#### MRI4SEDI, MRI4SESI, NFCSEDI, & NFCSESI SERIES

# IMPORTANT SAFEGUARDS

#### 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

# GENERAL INSTALLATION INSTRUCTIONS

- Install in compliance with the National Electric Code, any applicable local codes, and any specific instructions given on the luminaire labels.
- If installing in conjunction with any additional options and/or accessories, also refer to the respective instruction sheets. For installation only by a qualified electrician.
- To maintain the ratings and approvals noted on the fixture nameplate, any fittings or mounting hardware supplied with this fixture, must be used with this fixture.
- Wiring from power supply to fixture must be in a rigid aluminum conduit with aluminum fittings.
- Read instructions provided with the MedMaster<sup>™</sup> MRIPSF external power supply for proper installation and electrical connection to • the lighting system.
- Use installation procedures appropriate for an environment involving MRI/EMI Shielded rooms and sensitive electronic equipment.

# **RECESSED FLANGE INSTALLATION (MRI4SEDI/NFCSEDI)**

- To ensure an adequate seal between the flange and the ceiling system, 1. it is important to have a square opening and a flat ceiling surface. When gypsum is used as the base material it should have adequate thickness to resist bowing. See appropriate specification sheet or contact Kenall directly for recommended ceiling cutout dimension. The cutout opening should be accurate to within a 1/16 of an inch.
- 2. Swing arm brackets are used to mount fixture to ceiling structure. After creating the ceiling cutout, frame the opening on the plenum side of the ceiling.
- 3. Framing around the entire opening is recommended and should start at the



- 4. Gypsum board shall be secured to the framing material around the opening. The ceiling surface around the opening shall be flat and smooth and not run (deviate from a straight edge) more than 1/32 inch over 2 feet. The opening should always be cut into whole pieces of gypsum. Ceiling seams and joints shall be outside of fixture cutouts. Structural members running under the gypsum shall be whole pieces around the cutouts and run the length of the cutout, not just under the swing arm bracket.
- 5. Place a continuous bead of approved (RTV-108 room temperature vulcanizing silicone, or a type approved by the building owner/ consulting engineer for the application) caulk on the back side of the housing flange.
- 6. Connect the appropriate raceway system to the fixture and raise the fixture into the opening.
- 7. Turn each of the 4 swing arm screws approximately 1/2 turn to swing the arm away from the housing and then lower the fixture, letting the swing arm brackets come to rest on framing.







- 8. Continue tightening swing arm screws until the fixture is firmly seated in the cutout.
- 9. Position door frame into housing opening and start all screws by hand. Tighten all screws to seal door frame to fixture.

### **RECESSED GRID INSTALLATION (MRI4SEDI/NFCSEDI)**

- 1. Fixture is designed for use with 1.00"/1.50" T-bar grid systems with vertical grid T thickness of less than 0.25" with a maximum height of 1.50" inches. Grid systems can be installed with standard 12, 24 or 48 inch centerline spacing of grid.
- 2. Fixture housing lays into grid. Tighten four (4) swing arms in the stowed position as shown (required to maintain fixture IP rating). Secure fixture to the superstructure with hanger wire (by others) looped through holes on swing arm attach bracket.
- 3. Connect the appropriate raceway system to the fixture.
- 4. Position door frame into housing opening and start all screws by hand. Tighten all screws to seal door frame to fixture.

# SURFACE INSTALLATION (MRI4SESI/NFCSESI)

- 1. Using fixture as template or referring to appropriate specification sheet, locate and drill pilot holes in mounting surface.
- 2. Using fasteners and anchors appropriate for the mounting surface and fixture weight (not supplied), mount fixture to surface. Note that this step may require two people for safety.
- 3. Connect the appropriate raceway system to the fixture.
- 4. Position door frame into housing opening and start all screws by hand. Tighten all screws to seal door frame to fixture.

# **ELECTRICAL CONNECTION**

- 1. Mount and wire the MRIPSF external power supply system per the procedures provided in the supplementary instruction sheet.
- If a 0-10V dimming circuit is to be connected, install at this time. The 0-10V dimmer must be installed outside the shielded MRI/ EMI environment with the Kenall MRIFD-1A dimming line filter (or equivalent) installed in accordance with the supplied installation instructions. Kenall recommends the Lutron Diva (DVSTV) and Lutron Nova T (NTSTV-DV) series to ensure the full range of dimming can be achieved.
- 3. Run DC wiring, equal in size and temperature rating to the filter input wiring, between the EMI filter output cables and the first luminaire within the shielded room. Follow recommended wiring layout described within Single-Supply System Schematic. All wiring must be within completely enclosed, grounded, conduit suitable for an MRI/EMI Shielded environment. Any gaps, regardless of size, must be closed or wrapped in copper foil tape. Special attention should be paid to the wiring entry point into the shielded space. Class 1 wiring methods are required.





# **INSTALLATION INSTRUCTIONS** 3



Single-Supply System Schematic

4. Run the dimming signal wiring, equal in specification to the dimming filter input wiring, between the filter output cables and the first luminaire within the shielded room. Maintain polarity between input and output sides of the filter and follow wiring recommendation in Multi-Fixture Wiring Schematic. All wiring must be within completely enclosed, grounded, conduit suitable for an MRI/EMI Shielded environment. Any gaps, regardless of size, must be closed or wrapped in copper foil tape. Special attention should be paid to the wiring entry point into the shielded space. Cap pink and violet leads at luminaire(s) if dimming function is not implemented.



Multi-Fixture Wiring Schematic

- 5. Make DC supply and optional dimmer control connections within each luminaire.
- 6. Connect power on line voltage side and test system operation. For MRI Room applications: test operation of lighting system, including dimming functionality, during MRI machine idle mode and during scanning operations.

# **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



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