

Nonresidential Appendix NA9

Appendix NA1 – Nonresidential Fault Detection and Diagnostics

NA1.1 System Requirements

1. The following temperature sensors should be permanently installed to monitor system operation: outside air, supply air, return air
2. Temperature sensors shall have an accuracy of plus or minus 1.3°F.
3. Refrigerant pressure sensor, if used, shall have an accuracy of plus or minus 3% of full scale.
4. The controller shall have the capability of displaying the value of each sensor.
5. The controller shall provide system status by indicating the following conditions:
 - Free cooling available
 - Economizer enabled
 - Compressor enabled
 - Heating enabled
 - Mixed air low limit cycle active
6. The unit controller shall manually initiate each operating mode so that the operation of compressors, economizers, fans, and heating system can be independently tested and verified.
7. Faults shall be reported to a fault management application accessible by day-to-day operating or service personnel, or annunciated locally on zone thermostats.
8. The FDD System shall be certified by the CEC and verified to be correctly installed.

NA1.2 Faults to be Detected

The FDD system shall detect the following faults:

- Air temperature sensor failure/fault
- Not economizing when it should
- Economizing when it should not
- Damper not modulating
- Excess outdoor air