IMPORTANT SAFEGUARDS

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

- DO NOT MOUNT NEAR GAS OR ELECTRIC HEATERS.
- EQUIPMENT SHOULD BE MOUNTED IN LOCATIONS AND AT HEIGHTS WHERE IT WILL NOT BE SUBJECTED TO TAMPERING BY UNAUTHORIZED PERSONNEL.
- THE USE OF ACCESSORY EQUIPMENT NOT RECOMMENDED BY THE MANUFACTURER MAY CAUSE AN UNSAFE CONDITION.
- DO NOT USE THIS EQUIPMENT FOR OTHER THAN ITS INTENDED USE.

When using electrical equipment, basic safety precautions should always be followed, including the following:

THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED. DISCONNECT POWER TO ALL CIRCUITS BEFORE WIRING FIXTURE. INSTALL IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL CODES. DO NOT CONNECT TO AN UNGROUNDED SUPPLY. READ ALL FIXTURE MARKINGS AND LABELS TO ENSURE CORRECT INSTALLATION OF FIXTURE. SUPPLEMENTAL INSTRUCTIONS MAY BE LOCATED ON THE FIXTURE, IN ADDITION TO THIS INSTRUCTION SHEET, REGARDING ORIENTATION, OR MOUNTING RESTRICTIONS.

SAVE THESE INSTRUCTIONS

APPLICATIONS

THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED. FOLLOW ANY SPECIFIC INSTRUCTIONS ON LUMINAIRE LABELS.

Preparation

- Read all fixture markings and labels to ensure correct installation of the fixture. Additional information may be located on the fixture or in supplemental instructions sheets, separate from this instruction sheet, regarding orientation,mounting restrictions and optional equipment.
- For Peace of Mind Warranty, fixture must be mounted to building with at least 4 fasteners (4 point mounting). Attachment to the electrical box only is NOT recommended.
- WARNING: Disconnect power to the circuit before wiring fixture.
- Minimum 12" supply wire pigtails must extend from electrical junction box for field connections within fixture enclosure.
- Drilling Tip: Drill small pilot holes from inside, using drill points as guides. Enlarge holes from outside, using spade bits and light pressure to reduce "digging in" and slow drill speed to prevent material overheating. Remove burrs and plastic chips from parts prior to assembly.

WALL MOUNTING (Fig.1): Remove SHIELD and STENCIL ASSEMBLY. Remove ELECTRICALCHASSIS by disengaging tabs in upper corners. Remove REFLECTOR (if provided). Locate appropriate REAR PANEL drillpoints and drill (4) 5/16" dia. mounting holes and (1) hole of suitable size for supply wire entry. Place HOUSING over an installed electricaljunction box (drill points provided for temporary j-box attachment prior to permanent mounting).Locate and drill 4 pilot holes in mounting surface using REAR PANEL as a template. For wetlocation installation, attach self-adhesive pad GASKET to REAR PANEL. Using 1/4-20 fastenersand anchors appropriate for the mounting surface (not supplied), attach HOUSING to structure.

CANOPY MOUNTING (Figs. 1, 2, 4): Remove front SHIELD and STENCIL ASSEMBLY.
Remove ELECTRICAL CHASSIS by disengaging tabs in upper corners. Remove REFLECTOR (if provided). Locate appropriate HOUSING drill points and drill (2) 5/16" dia. holes for MOUNTING CANOPY attachment and (1) hole of suitable size for supply wire entry. Place MOUNTING PLATE over an installed electrical junction box (slotted holes provided for temporary j-box attachment prior to permanent mounting). Locate and drill 4 pilot holes in mounting surface using MOUNTING PLATE as a template. For wet location installation, attach self-adhesive pad GASKET to MOUNTING PLATE. Using 1/4-20 fasteners and anchors appropriate for the mounting surface (not supplied), attach MOUNTING PLATE to structure.
Connect supply ground to GROUND WIRE provided. For wet location installation, attach selfadhesive pad GASKET to CANOPY COVER. Using HARDWARE provided, attach CANOPY COVER and HOUSING to CANOPY MOUNTING PLATE.

ALL MOUNTING TYPES (Fig. 1, 3, 4) Configure DIRECTIONAL ARROWs as needed. To remove DIRECTIONAL ARROW COVER, use 7/16" nut driver (not supplied) to loosen RETAINER NUT approx. one complete turn and push in cover from outside. Tighten RETAINER NUT to secure COLOR FILTER PANEL and aluminum LIGHT MASK (if provided). Install ELECTRICAL CHASSIS. Install REFLECTOR (if provided), routing supply wires thru center hole (if wall mounted). Route supply wires around ELECTRICAL CHASSIS and connect to appropriate push-in connectors. Connector lead color coding: White= Neutral, Black= 120V, Orange= 277V, Blue= 347V. Install front STENCIL ASSEMBLY and SHIELD to HOUSING using Posigrip fasteners (included) and 9500 screwdriver (ordered separately).

CONDUIT ATTACHMENT(Fig. 5) ½" trade size conduit may be used for power entry into top or end of HOUSING or into center of REAR PANEL. Locate suitable drill point and drill 7/8" dia. hole. HOUSING is reversible for conduit entry from either end (Note UP indicator). Use proper conduit hub and locknut for wet or damp/dry location installation (not supplied).

Applications
Millenium Metrex METDU, METDW, MWESW series

Features

- Sealed, maintenance-free nickel-cadmium battery. EL option is suitable for use in 10°C to 40°C environments. EL-CW option includes a thermostatically controlled battery warmer and is suitable for use in -40°C to 40°C environments.
- Self-testing circuitry automactically conditions the battery and performs regularly scheduled tests that conform to NFPA 101 Life Safty Code. Self-diagnostic circuitry monitors battery, charger, power transfer and lamp functions.

Installation

- Fixture is shipped with battery disconnected.
- Follow Kenall Installation Instruction Sheet F-2189 FOR proper mounting, assembly and wiring of unit.
- After installing electrical chassis and making field wiring connections (AC power OFF), connect polarized 2-pin battery connector to PC board assembly.
- Exit legend will illuminate for a few seconds and then extinguish. This signals that battery is properly connected and is protected from discharging until AC power is established.
- Attach front stencil assembly and shield.

- Applications Metrex Egress METEL Series wall surface mount unit equipment for high abuse environments. See fixture label for restrictions.

Features

- Sealed, maintenance-free nickel-cadmium battery. Standard fixture is suitable for use in 10°C (50°F) to 45°C (113°F) environments. CEL option includes a thermostatically controlled battery warmer and is suitable for use in -30°C (-22°F) to 45°C (113°F) environments. Follow Kenall Instruction Sheet F-2929 for proper wiring of unit.
- Self-testing circuitry automatically conditions the battery and performs regularly scheduled tests that conform to NFPA 101Life Safety Code. Self-diagnostic circuitry monitors battery, charger, power transfer and lamp functions.

Installation (Figs. 2, 3)

- Follow Kenall Instruction Sheet F-2932 for proper mounting,assembly and wiring of unit.

Start Up (Figs. 2, 3)

- Do not apply power to fixture unless supply can be maintained for at least 7 days without interruption.
- If battery is not connected when power is applied, the selfdiagnostic feature will detect the missing battery and the status LED will display a steady red signal. Connect the battery and reset the system by pressing and holding the manual test pushbutton for approximately 7 seconds.
- Battery connection sequence: Always connect BATTERY CONNECTOR 1 first and BATTERY CONNECTOR 2 (if equipped) second. Always disconnect in reverse order.

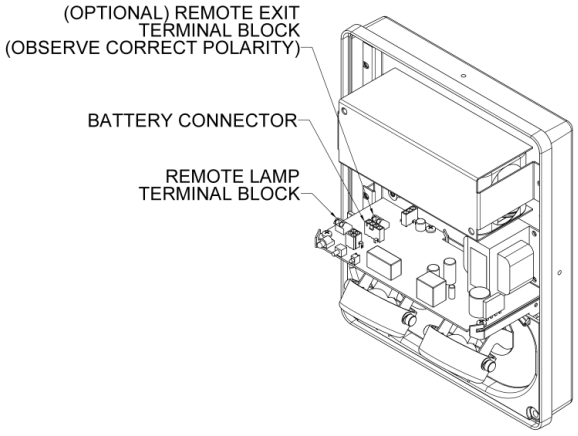

Figure 1

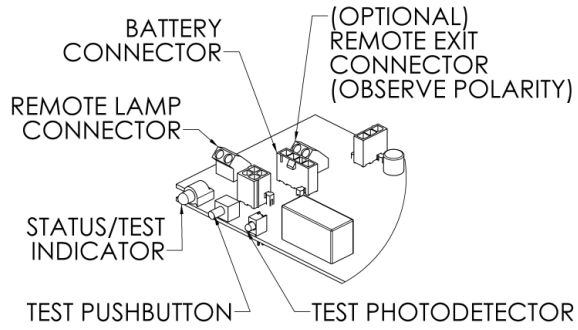

Figure 2

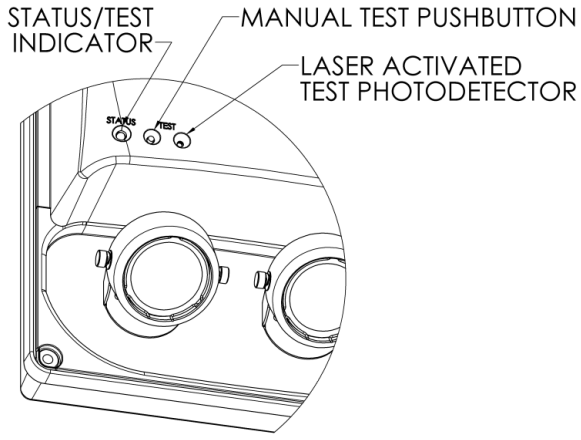

Figure 3

INSTALLATION (cont'd)

Battery Conditioning

- Upon initial power-up, the fixture will supply a trickle charge to the battery for 90 minutes. Then it will switch to full charge mode for approximately 24 hours. The fixture will thencondition the battery with a pair of 90 minute discharge and 24 hour recharge cycles.

Load Learning (Fig. 3)

- During the final discharge/recharge cycle of the battery conditioning function, the self-diagnostic feature will measure the operating current of the internal and external (if equipped emergency lamps and external LED exit sign (RXR option only).

CAUTION: To avoid electrical overload, total connected lamp load (factory and field installed) should not exceed output rating.

- Any time the total emergency lamp load (internal or external) or the remote exit sign load (RXR option only) is intentionallyaltered, the system must be reset by pressing and holding themanual test pushbutton for approximately 7 seconds. Failure to do so will result in a lamp fault indication.

Normal Operation

Normal operation is indicated by a steady green signal from the status LED. This indicates t he fully charged battery is receiving a maintenance (trickle) charge and normal A power is present. The normally off emergency lamps will be off and any normally on remote exit signs (RXR option only) will operate from normal AC power.

User Initiated Tests (Fig. 3)

- A single momentary actuation of the laser-activated photodetector (see fig.1) or the manual test pushbutton will initiate a one-minute test. The normally off emergency lamps will come on and the status LED will display single green flashes,signaling a test is in progress.
- Within the first 5 seconds, pressing the manual test pushbutton twice will change the test duration to 30 minutes, three times for 60 minutes, or four times for 90 minutes.
- Actuating the photodetector or the manual test pushbutton after the first 5 seconds will cancel any user initiated test.

Automatic Tests (Fig. 3)

- Automatic tests meet or exceed requirements NFPA 101 Life Safety Code, Section 4.6, Article 7.9.3: Monthly Test 30 minute cycle every 30 days.
- These tests allow the self-diagnostic circuit to monitor battery discharge and power transfer functions and exercise the battery to optimize its capacity. The normally off emergency lamps will come on and the status LED will display single green flashes,signaling a test is in progress.
- Actuating the TEST PHOTODETECTOR or the manual TEST PUSHBUTTON after the first 5 seconds will cancel any automatic test and delay by 12 hours all subsequent automatic tests.

Emergency Operation

- When the AC voltage drops below a predetermined level either due to a power failure or a brownout condition, the unit willswitch to emergency operation. The status LED will turn off, signaling normal AC power is not present. Unit will remain in emergency operation for 10 minutes after resumption of normal AC power to allow normal lighting systems to return to full brightness.

- Upon resumption of normal operation there will be a 90 minute time delay before a full charge is applied to the battery to allow the unit to reach normal operating temperature (CEL option). During full charge the status LED will display two green flashes. The charger will return a depleted battery to full capacity within 24 hours. When the battery has reached full capacity, maintenance (trickle) charging begins and the status LED will display steady green.
  Load Learning (Fig. 3)

- In the event of a prolonged power outage, the battery is protected from deep discharge by a low voltage disconnect circuit.

CAUTION: To avoid electrical overload, total connected lamp load (factory and field installed) should not exceed output rating.

- Any time the total emergency lamp load (internal or external) or the remote exit sign load (RXR option only) is intentionallyaltered, the system must be reset by pressing and holding themanual test pushbutton for approximately 7 seconds. Failure to do so will result in a lamp fault indication.

Status Indicator (Figs. 3, 4)

- A single dual-color status/fault LED is provided to allow monitoring of the circuit function. See fig. 2.

Self-Diagnostics (Figs. 3, 4)

Battery: The battery condition is constantly monitored during normal operation, tests and charge cycles. A malfunctioning or end-of-life battery will terminate any charge or test and return the unit to normal operation. The status indicator will display steady red.

Emergency Lamps: The emergency lamp condition is constantly monitored during test cycles. A variation of more than 10% of nominal load current will cause the status indicator to display single red flashes.

Remote Exits (if equipped): The LED lamp condition is constantly monitored during normal operation and test cycles. A variation of more than 25% of nominal load current will cause the status indicator to display two red flashes.

Charger: The charger function is constantly monitored during battery charging. A charger malfunction will terminate the charge and return the unit to normal operation. The status indicator will display three red flashes.

Transfer: The normal-to-emergency and emergency-tonormal power transfer functions are monitored at the beginning and end of each test cycle. A transfer circuit malfunction will cause the status indicator to display four red flashes.

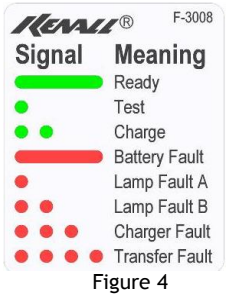

Figure 4

GREEN Status Indications	
On	Normal AC Power Operation (Maintenance Charge)
Off	AC Power Not Present (Blackout/Brownout)
One Flash	Test in Progress, User Initiated or Automatic
Two Flashes	Recovery Charge in Progress
RED Fault Indications	
On	Battery Disconnect/Fault detected
One Flash	Emergency Lamp Fault Detected
Two Flashes	Remote Exit Fault Detected (If Equipped)
Three Flashes	Battery Charger Fault Detected
Four Flashes	Load Transfer Fault Detected

120VAC Installation (Fig.1)

- Connect the WHITE wires from the BATTERY HEATER to COMMON.
- Connect one RED wire from the THERMOSTAT to the BLACK wire from the BATTERY HEATER.
- Connect the second RED wire from the THERMOSTAT to 120VAC supply.

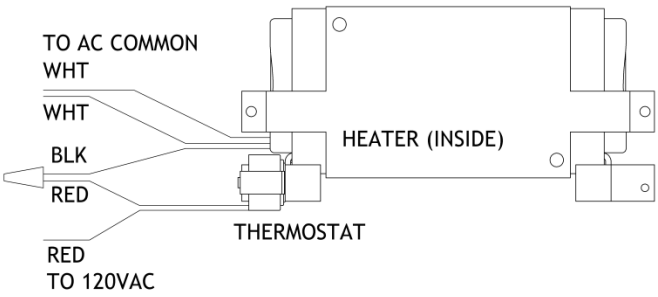

Figure 1

277VAC Installation (Fig.2)

- Connect one WHITE wire from the BATTERY HEATER to COMMON.
- Cap off the BLACK wire from the BATTERY HEATER.
- Connect one RED wire from the THERMOSTAT to the second WHITE wire from the BATTERY HEATER.
- Connect the second RED wire from the THERMOSTAT to 277VAC supply.

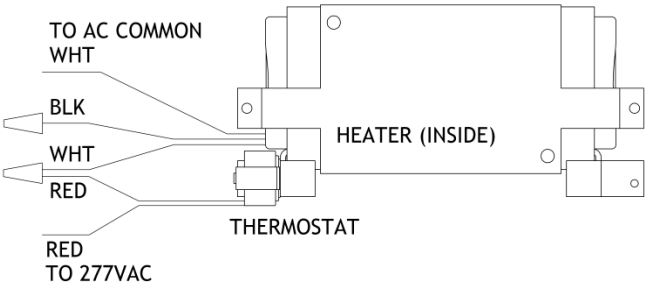

Figure 2

Battery Maintenance (Fig.3)

- To remove battery, remove (2) screws securing BATTERY RETAINER BRACKET. Remove bracket.
- Unwrap the foil lined fiberglass INSULATION from the BATTERY. There is no need to remove the INSULATION.
- Installation is the reverse of removal.

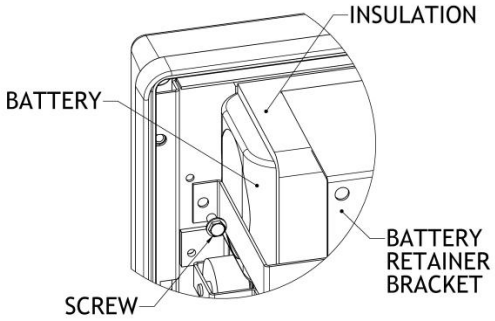

Figure 3

CUSTOMER SERVICE

For technical assistance, call 1-800-4KENALL (1-800-453-6255).

WARRANTY

For warranty information visit www.kenall.com/Resources/Certified-Performance-Warranties