

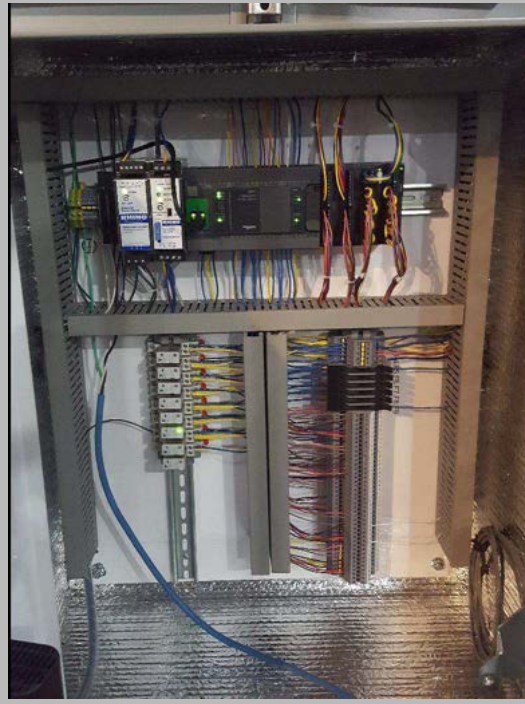


DUTYMASTER MULTIPUMP™ ON DUTY!

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



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

DESIGN

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



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

OPTIONS

- 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:
www.ieilabs.com

EMAIL AT:
info@ieilabs.com

PHONE AT:
844.IEI.LABS
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 lockedout 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 PANEL

FEATURE HIGHLIGHT: PASSWORD PROTECTION

Depending on facility or operations requirements it may be required to control what settings are visible and can thus 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



FEATURE HIGHLIGHT: FLOW CALCULATION

Station flow is a useful tool for preventative maintenance as well as planning. As populations increase flows will to. 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.

Electrical Specifications

Input Power	120VAC 7Amp Max.
Digital Input	24VDC Max 46
Digital Output	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 1

FOR MORE INFORMATION
VISIT OUR WEBSITE AT:
www.ieilabs.com

EMAIL AT:
info@ieilabs.com

PHONE AT:
844.IEI.LABS
844.434.5227

