Temperature Control for Heated Clothing

High Performance/Professional Quality

Engineered for heavy, flawless service

This 100 percent plug compatible ZANE Temperature Control is your optimal match for any manufacturer's electrically heated clothing using industry-standard 5.5 x 2.5mm power connectors. Engineered of high-specification material and workmanship throughout, you can expect years of effective and safe service.

Professional quality begins with lightweight power cords with quarter-inch round cross-sections. 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 in a convenient pocket.

The ZANE power connectors with gold plated socket contacts (see picture, above) are specially designed for high conductance under heavy use and difficult conditions. Adaptor hardware is readily available (if needed) to convert from older style connectors such as Widder, BMW, SAE, and cigarette.

The case is precision cast (not injection molded) 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, thermal conductivity, and long life. Thick rubber grommets at cord entrances provide extra strain relief at this vulnerable point.

Repeating an optimal temperature setting is quick and easy with the oversized machined aluminum knob and laser-inscribed and enamel-filled graticule -- even with gloved hands. At tactile click-on, power delivery begins at 45 percent to skip the seldom used lower range and allow ultra-precise setting of the important upper range over a wide and infinitely variable 315° rotational.

Control circuitry is proven and patented Cmos technology, delivering 99 percent of battery voltage at maximum setting to truly equal a toggle switch. At the full 10A output, 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.

Pat Pend
Made in USA

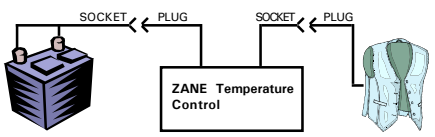
Features

- 100 percent plug compatible with any manufacturer's heated clothing using standard 5.5 x 2.5mm connectors
- High-specification material and workmanship throughout
- Premium lightweight power cords are kink-free and glove-leather soft -- so flexible you'll hardly know you're wearing them
- Precision cast, technology plastic case. Grommeted cord entrances.
- Laser-inscribed and enamel-filled graticule
- Quality, oversized machined aluminum knob, 315° rotational range, tactile on/off
- Proven Cmos control circuitry with extra heavy mosfet driver

Applications

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

Wiring Diagram



ZANE
Low-Voltage Power Systems

Technical Specifications

Mode of Operation
Continuously variable pulse width modulation (pwm). Adjustment range is from about 45% pwm at click-on through 100% at maximum setting

Supply Voltage (battery or filtered only)
6V Battery Version: 4.5 to 12vdc working, up to 15vdc momentary
12V Battery Version: 8 to 15vdc working, up to 19vdc momentary

Continuous Output Current
Fuse-limited 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 disconnected/ unit energized at any knob setting without damage

Short/Open Circuit Protection
Output is protected from short circuit by user-installed 10A fuse. Connections are 100% soldered to minimize possibility of 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 and molded PVC for a lump-free surface

Case
Case is 2" long x 0.9" wide x 1.15" high (50 x 23 x 29mm). Material is diallyl phthalate plastic to MIL-M-14 with dense glass fill. Potting material UL Listed, industrial grade epoxy mixed with powdered stone

Weight
4.62 oz (130gm)

Case Markings (front and rear)
Laser engraved at 1200 dpi and enamel filled

Connectors
Standard 5.5 x 2.5mm socket-and-plug power connectors (sometimes called "coax" connectors). Socket contacts are gold plated for increased conductance and long wear. Polarity is standard with - (negative) outer sleeves for both socket and plug

Potentiometer
Dual wiper blades provide skip-free performance over a 315^{o} rotational range. Sealed on/off switch toggles at about 5mA for a service life of about 50,000 cycles. Rubber "O" ring under knob dampens unwanted rotation and provides reliable water seal

Power Dissipation of Cmos Control Circuitry
About 14mW. No-load current draw is about 1mA. Nil power used in click-off position

Waste Heat
The approximate 1.25W maximum waste heat generated by mosfet driver is dissipated through heat-conductive potting material and case. In normal use the case becomes no more than warm to the touch

Line Regulation
Directly proportional to supply voltage

Load Regulation
Generally less than 3% from minimum load to maximum load at any setting

Voltage Drift
Nil with steady input voltage

Accessories Included
Detailed installation instructions, 10A blade-type automotive fuse x2, 7" x 9" plastic bag with zip top

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 Number	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