

# VISIONS 3000 Control System

## Technical Data Sheet 4: Maintenance



- Cabinet Built To Withstand Industrial Usage
- Low Center Of Gravity For Maximum Stability
- LCD Display Protected By Safety Glass
- All Fuses Easily Accessible
- Worldwide Support
- 24 Month Warranty

### Industrial Cabinet

The VISIONS 3000 uses a purposely built all steel industrial grade cabinet to provide a strong, robust frame capable of withstanding industrial usage.

### Low Center Of Gravity

The cabinets used for VISIONS 3000 systems, all feature low center of gravity which means that most cabinets are capable of being tilted in excess of 20° before falling over.

### Safety Glass

While there are many advantages to using Liquid Crystal Displays for industrial applications, they are in themselves, not particularly robust. The front screen is prone to scratching and is made of thin glass to improve optical qualities and reduce cost. In order to fully protect the screen from the rigors of industrial use, the VISIONS 3000 protects the screen with a sheet of 4mm safety glass, capable of withstanding all but the most vigorous of attacks.

### Ease Of Maintenance

While every step of the design process for the VISIONS 3000 has been taken with a view to ensuring maximum reliability, breakdowns can occur. When this occurs, downtime must be minimized to reduce the high costs associated with lack of production. To this end, the VISIONS 3000 has kept ease of maintenance at the forefront of its design philosophy. Many ease of maintenance and support features are incorporated, including: -

- All output cards have front panel LED's which indicate the status of the output fuses. The LED's are visible from outside of the cabinet through the front door window. When the fuses do need replacing, perhaps due to a tool fault, they are mounted on front edge fuse holders. The time required to replace faulty fuses is a matter of seconds.
- Each PCB is keyed to prevent its insertion into the incorrect slot. In addition, the input and output addressing is performed on the backplane, removing the need

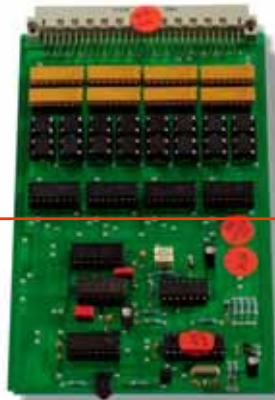


for this to be performed on the card itself, simplifying replacement.

- All modules have front panel LED's to indicate operational status. This includes a red status LED on each module that indicates communication with the CPU module and, when in run mode, gives a visual indication of operation of the system.
- LCD backlight saver. While there is no practical limit on the life of the LCD panel, the backlight typically has a half life or 50,000 hours. In other words, the backlight will fade to half brightness within approximately 5 years, making the display difficult to see. To maintain maximum brightness of the LCD display, the VISIONS 3000 switches off the backlight after 15 minutes. Any key press will re-activate the display.
- The keypad membrane of the VISIONS 3000 is made of durable Polyester. The Polycarbonate membranes typically used by other manufacturers are prone to cracking.
- The membrane is overlaid on top of a keyboard manufactured using switches. This is more reliable than using integral membrane keypads, while also enabling low cost maintenance of the keypad, should it fail.
- Three red neon lamps give clear indication of the status of the three input power phases.
- All PCB's are made from readily available components and all semi-conductors are mounted in sockets for ease of replacement.
- On the thermocouple input card, see below, the inputs are protected from damage from high voltages by the use of resistor networks and diode bridges. These are all socketed for ease of replacement.
- All components are readily accessible behind the cabinet front door which, for safety reasons, cannot be opened while the power isolator switch is in the ON position.
- Only two types of output card are available, the single zone 16A card and the four zone 3.15A card. For most applications, the 16A card is used, reducing the number of cards required for spares.
- Further support information is available from the website.
- The VISIONS 3000 is supported by a worldwide network of distributors and agents.
- A full 24 month warranty is provided on all VISIONS 3000 systems.

VISIONS 3000  
Thermocouple Card

Input protection  
components



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