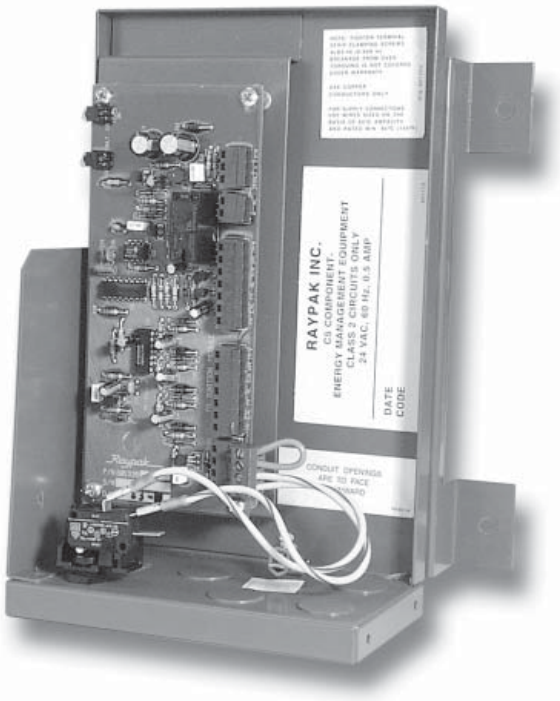
C-5 LATCHING LOCKOUT MODULE

CSD-1 Compliant Local Manual Reset Device

The C-5 Latching Lockout Module (LLM) is a solid state electronic ignition fault detector that has been engineered to comply with ASME Safety Code CSD-1 requirements for manual intervention ignition supervision. The C-5 LLM monitors the boiler's electronic ignition system and will lockout the ignition system upon flame failure. The boiler will remain safely shut-down until manually reset by an on-site operator. The LLM prevents a boiler restart due to remote cycling of the power. The LLM, or equivalent, is required on CSD-1 Code configured boilers.

Features

- Complies with ASME Safety Code CSD-1
- U.S. Postal Service AS-620 Compliant
- Microprocessor Based
- Solid State Circuitry
- Non-Volatile EEPROM Latching Mechanism
- Local Manual Reset
- 100% Shutoff Lockout
- 24V Monitor and Control Voltage
- Power and Fault LEDs
- Quick Connect Electrical Connections
- NEMA 3R Rainproof Enclosure
- Single Source Accountability



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Raypak®
A Rheem® Company

Catalog No. 5100.15C Effective: 12-28-07 Replaces: 03-15-03

C-5 Latching Lockout Module (LLM)

Module Control Board
Microprocessor Based
Solid State Circuit Board
Non-Volatile EEPROM Latching Mechanism

LED Indicators
Power - Green
Fault - Red
Relay Actuated - Red

Electrical Characteristics
24 VAC, 0.25 A, 60 Hz

Ambient Conditions
Temperature: -40 to 175°F
Humidity: 90% RH Non-condensing

Enclosure
Heavy Gauge Steel
NEMA 3R Rated Rainproof
6 1/4" W x 10" H x 5" D
Boiler Mounted

Limited One-Year Warranty

Sample Specification

Section I: General Requirements

1. Provide a Raypak C-5 Latching Lockout Module (LLM) that shall provide electronic ignition supervision and, upon flame failure, shall require local manual intervention for fault reset.
2. The LLM shall be microprocessor based.
3. The LLM shall be UL Listed.
4. The LLM shall carry a one-year limited warranty against failure caused by defective workmanship or material.
5. The LLM and boiler shall be manufactured by the same company and shall carry single source accountability.

Section II: Equipment Enclosure

1. The LLM enclosure shall be constructed of heavy gauge steel and shall be protected with a baked-on UV inhibited Polytuf powder coat finish.
2. The LLM enclosure shall be boiler mounted and shall be NEMA 3R rainproof rated.

Section III: Control Functions

1. The LLM shall monitor the boiler's electronic ignition system. Upon flame failure the LLM shall deenergize the main gas safety shutoff valve and the pilot valve. The LLM shall require manual local intervention for reset – cycling boiler power off and on shall not reset the LLM.
2. The LLM shall be equipped with a manual reset button for ignition reset and boiler restart.

Section IV: Display Functions

1. The LLM shall be equipped with the following indication and status LEDs:
   a) Power - a green LED shall indicate that power is available to the unit.
   b) Fault - a flashing red LED shall indicate that the LLM is in lockout mode and that the unit must be manually reset before ignition retry.
   c) Relay - a red LED (visible with the enclosure cover removed) shall indicate that the relay is actuated.
   d) Remote [*optional - supplied by others*] - contacts shall be supplied to activate a remote alarm and to illuminate an additional fault LED that is supplied by others.

Excerpts from ASME CSD-1

CF-310 Primary Safety Control

(a) Each main burner assembly shall be provided with a primary safety control that will deenergize the main gas safety shutoff valve(s) and shutoff pilot fuel upon loss of flame at the point of supervision as specified in CF-330.

(d) Primary safety controls shall require manual intervention to reset.