



NEMA type 2 red 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)
- Overspeed
- Pump House Trouble (PHT1-PHT8)
- Pump Running
- Start Contactor 1 Failure
- Start Contactor 2 Failure
- Transducer Failure

Highlighted Modification Codes

POC— Programmable Option Chassis – Provides 8 programmable relay outputs. Contacts rated 6 amps at 30 vdc, 6 amps at 250 vac. UL pilot duty ratings R300 and B300.

Voltage Free Remote Contacts

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

Model Number Construction

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

*Negative Ground

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G4 Innovation – Modification Codes

- FC** – Foam Controller
- POC** – Programmable Option Chassis – Provides 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
- 12** – NEMA Type 12 dusttight enclosure
- 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 (requires modification POC)
- 48F** – Modbus TCP/IP ethernet port on HMI
- 82H** – 5.7 inch, 64k color, HMI
- 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.



MASTER CONTROL SYSTEMS

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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.

100,000 Short Circuit Current rating

Controllers are short circuit current rated for 100,000 amps @ 200–480 vac and 22,000 @ 600 vac. If a transfer switch is provided, these ratings also apply to the Emergency side.

Visual and Audible Alarms

- AC Failure
- AC Volts Low
- CB Trip (requires SP1 or SP2)
- Failure to Start
- Load Shed
- Lockout
- Low Discharge Pressure
- Low Suction Pressure (83LT)
- Low Zone Start (On Demand)
- Motor Overload
- Overpressure
- Phase Reversal
- PhaseSmart
- Pump House Trouble Alarms 1–8
- Pump Running
- Single Phase Running
- Transducer Failure
- On transfer switch controllers:
 - Normal Position
 - Normal Power Available
 - Emergency Position
 - Emergency Power Available
 - Emergency CB Open

Voltage Free Remote Contacts

- Pump Running (2 sets)
- AC Failure
- Phase Reversal
- System Trouble
- Low Zone start (On Demand)
- On transfer switch controllers:
 - Normal Position
 - Emergency Position
 - Emergency CB Open
 - Generator Start

Highlighted Modification Codes

SIS—Separate Isolation Switch - The controller's Isolating Switch is mounted in a separate enclosure attached directly to the side of the fire pump controller. The incident energy calorie rating is less than 0.5 cal/cm²

48E—Email notifications through ethernet. Monitors 8 alarms and notifies 8 different email addresses.

48J—External Remote Alarm connection box

Additional Voltage Free Remote Contacts

8 programmable inputs and 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:

AC Failure, AC Volts Low, CB Trip, Fail to Start, Load Shed, Lockout, Low Discharge Pressure, Low Suction Pressure, Low Zone Start (On Demand), Motor Overload, Over Pressure, Phase Reversal, PhaseSmart Pump House Trouble inputs, Pump Run, Single Phase Running, Transducer Failure, Tsw Normal, Tsw Normal Available, Tsw Emergency, Tsw Emergency Available, Emergency CB Open.

Motor Starting for Every Application

Whether it's across-the-line for best economy, primary reactor for best value, soft start for smooth ramp starting, or other types, Master offers the motor starting type that's just right for your application.

Combination Transfer Switch Controllers

Transfer switch controllers are built in accordance with NFPA 20 as a combination fire pump controller and transfer switch. To select, just add a "T" to the basic model number. For example, a Primary Reactor transfer switch controllers is a model ECRT.

Model Number Construction – Fire Pump Controllers and Transfer Switch Controllers

ECR or ECRT		60	46	XG4, 48J
Basic Model		Horsepower	Voltage*	Modifications
ECA or ECAT:	Across-the-Line	15,20,25,30	20 = 200v, 60 hz	See List of
ECP or ECPT:	Part Winding	40,50,60,75	21 = 208v, 60 hz	Modification
ECR or ECRT:	Primary Reactor	100,125,150	23 = 230-240v, 60 hz	Codes
ECO or ECOT:	Wye-Delta Open	200,250,300	38 = 380-400v, 50 hz	
ECY or ECYT:	Wye-Delta Closed	350, 400	39 = 380-400v, 60 hz	
ECS or ECST:	Soft Start		41 = 415v, 50 hz	
ECT or ECTT:	Autotransformer		46 = 460-480v, 60 hz	
			57 = 575-600v, 60 hz	

*Horsepowers are not available at all voltages

G4 Innovation – Modification Codes

FC	– Foam Controller	15A	– 300 PSI, 300 series ss pressure transducer, test valve solenoid, and wet parts.
LPM	– Leading Phase Monitor	16A	– 500 PSI, pressure transducer, test valve solenoid, and wet parts.
SIS	– Separate Isolating Switch	19	– Space heater
SP1	– Supervisory Power input – Provides 120 vac, 50/60 hz transformer to completely power control circuits even if the Circuit Breaker is Off. Includes Supervisory Power Fail start (when enabled).	20	– Space heater with thermostat
SP2	– Supervisory Power input – Provides 240 vac, 50/60 hz transformer to completely power control circuits even if the Circuit Breaker is Off. Includes Supervisory Power Fail start (when enabled).	20A	– Space heater with humidistat
3R	– NEMA type 3R raintight enclosure	27	– 200,000 amp emergency short circuit current rating
4	– NEMA type 4 watertight enclosure	32	– Low pump room temperature switch
4XB	– NEMA type 4X, 304 ss watertight enclosure	33	– Auxiliary power output – (1 amp at 120 vac)
4XC	– NEMA type 4X, 316 ss watertight enclosure	48E	– Email notifications through ethernet. Monitors 8 alarms and notifies 8 different email addresses.
8C	– Bottom feed terminals	48J	– External alarm junction box (not with SIS)
8E	– CE declaration for European Community	83LT	– Low suction transducer and wet parts externally mounted under protective bracket.
15	– 300 PSI, 316 ss pressure transducer, test valve solenoid, and wet parts	200	– 200,000 amp normal short circuit current rating

Shipping Information

Model	Weight Range	Enclosure
ECA, ECP, ECO	270 lbs - 395 lbs (123 kg - 180 kg)	Single Door
ECR, ECT	430 lbs - 900 lbs (195 kg - 409 kg)	Double Door
ECY, ECO	440 lbs - 660 lbs (200 kg - 300 kg)	Double Door
ECS	480 lbs - 675 lbs (218 kg - 307 kg)	Double Door
EC*T	640 lbs - 1300 lbs (291 kg - 591 kg)	Transfer Switch

Note: Weight varies depending on the units horsepower and voltage ratings.

Ordering Information

When ordering a MASTER electric fire pump controller, be sure to specify the following to ensure prompt order entry and delivery:

- Complete MASTER model number
- Motor horsepower
- Motor rated voltage and frequency
- Withstand rating
- Optional equipment
- Special modifications



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