



DLCA NET

Data Logger Application

User Manual



Contents

1.0	DATA LOGGER APPLICATION DESCRIPTION	3
2.0	PRIOR TO INSTALLING THE DATA LOGGER APPLICATION	3
2.1	Enable the Telnet feature	3
2.2	Configure the firewall (typically not needed)	4
2.3	Add the Telnet program, if not listed as an allowed program	5
3.0	INSTALL THE DATA LOGGER APPLICATION	7
4.0	DATA LOGGER PROGRAM SCREEN	8
4.1	Connections	8
4.2	Data Logger screen definitions	8
5.0	CONFIGURE THE MAIN SCREEN	9
5.1	IP address and sample rate setup	9
5.2	Select the parameters to log to disk	10
5.2.1	Parameter definitions	10
5.3	Save screen configuration files (optional)	12
5.3.1	Save a configuration file	12
5.3.2	Load a saved configuration file	12
6.0	USING THE DATA LOGGER	13
6.1	Display Only mode	13
6.2	Log to Disk mode	13
6.2.1	File samples	15

1.0 Data Logger application description

The Data Logger application provides an easy way to view and/or log tension values from any DLCA NET tension amplifier. Logged data is stored on a computer or a storage device as a .csv Microsoft Excel file. A PC must be connected while viewing or logging data.

The Data Logger software is available for download on the Maxcess website.

2.0 Prior to installing the Data Logger application

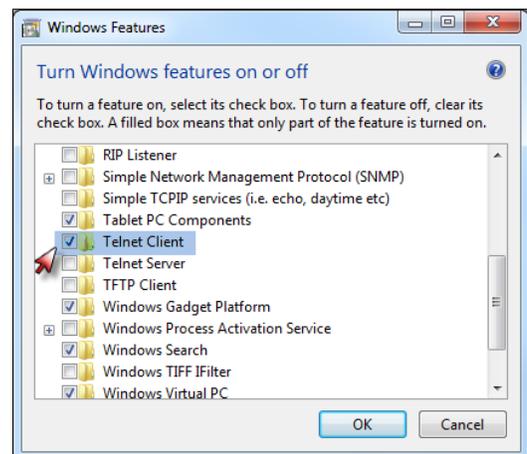
The application communicates with the DLCA NET using the Microsoft Telnet protocol. The DLCA NET acts as a Telnet server and a computer acts as a client. You must have the Microsoft Telnet Client feature enabled on your computer.

If your computer is not configured to work with Telnet by default, you will need to 1) enable the Telnet feature, 2) configure the firewall to allow Telnet, and then 3) add Telnet program to the list of allowed programs.

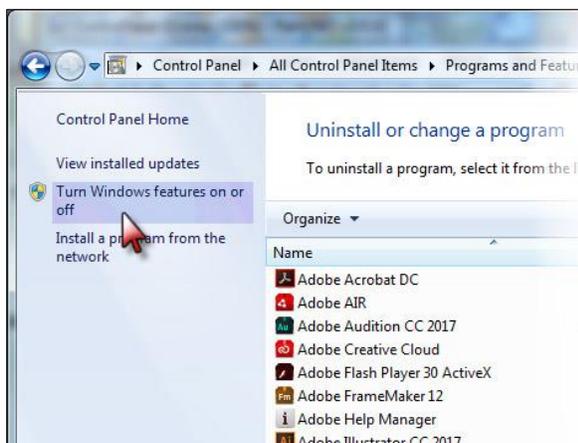
2.1 Enable the Telnet feature



a) In Control Panel, select **Programs and Features**.



b) In Windows Features, select the **Telnet Client** check box, and then click OK.



c) In Programs and Features, click **Turn Windows features on or off**.

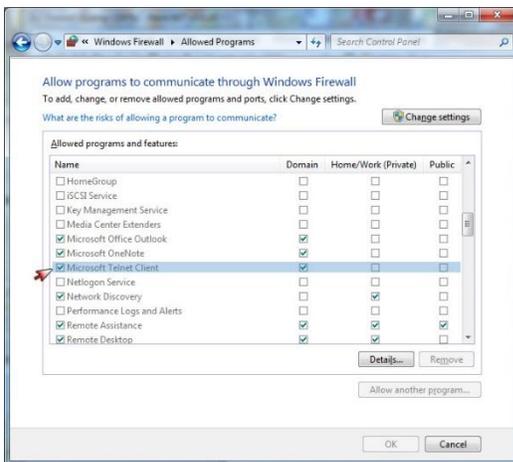
2.2 Configure the firewall (typically not needed)



a) In Control Panel, click **Windows Firewall**.



b) In Windows Firewall, click **Allow a program or feature through Windows Firewall**.



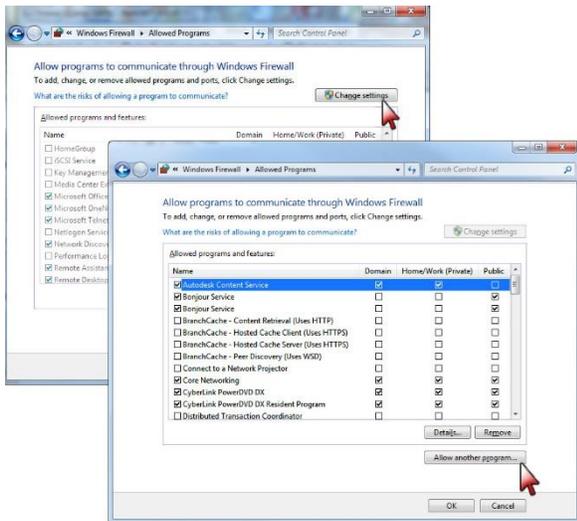
c) Locate **Microsoft Telnet Client** on the program list.

d) Select the check box, if not already selected.

e) Now you can install the Data Logger application; see page 7.

If the Telnet Client is not listed, click **Change Settings** and continue with instructions on the next page.

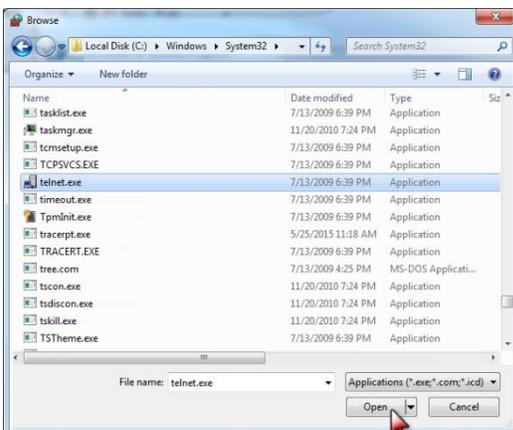
2.3 Add the Telnet program, if not listed as an allowed program (typically not needed)



- a) Go to
Control Panel > Windows Firewall >
Allowed Programs > Change settings...
- b) Click **Allow another program...**

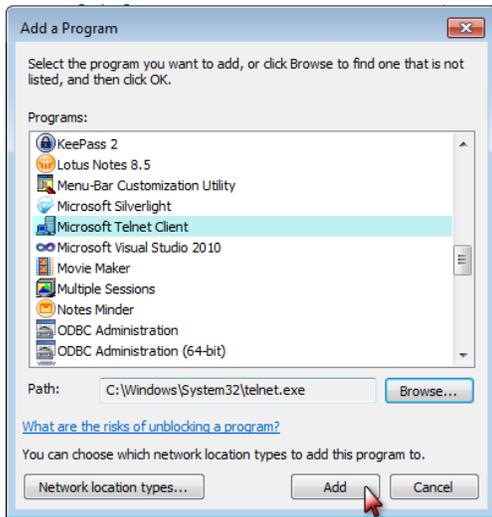


- c) In **Add a Program**, click **Browse**, and then navigate to the Windows > System 32 directory.



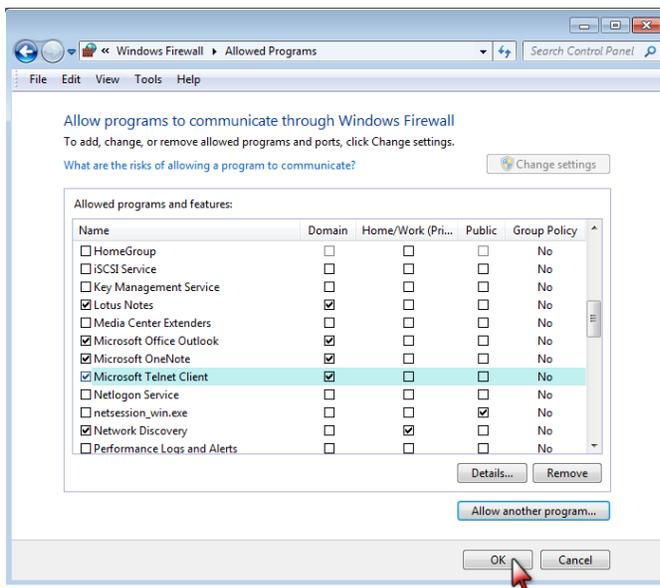
- d) In the Windows > System 32 directory, click **telnet.exe**, and then click **Open**.
- e) You will be returned to the **Add a Program** dialog box.

continued



f) Select **Microsoft Telnet Client** and click **Add**.

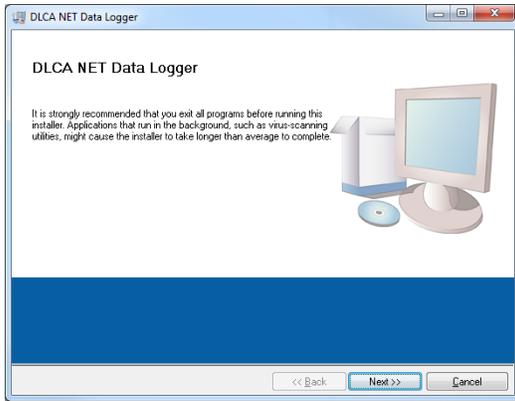
g) You will be returned to the **Windows Firewall > Allowed Programs** dialog box.



h) Select the **Microsoft Telnet Client** check box, and then click **OK**.

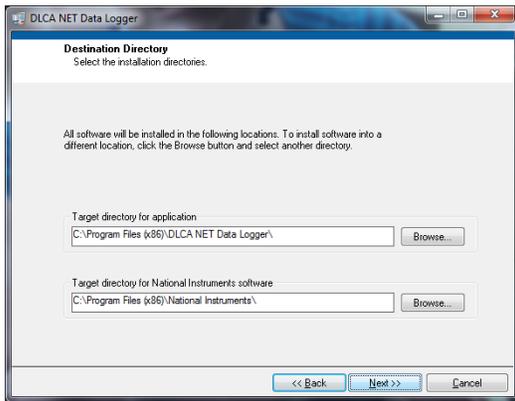
i) Close the Control Panel and **reboot the computer**.

3.0 Install the Data Logger application



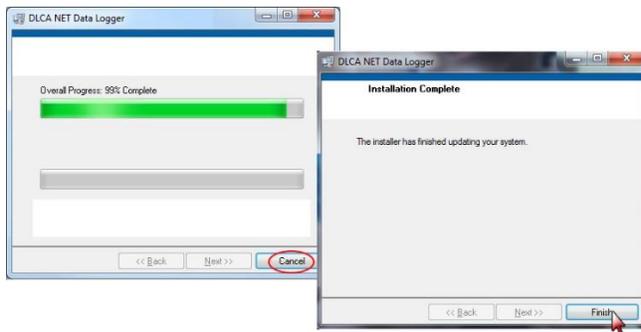
The Data Logger software is available for download on the Maxcess website.

- a) Open the Data Logger zip file and extract the files.
- b) Run the setup.exe file in the installation media. Follow the screen prompts to install the application.



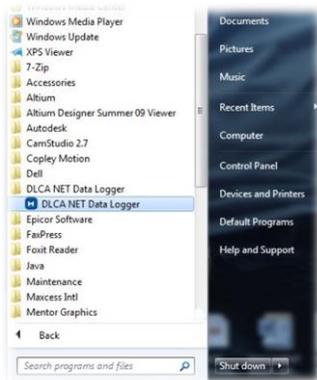
- c) Maxcess recommends using the default directory locations to store the Data Logger application, or you can browse to a directory of your choosing.

- d) Click **Next** to begin the installation.



- e) The system displays a progress bar. When installation is complete, click **Finish**, and then reboot your computer.

If necessary, you can **Cancel** the installation while in progress.



- f) Locate and open the DLCA NET Data Logger application to start the program.

4.0 Data Logger program screen

4.1 Connections

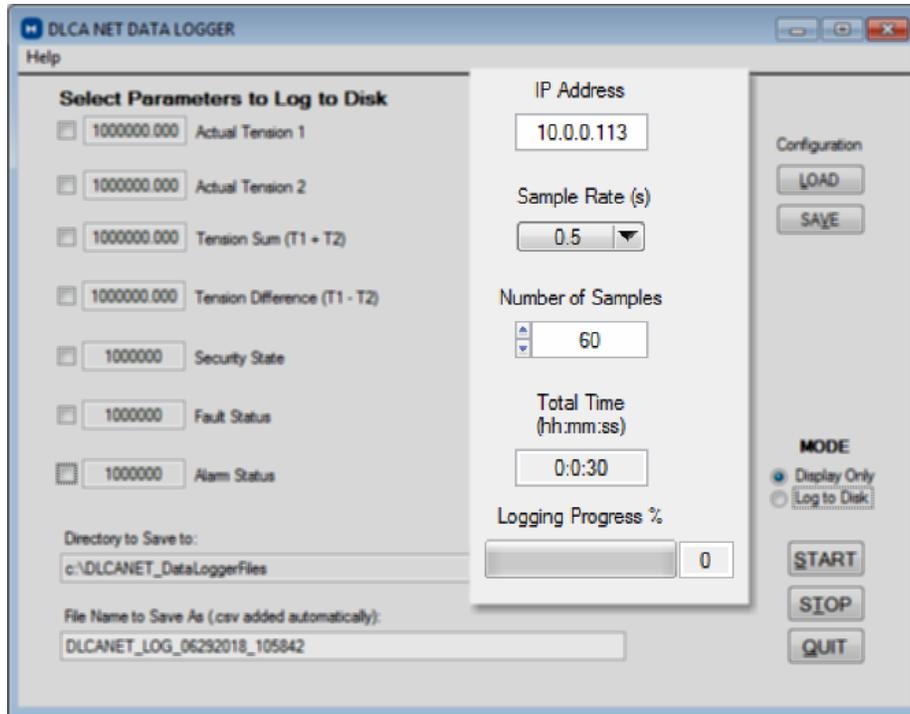
Connect a computer to the DLCA NET, or to network in which the DLCA NET is being used, using a standard ethernet cable.

4.2 Data Logger screen definitions

IP Address	IP address of the DLCA NET product being used	
Sample Rate	The interval at which the application logs a data sample	
Number of Samples	The number of samples you wish to log	
Total time	Estimated time for the completed log task	
Logging Progress	Percentage of log task completed	
Load	Loads a previously saved configuration file	
Save	Saves current screen configuration	
Mode	Display Only	View data for all parameters; no data is logged
	Log to Disk	Log data for the selected parameters; no data is displayed
Start	Starts the program in the selected mode	
Stop	Stops the program	
Quit	Exits the application	
Directory to Save to	File location for the logged data	
File Name to Save As	File name (.csv) for the data log This field populates automatically each time the application is opened; you can change the file name.	

5.0 Configure the main Screen

5.1 IP address and sample rate setup



IP Address

Enter the IP address of the DLCA-NET unit to be viewed.

Sample Rate (unit = seconds)

From the dropdown menu, select the interval at which you wish data samples to be logged.

Number of Samples

Enter the total number of data samples you wish to log.

Maximum number that can be entered is 1,048,500.

Total Time in hours:minutes:seconds (calculated)

Resulting estimated time that the data logging task will take to complete, based on your entries

Logging Progress (calculated)

Percentage of data logging task completed

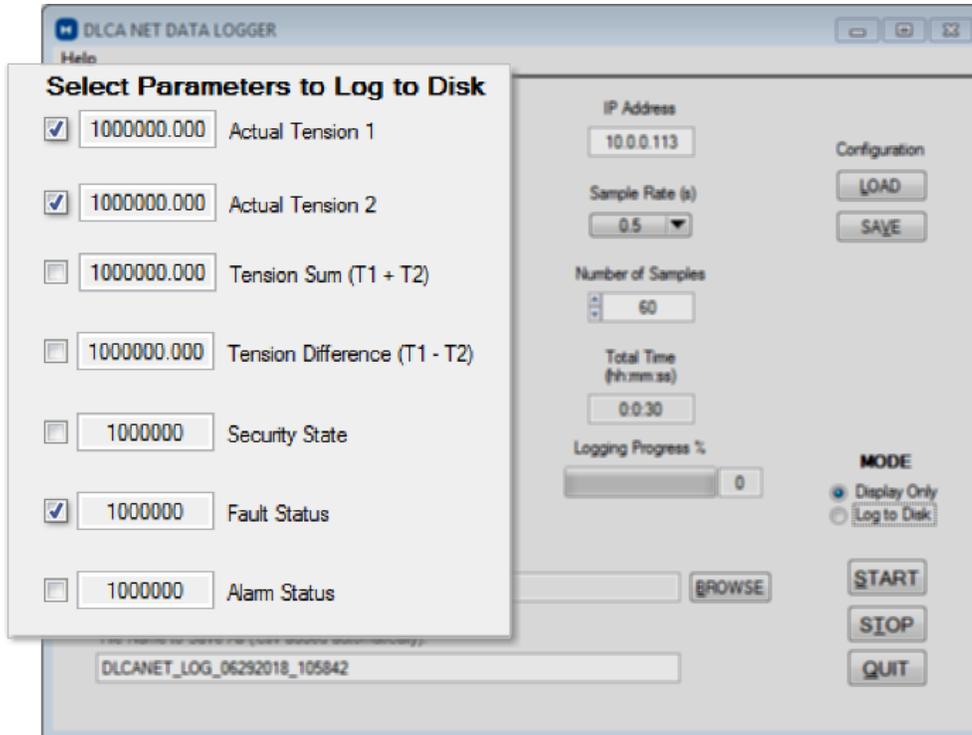
Errors



Confirm that the Telnet client is enabled and allowed; see page 3.

5.2 Select the parameters to log to disk

To log the data that you are viewing, check the boxes of the parameters that you wish to log.



5.2.1 Parameter definitions

Actual Tension 1	Tension from Channel 1
Actual Tension 2	Tension from Channel 2
Tension Sum	T1 + T2
Tension Difference	T1 - T2
Security State	0 = DLCA NET is unlocked and changes can be made. 1 = DLCA NET is locked and changes cannot be made.
Fault status	Indicates whether there are errors with power or load cells. Lower 8-bits: 0xXX00 = Power On, No Faults 0xXX01 = 5V power failure 0xXX02 = 12V power failure 0xXX04 = Load cell power failure Upper 8-bits 0x00XX = No Error 0x01XX = Sensor 1, white or black wire disconnected 0x02XX = Sensor 1, red wire disconnected 0x03XX = Sensor 1, green wire disconnected 0x04XX = Sensor 1, failure (check wiring -or- load cell damaged) 0x08XX = Sensor 2, white or black wire disconnected 0x10XX = Sensor 2, red wire disconnected 0x18XX = Sensor 2, green wire disconnected 0x20XX = Sensor 2, failure (check wiring -or- load cell damaged)

Alarm status

Indicates status of both tension based alarms

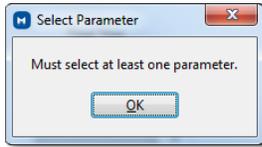
0 = no alarms

1 = alarm #1 is ON

2 = alarm #2 is ON

3 = both alarms are ON

Warning



At least one parameter must be selected in order to successfully start data logging.

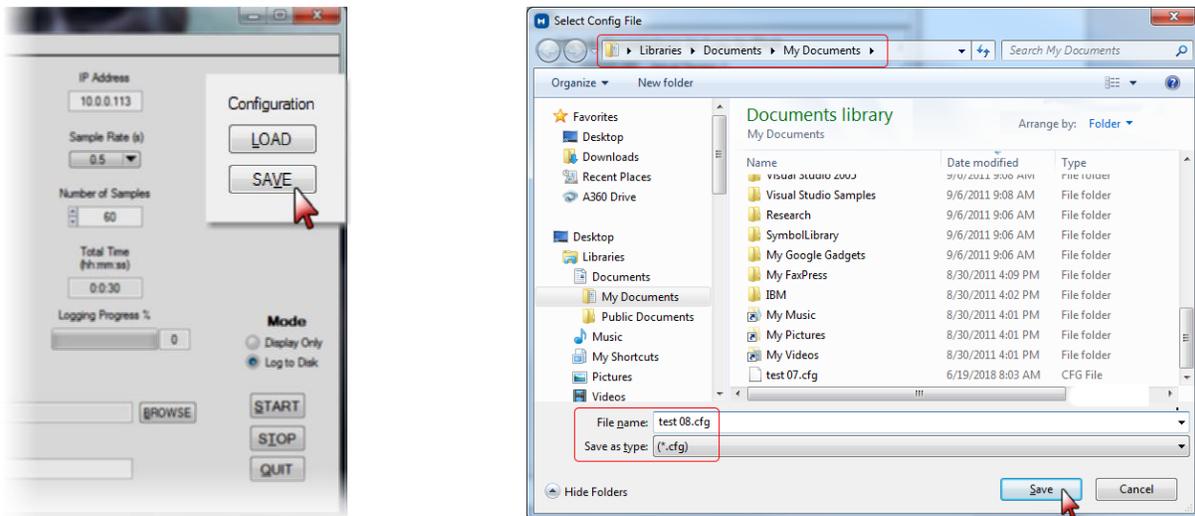
5.3 Save screen configuration files (optional)

After you have made your selections on the Main Screen, you can save those settings in a configuration file (.cfg). The file stores check box selections, IP address, sample rate, number of samples, the directory path for the saved data log, and the data log filename.

You can save multiple configuration files, and these can be loaded into the application when needed.

The Data Logger application does not have a default configuration file, and will come up blank each time the application is opened.

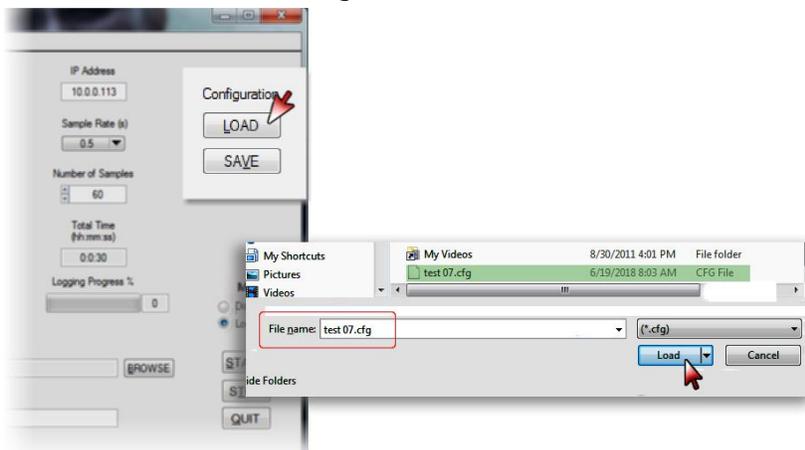
5.3.1 Save a configuration file



When you are satisfied with your settings on the Main Screen, click the **Configuration SAVE** button.

The Windows Explorer **Save** dialog box opens; browse for the desired directory. Name the file (file type default is .cfg), and then click **Save**.

5.3.2 Load a saved configuration file

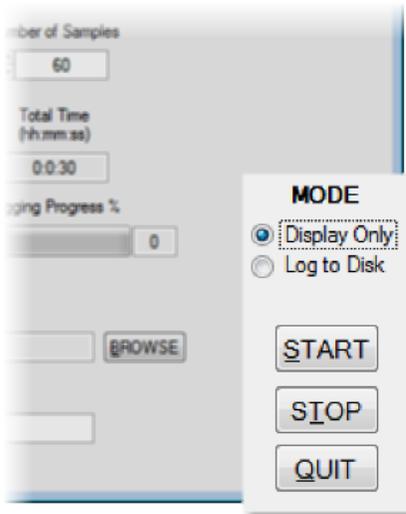


On the Main Screen, click the **Configuration LOAD** button to open Windows Explorer.

Browse to the saved files location. Select the file, and then click **Load**.

6.0 Using the Data Logger

6.1 Display Only mode



In Display Only mode, when the START button is clicked, **data for all parameters will begin to appear** in the boxes on the left side of the screen, regardless of the parameters you selected.

The check boxes, sample rate, and number of samples do not apply to this mode.

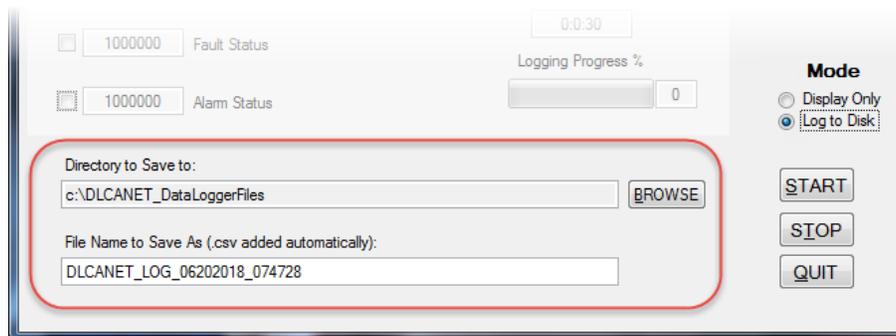
Click the STOP button to stop the data display.

6.2 Log to Disk mode

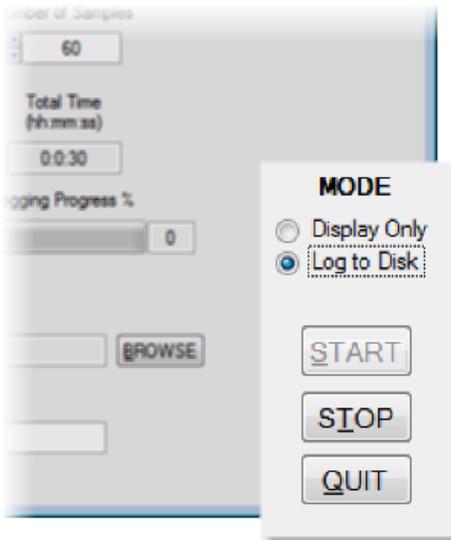
As the application runs, data is automatically saved to disk in the file and path that you choose. The default file type is .csv (comma-delimited text file); the file type extension will be added automatically in the directory when data logging begins.

On the Main Screen, select a folder destination and ensure there is a file named for saving the logged data.

The file name field is automatically populated with a date/time stamp each time the application is opened. If you STOP during the logging mode, and then START a new log, you must create a new file name, or the new log will overwrite the one you stopped.



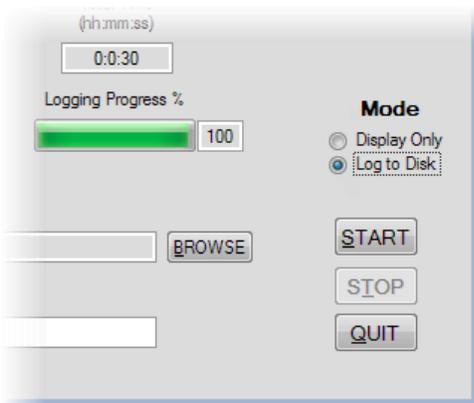
continued



When the START button is clicked, the application will begin to log data for the selected parameters. **No data will appear** in the boxes on the left side of the screen, regardless of your selections. The START button will be disabled.

A progress bar indicates the percent of the task completed. Data will be logged to disk in the directory selected.

i The log task can be stopped before automatic completion by clicking the STOP button. Progress will be displayed as incomplete until new logging task is started. Make sure to check your file name before starting a new log.



When the logging task is complete, the STOP button will be disabled and the START button will be enabled.

Click **QUIT** to exit the application.

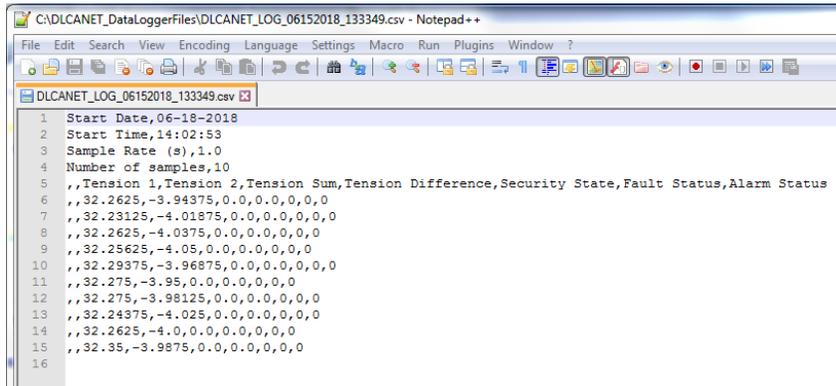
6.2.1 File samples

The data log is saved as a comma-delimited text file (.csv).

The start date, start time, sample rate and number of samples is always saved with the data file.

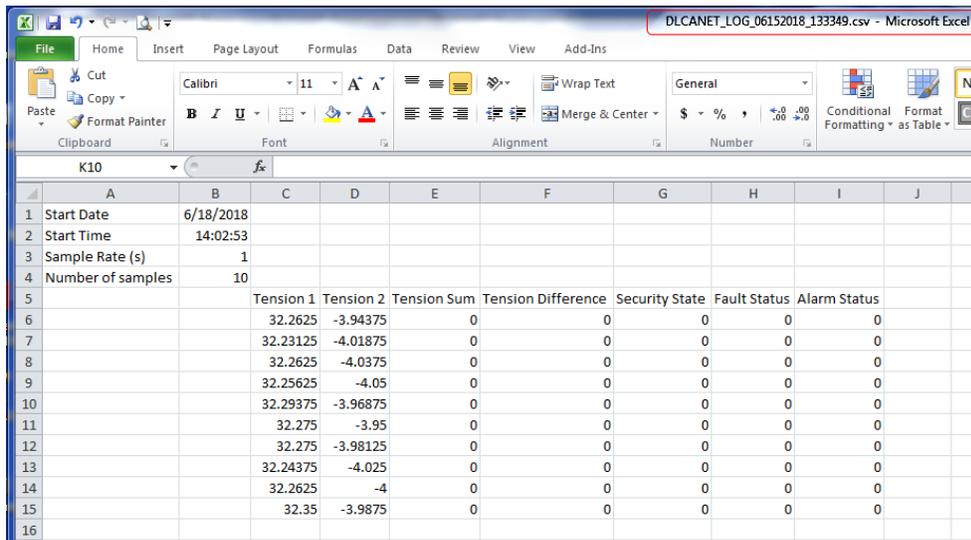
Data is logged only for the parameters that you select on the Main Screen.

Sample text file:



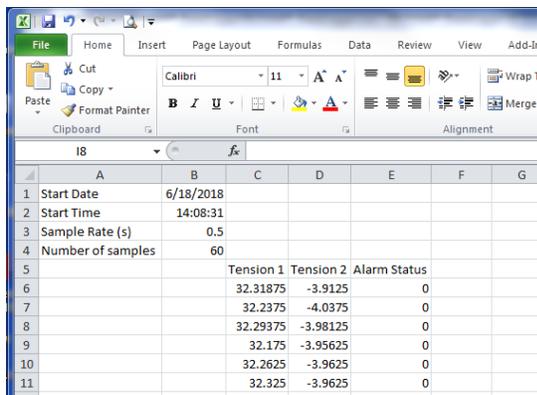
```
1 Start Date,06-18-2018
2 Start Time,14:02:53
3 Sample Rate (s),1.0
4 Number of samples,10
5 ,,Tension 1,Tension 2,Tension Sum,Tension Difference,Security State,Fault Status,Alarm Status
6 ,,32.2625,-3.94375,0.0,0.0,0,0,0
7 ,,32.23125,-4.01875,0.0,0.0,0,0,0
8 ,,32.2625,-4.0375,0.0,0.0,0,0,0
9 ,,32.25625,-4.05,0.0,0.0,0,0,0
10 ,,32.29375,-3.96875,0.0,0.0,0,0,0
11 ,,32.275,-3.95,0.0,0.0,0,0,0
12 ,,32.275,-3.98125,0.0,0.0,0,0,0
13 ,,32.24375,-4.025,0.0,0.0,0,0,0
14 ,,32.2625,-4.0,0.0,0.0,0,0,0
15 ,,32.35,-3.9875,0.0,0.0,0,0,0
16
```

This sample, opened in Microsoft Excel, shows that all parameters are logged.



	A	B	C	D	E	F	G	H	I	J
1	Start Date	6/18/2018								
2	Start Time	14:02:53								
3	Sample Rate (s)	1								
4	Number of samples	10								
5			Tension 1	Tension 2	Tension Sum	Tension Difference	Security State	Fault Status	Alarm Status	
6			32.2625	-3.94375	0	0	0	0	0	
7			32.23125	-4.01875	0	0	0	0	0	
8			32.2625	-4.0375	0	0	0	0	0	
9			32.25625	-4.05	0	0	0	0	0	
10			32.29375	-3.96875	0	0	0	0	0	
11			32.275	-3.95	0	0	0	0	0	
12			32.275	-3.98125	0	0	0	0	0	
13			32.24375	-4.025	0	0	0	0	0	
14			32.2625	-4	0	0	0	0	0	
15			32.35	-3.9875	0	0	0	0	0	
16										

This sample shows that only three parameters were selected on the Main Screen.



	A	B	C	D	E	F	G
1	Start Date	6/18/2018					
2	Start Time	14:08:31					
3	Sample Rate (s)	0.5					
4	Number of samples	60					
5			Tension 1	Tension 2	Alarm Status		
6			32.31875	-3.9125	0		
7			32.2375	-4.0375	0		
8			32.29375	-3.98125	0		
9			32.175	-3.95625	0		
10			32.2625	-3.9625	0		
11			32.325	-3.9625	0		



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