

MSPLCRQ

MASTER MODBUS DRIVER MODULE

FUNCTION

The MSPLCRQ executes automatic process locally in the RTU.

OPERATION

The defined routines could use and act over the signals of the real time internal data base of the RTU. For example, digital or analog inputs, digital or analog outputs and communications data.

FEATURES

- Based on the IEC 61131 standard.
- Graphic ambient to edit the routines in the languages defined by the standard:
 - SFC: Sequential Function Chart
 - FBD: Function Block Diagram
 - LD: Ladder Diagram (relays diagram)
 - ST: Structured Text
 - IL: Instruction List
- The routines could be edited with flow diagram .
- Includes function library for the programming languages.
- The development could be done by a technician with knowledge of Ladder programming or one of the other languages.
- The development is done in a PC with Windows.
- It has facilities for the set up or depuration in simulation environment .
- Sustained variables could be defined with the feature that they are not lost after a power supply fault, for example counters.
- The routines, like the other programs of the RTU, are in flash memory.
- The administration of the local logic routines is done with the module PRCMRQ.
- Two parts: the development system and execution engine.

APPLICATIONS

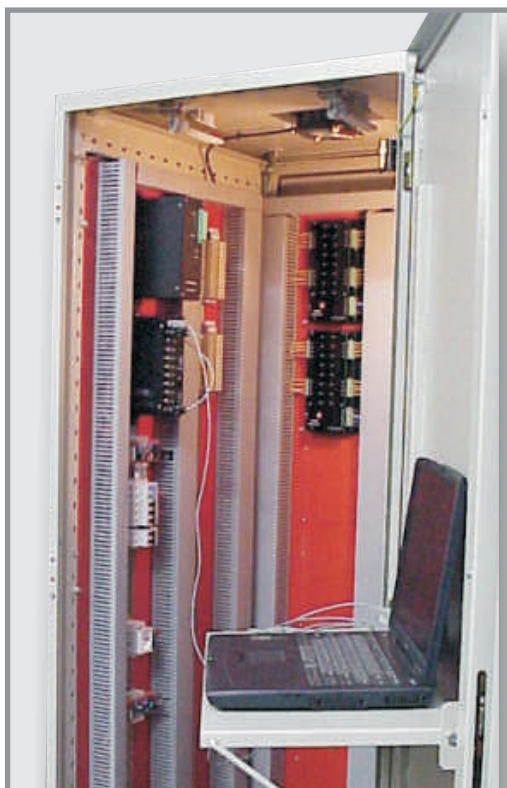
- Used to add non predicted functions to the RTU software.
- Substitution of wired logic in panels.
- Protection functions .
- Voltage control.
- Repetitive operations at specific hours.
- Alarm concentration and signaling.
- Circuit breakers trigger counter

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SOME FUNCTIONS AND AVAILABLE VARIABLES

- Calculation with basic and trigonometric operations, etc.
- Logic operations and comparisons.
- Pulse generators and counters.
- Definition of internal volatile and sustained variables.
- Type of variables: logic, numerical both integer and real, structures, timers.



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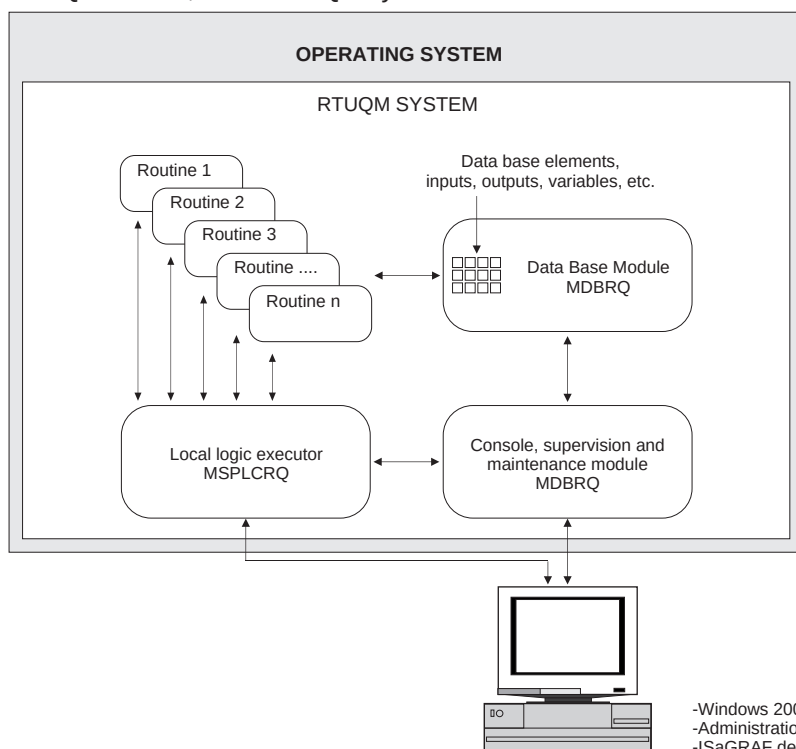
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Development system

It is a complete automatic routine and function development system from the ICS Triplex company, model IsaGraf, including editor, compiler and debugger.

The set up of the routines could be done step by step in simulation environment in the PC with graphic animation of the variables.

The developed routines are transmitted to the RTU through serial port and installed, associated to the MSPLCRQ executor, in the RTUQM system.



-Windows 2000
-Administration module PRCMRQ
-IsaGRAF development system of Altersys

Stages of the development process of local logic routines

- 1 Edition of the routines with the IsaGraf system in the PC.
- 2 Compilation of the routines in the PC.
- 3 Routines set up, simulated execution in the PC.
- 4 Routines installation in the RTU and configuration with PRCMRQ .
- 5 Step by step routine test.
- 6 Routines execution.

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Execution engine

The execution engine provides the link between the installed routines and the RTUQM system..
The routines act over the variables administrated by the MDBRQ data base module.
The time cycle is configurable and depending on the CPU capacity could be reduce up to 1 milisecond.

