

SoftPLC LOGDATA Module

I. INTRODUCTION

LOGDATA.TLM contains two (2) TOPDOC Loadable Instructions (TLI's) to log and retrieve data from a running SoftPLC System. The two (2) ladder instructions are LOGDATA and LOGCLOSE. The LOGDATA TLI will log a pre-defined address list of values to a binary file with a default or user defined path and name. The LOGCLOSE TLI instruction closes the binary LOG file so that the binary file can be uploaded from SoftPLC's flash disk to another storage location via an FTP client program. A utility program (LOG2PRN.EXE) is also provided to extract the data from the binary file into a standard text file (SDF or comma delimited) format.

II. INSTALLATION

The first step is to copy the two (2) property files (LOGDATA.DEF and LOGDATA.2X) to your development computer's "\SOFTPLC\PLC" directory. NexGen will use these files to determine the location of the LOGDATA.TLM and the associated configuration file "LOGDATA.LST".

If the SoftPLC kernel version is 3.x, the LOGDATA.TLM and the default LOGDATA.LST files should be transferred to the "C:\SOFTPLC\TLM" directory on the SoftPLC system using an FTP client like *WSFTP_PRO*. . If the installed SoftPLC version is 2.x, both the TLM and the LST files should be transferred to the \SPLCZ\IODVR directory on the SOFTPLC system. After this step is completed, and the LOGDATA TLM is selected in NexGen's Module Editor, the "Configure" option will become active and editing of the LOGDATA.LST file remotely will be enabled

For offline programming and execution using SoftPLC version 2.x, , both the TLM and LST files should be installed in the \TDZ directory on your development computer. To cause TOPDOC version 4.x to load the LOGDATA TLM, a single entry in the MODULE.LST file is required as shown below. Note that the default log path and filename may be over-ridden as described in the next section.

MODULE=LOGDATA.TLM

III. SETTING THE LOG FILENAME AND LOCATION

By default, the *LOGDATA TLM* will create a log file with the name *LOGDATA.BIN*. However, the location (drive and path) and the log filename may be declared by the user via the "**LOGFILE**" command line option. This option may be defined using NexGen's Module Editor's "Option" field. For example:

MODULE=LOGDATA.TLM LOGFILE=D:\DATALOGS\SPLCLOG.BIN

IV. LOGDATA ADDRESS LIST FILE

The data to be logged must be defined in a text file with the name **LOGDATA.LST**. Each address to be logged is defined in a simple single column list. This configuration file is read one time when the LOGDATA.TLM loads and the log file is created or validated. Therefore, any changes made to this definition will not be incorporated into the binary log file until the current log data binary file is erased and the logging is resumed. An example configuration file is shown below:

```
N7:0
N07:01
N007:002
T004:000.CTL
T004:000.PRE
T004:000.ACC
C005:000.CTL
C005:000.PRE
C005:000.ACC
B3:0
F008:000
F8:1
I:0
O:0
S:18
```

V. TLI INSTRUCTIONS

The **LOGDATA** TLI instruction takes two (2) parameters. The first parameter is an address to store an error code. The second parameter is the current size of the log file in Kbytes. The log file will automatically stop when the disk space is believed to be depleted.

The **LOGCLOSE** TLI instruction takes a single parameter that simply returns an error code if there is a problem encountered in closing the LOG file. If the log file is closed using this TLI, the file will be re-opened the next time the LOGDATA TLI is called.

VI. BINARY DATA CONVERSION PROGRAM

An executable program named LOG2PRN is provided to extract the data from the binary log file into a comma delimited text format. This ASCII file can then be viewed/used with any text editor, spreadsheet or database program.

VII. EXAMPLE LADDER PROGRAM

On the following page is an example SoftPLC ladder program using the two (2) LOGDATA TLM instructions:

LogData every 10 seconds!

```
|B003 +- EQU -----+ B003 +- TLI -----+|
+-]/[--| A = B +-[ONS]-----| TOPDOC LOADABLE INSTRN +|
| 00| | A: S:023 | | 01 | | Function: LOGDATA | | | | |
| | | 0000000000110100 | | | | Param 1: N007:000 | |
| | | B: 0 | | | | | | 0 | |
| | | | | | | | Param 2: N007:001 | |
| | | | | | | | | | 2 | |
| | | | | | | | | | | |
| +- EQU -----+ |
| +| A = B +| | | | | |
| | | A: S:023 | | |
| | | 0000000000110100 | | |
| | | B: 10 | | |
| | | | | | | |
| | | | | | | |
| +- EQU -----+ |
| +- EQU -----+ |
| +| A = B +| | | | | |
| | | A: S:023 | | |
| | | 0000000000110100 | | |
| | | B: 20 | | |
| | | | | | | |
| | | | | | | |
| +- EQU -----+ |
| +- EQU -----+ |
| +| A = B +| | | | | |
| | | A: S:023 | | |
| | | 0000000000110100 | | |
| | | B: 30 | | |
| | | | | | | |
| | | | | | | |
| +- EQU -----+ |
| +- EQU -----+ |
| +| A = B +| | | | | |
| | | A: S:023 | | |
| | | 0000000000110100 | | |
| | | B: 40 | | |
| | | | | | | |
| | | | | | | |
| +- EQU -----+ |
| +- EQU -----+ |
| +| A = B ++| | | | | |
| | | A: S:023 | | |
| | | 0000000000110100 | | |
| | | B: 50 | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| +- EQU -----+ |
```

Close Log file to upload or erase!

```
|B003 +- TLI -----+|
+-] [-----| TOPDOC LOADABLE INSTRN +|
| 00 | | Function: LOGCLOSE | | | | | | |
| | | Param 1: N007:002 | |
| | | | | | | | 0 | |
| | | | | | | |
| | | | | | | |
| +- EQU -----+ |
```