



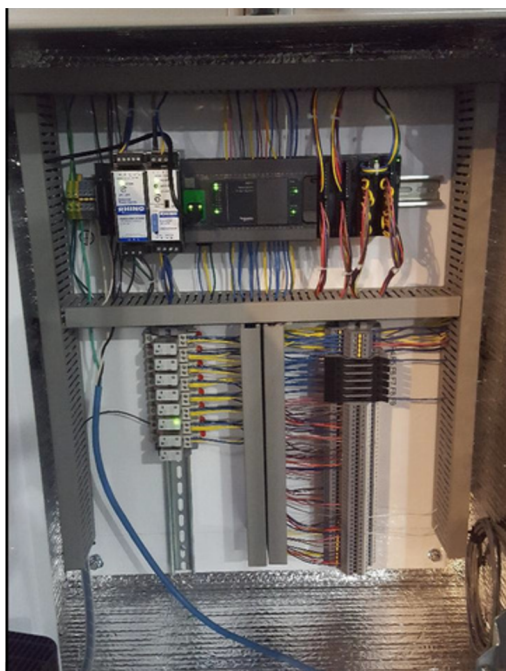
DUTYMASTER MULTIPUMP™ ON DUTY!



Modern society has solved the problem of elimination of sewage waste. There is a vast system of collection sewers, pumping stations and treatment plants. A critical component of the chain is getting the sewage waste from individual homes and business's to the treatment plant. While not the most glamorous part of the treatment process, it is extremely critical to each and every one of us, that it is done right. DutyMaster MP provides the sewer system operator a chance to reliably move the waste without giving it a second thought. DutyMaster MP provides the tools to remotely control and monitor each pumping station, making your operations more efficient and cost effective.

OPERATIONAL FEATURES

Controls 1-4 Pumps and a controller for more pumps
 Pump Auto Cycle so all pumps get even run time
 Pump Station Level
 Pump Station Flow
 High-High Level Float Backup Input
 Low-Low Level Float Backup Input
 Battery Backup UPS
 Level, Flow, Pump Amps, Temperature Trending
 Remote ScadaHAND Control
 Remote Pump Hand Operation (PLC Timer Enforced)
 Electronic Pump Motor Overload Protection
 Operator and Engineer Password Protection
 Graphical Touch Screen Local Control HMI
 Outside Alarm Light for Critical Alarms
 Dead Front Design
 Separate High Voltage Enclose for ArcFlash Protection



LOW VOLTAGE CONTROL PANEL

See our website at:

www.ieilabs.com

for a working demonstration
 of the DutyMaster MP.

COMMUNICATIONS

MODBUS TCP/IP
 Serial Modbus RTU RS232/485
 Optional Firewall
 Optional Firewall Appliance for Modbus Control
 Optional PrePackaged SCADA

ALARMS

Pump Seal Failure
 Pump High Temperature
 AC Power Fail
 Battery Power Fail
 High/Low Level Float
 Pump Excess Run Time
 Enclosure Temperatures
 Loss of Communications



ENGINEERING DATA

Rate of Change of Level
 Pump Efficiency
 Pump Energy
 Pump Amps
 Pump Seal Leak Detection
 Pump Temperature Alarm
 Pump Run Time
 Enclosure Temperature

DESIGN

Intrinsically Safe Class 1 Division 2 Wiring
 Remote MultiPump SCADA Software Development
 UL508A Listed and Labeled
 No Proprietary Hardware, Simplify Maintenance
 Full Installation Drawing Package
 Padlock Hasp for Security

OPTIONS

PLC Integrated Firewall
 Firewall Appliance with Modbus Control
 Extended Operating Temperature
 Complete SCADA Package



PREVENTATIVE MAINTENANCE

Pump Hour Meters
 Pump High Run Time Alarms
 Pump Amps Trending
 Pump Cycle Efficiency
 Pump Seal Leak
 Enclosure Temperature
 Flow Trending

FOR MORE INFORMATION
 VISIT OUR WEBSITE AT:
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 844.434.5227





DUTYMASTER MULTIPUMP™ ON DUTY!



FEATURE HIGHLIGHT: SCADA HAND CONTROL

This feature allows a SCADA system to remotely control the operation of the pump station. Since this overrides the normal operation of the station, the PLC implements a programmable timer that will return the station to normal PLC control. This prevents placing the system in SCADA Hand Control and then a loss of communication prevents returning it back to normal operation, leaving the station in a dangerous state.

FEATURE HIGHLIGHT: REMOTE PUMP DISABLE

Sometimes a pump acts up either tripping on electronic overload or continuing to excess run. With the remote pump disable feature, the pump can be locked-out from the SCADA system, removing it from the normal pump rotation. This may allow an operator to schedule a time or visit the site during normal business hours. This can prevent overtime calls and unplanned visits.

FEATURE HIGHLIGHT: ELECTRONIC OVERLOAD PROTECTION

Using the integrated pump CT, the PLC monitors the running current at all times. The PLC runs a class 20 overload algorithm. This allows the pump current to run at 600% for 20 seconds, after which the PLC stops and locks out the overloaded pump. The locked out pump will then need to be reset either from the on panel HMI or remotely from the SCADA system. Often pump overloads are due to a clogged pump, which, if run again after an overload, will clear itself up. This feature allows an operator to attempt to clear the condition without a truck roll, saving both time and money.



HIGH VOLTAGE and LOW VOLTAGE PANELS

FEATURE HIGHLIGHT: PASSWORD PROTECTION

Depending on facility or operational requirements, it may be required to control what settings are visible and thus can be changed. If implemented, there are up to 3 levels of password protected controls and settings. The station operator will have access to the parameters required to operate the station. Two additional levels can be set to change parameters, such as pump on/off levels, overload settings, and wet well dimensions, this provides an additional layer of security to ensure safe operation of the station.

FEATURE HIGHLIGHT: FLOW CALCULATION

Station flow is a useful tool for preventative maintenance as well as planning. As populations increase, flows will also. If the pump station has a flow meter installed, then the system will readily accept it as an input. Most pump stations do not include flow meters and, as such, a calculated flow as been built in. By setting the parameters of the wet well, the PLC calculates the flow based on the level rate of change. This value is calculated and updated at the end of each pump cycle. The value can then be stored by the SCADA historian and trended for future planning.

HIGH VOLTAGE PANEL

Electrical Specifications

Input Power	120VAC 7Amp Max
Digital Inputs	24VDC Max 46
Digital Outputs	24VDC Max 10
Analog Inputs	4-20mA, 0-10V Max 16
UPS Backup	2 Hours Min

Ethernet Port	1 x 10/100Mbps
Serial Port	2 x Serial RS232/RS485
USB Port	1
SD Card Slot	1
Clock	Battery backed Real-Time

Environmental Specifications

Standard Operating Temp	14° F - 131° F
Extended Operating Temp	-55° F - 155° F (Optional Insulation/Heater, A/C)

Standards

Safety	UL508A
Explosion	Class 1 Div 2