



KEEN PUMP DUPLEX CONTROL PANELS ARE CUSTOM DESIGNED FOR USE WITH KEEN GRINDER AND SEWAGE PUMPS AND PACKAGED SYSTEMS.

ALL CONTROL PANELS ARE BUILT TO UNDERWRITERS LABORATORIES UL508 STANDARD TO ENSURE THE HIGHEST LEVEL OF QUALITY AND SAFETY.

ALL PANELS CAN CARRY THE UL LABEL. THERE ARE MANY OPTIONAL FEATURES AVAILABLE, CONSULT THE "CONTROL PANEL OPTIONS PAGE".

Standard Features – Duplex Panels

SINGLE PHASE

- NEMA 4X Polycarbonate Enclosure
- Polycarbonate Hinge
- (2) Pump Circuit Breakers (2 Pole)
- (2) Capacitor Start Kits
- Control Circuit Breaker
- (2) Motor Contactors
- Alternator (switch able w/ lights)
- External Alarm Light
 - Flashing – High Water Level
- Audible Alarm – Buzzer
- Alarm Test Switch
- Control Circuit Relays
- DIN Rail Mounted Components
- Aluminum Back plate
- (2) Internal HOA Switches
- External Lockable Hasps
- Easy Wiring Terminal Blocks
- Grounding Lugs

THREE PHASE

- NEMA 4X Polycarbonate
- Enclosure Polycarbonate Hinge
- (2) Pump Circuit Breakers (3 Pole)
- Control Circuit Breaker
- (2) Motor Starters
- Alternator (switch able w/ lights)
- External Alarm Light
 - Flashing – High Water Level
- Audible Alarm – Buzzer
- Alarm Test Switch
- Control Circuit Relays
- DIN Rail Mounted Components
- Aluminum Back plate
- (2) Internal HOA Switches
- External Lockable Hasps
- Easy Wiring Terminal Blocks
- Grounding Lugs
- Transformer (460 volt panels only)



DUPLEX CONTROL PANEL SINGLE PHASE

4 FLOATS - CAPACITORS IN PANEL TECHNICAL SPECIFICATIONS

A NEMA 4X poly control panel shall be furnished with each pumping unit / basin package.

The control panel enclosure shall be molded of Polycarbonate resins, which are chemically resistant to corrosive atmospheres. The resin system shall be pigmented to impart a gray color to the enclosure and be resistant to ultraviolet light.

The resin system also shall include a flame retardant to obtain a flammability rating which meets U.L. 94V-0. Heat distortion temperature shall be 350 degrees Fahrenheit.

The enclosure shall be of one piece, NEMA 4X poly, weatherproof construction with smooth, rounded corners and shall be constructed to have a smooth exterior and interior. The enclosure shall be fitted with a closed cell neoprene gasket cover. The enclosure shall have back panel mounting provisions.

The cover shall be hinged with a heavy-duty corrosion resistant Polycarbonate clasps. The cover shall be lockable by means of two (2) high quality combination latches and padlock hasps.

The enclosure shall be provided with external mounting feet on the top and bottom of the enclosure.

These mounting feet shall be of Polycarbonate, separately mounted to the enclosure.

The back panel shall be a minimum of .080" aluminum and held in place by (4) #10 screws, which will mate to four (4) threaded standoffs, which are molded into the enclosure.

The panel shall include (2) double pole main disconnect circuit breakers, alarm circuit breaker, (2) I.E.C. rated motor contactors, (2) sets of start and run capacitors, (2) plug-in control relays, alternator relay, (2) pump hand-off-auto switches, red alarm light, audible alarm, alarm silence switch, enclosed wire way, terminal blocks, ground lug and all necessary wiring. Terminal strips must have a minimum 3" clearance to the bottom of the enclosure for ease of wiring.

The control panel shall be fitted with a red lexan alarm light. The light shall remain solidly illuminated, indicating a high water alarm condition in the basin. The light shall be approximately 3" high by 2" diameter, mounted on the top surface of the enclosure, visible from all 360-degree direction. The bulb or lens shall be easily replaced. The lens shall be mounted on top of the enclosure with a neoprene gasket.

The alarm condition will produce a bright glowing alarm light and audible buzzer. The audible buzzer can be silenced by means of the silence switch inside the front panel. The red indicator light will remain illuminated as long as the alarm condition persists. Both flashing alarm light and audible buzzer will stop when the water level drops to normal operating conditions.

All internal wiring shall be neatly assembled within an enclosed wire way. Each wire shall be a different color or stripe (except for ground), and all incoming wires shall terminate in the terminal block. All wires shall be rated for 105 degrees Celsius.

A schematic diagram shall be permanently fastened to the inside of the enclosure.

The control panel shall be U.L. listable as an assembly.

DUPLEX CONTROL PANEL SINGLE PHASE

4 FLOATS - CAPACITORS IN PUMP TECHNICAL SPECIFICATION

A NEMA 4X poly control panel shall be furnished with each pumping unit / basin package.

The control panel enclosure shall be molded of glass reinforced polyester resins, which are chemically resistant to corrosive atmospheres. The resin system shall be pigmented to impart a gray color to the enclosure and be resistant to ultraviolet light.

The resin system also shall include a flame retardant to obtain a flammability rating which meets U.L. 94V-0. Heat distortion temperature shall be 350 degrees Fahrenheit.

The enclosure shall be of one piece, NEMA 4X poly, weatherproof construction with smooth, rounded corners and shall be constructed to have a smooth exterior and interior. The enclosure shall be fitted with a closed cell neoprene gasket cover. The enclosure shall have back panel mounting provisions.

The cover shall be hinged with a heavy-duty corrosion resistant piano hinge. The cover shall be lockable by means of two (2) high quality combination latches and padlock hasps.

The enclosure shall be provided with external mounting feet on the top and bottom of the enclosure.

The back panel shall be a minimum of .080" aluminum and held in place by (4) #10 screws, which will mate to four (4) threaded standoffs, which are molded into the enclosure.

The panel shall include (2) double pole main disconnect circuit breakers, alarm circuit breaker, (2) I.E.C. rated motor contactors, (2) plug-in control relays, alternator relay, (2) pump hand-off-auto switches, red alarm light, audible alarm, alarm silence switch, enclosed wire way, terminal blocks, ground lug and all necessary wiring. Terminal strips must have a minimum 3" clearance to the inside wall of the enclosure for ease of wiring.

The control panel shall be fitted with a red lexan alarm light. The light shall be approximately 3" high by 2" diameter, mounted on the top surface of the enclosure, visible from all 360-degree direction. The bulb or lens shall be easily replaced. The lens shall be mounted on top of the enclosure with a neoprene gasket.

The alarm condition will produce a bright glowing alarm light and audible buzzer. The audible buzzer can be silenced by means of the silence switch inside the front panel. The red indicator light will remain illuminated as long as the alarm condition persists. Both flashing alarm light and audible buzzer will stop when the water level drops to normal operating conditions.

All internal wiring shall be neatly assembled within an enclosed wire way. Each wire shall be a different color or stripe (except for ground), and all incoming wires shall terminate in the terminal block. All wires shall be rated for 105 degrees Celsius.

A schematic diagram shall be permanently fastened to the inside of the enclosure.

The control panel shall be U.L. listable as an assembly.



DUPLEX CONTROL PANEL THREE PHASE

4 FLOAT OPERATION TECHNICAL SPECIFICATIONS

A NEMA 4X poly control panel shall be furnished with each pumping unit / basin package.

The control panel enclosure shall be molded of glass reinforced polyester resins, which are chemically resistant to corrosive atmospheres. The resin system shall be pigmented to impart a gray color to the enclosure and be resistant to ultraviolet light.

The resin system also shall include a flame retardant to obtain a flammability rating which meets U.L. 94V-0. Heat distortion temperature shall be 350 degrees Fahrenheit.

The enclosure shall be of one piece, NEMA 4X poly, weatherproof construction with smooth, rounded corners and shall be constructed to have a smooth exterior and interior. The enclosure shall be fitted with a closed cell neoprene gasket cover. The enclosure shall have back panel mounting provisions.

The cover shall be hinged with a heavy-duty corrosion resistant piano hinge. The cover shall be lockable by means of two (2) high quality combination latches and padlock hasps.

The enclosure shall be provided with external mounting feet on the top and bottom of the enclosure.

These mounting feet shall be of fiberglass molded.

The back panel shall be a minimum of .080" aluminum and held in place by (4) #10 screws, which will mate to four (4) threaded standoffs, which are molded into the enclosure.

The panel shall include (2) three pole main disconnect circuit breakers, alarm circuit breaker, (2) I.E.C. rated motor starters with ambient compensated overload relay, (2) plug-in control relays, alternator relay, (2) pump hand-off-auto switches, red alarm light, audible alarm, alarm silence switch, enclosed wire way, terminal blocks, ground lug and all necessary wiring. Terminal strips must have a minimum 3" clearance to the inside wall of the enclosure for ease of wiring.

The control circuitry shall include thermal overload protection, automatically stopping pump operation if overheating is sensed inside the motor housing of the pump. Pump operation will resume once overheating conditions have passed.

The control panel shall be fitted with a red lexan alarm light. The light shall remain solidly illuminated, indicating a high water alarm condition in the basin. The light shall be approximately 3" high by 2" diameter, mounted on the top surface of the enclosure, visible from all 360-degree direction. The bulb shall be 40-watt minimum high intensity-medium base type. The bulb or lens shall be easily replaced. The lens shall be mounted on top of the enclosure.

The alarm condition will produce a bright glowing alarm light and audible buzzer. The audible buzzer can be silenced by means of the silence switch. The red indicator light will remain illuminated as long as the alarm condition persists. Both flashing alarm light and audible buzzer will stop when the water level drops to normal operating conditions.

All internal wiring shall be neatly assembled within an enclosed wire way. Each wire shall be a different color or stripe (except for ground), and all incoming wires shall terminate in the terminal block. All wires shall be rated for 105 degrees Celsius.

A schematic diagram shall be permanently fastened to the inside of the enclosure.

The control panel shall be U.L. listable as an assembly.

AI	AUDIBLE ALARM HORN
A	AUDIBLE ALARM BELL (TYPE 3R ONLY)
A3	AUDIBLE ALARM SONALERT
CX	AUXILIARY CONTACTS (DRY FORM A)
B	ELAPSED TIME METER (PER METER)
G	CYCLE COUNTER (PER COUNTER)
M	DEAD FRONT DOOR
I	GENERATOR RECEPTACLE
F	LIGHTNING ARRESTOR
K	REDUNDANT LOW LEVEL OFF
S	MAIN DISCONNECT
PM	PHASE / VOLTAGE MONITOR
W	REMOTE DIALER
P	UL 508A SERIALIZED LABELING