

# Technical Service Bulletin

**COMPLIANCE:** ADVISORY

**SUBJECT:** REDUCED IONIZATION DUE TO INADEQUATE GROUNDING

**AFFECTED UNITS:** GPS-iMOD® UNITS

**DESCRIPTION:** The GPS-iMOD was designed for mounting to cooling coil inlets using magnets or sheet metal screws. Sometimes there are situations where the ion densities downstream of the coil are lower than expected, even though the ion output from the GPS-iMOD is at the designed level.

## POTENTIAL ROOT CAUSES:

1. Inadequate grounding of the GPS-iMOD to the coil or the Air Handling Unit (AHU).
2. Inadequate grounding of the Air Handling Unit (AHU) chassis or coil.

## ACTIONS:

1. Ensure the GPS-iMOD power supply is properly and adequately grounded.
2. When using magnets for mounting the GPS-iMOD, ensure there is a clean surface between the magnets and the chassis/coil. Remove any corrosion or dirt/debris at the magnet to coil/chassis interface. Note that every third GPS-iMOD bar section should be supported by a magnet every 18 inches.
3. When the GPS-iMOD bar is mounted to the AHU chassis, ground the chassis to the GPS-iMOD power supply.
4. When the GPS-iMOD bar is mounted in close proximity to the coil (the bar must have clearance of between 1/8" and 1/2" from the surface), install a grounding clamp on the piping of the chilled water or cooling coil. The clamp must be compatible with the diameter and material of the coil. The clamp can be located on a "U" bend or where the piping meets the air handler. Connect and route wire from ground clamp to the green grounding lug on the GPS-iMOD power supply (or any verified sound electrical ground).
5. When placing the GPS-iMOD bar immediately after the coil (wet side), use a mounting bracket to prevent moisture from interacting with the bar (example in separate TSB).

### Note:

- Ensure that the mounting bracket is grounded to the GPS-iMOD power supply
- The clearance between the GPS-iMOD bar wall and the bracket should be no smaller than 1/8" and no larger than 1/2".

