

Temperature Control for Heated Clothing

High Performance/Professional Quality



Updated version of an old favorite

With over 20,000 units of the old version sold since 1996, the original OEM Manufacturer is continuing on with an updated version under the ZANE brand. And with our many years of design and manufacturing experience, we at ZANE have carefully blended the same professional grade materials and proprietary manufacturing processes with new and practical improvements suggested over the years. Now available in a DUAL version as well (see picture, above right).

First, industry standard 5.5 x 2.5mm power connectors are added to make the ZANE Temperature Control 100 percent plug compatible with all manufacturer's heated clothing and accessories using same. The ZANE Power connectors are specifically engineered for high conductance under difficult conditions, including gold plating for the socket contacts (see above).

We think you'll like the new lightweight cords. They're premium quality, glove-leather soft, kink free, and so flexible you'll hardly know you're wearing them. When unneeded, they simply fold up for easy storage of the unit in any convenient coat pocket.

Retained time-tested features include an oversized machined aluminum knob for easy adjustment with gloved hands. Because the knob rotates only a few hundreds of an inch over the case, extra protection is provided against accidental drops and impacts.

The case is precision cast of technology plastic/dense glass fibers for exact shape and high heat conductivity. Inner potting material is a mixture of industrial-grade epoxy and powdered stone for impact resistance, high thermal conductivity, and long life. Thick rubber grommets at cord entrances provide extra strain relief at this vulnerable point.

Control circuitry is the same proven and patented Cmos technology as always, delivering 99 percent of battery voltage at maximum setting. At the full 10A output (either channel, any combination for DUAL) a powerful 81 amp mosfet driver is still at only 12 percent of rated capacity for high efficiency and long-term reliability. Up to 134 watts (10 amps at 13.4 volts) of fuse-protected power is available.

Features

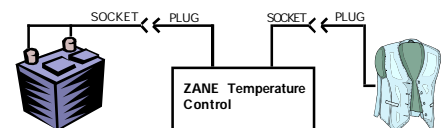
- Fusion of proven reliability and practical new improvements
- Industry Standard 5.5 x 2.5mm connectors for 100 percent plug compatible with all manufacturer's heated clothing using same
- New lightweight power cords are kink free and glove-leather soft
- Precision cast, technology plastic case. Grommets cord entrances
- New laser-inscribed and enamel-filled graticule for easy repeat of optimal temperature setting
- Quality, oversized machined aluminum knob, 315° rotation, tactile on/off
- Proven Cmos control circuit with extra heavy mosfet driver
- 6-, 12-, and 24-volt versions

Applications

- Mobile: Motorcycle, snowmobile, ATV, forklift, golf cart, boat, tractor via a battery harness
- Winter sports: Enjoy cold weather activities in warmth via a compatible portable battery pack
- Outdoor winter tasks: Plug into a stationary source of low-voltage dc power for increased comfort and safety

Made in USA
web: www.zane1.com

Wiring Diagram



Technical Specifications

Mode of Operation

Continuously variable pulse width modulation (pwm). Range is from 45% at click-on through 100% at maximum setting (US Patent #5,237,263 -- expired)

Supply Voltage (battery or filtered dc)

-6V Battery Version: 4.5 to 12 vdc working, up to 15 vdc momentary

-12V Battery Version: 8 to 15 vdc working, up to 19 vdc momentary

-24V Battery Version: 20 to 27 vdc working, up to 30 vdc momentary

Continuous Output Current

Fuse-limited to 10A (DUAL ... either channel any combination to 10A)

Ambient Temperature Range

-25F (-32C) to +90F (+33C)

DC-DC Conversion Efficiency

About 99%

Load Types

Optimized for resistive heating elements

Reverse Polarity/Connection Protection

Input leads can be reverse connected without damage. The load can be connected or disconnected or at any knob setting without damage

Short/Open Circuit Protection

Output is protected from external short circuits by user-installed 10A fuse in battery harness. Internal connections are 100% soldered to practically eliminate the possibility of an open circuit. All units 100% factory tested

Transient Protection

Resistive/capacitive filtering

Cords

Each cord is 18" (458mm) long including connector, and has a 0.25" (6.5mm) round cross section to minimize or eliminate the kinking associated with twin conductor cable. Internal 16-ga conductors (positive and negative) are each of extra-fine stranded copper (107 count) and individually pvc jacketed for extra strain relief. The outer jacket is specially formulated PVC for a lump-free and weather-resistant surface

Case

Case is 2" long x 0.9" wide x 1.15" high (50 x 23 x 29mm) Single, 1.8" long x 2.1" wide x 0.825" high (45.7 x 53 x 21mm) DUAL. Material is diallyl phthalate plastic with dense glass fill to MIL-M-14

Potting material is a UL Listed (fire proof) HYSOL #ES4212 (Part A and Part B) epoxy/powdered stone mixture

Connectors

Industry standard 2.5mm x 5.5mm x 10mm plug-and-socket power connectors ("2.5mm Coax connectors"). Polarity is standard with - (negative) outer sleeves for both plug and socket. Socket contacts are gold plated for increased conductance and durability. Plug is color-coded with a red stripe for easy nighttime identification, one socket is color-coded white with a white circle encoded on the corresponding adjustment knob

Case Markings (front and rear)

Laser engraved at 1200 dpi and filled with white enamel to military standards

Potentiometer

Dual wiper blades provide skip-free performance over 315° rotational range. Sealed on/off switch has a service life of about 50,000 cycles. Rubber "O" ring under knob dampens unwanted knob rotation and provides reliable water seal

Power Dissipation of Control Circuit

About 14mW Single, 28mW DUAL independent of power delivery

Mosfet Driver

The mosfet driver(s) has an on state of 0.012 ohms, an off state of 12,000,000 ohms, a maximum pulse rating of 330A and a dissipation rating of 170W. The 1.25W maximum waste heat generated at full 10A power delivery is dissipated through heat-conductive potting material and case. In normal use the case becomes no more than warm to touch

Regulation

Line regulation is directly proportional to supply voltage. Load regulation is generally less than 3%

Weight

4.62 oz (130gm) Single, 7.3 oz (209gm) DUAL

Accessories Included

Detailed installation instructions, 10A blade-type automotive fuse x2, plastic zip top bag

Warranty and Disclaimer:

Although Manufacturer warrants the goods, so far as the same are of its manufacturer, against defects in materials and workmanship under normal use and service for which they were designed for a period of one (1) year after invoice date, Manufacturer's obligation under this warranty are limited, at its option, to the replacement of the part or parts determined to be defective or to the refund of the purchase price.

Claims made in this data sheet are based on extensive testing and are believed to be true. Manufacturer shall under no circumstances be liable for any special, indirect, incidental, or consequential damage owing to failure of the goods. Manufacturer makes no warranty of fitness for a particular purpose or merchantability or any other warranty, oral or written, expressed or implied, except as specifically set forth herein.

Do not use ZANE products as critical components in life support devices or systems, aircraft, or other hazardous applications. Quotation, order acknowledgment, purchase, etc. does not grant or imply a license under any present or future patents owned by seller except to extent purchases are made from seller.

Any goods returned under warranty must be returned freight prepaid to ZANE International Inc., Minden, NV.

Temperature Control for Heated Clothing

Part #	UPC #	Input Voltage	Maximum Current/Watts
ATC-48L-6V	29000	6V (nominal)	10A fused/60W at 6vdc
ATC-48L-12V	29100	12V (nominal)	10A fused/120W at 12vdc
ATC-48L-24V	29200	24V (nominal)	10A fused/240W at 24vdc
ATC-48L-DUAL-6V	29300	6V (nominal)	10A fused/60W at 6vdc
ATC-48L-DUAL-12V	29400	12V (nominal)	10A fused/120W at 12vdc
ATC-48L-DUAL-24V	29500	24V (nominal)	10A fused/240W at 24vdc