

SEQUENCE[®] Colossus 750 DC Plus

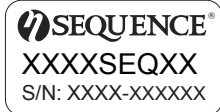
INSTALLATION AND OPERATIONS MANUAL

FILL IN FOR FUTURE REFERENCE:

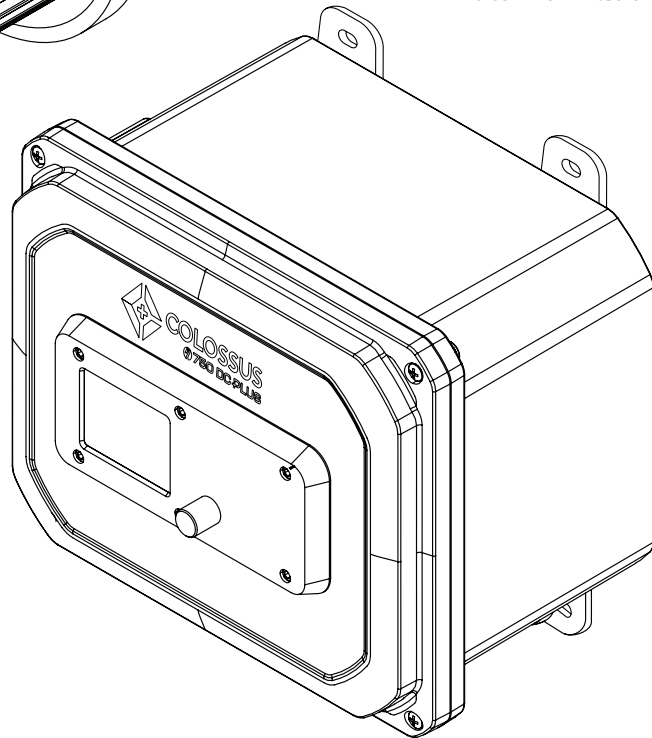
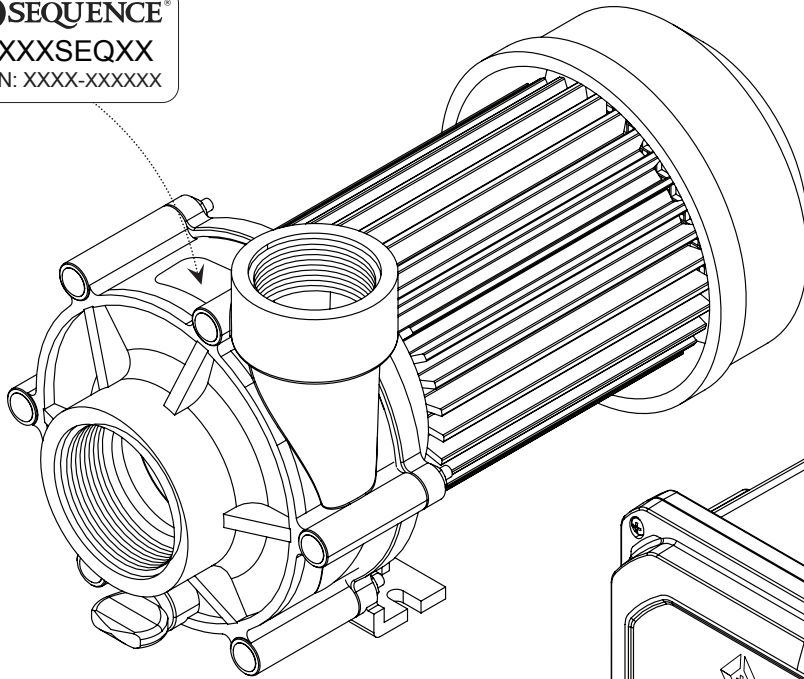
MODEL: _____

SERIAL NUMBER: _____

DATE PURCHASED: _____



TO REGISTER YOUR PUMP
SCAN THIS QR CODE OR VISIT
MDMINC.COM/PUMP-REGISTRATION



PUMP TYPE: ESCC (END SUCTION CLOSE-COUPLED)
MOTOR: BLDC, VARIABLE SPEED, 3150 RPM MAX
INLET: 2" FNPT
DISCHARGE: 1-1/2" FNPT

MATERIAL: 40% GLASS-FILLED POLYPROPYLENE
WITH NORYL[®] IMPELLER
HARDWARE: 316 STAINLESS STEEL
DISCHARGE: 1-1/2" FNPT

SUCTION	DISCHARGE	MAX FLOW	MAX HEAD	MAX POWER	MAX CURRENT	@ VOLTS	MOTOR HP	MOTOR ENCLOSURE	PUMP CASE MATERIAL	MECHANICAL SEAL	IMPELLER	FASTENERS
2" FNPT	1.5" FNPT	120 GPM @ 100%	38.5 FEET @ 100%	723 WATTS	6.3 @ 100%	115	.97	BLDC / TEFC	40% GLASS FILLED PP / VITON	316 SS CARBON GRAPHITE / CERAMIC, VITON	750. COLOSSUS, NORYL [®]	316 SS



Read this manual completely before you install or operate your new pump. This is an external "out-of-pond" pump. It is not submersible. Do not allow this pump to become submerged. Never run dry. Maximum case pressure - 25 PSI.



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OPERATING INSTRUCTIONS

Controller Installation

1. Locate a suitable surface-mount location within range of your installed pump assembly.
2. Orient the control box with the air inlet facing down.
3. Hold the enclosure feet against the surface on which you would like to mount the controller.
4. Mark the centers of the (4) mounting holes on the mounting surface.
5. Use an anchoring method capable of holding the controller box securely to the intended mounting surface. The static weight of the controller box is 15 lbs. Use of all feet is recommended.
6. Route and secure all cables to reduce the potential for damage and tension on the connections and controller.

Controller Connections

1. Plug the 9-pin motor cord connector into the controller receptacle, ensuring the connector pins are aligned before twisting connector's lock ring.
2. Plug the controller's power cord into a power outlet. The input voltage range is 90 - 264VAC.

Controller Operation

1. Toggle the rocker-switch on the controller to turn the controller on.
2. Use desired mode to control the speed of the pump.
Note: The display's background color will change from black to red if the pump is not able to reach the speed setpoint. This behavior occurs at the power limit of the pump assembly.
3. Set the desired speed setpoint using one of the three speed input modes. Reference the Speed Input section below for more detail on these three modes.

CONTROLLER MENU

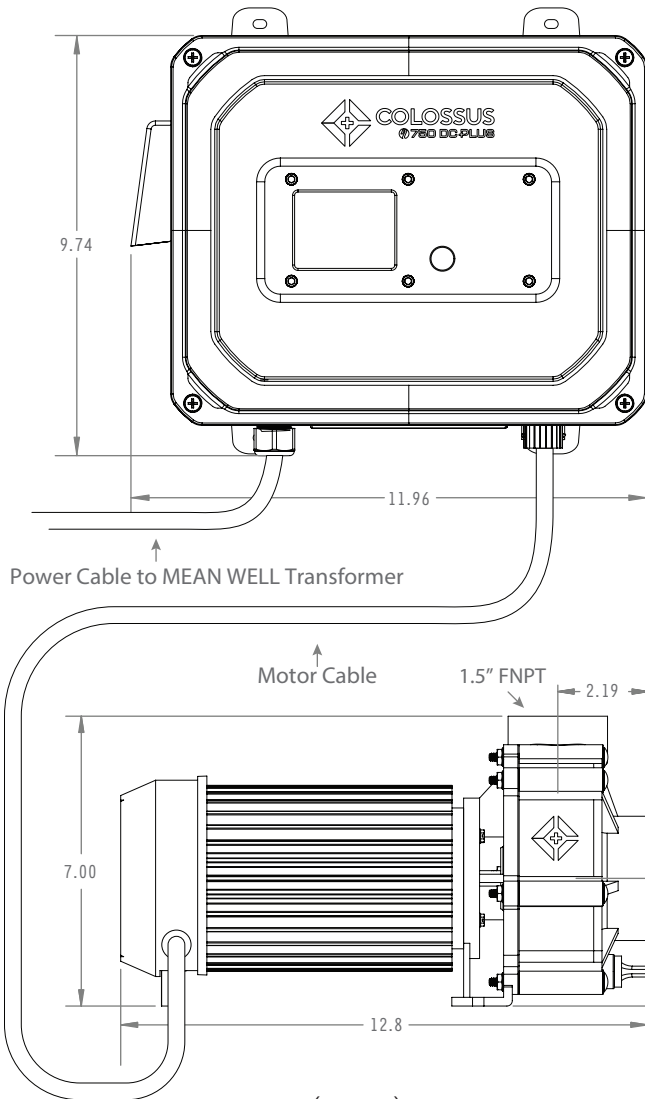
Note: Click the encoder knob to access the menu. Rotate the knob to scroll through the menu and click again to access sub-menu. Select then click Back to exit.

1. Speed Input
 - a. Manual
 - i. The encoder knob on front of controller enclosure is used to adjust the motor speed set point. This set point is displayed on the controller's screen.
 1. The motor speed range is 100 - 3150 RPM.
 - b. Analog: 0 - 10 V (IoT Compatible)
 - i. The analog input connector is used to connect an external control for remote speed control.
 1. Black = V+, Red = V-
 - c. Analog: 4 - 20 mA (IoT Compatible)
 1. Green = A+, White = A-
2. Restore Speed (Manual only)
 - a. The Restore Speed menu item is used to save a setpoint for the pump which to return to following a power loss event.
 - b. When in either Analog Speed Input modes, Restore Speed is disabled.
3. Max User Speed (Manual only)
 - a. The Max User Speed menu item is used to set the maximum speed a user can command.
4. WiFi AP
 - a. The WiFi AP menu item is used for wireless firmware updates.



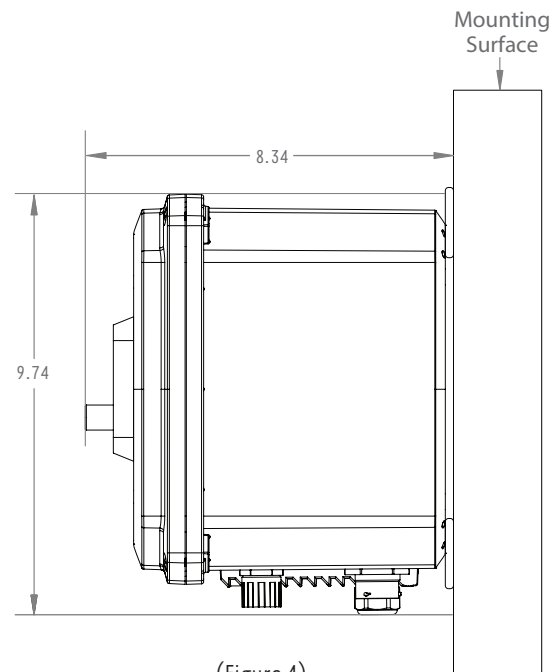
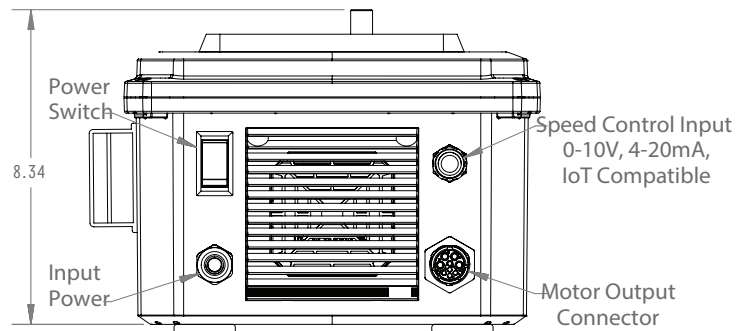
SEQUENCE® Colossus 750 DC Plus

(Figure 1)



(Figure 2)

(Figure 3)



(Figure 4)



WARNING: ALWAYS SHUT OFF ELECTRICAL POWER BEFORE INSTALLATION AND / OR SERVICING THIS PUMP.
ALL ELECTRICAL WIRING SHOULD MEET STATE AND LOCAL ORDINANCES. CONTACT YOUR SUPPLIER FOR INFORMATION.



ELECTRICAL CONNECTIONS

1. Plug unit directly into a dedicated wall outlet with proper circuit protection and ground.
2. Use of an extension cord is not recommended. If an extension cord must be used it should be 14 ga. with a ground and a capacity of 13 amps or greater. Use the shortest cord length possible. Protect the plug/socket connection from water.
3. Warning: Do not run the pump dry.
4. Consult factory an electrical professional if you have questions.
5. Consult factory for hard-wired configurations of the MEAN WELL transformer (not shown in Figure 1).



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MAINTENANCE

Lubrication

Motor – Permanently Lubricated ball bearings – no service required.

Rotary Seal – Requires no lubrication after assembly.

WARNING: EYE PROTECTION IS STRONGLY RECOMMENDED

**The pump must be drained before servicing or if stored below freezing temperatures. Periodic replacement of seals may be required due to normal carbon wear.*

SYMPTOM	PROBLEM	RESOLUTION
No Flow	Insufficient Prime	Prime system with water and purge all air from suction piping.
		Install check valve.
	Insufficient Power	Verify power supply and connection from panel to pump.
		Verify proper voltage.
	Flow Restriction	Ensure valves are open.
		Ensure plumbing is clear, including suction strainers, check valves, etc.
		Verify check valve orientation and direction of permitted flow.
Low Flow	Air leak	Fix air leaks at fittings, connections, strainer basket etc. This typically occurs on the intake side.
	System Incompatibility	Verify hydraulic compatibility: i.e. pump and pipe are sized for the system.
	Air leak	Fix air leaks at fittings, connections, strainer basket etc. This typically occurs on the intake side.
		System Incompatibility
	Insufficient Power	Verify power supply and connection from panel to pump.
		Verify proper voltage. Some models are dual voltage (115/230).
	Flow Restriction	Ensure valves are open.
		Ensure plumbing is clear, including suction strainers, check valves, etc.
	Insufficient Prime	Prime system with water and purge all air from suction piping.
		Verify airtight plumbing on the suction plumbing especially fittings.
	Cavitation	Clean out leaves or other debris from basket strainer (if applicable).
		Increase pipe size where possible.
		Decrease suction pipe length, reduce the number of elbows, etc.
		Verify hydraulic compatibility: i.e. pump and pipe are sized for the system.
Sporadic Operation	Insufficient Power	Verify power supply and connection from panel to pump.
		Verify proper voltage.
	Poor Ventilation	Ensure adequate airflow over motor to prevent overheating.
Excessive Noise	Cavitation	Verify airtight plumbing on the suction plumbing especially fittings.
		Clean out leaves or other debris from basket strainer (if applicable).
		Increase pipe size where possible.
		Decrease suction pipe length, reduce the number of elbows, etc.
		Verify hydraulic compatibility: i.e. pump and pipe are sized for the system.
	Insufficient Power	Verify power supply and connection from panel to pump.
		Verify proper voltage.
	Flow Restriction	Ensure valves are open.
		Ensure plumbing is clear, including suction strainers, check valves, etc.
		Verify check valve orientation and direction of permitted flow.



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