Quest Technical Solutions

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QTS-CLX-PVX

PROVOX® Module

The QTS-CLX-PVX connects a ControlLogix controller to a PROVOX® Control I/O bus.

The QTS-CLX-PVX is intended to be used for migrating PROVOX systems to ControlLogix controllers. You can retain the PROVOX I/O as the first step in the migration.

The module acts as a monitor or as a master on the Control I/O bus. You select the mode by downloading different firmware to the module.

The module is configured by capturing the data sent by the PROVOX master during a Control I/O bus reset.

In monitor mode, the QTS-CLX-PVX reads PROVOX input and output data and sends it to input and status input data in the ControlLogix. It cannot transmit on the bus.

In master mode, the ControlLogix sends output data to the QTS-CLX-PVX, which then transmits it as output data on the PROVOX Control I/O bus. The QTS-CLX-PVX sends PROVOX input data to input data in the ControlLogix.

The QTS-CLX-PVX:

- supports I/O bus redundancy
- supports 20-series Control I/O files 1-16
- supports up to 64 I/O cards. For larger systems, split the bus and use two QTS-CLX-PVX modules.
- supports 10 series I/O with serial buffer card
- does not support EIC or IDI
- does not support Control I/O card redundancy

The QTS-CLX-PVX communicates with the ControlLogix processor using scheduled connections. You configure the module as a Generic Module in RSLogix 5000 with:

- 250 16-bit words of scheduled input data
- 248 16-bit words of scheduled output data
- 250 16-bit words of status input data

Routines are available to convert to and from PROVOX percent format.

The Windows configuration program supplied with the module maps Control I/O bus data to the scheduled data. It also:

- uploads and downloads configuration data
- downloads firmware to the module
- saves and opens configuration files
- exports aliases for use in your RSLogix 5000 application

To use the Windows utility programs, you must have RSLinx software, version 2.54 or later, with an activation.

To accomplish a control system upgrade:

- Capture the existing controller's I/O configuration
- Develop a new application in the ControlLogix
- Monitor the existing controller's inputs and outputs and compare the outputs from the new application to the existing controller's outputs, using exactly the same inputs
- Swap in the new controller with an already-tested application

Once the new control system's functionality has been verified, the old I/O can be replaced a little at a time with modern Rockwell I/O as time and funding permit

The advantages of this approach:

- the new system is tested before you install it
- the switchover happens with minimum downtime and lost production. Install the new system during scheduled shutdowns.
- I/O and field wiring are unchanged so you can easily back out of the change if necessary

Specifications

- ControlLogix module
- Power requirements: 675 mA @ 24VDC and 5 mA @ 5.1VDC from I/O chassis backplane
- Operational temperature: 0-60℃ (32-140℉)
- Storage temperature: –40 to 85℃ (–40 to 185℉)

About QTS

Quest Technical Solutions is a provider of industrial communication hardware and software. Quest employees have many years combined experience in developing industrial communications solutions.

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