

Allen Bradley PLC with RTA NBX350 - Communications with HypotULTRA

Process:

Communicate between an AB PLC and an Associated Research HypotULTRA

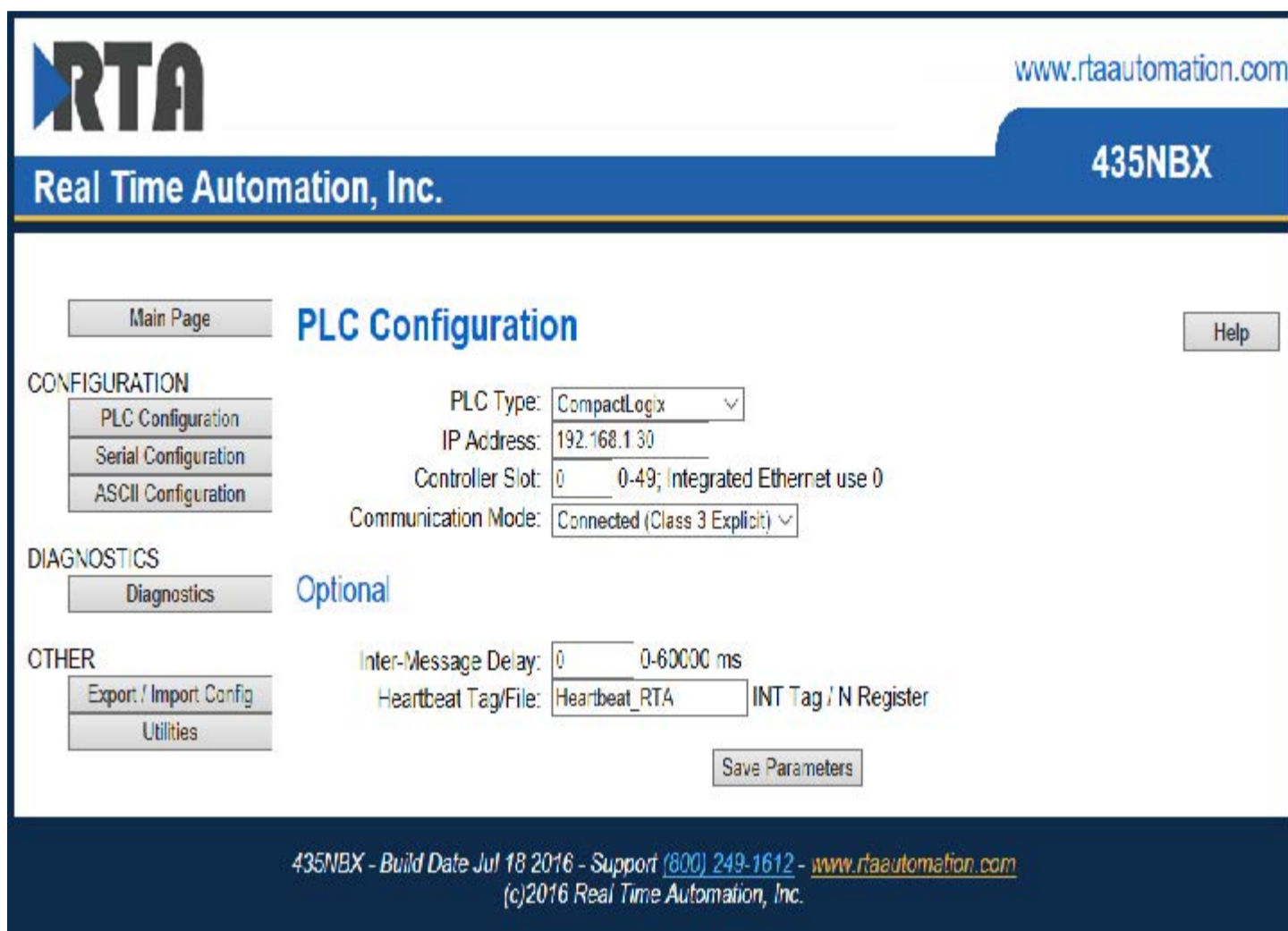
Hardware:

AB L33ER Compact Logix PLC (Ethernet IP)

RTA NBX350 Ethernet IP to RS232 Gateway

Associated Research HypotULTRA 7850 (RS232)

RTA Setup:



The screenshot shows the RTA 435NBX web interface for PLC Configuration. The page title is "PLC Configuration" and the URL is "www.rtaautomation.com". The interface includes a navigation menu on the left with options: "Main Page", "PLC Configuration", "Serial Configuration", "ASCII Configuration", "Diagnostics", "Export / Import Config", and "Utilities". The main configuration area is titled "Optional" and contains the following fields:

- PLC Type: CompactLogix (dropdown menu)
- IP Address: 192.168.1.30
- Controller Slot: 0 (dropdown menu, range 0-49; Integrated Ethernet use 0)
- Communication Mode: Connected (Class 3 Explicit) (dropdown menu)
- Inter-Message Delay: 0 (input field, range 0-60000 ms)
- Heartbeat Tag/File: Heartbeat_RT (input field) INT Tag / N Register

A "Save Parameters" button is located at the bottom right of the configuration area. The footer of the page contains the text: "435NBX - Build Date Jul 18 2016 - Support (800) 249-1612 - www.rtaautomation.com (c)2016 Real Time Automation, Inc."

Main Page

Serial Configuration

Help

CONFIGURATION

PLC Configuration

Serial Configuration

ASCII Configuration

DIAGNOSTICS

Diagnostics

OTHER

Export / Import Config

Utilities

Enable Port 0:

Mode: RS232

Baud Rate: 58400

Parity: None

Data Bits: 8

Stop Bits: 1

Flow Control: None

DTR (Pin 4): High (default)

RTS (Pin 7): High (default)

Enable Port 1:

Mode: RS232

Baud Rate: 19200

Parity: None

Data Bits: 8

Stop Bits: 1

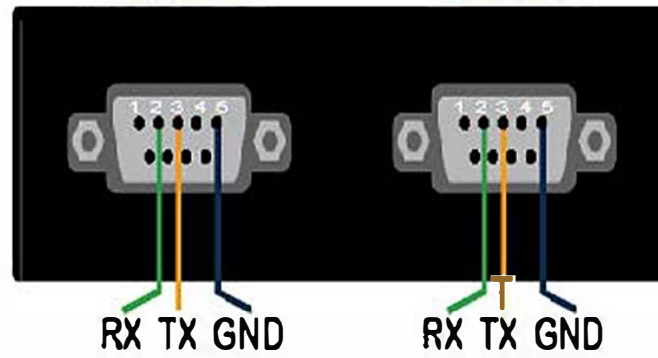
Flow Control: None

DTR (Pin 4): High (default)

Save Parameters

Port 0: RS232

Port 1: RS232



Main Page

Port 0 ASCII Configuration

<< 0 1 >>

Help

CONFIGURATION

- PLC Configuration
- Serial Configuration
- ASCII Configuration

Copy Configuration From: Port 0

DIAGNOSTICS

Diagnostics

OTHER

- Export / Import Config
- Utilities

ASCII to PLC

PLC to ASCII

Enable Communications:

Define CompactLogix Tag/File

Data Type: STRING

Tag/File Name: Hypot_RS232_In

Define ASCII Message Termination

Character Count: 82 1-4096 chars

Timer: 0 0-30000 ms

Delimiters:

Start 0 [LF] 10 0x0a [NUL] 0 0x00

End 1 [LF] 10 0x0a [NUL] 0 0x00

Remove Delimiters from ASCII Message:

Message Queue

Queue Size: 1 0-20 messages

Queue Full Behavior: Overwrite Oldest Data

Data Conversion

NULL Character Handling: None

Save Parameters

Main Page

Port 0 ASCII Configuration

<< 0 1 >>

Help

CONFIGURATION

- PLC Configuration
- Serial Configuration
- ASCII Configuration

Copy Configuration From: Port 0

DIAGNOSTICS

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- Export / Import Config
- Utilities

ASCII to PLC

PLC to ASCII

Enable Communications

Define CompactLogix Tag/File

Data Type: STRING

Tag/File Name: Hypot_RS232_Out

Character Count: 82 1-4096 chars

Add Delimiters to ASCII Message

Start 0 [NUL] 0 0x00 [NUL] 0 0x00

End 2 [CR] 13 0x0d [LF] 10 0x0a

Data Conversion

NULL Character Handling: None

Save Parameters

PLC Logic:

