

Connecting UniOP to MicroLogix 1500

This Technical Note contains the information needed to connect UniOP to MicroLogix 1500.

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1. Introduction

The UniOP operator panels can be connected to the Micrologix 1500 directly using cable CA95 using DF1 protocol or DH-485. Connection to the AIC+ link coupler is also possible with CA12.

Note: UPLC10.DLL version V5.02 includes the support for the Micrologix 1500 model

2. Setting up the PLC for Communication

The first step will be to connect your PC to the MicroLogix using RSLogix software. Connect cable 1761-CBL-PM02 to your PC's COM1. Remove the front cover from the MicroLogix exposing a small circular switch labelled COMMS. Use a pencil to depress the switch. This will set the communication parameters to the default settings, DF1, 19200 baud, no parity, CRC error checks. Now launch RSLinx. From the Communications menu – Configure driver. Select driver RS-232 DF1 devices; add new, OK, then auto configure. You should get a message of success. OK the dialog.

You can now launch the Designer and select the DF1 driver, MicroLogix model. Set the baud rate to 19200 and parity settings to NONE, 8 data bits and 1 stop bit. When you select the MicroLogix model it will use a CRC error check. Put one numeric field on page one using status file 2 offset zero. (S2:0) word binary. Save the project file as Test1.prj. Now download and then connect CA95 to the programming port. You should have good communications. You can alternately connect cable 1761-CBLI-AM00 to the programming port on the MicroLogix and then to the 1761-NETAIC (AIC+), then use cable CA12 from UniOP to the AIC+.

Note : The MicroLogix model setting was originally done for the model 1000. You will not be able to access all the files and elements that the Model 1500 is capable of. However by changing the driver setting we are able to use the SLC500 model with DF1 or DH-485.

2.1 Using SLC500 DH-485 with the MicroLogix 1500

In this configuration all files and elements are accessible.

Using RSLogix connect online with the MicroLogix. Goto Channel Config, Channel 0 SYS, and select the DH485 driver. Apply. A message will warn that a loss of communications will occur. Apply.

RSLogix then goes offline. Now you will need to reset RSLinx to the new setting. Configure RSLinx by selecting the 1747 – PIC / AIC+ driver.

Using the Designer software, select the DH485 driver and model SLC500 fixed I/O and download. You can use cable CA12 with the AIC+, or cable CA95 directly.

2.2 Using SLC500 DF1 with MicroLogix 1500

In this configuration all files and elements are accessible.

SLC500 DF1 uses BCC error check. You will need to re-configure the default DF1 setting in the Channel 0 SYS settings to use BCC rather than CRC. Select DF1 Full duplex.

You will also need to reset Rslinx. Select RS232 DF1 devices, 19200 baud, N 8, 1, BCC full duplex.

Using the Designer software, select the DF1 driver and model SLC500 fixed I/O and download. You can use cable CA12 with the AIC+, or cable CA95 directly.