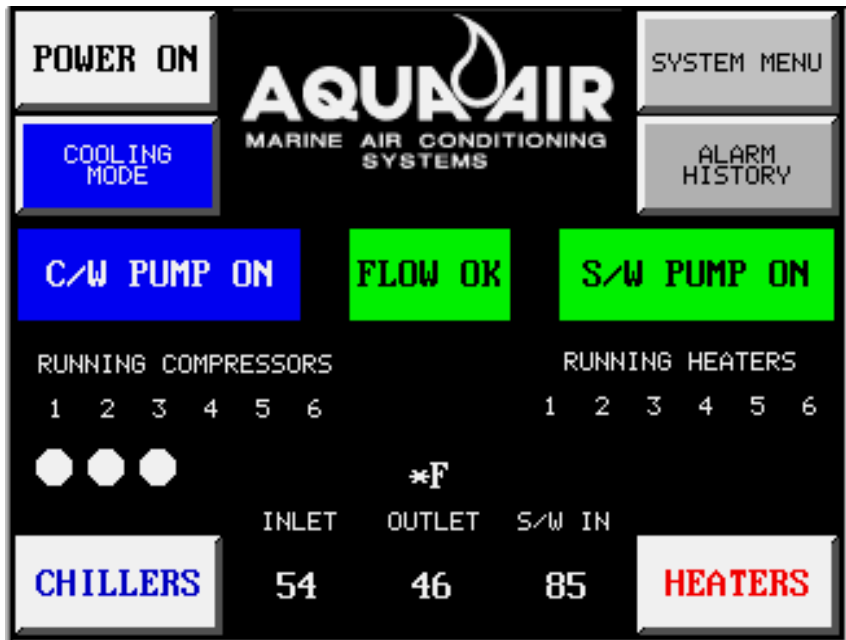


Introduction

1



The Aqua-Air® TS/PLC Touchscreen and PLC Control System, featured exclusively on Aqua-Air® chillers, is the latest revolutionary innovation in chiller technology by Aqua-Air®.

With in-house programming and renown Aqua-Air® chiller expertise you are assured of state-of-the-art control of your chiller unit.

Utilizing industrial grade PLC's and touchscreens you are assured of years of trouble-free operation.

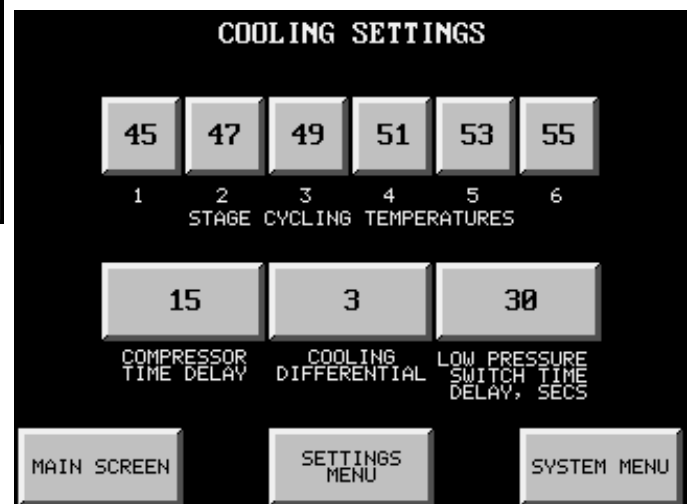
System Features

- 0 User friendly graphical interface-no more cryptic two letter diagnostic codes
- 0 Easy selection of system operating mode, cooling or heating
- 0 Digital display of chillwater inlet and outlet temperatures
- 0 Digital display of seawater inlet temperature
- 0 Temperatures can be displayed in Fahrenheit or Centigrade
- 0 Indicator lights showing the number of running compressors or heaters
- 0 Running status of chillwater and seawater pumps
- 0 Alarm History shows each alarm that has occurred with the most recent at the top
- 0 Alarm Count lists all alarms and shows the total count for each one
- 0 Alarms have date & time stamps showing alarm activation, when cleared, value at time of alarm, high and low limits and which limit was tripped
- 0 Individual on-off control of each chiller and immersion heater element
- 0 Digital display of chiller and heater cycling temperatures
- 0 Indicator lights for low and high refrigerant pressure faults, freeze-up faults and compressor / variable frequency drive faults
- 0 Hour meters for compressors, pumps and heaters
- 0 Primary and secondary chillwater and seawater pump selection
- 0 Optional seawater pump variable frequency drive control interface
- 0 Factory default settings can be loaded at any time to return the system to a

- standard baseline for troubleshooting purposes
- 0 Individual stage cycling temperatures for both chillers and heaters
- 0 Settings for compressor and heater time delays
- 0 Automatic or manual alternating sequence selection
- 0 Alternating sequence can be set to manually stay in any particular sequence
- 0 Alternating period can be set from 1-999 hours
- 0 Display of time remaining in current alternating sequence
- 0 Touchscreen contrast is user adjustable for almost any lighting situation
- 0 Diagnostics screen where you can individually energize all outputs and monitor all inputs
- 0 Optional refrigerant suction and discharge pressure indication for each compressor
- 0 Optional remote monitoring by the ships system via an Ethernet network utilizing the MODBUS protocol
- 0 Optional remote touchscreen
- 0 Optional color touchscreen
- 0 Optional Global Link® Package allows Aqua-Air® engineers to remotely access your system via phone modem and aid in troubleshooting system problems.



Chiller Control Screen

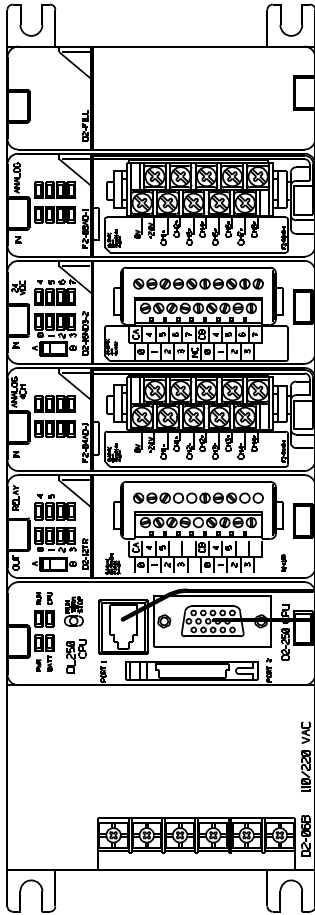


Cooling Settings Screen

I:\WORDPFCT\TSPCL6-1COLOR-PDF.WPD

Aqua-Air Manufacturing, division of the James D. Nall Co., Inc.
1050 E. 9th Street, Hialeah, Florida 33010 U.S.A.
Ph 305-884-8363 Fax 305-883-8549 Email sales@aquair.com

TYPICAL 3 STAGE PLC RACK



OPTIONAL ANALOG INPUT (4-20mA) FROM PRESSURE TRANSDUCERS (SUCTION AND DISCHARGE) ON EACH COMPRESSOR.

DIGITAL INPUT (24 VDC) FROM PRESSURE SWITCHES, FREEZE STATS, INVERTER FAULT RELAYS, FLOW SWITCHES AND STARTER OVERLOADS

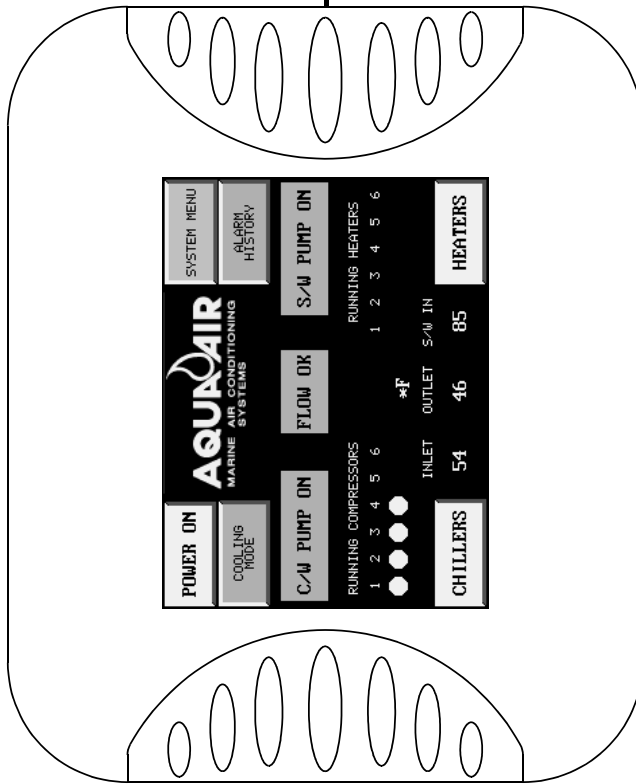
ANALOG INPUT (4-20mA) FROM TEMPERATURE TRANSDUCERS CHILLWATER INLET & OUTLET AND SEAWATER INLET

RELAY OUTPUTS CONTROLLING PUMP STARTERS, COMPRESSOR STARTERS OR INVERTER RELAYS, REVERSING VALVE SOLENOIDS AND ALARM OUTPUT

PROGRAMMING PORT CONNECTS TO COMPUTER VIA RS-232C

J:\GCON\TYPTSP\PLCGCD
J:\DXF\TYPTSP\PLCDXF

TOUCHSCREEN DISPLAY PANEL



TYPICAL TOUCHSCREEN / PLC SYSTEM

I:\WORDPFCT\PLC\TYPICAL\TSP\SYSTEM.WPD