

HARDWARE SPECIFICATIONS

Input Power

- 88-125 VAC 47-63 Hz

Environmental

- Operating Temperature -20°F to 140°F (-29°C to 60°C)
- Storage Temperature -40°F to 185°F (-40°C to 70°C)

Display

- Size 10.1" Diagonal – Wide Format
- Dot Format 1280 x 800 WVGA
- Backlight LED
- Touchscreen 5-Wire Resistive

CPU

- Type ARM Processor, Running Linux

Certifications

- Agency Approvals UL 508A, cUL

Digital Output Modules

- Continuous Operating Current 3 Amps Maximum
- Voltage 12 to 140 VAC

Digital Input Modules

- Voltage 90 to 140 VAC

Analog Inputs

- Type 0-5 VDC, 0-10 VDC, 4-20 mA, ICTD, RTD

Analog Outputs

- Type 4-20 mA

Motor Current Sensor

- Technology 4-20 mA Transmitter

External Communications Ports

- Ethernet 10/100 Mb/s
- Protocol MODBUS TCP
- USB USB-2.0 Compliant

DESIGN SPECIFICATIONS

PUMP AND LIQUID LEVEL CONTROL

Refrigerant pump and liquid level control shall be furnished with a UL/cUL listed control panel in a NEMA-4 enclosure fully factory wired and tested which shall provide the following functionality:

1. Single point power connection with disconnect.
2. Starters for pumps.
3. Pump differential pressure monitoring and safety cutouts.
4. Independent high level compressor cutout float and circuit.
5. Liquid level control, monitoring and alarming.
6. Ability to detect low pump flow and automatically open minimum flow bypass valve(s)
7. Automatically energize the other pump in the event one fails.
8. Read 4-20 mA signal from level probe and provides digital readout on panel.
9. Automatically controls (up to two) proportional liquid feed valve(s).
10. Utilize MODBUS over RS-485 or Ethernet to communicate with Refrigeration Control System.

Control shall be the Matrix II Microprocessor™ Control Panel as manufactured by Refrigeration Vessels & Systems Corporation or approved equal.