



## Energy Avenger™ Master Product Data Sheet

### Generic Description:

The Energy Avenger™ is an Auto-Transformer Based Bi-Level Switching Energy Reduction Technology (ERT) for virtually all-magnetic ballast HID Lighting applications. It can provide energy savings of 15% to 25% while maintaining IES lighting guidelines.

### Electrical Standard:

All products are bi-level switching devices that comply with NEMA LSD-14-2010.

### Applications:

The Energy Avenger™ Lighting Control System is designed to control High Intensity Discharge (HID) lighting units at the control panel without the need for replacing or re-lamping existing infrastructure. It yields a power savings by altering the applied voltage to the lights once the HID units have been started and warmed up.

### System:

The energy savings occurs through reduction of voltage across a relatively stable resistance. Unlike a standard lighting dimmer application, where the voltage is reduced through a series-connected variable resistor, the Energy Avenger™ uses sets of contactors and a PLC to transition from standard voltage to reduce voltage by connecting the lights to a pre-defined closed transition reduced voltage tap on a multi-tap transformer. By applying a reduce voltage to the lights (voltage drop across a straight resistive element) the current is reduced. Lower voltage and current yields lower kilowatts consumed, thus can be considered an energy reduction technology.

### Miscellaneous Data:

Working Temperatures 7°C-40°C (-20°F-104°F), Storage Temperature 0°C-55°C (32°F –131°F), Cold Temperatures require NEMA 4x or 12x enclosures/heat strip.

### Key Features:

- Automated lamps start at full voltage- **UL #508**
- 1 to 600 Amp Units Available
- Compatible with other Energy Management Systems (EMS), Time Clock, Photo Cell, Manual, and Bypass Switches
- Instantaneous savings verification after 20 minute lamp warm up
- Fail Safe auto/manual full power bypass for 24/7 use
- Optional status lights and constant savings read out
- Optional Electro-Mechanical controlled switching with a USB Port for remote access
- Optional wireless “real time” data status
- Emerson Power Validation / Spectralux Industries Certified
- Creates no power factor reductions

Capacities and Voltage		
Series No.	Capacity	Voltage
301	30 amp Single Phase	120/240
303	30 amp Three Phase	120/208
304	30 amp Three Phase	277/480
601	60 amp Single Phase	120/240
603	60 amp Three Phase	120/208
604	60 amp Three Phase	277/480
1001	100 amp Single Phase	120/240
1003	100 amp Three Phase	120/208
1004	100 amp Three Phase	277/480

\*All listed products have additional sizes for specific operating requirements and design.

**Product Technical Data:** Part and Model numbers will vary for each product series based upon PLC commands and operating conditions for most applications. Deviating from model sizes recommended voids warranty of ISI Energy Controls. See individual Product Data Sheet for details regarding Input Voltage, Enclosure, Lamp Warm-Up Time, Control, Amp Rating and Transformer.



**Avenger 300 Series™**  
Net Weight 400 lbs.



**Avenger 600 Series™**  
Net Weight 460 lbs.



**Avenger 1000 Series™**  
Net Weight 580 lbs.

Dimensions 32"W x 48.5" H x 26" D

**ISI Energy Controls Limited Warranty**

ISI Energy Controls (ISI) warranty for a period of five(5) years from the date of your purchase under the terms and conditions of this warranty. The Energy Avenger™ warranty covers material and manufacturing defects. During the warranty period all inclusive internal electrical components are covered under this warranty. The Energy Avenger™ components will be repaired or the unit will be replaced (at the sole discretion of the service center) free of repair charges, if it proves to be defective in material or workmanship under normal use. In case of replacement it cannot be guaranteed that you will receive the same unit but will fit the desired requirements that meet all electrical needs of the application. A unit of equal value and similar style will be supplied. Proof of purchase (dated receipt) is required in order to waive repair charges for components under warranty. A shipping and handling fee will apply for all warranty service.

**The Manufacture's Warranty Does Not Cover**

- Damage resulting from improper handling, lack of care, accidents, or normal wear and tear.
- Ice, water damage unless marked water-resistant, and acts of nature.
- Any changes to PLC Board, foreign software connection, or modification to product s), in any form other than delivered from ISI Energy Controls.
- Repairs or defects if the unit was not originally purchased from an authorized representative or ISI Partner.
- Improper installation by the licensed electrician.
- Improper information provided for the correct sizing of the unit / model for a given installation. Installed product requires a confirmed audit sizing through ISI Energy Controls audit process or an authorized representative.
- Ordering or installing the wrong size of ISI Energy Controls products.

This warranty is void if the unit has been damaged by accident, negligence, unauthorized service, or other factors due to defects in materials or workmanship. THE WARRANTY DESCRIBED IN THE ABOVE PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The buyer's sole and exclusive remedy against ISI Energy Controls, Inc. shall be for replacement of the product in the event a defective condition of the product should be found to exist and the exclusive remedy shall not have failed its essential purpose as long as ISI Energy Controls is willing to provide comparable replacement product to the buyer.

LIMITATIONS OF SELLER'S LIABILITY: The sole and exclusive remedy against ISI Energy Controls, Inc. shall be for replacement of the product in the event a defective condition of the product should be found to exist. This limitation of liability shall apply to any claim against Seller, to the fullest extent permitted by law, including without limitation, any claim of breach of contract, negligence, misrepresentation, nondisclosure, breach of any duty of good faith and fair dealing, violation of any consumer protection statute, or any tort claims.

NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY OF PERSON OR PROPERTY, ENVIRONMENTAL INJURIES, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE.

The sole purpose of this exclusive remedy shall be to provide replacement of the product if any defect in materials is found to exist. This exclusive remedy shall not be deemed to have failed its essential purpose as long as ISI Energy Controls, Inc. is willing to replace the defective materials.