

# Micro Processor Based Diesel Engine Fire Pump Controller

## Model HD5000

Specifications HD5000 \* April 2010 \* New

The diesel engine fire pump controller shall be microprocessor type and shall be factory assembled, wired and tested as a unit assembly, and shall conform to the requirements of the latest edition of NFPA-20, NFPA-70, UL 218, FM 1321/1323, and shall be UL Listed and FM Approved.

The controller shall be of the combined automatic/manual type and furnished in a wall mount Type 4 indoor/outdoor enclosure. Dimensions shall not exceed 24"Hx20"Wx8"D, and weight not to exceed 110 lbs. The assembly shall be rated for 120 VAC, 12 or 24 VDC, 50 or 60 Hz, and rated for use in 4-40 degree C. ambient environment. For use with Lead Acid batteries.

### **The controller shall include the following features:**

Door mounted display/interface panel with 4x20 character Vacuum Fluorescent Display easily read in dimly lit pump rooms. User interface panel shall utilize proximity touch switches, and shall include high intensity display LED's.

Illuminated Crank 1 and Crank 2 pushbuttons, can be pressed simultaneously if needed to crank from both batteries.

Illuminated Auto-Manual selector switch.

Illuminated Stop pushbutton.

Two pre-punched conduit holes in bottom of enclosure.

PC board diagnostic LED's on all terminal inputs and outputs.

All PC boards have locking plug-in connectors.

Microprocessor program shall have Quick Start Menu for ease of set up.

The microprocessor shall be programmed to advise the user when the annual pump test (NFPA required test) is required. The controller

shall display the message on the Vacuum display and the audible alarm shall chip to alert the user 11 months after the controllers initial startup and acceptance.

The microprocessor program shall allow the Pump OEM data to be entered into the controller at time of startup, to help assure a permanent record of the pump data, such as the pump serial number.

Controller shall be rated for 600 PSI, with the pressure transducer and test solenoid valve mounted on a common manifold with 4000PSI burst pressure, individually leak tested at 1000 PSI.

Each of the controllers printed circuit boards shall have a digital ID programmed on the micro chip identifying the boards part number, build date, test date and firmware revision.

Controller shall provide internal anti-condensation

Lamp Test Push button

Alarm Silence switch

Three illuminated AC line circuit breakers/disconnects

Manual Test PB

Minimum Run timer.

Weekly Test timer

Engine Run Time meter

Automatically adjusts for Daylight Savings Time, can be disabled if required.

Remote Start input

Deluge Valve Start

Shutdown Interlock input

High zone/low zone series pumping shall be supplied as standard, enabled/disabled through the keypad.

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## Data/Event Recording

Event history shall be continuously downloaded to 2G USB Flash Drive (included as standard with the controller). Time and date stamped Data/Event log shall be stored on the main processor board and on the USB flash drive. Real time clock accurate to plus/minus 2 minutes per year over the full temperature range.

The event history can be viewed by scrolling on the display or by saving it to a USB flash drive. The event history shall be recorded as a .CSV file and can be easily opened as an Excel file. Data log shall include all pressure, alarm and start/stop events.

Pressure accuracy shall be better than 2%.

## Display LED's:

- Charger 1 Trouble
- Charger 2 Trouble
- Battery 1 Trouble
- Battery 2 Trouble
- System In Auto
- Pressure Switch Start
- Engine Low Oil Pressure
- Low Fuel Level
- Engine Running
- Engine Start Failure
- High Coolant Temperature
- Auto Shutdown On
- System water pressure digital display
- Start pressure digital display
- Simultaneous digital display of amperes and voltages for battery 1 and battery 2

## Text/Alarm Messages

Memory near full message  
Low Suction Pressure message  
Crank Cycle Status indication shows number of starting attempts and crank/rest time remaining.  
Up to 33 programmable alarm messages

## Alarms Contacts

Engine run contact, one Form C  
Louvers, one Form C  
Main Switch Not In Auto, one form C contact  
Trouble One, one Form C contact  
Trouble Two, one Form C contact  
DC Power Available, one Form C

Up to 6 programmable pump house alarm inputs.

## Communications

The controller shall include RS485 and RS232 serial communications ports.

Three internal high speed USB open serial communication ports are provided to cover a variety of communication protocols. One port is used for the USB Flash Drive for event/data recording, two are available to the user for additional devices.

## Battery Chargers

Dual battery chargers, industrial style, 10 ampere, for 12 volt or 24 volt DC lead acid batteries, 120 volt AC input.

The diesel engine fire pump controller shall be Hubbell model HD5000 and shall manufactured in the U.S.A.

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