

- A Liftgate Battery +
- B Interior light control
- C DP & 7-way
- D Liftgate Battery
- E Exterior switch for interior lights
- F Input to converter
- G 7-way +
- H Ignition
- I Dual Pole +
- J Positive to interior lights
- K Interior light fuse
- L Telematics
- M Ground
- N Reeper
- O Ignition to converter
- P 2 amp fuse
- Q Liftgate Battery +
- R liftgate Battery
- S Input to converter
- T Output to Battery +
- U Interior light power (can be DP, reeper, or 7-way)
- V DP or reeper to controller

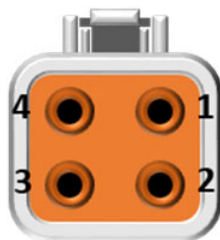
Operation:

The Direct controller watches for voltage from the reefer or 7-way to turn the DC/DC converter on to charge the liftgate batteries. When it sees 13.2 volts continuously for 5 minutes, the controller turns the converter on. If it sees 13.8 volts, the converter is turned on immediately. The controller passes the source voltage to the input (pin 1) of the converter and sends a signal to ignition pin (pin 4) of the converter. This signal needs to be 10.0 volts or higher.

When the source voltage drops below 13.8 volts, the Direct goes into the extend mode. Every 2 minutes, the Direct looks at the source voltage; if above 12.4 volts, it remains on. The extend function lasts 1 hour unless source voltage drops below 12.4 volts, then the Direct removes the signal to the converter immediately. The Direct will look at the next available source, if any. The order of source preference is the dual pole, reefer (if available), then aux.

The power source for the interior lights can be dual pole, reefer, aux or liftgate batteries. The source is connected at (U) ground and (U) positive.

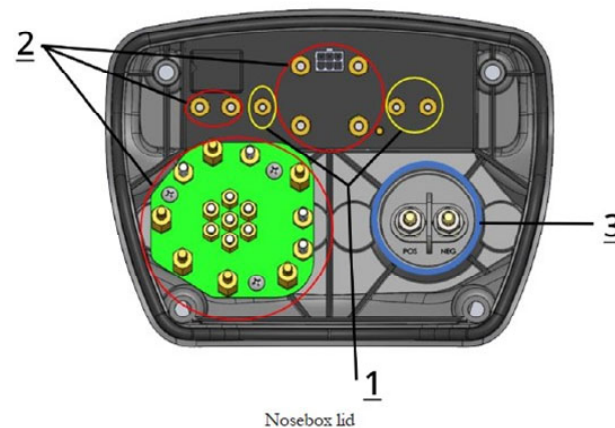
- 1: Input
- 2: Output
- 3: Ground
- 4: Ignition



Note: Ignition acts like on/off switch

Installation tips:

1. Before starting installation, remove the positive cable from the battery or pull the 2 amp fuse out of the fuse holder on the charging plate.
2. If available, solder the ring terminals after crimping and before applying heat shrink to assure a solid connection.
3. Be sure all connections in the controller are tight before closing it up.
4. Be sure all connections are tight on batteries and charging plate before hooking the positive cable back up or installing the 2 amp fuse.
5. When running the 4-conductor cable main harness in the channel toward the back of the trailer, secure it with zip ties or cable clamps as you go and avoid sharp edges and possible chaffing points.
6. Make sure the 4-conductor main harness enters the liftgate battery box through a dome nut or rubber grommet to prevent chaffing the harness, which could result in a possible short in the system.



Preventative Maintenance Torque Check

Purkeys would like to suggest that on all preventative maintenance checks or repairs to a Direct Plus, Flex or Max, all threaded stud junctions be checked for proper tightness, as the nuts may loosen over time. To reduce this chance of loose fasteners, Purkeys has changed the design to incorporate Nyloc nuts in future products.

Call-out	Size	Recommended Torque
1 (circled in yellow)	8/32	36 inch-lbs
2 (circled in red)	10/32	48 inch-lbs
3 (circled in blue)	1/4-20	60 inch-lbs

