



# OMEGA LTD

Engineering Solutions For The Present and Future

November 2007



Carling Technologies has a full line of Thermal Circuit Breakers available to today's manufacturing and design needs.

**The CLB-Series** is a compact, single pole, push-to-reset family of thermal circuit breakers designed to protect equipment. The CLB-Series of thermal breakers are slightly larger than the CMB-Series, with longer bushings and broader amp rating range.

Utilizing simple, precision design with few moving parts, these breakers offer cost effective, extremely reliable circuit protection with high resistance against



CLB-Series & CMB-Series

shock and vibration. The CLB-Series provides a consistent trip point over temperatures ranging from -10°C to +60°C. They are ideally suited for such applications as household and commer-

cial appliances, transportation, marine, telecommunications, power strips, audio-visual, medical, and power supplies.

**The CMB-Series** is a compact, single pole, push-to-reset family of thermal circuit breakers designed to protect equipment. Utilizing simple, precision design with few moving parts, these breakers offer cost effective, extremely reliable circuit protection with high resistance against shock and vibration. The CMB Series provides a consistent trip point over temperatures ranging from -10°C to +60°C. They are ideally suited for such applications as household and commer-

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In response to increasing market demand for improved lighting, Bivar, Inc., a leading manufacturer of optoelectronics, recently announced the formation of the Engineered Illumination Business Unit. This newly created unit is dedicated to providing highly efficient



**Solid State Lighting (SSL)** for a variety of industrial applications. Products will feature significant energy savings and enhanced aesthetics over traditional lighting sources.

"OEM's are accelerating their transition from traditional lighting to SSL solutions across industrial markets and applications," explains, Michael Finn, Bivar's Vice President of Strategic Business Development. "We are addressing the growing demand for improved ways to light existing products, and the evolutionary need for application spe-

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## Special points of interest:

- Lighting for industrial applications - kiosk, vending, enclosures, refrigerated cabinets, instrumentation, transportation equipment, and industrial machinery and controls. Custom LED backlights that utilize only one white LED.
- Separate from standby power is the need in many electronic products for a very compact switching power supply that reliably provides the "low power" needed without over or under specifying.

### High-Performance Cat-5e Connectors

- Designed for high-speed, low crosstalk Gigabit applications.
- Optional EMI gasket version available for up to 10 dB noise attenuation.
- Optional ferrite noise filter available on all models to help control common mode noise.



#### Standard Features:

- Patented Hi-Speed microwave contact design - "Gigabit Ready"

- Exceeds TIA / EIA 568A & B crosstalk standards.
- Up to 10 dB better for Ethernet.
- Up to 20 dB better for ATM. Available in 1, 2, 4, 6, & 8 port versions.
- Fits current industry standard footprint, mechanically interchangeable with existing Cat-3 and Cat-5 designs.
- Made in USA at an ISO certified manufacturing facility.



#### Features with EMI gasket option:

- Up to 10 dB better EMI noise attenuation over shielded tab versions.
- Interchangeable with shielded /tabbed and unshielded versions (same footprint & panel cutout).
- Easier to mount - eliminates broken or bent tab problems.
- Offers an edge in world markets on EMC compliance



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**Bias Power LLC manufactures a line of patented low-power, isolated AC-to-DC supplies, based on a form of switching technology. The main virtues of this proprietary design are efficiency, high density and cost-effectiveness.**

### Simplifying Standby Power Needs



One of the main product applications for Bias Power products is to help manufacturers of electronic devices and appliances reduce the amount of "standby power" that is consumed when a product is switched "off" or in a sleep mode. It has been long recognized that most of the newer generation of electronic devices are not really completely off, when they are turned off. Some type of power supply must remain powered-up for digital clocks, infrared remote control receivers, housekeeping circuits, touch controls and the like. This could be the main power supply for the product being powered, but

that would be terribly inefficient. So, some type of smaller standby power supply is used to handle that requirement. This could be designed into the main supply or be completely a different supply. It turns that it is not easy to design and build a highly efficient, reliable and cost-effective standby power supply, so Bias Power was created, in part, to help fill that need.

#### Low Power Needs are Everywhere

Separate from standby power is the need in many electronic products for a very compact switching power supply that reliably provides the "low power" needed without over or under specifying. There are an almost unlimited range of such applications. These include remote sensors and sensor networks (of growing importance for environmental and security monitoring), industrial control, home automation, remote meter reading, appliances and the exploding field of LED lighting for interior rooms and exterior lighting. Such systems require reliable, compact, low-cost power sources. The patented Bias design is a natural to meet this need.

#### Advantages of Bias AC to DC power supplies:

- Micro Size
- Ultra-compact, 1/2 , 1 and 2 watt models



Complete drop-in solution

Universal Input voltage (85-308VAC)

UL/CSE/VDE listed

Rugged sealed design

Low cost

Modular design

Reduces time to market

Up to 75% efficient

Patented design eliminates EMI without external filtering

Ready-to-apply standby and low power solutions

Meets or exceeds EN55022, Class B and FCC Part 15, Class B

UL File Number E210855

Less than 30mW no-load

Recognized per IEC 60950

CB Test Certificate Number US/7104B/US

For additional information or samples contact Omega Ltd. at [info@omegaltd.com](mailto:info@omegaltd.com) or visit the BIAS web Site [www.biaspower.com](http://www.biaspower.com).



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cial appliances, transportation, marine, telecommunications, power strips, audio-visual, medical, and power supplies.

**The CTB-Series** is a compact, single pole, rocker actuated family of thermal circuit breakers designed to protect equipment. Utilizing simple, precision design with few moving parts, these breakers offer cost effective, extremely reliable circuit protection with high resistance against shock and vibration. They are ideally suited for such applications as household and commercial appliances, transportation, marine, telecommunications, power

strips, audio-visual, medical, power supplies, and exercise equipment.



CBT-Series

**Carling Technologies** is one of the world's largest manufacturers of Hydraulic/Magnetic and Thermal Circuit Breakers, Electrical Switches and Assemblies, and Advanced Systems including Power Distribution Centers and Electronic Control Systems.

For more information, contact Omega Ltd. at [info@omegaltd.com](mailto:info@omegaltd.com) or visit Carling's Web site: [www.carlingtech.com](http://www.carlingtech.com).

## BIVAR continued

cific configurations to illuminate new products. With our dedicated business unit, Bivar is now poised to deliver innovative SSL solutions to a broad spectrum of vertical markets.

Initially, the Engineered Illumination Business Unit will focus on products designed for Directional Lighting used in a defined group of industrial applications. These products offer ruggedized packaging, bright and powerful illumination, and incorporate the proven performance and recognized reliability long associated with Bivar. These industrial applications include kiosk, vending, enclosures, refrigerated cabinets, instrumentation, transportation equipment, and industrial machinery and controls.

Products developed by the new unit will include Bivar's innovation and packaging expertise, which optimizes key design variables

such as luminous intensity, viewing angle, thermal management, power management, energy efficiency and environmental design into a highly efficient lighting solution.

These directional lighting products feature multiple color options and styles to create distinctive visual effects for spot and flood lighting. The initial product roll-out includes the Cubic DL™ (CDL), Variable Segment DL™ (VSDL), and Low-Profile Variable Segment DL™ (TVSDL), all offered in several packaging configurations to fulfill a variety of power, mounting, and size requirements.

Bivar has a 40-year proven track record of product innovation, with optoelectronic strength in the indication areas of LEDs, light pipes, standard and custom opto assemblies. Product development and support remains

focused on the best possible means of selecting, transferring, and positioning LED light. "This theme accentuates our fundamental competency," emphasizes Finn. "Advancing into new areas of SSL illumination is a natural evolution from our central product platform. Bivar's configurable LED lighting styles and efficiencies take industrial lighting to a whole new level."

. For more information, contact Omega Ltd. at [info@omegaltd.com](mailto:info@omegaltd.com) or visit Bivar's Web site: [www.Bivar.com](http://www.Bivar.com).



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### Features with ferrite filter option:

- Economical, cost effective solution to common mode noise filtering.
- Efficient - controlled insertion loss.
- More protection - filters common mode noise right at the base of the connector.



With ferrite filter option

- Reliable - no internal solder joints to fail.
- Available for up to 8 ports.

For more information, contact Omega Ltd. at [info@omegaltd.com](mailto:info@omegaltd.com) or visit Regal's Web site: [www.regalusa.com](http://www.regalusa.com).





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Engineering Solutions For  
The Present and Future

### Design Services

Omega Ltd. is able to offer design services through the engineering departments of our manufacturers. It is our intent to help you in your design so that you can get the most benefit from our products and cut your time to market. We can assist you with budgetary cost analysis and quotes from our factories.

### Engineering Resources

It is the mission of Omega Ltd. to inform you of the newest technology and new products that our manufacturers have introduced to the market place. We want to provide you with the most up to date specifications and if possible free evaluation samples to help you in your prototyping and initial design efforts. We can also get you in touch with engineers at our factories that are able to assist you in your project.

### Technology Sources

When you are in the development phase of a new product or in a trouble shooting issue with your product we can offer engineering support from applications engineers at our factories. We can arrange meetings and conference calls as well as local support to assist you in making sure that you have the best product and design for your project. We can also recommend design solutions that will help you in meeting your engineering goals.

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## On The Lite Side of Things

### FACTS TO PONDER:

- (A) The number of physicians in the U.S. is 700,000
  - (B) Accidental deaths caused by Physicians per year are 120,000
  - (C) Accidental deaths per physician is 0.171.
- Statistics courtesy of U.S. Dept of Health Human Services.
- Now think about this:
- Guns:
- (A) The number of gun owners in the U.S. is 80,000,000.
  - (Yes, that's 80 million..)
  - (B) The number of accidental gun deaths per year, all age groups, is 1,500.

(C) The number of accidental deaths per gun owner is .0000188

Statistics courtesy of the FBI

So, statistically, doctors are approximately 9,000 times more dangerous than gun owners.

Remember, 'Guns don't kill people, doctors do.'

FACT: NOT EVERYONE HAS A GUN,

BUT

ALMOST EVERYONE HAS AT LEAST ONE DOCTOR.

Please alert your friends to this alarming threat.

We must ban doctors before this gets completely out of hand!!!!

Out of concern for the public at large, we have withheld the statistics on lawyers for fear the shock would cause people to panic and seek medical attention!

