GE Intelligent Platforms - VersaMax PLC

The PLC, or programmable logic controller, is the heart of any intelligent automation system. The PLC sends commands to actuators, takes in data from sensors, and executes programs based on the needs of the specific system. The introduction of the PLC into the manufacturing realm allowed manufacturers to replace thousands of hand wired relays, rapidly improving the setup, teardown, and maintenance processes. PLCs can be connected to actuators, such as solenoids, hydraulic, or pneumatic systems; sensors, and machine vision systems. The PLC can interface with facility databases to read or update information as needed.

The VersaMax PLC from GE Intelligent Platforms is a low cost, robust, and versatile PLC that can be used alone, as an I/O drop for other controllers, or as distributed control for up to 256 I/O points. The VersaMax PLC is easily expandable, so operators can add module slots and modules as needed. The VersaMax PLC has four CPU models (each with two serial ports and one with an Ethernet port) and a wide selection of discrete and analog I/O. Additionally, the VersaMax PLC has four Network Interface Units (NIUs) that allow the user to use the VersaMax PLC in I/O drops that are connected to the following field busses:

> Genius
> DeviceNet
> Profibus-DP
> Ethernet (GE EGD and Modbus TCP)

Manufacturers are continuously looking for tools to improve the productivity of their production processes while meeting increasing customer demands and managing potentially global operations. The flexibility of the VersaMax PLC means that it can be used for application scaling from simple workstations to complex production processes.

VersaMax CPU

The VersaMax PLC is controlled by a processor that has 12K of memory for application programs, floating point math, real time clock, and other functions. Bumpless run mode contributes to the versatility of the system. The CPU includes automatic I/O addressing, including extensive diagnostics, internal fault table, and LEDs that indicate system faults.

Programming the VersaMax PLC

The VersaMax is programmed using Proficy Machine Edition Logic Developer PLC Standard and it uses an instruction set very similar to the set used by the Series 90-30, which makes a VersaMax ladder program transportable to the Series 90-30, Series 90-70 and PACSystems controllers with little or no manual intervention. Proficy Machine Edition combines the best of traditional programming and graphics applications with powerful open industry standard

technologies such as COM/DCOM, ActiveX, OPC and XMLproviding a smooth migration path to the latest development tools. The combination of the VersaMax PLC and Proficy Machine Edition allows manufacturers to create reliable automation solutions and/or upgrades quickly and easily.

Applications for the VersaMax PLC

The VersaMax PLC combines the power and reliability that manufacturers require with flexibility and versatility to allow the VersaMax PLC to be used in nearly any automation application. Some of these applications include:

> Ship compartment humidity monitoring system (VersaMax CPU and Ethernet NIUs)
> Water/Wastewater (VersaMax controller and Ethernet NIUs)
> Correctional facilities (VersaMax controller)
> Transformer manufacturing (Proficy Machine Edition Logic Developer PC with View and VersaMax Ethernet NIUs)