



**TRANE**

**General  
Service  
Bulletin**

**CVHE-SB-12A**

Library	Service Literature
Product Section	Refrigeration
Product	Centrifugal Liquid Chillers
Model	CVHE
Literature Type	General Service Bulletin
Sequence	12A
Date	4/19/85
File No.	SV-RF-CTV-CVHE-SB-12A-485
Supersedes	

Literature Changes:

Modified "Parts Ordering Information".

SUBJECT: CVHE/CVHB MOTOR OVERLOAD MODULE PROTECTION

INTRODUCTION:

This service bulletin discusses the addition of a surge suppressor across the power supply of CVHE and CVHB solid state motor overload modules. The addition of the suppressor is recommended to provide protection from high voltage spikes which can lead to module failures.

DISCUSSION:

A number of Cutler-Hammer overload modules (Trane part number RLY-765) that have been returned as failed, appear to have been exposed to a high voltage condition. This high voltage could have been caused by inadvertent application of 110 volts through the low voltage side of the module or through transient line voltage spikes which can enter the module through its power supply. The module can be protected from these voltage spikes by the addition of a surge suppression device that connects to the module power supply. These devices are generally referred to as MOV's (metal oxide varistors).

CORRECTIVE ACTION:

Surge suppressors should be installed on all CVHE and CVHB units with solid state overload modules at unit start-up. Units which are being retrofitted to add the new solid state motor protection module should also have the suppressor added. Units that are already started should have the surge suppressor added on an opportunity basis such as a service call or annual maintenance.

Since The Trane Company has a policy of continuous product improvement, it reserves the right to change specifications and design without notice. The installation and servicing of the equipment referred to in this booklet should be done by qualified, experienced technicians.

Install a surge suppressor in the unit control panel across terminals 2 and 3 as shown in Figure 1. The suppressor (MOV) should have the following values:

- Maximum RMS volts -150
- Maximum energy rating - 80 joules
- Average power dissipation - 1 watt
- Peak pulse amps - 6,500

A surge suppressor can only protect against high voltage surges that do not exceed its design rating. Voltage surges in excess of this rating will cause the suppressor to fail. A failed surge suppressor is evident due to its almost total physical destruction. Failure of the suppressor will not interfere with the operation of the unit control system. Periodic inspection of the suppressor should be included with other normal maintenance procedures.

**PARTS ORDERING INFORMATION:**

The part number for the surge suppressor is SPS-11.

Figure 1  
Surge Suppressor  
Mounting Location

