

# FIRE PUMP CONTROLLER For Diesel Driven Fire Pumps

Metron  
Eledyne

Type **FD4e v5.00**

Release 1.4

## Introduction:

The Metron Eledyne type FD4e controller is designed to specifically meet the latest NFPA 20 (2013), UL 218, IEC62091 and FM 1321/1323 standards for Diesel Engine Fire Pump Controllers.

This controller implements the latest component and microprocessor logic technology available. It incorporates years of experience in the design and manufacture of fire pump control systems.

The components are installed in a NEMA 2 (IP54) dust and drip proof enclosure with optional NEMA 4 or 4X (IP65) ratings available. Finished to Metron Eledyne paint specification PSO396.

A user friendly operator interface device (OID) includes a 4 line back lit LCD to allow the user to view parameters and make adjustments.

Inside the controller there are mounted two fully automatic battery chargers. These are a constant voltage and constant current design each rated at 10 Amps. The battery chargers operate in such a manner as to ensure that the engine batteries are fully charged within 24 hours (Batteries to 220A/Hr). Also located within the battery charger is battery and battery charger monitoring circuit.

## Main Features:

- 3 million event log
- 10 year pressure Log
- User settings change log
- Battery 1 & 2 volts & Amps log
- First out annunciation, ISA-F1/3A
- 24 way long life LED annunciator
- Tested to 55°C ambient
- MODBUS fitted as standard
- Quick start set up facility
- Removable cable gland plate
- Mains input, 95-250Vac, as standard
- Set on site for 12v or 24v operation, all battery types
- Engine DC contactor monitor
- Charge from flat battery charge facility, fully automatic
- 9x spare programmable inputs
- 10x spare programmable volt free contacts, each 10A/250v rated
- 8x spare programmable Indicators
- 24x aux program capability
- Delay start, mains failure start, auto stop timers all included as standard



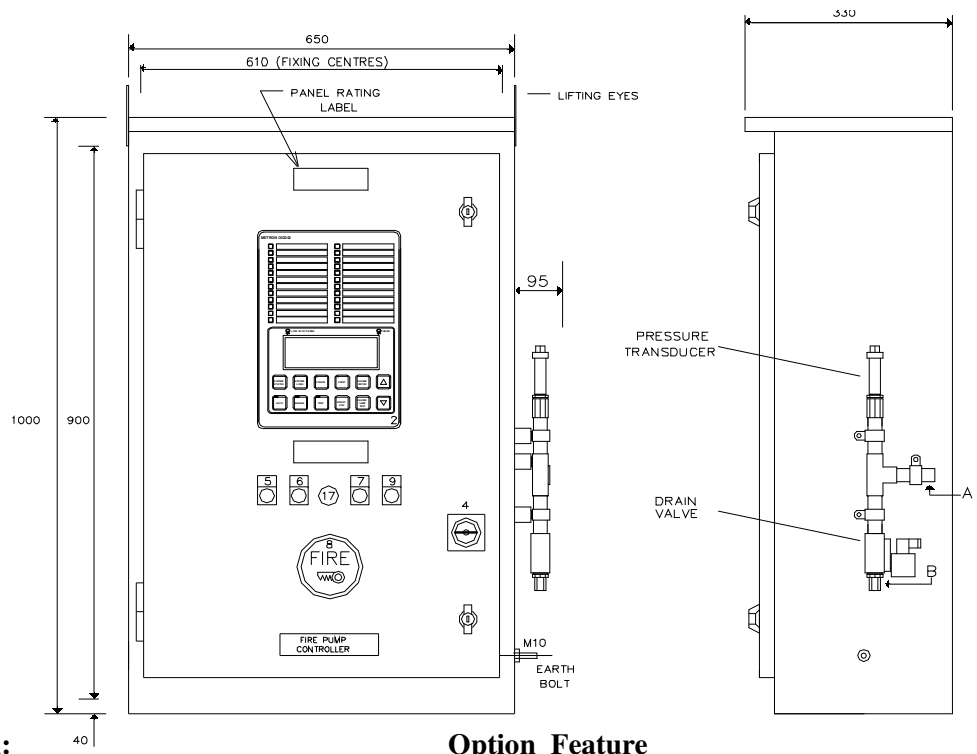
FM / UL / NFPA20



RoHS & WEEE  
COMPLIANT  
WEE/CFO105WW



**General Arrangement**



**Door mounted:**

Operator Interface Display, to show: Battery 1 & 2 Amps, Battery 1 & 2 Volts, Actual water pressure and start pressure
AC/DC isolator, door interlocked
Crank battery 1 & 2 push buttons
Mode key selector switch
Stop push button
Emergency start break glass module

**Annunciator indicators: (basic system)**

System fault
Battery 1 healthy
Battery 2 healthy
Charger 1 failure
Charger 2 failure
AC power loss
Engine running
Failed to start
Low oil pressure
High water temperature
Engine over speed
Low fuel level
High cooling water temperature
Low engine temperature
DC contactor fault
Pump on demand
Automatic mode on
Manual mode on
Test mode on
DC Power loss
8x Spare programmable indicators

**Volt free contacts: (10A/250v rated)**

Engine running x2
Automatic mode
Engine failed to start
Pump on demand
System fault
10x Spare programmable relays

**Option Feature**

A	Alternator diode block
B	Low pump room temperature alarm & thermostat
C	Air Flap(s) circuit with solenoid output & lamp
D	Internal lamp with door operated micro-switch
E1	Engine heater output, MCB protected
E2	Engine heater output, MCB protected
F1	DC Turbo Pre-Lub solenoid output & protection
F2	Single phase ventilation fan output, with delay
F3	3 phase heater output & contactor & protection
G	Space Heater Internally powered thermostat/humidistat & anti-condensation heater.
G2	Space Heater and thermostat externally powered with own isolator
H	DC & AC isolated flag indicators
L1	4-20mA input fuel level alarms
L2	4-20mA fuel level alarms with 4-20mA repeater
M	LSOH Cable
N	24v Louvre output for 12v controllers, AC powered, fuse protected
N3	24v Louvre output for 12v controllers, DC powered, fuse protected
P	Profibus interface (powered from mains supply)
P1	MODBUS/TCP/IP interface (powered from mains)
R1	Remote start, non delayed open to start
R2	Remote start, non delayed 24vDC energise to start
R3	Remote start, non delayed 24vDC de-energise to start input
S1	Secondary hydraulic crank, single crank output
S2	Secondary hydraulic crank, 3 attempt crank cycle
S3	Hydraulic re-charge output
T1	Cabinet mounting lugs
T3	600mm plinth (Legs)
T4	Anti-vibration kit
Un	Removal of pressure transducer for non-pressure activated system
20A	20A Battery chargers, for 400A/Hr batteries
W	Mild steel or 316 or 304 stainless steel weather proof enclosure. IP65 / NEMA 4(x)

When ordering, please specify:  
Battery voltage and type, options,



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