## **Analog Recorder**

Installation and User Manual





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#### ACRONYMS

PLC – programmable logic controller.

PC – Microsoft Windows based personal computer.



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## INTRODUCTION

The "Analog Recorder" is software that logs the current values of programmable logic controller (PLC) integer or real addresses. This logged data can be graphically displayed as time-based plots.



The "Analog Recorder" consists of two applications: *Analog Logger* and *Analog Viewer*. These are Microsoft Windows based PC applications. *Analog Logger* reads the PLC data and writes it to PC files. *Analog Viewer* displays the logged data.

The "Analog Recorder" is provided on a USB flash drive. There are multiple folders on the drive:

- Analog Logger
- Analog Viewer
- Blank Database
- Manual
- Terms & Conditions.

The "Analog Logger "folder has installation files for the Analog Logger.

The "Analog Viewer" folder has installation files for the Analog Viewer.

The "Blank Database" folder has a blank database for use with Analog Viewer.

The "Manual "folder has a pdf version of this document.

The "Terms and Conditions" folder lists the terms and conditions of the software.

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## ANALOG LOGGER

#### INTRODUCTION

*Analog Logger* is software that reads the current values of programmable logic controller (PLC) integer and real addresses. It is installed on a PC with the Windows 10 or later operating system and which is connected to an Ethernet network on which the PLCs are also connected.

The addresses to be read are specified by the operator and can be from more than one PLC. The values are read every 10 seconds and then date and time stamped, compressed, and written to a data file on a PC hard drive. A new data file is created at the beginning of each day. Old data files are automatically deleted after an operator specified number of days.

*Analog Logger* requires a "driver" which is software that performs the communication with the PLC's. <u>This software is NOT provided as part of the "Analog Recorder System" package. It</u> <u>must be purchased separately.</u> For Allen-Bradley PLC's the driver is Allen-Bradley's RSLinx OEM<sup>™</sup> software which can be purchased from the local Allen-Bradley Distributor. For other PLC's brands the software is the PTC Incorporated KEPServerEX<sup>™</sup> software. See Appendix 1 for installing and configuring the RSLinx software and Appendix 2 for the KEPWareEX software.

Analog Logger is controlled from the "Analog Logger" window, as described in detail below.

<b>(</b> )	Analog Logger [Sto	pped]	- ×
Start Logging	Stop Logging	Communication Status	
Configure Points	Configure Application		
	About		
Close	Shutdown		



#### INSTALLING ANALOG LOGGER

Within the "Analog Logger" folder on the "Analog Recorder" USB flash drive are two files, "setup.exe" and "setup.msi". Within the "Blank Database" folder is a blank database, "Analog Logger.mdb", which is used to store data point configuration data.

*Analog Logger* is installed by double-clicking the "setup.exe" file. At that time an installation wizard is launched.

🚽 Analog Logger		-		×
Select Installation Fol	der			
The installer will install Analog Logger	to the following folder.			
To install in this folder, click "Next". To	o install to a different folder, enter i	t below or a	lick "Brows	e''.
<u>F</u> older:				
C:\Program Files (x86)\Brigger And	Associates\Analog Logger\		Browse	
			Disk Cost	
Install Analog Logger for yourself, or Everyone	for anyone who uses this compute	er:		
Just me				
	Deale New			

The wizard displays a default folder in which to install the *Analog Logger* files on the PC. This default folder is:

c:\Program Files (x86)\Brigger And Associates\Analog Logger\

Another folder can be specified if desired. However, it is recommended that the default folder be used.

Once the folder has been specified, *Analog Logger* is installed by clicking "Next" and then "Finish" on the wizard. At that time the following occurs:

- 1. The above folder is created and *Analog Logger* files are added to the folder.
- 2. An "Analog Recorder" folder is added to the PC "Start" menu with "Analog Logger" within the folder.
- 3. *Analog Logger* is added to the "Startup Apps" so that *Analog Logger* will be automatically launched when the PC is started.



The installation includes two icons that are used to identify the status of Analog Logger:



Alarm Logger Running

Alarm Logger Stopped

The icons are displayed in the Desktop Hidden System Tray in the lower right of the screen. There is no icon displayed if *Alarm Logger* is shut down.

Finally, two folders must be created, a Data folder and a Configuration folder.

#### Data folder

This folder is where the data read from the PLC is saved. The data is saved to a separate file within the folder each day.

#### Configuration folder

This folder is where the "Analog Recorder.mdb" database is located. It is supplied in the "Blank Database" folder on the supplied USB flash drive. It must be copied to this folder. The database holds the configuration data for each monitored address, as described below. The name can be changed.



#### CONFIGURING ANALOG LOGGER

*Analog Logger* must be configured before data can be logged. This consists of defining the location of the Data and Configuration folders, created when *Analog Logger* was installed, and the PLC addresses to be logged.

Following installation, *Analog Logger* is started when the PC is restarted or from the PC "Start" menu. When first started following the installation, the *Analog Logger* window is displayed with the following overlaying message:

"The program has been run for the first time and requires configuration data".

Ó.	Analog Logger [Sto	opped] – ×
Start Logging	Stop Logging	Communication Status
Configure Poin Anal	The program has been run for th configuration data.	e first time and requires
Close	Shutdown	ок

When the "OK" button is clicked, the Configure Application window is displayed.

Ø	Configure Application
	Data Path
	Data Point File Location
[	Number of Months to Keep
	Accept Cancel

The "Data Path" is the file path to the Data folder created during installation. Likewise, the "Data



Point File Location" is the file path to the Configuration folder to include the name of the database in the folder.

The files in the Data folder are daily files, each day a new daily file is created for that day's data. These daily files will be automatically deleted after the number of months specified in the "Number of Months" entry box.

When the "Accept" button is clicked, the above data is saved and the window is closed. The addresses to be logged must then be configured.



#### CONFIGURING DATA POINTS

The data points (i.e. PLC addresses) to be monitored are defined in the "Configure Points" window displayed by the clicking the "Configure Points" button on the "Analog Logger" window.

ų	) X		Configure Points				×
ň	Category	Description	Plot Min	Plot Max	Address		
						^	
		1	I		1		

The data points are grouped into "categories". Each category can have multiple addresses assigned. The purpose of the categories is to organize the data points.

Each line on the "Configure Points" window represents a single data point.

Category - This is the name of a category, as explained above. Note that categories are created here. There is no place to create a category. (This can be edited in the *Analog Viewer*).

Description - This is a description of the data point. (This can be edited in the Analog Viewer).

Plot Min and Plot Max - This is the plot range for the point. Note that this is not necessarily the range of the point itself. (This can be edited in the *Analog Viewer*).

Address - This is the PLC address of the point. (This <u>cannot</u> be edited in the *Analog Viewer*). The addressing format is dependent upon the PLC driver used, Allen-Bradley's RSLinx OEM<sup>™</sup> software or PTC Incorporated KEPServerEX<sup>™</sup> software.

The PLC address format for Allen-Bradley's RSLinx OEM<sup>™</sup> software:

[plc\_topic\_name]plc\_address

Where "plc topic name" is in brackets and is the "Topic Name" given to the PLC in RSLinx.

For Controller Tags the PLC address is just the address. For example,

[*plc\_topic\_name*]F[10].

For Program Tags the PLC address is "Program: *program-name*.address." For example,

×

×



[plc\_topic\_name [Program:MainProgram.F[10]

For multiple tasks the PLC address is: "Program:*task\_name.program-name*.address".

The PLC address format for PTC Incorporated KEPServerEX<sup>™</sup> software:

channel.device.address

Where channel is the channel name assigned to the channel when KEPServerEX was configured and device is the device (PLC) name assigned when KEPServerEX was configured.

The are 3 buttons on the right-hand side of the window that are used to add a new point, modify and exiting point, or delete an existing point.

Ó

Category

Min

Max

Address

Description



#### Adding a New Data Point

A new data point to be logged is added by clicking the "New" button and entering the point data on the subsequently displayed "New Point" window. The data is saved when the "Accept" button is clicked.

		Accept	Cano
	¢۲		
l by first			
en	Category		
for the	Description		
	Min		
ently	Max		
an then	Address		
2			

Accept

Cancel

#### Modifying a Data Point

A data point in the list can be modified by first clicking on the row of the point and then clicking the "Modify" button. The data for the point will be displayed in the subsequently displayed "Modify Point" window. It can then be changed. The data is saved when the "Accept" button is clicked.



#### Deleting a Data Point

A point can be deleted by first clicking on the row of the point and then clicking the "Delete" button. When the button is clicked a verification window is displayed. When "Yes" is clicked the point is removed.

The window is closed when either the "Return" button or the "X" in the upper right corner is clicked.



#### MAIN CONTROL WINDOW

*Analog Logger* is controlled from the "Analog Logger" window. This window can be displayed whenever *Analog Logger* is started. The *Analog Logger* is started either by restarting the PC or from the "Start" menu.

Ó.	Analog Logger [Sto	pped]	- ×
Start Logging	Stop Logging	Communication Status	
Configure Points	Configure Application		
	About		
Close	Shutdown		

During logging "Running" is displayed next to the window title. If it is not logging, "Stopped" is displayed.

The window has the following buttons:

- Start Logging Clicking on this button starts logging data from the PLC's. This button is colored green if logging is stopped and gray if logging is running.
- Stop Logging Clicking on this button stops all logging. This button is colored gray if logging is stopped and red if logging is running.
- Configure Application This button is used to display the "Configure Application" window which defines where the data and the data point configuration is to be stored, as explained below.

Configure Points - This button is used to display the "Configure Points" window which specifies the PLC addresses of each data point logged, as explained above.

- About This button displays a window with the current program version number.
- Shutdown This button stops *Analog Logger*. Once shut down it can be restarted either by restarting the PC or from the "Start" menu.

Close - This button closes the window. If logging is running, it continues to run. The "X" in the



upper right corner will also close the window. Once the window is closed, it can be displayed by clicking the *Analog Logger* icon in the "Hidden Icons" display on the Desktop.

While logging is running the data read from the PLC is displayed in the "Communication Status" window.



During logging "Running" is displayed next to the window title. If it is not running, "Stopped" is displayed.



## ANALOG VIEWER

#### INTRODUCTION

*Analog Viewer* is software that displays the data logged by *Analog Logger*. It is installed in a PC with Windows 10 or later operating system and which is on the same PC as *Analog Logger* or on a PC networked to the *Analog Logger* PC.

The data is displayed as a time plot with selectable time ranges. Up to 6 parameters can be displayed at a time, with each parameter assigned a color. The data can also be exported to a text file.

The Analog Viewer consists of the following 6 screens:

- Trend Setup
- Groups
- Configure Points
- Application Configuration
- Trend
- Export

When the Analog Viewer is launched, the Trend Setup screen is displayed.



#### INSTALLING ANALOG VIEWER

Within the "Analog Viewer" folder on the "Analog Recorder" USB flash drive are two files, "setup.exe" and "setup.msi".

*Analog Viewer* is installed by double-clicking the "setup.exe" file. At that time an installation wizard is launched. After an introductory window the following window is displayed;

elect installation r	Folder		Ę
ne installer will install Analog Vie	wer to the following folder.		
) install in this folder, click "Nex	t". To install to a different folder, enter it b	elow or c	lick "Browse".
Folder:			
C:\Program Files (x86)\Brigge	r And Associates\Analog Viewer\		Browse
		[	)isk Cost
Install Analog Viewer for yourse	If or for anyone who uses this computer:		
Install Analog Viewer for yourse	elf, or for anyone who uses this computer:		
Install Analog Viewer for yourse	H, or for anyone who uses this computer:		
Install Analog Viewer for yourse E veryone Just me	off, or for anyone who uses this computer:		

The wizard displays a default folder in which to install the *Analog Viewer* files on the PC. This default folder is:

C:\Program Files (x86)\Brigger And Associates\Analog Viewer\

Another folder can be specified. However, it is recommended that the default folder be used.

Once the folder has been specified, *Analog Viewer* is installed by clicking the "Next" and "Finish" buttons on the subsequent windows.

The wizard adds an "Analog Recorder" folder to the "Start" menu (if not already created if the *Analog Logger* was installed on the same PC) with "Analog Viewer" within the folder. In addition, the following *Analog Viewer* shortcut is added to the Desktop:



It also adds an ".ini" file in "c:\Program Data\Brigger And Associates\Analog Viewer".



Once the *Analog Viewer* is installed, it is launched double-clicking the shortcut. It can also be launched from the "Start "menu.

It is shut down by clicking on the "X" in the upper right-hand corner of the *Trend Setup* window or by selecting "File – Exit" from the menu bar, described below.



#### **CONFIGURING ANALOG VIEWER**

Once *Analog Viewer* is installed, it must be configured before data can be displayed. This consists of specifying the locations of the logged data and the data point configuration folder that are specified when the *Analog Logger* is installed. This is performed in the "Application Configuration" window.

When *Analog Viewer* is first started following the installation, the *Trend Setup* window (described below) is displayed with the following overlaying message window:

"The program has been run for the first time and requires configuration data".



When the "OK" button is clicked, the Application Configuration window is displayed

😻 Application Configuration	×
Data Folder	
Data Point File Location	
Accept	Cancel

The "Data Folder" is the path to the "Data" folder where the *Analog Logger* saves the logged data (created during installation of *Analog Logger*).

The "Data Point File Location" is the path to the *Analog Logger* database that specifies the configuration of the data points (created during installation of *Analog Logger*).

When the "Accept" button is clicked the data is saved and the window is closed.



#### TREND SETUP WINDOW

The *Trend Setup* window is the window used to set up a plot. It is the window that is displayed when the *Analog Viewer* is launched. It is also displayed when any other window is closed.

Trend Setup - S	×
File       View       Edit       Help         Logged Points       Dag a point to the design for an adalable point       Tile         Image: Start Time       Pens         Image: Start Time       Image: Start Time         Image: Start	

The *Trend Setup* window defines what points are to be plotted, the pen color for each point, the beginning time for the plot and the time duration of the plot.

The "Logged Points" section displays the points that can be displayed. The right-hand side of the window is used to assign the points to be plotted and the plot period.

The menu bar at the top has the following selections:

- File Exit: Closes the window and stops the program.
- View: Displays the "Export Data" window used to save the plotted data to a csv file.(see page x)
- Edit–Points: Displays the "Configure Points" window where all but the address of each point can be edited.
- Edit–Groups: Displays the "Groups" window where predefined groups of points can be defined.
- Edit-Application Configuration: Displays the Application Configuration window, described above,



• Help: Displays the "About" window which has the current version of *Analog Viewer* and Brigger & Associates contact information.

#### Logged Points

This section displays the categories that were created when *Analog Logger* was configured. Each category is represented by a file folder:



Double-clicking the category folder lists the description of each point within that category. The details of each point, except for the PLC address, can be edited from the "Configure Points" window, described below.

The are 10 groups displayed where a group is a collection of data points. Each group is represented by cascading sheets:



Groups are created from the "Edit-Groups" menu selection. This menu selection will display 10 group names. Initially, each group is named Group 1 through Group 10, but these names can be changed. A group is created and edited by clicking a group name. This displays the "Configure Group" window. Described below.

#### Right-hand side

The right-hand side of the screen is used to assign the points to be plotted, the plot period, and to assign a title to the plot, as described below.



#### **CONFIGURE POINTS WINDOW**

This window is selected from the "Edit-Points" menu selection on the "Trend Setup" screen. It is the same as the "Configure Points "screen of the *Analog Logger*.

I	) )		Configure Points				×
	Category	Description	Plot Min	Plot Max	Address		
				-		^	

The categories and their associated points were originally specified when the *Alarm Logger* was configured. However, everything except the address can be edited here. Points cannot be added or deleted.

Note that the "Plot Min" and "Plot Max" values represent the plot range, no the sensor range.



#### DEFINING GROUPS

Groups are predefined pen assignments. Each group can have up to 6 data points assigned to pens.

There are 10 possible groups. Groups are defined and edited in the *Group Configuration* window, accessed by clicking the "Edit-Groups" menu button of the *Trend Setup* window.

Ó			Group Config	uration	- ×
File	View Edit Help	Drag a point to the desired per or double			
	Logged Points	click the point to assign it to an available pen		Group Name Group 1	
	⊷ [hone] ← clock ← Feeder ← Tanks			Pens	
			n		

The point categories are listed in the "Logged Points" section. For a group, points are assigned to pens by expanding the point categories and assigning points to pens, as described above for the *Trend Setup* window. Each Group is assigned a Group name. Initially, these names are "Group 1" to "Group 10". These can be changed in the "Group Name" section of the screen.

The screen is closed by clicking the "Return" button at the bottom of the screen (not shown) or by clicking the "X" in the upper left corner of the screen, When the screen is closed, the Group data is saved and the Trend Setup" window is displayed.

Note that when a Group is selected on the *Trend Setup* screen, the pens for the Group are automatically assigned per the Group setup. However, additional points can be assigned to pens and the points already assigned to a pen can be removed.



#### PLOTTING SETUP

Plotting setup defines what points are to be plotted and the period for plotting. Optionally, a title for the plot can be entered. It is performed from the "Trend Setup" window. There are 6 "pens" for plotting, each with a different color as indicated by the border of the pen box. Within the box is the point to be plotted.

View Edit Help	Tr	end Setup	-
Logged Points	Drag a point to the desired pen or double click the point to assign it to an available pen	Title	
Clock Clock Feeder Tanks Tank A Pre Tank A Pre Tank A Sta Tank A Ter	ase Time ssure — — — — — — — — — — — — tus mperature use Time	Pens Tank A Pressure Tank A Phase Time	

An individual point is assigned to a pen by dragging the point to the pen. Another way is to double-click the point which will assign the point to the first available pen from the top.

A point is removed from a pen by dragging the "[none]" selection in the "Logged Points" section to the pen.

The points of a group are assigned to pens by dragging the group to the "Pens" section. Note that if the group has less than 6 data points, additional points can be assigned to pens. Group points already assigned to a pen can be removed.

The plot for the selected points will begin with the time and date specified in the "Start Time" section of the window. The duration of the plot is specified in the "Duration" section.

6/26/23 1	2:00 AM	
Duration		
Duration 30 Minutes	4 Hours	16 Hours

Once the plot has been set up, the data is plotted on the "Trend" window which is displayed by clicking the "Create Report" button.



#### PLOTTING DATA

The data is plotted on the "Trend" window which is displayed by clicking the "Create Report" button on the "Trend Setup" window.

The purpose of this screen is to plot the selected points. The x-axis is the date and time and the y-axis is the value of the point.



The date / time range is the "Duration" selected on the "Trend Setup" window. Initially, it begins with the "Start Time" entered on the "Trend Setup" window. However, the beginning time can be moved forward or backward using the arrows.

Each point is plotted in its assigned color. The bottom of the screen shows the names of the points in their assigned color. When one of these points is clicked, the values on the y-axis will be the values for that point.

There are two sliders, a horizontal slider and a vertical slider. These are shown in yellow boxes with a line to the axis. The horizontal slider moves across the x-axis, the date/time. The date and time of the position of the slider is displayed within the slider. The vertical slider moves across the y-axis, the values. The values at the position of the slider are displayed for each of the 6 possible points within the slider. For colors that are not selected a "----" is displayed.



#### EXPORTING DATA

Selected logged values can be exported to a text file from the "Export" window. The exported text file has a column for the date and time and a column for each selected value.

<i>µ</i>		
View Help Logged Points Centrifuge S Centrifuge S Fred System Product Fic Spare Valve Posit Spare	Drag a point to the desired pen or double cick the point to assign it to an available pen are are af w Matical 1 m	File URLESTORAGEVPublic/Projects/INTERNAL U Product Flow Mixer Speed Start Time 3/30/20 • 9:00 AM Bridge Speed 0/2000 • 11:59 PM

The points whose values are to be exported are listed in the "Export List" section. Points are added to the list by dragging them from the "Logged Points" section. The order that the points are listed in the "Export List" section is the order they will be listed in the exported text file. This order can be changed using the up and down arrows on the right.

The date and time range for the exported data is specified with the "Start Time" and "End Time" boxes.

The location for the exported data is specified in the "File" section.



## APPENDIX 1 INSTALLING AND CONFIGURING RSLINX

#### INTRODUCTION

The *Analog Logger* communicates with PLC's using Allen-Bradley's RSLinx Classic OEM software, referred to as RSLinx. *Analog Logger* specifies the PLC addresses to be read. RSLinx reads the values of the PLC addresses and *Analog Logger* reads the values from RSLinx.

RSLinx must be installed on the *Analog Logger* PC. Once RSLinx is installed, it must be configured to communicate with the PLC or PLC's. This must be done with the PC connected to the PLC's. The following procedure assumes that the PC will connect to the PLCs over an Ethernet network.

With the PC connected, launch RS Linx. The "RSLinx OEM" window is then displayed, as shown below.

National RSLinx Classic OEM	8 <u>—</u> 8	
File Edit View Communications Station DDE/OPC Security Window Help		
For Help, press F1 NUM	01/17/24	03:06 PM

*Event Logger* assumes that the PLC's to be monitored are all on the same Ethernet network. Thus, RS Linx must first be configured to communicate with that network. This is accomplished by installing an Ethernet driver.



#### INSTALLING AND CONFIGURING DRIVER

The Ethernet driver is installed by selecting "Configure Drivers from the "Communications" menu of the "RSLinx OEM" window.

File       Edit       View       Communications       Station       DDE/OPC       Security       Window       Help					1	lassic C	SLinx (	🇞 F
Image: Solution of the second seco		Window Help	DDE/OPC S	Station	mmunications	View	Edit	File
Configure Drivers Configure Shortcuts Configure Client Applications Configure CIP Options Driver Diagnostics					RSWho	\$\	쁆	2
Configure Shortcuts Configure Client Applications Configure CIP Options Driver Diagnostics				vers	Configure Driv			
Driver Diagnostics			ations	ortcuts ent Applica Options	Configure Sho Configure Clie Configure CIP			
CIP Diagnostics Gateway Diagnostics				ostics cs	Driver Diagno CIP Diagnosti Gateway Diag			

nfigure Drivers		?
Available Driver Types:		Close
	Add New	Help
Configured Drivers:		
Name and Description	Status	
		Configure.
		Startup
		Start
		Stop
		Delete
1		

The Ethernet driver is installed by selecting "Ethernet devices" from the drop-down menu in the "Available Driver Types" section and clicking the "Add New" button. The "Configure" button will then be enabled. Click on this to display the following window to assign a name to the driver.

Add New RSLinx Classic Driver	>
Choose a name for the new driver. (15 characters maximum)	ОК
AB ETH-2	Cancel

A default name is displayed but this can be changed. Click the "OK" button to accept the name and install the driver.

The driver is displayed in the "Configured Drivers" box. The IP addresses for the PLC's are then



#### entered by clicking "Configure" button.

0.0	11. · N	
Station	102 102 102 150	Add New
1	192,192,192,190	Delete
2	192.192.192.21	
2	132.132.132.27	
63	Driver	

RS Linx is now communicating with the PLC network, as shown in the "Configured Drivers" section.

figure Drivers		?
Available Driver Types:		Close
	Add New	Help
Configured Drivers:		
Name and Description	Status	
AB_ETH-1 A-B Ethernet RUNNING	Running	Configure
		Startup.
		Start
		Stop
		Delete

Close the "Configure Drivers" sub-window.

All the devices on the network are displayed on the "RSWho" sub-window which is displayed by selecting "RSWho" from the "Communications" menu of the "RSLinx OEM" window.







With RSLinx on the Ethernet network, it is configured to identify the PLC's to be monitored. Each PLC on the network that is to be monitored is assigned a name called a "Topic". Topic names are assigned on the "DDE/OPC Topic Configuration" sub-window which is displayed by selecting "Topic Configuration" from the "DDE/OPC" menu on the "RSLinx OEM" window.

National Classic OEM			- 0
File Edit View Communi	tions Station DDE/OPC Security Windo	ow Help	
🛎 🚠 🎜 🗿 🛍 🙋	►? Topic Configuration		
	Alias Topic Configuration	in	
	Active Topics/Items		
	Communication Events		
	Optimized Packets		
	Server Diagnostics		
	DDE Client Diagnostics.		
	OPC Group Diagnostics		
	Update ControlLogix Ta	g Info	
	Options		
		2	
DDE/OPC Topic Configuration		? X	
Project: Default			
Topic List:	Data Source Data Collection Advanced (	Communication ]	
NEW TOPIC	Autobrowse Betresh 1		
	Workstation, SPARE		
	由 器 Linx Gateways, Ethernet		
C	由-器 AB_ETH-1, Ethernet		
New Clon	Delete Apply	Done Help	

On the "DDE/OPC" Topic Configuration" sub-window, on the panel on the right, the PLCs on



the Ethernet network are displayed. To assign a Topic name to a PLC, click on the "New" button and enter a unique name to replace the "NEW\_TOPIC". Then select the PLC from the "tree" on the right. The Topic name will be appended to the PLC on the "tree".

After the topic has been defined for all the PLC's, click the "Done" button. RS Linx is now installed and configured.



# APPENDIX 2 INSTALLING AND CONFIGURING KEPServerEX

#### INTRODUCTION

The *Analog Logger* communicates with PLC's using "Drivers". A driver is PC software that allows a program on the PC to read data from and write data to a PLC. There is a separate driver for each PLC. For Allen-Bradley PLC's the driver is typically RSLinx, as described in Appendix 1. For other PLC's, drivers can be obtained from PTC Incorporated using their KEPServerEX software.

#### PURCHASING KEPServerEX

KEPServerEX software can be obtained from the PTC Incorporated web site:

#### https://www.ptc.com

On the web site menu, select "Products and Solutions" and then select "Kepware". On the subsequently displayed screen click the "Buy Now" button which displays the "PTC Store" screen. In the "Filter Results" area select "Kepware" for Product Family and "Drivers" for Product Type. All available drivers are listed alphabetically on the right.

Most drivers can only be purchased as part of a suite of drivers. You can select a suite in the "Within Suite" section. This will cause only the drivers for that suite to be displayed.

To determine which driver is for a particular PLC, click "Product Details" beneath the driver's name. This will display a screen about the driver. Clicking "Supported Devices" on the screen will display the PLC's supported by the driver. Clicking "Learn More" will display a screen for purchasing the driver suite. Note that Kepware drivers are sold on a subscription basis.

Brigger and Associates can assist you in purchasing KEPServerEX.

#### INSTALLING and CONFIGURING KEPServerEX

Once KEPServerEX has been purchased an ".exe" is downloaded. Double-clicking on this file will put a shortcut on the screen,



At the same time an installation wizard will be launched after which the following screen will be displayed.





This screen is used to establish the communication path to each PLC monitored by *Analog Recorder*. Each driver is represented by a "channel". To create a channel right click on "Connectivity" and click "New Channel" to launch the "Add Channel" wizard. The Wizard displays the screens for naming the channel and defining the driver.

Once a channel has been created, the PLCs for that channel are specified by right clicking the channel and select "New Device", the device being the PLC. This will launch a wizard for defining the PLC, giving it a name ("ID"), and specifying the network path to the PLC.