



# Model CA5000 Liquid CO<sub>2</sub> Backup Alarm System



BATTERY-VALVE-MODULE (BVM)

CONTROL ALARM

## **FEATURES:**

- Backup time of 10 hours minimum on one 50 lb. cylinder of CO<sub>2</sub> at -60 °C set point.
- An internal battery with charger keeps the alarm system running for at least 48 hours after a power outage.
- A battery status indicator warns of a disconnected or low battery condition.
- Independent user-programmable controls for system alarm and liquid CO<sub>2</sub> injection rates.
- Visible and audible indicators for system status.
- Multiple user-programmable alarm delays available to minimize nuisance or false alarms.
- Relay contact output for central alarm systems or automatic dialers.
- Included is a door safety interlock switch that prevents liquid CO<sub>2</sub> injection while the freezer is being accessed.

The Model CA5000 freezer back-up alarm system is a unique combination of field proven, ultra-reliable alarm systems and a liquid CO<sub>2</sub> injection system; providing security for your products that are stored at ultra-low temperatures.

It offers user-programmable alarm and control set points and alarm delay times. Parameters are stored in non-volatile memory.

The customer supplied liquid CO<sub>2</sub> is maintained at high pressure, ready to be injected into a freezer cabinet or system. When a malfunction occurs and the freezer warms above the user-defined set point, an alarm sounds with flashing red LED. If the freezer continues to warm, then a user-defined amount of liquid CO<sub>2</sub> is injected into the freezer, quickly recovering the set point temperature.

*Custom programming and packaging can be provided.*





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BATTERY-VALVE-MODULE (BVM)

**Power Requirements:**

Includes Universal Power Supply, 120-240V/50-60 Hz UL listed Supplies 15VDC to BVM

**Mechanical:**

BVM Box with handle = 6.25" W x 5" H x 10" D  
Control Alarm Box = Case is black bakelite, 5" W x 4.25" H x 1.75" D

**Weight:**

BVM Box = 14 pounds  
Control Alarm Box = 2 pounds

**Temperature Range:**

-200° C to +50° C

**Backup Temperature Range:**

-150° C to -40° C

**Resolution:**

1° C

**Accuracy:**

±2° C

**Sensor:**

Type "T" Thermocouple with 10' lead

**Battery:**

12VDC 12Ah sealed lead-acid rechargeable

**Relay Output:**

SPDT NO/NC dry contact, 30VDC/1A max. (non-inductive)

*There is a one-year warranty on all Hampshire Controls products.*

***Hampshire Controls Corp. is a Woman Owned Small Business***

***About Our Company***

Started in 1975, Hampshire Controls provides standard and custom designed electronics to the biomedical and industrial markets. In addition to the CA5000-N LN2 Freezer Backup Alarm System, other products include:

- Model 140 Single Probe Temperature Monitor
- Model MPS Multi-Point Monitor
- Alert Central Monitoring System (AMS)
- Model LD-200 LN2 Level Detector/Alarm
- Liquid CO2 Backup Control/Alarm for Freezers
- Line Voltage Controls
- Custom Microprocessor Assemblies
- Model ADM Alarm Delay Module
- Regulated Output Phase Control
- Custom AC Motor Phase Controls
- Air Flow Monitors
- Model TC-12 Rapid Response TempCheck

