DESCRIPTION OF OPERATION

CMC09 / CMC10

DUPLEX PUMP CONTROLLER / ALTERNATOR

FEATURES:

- Independent on, common off is standard. Independent on, independent off is optional.
- All relay construction. The alternator is a permanent magnetic latching type relay – not a cam or ratchet which are subject to wear.
- Redundant "On" switching: When the "Lag Pump On" sensor closes, lead and lag pilot circuits will be completed by separate contacts of CR3, thus providing redundant "on" control for the lead pump.
- Sequence Selector: An optional sequence selector may be connected to "lock" the controller into a desired sequence (1-2, 2-1, or AUTO).
- The CMC10 is the same as the CMC 09 with the addition of alternator contacts wired to terminals for connection of optional "Next Pump On".
- Snap-Track mounting. Board is 3'' wide by 8 ½" long (CMC09) or 9" long (CMC10).

GENERAL

This module is designed to control the ON-OFF operation of two pumps with respect to the liquid level such as in a wet well or similar application. The ON-OFF levels are typically switch type liquid level sensors.

INDEPENDENT ON, COMMON OFF

The following is an example of "Pump Down" independent ON – common OFF operation. Assume that the liquid level is below the bottom sensor, the level is rising and the alternator is in the RESET position as shown.

The "All Off" sensor will close first, completing the sealing circuit. As the liquid level continues to rise, the "Lead Pump On" sensor wired between terminals 4 and 7, will close and energize relay CR1. The N.O. contacts of CR1, wired between terminals 11 and 12 will close thus completing the pilot circuit for Pump No. 1.

If the liquid level should continue to rise, the "Lag Pump On" sensor will close and energize CR3. The redundant N.O. CR3 contacts, wired between terminals 9 and 10, 11 and 12, will close when CR3 energizes. These redundant contacts give positive assurance that both pump pilot circuits are closed when the "Lag Pump On" sensor closes.

The pump(s) must pump down past the "Both Pumps Off" sensor before the sealing circuit will be broken, de-energizing the control relays, which stops the pumps(s).

At this point – immediately after the termination of a pumping sequence – the alternator will change state. This means that the pumps will operate in a reverse sequence on the next pumping cycle.