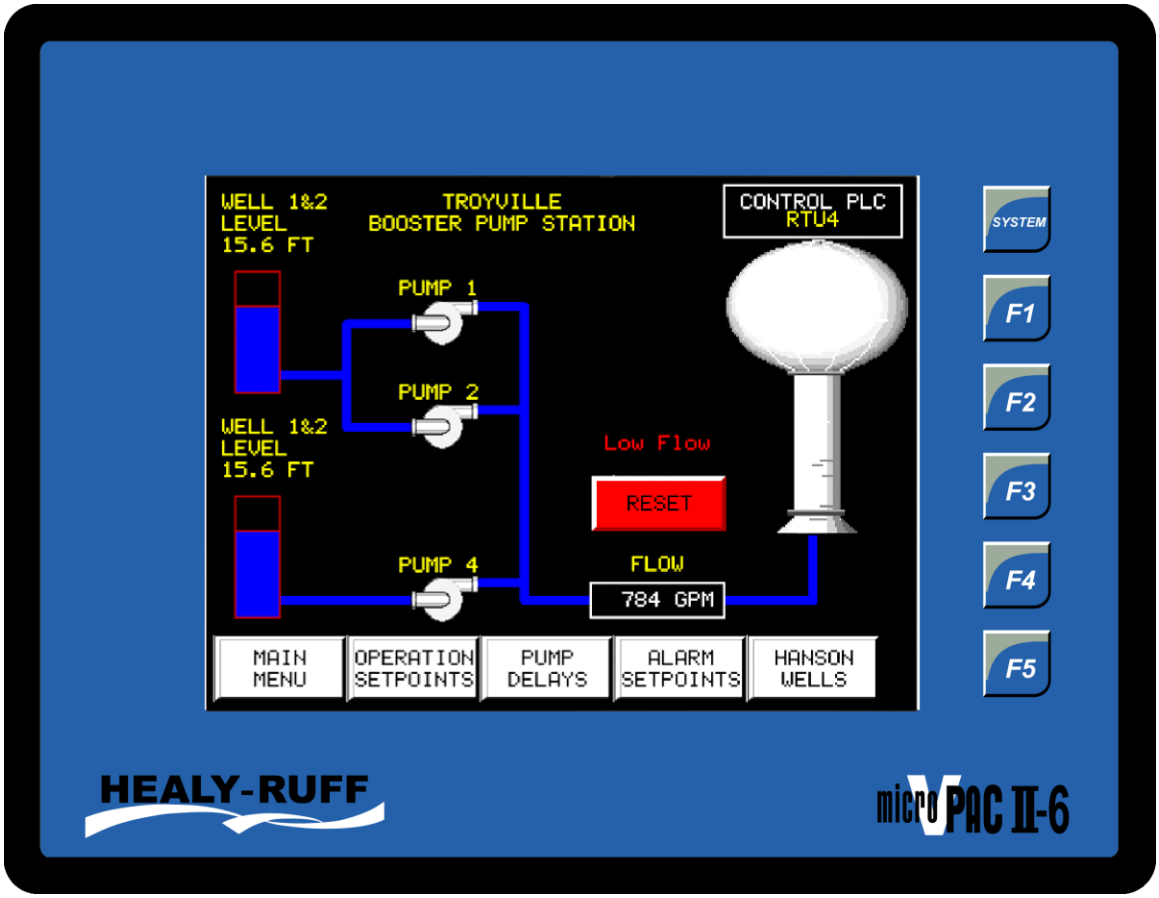
Engineering Guide Specification

Micro-VPAC IIC Programmable Controller



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Micro-VPAC IIC Engineer's Guide Specification

Control Type: Programmable Logic Controller (PLC)
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A. Operator Interface

1. General – The operator interface shall be a 5.7" 320 x 240, TFT, LCD touch screen display. A library of scalable graphics including pilot lights, push buttons, multi-position selector switches, numeric and ASCII data entry, 360° rotary gauges, bar graphs, analog gauges, animated Bitmaps, trending- capable of 10mS updates, alarm summary and alarm history, removable memory monitoring and management, scalable fonts and importing any True Type Fonts from development PC, and Language translation.

2. It shall include 5 soft keys: 4 programmable soft function keys, and a System key.

3. Environmental Ratings & Agency Approvals – The operator interface shall be suitable for Type 12, 4 & 4X environments. Additionally the front panel shall be manufacture from a UV resistant polyester substrate.

4. Security – A four level, multi user security system shall be available for use by the owner. The control system supplier shall provide the owner with a suggested security program in the submittal stage of this project.

B. PLC

1. Processor and memory – The PLC Processor scan rate shall be 0.2 ms/K of memory or faster. Total available program memory shall be no less than 256K. Memory structure shall support monitoring of at least 5000 I/O points. A 2 GB removable mass storage device shall be provided to store the operating program and historical data.

2. On-Board I/O – In its base form the controller shall be provided with at least 12 standard digital inputs, 4 high-speed counter inputs, 6 relay outputs each with independently isolated contacts and 4 analog inputs. A CAN port shall be provided to interface with a wide variety of I/O expansion modules, and other V-PAC controllers. I/O expansion modules and V-PAC controller may be located locally or distributed up to 6,000'

from the controller without the need for special line conditioning, amplifiers or other devices.

3. I/O Expansion - The processor and I/O system shall be capable of monitoring 2048 digital inputs, 2048 digital outputs, 512 analog inputs, and 512 analog outputs.

4. I/O Options - A wide selection of I/O module shall be available. They shall include DC inputs with ESP, AC inputs, DC outputs PNP & NPN, AC outputs, relay outputs, combination input output, analog input, analog output, isolated analog output, combination analog input & output.

5. Communication I/O & Protocols – Each controller shall include two active RS-232/RS-485 serial ports in addition to the CAN network port. Supported protocols shall include: Modbus RTU Master/Slave, DF1 Master, SNP and serial ASCII in and out. A control algorithm shall be supplied that supports store and forwarding of Modbus RTU addresses through multiple sites. When enabled, this communication feature shall allow the Modbus RTU Master to communicate with blocked or distant remote sites.

6. When ordered with Ethernet option, the controller shall be programmable via a LAN or WAN. A field installable 57K modem card shall be available as an option for installation where an Ethernet network connection is not available.

C. Software

1. A site license for the Operator Interface and PLC control logic development software shall be provided to the owner and licensed in their name. All cables shall be provided to allow the owner to make changes to the software should the need arise. Software shall be a 32 bit application and operate with any current Windows ™ operating system.

2. The software shall allow the operator to develop PLC ladder logic software, upload and download programs to the PLC and edit communication programs should the need arise.

3. The PLC programming instruction set shall include contacts, coils, timers, counters, math blocks, move blocks, scaling blocks, auto-tune PID blocks, floating point math capability, data conversions, modem commands & subroutines as a minimum.