ECOSENSE®

TROV – TROUBLE SHOOTING GUIDE

A comprehensive trouble shooting guide for TROV

This guide is designed to help you easily and quickly troubleshoot come common issues in the field.

For these issues that are not resolved with the trouble shooting action, simply fill in the form on the last page and submit to technicalsupport@ecosenselighting.com or call Customer Service at 855-632-6736.

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MECHANICAL

ISSUE ENCOUNTERED	WHAT TO CHECK
Fixture doesn't stay at angle/aiming	Is large vibration or some other force, other than gravity, causing the aiming angle to change? IF YES: Proceed to next question. IF NOT: Escalate to technicalsupport@ecosenselighting.com. Can the Angle Lock Clip accessory be used to lock the aiming angle? (This accessory only locks aiming in one direction, please see spec sheet for details.) IF YES: Install angle lock accessory as per Installation Guide. If angle lock is already installed, and having this issue, escalate to technicalsupport@ecosenselighting.com. IF NOT: We do not have a solution to prevent the fixture from adjusting in the open direction. Contact technicalsupport@ecosenselighting.com for more information.
Mounting screws are not working	Are you using two #10 Flat Head screws per fixture? IF YES: Escalate to technicalsupport@ecosenselighting.com. IF NOT: Refer to Installation guide.
FAB adjustment screw is stripped out and is no longer adjusting	Does the fixture change its aiming angle when the adjustment screw is turned in either direction? IF YES: The adjustment screw is functioning properly. IF NOT: The nut that the screw is threaded into is stripped out. Ask Inside Sales for a fix it kit, which includes a new nut and installation instructions on how to replace it.
Fixture cable lengths are inconsistent	Are the cable lengths on the fixture connectors different from fixture to fixture and causing installation issues? IF YES: Escalate to technicalsupport@ecosenselighting.com IF NOT: Nothing needs to be done.

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LDCM

ISSUE ENCOUNTERED	WHAT TO CHECK
Fixtures aren't working at all with LDCM	Did you wire the input power to the output of the dimmer? IF YES: The LDCM is damaged and needs to be replaced, contact technicalsupport@ecosenselighting.com. IF NOT: Proceed to the next step. Try disconnecting the 0-10V control wires from the dimming system and see if the fixture comes on. IF ON: The dimming system is turning the LDCM off. Please consult dimmer manufacturer installation guide. IF OFF: Test the fixture on a non-dimmed circuit by bypassing the LDCM and connecting the fixture directly to the input of the LDCM. Proceed to the next question. Does the fixture work without the LDCM? IF YES: The LDCM is defective and needs to be replaced. Escalate to technicalsupport@ecosenselighting.com. IF NOT: Please see Fixture Won't Turn On in the Electrical section.
Fixtures come on, but aren't dimming with LDCM	Is the fixture you are connecting to the LDCM ELV dimmable? IF YES: Proceed to the next question. IF NOT: LDCM will not work with non-ELV dimmed fixtures. Does the input voltage going into the LDCM match the required voltage of the fixture? IF YES: Proceed to the next question. IF NOT: Rewire so the input voltage to the LDCM matches the voltage of the fixture. Are the positive and negative 0-10V wires on the LDCM connected to the corresponding positive and negative terminals on the Dimmer? IF YES: And if the fixture still doesn't dim, escalate to technicalsupport@ecosenselighting.com. IF NOT: Rewire the 0-10V wires so the positive goes to positive and negative goes to negative. If this did not resolve the problem escalate to technicalsupport@ecosenselighting.com.
Fixtures come on, but they flicker or strobe	Are the output neutral and hot (grey and red wires labeled "output") going directly to the fixtures and nothing else? Neutral sharing will not work with the LDCM. IF YES: Then rewire the circuit. If the fixtures continue to flicker proceed to the next question. IF NOT: Proceed to the next question. Has the maximum wattage of the LDCM been exceeded? Maximum wattage is 450W at 120V and 1000W at 277V. IF YES: Reduce the load on the circuit and retest. If it still flickers it was likely damged from the over loading and will need to be replaced. Please contact your local distributor to order a replacement. IF NOT: Escalate to technicalsupport@ecosenselighting.com

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DIMMER

ISSUE ENCOUNTERED	WHAT TO CHECK
Fixtures will not turn on at the lowest dimming setting *Also known as Pop-On*	Is the start up level of the dimmer set slightly higher than the lowest dim level? **IF YES:** And if the dimmer has to be set very high before the fixture turns on, escalate to technicalsupport@ecosenselighting.com. **IF NOT:** Program the dimmer so the start up level is slightly higher than the lowest dim level. If the dimmer does not have this feature set the lowest end trim to the start up level. If the dimmer doesn't have any trim features the dimmer will have to be manually adjusted higher to get the fixtures to turn on, then it can be adjusted to the lower dim setting. The Pop-on Effect results when the LED fixture does not turn on at its very lowest light level and the dimming level must be increased in order for the light to turn on. The voltage at which the light source begins operation is higher than the voltage of the dimmer's lowest setting, so therefore when the right level is reached the fixture "pops-on". This occurrence happens regardless of the dimmer loading. It is common practice in the industry to set the trim on the low levels of the dimmer in order to prevent instabilities. Low end trim could be set high enough to guarantee no pop on behavior.
Fixture turns off at the lower travel level of the dimmer before reaching the bottom *Also known as Drop-Out*	Does the dimmer have a trim feature? **IF YES:** Set the low end trim of the dimmer to the lowest dimming level of the fixture before it turns off. If you are having trouble trimming the low end of the dimmer, please contact the dimmer manufacturer for help. **IF NOT:** We recommend using a dimmer with low end trim. It is the only way to prevent drop-out. Drop out occurs where the light turns off (or "drops out") as you decrease the dimming level, although you have not reached the bottom of the dimmer. This causes some dead travel at the low end of the dimmer. This is common due to the fact that different dimmer models have different values for their lowest, low end voltage.
Multiple fixtures turn on at different times *Also known as Popcorn Effect*	Are all the fixtures in question the same power level? **IF YES:** Bypass the dimmer then proceed to the next question. **IF NOT:** Having multiple power levels on one dimmer may result in some inconsistent startup times. Did this fix the issue? **IF YES:** Contact dimmer manufacturer for further assistance. **IF NOT:** Escalate to technicalsupport@ecosenselighting.com.

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DIMMER (CONT.)

ISSUE ENCOUNTERED	WHAT TO CHECK
Fixture does not dim up or down over a portion or the dimming range *Also known as Dead Travel*	Is the dimmer a reverse phase dimmer, also known as ELV or trailing edge? **IF YES:** Proceed to the next question. **IF NOT:** Replace it with a reverse phase dimmer. TROV will only dim on a reverse phase dimmer. Is the dimmer on the dimmer compatible chart? **IF YES:** Proceed to the next question. **IF NOT:** Replace the dimmer with one on the chart. If you would still prefer to use the dimmer installed escalate to technicalsupport@ecosenselighting.com. Is the dimmer wired correctly? **IF YES:** Swap the fixture out with a different one. Proceed to the next question. **IF NOT:** Then correctly wire the dimmer. Did this fix the issue? **IF YES:** The original fixture is defective and needs to be replaced. Escalate to technicalsupport@ecosenselighting.com. **IF NOT:** Escalate to technicalsupport@ecosenselighting.com.
Fixtures will not dim with DALI or DMX	Is this installation in North America? **IF YES:** TROV cannot dim directly with DALI or DMX. There currently are not any dimming modules that will convert DALI or DMX to ELV that work with TROV. **IF NOT:** Proceed to the next question. Can a module be used to convert DALI or DMX to ELV? **IF YES:** See dimmer compatibility chart for DALI and DMX modules that work with TROV. **IF NOT:** TROV cannot dim directly with DALI or DMX.

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DIMMER (CONT.)

ISSUE ENCOUNTERED	WHAT TO CHECK	
Light is flickering	Is the dimmer a reverse phase dimmer, also known as ELV or trailing edge?	
	IF YES	IF NOT
	Proceed to the next question.	Replace it with a reverse phase dimmer. TROV will only dim on a reverse phase dimmer.
	Is the dimmer on the dimmer compatible chart?	
	IF YES	IF NOT
	Proceed to the next question.	Replace the dimmer with one on the chart. If you would still prefer to use the dimmer installed escalate to technicalsupport@ecosenselighting.com.
	Is the dimmer wired correctly?	
	IF YES	IF NOT
	Proceed to the next question.	Then correctly wire the dimmer.
	Has the minimum load of the dimmer met?	
	IF YES	IF NOT
	Proceed to the next question.	Add more load to the dimmer. This can be done with a phantom load module.
	Has the maximum load of the dimmer been exceeded?	
	IF YES	IF NOT
	Reconfigure the runs so the maximum load is not exceeded.	Escalate to technicalsupport@ecosenselighting.com.

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DIMMER (CONT.)

ISSUE ENCOUNTERED	WHAT TO CHECK
Fixture is not dimming to the published low end dimming level	Is the dimmer a reverse phase dimmer, also known as ELV or trailing edge? IF YES: Proceed to the next question. IF NOT: Replace it with a reverse phase dimmer. TROV will only dim on a reverse phase dimmer.
	Is the dimmer on the dimmer compatible chart? IF YES: Proceed to the next question. IF NOT: Replace the dimmer with one on the chart. If you would still prefer to use the dimmer installed escalate to technicalsupport@ecosenselighting.com.
	Is the dimmer wired correctly? IF YES: Proceed to the next question. IF NOT: Then correctly wire the dimmer.
	Has the minimum load of the dimmer met? IF YES: Proceed to the next question. IF NOT: Add more load to the dimmer. This can be done with a phantom load module.
	Are you determining the low end range based on information from the dimmer? IF YES: The information given by the dimmer on dimming range, typically a percentage, is based on voltage and not light output. This is not how low end dimming range is determined. IF NOT: Proceed to the next question.
	Are you using an illuminance meter to determine the maximum and minimum light levels? IF YES: And if you are still not able to achieve the published low end dimming level escalate to technicalsupport@ecosenselighting.com. IF NOT: Use an illuminance meter to measure the illuminance at 100% and at the lowest level before the fixture turns off. Then divide the minimum value by the 100% value to determine the low end dimming level. Proceed to the next question.
	Do these results match the published levels? IF YES: Nothing needs to be done. IF NOT: Escalate to technicalsupport@ecosenselighting.com.

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ELECTRICAL

ISSUE ENCOUNTERED	WHAT TO CHECK
Fixture won't turn on	If there is more than one fixture in the run, are the other fixtures working? If there is only one fixture or they are all not working, then proceed to next question. **IF YES:** Then this fixture is defective, escalate to technicalsupport@ecosenselighting.com. **IF NOT:** Proceed to the next question. Is the leader cable wired correctly to the mains voltage? **IF YES:** Use a volt meter connected to the two metal pins of the connector. Then check the voltage. Proceed to the next question. **IF NOT:** Then connect power to the leader cable as per installation sheet. Are you seeing the correct voltage? **IF YES:** Proceed to the next question. **IF NOT:** Check the circuit breaker and all wire connections on the site to find the disconnected power source. Is the connector on the leader cable firmly connected to the connector on the fixture? **IF YES:** Escalate to technicalsupport@ecosenselighting.com. **IF NOT:** Firmly connect the connector from the leader cable to the fixture. If this did not fix the issue, escalate to technicalsupport@ecosenselighting.com.
Leader cable doesn't have a ground	TROV is designed without the need for a ground wire. The driver is double insulated which ensures none of the electrical components will come in contact with the metal parts of the fixture. For further explanation please see TROV 101 document or contact technicalsupport@ecosenselighting.com

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LIGHT QUALITY

ISSUE ENCOUNTERED	WHAT TO CHECK
Light distribution is inconsistent/non-uniform	Is there visible damage to the fixture or debris blocking the fixture? IF YES: The optics and/or LEDs could have become damaged, escalate to technicalsupport@ecosenselighting.com. IF NOT: Proceed to the next question. Is there any rattling if the unit is gently vibrated? IF YES: The optics and/or LEDs could have become damaged, escalate to technicalsupport@ecosenselighting.com. IF NOT: Proceed to the next question. Are you seeing the same thing across all fixtures? IF YES: The optics and/or LEDs could have become damaged, escalate to technicalsupport@ecosenselighting.com. IF NOT: Proceed to the next question. Are the fixtures installed in a straight line and on a level surface? IF YES: Proceed to the next question. IF NOT: Then reinstall fixtures so they are. Are all the units the same beam angle? IF YES: Escalate to technicalsupport@ecosenselighting.com. IF NOT: Different beam angles used in the same run will look inconsistent. Reconfigure the run so all the beam angles are the same.
Color does not match expectaions	Is the reflective surface painted white? IF YES: Proceed to the next question. IF NOT: Then paint the surface white to match the light output color. Any other color will distort the color of the light. Are the other fixtures in the space the same CCT and CRI? IF YES: Use a spectrometer to measure the CCT, CRI, and duv. For accurate measurements it is best to measure light at least 6" from the fixture. Point spectrometer directly at the light. Proceed to the next question. IF NOT: Then different CCT and CRI fixtures will look different. Do these metrics match for all fixtures? IF YES: Escalate to technicalsupport@ecosenselighting.com. IF NOT: TROV uses a single 2-step MacAdam ellipse bin which is very tight and consistent. Other manufacturers use wider bins and may not match TROV.

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LIGHT QUALITY (CONT.)

ISSUE ENCOUNTERED	WHAT TO CHECK	IF YES	IF NOT
Light intensity is inconsistent/non-uniform	Is there visible damage to the fixture or debris blocking the fixture?	The optics and/or LEDs could have become damaged, escalate to technicalsupport@ecosenselighting.com.	Proceed to the next question.
	Is there any rattling if the unit is gently vibrated?	The optics and/or LEDs could have become damaged, escalate to technicalsupport@ecosenselighting.com.	Proceed to the next question.
	Are the fixtures the same power level?	Proceed to the next question.	Then reconfigure runs so they are all the same power level fixtures.
	Are they all the same CCT and CRI?	Then some of the units might be defective, escalate to technicalsupport@ecosenselighting.com.	Different CCT and CRI fixtures will have different lumen outputs. Reconfigure runs so they all match.
Color doesn't match from unit to unit	Is there visible damage to the fixture or debris blocking the fixture?	The optics and/or LEDs could have become damaged, escalate to technicalsupport@ecosenselighting.com.	Proceed to the next question.
	Is there any rattling if the unit is gently vibrated?	The optics and/or LEDs could have become damaged, escalate to technicalsupport@ecosenselighting.com.	Proceed to the next question.
	Does the fixture label have the same CCT for all the fixtures in the run?	Proceed to the next question.	Reconfigure the run so the CCTs are all the same.
	Does the CCT of the fixture match the label?	Escalate to technicalsupport@ecosenselighting.com.	The fixture is defective, escalate to technicalsupport@ecosenselighting.com.

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TECH SUPPORT FORM

For technical assistance, please fill out this form and email it to technicalsupport@ecosenselighting.com.
To further address the issue you have encountered, please provide pictures and/or video.

Today's Date:	
Customer Name:	
QTY of Fixtures Total:	
QTY of Fixtures Affected:	
Application for Use: (Bridge, Indoor, Cove, Graze)	
Dimmer Type:	
Dimmer Model:	
Number of Units per Circuit:	

Serial Numbers:	SKUs:

SUBMIT FORM

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