

Duplexor™ Alternating Pump Controller

Standard Controller

PART/MODEL NUMBERS: CPC-SDS1 SERIES
15 AMP, 120VAC



TECHNICAL DATA SHEET

DESCRIPTION OF OPERATION



Alderon Industries™ | Patent Pending

The Duplexor™ is a compact, innovative alarm and pump controller designed to alternate two pumps rated up to ½ HP, 12 amps each, 120 VAC. Featuring a built-in amp meter display, the Duplexor™ allows both pumps to operate simultaneously during a high-water event—provided the total current draw does not exceed 12 amps.

The controller offers redundant pump starting when connected to both pump start and high-level sensors. Users can choose between a dual sensor probe (non-moving, with separate start and alarm probes) or float switches for start and high-level detection.

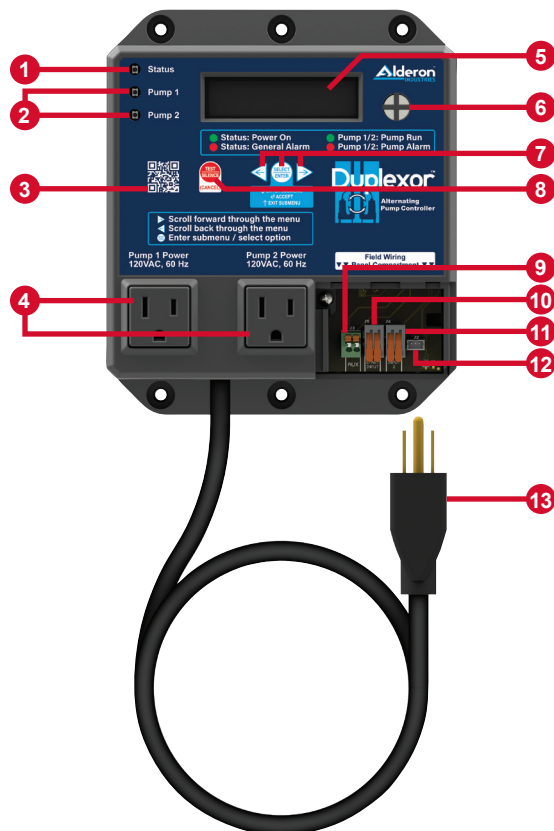
Operation with Automatic Pumps: When the liquid level rises to the pump start sensor, Pump A starts and runs until its automatic float switch drops, stopping the pump. The Duplexor™ then alternates so that Pump B starts on the next cycle.

If the liquid level reaches the high-level sensor, the alarm activates and both pumps start (if the combined draw is below 12 amps). If the total exceeds 12 amps, the pumps will alternate operation instead.

Operation with Manual Pumps: When the liquid level reaches the pump start sensor, Pump A starts. Once the level falls below the start sensor, the pump-on delay timer engages, keeping the pump running until the programmed delay time has elapsed.

On the next cycle, Pump B starts automatically, ensuring balanced pump wear and reliable operation.

STANDARD FEATURES



(1) **Power On Indicator** - Green LEDs illuminate to indicate the unit is powered on. Note: Disable LED indicators in system settings.

(2) **Pump Run Indicators** - Green LEDs illuminate to indicate a pump run event. Red for Pump Alarm.

(3) **QR Code** - Scan code for product information

(4) **Pump Receptacles** - 120VAC female receptacle for pump plugs.

(5) **OLED Display Screen** - Displays system functions, including the temperature, backup battery level, and system events on the main screen.

(6) **Alarm Buzzer** - Annunciates to indicate an alarm event

(7) **Menu Keypad** - Toggle between system functions, program settings, or view all lifetime data stored.

(8) **Test/Silence Pushbutton** - Quick access to lifetime pump run event counter statistic, test or silence the alarm, or exit the menu system.

(9) **Alarm "Dry" Contacts** - Interface with an external device such as a standard or WiFi indoor alarm or BAS (Building Automation System). The contacts are rated 24VDC at 500mA maximum, normally open - fail-safe closed. Operate during any alarm event.

(10) **Start Input Terminal Block** - A terminal block to connect a start control switch.

(11) **Input 2 Terminal Block** - A terminal block to connect an alarm control switch.

(12) **Charger Port** - Connector for rechargeable battery backup (LiPo Battery Included). Provides battery power to the alarm (will not run the pump).

(13) **Power Cable** - Incoming system power Cable, 6ft 120VAC 15 Amp male plug

SPECIFICATIONS

Duplexor™ - Alternating Pump Controller



Pump Power Receptacle
120VAC, 15A, 60 Hz

Pump Power
½ HP 12A Motor Load, 120VAC 60 Hz
15A General Usage, 120VAC 60 Hz

Alarm Power
120VAC, 60 Hz

Auxiliary "Dry" Contacts
24VDC/120VAC, 500mA maximum
Normally Open - Fail-Safe Closed

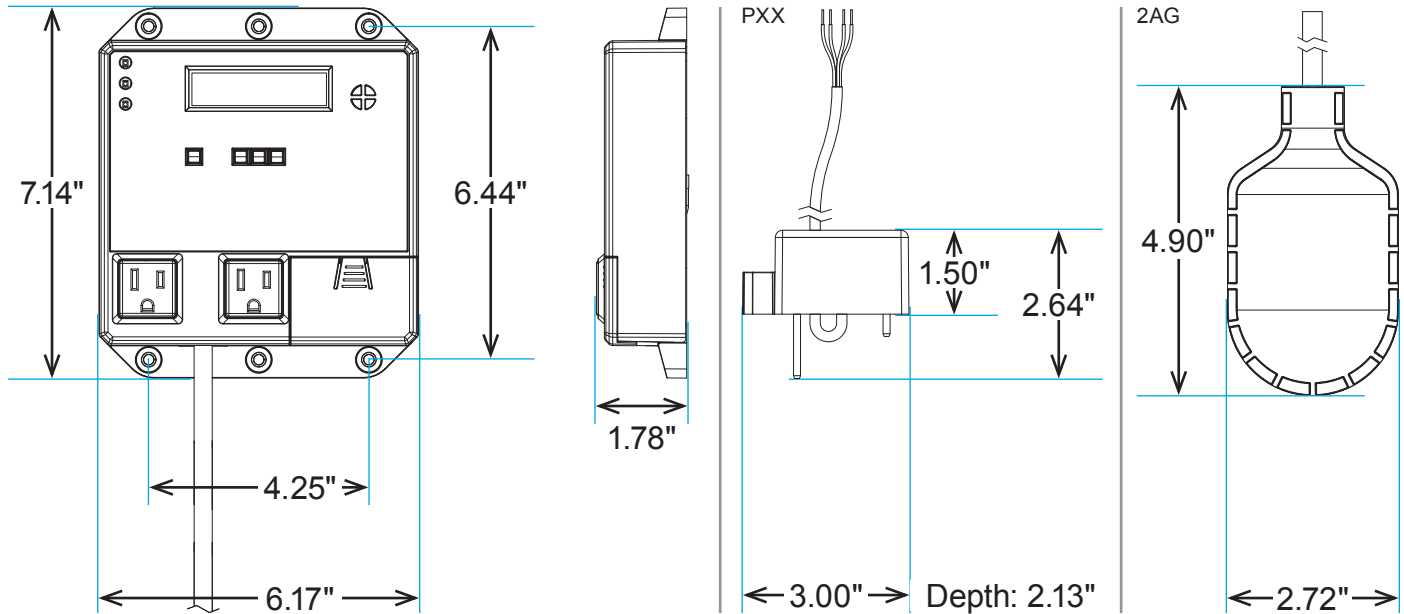
Board Power Consumption
14 Watts maximum (*alarm condition*)

Enclosure
Indoor Type 1

Certifications
FCC Part 15 (*US and Canada*)
CSA (*US and Canada*)

Three-Year Limited Warranty

MECHANICAL DRAWING



Duplexor™ - Alternating Pump Controller, Standard | System Functions and Event Displays

ENCLOSURE LED	COLOR	SYSTEM FUNCTION DISPLAYED TEXT	DESCRIPTION OF SYSTEM FUNCTION
Power	Green Continuous	SYSTEM NORMAL	System is normal
	Green Blip	ON BATTERY	System running on battery
	Green Blip	LOW BATTERY	Battery level is low
	Green Slow Blink	NO BATTERY	The battery is disconnected
	Amber Continuous	EXT START ALARM	Start Input active too long
	Red Fast Blink	HIGH LEVEL INPUT ACTIVE	High Water Level detected
	Red Continuous	[ERROR DISPLAYED]	The stated error is occurring. Press Select/Enter to clear if available
Pump 1	Green Continuous	PUMP 1 RUN	Pump 1 is running normally
	Red Continuous	[ERROR DISPLAYED]	Pump has the stated error occurring. Press Select/Enter to clear
Pump 2	Green Continuous	PUMP 2 RUN	Pump 2 is running normally
	Red Continuous	[ERROR DISPLAYED]	Pump has the stated error occurring. Press Select/Enter to clear

ORDERING INFORMATION



Scan QR code for more information on this product and website includes pricing.

CPC-SDS1X
1 2 3 4 5 6

Customized System Part Number:

MODEL # BOX 1	MODEL # BOX 2	MODEL # BOX 3	MODEL # BOX 4	MODEL # BOX 5	MODEL # BOX 6
CPC					

NUMBER	CATEGORY	TYPE / EXAMPLE
1	Panel Series	CPC = Compact Pump Controller
2	Type	S = Standard Pump Application
3	Pumps	D = Duplex
4	Special PCB Variant	S = Standard W = WiFi, Alderon
5	Plug Style	1 = 120V
6	Sensor	PXX = Dual Probe Switch, Pipe Clamp, Stainless Steel (Start & High) 2AG = Altra Gold Control Switches, Pipe Clamp, RubberLox (Start & High)