MAGPOWR TENSION CONTROL



# DLCA NET Data Logger Application User Manual





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# 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







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



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



2.2



hat are the risks of allowing a program to com	nunicate?	Cha	nge setting
Allowed programs and features:			
Name	Domain	Home/Work (Private)	Public
HomeGroup			
iSCSI Service			
C Key Management Service			
Media Center Extenders			
Microsoft Office Outlook			
Microsoft OneNote			
Microsoft Teinet Client			
Netlogon Service			
Network Discovery			
Performance Logs and Alerts			
Remote Assistance			
Remote Desktop		2	
		Details	Remove

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.

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# 2.3 Add the Telnet program, if not listed as an allowed program

#### (typically not needed)

![](_page_4_Picture_2.jpeg)

a) Go to

Control Panel > Windows Firewall > Allowed Programs > Change settings...

b) Click Allow another program...

![](_page_4_Picture_6.jpeg)

![](_page_4_Picture_7.jpeg)

 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

![](_page_5_Picture_1.jpeg)

- f) Select Microsoft Telnet Client and click Add.
- g) You will be returned to the
   Windows Firewall > Allowed
   Programs dialog box.

$\Theta$	🚱 🔵 🕈 « Windows Firewall 🕨 Allowed Programs 🔹 😽 Search Control Panel					
File	Edit View Tools Help					
	Allow programs to communicate t To add, change, or remove allowed programs What are the risks of allowing a program to c	hrough W s and ports, cl ommunicate?	indows Firewall ick Change settings.		휫 Change settir	ngs
	Allowed programs and features:	Domain	Home/Work (Pri	Public	Group Policy	*
	HomeGroup     iSCSI Service				No	
	Key Management Service Key Notes				No	_
	Media Center Extenders				No	=
	Microsoft Office Outlook	V			No	
	Microsoft Telnet Client				No	
	netsession_win.exe			V	No	
	Network Discovery Performance Logs and Alerts				No No	-
				Details	Remov	e
				Allow	another prograr	n
				Ok	Cano	:el
					~	

- h) Select the **Microsoft Telnet Client** check box, and then click **OK**.
- i) Close the Control Panel and **reboot the computer.**

#### Install the Data Logger application 3.0

![](_page_6_Picture_1.jpeg)

Destination Directory Select the installation directories.
All software will be installed in the following locations. To install software into a different location, click the Browse button and select another directory.
Target directory for application C\Program Files (x66)\DLCA NET Data Logger\ Browse
Target directory for National Instruments software C\Program Files (x66)\National Instruments\ Browse

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.

![](_page_6_Picture_11.jpeg)

Windows Media Player Windows Media A Windows Update XPS Viewer 7-Zip Accessories Altium Altium Desig Altium Designe Autodesk CamStudio 2.7 Copley Motion Dell

Dell DLCA NET Data Logger DLCA NET Data Logge Epicor Software FaxPress Foxit Reader

Q

Java

Mainten Maxcess Intl 4 Back

![](_page_6_Picture_12.jpeg)

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# 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

DLCA NET DATA LOGGER Help		
Select Parameters to Log to Disk           1000000.000         Actual Tension 1           1000000.000         Actual Tension 2	IP Address 10.0.0.113 Sample Rate (s)	Configuration
<ul> <li>✓ 1000000.000 Tension Sum (T1 + T2)</li> <li>□ 100000.000 Tension D#ference (T1 T2)</li> </ul>	0.5 V	SAVE
1000000 Security State	Total Time (hh.mm.ss)	
Image: 1000000         Fault Status           Image: 1000000         Alarm Status	Logging Progress %	MODE Display Only (a) Log to Disk
Directory to Save to: c:\DLCANET_DataLoggerFiles File Name to Save As (.csv added automatically):	BROWSE	START STOP
DLCANET_LOG_06292018_105842		QUIT

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 tir	ne	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		
	Display Only	View data for <b>all</b> parameters; no data is logged		
Mode	Log to Disk	Log data for the <b>selected</b> 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 (.csv) for the data log		
File Nan	ne to Save As	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

DLCA NET DATA LOGGER     Help		
Select Parameters to Log to Disk           1000000.000         Actual Tension 1           1000000.000         Actual Tension 2           1000000.000         Tension Sum (T1 + T2)	IP Address 10.0.0.113 Sample Rate (s) 0.5	Configuration LOAD SAVE
1000000.000 Tension Difference (T1 - T2)     1000000 Security State	Number of Samples	
1000000 Fault Status     1000000 Alarm Status	Total Time (hh.mm:ss) 0:0:30 Logging Progress %	MODE Display Only Log to Disk
Directory to Save to: c:\DLCANET_DataLoggerFiles File Name to Save As (.csv added automatically): DLCANET_LOG_06292018_105842	0	START SIOP QUIT

#### **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

![](_page_8_Picture_15.jpeg)

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.

DLCA NET DATA LOGGER		
Select Parameters to Log to Disk	10 444444	
1000000.000 Actual Tension 1	10.0.0.113	Configuration
1000000.000 Actual Tension 2	Sample Rate (x)	LOAD SAVE
1000000.000 Tension Sum (T1 + T2)	Number of Samples	
1000000.000 Tension Difference (T1 - T2)	Total Time (trh.mm.ss)	
1000000 Security State	Logging Progress %	MODE
1000000 Fault Status		<ul> <li>Display Only</li> <li>Log to Disk</li> </ul>
1000000 Alarm Status	BROWSE	SIOP
DLCANET_LOG_06292018_105842		QUIT

### 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	Т1-Т2
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

Select Parameter
Must select at least one parameter.
ОК

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.

![](_page_11_Picture_4.jpeg)

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

![](_page_11_Picture_9.jpeg)

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

![](_page_12_Picture_2.jpeg)

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 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.

1000000 Fault Status     1000000 Alarm Status	0.0.30 Logging Progress %	Mode Display Only Log to Disk
Directory to Save to: c:\DLCANET_DataLoggerFiles	BROWSE	START
File Name to Save As (.csv added automatically):		
DLCANET_LOG_06202018_074728		QUIT
		,

#### continued

mber of Samples	
60	
Total Time (hh.mm.ss)	
0.0.30	
oging Progress %	MODE
0	<ul> <li>Display Only</li> <li>Log to Disk</li> </ul>
BROWSE	START
	STOP

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.

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.

(hh:mm:ss) 0:0:30	
Logging Progress %	Mode <ul> <li>Display Only</li> <li>Log to Disk</li> </ul>
BROWSE	STOP

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:

![](_page_14_Picture_3.jpeg)

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

X	🚽 🌒 🕶 (🖻 🗉 🛄 🖃		-	-	_		DLCAN	ET_LOG_061520	18_133349.csv -	Microsoft Exce	1
File Home Insert Page Layout Formulas Data Review View Add-Ins											
Pa	Normal Cut	Calibri	* 11	· A A		≫r	t Gener	al	v Conditiona	Eormat	No
	Format Painter	<b>b</b> 1 <u>0</u>		<u>v</u> · <u>n</u> ·		aper aper interge oc	center · · · ·	70 7 .00	▶.0 Formatting	* as Table *	311
-	Clipboard 🕞		Font	G.		Alignment	Fai	Number	Gi .		_
K10 • (* <i>f</i> *											
	Α	В	С	D	E	F	G	Н	1	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.

![](_page_14_Figure_7.jpeg)

![](_page_15_Picture_0.jpeg)

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