Troubleshooting Guidelines for VS Electronic HID Ballasts

Problem	Check	Corrective Action
Lamps do not start and known "good" replacement lamp does not start when installed	1. Due to the "safety" ballast shutdown feature; the ballast output may be turned off.	1. Reset power to see if "good" lamps come on. Note, lamps that were previously lit may need to cool down before they relight.
	2. Check lamp type; must be the proper wattage and should be the ceramic metal halide type or a "compatible" quartz type.	2. Replace with approved ceramic type lamps or consult with lamp manufacturer & VS to see if lamp is a compatible "quartz" type.
	3. Check if actual input voltage matches the rated voltage on the ballast label.	3. Correct voltage problem first. If 277V is applied to a 120v ballast or 480V (277V 3-phase leg to leg) is applied to a 277V ballast the ballast's internal fuse will blow and the ballast must be replaced.
	4. With power turned off to the fixture, measure resistance from both lampholder contacts to "ground". Both of the measurements should be "open" or have very high meg-ohm readings. If a "short" or low ohms are measured, the fixture or lampholder wiring is defective.	4. The "short-to-ground" in the fixture must eliminated before a new ballast can be installed. Loose wirenuts, incorrect lamp connections to neutral, frayed strands of conductors; cut or nicked lead insulation, pinched leads under BX fittings or under lampholders should all be examined for the shorting cause. The ballast is not warranted for a lamp lead to ground short.
Random starting pattern	Lamps that start today and not the next day and vice versa are typically caused by end-of -life lamps, non-compatible lamps or improper output lead cable usage	Consult with lamp company or & VS to see if lamp is a compatible type. In remote applications; service type power cords (SV,SJ, etc) or metal clad cables are not acceptable as they load down the ignition voltage; thereby causing starting issues. Replace output power cable with individual leads per VS Guidelines & local codes.
New lamps operate with bluish hue	Lamps will operate with a "cooler" color temperature when driven with significantly lower wattage than rated. Eg. a 70W lamp on a 39W ballast will be driven at only 40W which will make the lamp appear bluish or greenish vs.the normal warm 3000K color.	Check the ballast label to see if it is the correct ballast for the lamps and vice versa. Check to see if the proper voltage ballast is being used. Replace with proper ballast.
Lamp initially starts, but the lamp shuts off after approx. 30 minutes	1. The ballast shutdown feature will turn off the output if lamp is running in abnormal "end of life" condition such as rectifying, high lamp voltage or low lamp voltage.	1. Replace the old MH lamp with new one. RESET POWER TO THE FIXTURE.
	2. Check to see if an Incandescent (halogen) lamp has been mistakenly used. When halogen PAR type lamps are also used in same space, they can be easily mistaken for HID PAR lamps.	2. Replace the Incandescent lamps with the proper HID lamps immediately as they could damage or fail the ballast.
Lamp initially starts, but the lamp will cycle on & off	1. Check if input voltage to the fixture or track is proper and consistent with the ballast rating.	1. If voltage is improper, correct the voltage problem or replace the ballast with an input voltage rating to match actual power supply voltage.
	2. Check if fixture is located in a higher than normal temperature area (near heating ducts, etc.) Typically, a 2-4 hour cycle.	2. Move the fixture to a cooler location or redirect the hot air.
	3. If this is a downlight fixture; check the fixture "thermal protector" is the proper rating. Typically a 2–3 minute cycle.	3. Note: -Proper TP: 120V fixture: RP-1B or RP-5A; 277V fixture: RP-4A-; if ballast is "JT" style then a 277V fixture could use an RP-5A TP.
	4. If this is a downlight fixture; check to see if the fixture has an auxiliary backup lamp that is staying "lit".	4. Remove the auxiliary lamp to see if fixture runs properly. If OK, then troubleshoot the defective auxiliary sensing circuit.
	5. If this is a "non-IC" downlight fixture; check to see if "insulation" has been placed around the fixture.	5. Space the insulation away from the fixture as the insulation can cause the fixture to overheat and cause the fixture or the ballast thermal protectors to function.
	6. If this is a multi-lamp fixture with only one fixture TP; check to see if the TP is connected to only one ballast yellow lead.	6. If more than one ballast yellow leads are connected to the TP heater; the TP will overheat and cause the lamp to cycle "on & off". Rewire with only one yellow lead connected to the TP.
Lamp has noticeable flicker	1. Check to see if an Incandescent (halogen) lamp has been mistakenly used. When halogen PAR type lamps are also used in the same space, they can be easily mistaken for HID PAR lamps.	1. Replace the Incandescent lamps with the proper HID lamps immediately as they could damage or fail the ballast.
	2. If "flicker" is noticed on 277v ballasts; check if a line conditioner is being used in combination with a step-up transformer or variac to convert 120V to 277V.	2. Bypass the line conditioner and use an UN-regulated 120V power to the step-up means. The electronic HID ballasts have their own internal input regulator circuit so additional line conditioners or regulators are usually not needed.
	3. Check to see if luminaires are on a dimmer circuit; they can cause flicker in some situations.	3. Remove dimmer circuitry as VS ballasts are not warranted on such.

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