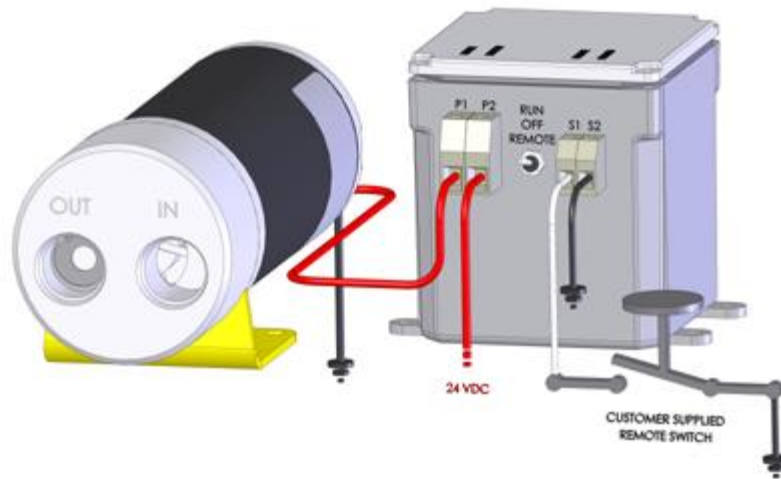
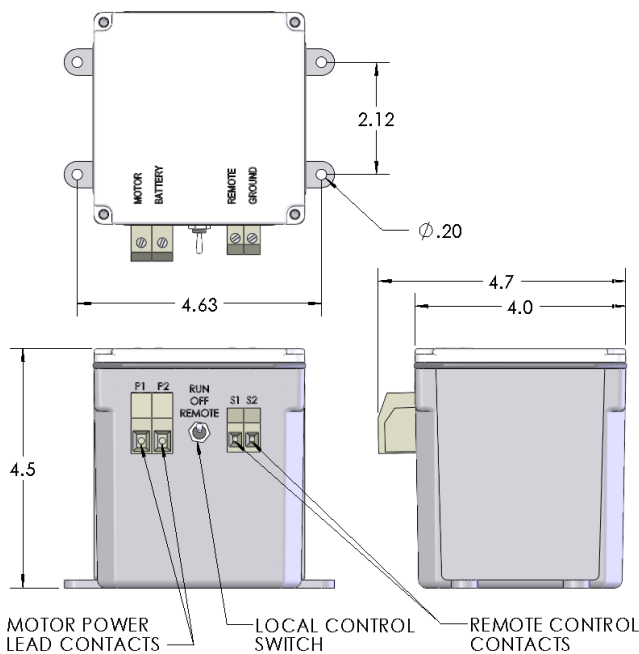




SCD Series Prelube Controls



Feature and Specifications Comparison	SCD1215	SCD2415	SCD2450
Operating voltage	12VDC	24VDC	24VDC
Pump Power rating	15 A	15 A	50 A
Motor Protection	Included		
Low Power Remote Control Circuit	Integrated		



Simple, Compact, Heavy Duty, Industrial,
 Basic controls for setting up a Prelube system to run from the control or from a remote switch
 Easy external Wiring Screw Connections
 Compact NEMA enclosure



VARNA Products

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General

The VARNA Products SCD Prelube Pump Control Units come in 12 or 24 VDC as well as in 15 or 50 amp versions. They provide all the functions for local and remote operation of an engine prelube pump. Prelubing the engine is as simple as holding the local or a remote switch.

The VARNA Products Prelube Control Unit is prewired inside and ready to be connected to your system. Installation is easy with all connections conveniently located outside of the enclosure with screw terminals. The installer only needs to connect power, any remote switches and the prelube pump for the system to be ready to operate.

Remote Operation

The unit includes an optional easy to set up remote function. The Prelube Control Unit supplies voltage to the remote switch. No external voltage sources are needed. One or more remote switches can be added to the Prelube Control Unit in parallel if more than one remote station is desired. If no remote function is to be used, S1 must be grounded. Using the function requires only one wire to be run to a user supplied contact closure of some kind. Remote switches, relays or other contact closures must be DC rated for 0.5 amps continuous with 4.0 Amp inrush current at 24 VDC. This switch acts to ground the control relay inside the box to cause the prelube pump to run.

The engine prelube pump may also be controlled by a semi or fully-automatic device such as an engine control unit. Any kind of contact closure capable of the same rating as a remote switch can be used to trigger the system.

Motor Protection

SCD controls can be ordered for either 15A or 50A. Each model includes the appropriate motor protection for prelube pumps of a matching rating. The 15A version is ideal for our EP and XD pumps and the 50A is suited for the DC pumps in the CF line.

Application Engineering

It is challenging to address every possible installation type. We are always happy to help in choosing an appropriate installation setup. Give us a call for engineering assistance and support. 888-676-7774



SAFETY WARNINGS and CAUTIONS

WARNING This equipment operates on 12 or 24 VDC depending on model number. Only qualified personnel should install or maintain this equipment. Before working on this equipment make sure that ALL power to this equipment has been disconnected and that no other sources of power exist that may create an electrical shock hazard within this equipment. Electric shock can cause serious or fatal injury.

WARNING This equipment operates on 12 or 24 VDC depending on model number. Only qualified personnel should install or maintain this equipment. Improper wiring or connections can cause burns or fires resulting in serious or fatal injury.

WARNING This equipment can be accidentally or purposely, remotely operated at any time. Always insure that all means of energizing this equipment have been locked out or otherwise disabled during installation and maintenance of the prelube pump. Unexpected prelube pump operation during installation and maintenance can cause contact with or entanglement in moving or rotating parts resulting in serious or fatal injuries.

CAUTION The prelube pump can be accidentally or purposely, remotely operated at any time. Make sure that all means of energizing the prelube pump are locked out or otherwise disabled before changing oil filters, disconnecting the associated oil lines, or maintaining any other equipment that may cause oil spillage by unintended prelube pump operation.

CAUTION Maximum vibration in the 10 to 55 Hz. range is 1 g RMS. Excessive vibration can damage the control box. The control box must be mounted in a location that does not receive direct vibration from the engine or other sources.

CAUTION Suitable circuit protection to protect the cable between the battery and the Prelube Control must be provided by the installer and is not included in the kit.

CAUTION If the switch on the control is left in the OFF position after the local run has been used the remote switch will not operate.



Prelube Control Unit Installation

1. Locate the Prelube Control Unit in an appropriate place for electrical equipment associated with the engine. Mount it with the four flange tabs outside the box.
2. Connect power cables:
 - a. The conductor size will be dictated by the current draw of the prelube pump motor, by the length of the run, the circuit protection device in the source power panel, applicable codes, and standard practice. These cables are to be supplied by the installer.
 - b. Strip the wire ends 3/8 inch (10 mm).
 - c. Connect the Prelube Controls P1 screw terminal to the red/positive lead on the pump.
 - d. Connect the positive post on the 12/24 volt battery to the P2 screw terminal on the Prelube Control.
 - e. Connect the black motor lead on the pump to the negative post of the battery.
3. Connect remote switch station wiring.
 - a. Use 16 gage or bigger conductor. (These cables are supplied by the installer.)
 - b. Strip the wire ends 3/8 inch (10 mm).
 - c. Connect S1 screw terminal to a switch. (if no remote is used connect S1 directly to ground)
 - d. Connect the other side of the switch to ground.
 - e. Connect S2 screw terminal to ground. (if no remote is used leave S2 unconnected)
4. Wiggle all screw terminals and retighten.
5. Install wire supports or stress relief to hold the wires as close to the control as possible and within 5 inches of the terminals.

Installation Checkout

1. Verify that the Prelube Pump is installed and plumbed according to its installation instructions.
2. Verify that there is oil in the engine and that all oil lines, filters and other engine oil related equipment are completely installed and ready to test.
3. Push and hold the switch in the “RUN” position on the Control. The prelube pump should run until the switch is released. If the motor fails to run or make pressure, see the trouble shooting section.
4. Leave the power switch on the control set to the “Rem.” position for use with the optional remote switch station.
5. From the remote station (if used), push and hold the switch in the “RUN” position. The prelube pump should run until the switch is released. If the motor fails to run or make pressure, see the trouble shooting section.



Trouble Shooting

1. The Prelube Pump does not run:
 - a. Check that the switch on the control is not in the OFF position.
 - b. Check for voltage at the end of the pump leads. If there is power see pump manual for trouble shooting.
 - c. Listen for the circuit breaker tripping. It is located inside the Prelube Control Unit and is a self-resetting breaker that cannot be reset manually. If there is an overload problem, the breaker will trip and then after a few seconds it will cool and reset. It makes an audible click when it trips or resets. A miswired control or shorted wires can cause this circuit breaker to trip.
 - d. Check all screw terminals by giving them a gentle tug.
 - e. Check connections for continuity.

2. The pump runs but the prelube does not make pressure at the engine.
 - a. Verify that there is adequate oil in the engine. Note: Changed oil filters or other maintenance may require a longer prelube time to purge the filters and oil lines.
 - b. Check if maintenance has been performed that would allow air in the oil lines to the pump. While the pump will self-prime, it may take some time.
 - c. Check if the engine is hot and therefore the oil is thin. Oil may be present in the engine but thin oil could be flowing through the bearings and other oil paths faster than the prelube pump is supplying it. Oil is flowing through the engine but it does not produce enough pressure to operate the prelube pressure switch.
 - d. Check for proper function of the engine pressure measuring system.
 - e. Check for leaks in the Prelube Pump suction line and fittings. These leaks can be hard to find. A relatively small suction leak can keep the pump from priming.

3. The prelube pump runs whenever power is applied to the control unit.
 - a. Check for shorted wire(s) to the remote prelube station.
 - b. Check for shorted or miswired remote prelube cable at the Control Unit or at the remote prelube station. Pay particular attention that S1 is not grounded.

VARNA Products PRELUBE CONTROL PANEL

12/24 VDC 15 Amp Control

VARNA P/N 6650(12V) or 6716(24V)

