

## March 19, 2019 ODMR dimmer update

additions made # 10, 11

Over the past year, we have seen excellent dimmer sales and have learned a few things that will benefit your service staff. Please read and also give to your installers. Should we be asked to troubleshoot a field installation we look for your service person to be a part of this phone call. This allows us both to gain knowledge and have future expertise diagnosing any issues. When we trouble shoot direct with the grower - they virtually do not have the right tools nor understand how the unit was installed or how the lamps are wired. We must approach this as a together! All of the items below are very important! All have created problems and all need to be understood and followed!

### Installation and Guidelines for Overdrive dimmers (these are not listed in any particular order):

1. **Most important that a dedicated neutral is used.** The neutral should always be from the power panel direct and not be tied to any neutral associated with other equipment.
2. Never short-circuit Channel 1 and Channel 2 output terminals.
3. **Check voltage between neutral and ground and if any positive reading correct before using dimmer.** Good neutral is very critical for the proper functioning of the dimmer.
4. Power the lights and dimmer on the same 120 V phase of the breaker panel.
5. **Ensure that a proper ground is made and that the ground terminal is tied to this earth ground.**
6. **Spare fuses are supplied with each dimmer.** Good idea to tape the spares to the dimmer. Typical 6 amp used for the 5 amp dimmer and 11 amp fuse for the 10 amp dimmer model. We have found many dimmers that are not working simply need the fuse replaced. There is a fuse for each channel.
7. **The dimmers are sized for their load capability. Go to [www.aglights.com](http://www.aglights.com) for number of output loads to be used. We have seen in many poultry applications, where input supply voltages vary – this can have a large impact on the performance of the dimmer and lamp combination.**
8. **LED's are changing quickly – it is always best to stay with 1 brand/wattage of bulbs in each poultry house and on each channel. There is a difference between Omni LED's and the Overdrive directional beam angled models and these different bulbs have different inrush currents and affect the operation of the dimmer, if lamps are mixed on the line. Keep in mind Overdrive directional 6/10/15 watt bulbs are all 5 year warranty and wet location – IP66 rated lamps.** If the Overdrive dimmer is used to control another brand of LED's, unless we have lab or field tested we cannot be certain how the dimmer/lamp combination will operate. All of these LED's have different electronics, different dimming capabilities, different starting thresholds, in-rush currents etc. There are times when it is not neither the lamp nor the dimmer but that the two are not electrically compatible.
9. If an over-current message appears on the display, first check the fuses, make sure the # of LED lamps being controlled are within the limits. In a small number of applications – this message is possibly caused by an initial surge of inrush current from ramping up when the dimmer is powered up. This also may occur if the input system voltage is high at that time. Under such situations, please reduce the load on the dimmer. Reducing the load has solved several of the issues but fully removing power from the dimmer (at the breaker) may be required to effectively clear the error message.
10. Another issue is shorted keyless sockets, sockets with pinched wires, corroded terminals, etc. can lead to blown fuses on the Overdrive dimmers. **If houses are updated with LED's – nickel plated brass screw-shell should be a part of the update.**
11. Overdrive dimmers running in slave mode via a 0-10 volt controller – we have seen with certain controllers where reversing the wires (polarity) allows our dimmer to operate properly (when the dimmer would not operate via the controller prior to reversing the wires).

**Would be a good practice to give a copy of this to ALL installers and electricians and growers.**