

April 29, 1993

**BOSTON TRANSPORTATION DEPARTMENT**  
**Specifications for**  
**Rack Mounted Loop Detector Amplifiers**

1.
  - a. The loop amplifier shall meet NEMA TS2 latest revision for detector rack configuration with 2 channel detector amplifiers.
  - b. Unless otherwise specified, the application for these units shall be in 4DW cabinets with 7 or more loop amps or in 8DW cabinets with 13 or more loop amps.
  - c. The rack mounted loop amplifiers shall be powered by a 24V DC power supply external to the controller unit as defined in NEMA TS-2 Section 5.3.5.
  
2.
  - a. The wires in the harness for loop wire connections from the loop feeder cable shall be twisted.
  - b. The harness shall include a wire connected to the loop detector chassis ground to be connected directly to the loop detector feeder cable shield drain wire.
  - c. When the loop detector amplifier is supplied as part of a control cabinet, separate field terminals shall be supplied for the chassis ground from each loop detector amplifier. Connections to control cabinet chassis ground shall be made from these same terminals.
  - d. Unless otherwise directed by the engineer, loop feeder cables shall have their shield drain wires isolated at the pull box end but individually connected to a wire in the appropriate loop detector harness which provides a connection to the loop detector amplifier chassis ground.
  - e. Loop harness wires shall not be bundled into other cabinet wiring harnesses.
  - f. Rack mount shall be designed so that PC cards are protected from moisture and dust.
  
3. The sensitivity of the loop detector amplifier shall be such that it will detect a .05 percent (.05%) inductance change and then provide an output for 3 minutes or more.

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***Specifications for Rack Mounted Loop Detector Amplifiers.....(cont.)***

4. **Prints And Manuals**

Three (3) schematics of the amplifier and three (3) operating and maintenance manuals shall be provided with each detector amplifier. The manual shall include a complete parts list. The parts list shall include a cross reference to at least one other manufacturers name and part number for each item. The schematic shall indicate appropriate voltages and waveforms.

5. **Guarantee**

The vendor shall guarantee the loop detector amplifier for a period of two (2) years from the date of delivery. All defects due to faulty parts, assembly or design shall be repaired at the vendor's expense.