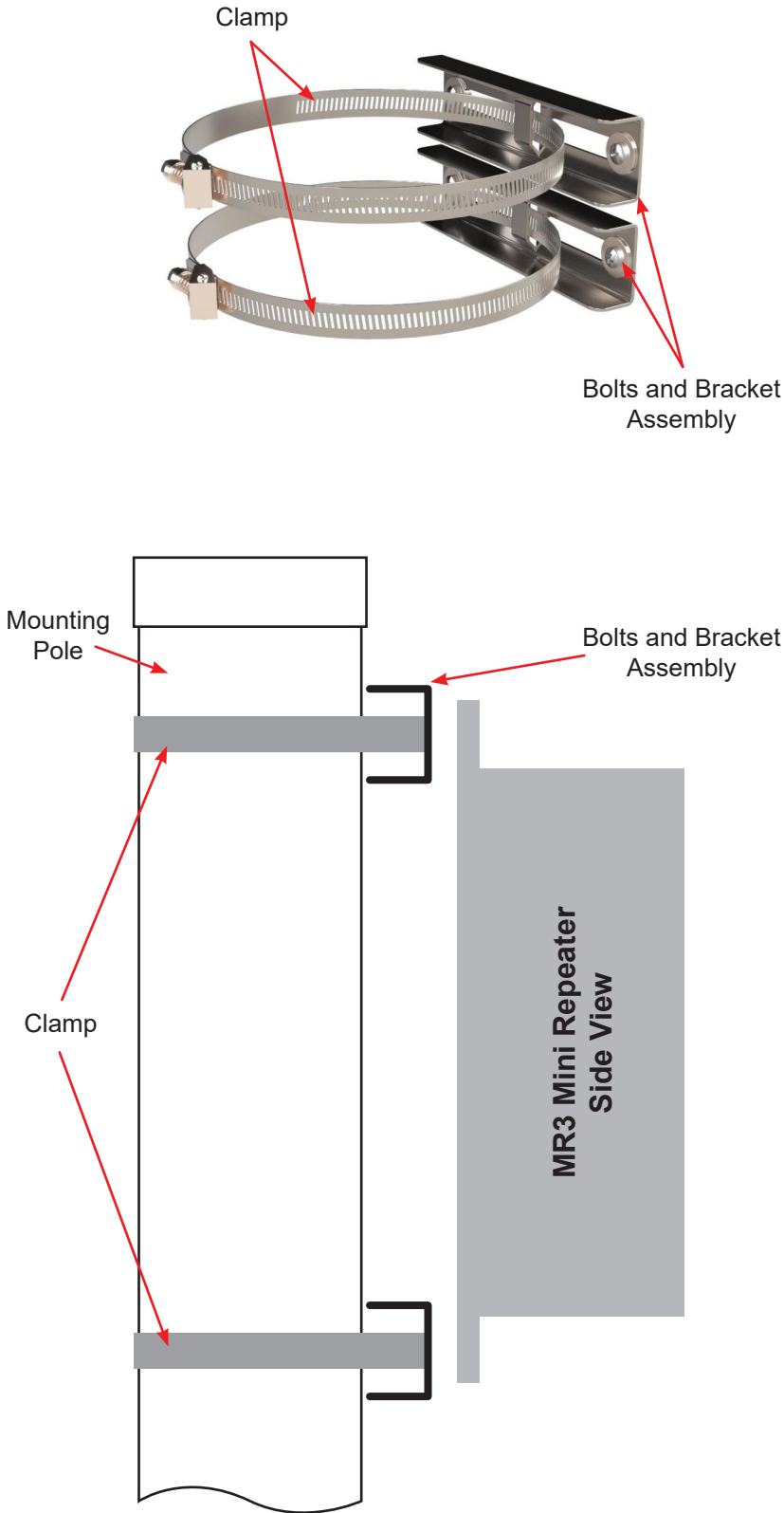


MR3 Mini Repeater Mounting Assembly

- Hardware for pole mounting is included.

DO NOT Mount MR3 Mini Repeater with its antenna against metal surfaces!

Improper Installation May Impair Performance



FCC Statements

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Industry Canada Statements

This Class A digital apparatus complies with Canadian ICES-003.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.(select the class for your device)

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

GRACE One (1) Year WARRANTY

Grace Industries Incorporated, of Fredonia PA 16124 USA, warrants products that it manufactures to be free from defects in workmanship and materials for a period of one (1) year from the original date purchase. This warranty does not apply to third party products sold by Grace Industries. Grace Industries will repair or replace, at their sole discretion, defective products free of charge. This warranty applies to products that Grace Industries deems defective in its sole discretion due to defects in material or workmanship under normal use and maintenance and where a defect was not caused by accident, misuse or abuse of the product and that no disassembly, repairs or parts replacement were made or attempted by other than Grace Industries' personnel. **GRACE INDUSTRIES, INCORPORATED SHALL NOT BE LIABLE FOR ANY DIRECT, INCIDENTAL OR CONSEQUENTIAL LOSS OR DAMAGE ARISING OUT OF THE USE OF THE PRODUCT OR FAILURE OF THE PRODUCT TO OPERATE.**

The sole and exclusive remedy under all guarantees or warranties, expressed or implied, is strictly limited to repair or replacement as herein provided. **ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO WARRANTIES OF FITNESS AND MERCHANTABILITY, ARE HEREBY LIMITED IN DURATION TO A PERIOD OF ONE (1) YEAR FROM THE DATE OF ORIGINAL PURCHASE.** The warranty and liability set forth here are in lieu of all other warranties, expressed or implied, in law or in fact, including warranties of merchantability and fitness for a particular purpose.

Warranty claims process: 1) Obtain a Return Authorization Code or Number from Grace Industries corporate headquarters by calling phone number 724-962-9231, or by email correspondence to sales@graceindustries.com. 2) The product name, serial number, date and proof of purchase must be provided and 3) Return products including Return Authorization number, prepaid and accompanied by original proof of purchase that states the date and location of purchase to: Grace Industries, Inc., Repair Department, 305 Bend Hill Road, Fredonia, PA 16124, USA. Customer is responsible for all shipping costs, return shipping costs, handling, or any other fees associated with a warranty claim.



Grace Industries, Inc.
724-962-9231
305 Bend Hill Rd
Fredonia, PA 16124
sales@graceindustries.com

MR3 Mini Repeater
User Information



MR3 Mini Repeater extends operational distance of a Grace Lone Worker Safety system.

MR3 Mini Repeater



Power Terminal and Battery Backup

MR3 Mini Repeater

MR3 Mini Repeater extends operational distance by receiving and retransmitting RF signals to and from Grace Gateway Base Monitoring devices and worker-worn Pendants.

Power and Operation

MR3 Mini Repeater is powered by 90-264 VAC 50/60 Hz Single Phase 1 Amp source and contains a Lithium battery backup.

The repeater is equipped with a standard 120 VAC 3-prong electrical cord and is powered by plugging into a 120 VAC outlet.

If a hardwired connection is desired, the provided cord can be disconnected from the AC power connector located inside the MR3 Mini Repeater. The AC power connector is a screw-less terminal rated for solid or stranded wire from 14-22AWG. Wires should be stripped 1/2 inch. Wires should be inserted by using a small screwdriver to depress the lever and then inserting the wire.

When the MR3 Mini Repeater is connected to AC Power, the Power Indicator LED glows Green, indicating the unit has Power and is ready for operation.

With loss of AC power, the Power Indicator glows Red, indicating Repeater is operating on battery power.

Power Indicator LED

- **Green Glow:** Operating on AC Power.
- **Red Glow:** Operating on battery backup

Transmit / Receive LED

- **Green Flashing:** Transmitting a signal.
- **Red Flashing:** Receiving a signal.

MR3 Mini Repeater Specifications

- **Case:** Rugged, industrial grade, IP-rated, water-resistant enclosure
- **Color:** Light Gray
- **Weight:** 18 ounces (without cable and mounting brackets)
- **Case Dimensions:** 4.5" W x 7.5" H x 2.5" D
- **Power Cord Length:** 12.5 ft.
- **Antenna:** External half wave; 5.7" when extended, 1.25 x 5" when folded

- **Power Requirements:** 100-277 VAC 50/60 Hz. Single Phase 1 Amp
- **Battery Backup:** Provides backup power for up to 40 hours. (Size 18650, 3.7 V, 2.5 AH)
- **Operating Frequency:** 902-928 MHz
- **FCC ID:** J5MXHEM -- Meets FCC Part 15
- **IC:** 5916A-MXHEM -- Complies with Canadian ICES-003
- **Environmental Range:** -4°F / -20°C to +131°F / +55°C.
- **Compatible Equipment:** Grace Radio-H telemetry products
- Dual Mounting Brackets included for recommended pole-mounting
- **Cleaning / Decontamination:** Units contaminated by chemical or radioactive materials must be disposed of or decontaminated in accordance with all applicable regulatory standards. **DO NOT mark or apply paint to MR3 Mini Repeater.**

Battery Replacement

WARNING: Disconnect Power Supply before servicing MR3 Mini Repeater.

To change battery, disconnect the external power supply.

Loosen all four screws and remove the cover. Cut plastic zip tie securing the battery. Remove the battery from the holder and replace with a new Lithium battery. (Size 18650, 3.7 V, 2.5 AH).

If new battery is pre-charged, press **Battery Reset** button to power up the repeater on battery backup.

Replace cover and hand tighten the four screws until snug.

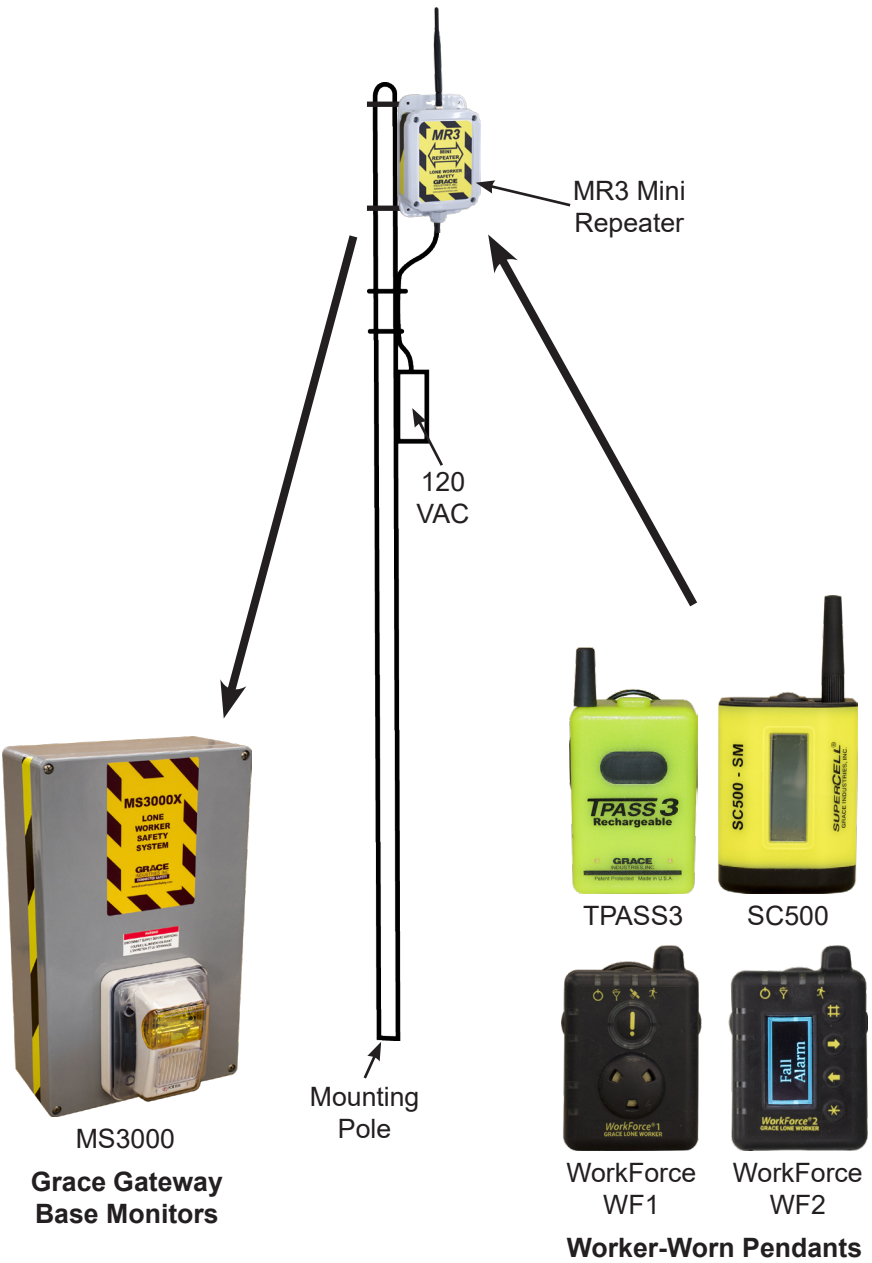
Reconnect power supply and test system for proper operation before use.

MR3 Mini Repeater System Installation

IMPORTANT: Always test System for proper operation before use.

MR3 Mini Repeater must be mounted so that there is a clear, unobstructed path to the area where Grace Gateway Base Monitoring devices and worker-worn Pendants are used.

For optimum performance, place MR3 Mini Repeater at a minimum of 6 feet above ground level.



Hardware for recommended pole mounting is included with each MR3 Mini Repeater.

DO NOT Mount MR3 Mini Repeater with its antenna against metal surfaces!