

## 2 INSTALLATION



**DANGER:** Before installing, removing, inspection, or performing any maintenance on a hoist, the main switch shall be de-energized. Lock and tag the main switch in the de-energized position in accordance with ANSI Z244.1. Follow other maintenance procedures outlined in this manual and ASME B30.16.

### 2.1 General

Prior to installation, the unit shall be checked thoroughly for damage during shipment or handling at the job site.

Each complete electric chain hoist is load tested at the factory at 125% of the nameplate-rated capacity.

All hoists are designed for the type of mounting specified by the purchaser. The adequacy of the supporting members (monorail beams, cranes, hangers, supports, framing, etc.) is the responsibility of user / owner and shall be determined or verified by qualified personnel.

Read the instructions contained in this manual and the [LoadMate® Electric Chain Hoist Operator's Manual](#) as well as any other related manuals. Observe the warning tags attached to the unit before the installation is started.

### 2.2 Lubrication

The hoist gear case comes completely pre-lubricated with grease.

Note: Open trolley wheel gearing has not been greased at the factory. See the trolley manual for proper gear lubricant to use before installing hoist.

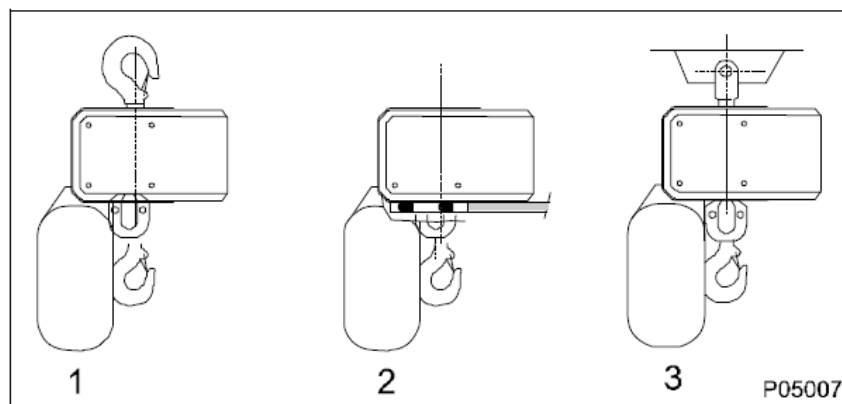
The load chain requires lubrication prior to first use. Chain lubricant is included with shipment of each new chain hoist.

## 2.3 Mounting

Below are three types of mounting:

1. Hook Mounted
2. Base Mounted
3. Coupling Mounted
4. Trolley Mounted – NOT SHOWN – is accomplished via a Hook or Trolley Coupling to the Trolley Assembly.

**Figure 2.0. Mounting Types**



For all trolley-mounted hoists, refer to appropriate trolley manual for trolley installation instructions.

After a trolley-mounted hoist has been assembled to a beam, check for balance. Each trolley-mounted hoist is balanced at the factory for “as shipped” condition. Any auxiliary devices (radio control, lights, hose reels, etc.) furnished and mounted by “others” may require additional counterweight. Hoists must hang straight without a load or there will be a noticeable “kick” when a load is applied to hook. An unbalanced hoist / trolley may result in damage to equipment.

## 2.4 Load Hook Throat Opening





**CAUTION:** ANSI B30.16-1998 recommends that the throat opening of a load hook be measured and recorded prior to putting a hoist into service and that a gage be made to provide a quick visual inspection for a bent hook as required during routine inspections. Record this information before initial start-up. See Section 5.8 for more detailed hook information.

## 2.5 Electrical Connection

The user / owner must provide the main power supply hardware (cable, conductor bar, fuses, disconnect switch, etc.).


 **CAUTION:** Make sure that the power supply voltage is the same as that shown on hoist serial plate / nameplate.

 **CAUTION:** Make sure that fuses and other current overload devices are in place to protect the power supply.

 **CAUTION:** Make sure that power cable or conductors have sufficient capacity to maintain the hoist supply voltage by  $\pm 5$  percent of nominal voltage under all operating conditions. Poor voltage regulation may cause motor overheating or sluggishness, and chattering / inoperative motor brake(s) and controls.

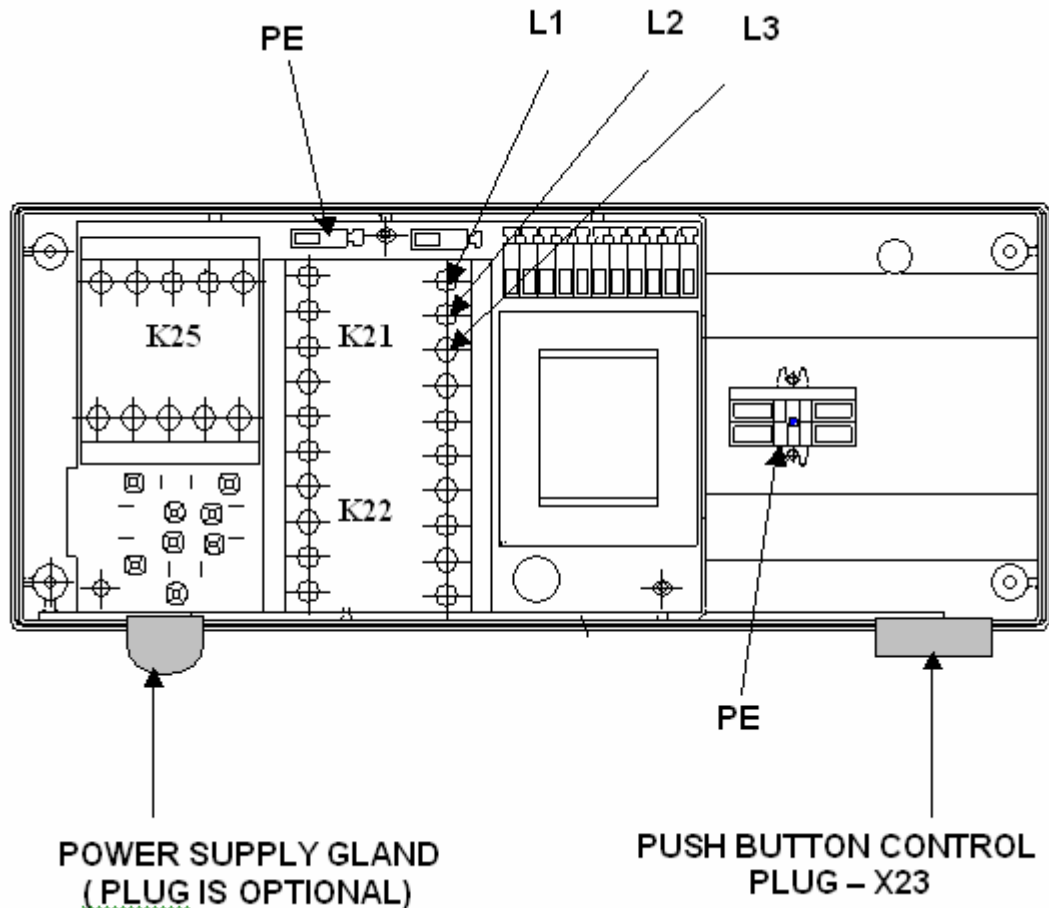
 **CAUTION:** Do not use power supply cables with solid conductors.

 **WARNING:** Failure to properly ground the hoist presents the danger of electric shock.

 **WARNING:** An improper or insufficient ground connection creates an electrical shock hazard when touching any part of the hoist or trolley.

## 2.6 Three Phase Power Connections

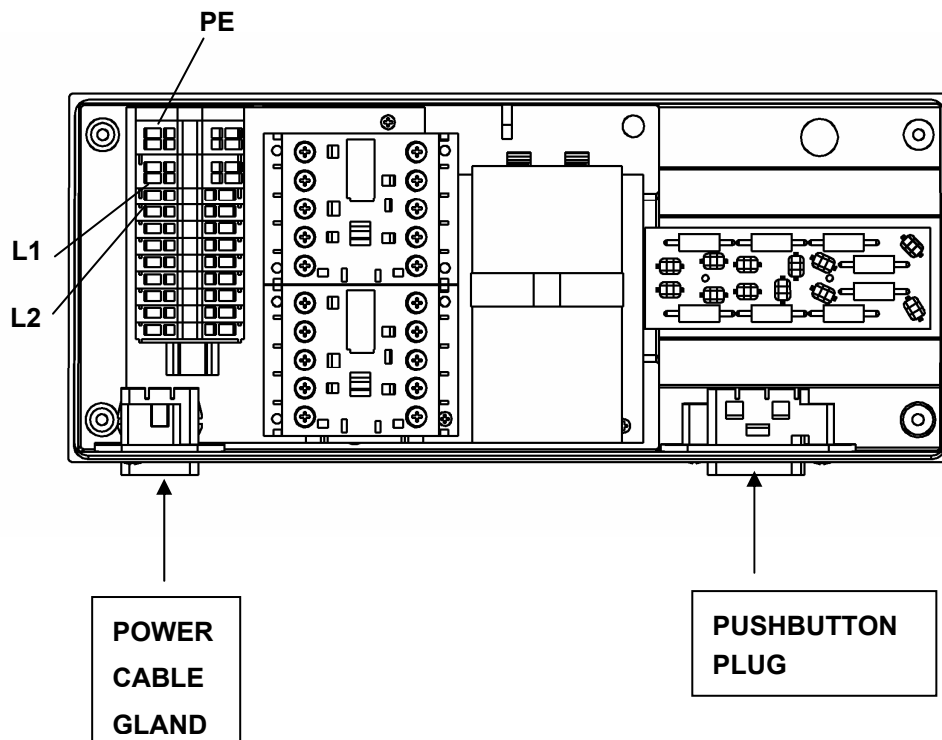
Figure 2.1. Three Phase Control Box Power Connections



1. Remove control box cover.
2. Insert power supply cable through cable gland or assemble to (optional) plug.
3. Connect power leads L1, L2, and L3 to relay K21.
4. Connect ground wire PE (GRD) to terminal strip (2). Refer to wiring diagram.
5. Tighten terminal screws.
6. Tighten cable gland or (optional) connector to secure power cable.
7. Replace control box cover.
8. Attach pushbutton assembly to plug connection X23.

## 2.7 Single Phase Power Connections

Figure 2.2. Single Phase Control Box Power Connections



1. Remove control box cover.
2. Insert power supply cable through power cable gland (*Figure 2.2*).
3. Connect power leads L1 and L2 to terminal strip (*Figure 2.2*).
4. Connect ground wire PE to terminal strip (*Figure 2.2*). Refer to wiring diagram.
5. Insure terminals are tight
6. Tighten cable gland or connector (*Figure 2.2*) to secure power cable.
7. Replace control box cover.
8. Attach pushbutton assembly to plug (*Figure 2.2*).