

## **ISIMET – LA Series Controller – Supplemental Wiring Instruction**

### **CONDUIT:**

ISIMET recommends that separate conduits be provided for each device that is controlled and integrated with each Controller. Do not incorporate wiring systems from a series of Controllers within a common conduit. Conduits for monitoring panels, arrays and panic assemblies should be separate from line voltage, control wiring and integrated system wiring. Where system components are mounted alongside the Controller within a common wall, install conduct for low voltage control wiring between the devices.

### **WIRING:**

#### **Operating Power:**

Provide dedicated electrical service to the LA Series Controller. Verify wiring requirements with Manufacturer's requirements. Minimum 15 amp circuit. A single circuit may provide service to multiple LA Controllers provided that output load and operating limits do not exceed recommended limits for the unit. Circuit should not be routed through a device controlled by the output circuit of the unit.

#### **Low Voltage Control Wiring:**

Provide 24 VAC control wiring from Controller to each controlled utility or device. Make connections at controlled device and terminate at output terminal on Controller's printed circuit. Minimum wiring, 18 AWG, plenum rated cable. Provide cable with required conductors plus two spares. Wiring should not be bundled or left in spools. Remove all excess wiring.

#### **120-vac Output Wiring (Single Source Units): Control of Electrical Service**

120-vac line, neutral and ground from the LA Unit should extend to a single circuit, single duplex electrical device located at the dedicated workstation. Unit is not intended to operate other circuits or devices.

**120-vac Output Wiring (Independent – UL):** Unit is configured as "dry-contacts" for field connection of electrical services. 120-vac line-load and/or neutral, ground as mandated by governing codes should be routed to the LA Unit in independent conduit separate from wiring from other operating systems. Make connection as shown on wiring schematic. Failure to follow this installation instruction may cause operating malfunctions.

#### **Integrated Systems:**

Verify voltage and wire sizes to comply with requirements of each system.

#### **System Monitoring Panels and Arrays:**

Provide 24 VAC control wiring from LA Controller to each monitoring panel or array. Make connections at monitoring device and terminate at output terminal on Controller's pc board. Minimum wiring, 22 AWG, plenum rated cable. Provide cable with required conductors plus two spares.

#### **Remote Panic Assembly:**

Provide low voltage control wiring from LA Controller to each Remote Panic Assembly Panel within the classroom. Make connections at panel and terminate at Controller's pc board. Minimum wiring, 22 AWG, plenum rated cable. Provide cable with required conductors plus two spares. Where Drawings indicate two or more remote panels, connect each panel in parallel.

#### **Control of Electrical Services (Multiple circuits):**

Where a multiple of circuits are to be operated by the Controller, then these circuits should be controlled by an E Series Companion Enclosure or other equivalent control device. The LA Controller should be configured to provide 24-vac output in order to integrate with the interface relay on the E Series Enclosure.

**Caution:** Do not mount or locate any field provided electrical or mechanical devices within an ISIMET panel. Additionally, except for units operating power, do not place any line voltage wiring inside an ISIMET control panel. Where mounted in ceiling spaces, Contactors should be readily accessible with no obstructions preventing access.



## Recommended Wiring Mechanically Held Contacts And Shunt Trip Breakers

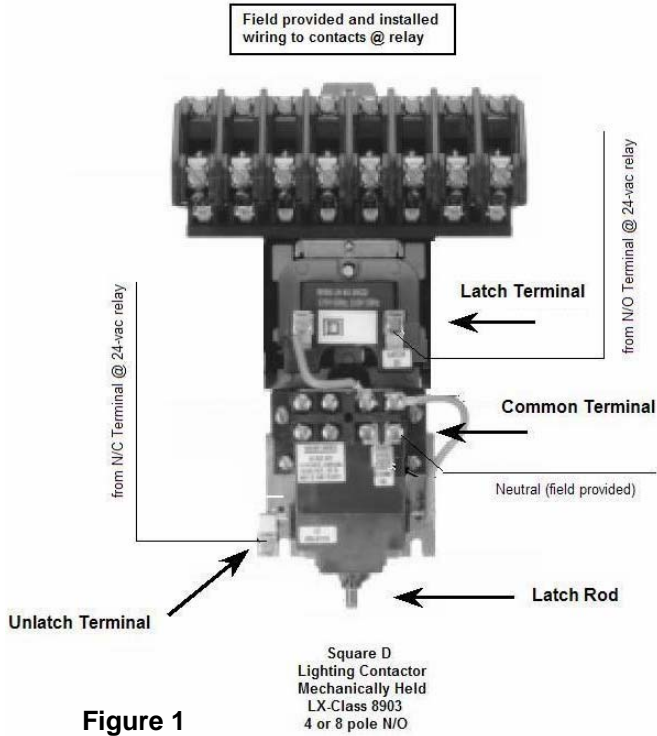


Figure 1

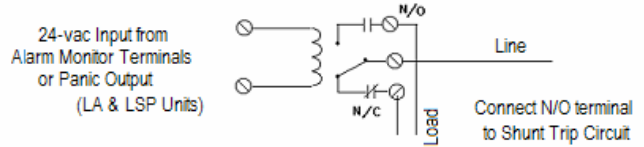


Figure 2

NOTE: Relay should be mounted exterior of the Control Unit.

All **ISIMET** Applications use mechanically held Square D - Master Control N/O Multi-pole Lighting Contactors to control the 120 VAC circuits to the convenience outlets (Figure 1). Square D - Definite Purpose Contactors are used when a controlled device load demand exceeds normal operating amperes. All E-Series Companion Enclosures are equipped with an interface relay to enable the Utility Controller's output circuit to operate the contactors.

If relays or contactors other than those provided by **ISIMET** are used in the application, **ISIMET STRONGLY** recommends that only this type of contactor be provided. Additionally, an interface relay will need to be purchased from **ISIMET** to insure compliance with application installation requirements.

Where Electrical Circuits are operated by means of "Shunt Trip Breakers" then control should be accomplished as shown in **Figure 2** and as further stated in the ISIMET Supplemental Panic Output Wiring Instructions.

UI-508-A Units configured for line voltage applications are provided with "dry-contacts" for field connection of operated devices. Do not exceed voltage or amperage rating stated on the relay.

**Caution !!! Installations that are not in compliance with these recommendations may cause the system to malfunction and may void the warranty of the Utility Controller.**

**ISIMET recommends that any installation technique or configuration other than those expressly shown in ISIMET Product Literature of Drawings should be verified prior to field installation.**