CMEXR, MMEX, METDU, METSR, METSU, and METSW Series

IMPORTANT SAFEGUARDS

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

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

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 INSTRUCTION ON LUMINAIRE LABELS.

- Do not mount near gas or electric heaters.
- Equipment should be mounted in locations and at heights where it will not be readily subject 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 intended use.
- Servicing of this equipment should be performed by qualified personnel.
- WARNING: Disconnect power to the circuit before wiring fixture.
- Read all fixture markings and labels to insure 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.

SAVE THESE INSTRUCTIONS

OPERATING INSTRUCTIONS

APPLICATIONS

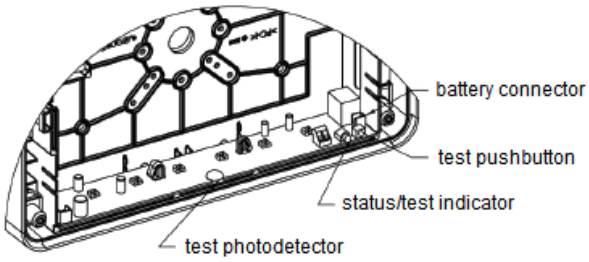
Mighty Mac MMEX series, Millenium Metrex METDU, METSR, METSU, METSW series, SimpleSeal CMEXR series exit signs with EL or CEL Emergency Battery Pack options. See fixture labels for instructions. METSW unit shown, other units similar.

FEATURES

- Sealed, maintenance-free nickel-cadmium battery. EL option 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 -45 C (-49 F) to 45 C (113 F) environments. Self-testing circuitry automatically conditions the battery and performs regularly scheduled tests that conform to NFPA 101 Life
- Safety Code. Self-diagnostic circuitry monitors battery, charger, power transfer and lamp functions.

INSTALLATION

- Follow Kenall Installation Instruction Sheet for proper mounting, assembly and wiring of unit.
- Fixture is shipped with battery disconnected.
- 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 the battery is properly connected and is protected from discharging until AC power is established.
- Carefully align front stencil assembly over status/test pushbutton and indicator. Snap front stencil assembly to housing.



START-UP

- 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 self-diagnostic 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 push test switch for approximately 7 seconds.
- 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 then condition the battery with a pair of 90 minute discharge and 24 hour recharge cycles.

LOAD LEARNING

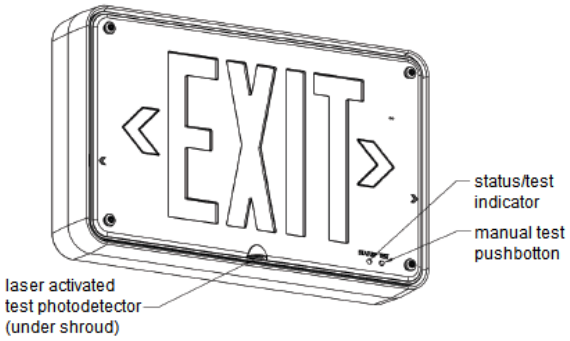
- During the final discharge/recharge cycle of the battery conditioning function, the self-diagnostic feature will measure the operating current of the internal and external (if equipped) exit sign(s).
- Any time the total (internal or external) exit sign load is intentionally altered, the system must be reset by pressing and holding the manual 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 the fully charged battery is receiving a maintenance (trickle) charge and normal AC power is present. The normally on exit sign(s) will operate from normal AC power

User Initiated Tests

- A single momentary actuation of the laser-activated photodetector 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

- Automatic tests meet or exceed requirements of 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 status LED will display single green flashes, signaling a test is in progress. Automatic tests can be delayed 12 hours by actuating the laser-activated photodetector or the manual test pushbutton once during an automatic test.

EMERGENCY OPERATION

- When the AC voltage drops below a predetermined level either due to a power failure or a brownout condition, the unit will switch 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 power supply to stabilize.
- 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.
- In the event of a prolonged power outage, the battery is protected from deep discharge by a low voltage disconnect circuit.

SELF DIAGNOSTICS

Status Indicator

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

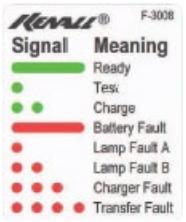
GREEN Status Indications	
On	Normal AC power operation (maintenance charge)
Off	AC power not present (blackout/brownout)
One Flash	Test in progress, user initiated or automatic
Two Flashes	Charge in progress
RED Fault Indications	
On	Battery disconnect/fault detected
One Flash	Internal exit lamp fault detected
Two Flashes	Remote exit lamp fault detected (if equipped)
Three Flashes	Battery charger fault detected
Four Flashes	Load transfer fault detected

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.

LED Exit Lamps

The LED lamp condition is constantly monitored during normal operation and test cycles. A variation of more than 50% of nominal load current will cause the status indicator to display single red flashes.



Remote LED Exit Lamps (if equipped)

The LED lamp condition is constantly monitored during normal operation and test cycles. A variation of more than 50% 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-to-normal 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.

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

WARRANTY
This product is warranted by Kenall to be free of defects in workmanship and materials for a period of one (1) year from the date of the invoice. LED lamps and internal power regulation components are warranted for a period of five (5) years from the date of the invoice against defects in materials and workmanship. The external DC power supply carries a three year warranty from the date of the invoice.
The warranty is void if all power and dimming signal wiring is not completely shielded against grounded aluminum conduit and installed with a suitable MRI room filter (by others).
Kenall reserves the right to issue credit, repair, or replace the defective merchandise, at its discretion, upon notification and confirmation by its local representative of the defect. Kenall also reserves the right to test and examine the defective product if the defect is questionable and to deny the warranty herein for any product altered, improperly installed, installed in applications for which it is not intended. This includes operation in ambient temperatures above stated limits for any length of time. Failure by electrical surge shall not be covered under warranty.
Kenall assumes no responsibility for labor or freight costs incurred in connection with the installation, removal, or replacement of products determined to be defective or any other consequential or incidental damages arising from the use of the product. Kenall's entire liability on any claim of loss or damage

resulting from a defective product is limited to the replacement price of the product.
The foregoing warranty is exclusive of all other warranties and no other warranties of any kind are expressed or implied.