TECHNICAL BULLETIN

SEAKEEPER 35 TO 40 SEAWATER OPTIONS

PRODUCT Seakeeper 40

OVERVIEW

The purpose of this document is to inform Seakeeper installers of suitable seawater supply options when replacing a Seakeeper 35 with a Seakeeper 40. The Seakeeper 40 has transitioned to a 24 VDC seawater pump output in contrast to the 220 VAC output used on the Seakeeper 35. The Seakeeper 40 has been outfitted with a new heat exchanger and wire harness as part of this update. Impacts to Seakeeper 40 installations and the relevant drawings are outlined in the following sections.

SEAKEEPER 40 INSTALLATION CHANGES

Please note the following changes to the Seakeeper 40 compared to the Seakeeper 35:

1. The Seakeeper 40 controls a dedicated 24 VDC circuit that powers a DC Seawater Pump.
2. The dedicated 24 VDC circuit requires 20 A overcurrent protection.
3. The seawater pump 24 VDC output has been updated to a 2 x 12 AWG cable.
4. The Seakeeper 40 wire harness includes a dedicated 24 VDC circuit, as seen in the Cable Block Diagram (90710).
5. The Seakeeper 40 requires 13 – 15 GPM (49 – 57 LPM) of seawater flow through the heat exchanger.
6. The Seakeeper 40 requires on-demand flow that is controlled automatically by the unit. Continuously powered pumps that bypass the Seakeeper control cannot be used and may result in damage to the Seakeeper.
7. Seakeeper offers a DC Seawater Pump Assembly (P/N 30529) as an option for the Seakeeper 40. The assembly uses a Gianneschi 24 VDC Seawater Pump which is covered under the Seakeeper Standard Warranty. Seakeeper strongly encourages the use of this pump as it is the only model verified by Seakeeper to deliver the required flow.

USE OF AC SEAWATER PUMPS WITH SEAKEEPER 40

The Seakeeper 40 is designed for on-demand seawater flow that is controlled by the 24 VDC sea water pump circuit. This circuit must be used to regulate the temperature of the unit.

If an existing AC pump meets the flow requirements outlined above, it can be used if a DC-triggered control circuit is implemented to control the AC pump with the Seakeeper 24 VDC sea water pump output. This control circuit must be rated for the current draw of the AC pump installed and possess an Ingress Protection (IP) rating of at least 67. If the control circuit does not possess an IP rating, an IP 67 or greater electronics enclosure may be used.

Please note the Seakeeper 40 DC Seawater Pump Kit (PN 30529) is the only pump tested and approved by Seakeeper. It is the sole responsibility of the installer to validate the seawater flow and pump cycling functionality of any other seawater supply method. Failure to do so could result in overheating or overcooling events that can cause permanent damage to the Seakeeper.

PRODUCT Seakeeper 40

A generic control circuit utilizing a solid-state relay is shown below:

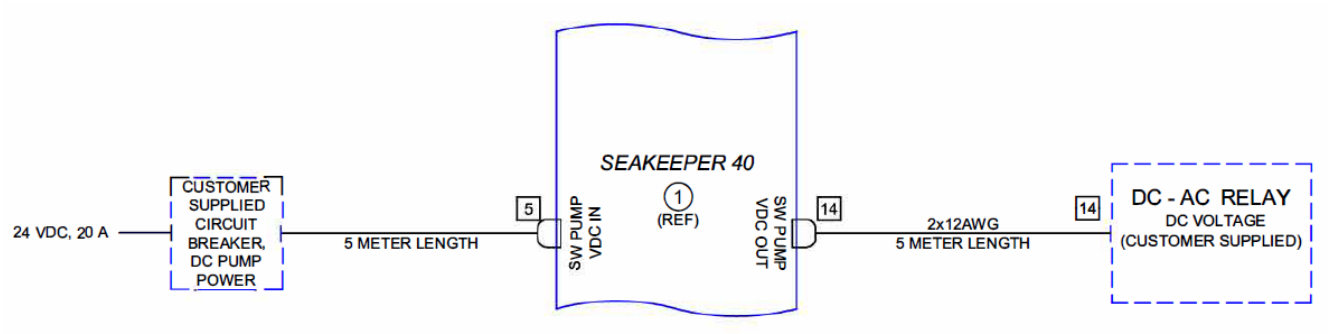

Figure 1: Seawater Pump Cable Block Diagram with DC-AC Relay

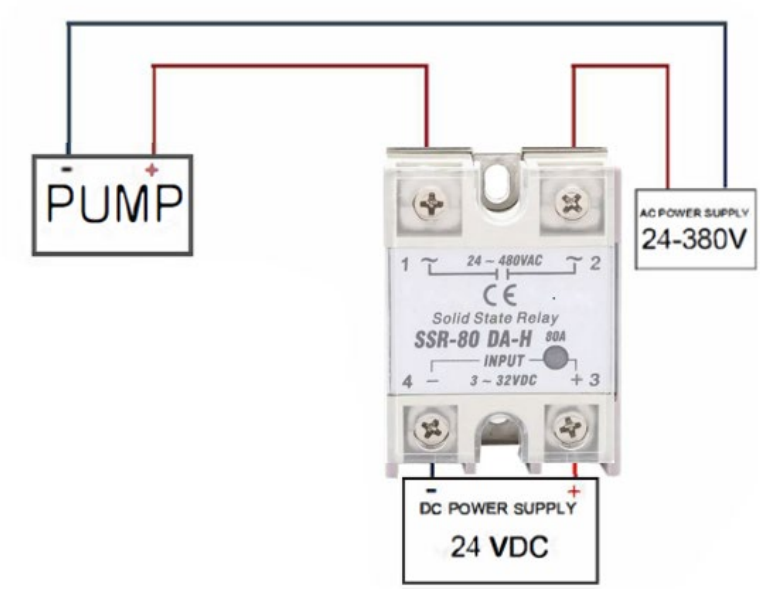

Figure 2: Solid State Relay with DC Input & AC Output

Note: AC power supply voltage will be based on the pump power input specification

SEAKEEPER 40 REFERENCE DOCUMENTS

- 90710, Seakeeper 40 FRB Cable Block Diagram
- 90711, Seakeeper 40 FRB Cooling Water Schematic
- 30529, Gianneschi 24 VDC Seawater Pump