.2V for more than 30 seconds; OR
- 60 minutes timed battery merge period expires – re-merge will occur again if the merge conditions are still present
- **The Magnum Charger stops charging**

2019 Tiffin Bus
Battery Merge System
 (Components not to scale)



House

Chassis



Chassis Voltage


5A Inline Fuse @ Chassis Electrical Panel

Ignition Switch


12V+

!!!!CAUTION!!!!

The correct solenoid must be used when replacing a merge solenoid. TE solenoids are grey Gigavac solenoids are black.

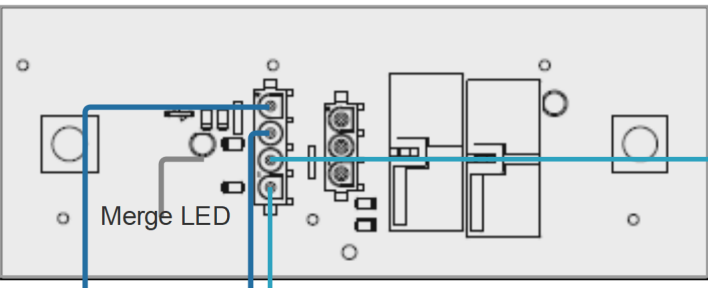
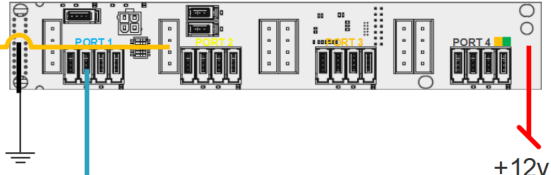


(TE merge solenoid)
Spdyer PN: RLY411718

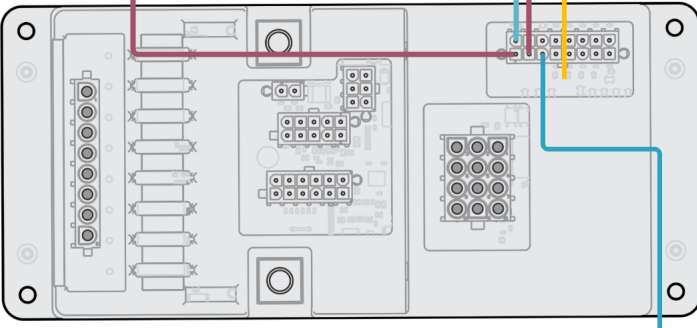


(Gigavac merge solenoid)
Spdyer PN: RLY411718-G

CAN Router @ D/S Storage Bay Ceiling
 (2018-2019 Tiffin PN: 5064971)



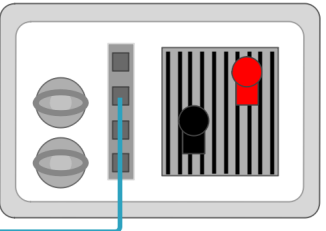
BDC2 @ D/S Storage Bay Ceiling
 (2018-2019 Tiffin PN: 5074515)



G8 Module @ D/S Storage Bay Ceiling
 (2018 Tiffin PN: 5063732) (2019 Tiffin PN: 5077973)

Auto Merge Output from G8

Magnum RV-C Bridge Module



To read the conditions that must be met to merge or unmerge the batteries please refer to the Merge Logic and Troubleshooting Page

Manual Merge Override Switch
 Located @ Dash

Auto Merge Troubleshooting

Check the battery readings on your LCD panel.

NO

Using the Merge Logic provided on the previous page, put the system in a merge condition. Does a yellow line appear between the House and Chassis batteries indicating a merge?

YES

Does the G8 emit 12V+ from J10 Pin 3?

NO

Call Spyder Controls

YES

Is 12V+ present at the BDC2 J2 Pin 4?

NO

Inspect the wiring between the G8 and BDC2

YES

Is 12V+ being emitted from the BDC2 J2 Pin 3?

NO

Replace the BDC2

YES

Check the merge solenoid. Does it have 12V+ and a good ground?

NO

Inspect and repair the wiring as necessary.

YES

Replace the merge solenoid.

Dashes are being shown on both house and chassis voltage.

Check the network cable at the G8 module. Is it plugged in at both ends and free from damage?

NO

Insure the cable is plugged in securely at both ends. If any wiring issues are present repair as necessary.

YES

Call Spyder Controls

The house or the chassis voltage is reading inaccurately. E.g. 6V+ or 24V+

Replace the G8

The house voltage is accurate but the chassis is reading 0V+

Check the wiring harness pin that connects to G8 J10 Pin 9. Does the voltage being emitted from the pin match the voltage at the chassis batteries?

NO

Check the wiring and 5 A inline fuse

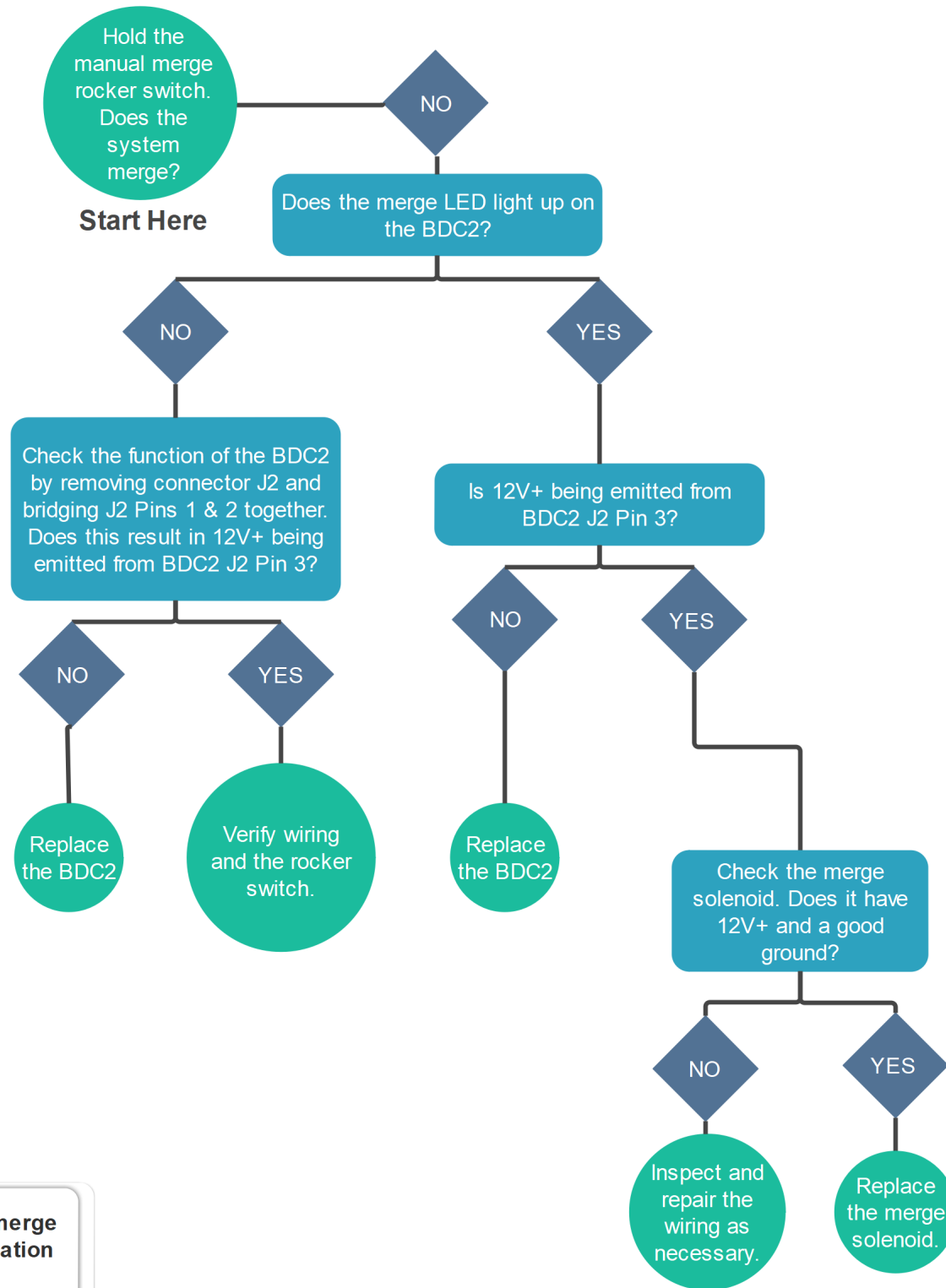
YES

Replace the G8

The information above only covers the auto merge system. Please see the next page for information on manual merge & the manual merge rocker switch

Start Here

Manual Merge Troubleshooting



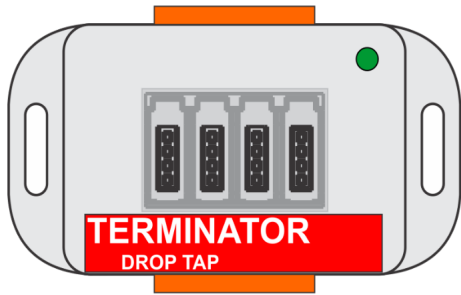
The information above only covers the manual merge system. Please see the previous page for information on auto merge system.

2019 Tiffin Bus

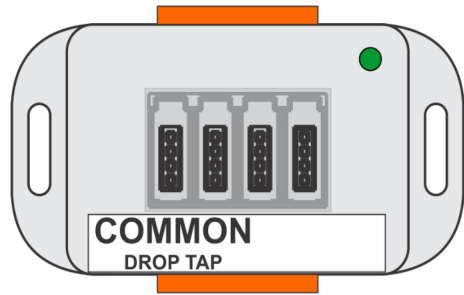
Network Connectors and Related Parts

(Components not to scale)

G3 Terminator Tap
Tiffin P/N: 5051935



G3 Common Tap
Tiffin P/N: 5027834



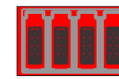
G4 Common Drop Tap
Tiffin P/N: 5016592



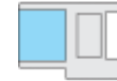
Mini-Clamp Plug
Tiffin P/N: 5066157
3M P/N: 37104-2165-000 FL 100



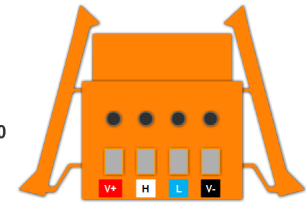
G4 Terminator Drop Tap
Tiffin P/N: 5051936



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



4 Pos Wago Connector
Tiffin P/N: 5015508



Wago Hook Tool
Wago P/N: 231-131

