

ISIMET – Utility 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 each Utility Controller. Verify wiring requirements with Manufacturer's requirements. Minimum 15 amp circuit. 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 Utility Controller to each controlled utility or device. Make connections at controlled device and terminate at output terminal on Controller's control panel. 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.

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

Remote Panic Assembly:

Provide low voltage control wiring from Utility 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.

Companioned LA Series Control Panel:

Where required by application, provide low voltage control wiring from Utility Controller to the LA Series Control Panel at the instructor's desk. Make connections at panel and terminate at Controller's PC Board so that a panic signal from one unit will place the other into its panic mode. Minimum wiring, 22 AWG, plenum rated cable. Provide cable with six conductors. Final wiring connections shall be as recommended by the manufacturer.

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.

CAUTION: Where output or Input Circuit Configurations or Operation intent differ from ISIMET Standards then Shop Drawings should be submitted to ISIMET prior to making field connections.



**Recommended Wiring
Mechanically Held Contacts
And
Shunt Trip Breakers**

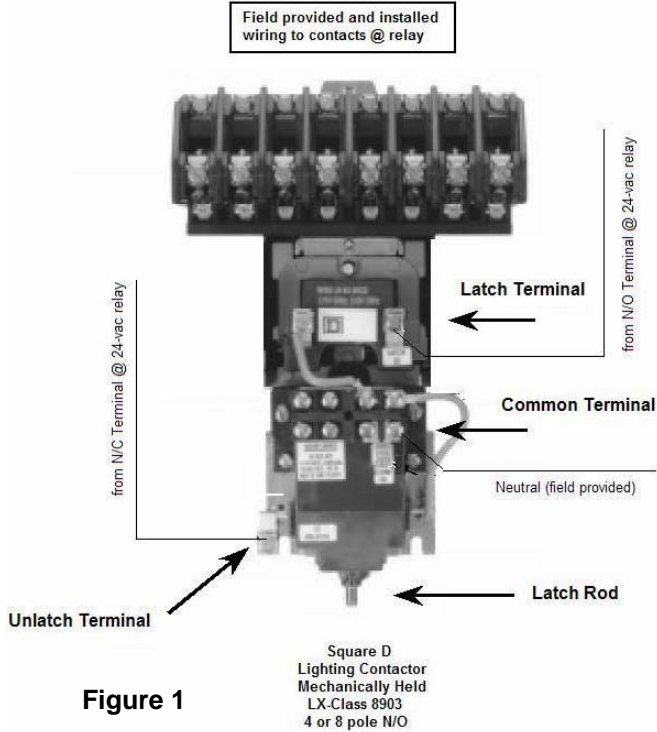


Figure 1

24-vac Input from Alarm Monitor Terminals or Panic Output (LA & LSP Units)

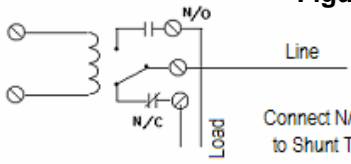


Figure 2

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.

Caution !!! Installations in non-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.

August 2007