

MASTER

SERIES DEC

DIESEL FIRE PUMP CONTROLLER

MASTER CONTROL SYSTEMS, INC

ENHANCED

G4 Innovation



DEC Series enhances G4 performance

- NEMA, type 12, dusttight enclosure
- 5.7 inch color touch screen HMI display
- Modbus TCP/IP over Ethernet
- Waterproof adapter for Ethernet connection
- 8 programmable remote alarm relays
- Conformal coating on all printed circuit boards
- Lightning guarantee
- 5 year warranty on the entire controller



HMI Special Features

- Simultaneous display of battery voltages, charger currents, System Pressure, Start/Reset, Manual/Auto, and Weekly/Monthly testing
- Starting sequence displayed
- Setup assistant
- Setup summary screen
- Start setting with auto 10 PSI increment for Reset setting
- Automatic weekly or monthly testing
- Transducer testing during weekly or monthly testing
- Remote alarm contact testing
- Annual testing reminder
- Service contact information displayed
- Alarm silence with auto re-sound
- Instant conversion from PSI to BAR for pressure settings
- Multiple passwords levels

Controller Special Features

- Data Recorder tracks 52 digital and 8 analog signals and outputs CSV file to USB adapter
- Waterproof USB adapter on outside
- HMI not needed for controller operation
- No water connections inside enclosure
- Protective bracket for external transducer
- Y-strainer to protect test valve solenoid
- 50 C ambient temperature rating



Standard Features

- Sequence start
- Remote/Deluge Start – normally closed
- Automatic stop
- Auto test valve solenoid
- Manual pressure drop test button
- High Zone delayed start
- Manual, Non-automatic operation
- 8 Pump House Trouble inputs
- Lockout when authorized by the AHJ
- 30mm mechanical Start/Stop pushbuttons
- Motherboard in steel chassis with latched connectors

Standards and Approvals

Controllers are designed to the requirements of NFPA 20, Underwriters Laboratories, and Factory Mutual Approvals.

NEMA type 12 dusttight enclosure with external wet parts

Externally mounted transducer, test valve solenoid, and pressurized wet parts eliminate any chance of water spray on electrical parts.

Visual and Audible Alarms

- Battery 1 Failure
- Battery 2 Failure
- Charger Failure
- Electronic Engine (301-304, 310-312)
- Failure to Start
- High Water
- Interstitial space liquid intrusion
- Lockout
- Low Discharge Pressure
- Low Fuel
- Low Oil
- Low Suction Pressure
- Low Zone Remote Start (On Demand)
- Overpressure
- Overspeed
- Pump House Trouble (PHT1-PHT8)
- Pump Running
- Start Contactor 1 Failure
- Start Contactor 2 Failure
- Transducer Failure

Highlighted Modification Codes

- 48E** — Email notifications through ethernet. Monitors 8 alarms and notifies 8 different email addresses
- 83LT** — Low suction transducer and wet parts externally mounted under protective bracket.

Voltage Free Remote Contacts

- Pump Running (3sets)
- System Trouble
- Auto Off
- Pump House Trouble

Additional Voltage Free Remote Contacts

8 programmable relay outputs. Contacts rated 6 amps at 30 vdc, 6 amps at 250 vac. UL pilot duty ratings R300 and B300. Relays can be programmed for any of the following:

Auto Off, Battery Failure, Charger Failure, Electronic Engine Alarms (301-304, 310-312), Failure to Start, High Water, Lockout, Low Discharge Pressure, Low Fuel, Low Oil, Low Suction Pressure, Low Zone (On Demand), Over Pressure, Overspeed, Pump House Trouble, Pump Run, Start Contactor Failure, Transducer Failure

Model Number Construction

DEC	12N	115	XG4, 12L, 48E
Basic Model	Battery Voltage	AC Voltage	Modifications
DEC	12N = 12 VDC*	115 = 115 VAC, 50/60 HZ	See List of Modification Codes
	12P = 12 VDC**		
	24N = 24 VDC*	230 = 230 VAC 50/60 HZ	
	24P = 24 VDC**		

*Negative Ground
**Positive Ground

G4 Innovation — Modification Codes

- FC** – Foam Controller
- 3R** – NEMA Type 3R raintight enclosure
- 4** – NEMA type 4 watertight enclosure
- 4XB** – NEMA type 4X, 304 ss watertight enclosure
- 4XC** – NEMA type 4X, 316 ss watertight enclosure
- 8E** – CE declaration for European Community
- 15** – 300 PSI, 316 ss pressure transducer, test valve solenoid, and wet parts
- 15A** – 300 PSI, 300 series ss pressure transducer, test valve solenoid, and wet parts.
- 16A** – 500 PSI, pressure transducer, test valve solenoid, and wet parts.
- 19** – Space heater
- 20** – Space heater with thermostat
- 20A** – Space heater with humidistat
- 32** – Low pump room temperature switch
- 48E** – Email notifications through ethernet. Monitors 8 alarms and notifies 8 different email addresses
- 83LT** – Low suction transducer and wet parts externally mounted under protective bracket.

Ordering and Shipping Information

When ordering a MASTER Diesel Fire Pump Controller, the following information must be included in the order to allow prompt order entry and delivery: Complete Model Number, Engine Make and Model, Engine Battery Voltage, Engine Polarity, A.C. Line Input Voltage and Frequency, Battery Type, Ultimate Destination, and Size of Fuel Tank.

Shipping carton measures 48 inches (122 cm) high x 32 inches (81 cm) wide x 20 inches (51 cm) deep. Average packed controller weighs 200 pounds (91 kg). Packed controller must not be stored outdoors.



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