

ECV Series Variable Speed Fire Pump Application Notes

Additional Application Considerations and Requirements:

- 1) The controller is U.L. Listed for fire pump applications.
- 2) The enclosure is rated for NEMA 12 unless otherwise specified.
- 3) 40 degrees C is the maximum ambient for which the controller is suitable.
- 4) Enclosures are approximately 75" high Unless otherwise specified. It may be smaller depending on the exact model and horsepower. Single source units are approx. 6 ft wide X 3 ft deep. Dual source (Transfer Switch) units are approx. 9 ft wide X 3 ft deep. The unit may be smaller depending on the exact model and size.
- 5) The enclosure must be mounted at least 12 inches from the back wall or obstruction for ventilation, and 24 inches from the right side wall for access to the heat exchanger cabinet cooler.
- 6) The motor must be a NEMA Design B, Starting Code G.
- 7) The motor must be suitable for use with a variable speed drive.
- 8) Even though a motor is suitable, it may not allow the use of the service factor
- 9) The gen-set must be suitable for use with a variable speed drive having a 5% Line Reactor.
- 10) The power source must be capable of Across-the-line starting or Primary Reactor Reduced Voltage should be used in the bypass mode (Model ECVT or ECVRT).
- 11) The pump and motor must be rigidly coupled.
- 12) For Horizontal Pumps, the pump and motor must be properly grouted.
- 13) A relief valve is required for emergency and manual full speed operation to avoid excessive pressures.*

For Vertical Turbine pumps, also provide the following information:

- 14) All resonant frequencies (or speeds). We will program in VFD skip frequency(s) accordingly.
- 15) Specify minimum speed and minimum accelerate time to said speed, if applicable (water lubricated pumps).

* Note: If the pump churn (shut-off) pressure, at maximum pump anticipated pump suction pressure, does not exceed the pressure rating of any system components, the Authority Having Jurisdiction (AHJ) may waive the need for a relief valve.

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