

PowerStar

Horticultural Lighting Contactor



Introduction

Most growers choose to use High Intensity Discharge lighting in their Growrooms. HID lighting is the most efficient form of lighting for horticultural use, Sodium & Metal Halide lights are most commonly used and are of the HID Variety. HID lamps cause large amounts of current to flow when they are first turned on, the amount of power required to start the lamp will be up to twice the normal running power and will increase as the lamp gets older.

Most growers use a 24 Hour timer to set the day length in their grow rooms. However most 24 Hour timers are not designed to allow high current switching and normally fail very quickly when used with HID lighting loads, due to this high power relays are normally used to pass the power to the lighting system so the timer is only used for control.

The large startup current is caused by a number of factors.

Firstly there is a very large initial inrush current drawn by the large power factor correction capacitor in the ballast unit, this is only present for a fraction of a second. Secondly a situation known as Lamp Rectification, rectification occurs when the two ends of the lamp heat up at different rates causing a DC current to flow in the lamp this DC current causes saturation of the ballast core which reduces the impedance of the ballast causing more current to flow through the lamp, this situation only lasts for a few seconds whilst the lamp is warming up and stops once lamp operating temperature is reached.

This situation will always occur but tends to get worse as the lamp gets older, for this reason it is best to over rate contactor systems by about 30% to allow for lamp degradation.

Load Recommendations

Due to the reasons stated above it can be seen that starting currents are considerably higher than running currents typically as shown in the table below.

Lamp	Start up current in amps	Running current in amps
250w Son-T +	2.3A	1.5A
400w Son-T +	3.6A	2.3A
600w Son-T +	4.5A	3.2A
1000w Son-T +	7.0A	5.0A

Setup and Use

The Ecotechnics PowerStar Contactors have been specifically designed to allow the timed switching of horticultural lighting and appliances. In use the PowerStar Contactor is very simple and should provide years of trouble free use

1. **Locate CONTACTOR in a suitable position in your growroom**
2. **Plug lights and appliances into 4-way power outlet.**
3. **Set TIMER in normal way.**
4. **Insert TIMER PLUG into a 24Hr TIMER.**
5. **Plug TIMER and POWER IN PLUG into power points and switch on.**

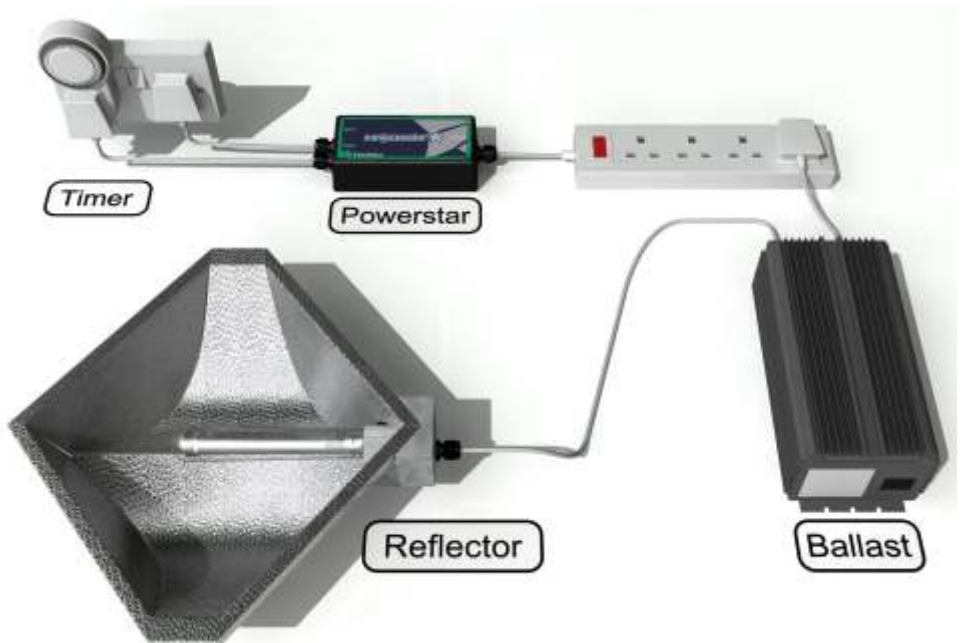
Set Up

The lights and appliances plugged into your contactor will now be controlled by the timer. Digital or Analogue timers can be used and will last their full service life.

Recommended Maximum Loads For PowerStar Contactors

	1 way 1Kw PowerStar contactor	2 way 2Kw PowerStar contactor	3 way 3Kw PowerStar contactor	4 way 3Kw PowerStar contactor
250w Son-T +	1	2	3	4
400w Son-T +	1	2	3	4
600w Son-T +	1	2	3	4
1000w Son-T +	1	2	3	3

Connection Diagram



SAFETY CONSIDERATIONS

- Always make sure the unit is unplugged before attempting to connect the fan and/or heater to the unit.
- Always check that all cables are correctly and securely connected and that the cover is securely screwed on before plugging the unit in and turning the power on.
- Always Remember that Electricity and Water is an Extremely Dangerous Combination. Electricity can be fatal especially in the presence of water.
- It is strongly recommended that any electrical equipment used in the growing environment is mounted above ground level, on a shelf or if possible wall mounted so that in the event of water spillage or flooding the two remain separate.

POWER CONSUMPTION 15 WATTS MAX
SUPPLY VOLTAGE 230-240V AC

ECOTECHNICS PRODUCT GUARANTEE

Thank you for choosing an Ecotechnics product for use in your growroom. As leading manufacturers of horticultural equipment and accessories we are committed to providing a range of innovative products to enhance your garden. Our commitment to quality is second to none, however if you do experience any problem all our products are covered with a full 1 year parts & labor guarantee and should be returned to the retailer along with the original purchase receipt .

Ecotechnics UK Ltd is not liable for labor costs involved in the installation or removal of the product, lost profits, incidental or consequential loss, injury to property or persons or any other consequential loss however caused.

Shop / Dealer

Purchase Date

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Serial Number

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