ISIMET

E – Series Enclosure

Installation, Maintenance, and Operation Instructions

The E-Series Enclosures are pre-assembled and pre-wired enclosures intended for use with the **ISIMET** Utility Controller. Each contact point utilizes a master relay to control electrical outlets in the science classroom. The E-Series Enclosure utilizes a Square D mechanically held Lighting Contactor.

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Warranty:
ISIMET will repair or replace any defective parts or workmanship of this product for a period of one year from date of installation. The P.C. Board has a two year limited warranty. Damage caused by incorrect installation or improper usage is not warranted. Failure to follow recommended installation, operation, and/or maintenance procedures listed in this manual may void product warranty. Recovery rights shall be limited to the total sum of the amounts paid for the product by the purchaser.

EXTENDED WARRANTY:
ISIMET will extend the warranty of this product to a period of two years from date of installation when installation complies with all start up and routine maintenance procedures and the Controller incorporates with an "EMS" system for night time shutdown or "1st Time Keying" for UtC Version 9.1. Refer to Extended Warranty Policy.

Limits of Liability:
ISIMET's liability shall be limited to costs of repair or replacement parts. The Laboratory Service Panel and Utility Controller are not intended for usage other than those expressly described in this manual. _ISIMET_ shall not be liable for damage or injury caused by the improper use of the product.

ISIMET does not warrant against or assume liability for failure of operation or lack of notification to secondary integrated monitoring systems. The system should be thoroughly tested and adjustments made at time of initial operation. Periodic testing should be conducted by the user to assure that all components function and operate according to specifications.

Care should be taken in the installation of this product. _ISIMET_ shall not be liable for damage or injury caused from the improper installation of the product.

Warranty is Subject to Compliance with Specific Installation Requirements.

DISCLAIMER OF IMPLIED WARRANTY:
THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION HEREIN. SELLER DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OF THE GOODS OR OF THE FITNESS OF THE GOODS FOR ANY PURPOSE, AND BUYER AGREES THAT THE GOODS ARE SOLD "AS IS."

Enclosure Specifications:

The NEMA 1 enclosure may be either surface or flush mounted. Gray Powder Coat is available in surface mount only and provided with screw cover panel. Latch for White Powder Coat or Stainless hinged doors may be specified as Screw Driver Latch, Keyed Lock, or Hand Knob.
The enclosure is available in gray powder coat, or GPC with WPC door, or GPC with brushed stainless door.

Series 1 and 4 Enclosures (WPC or SS W/Gray PC Enclosure with Hinged Door)
Contacts are assembled using a 16X14X6 or 18X18X6 enclosure and when specified as flush mount are provided with the *ISIMET* Trim Kit for installations in finished/occupied areas. Flush Trim adds 3.5 inches to both Height and Width Wall Surface dimensions.

Contact points are arranged within the enclosure to insure ease in making field-wiring connections.

Relay Specifications:

Lighting Contacts (Standard Units)- Square D 8903 LX Series 4-12 circuit latching relay.
Maximum operating temperature for the contact is 160° F / 71° C.
All Contacts have an A600 NEMA Rating.
Average operating time in milliseconds: 15 pick-up; 16 drop-out.

Note: Contactors may be utilized for 277-vac lighting circuits and, where specified, are companioned with ELC Enclosures as secondary circuit control. (Specify – 277 suffix)

Custom Assemblies:
Contact a factory representative for custom assemblies

Important!

Do not install wiring or cable for integrated systems, remote panic assemblies or other interface wiring within conduit for either 24-vac control or 120-vac line voltage. Each wiring system should be housed in independent conduit and not bundled with wiring for other systems.

All local electrical codes must be followed when installing this enclosure and making the wiring connections.

Verify that the electrical supply is disconnected prior to making the wiring connections or servicing enclosure.

E Series Enclosures
Pre-Assembled Contact Enclosures
Model Number Description

E - 3 1 08 - S - L F

Enclosure Series
1 - White Powder Coat
3 - Gray Powder Coat
4 - Gray Powder Coat
   w/ Stainless Door & Trim

Mounting Style
1 - Surface Mount
2 - Flush Mount

Number of Contacts
0 4 thru 24
+ Even count of contacts required

Door Latch
S - Screw Driver Latch
K - Keyed Lock
H - Hand Knob

Relay
L - Lighting Contacts
* Relays have 120 VAC coils
Mechanically held contacts

Options
Ex - Fan Circuit
Ex2 - Hi/Low Fan Circuit
F - Fume Hood Circuit
A - Auxiliary Circuit
   (User Defined)
Relays for Optional Circuits have 24 VAC coils

Enclosure Dimensions:

Enclosure Style	Series 3 12-circuit Max.	Series 1 & 4 12-circuit Max.	Series 3 14-24 circuits	Series 1 & 4 14-24 circuits
Height	16	16	18	18
Width	12	14	18	18
Depth	4	6	4	6

Series 3 units - Screw Cover Panel

Series 1 & 4 units - Hinged Door
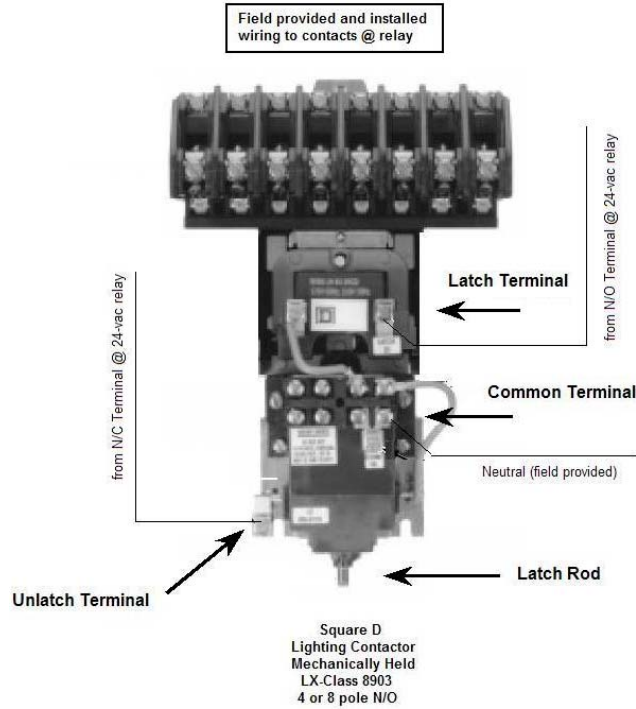
* Series 3 units are Surface Mount only.

Wiring Information and Instructions:

Enclosures are provided with Model # RIBMN24C panel mounted interface relay.
Contact leads from interface relay are connected to coils at each AC Lighting Contactor.
Relay is labeled to correspond with the output circuit from the Utility Controller.
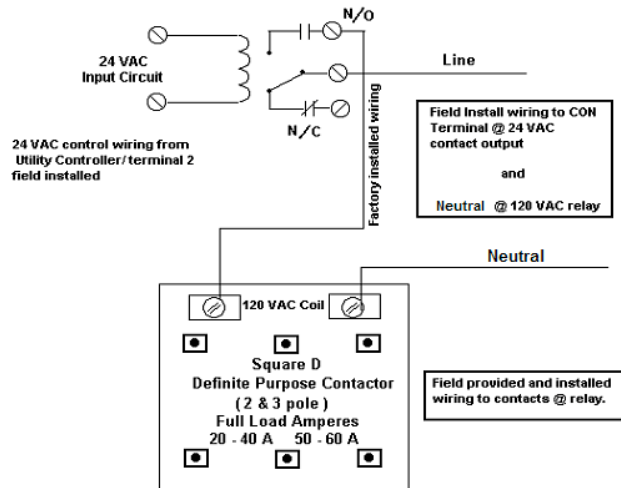Field wiring required from Load Center to AC relay contact.

Caution: Except for units equipped with a 120 VAC coil interface relay, only connect 24 VAC control wiring from Utility Controller output circuits to input terminal at interface relay.

Grounding: Enclosure should be grounded by terminating service ground wire to enclosure at grounding lug.
Load Center: We recommend maximum 20-amp breaker.

Typical Wiring Diagram – Mechanically Held - Latching Contactor

Field provided and installed wiring to contacts @ relay

from N/O Terminal @ 24-vac relay

Latch Terminal

from N/C Terminal @ 24-vac relay

Common Terminal

Neutral (field provided)

Unlatch Terminal

Latch Rod

Square D
Lighting Contactor
Mechanically Held
LX-Class 8903
4 or 8 pole N/O

Typical Wiring Diagram – Electrically Held & Optional Definite Purpose Contactor

N/O

24 VAC Input Circuit

Line

Factory installed wiring

Field Install wiring to CON Terminal @ 24 VAC contact output

and

Neutral @ 120 VAC relay

24 VAC control wiring from Utility Controller/terminal 2 field installed

N/C

Neutral

120 VAC Coil

Square D
Definite Purpose Contactor
(2 & 3 pole)
Full Load Amperes
20 - 40 A   50 - 60 A

Field provided and installed wiring to contacts @ relay.

Optional Contactor:
The E-Series Enclosure can be factory modified to provide space for an optional Definite Purpose Contactor to control devices such as Exhaust Fans. This contactor is controlled by a 24-vac signal from either the remote or auxiliary output circuits at the Utility Controller.

Optional Sequences of Operation are: (Contact factory regarding these options.)
- Contactor energizes with "EMS" **ON** input signal.
- Activating the key switch is required for first engagement.
- "EMS" **OFF** and/or panic state will de-energize contactor.
- Panic state will energize contactor.

Installing the Enclosure

CAUTION: Provided mounting hardware must be used.

There are two options for mounting the E-Series Enclosure:
Flush Mounted and Surface Mounted.

Flush Mounted: Style 2

Prior to installation:
- The Enclosure mounts between two standard
  spaced wall studs within a minimum 6" wall cavity.
- If stud spacing is greater than that required for the
  mounting of the controller, add studs to insure a secured
  mounting.
- The studs should be facing to facilitate securing the enclosure.
- Predetermine wall finish so that the face lip of the enclosure
  aligns flush with the finished wall surface.

To install:
1. Using the self-starting screws (13), mount the flanges at
   each side and at the top and bottom of the enclosure.
2. Attach the enclosure to the wall studs with field-provided
   sheet metal screws per the drawing.
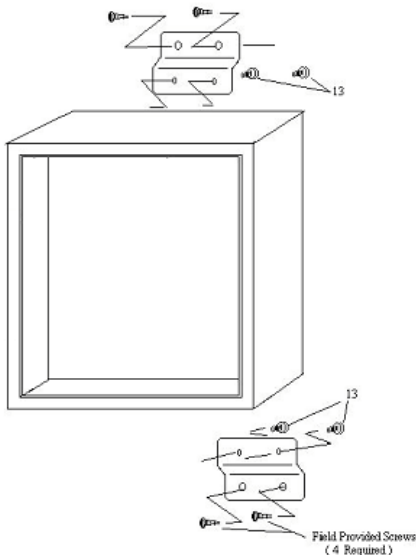3. Level the enclosure.

Notes:
- When the Door Panel is mounted onto the controller,
  it should protrude beyond the wall surface about ¼".
- Care should be taken at installation time to ensure that this occurs.
- A Flush Mounting Trim Flange is provided with each flush
  mounted unit. Separate installation instructions and hardware are
  included with this flange.
- It is the responsibility of the installer to verify finish wall
  dimensions.

Field Provided Screws
(8 Required)

13

13

Flush Mounting Flange - 11
(4 Required)
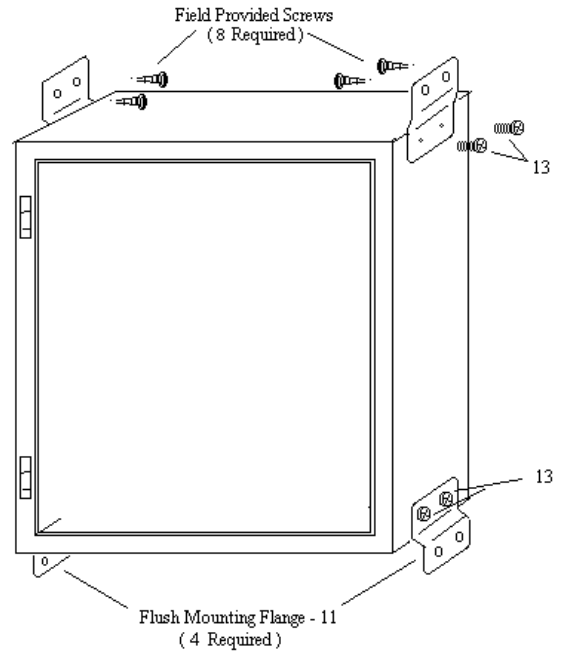
For best Flush Mounting
results, recess face of
enclosure's lip
¼ " behind wall finish

Flush Mount Style 2 Enclosures: Clearance around Enclosure:

Care should be taken to allow ½" clearance from wall framing and sheet-rock or other wall surface material
around the outer surface of the unit to permit the trim to be properly installed.

13

13

Field Provided Screws
(4 Required)

Surface Mounted: Style 1

Prior to installation:
- Wall finishes should be complete.
- The wall cavity must have sufficient backing or support to ensure a
  firm mounting of the enclosure to the wall surface.

To install: Where flanges are provided
1. Secure the surface mount flanges to the back of the enclosure with
   the self-starting screws (13).
2. Use the field-provided screws to attach the enclosure by the flanges
   to the wall surface.
3. Level the enclosure.

Surface Mounted: Special Notations

Standard units are provided in a 16X12X4 enclosure with
mounting hardware and screw latch removable front panel. The
units are intended to be surface mounted.

Custom and units with excess of 12 pole contacts are provided
in a 18X18x4 enclosure.

Installing the Door Panel: Series 1 & 4 only

To install the Door Panel on the Enclosure:
1. Position the door at 90° – 100° of enclosure.
2. Slide top hinge pin onto fixed hinge post at top of door.
3. Slide lower hinge pin toward lower spring hinge mechanism with hinge pin lever in retract position.
4. With lower hinge pin in position, turn hinge pin lever outward and down, then turn inward to the extended lock position.

STEP 1

STEP 2

STEP 3

STEP 4
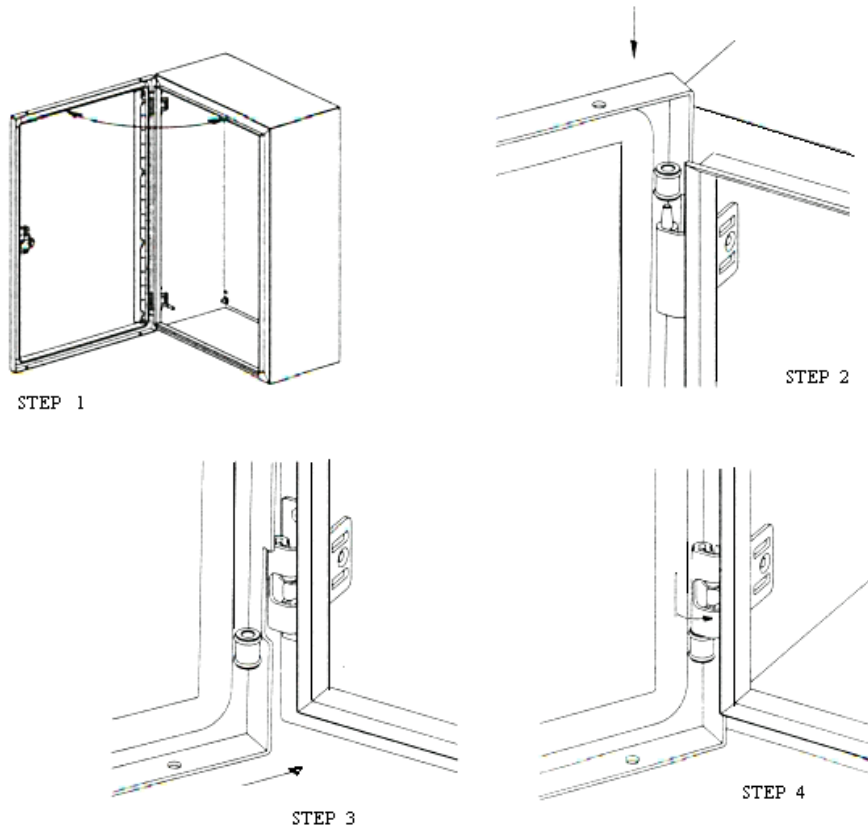
Installing the Flush Door Trim: Series 1 & 4 only

Prior to installing Door Trim, ensure that wall finishes are complete and that the door panel has been installed.
Flush Trim adds 3 ½" to both Height and Width Wall Surface dimensions.

To install the Flush Door Trim:
1. With the door in the open position, slide flush door trim over enclosure.
2. Align holes on enclosure with upper and lower holes in door trim.
3. Insert four (4) 8-32 (provided) screws through enclosure panel and tighten into door trim.

7
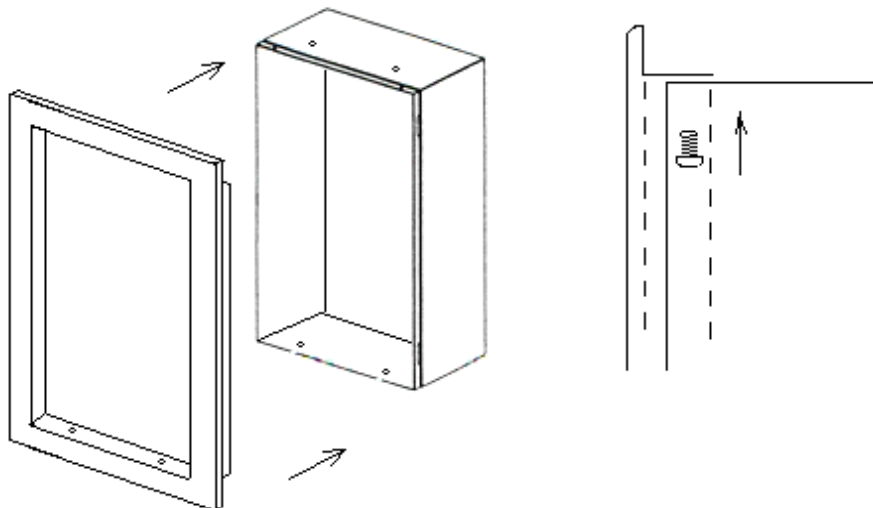
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