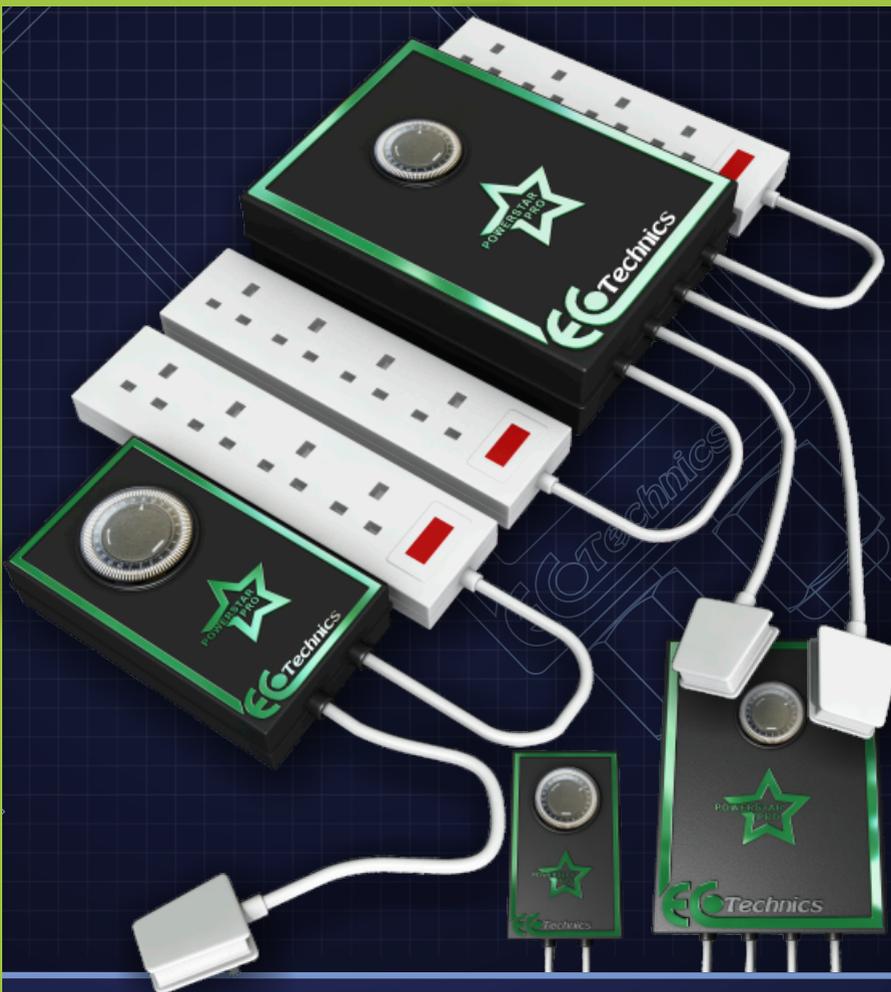


PowerStar Pro

Horticultural Lighting Contactor



Introduction

Most growers choose to use High Intensity Discharge lighting in their Growrooms. HID lighting is the most effective possible form of lighting for horticultural use, Sodium & Metal Halide lights are most commonly used and are of the HID Variety. HID lamps require large amounts of current to flow when they are first turned on, the amount of power required to start the lamp can 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 switch 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 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

Recommended Maximum Loads For PowerStar Pro Contactors

Lamp	2way 2Kw PowerStar Pro contactor	4way 3Kw PowerStar Pro contactor	6way 6Kw PowerStar Pro contactor	8way 8Kw PowerStar Pro contactor
250w Son-T +	2	4	6	8
400w Son-T +	2	4	6	8
600w Son-T +	2	4	6	8
1000w Son-T +	2	3	6	6

Setting up your Powerstar Pro

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

1. **Locate the Powerstar Pro in a suitable position.**
2. **Plug the lights into power outlets on the Powerstar Pro.**
3. **Set TIMER on the Powerstar Pro to your desired requirements.**
4. **Finally take the Powerstar Pro plugs and connect them to the mains sockets and switch on the power.**

The lights and appliances plugged in to your Powerstar Pro are controlled by the timer on the Contactor. There are 2 options for timer type, either a standard timer or a Grasslin timer.

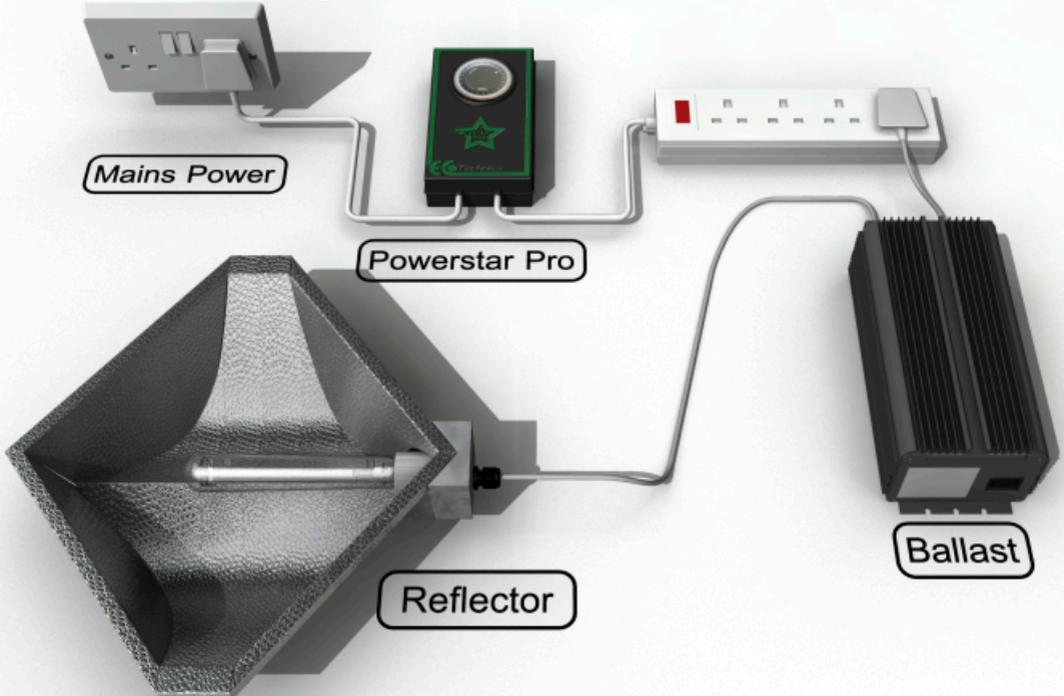
Timer Setup

The timer can be set in 15 minute intervals (4 segments = 1 Hour). To SET the OFF time gently pull up the required number of 15 Min segments with your fingernail or a screwdriver to SET the On time make sure the required number of 15 Min segments are pushed fully down.

To SET the time turn the dial **clockwise** until the arrow points at the correct time.

The lights and appliances plugged into your Powerstar Pro will now be controlled by the timer.

Connection Diagram



Please note you will find the latest revision of any of our User Guides on the Ecotechnics website located in the downloads area below:
<http://www.ecotechnics.co.uk/downloads.htm>

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 3 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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