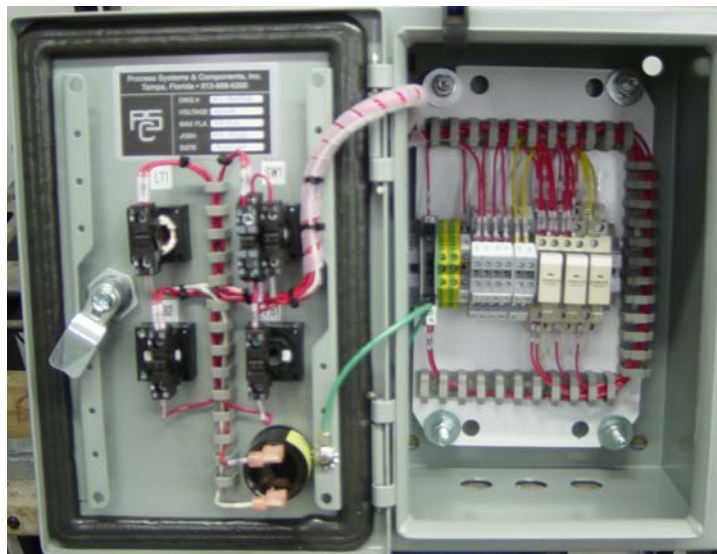


H2O Stand Alone Control Panels

Product Description/Equipment Specifications

FLEXIBILITY
LATITUDE
ENGINEERING
EXECUTION
EXCELLENCE

*Process Water Systems designed with ultimate **FLEXIBILITY** in mind.*

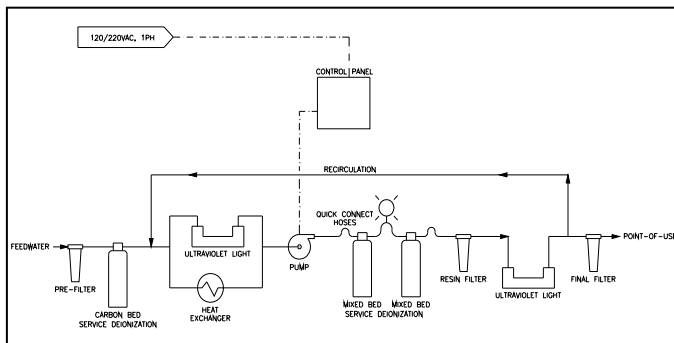


Features at a glance:

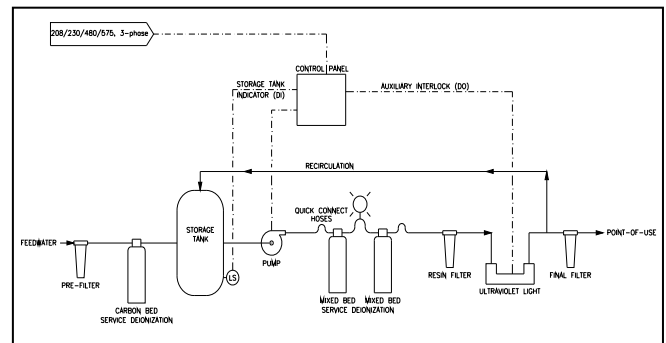
- Quick Delivery
- Minimal field installation required
- Controls are UL / cUL Approved
- Custom control panels available.

A COMPREHENSIVE LINE OF WATER TREATMENT SYSTEM CONTROL PANELS





Pump Control with Contactor(s)



Pump Starter-Disconnect

General Description:

FLEXX™ standard UL and cUL approved H2O Stand Alone Control Panels are a diverse and flexible offering of Pump Control Panels designed to be easily integrated into a Client supplied water treatment system. The Pump Control panels are capable of starting, stopping, and protecting single and three phase motors used as drivers for pumping systems. The range on standards is up to 2 Hp for single-phase, and up to 10 Hp for three-phase. All panels are available as NEMA 4/12, NEMA 4X Composite, or NEMA 4X Stainless Steel and proudly offer Allen Bradley and Siemens based components. Custom panels are available with minimal impact on pricing or delivery.

Electrical and Operating Description:

1. Pump Control with Contactor(s) (1 Phase) and Pump Starter / Disconnect (3 phase)

When the pump Hand-Off-Auto (HOA) switch is in the HAND position, the pump will run continuously until the switch is turned off, with protection preventing the pump from running if a level switch is closed. When the HOA switch is in the OFF position, the pump will not run. When the HOA switch is in the AUTO position, the pump will run unless a low-level switch input senses an open contact. For example, a tank level switch will prevent the pump from running dry when the tank is not being filled.

For Duplex Pump Control enclosures, the position of the pump select switch (Pump 1/Alternate/Pump2) will dictate which pump is slave to the pump HOA switch, or whether user-defined pump alternating is enabled. Both pumps cannot run at the same time. The Duplex Pump Control can be configured with an optional alternating timer for automatic repeat cycling of which pump is in operation.

Options offered for the Pump Starter / Disconnect (3 phase) panels include:

- Auxiliary Interlock option
When the Auxiliary Interlock option is selected, an “OFF/AUTO” selector switch is provided. With the selector switch in the OFF position, the auxiliary component will not be energized. With the selector switch in the AUTO position, the auxiliary component will be energized provided the pump is in a RUN mode. For example, the Auxiliary Interlock option might be used for control of an Ultraviolet Sterilizer.
- 24VAC Control Power option
Optional 24VAC control power provides for low volt power to all control components in the control panel.

Product Offering Overview:

Model Number	Description
H2OC	Single Phase Pump Control with Contactor(s)
H2OS	Three Phase Pump Starter / Disconnect

General Specifications:

Enclosure	Description
Size	From 8" x 6" to 24" x 20" (Varies with product)
Rating	Dual Rated NEMA 4/12, NEMA 4X (optional)
Material	Carbon Steel (gray) (NEMA 4/12), Composite (optional) (NEMA 4X), Stainless Steel (optional) (NEMA 4X)
Electrical	Single Phase Pump Control with Contactor(s)
Voltage: 1 Phase	120V or 220V
Motor Starter	NEMA rated, full voltage with overloads
Horsepower	1 – 2 Hp, depending on pump requirements
Electrical	Three Phase Pump Starter/Disconnect
Voltage: 3 Phase	208V, 230V, 460V, 575V
Motor Starter	NEMA rated, full voltage with overloads
Horsepower	1 – 10 Hp, depending on pump requirements
Control Voltage	120VAC standard, 24VAC optional
Indicator Lights	
Continuously On	Light Emitting Diodes (LED)
Alarm Horn	80dBA at 2.9 KHZ

Instrumentation Specifications:

Quality (optional)	Description
DI Tank Indicator	Hy-Lite, 2 Meg, with transformer, relay module, and patch cord
Quality Monitor	Mettler-Toledo Thornton M300 with 240-201 Sensor, or
Base Quality Monitor	Myron L 752 Series with CS10 Sensor

Controls Specifications:

All switches, pushbuttons, lights, etc.	Siemens or Allen Bradley
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Regulations and Standards:

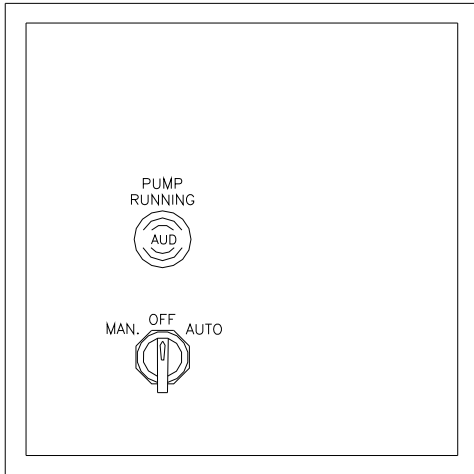
Quality System	Factory Procedures
Electrical	National Electrical Code (NEC), Underwriters Laboratories (UL), Underwriters' Laboratories of Canada (ULC)

Documentation Package:

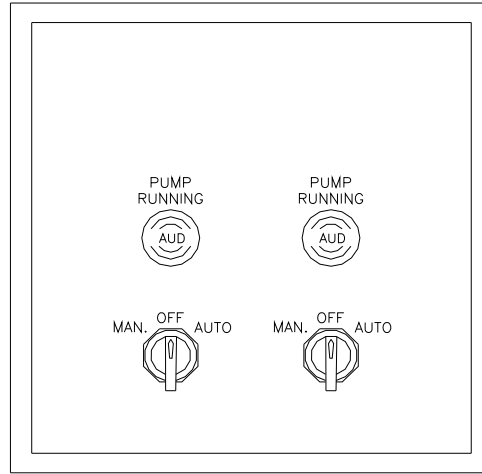
Documents	Specifications and Electrical Schematics
Quality Documents	Quality Assurance Reports

**H2OC Single Phase Simplex/Duplex Pump Control w/
Contactor(s)**

Simplex



Duplex

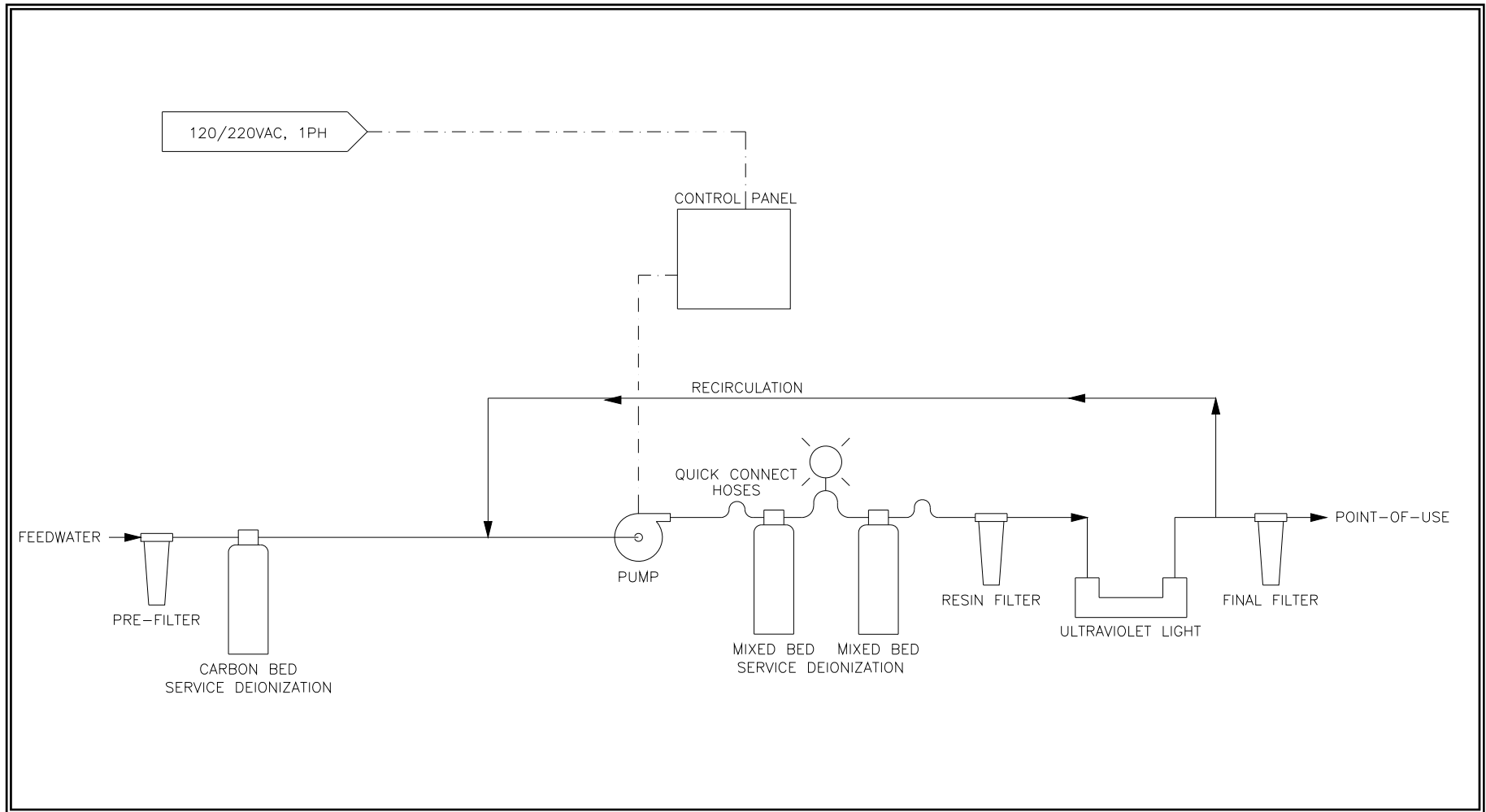


PRODUCT FEATURES:

- Panels proudly feature Allen Bradley or Siemens based components
- NEMA 4/12, NEMA 4X Composite, or NEMA 4X SS
- 120 or 220 VAC
- UL / cUL Approved
- Up to 2 HP standard, other HP available with minimal impact on cost or delivery.
- Continuously on lamps are robust LED's
- Interface drawing shows number and function of each terminal
- All wires, components, and screw terminals are labeled for easy identification
- Pump fuses included
- Pump MAN/OFF/AUTO lighted selector switch included for each pump

- *Duplex Panels Only:* Manual Pump 1 / Pump 2 Selector Switch
- *Duplex Panels Only:* Alternating Timer available

Process Flow Diagram: Pump Control with Contactor(s) (H2OC)



All interconnecting wiring, power supply, and system components are Customer supplied.

If a Custom Panel is desired, please mark-up above drawing and fax to 813-881-1561, Attn: Rich Marston. Any clarification will then be made and pricing provided.

H2OC Control Panel Selection Matrix

Select Select Select Select Select Select

EXAMPLE PART NUMBER

H2OC 1 A 1 S 05

FIELD 1	H2OC Control Panel:	
	Code	Code Description
	H2OC	H2OC Control Pump Control with Contactor – 1ph

FIELD 2	NEMA Rating: Enter the code for the appropriate NEMA rating for your application.	
	Code	Code Description
	1	NEMA 4/12
	2	NEMA 4X Composite
	3	NEMA 4X SS

FIELD 3	Type of Components: Enter the code for the desired component manufacturer.	
	Code	Code Description
	A	Allen Bradley
	S	Siemens

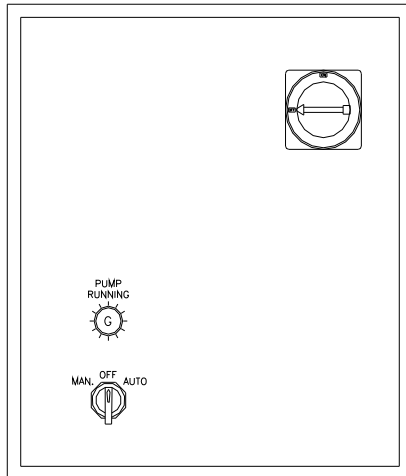
FIELD 4	Voltage: Enter the code for the desired voltage.	
	Code	Code Description
	1	120 VAC, 1ph
2	220 VAC, 1ph	

FIELD 5	Number of Pumps: Enter the code for the number of pumps to be controlled.	
	Code	Code Description
	S	Simplex
	D	Duplex
	A	Duplex with Alternating Timer

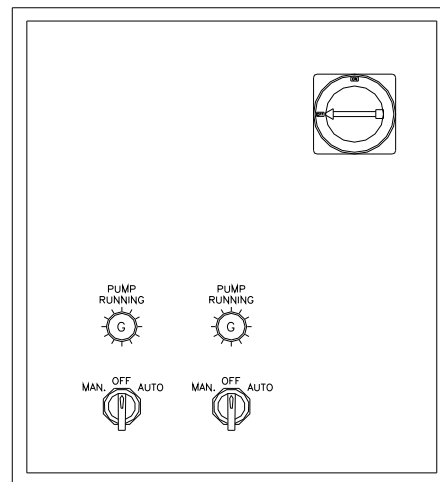
FIELD 6	Horsepower: Enter the code for the appropriate horsepower.	
	Code	Code Description
	03	1/3 HP
	05	1/2 HP
	07	3/4 HP
	10	1 HP
	15	1.5 HP
20	2.0 HP	

Three Phase Simplex/Duplex Pump Starter / Disconnect (H2OS)

Simplex



Duplex



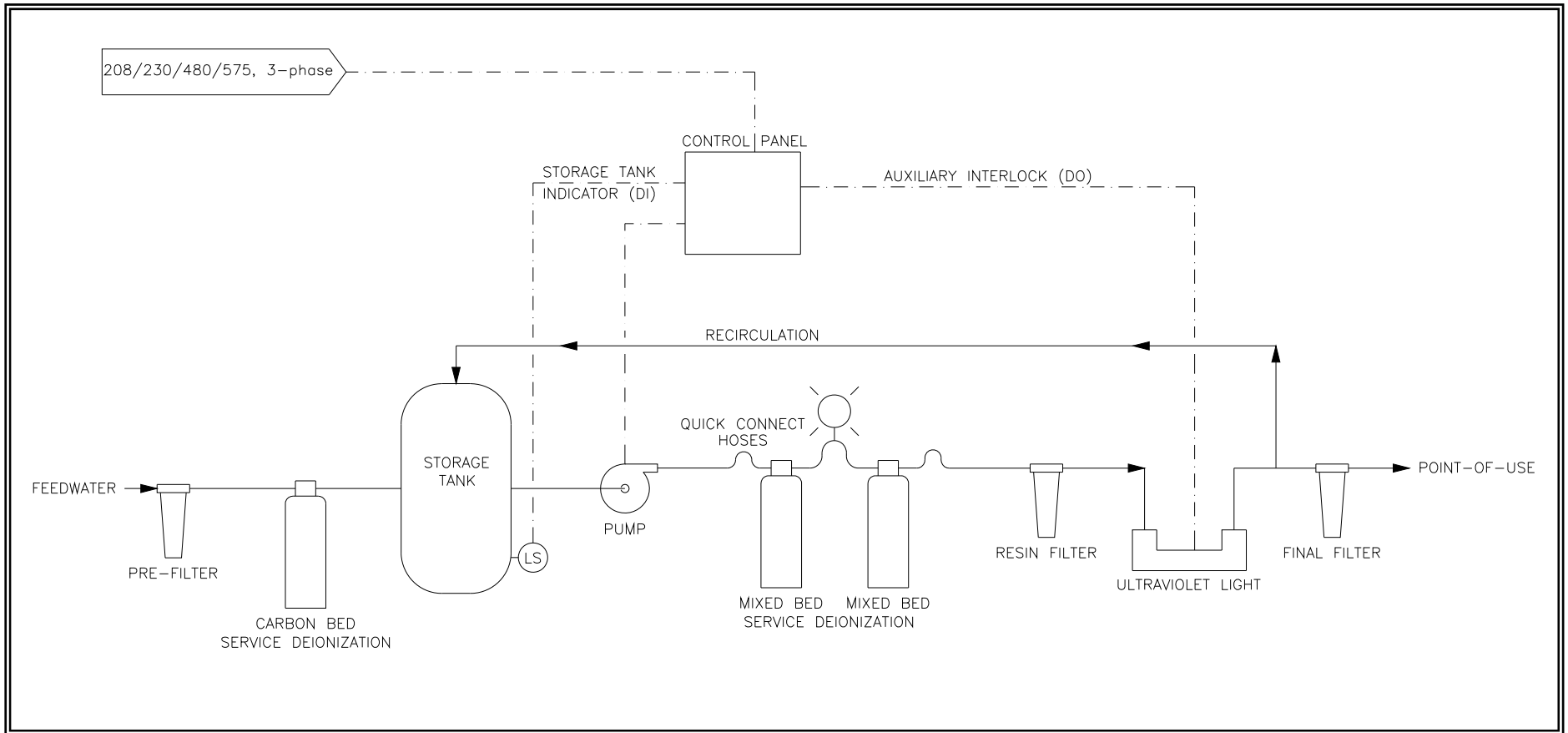
PRODUCT FEATURES:

- Panels proudly feature Allen Bradley or Siemens based components
- NEMA 4/12, NEMA 4X Composite, or NEMA 4X SS
- 208, 230, 460, or 575 VAC
- UL / cUL Approved
- 120 VAC output control voltage
- Up to 10 HP standard, other HP available with minimal impact on cost or delivery
- Continuously on lamps are robust LED's
- Alarm Condition lamps are bright and visible incandescent bulbs
- All wires, components, and screw terminals are labeled for easy identification
- Pump fuses included
- Pump MAN/OFF/AUTO lighted selector switch included for each pump

ADDITIONAL OPTIONS:

- Auxiliary Component OFF/AUTO Interlock Control
 - e.g. UV Lamp
- Alarm Output: Indicator Light, Alarm Horn, Alarm Silence Button
 - e.g. Storage Tank Level
- *Duplex Panels Only:* Alternating Timer available

Process Flow Diagram: Pump Starter / Disconnect (H2OS)



All interconnecting wiring, power supply, and system components are Customer supplied.

(DI) Discreet Input
 (DO) Discreet Output

If a Custom Panel is desired, please mark-up above drawing and fax to 813-881-1561, Attn: Rich Marston. Any clarification will then be made and pricing provided.

H2OS Control Panel Selection Matrix

Select Select Select Select Select Select Select Select

EXAMPLE PART NUMBER

H2OS
 1
 A
 1
 010
 D
 X
 A

FIELD 1	H2OC Control Panel:	
	Code	Code Description
	H2OS	H2OS Control Pump Starter / Disconnect – 3ph

FIELD 2	NEMA Rating:	
	Enter the code for the appropriate NEMA rating for your application.	
	Code	Code Description
	1	NEMA 4/12
	2	NEMA 4X Composite
3	NEMA 4X SS	

FIELD 3	Type of Components:	
	Enter the code for the desired component manufacturer.	
	Code	Code Description
	A	Allen Bradley
S	Siemens	

FIELD 4	Voltage:	
	Enter the code for the desired voltage.	
	Code	Code Description
	1	208 VAC, 3ph
	2	230 VAC, 3ph
3	460 VAC, 3ph	
4	575 VAC, 3ph	

FIELD 5	Horsepower:	
	Enter the code for the appropriate horsepower.	
	Code	Code Description
	005	1/2 HP
	007	3/4 HP
	010	1 HP
	015	1.5 HP
	020	2.0 HP
	030	3.0 HP
	050	5.0 HP
075	7.5 HP	
100	10 HP	

FIELD 6	Number of Pumps: Enter the code for the number of pumps to be controlled.	
	Code	Code Description
	S	Simplex
	D	Duplex
	A	Duplex with Alternating Timer

FIELD 7	Auxiliary Interlock: Enter the code if auxiliary interlock is required. If auxiliary interlock is not required, place an X in Field 7.	
	Code	Code Description
	L	Auxiliary Interlock

FIELD 8	Audible Alarm: Enter the code if an audible alarm is required. If an audible alarm is not required, place an X in Field 8.	
	Code	Code Description
	A	Audible Alarm



Custom Panels

Panels offered in this category are custom designed and fabricated to meet any panel requirement/specification from a simple, special application panel to panels requiring a PLC and HMI or to provide for multiple systems integration. Whatever the application, a custom panel can be fabricated to meet the demand.

Please contact factory at 813-888-6300, ext 209, or Fax request to 813-881-1561 Attention Rich Marston.