



# *Tixi Alarm Editor*

# *User Manual*

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# 1 Introduction And Preparations

The Tixi Alarm Editor (TILA) allows to create and edit Tixi Alarm Modem projects and to transfer them between the device and a PC. The easy interface lets you conveniently access all necessary parameters, without need to understand the internal configuration language *TiXML*.



Tixi Alarm Modem projects are all written in TiXML, which is a variant of XML. In order to directly create projects using TiXML, you will need detailed knowledge on project structure and command syntax. The Tixi Alarm Modem Editor will spare you this effort, as it clearly presents all relevant options.

Before starting to work, the Tixi Alarm Modem needs to be connected to the power supply, to the PSTN if necessary and to a local COM port of your PC.

When having connected the Tixi Alarm Modem, install the TILA Tixi Alarm Editor from the CDROM supplied. After installation, the software will start automatically.

## 1.1 The Program Window

Start the Tixi Alarm Editor. The program window is divided into three parts:

At the left, there's an **Option Bar** holding all options being available for editing the selected properties.

The bottom of the program window is occupied by a **Navigation Bar**. This allows to access all modules being necessary for configuring the device.

- These modules embrace settings being thematically related. Each group of settings accessible by a navigation bar button, may be regarded as a "module".




Please note that some elements of the navigation bar will show up once a connection to the device is established (see chapter 2), or once an Alarm Modem model is selected manually for offline use.

The **Details** area shows brief information on the setting that is currently selected.

The main part of the program window is seized by what we call **Workspace**, which shows the settings currently worked at.

All modules being accessible by the navigation bar, are available via the menu bar (directly below the program windows title bar), too.

Additionally, the navigation bar as well as the workspace may hold some of these symbols, which indicate errors present within the current configuration:

-  incomplete entry
-  erroneous entry
-  number of errors present in the appropriate module

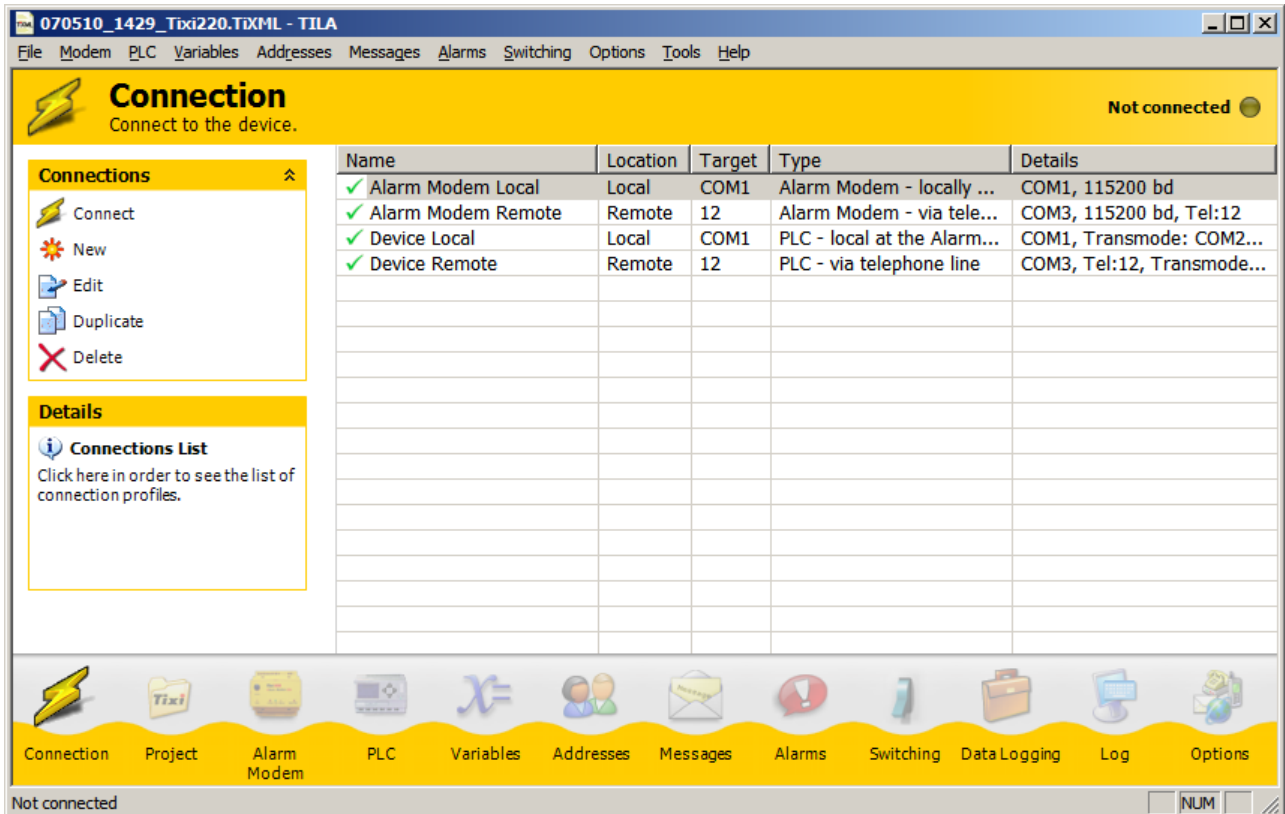


## 2 Connect To The Device



Within the navigation bar, click on **[Connection]**<sup>1</sup>, in order to establish a connection between Tixi Alarm Editor and the Alarm Modem device. The Connection module is intended to be some sort of "phone book" for administration of different installations. You may define connection templates for all your installations, including all parameters as telephone numbers and passwords.

The overview page already holds pre-configured templates for every type of connection, thus you will have to enter some user-specific data only.



First, check if the properties of the desired connection are correct. If so, highlight the appropriate connection template and, within the option bar, click **[Connect]**.

In order to correct the properties (if necessary), highlight the appropriate template and, within the option bar, click on **[Edit]**.

To create a new template, use the **[New]** button.

In both cases, the connection template editor opens up, which allows you to conveniently set all parameters of the particular connection template. You'll have to set the Type of that connection - e.g. if it's a local connection or a remote one.

The different types of connections are described in the following chapters, along with all requisite settings.

In order to find out which modems are connected to your PC, use the **[Find Modems]** button. Upon clicking this one, TILA searches all COM ports for modems and shows them inside the "Modem" list box.

Note that generic modems are detected, too. These can be used to remotely connect to a Tixi Alarm Modem.

In order to establish a connection, some parameters are to be set initially.

As soon as a connection is established, it may be terminated by clicking the **[Disconnect]** button. In order to terminate a transmode connection, use the appropriate button within the transmode dialog. This dialog comes up once a transmode connection is established.

<sup>1</sup> Buttons to click at within TILA are identified by bold font and square brackets.

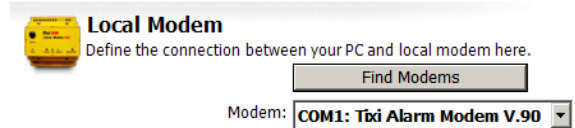
## 2.1 Alarm Modem Local

Select this connection template to configure a Tixi Alarm Modem which is connected directly (via RS232) to the local PC.

### 2.1.1 Local Modem

#### Find Modems

Use this button to let TILA search for modems which are connected to the local PC. All devices being detected will be shown inside the "Modem" listbox.



#### Modem

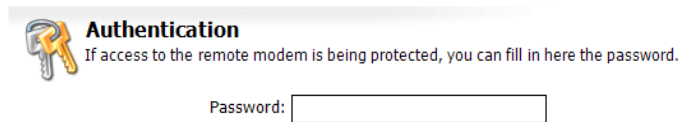
Select the COM port resp. modem here, that TILA shall connect to. The devices attached to the COM ports are shown only in case you used the **[Find Modems]** button before; otherwise, the list box will show the COM ports solely.

Note that a connection of this type can be established to Tixi Alarm Modems only.

### 2.1.2 Authentication

#### Password

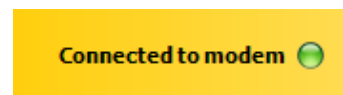
A password is necessary in case the Alarm Modem has been configured and provided with password protection before. Details on password protection can be found in chapter 4.9 of this manual. Note that this entry field shows up only after clicking the **[Advanced]** button.



Subsequently, click the **[Connect]** button in order to establish the connection between TILA and the Alarm Modem, using the given parameters.

All changes put on this connection template will be saved as soon as a connection is established.

The connection status is indicated by a LED symbol with some text within the upper right corner of the program window.



If TILA cannot establish a connection despite all parameters being correct, you may change the option **[Tools] > [Settings] > [Delay after opening the COM port]**. This may solve compatibility problems that could occur with some serial interfaces.

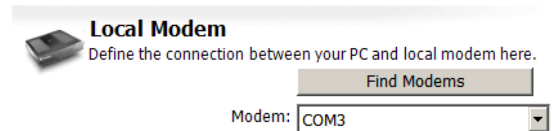
## 2.2 Alarm Modem Remote

Select this connection template to configure a remote Tixi Alarm Modem. Therefore, you need to connect a generic HAYES-compliant modem to your local PC, which is then used by TILA to dial into the remote Tixi Alarm Modem.

### 2.2.1 Local Modem

#### Find Modems

Use this button to let TILA search for modems which are connected to the local PC. All devices being detected will be shown inside the "Modem" list box.



#### Modem

Select the COM port resp. modem here, that TILA shall connect to. The devices attached to the COM ports are shown only in case you used the **[Find Modems]** button before; otherwise, the list box will show the COM ports solely.

The following elements are visible only in case you've clicked the **[Advanced]** button before:

#### Baud Rate

Set the connection speed between PC and local modem here.

#### Dialling method

We strongly recommend to leave this one at the default "Tone" setting.

#### Wait for Dial Tone

Activate this only in case you need to wait for a dial tone. This may apply when using a PABX.

#### AT-Init

Use this entry field to provide an alternative modem initialization string for the local modem.

Examples (AVM Fritz card): `ATS31=8; S51=0; X0; E0` (analogue)

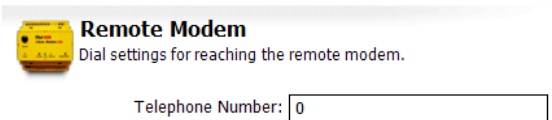
`ATS31=0; S51=0; X0; E0` (ISDN)

`ATS31=2; S51=0; X0; E0` (GSM)

### 2.2.2 Remote Modem

#### Telephone Number

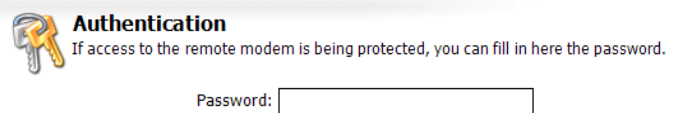
Enter the telephone number here which needs to be dialed in order to reach the remote Tixi Alarm Modem.



### 2.2.3 Authentication

#### Password

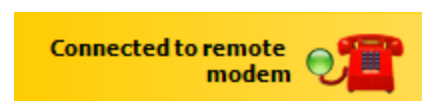
A password is necessary in case the Alarm Modem has been configured and provided with password protection before. Details on password protection can be found in chapter 4.9 of this manual. Note that this entry field shows up only after clicking the **[Advanced]** button.



Subsequently, click the **[Connect]** button in order to establish the connection between TILA and the Alarm Modem, using the given parameters.

All changes put on this connection template will be saved as soon as a connection is established.

The connection status is indicated by a LED symbol with some text within the upper right corner of the program window.



If TILA cannot establish a connection despite all parameters being correct, you may change the option **[Tools] > [Settings] > [Delay after remote CONNECT]**. This may solve compatibility problems that could occur with some GSM providers.



## 2.3 Device Remote

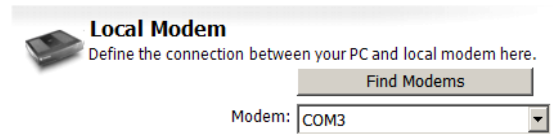
Use this option to connect the PLC software on your local PC to a remote PLC, using a telephone connection between a local modem and the remote Alarm modem attached to the the PLC.

Please note that this type of connection requires an external serial modem. Internal modems - e.g. those being found in laptops - can not be used.

### 2.3.1 Local Modem

#### Find Modems

Use this button to let TILA search for modems which are connected to the local PC. All devices being detected will be shown inside the "Modem" list box.



#### Modem

Select the COM port resp. modem here, that TILA shall connect to. The devices attached to the COM ports are shown only in case you used the **[Find Modems]** button before; otherwise, the list box will show the COM ports solely.

The following elements are visible only in case you've clicked the **[Advanced]** button before:

#### Handshake

Set the handshake used between PC and dialling modem.

#### Dialling method

We strongly recommend to leave this one at the default "Tone" setting.

#### Wait for Dial Tone

Activate this only in case you need to wait for a dial tone. This may apply when using a PABX.

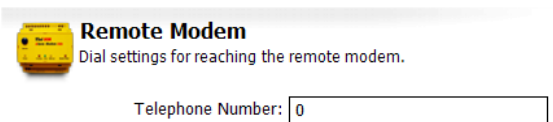
#### AT-Init

Use this entry field to provide an alternative modem initialization string for the local modem.

### 2.3.2 Remote Modem

#### Telephone Number

Enter the telephone number here which needs to be dialed in order to reach the remote Tixi Alarm Modem.



### 2.3.3 PLC

#### PLC

Select the COM port of the remote Alarm Modem here that the PLC is attached to.

#### Baud Rate

This applies to the transmission rate between PLC and PLC software.

The following list boxes will appear only in case you clicked the **[Advanced]** Button:

#### Data Bits

Set the number of data bits for this connection here.

#### Parity

Select from Odd, Even or None to provide a parity for the connection between Tixi Alarm Modem and PLC.

#### Stop Bits

Provide the number of stop bits for this connection.

#### Handshake

Select the type of handshake between the devices.

#### Waittime

Specifies the time the Alarm Modem will try to switch to the transparent connection to the PLC.

**PLC**

Settings for the Transmode at the remote modem.

PLC:	COM2
Baud Rate:	9600
Data Bits:	8
Parity:	None
Stop Bits:	1
Handshake:	(None)
Waittime:	20 s

### 2.3.4 Authentication

#### Password

A password is necessary in case the Alarm Modem has been configured and provided with password protection before. Details on password protection can be found in chapter 4.9 of this manual. Note that this entry field shows up only after clicking the **[Advanced]** button.

**Authentication**

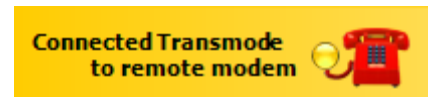
If access to the remote modem is being protected, you can fill in here the password.

Password:

Subsequently, click the **[Connect]** button in order to establish the connection between TILA and the Alarm Modem, using the given parameters.

All changes put on this connection template will be saved as soon as a connection is established.

The connection status is indicated by a LED symbol with some text within the upper right corner of the program window.



If TILA cannot establish a connection despite all parameters being correct, you may change the option **[Tools] > [Settings] > [Delay after remote CONNECT]**. This may solve compatibility problems that could occur with some GSM providers.

## 2.4 Device Local

Use this option to connect the PLC software on your PC to a PLC being attached to a local Alarm Modem.

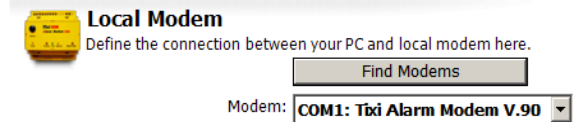
### 2.4.1 Local Modem

#### Find Modems

Use this button to let TILA search for modems which are connected to the local PC. All devices being detected will be shown inside the "Modem" list box.

#### Modem

Select the COM port resp. modem here, that TILA shall connect to. The devices attached to the COM ports are shown only in case you used the **[Find Modems]** button before; otherwise, the list box will show the COM ports solely.



### 2.4.2 PLC

#### PLC

Select the COM port of the remote Alarm Modem here that the PLC is attached to.

#### Baud Rate

This applies to the transmission rate between PLC and PLC software.

The following list boxes will appear only in case you clicked the **[Advanced]** Button:

#### Data Bits

Set the number of data bits for that connection here.

#### Parity

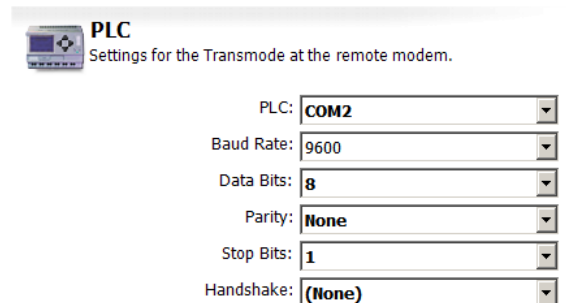
Select from Odd, Even or None to provide a parity for the connection between PLC software and PLC.

#### Stop Bits

Provide the number of stop bits for that connection.

#### Handshake

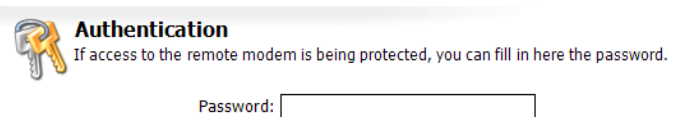
Select the type of handshake between the devices.



### 2.4.3 Authentication

#### Password

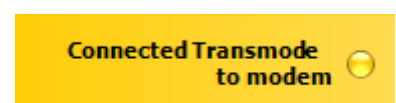
A password is necessary in case the Alarm Modem has been configured and provided with password protection before. Details on password protection can be found in chapter 4.9 of this manual. Note that this entry field shows up only after clicking the **[Advanced]** button.



Subsequently, click the **[Connect]** button in order to establish the connection between TILA and the Alarm Modem, using the given parameters.

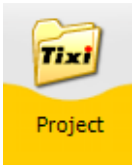
All changes put on this connection template will be saved as soon as a connection is established.

The connection status is indicated by a LED symbol with some text within the upper right corner of the program window.



If TILA cannot establish a connection despite all parameters being correct, you may change the option **[Tools] > [Settings] > [Delay after opening the COM port]**. This may solve compatibility problems that could occur with some serial interfaces.

### 3 The Tixi Alarm Modem Project



Clicking **[Project]** at the navigation bar opens up a form that offers some options for the project itself, such as saving to disk or transmitting it to the Alarm Modem. The option bar at the left offers these possibilities:

#### Start

This button gets you to the start page, which you should have just opened up. From here, you may connect Tixi Alarm Modem Editor to a Tixi Alarm Modem (use the **[Online]** button) or select an Alarm Modem type for offline configuration (by means of the **[Offline]** button).

#### New

Click here in order to create a new project.

#### New from template...

Click here in order to create a new project, based upon a precast project template.

#### Load...

This will bring up an open file dialog which lets you open a project file from your PC's hard drive.

#### Save/Save as...

Use this option to save projects to your PC's hard drive.

#### Properties

Using this option opens up a form that allows to save additional information (as author, department etc pp) about the project.

#### Exit Program

This will shut down the Tixi Alarm Modem Editor.

#### Send Project

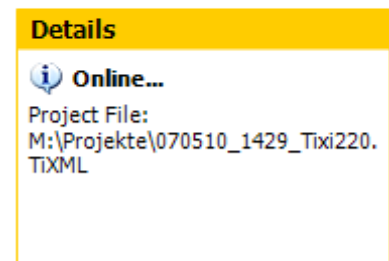
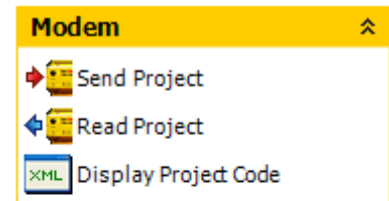
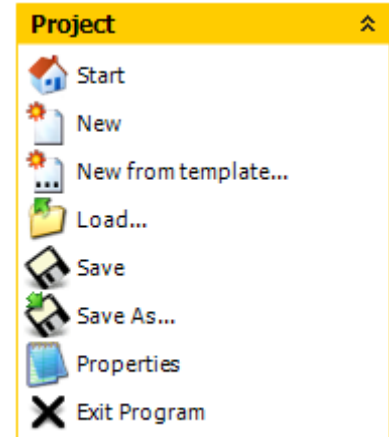
Use this option to send the current project into the connected Tixi Alarm Modem. Please note that if already a project exists inside the device, it will be overwritten without further notice. This option is available only in case Tixi Alarm Modem Editor is connected to a Tixi Alarm Modem.

#### Read Project

Click here to transmit the project data from Tixi Alarm Modem into Tixi Alarm Modem Editor, in order to edit it. This option is available only in case Tixi Alarm Modem Editor is connected to a Tixi Alarm Modem.

#### Display Project Code

You may display the TiXML source code of the project here.



## 4 Alarm Modem - General Settings



Click on **[Alarm Modem]** within the navigation bar, in order to first set some options regarding the device and basic project settings. We recommend to work off the option bar elements in the order provided.

### 4.1 Selecting an Alarm Modem Type

Click the **[Offline]** button to open up a form to let you select the type of the Tixi Alarm Modem, in case the Tixi Alarm Modem Editor is not connected to the device (working offline).

For setting the device type by connecting TILA to the Alarm Modem, please refer to chapter 2 of this manual.

#### Selection of an Alarm Modem

For an offline configuration the Alarm Modem model can be set manually.

Product Series:	HM (Analog Modem, HutLine) ▼
Product:	HM27 ▼
Status:	Not connected ▼

### 4.2 Phone Settings

On this form, some details on your telephone connection and location data are to be set.

#### 4.2.1 Own Telephone Number

##### Country/Region

Select the country or region here wherein the Tixi Alarm Modem is being used.

##### Area Code/Mobile Network Code

Enter your locations area code here, respective the network code of the SIM card (HG series only).

##### Phone Number

Type in the telephone number of the connection used, without any prefixes.

##### Extension

If you're using the Tixi Alarm Modem with a PABX, you may enter the extension number here. This will prevent internal calls (within the same extension) to be routed via the exchange line.

##### International Telephone Number

This field shows the complete phone number in international format.

##### MSN (ISDN devices only)

Enter the MSN of the terminal device here. On a main connection, this will be the complete phone number without any extension, while on a PABX, it could be the extension number solely.

These options are shown only if a GSM device is used:

##### PIN

Enter the PIN of the SIM card here.

##### Query Card Credit

This string is used to query the remaining credit of a prepaid card. Change it if your mobile network provider requires a different command.

#### Own Telephone Number

The Alarm Modem responds to incoming calls on this number

Country/Region:	Germany (+49) ▼
Area Code:	
Phone Number:	
Extension:	
International Telephone Number:	+49-???-???

#### SIM Card

PIN number of the SIM card in the Alarm Modem.

PIN:	
	<< Advanced
Query Card Credit:	*100#

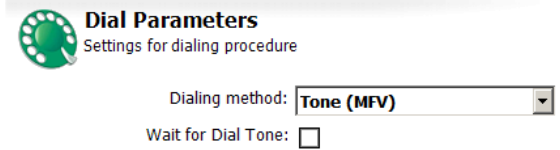
## 4.2.2 Dial Parameters

This option is shown only if an analogue Tixi Alarm Modem is used.

### Dialling Method

Select Tone or Pulse dialling here.

If the Alarm Modem has to **Wait for Dial Tone** before dialling, activate the appropriate option.



**Dial Parameters**  
Settings for dialling procedure

Dialing method: **Tone (MFV)**

Wait for Dial Tone:

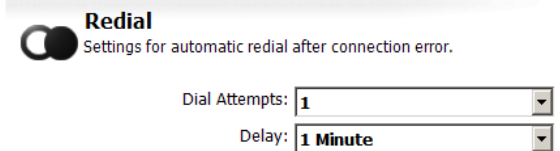
## 4.2.3 Redial

### Dial Attempts

Select the number of dial attempts here, just for the unlikely case of a failed message transmission.

### Delay

Enter the delay between dialling attempts here.



**Redial**  
Settings for automatic redial after connection error.

Dial Attempts: **1**

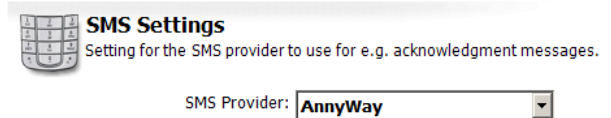
Delay: **1 Minute**

## 4.2.4 SMS Settings

This option is shown only if an analogue or ISDN Alarm Modem is used.

### SMS Provider

Select the service provider for the dispatch of remote control notifications here. The entry to select here depends on in which mobile phone network the recipient of such notifications resides.



**SMS Settings**  
Setting for the SMS provider to use for e.g. acknowledgment messages.

SMS Provider: **AnnyWay**

More service providers may be added via the "Options" module (see chapter 13.1).

## 4.3 Dial Prefixes

On this form, you may enter prefixes in case they are needed for operating the Tixi Alarm Modem along with a telephone exchange. Click the **Advanced** button in order to completely display all settings.

### 4.3.1 Telephone Extension

#### Local Call

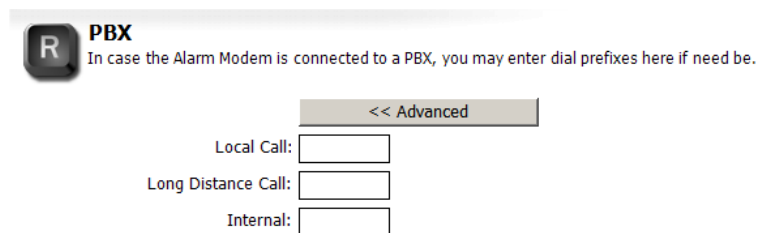
If a prefix is needed for local calls, enter it here.

#### Long Distance Call

Usually, this one is to be same as for local calls. Thus if you enter a local call prefix, it will be automatically applied here, too. - Although you may change it manually, if need be.

#### Internal

A prefix for internal calls is not necessary in most cases, but if so, you can provide it in this field.



**PBX**  
In case the Alarm Modem is connected to a PBX, you may enter dial prefixes here if need be.

<< Advanced

Local Call:

Long Distance Call:

Internal:

### 4.3.2 Long Distance Calls

#### International Call

Enter the prefix here that is necessary to establish a foreign connection. In most European countries, this will be 00 (USA: 011) and shall not be changed.

#### Long Distance Call

This preset (0) applies to the most European countries, too. For the United States, use 1 instead.



#### Long Distance Calls

Dial prefixes for long distance calls.

<< Advanced

International Call:

Long Distance Call:

## 4.4 Sender Data

For every message type that is to be used within the Tixi Alarm Modem project, a sender address must be defined.

#### Automatic Numbers

Enable this option to let TILA generate all addresses (except the E-mail address) automatically from the phone settings. (see chapter 4.2.1).

If you don't use this option, enter the numbers in international format (e.g. +49-30-1234567).

#### E-mail

Enter an E-Mail sender address here, in case the Alarm Modem shall send such messages.



#### Sender Data

Enter the Alarm Modem sender data for each message type to be used for alarms.

Automatic Numbers:

SMS Number:

Telephone Number:

Fax Number:

Express E-Mail:

E-mail:

## 4.5 Sender Location Texts

The text entered here will be attached to outgoing messages (if selected so) and thus make it easier to associate a message to a specific device.

#### SMS and Pager

Enter a short text (max. 20 chars) here that is to be appended to outgoing SMS and pager messages. Do neither use line breaks nor umlaut.

#### E-Mail and Fax

This text is attached to all E-mail, Express-E-Mail and Fax messages. It can be of infinite length and may be used as a "signature" of the specific Alarm Modem device.



#### Sender Location Texts

Information about device and sender location which will be attached to every outgoing message

SMS and Pager:

E-mail and Fax:

Fax Header:

#### Fax Header

This is used as fax headline as well as a sender ID for Express-E-Mail messages.

Variables may be used in Sender Location Texts as in any other message template. Details on using variables in message texts can be found in chapter 8.2.2 of this manual.

## 4.6 Internet Access

In order to send E-mail messages, internet access data must be entered. These access data can be asked for at your internet service provider.

### 4.6.1 Internet Access Data

#### Phone Number

Enter your ISPs dialup number here in international format. So, if you have to dial 0192658 (for example), enter +49-19-2658. When using GSM, abbreviated numbers (e.g. 22243) are valid, too.

#### GSM Protocol

GSM devices only: Select the internet access GSM protocol here.

#### ISDN Protocol

ISDN devices only: Select the internet access ISDN protocol here.

#### Authentication Method

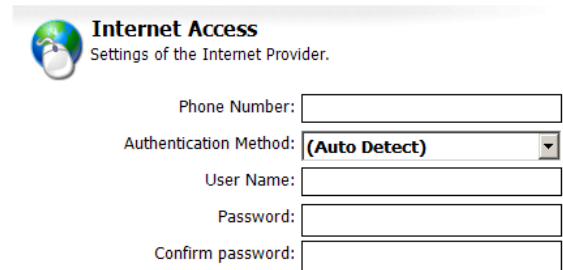
"Auto Detect" is the default value here. Usually, there will be no need to change this setting..

#### User Name

Enter your PPP login name here, not to be confused with the POP3 (E-mail) login.

#### Password

The PPP password will be disguised and thus is to be entered twice.



**Internet Access**  
Settings of the Internet Provider.

Phone Number:

Authentication Method: **(Auto Detect)**

User Name:

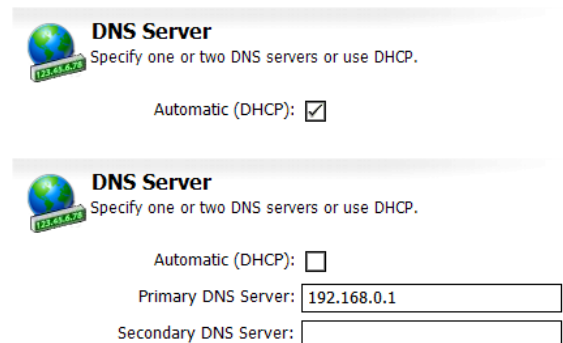
Password:

Confirm password:

### 4.6.2 DNS-Server

Check "Automatic (DHCP)" in case your ISP dynamically assigns an DHCP server. - Usually, he will do so. In case of doubt, ask your ISP.

Otherwise, the DNS server addresses need to be entered manually. Your ISP will provide you with this information.



**DNS Server**  
Specify one or two DNS servers or use DHCP.

Automatic (DHCP):

---

**DNS Server**  
Specify one or two DNS servers or use DHCP.

Automatic (DHCP):

Primary DNS Server:

Secondary DNS Server:

## 4.7 E-Mail-Server

Beside an internet access, sending E-mail messages requires an SMTP server. In some cases you will have to provide a POP3 account, too, depending on the authentication method. Your ISP will provide you with this information.

#### SMTP Server

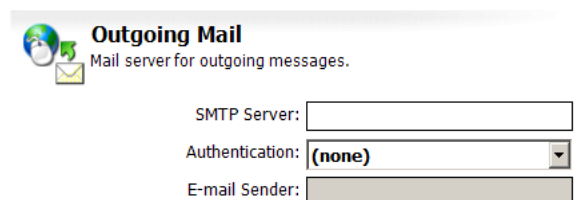
The name of the mail server for outgoing messages (must be an SMTP server). You may enter a generic name or an IP address here.

#### Authentication

In case the SMTP server requires authentication, select the appropriate method here.

#### E-Mail Sender

This read-only field shows the E-mail address given as sender data (see chapter 4.4 of this manual). The SMTP server provided must match this address.



**Outgoing Mail**  
Mail server for outgoing messages.

SMTP Server:

Authentication: **(none)**

E-mail Sender:



### 4.7.1 ESMTTP Authentication

If ESMTTP authentication is used, you need to provide some additional data.

#### User Name

This user name is provided by your E-mail hoster.

#### Password

Enter the appropriate password here.

#### Outgoing Mail

Mail server for outgoing messages.

SMTP Server:

Authentication:

User Name:

Password:

Confirm password:

E-mail Sender:

### 4.7.2 POP-before-SMTP Authentication

If this authentication method is used, enter the access data of the appropriate POP3 mailbox here.

#### POP3 Server

This is the server for incoming messages.

#### User name

Login name of the mailbox which is used as a sender address of the messages.

#### Password

Enter the POP3 mailbox password here.

#### Incoming Mail

Mail server for incoming messages.

POP3 Server:

User Name:

Password:

Confirm password:

## 4.8 Date and Time

If Tixi Alarm Modem Editor is connected to the Tixi Alarm Modem, you can set the battery-buffered real time clock of the device here.

Select the desired time zone on the right and click the **Set Computer Time** button, in order to synchronize the Tixi Alarm Modem RTC with the PC system clock.

Alternatively, you may even manually set a time at the lower right - independently of the PC system clock - and set the device to this time, using the **Set Time (manually)** button.

Computer Time: \_\_\_\_\_  
(GMT+01:00) Amsterdam, Berlin,...

Heute: 2007-06-13

10:49:07

Set modem clock:

>>

Alarm Modem: \_\_\_\_\_  
(GMT+01:00) Amsterdam, Berlin, B

Heute: 2007-06-13

09:49:53

Set Time (manually)

In order to set the time zone wherein the Tixi Alarm Modem resides, select the appropriate time zone above the right calendar field and click the **[Set modem clock]** button.

## 4.9 Access Protection

If required, you may define an access protection here. These access data must be provided each time you configure and control the Alarm Modem, in order to protect it against unauthorized access.

### Password local

Enter a password here to protect local access, i.e. for when the Tixi Alarm Modem is connected to the COM port of a local PC.

### Password remote

Enter a password here to protect the device against unauthorized remote access. This password applies to the user ADMIN of the Siemens TeleService software, too.

Please keep in mind that these passwords must be provided when connecting to a protected Tixi Alarm Modem. See chapter 2 of this manual for details on connecting to a password protected Tixi Alarm Modem.



### Access protection

The Alarm Modem can be protected against unauthorized access. A password can be defined for every connection type.

Password local:

Password remote:

## 4.10 Extensions

If you're using extension modules and TILA is not connected to the Tixi Alarm Modem, click on **[Extensions]** (within the option bar) in order to define extension modules.

**Note:** If TILA is connected to the Tixi Alarm Modem, extension modules will be recognized automatically and cannot be defined manually. Extension modules are available for hut line Tixi Alarm Modems only.

Type	Interfaces	IO Ports	TiXML Path
✓	0	12	C42
✓ HM27	2	6	

Within the option bar, click on **[Extensions]** and **[Modem Modules]** subsequently, in order to show a list of modules already defined in the project.

### 4.10.1 Adding Extension Modules

In order to add a new extension module to the project, click the **[New Module]** button within the option bar. This will open up a form that allows to set all properties of the extension module.

#### Type

Select the type of the extension module here.

#### TiXML Path

If using not more than one extension module, leave the preset setting at "C42". If more extension modules are to be used, please contact the Tixi.Com technical support for detailed information: [tixi-support@tixi.com](mailto:tixi-support@tixi.com)



### Modem Modules

Settings for the Modems IO-Extensions.

Type:

Interfaces:

IO Ports:

TiXML Path:

If the overview of extension modules is displayed, and an extension is highlighted within the table, you may even change, duplicate or delete this entry. Just use the appropriate option bar buttons.

## 5 PLC Settings



The PLC module holds all parameters necessary for connecting the Tixi Alarm Modem to a PLC. If this PLC supports multiple stations, these may be defined here, too.

### 5.1 PLC System

At **[Modem-PLC Communication]** you may set some basic parameters of the PLC connection.

#### Modem Interface

Select the COM port of the Tixi Alarm Modem where the PLC is attached to.

#### PLC System

Choose the PLC manufacturer or fieldbus system here.

#### Typ

Select the exact PLC type here.

**Modem Interface and PLC System**  
Select the modem interface to connect one or multiple PLC and select the PLC or fieldbus system to be used.

Modem Interface:	<input type="text" value="COM1 (RS232)"/>
PLC System:	<input type="text" value="Mitsubishi"/>
Type:	<input type="text" value="Alpha XL"/>

### 5.2 Modem-PLC Communication

After selecting a PLC system, more options will be displayed at **[Modem-PLC Communication]**. These are to be set for each PLC specifically and will be covered within the following chapters.

For details on the physical connection (i.e., wiring) between Tixi Alarm Modem and PLC, please refer to the Tixi Alarm Modem Hardware Manual.

If you click **[List of Stations]** within the option bar, a list comes up that shows all stations already defined for this PLC type. From this Overview you may even add, duplicate and/or delete PLC stations, in case the PLC system supports more than one of them.

#### New Station

Use this button to create a new station for the selected PLC connection.

#### Duplicate

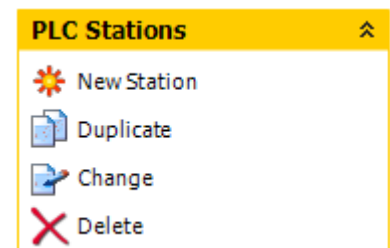
If a station is already defined and highlighted within the list, you may create a copy of this entry and edit it. This may save time when defining similar entries.

#### Change

This opens up the highlighted entry in an editor.

#### Delete

Click here in order to delete the highlighted entry.



### 5.2.1 ABB AC31 at RS232

The ABB AC31 may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 19200 baud.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Connection/Handshake:

#### Handshake

Leave this at "(None)".

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

Character Interval:

Timeout:

Message Interval:

DWORD Increment:

Low Before High (DWord-Swap):

Single Word Write:

Query collectively:

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Character Interval

This applies to the pause length between sending single characters. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours).

#### Timeout

Provide the transmission timeout for Modem-PLC connections here. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours).

#### Message Interval

This applies to the pause length between sending single messages. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours).

#### DWORD Increment

Enter the increment between two following DWORD addresses here.

#### Low Before High (DWord-Swap)

Enable this option to send Low before High words.

#### Single Word Write

Enable this option to individually write multiple word values. (Function code 6)

#### Query Collectively

Here you may set if multiple subsequent variables are queried in block transmission, or if not so. (Caching)

### 5.2.2 ABB AC31 at RS485

The ABB AC31 may be connected to the COM2 (RS422/485) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 19200 baud.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Connection/Handshake:

#### Handshake

Choose from 2-wire (halfduplex) or 4-wire (fullduplex) here.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

Character Interval:

Timeout:

Message Interval:

DWORD Increment:

Low Before High (DWord-Swap):

Single Word Write:

Query collectively:

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Character Interval

This applies to the pause length between sending single characters. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours).

#### Timeout

Provide the transmission timeout for Modem-PLC connections here. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours).

#### Message Interval

This applies to the pause length between sending single messages. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours).

#### DWORD Increment

Enter the increment between two following DWORD addresses here.

#### Low Before High (DWord-Swap)

Enable this option to send Low before High words.

#### Single Word Write

Enable this option to individually write multiple word values. (Function code 6)

#### Query Collectively

Here you may set if multiple subsequent variables are queried in block transmission, or if not so. (Caching)

### 5.2.3 ABB AC010 at RS232

The ABB AC010 may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem. No further settings are required for the PLC connection itself.

Click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Polling Rate:

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.4 Allen Bradley Pico at RS232

The Allen Bradley Pico may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem. No further settings are required for the PLC connection itself.

Click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Polling Rate:

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.5 Mitsubishi Alpha XL at RS232

The Mitsubishi Alpha XL may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem. No further settings are required for the PLC connection itself.

Click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.6 Berthel ModuCon at RS232

The Berthel ModuCon may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 38400 baud.

#### Alarm Modem MPI address

Enter the MPI address of the Alarm Modem here.

#### Highest Station (HSA)

Provide the highest station ID here that is used on the bus.

#### GUF

Enter the Gap Update Factor for tokenring systems here.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Alarm Modem MPI address:

Highest Station (HSA):

GUF:

### 5.2.7 Carel PC2 Macroplus at RS232

The Carel PC2 Macroplus may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 1200 baud.

#### Handshake

Leave this at "(None)".

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Handshake:

### 5.2.8 Mitsubishi MELSEC FX at RS232

The Mitsubishi MELSEC FX may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 9600 baud.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Connection/Handshake:

#### Handshake

Leave this at "(None)".

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

CPU:

Station ID:

Polling Rate:

#### CPU

Select the type of CPU here that is being used.

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.9 Mitsubishi MELSEC FX Format 1 at RS232

The Mitsubishi MELSEC FX Format 1 may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 9600 baud.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Connection/Handshake:

#### Handshake

Leave this at "(None)".

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

CPU:

Station ID:

Polling Rate:

#### CPU

Select the type of CPU here that is being used.

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.



### 5.2.10 Mitsubishi MELSEC FX at RS485

The Mitsubishi MELSEC FX may be connected to the COM2 (RS422/485) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 9600 baud.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Connection/Handshake:

#### Handshake

Choose from 2-wire (halfduplex) or 4-wire (fullduplex) here.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

CPU:

Station ID:

Polling Rate:

#### CPU

Select the type of CPU here that is being used.

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.11 Mitsubishi MELSEC FX Format 1 at RS485

The Mitsubishi MELSEC FX Format 1 may be connected to the COM2 (RS422/485) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 9600 baud.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Connection/Handshake:

#### Handshake

Choose from 2-wire (halfduplex) or 4-wire (fullduplex) here.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

CPU:

Station ID:

Polling Rate:

#### CPU

Select the type of CPU here that is being used.

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.12 Modbus ASCII at RS232

Devices supporting the Modbus-ASCII protocol may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 19200 baud.

#### Handshake

Leave this at "(None)".

#### Dataformat

Select the data format for serial transmissions here.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Connection/Handshake:

Dataformat:

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.13 Modbus ASCII at RS485

Devices supporting the Modbus-ASCII protocol may be connected to the COM2 (RS485/422) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 19200 baud.

#### Handshake

Choose from 2-wire (halfduplex) or 4-wire (fullduplex) here.

#### Dataformat

Select the data format for serial transmissions here.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Connection/Handshake:

Dataformat:

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.14 Modbus RTU at RS232

Devices supporting the Modbus-RTU protocol may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 19200 baud.

#### Handshake

Leave this at "(None)".

#### Dataformat

Select the data format for serial transmissions here.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Connection/Handshake:

Dataformat:

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

Character Interval:

Timeout:

Message Interval:

DWORD Increment:

Low Before High (DWord-Swap):

Single Word Write:

Query collectively:

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Character Interval

This applies to the pause length between sending single characters. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours).

#### Timeout

Provide the transmission timeout for Modem-PLC connections here. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours).

#### Message Interval

This applies to the pause length between sending single messages. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours).

#### DWORD Increment

Enter the increment between two following DWORD addresses here.

#### Low Before High (DWord-Swap)

Enable this option to send Low before High words.

#### Single Word Write

Enable this option to individually write multiple word values. (Function code 6)

#### Query Collectively

Here you may set if multiple subsequent variables are queried in block transmission, or if not so. (Caching)

### 5.2.15 Modbus RTU at RS485

Devices supporting the Modbus-RTU protocol may be connected to the COM2 (RS485/422) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 19200 baud.

#### Handshake

Choose from 2-wire (halfduplex) or 4-wire (fullduplex) here.

#### Dataformat

Select the data format for serial transmissions here.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:


Connection/Handshake:

Dataformat:

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.

 **Define PLC Station**  
A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

Character Interval:

Timeout:

Message Interval:

DWORD Increment:

Low Before High (DWord-Swap):

Single Word Write:

Query collectively:

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Character Interval

This applies to the pause length between sending single characters. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours).

#### Timeout

Provide the transmission timeout for Modem-PLC connections here. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours).

#### Message Interval

This applies to the pause length between sending single messages. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours).

#### DWORD Increment

Enter the increment between two following DWORD addresses here.

#### Low Before High (DWord-Swap)

Enable this option to send Low before High words.

#### Single Word Write

Enable this option to individually write multiple word values. (Function code 6)

#### Query Collectively

Here you may set if multiple subsequent variables are queried in block transmission, or if not so. (Caching)

### 5.2.16 Moeller Easy 400/600 at RS232

The Moeller Easy 400/600 may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem. No further settings are required for the PLC connection itself.

Click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Polling Rate:

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.17 Moeller Easy 500/700 at RS232

The Moeller Easy 400/600 may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem. No further settings are required for the PLC connection itself.

Click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Polling Rate:

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.18 Moeller PS4-200 at RS232

The Moeller PS4-200 may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem. No further settings are required for the PLC connection itself.

Click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.19 Moeller Easy 800/MFD at RS232

The Moeller EASY 800/MFD may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem. No further settings are required for the PLC connection itself.

Click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.20 Moeller PS306/316 at RS232

The Moeller PS306/316 may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem. No further settings are required for the PLC connection itself.

Click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.21 Moeller PS4-341 at RS232

The Moeller PS306/316 may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem. No further settings are required for the PLC connection itself.

Click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.22 Moeller PS4-416 at RS232

The Moeller PS4-416 may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 9600 baud.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Dataformat:

#### Dataformat

Select the data format for serial transmissions here.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

#### Station ID

The station ID to set here depends on the variable range to be observed.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.23 Moeller XC/XVC at RS232

The Moeller XC/XVC may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem. No further settings are required for the PLC connection itself.

Click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

#### Station ID

The station ID to set here depends on the variable range to be observed.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

### 5.2.24 SAIA PCD/PCS at RS232

The SAIA PCD/PCS may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 19200 baud.

#### Handshake

Leave this at "(None)".

#### Master

Enable this option to let the Alarm Modem act as a bus master.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Handshake:

Master:



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

### 5.2.25 SAIA PCD/PCS at RS485

The SAIA PCD/PCS may be connected to the COM2 (RS422/485) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 19200 baud.

#### Handshake

Choose from 2-wire (halfduplex) or 4-wire (fullduplex) here.

#### Master

Enable this option to let the Alarm Modem act as a bus master.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Handshake:

Master:



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:



### 5.2.26 Siemens S7-200 at RS232

The Siemens S7-200 may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 9600 baud.

#### Handshake

Leave this at "(None)".

#### Master

Enable this option to let the Alarm Modem act as a bus master.

#### Alarm Modem PPI address

Enter the PPI address of the Alarm Modem here.

#### Highest Station (HSA)

Provide the highest station ID here that is used on the bus.

#### GUF

Enter the Gap Update Factor for tokenring systems here.

#### Repeats

This determines the number of communication attempts in case of a transmission failure.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.

#### CPU

Select the type of CPU here that is being used.

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Handshake:

Master:

Alarm Modem PPI address:

Highest Station (HSA):

GUF:

Repeats:



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

CPU:

Station ID:

Polling Rate:

### 5.2.27 Siemens S7-200 at RS485

The Siemens S7-200 may be connected to the COM2 (RS485) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 9600 baud.

#### Handshake

Choose from 2-wire (halfduplex) or 4-wire (fullduplex) here.

#### Master

Enable this option to let the Alarm Modem act as a bus master.

#### Alarm Modem PPI address

Enter the PPI address of the Alarm Modem here.

#### Highest Station (HSA)

Provide the highest station ID here that is used on the bus.

#### GUF

Enter the Gap Update Factor for tokenring systems here.

#### Repeats

This determines the number of communication attempts in case of a transmission failure.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.

#### CPU

Select the type of CPU here that is being used.

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Handshake:

Master:

Alarm Modem PPI address:

Highest Station (HSA):

GUF:

Repeats:



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

CPU:

Station ID:

Polling Rate:

### 5.2.28 Siemens S7-300/400-A at MPI

The Siemens S7-200 may be connected to the MPI interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Master

Enable this option to let the Alarm Modem act as a bus master.

#### Alarm Modem MPI address

Enter the PPI address of the Alarm Modem here.

#### Highest Station (HSA)

Provide the highest station ID here that is used on the bus.

#### GUF

Enter the Gap Update Factor for tokenring systems here.

#### Repeats

This determines the number of communication attempts in case of a transmission failure.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

Station Name:	<input type="text" value="S7-300/400-A"/>
Station ID:	<input type="text" value="2"/>
Polling Rate:	<input type="text" value="1s"/>

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Master:	<input checked="" type="checkbox"/>
Alarm Modem MPI address:	<input type="text" value="1"/>
Highest Station (HSA):	<input type="text" value="15"/>
GUF:	<input type="text" value="1"/>
Repeats:	<input type="text" value="1"/>

### 5.2.29 M-Bus Devices

The Hx23-M Alarm Modem models may be connected to M-Bus devices.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and meter here. We recommend 2400 baud.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific meter:

#### Station Name

Enter a name for this meter here.

#### Station ID

Enter the station ID of this meter here.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the meter. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

Primary Address:

Secondary Address:

Manufacturing Address:

Manufacturer Code:

Generation:

Medium:

### 5.2.30 TixiBus Devices at RS232

Tixi-Bus compliant devices may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 1200 baud.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:

Connection/Handshake:

Master:

Station ID:

#### Handshake

Leave this at "(None)".

#### Master

Enable this option to let the Alarm Modem act as a bus master.

#### Station ID

Enter the station ID of the Tixi Alarm Modem here.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:

Station ID:

Polling Rate:

### 5.2.31 TixiBus Devices at RS485

TixiBus compliant devices may be connected to the COM2 (RS485) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 1200 baud.

#### Handshake

Choose from 2-wire (halfduplex) or 4-wire (fullduplex) here.

#### Master

Enable this option to let the Alarm Modem act as a bus master.

#### Station ID

Enter the station ID of the Tixi Alarm Modem here.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:	<input type="text" value="Tixi-Bus"/>
Station ID:	<input type="text" value="0"/>
Polling Rate:	<input type="text" value="1s"/>

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:	<input type="text" value="1200"/>
Connection/Handshake:	<input type="text" value="(None)"/>
Master:	<input checked="" type="checkbox"/>
Station ID:	<input type="text" value="1"/>

### 5.2.32 VIPA at RS232

The VIPA with GreenCable may be connected to the COM1 or COM2 (RS232) interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Baud Rate

Select the transmission rate between Alarm Modem and PLC here. We recommend 38400 baud.

#### Alarm Modem MPI adress

Enter the MPI address of the Alarm Modem here.

#### Highest Station (HSA)

Provide the highest station ID here that is used on the bus.

#### GUF

Enter the Gap Update Factor for tokenring systems here.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

Station Name:	<input type="text" value="Green Cable"/>
Station ID:	<input type="text" value="2"/>
Polling Rate:	<input type="text" value="1s"/>

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Baud Rate:	<input type="text" value="38400"/>
Alarm Modem MPI address:	<input type="text" value="1"/>
Highest Station (HSA):	<input type="text" value="15"/>
GUF:	<input type="text" value="1"/>

### 5.2.33 VIPA an MPI

The VIPA may be connected to the MPI interface of the Alarm Modem.

This requires the following parameters to be set within the **[Modem-PLC Connection]** module:

#### Master

Set this option to let the Alarm Modem act as a bus master.

#### Alarm Modem MPI Address

Enter the MPI address of the Alarm Modem here.

#### Highest Station (HSA)

Provide the highest station ID here that is used on the bus.

#### GUF

Enter the Gap Update Factor for tokenring systems here.

#### Repeats

This determines the number of communication attempts in case of a transmission failure.

Subsequently, click the **[Configure Stations...]** button and open up the existing station by double-clicking it. Here you may define settings which apply to the specific PLC station:

#### Station Name

Enter a name for this PLC station here.



#### Define PLC Station

A name, a ID number and a polling rate must be defined for every station with which the Alarm Modem is to communicate.

#### Station ID

Enter the station ID here, which must match the one set inside the PLC.

Station Name:	<input type="text" value="MPI"/>
Station ID:	<input type="text" value="2"/>
Polling Rate:	<input type="text" value="1s"/>

#### Polling Rate

Enter the interval here at which the Alarm Modem queries the PLC. Type a number, followed by **s** (seconds), **m** (minutes) or **h** (hours). Conditional upon performance, the actual polling rate may vary.

#### Modem PLC Communication

Settings for the communication between modem and PLC.

Master:	<input checked="" type="checkbox"/>
Alarm Modem MPI address:	<input type="text" value="1"/>
Highest Station (HSA):	<input type="text" value="15"/>
GUF:	<input type="text" value="1"/>
Repeats:	<input type="text" value="1"/>

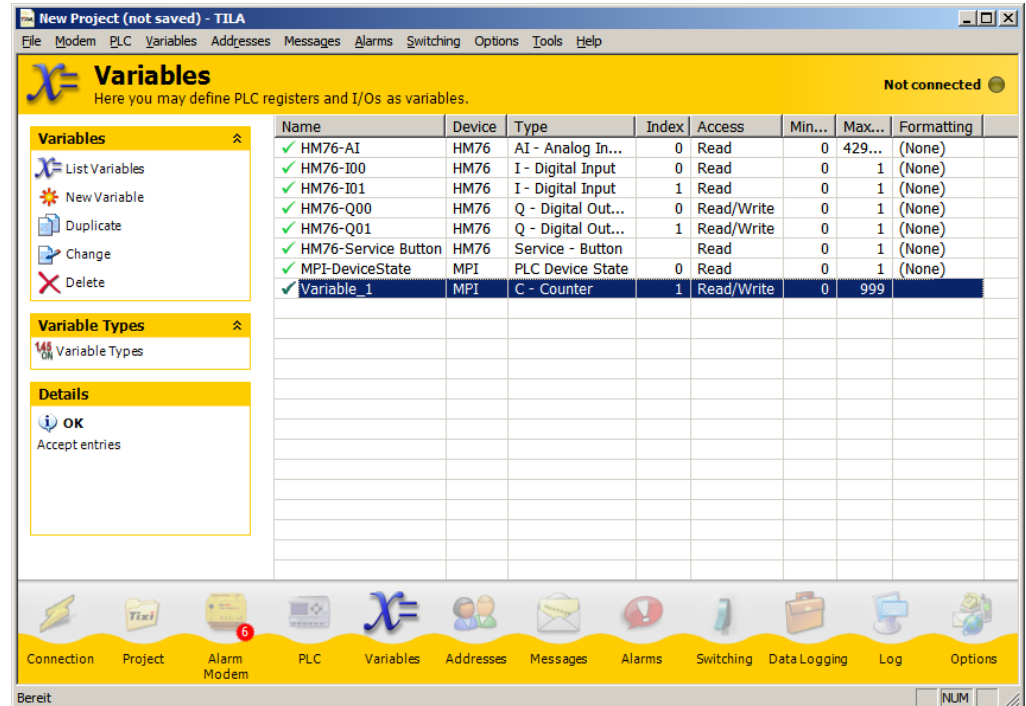
## 6 Variables



In order to read and write values of PLC variables via the Tixi Alarm Modem, these variables must be defined within the PLC program and the Alarm Modem project.

### 6.1 Variables: Overview

Clicking **[Variables]** opens up an overview table of all variables defined within the project, which - at first - is almost empty. Which variables are defined automatically, depends on the Alarm Modem model used. An overview of these system variables can be found in chapter 14.1 of this manual.



The option bar at the left offers these possibilities:

#### List Variables

This takes you back to the overview table of variables.

#### New Variable

Use this button to create a new entry.

#### Variable Types

Here you'll find a list of all variable types available for the selected PLC.

The following buttons show up only after custom variables have been created:

#### Duplicate

If an entry already exists, you may use this button to create a copy of it and edit it with the variable editor. This will save time on creating similar entries.

#### Change

opens the selected entry in the variable editor. This option is not available for system variables.

#### Delete

deletes the selected entry from the project. This option is not available for system variables.

#### Read Variables

If connected to the Alarm Modem, this will read the variable values and display them in the overview table.

#### Write Value / Set / Reset

These entries occur depending on the kind of variable selected. By using this option, you may set the variable to a value within its range. This option is only available if TILA2 is connected to the modem.

## 6.2 Adding Variables

The **[New Variable]** button creates a new variable. In the editor, you may set all parameters of this variable. These parameters may vary, depending on which PLC is being used.

### Name

This may be chosen at will and serves as a reference within the Alarm Modem project.

### Device

This is the device providing the variable value. If a PLC is connected to the Alarm Modem, this will be probably a PLC station.

### Type

This refers to the variable type. Which variable types are available depends on which PLC is being used.

### Index

This refers to the variable index defined within the PLC program.

### Access

If the variable got read and write access, you may restrict this here. With some protocols, you may even enable caching.

### Length

The maximum length of a variable value can be entered here, but for string variables only.

### Minimum, Maximum

After selecting a variable type, these fields display the range of it's value. They are read-only.

### Last Value

If the variable has already been queried, the last variable value is displayed here. It's read-only, too.

### Preset Value

Enter the variable value here that is to be used in case the actual value cannot be read when starting up the respective station. On starting up the modem, this value will be written into the PLC.

### Formatting

Depending on the variable type, different formatting options may be available here. These will be applied once the variable values are sent within messages.

### Note

This field allows to save some auxiliary notes on this specific variable.

Click the **[OK]** button to close this form and return back to the overview table. From there, you may add further entries using the **[New Variable]** button.

**Variable**  
Definition of variables used by the Alarm Modem

Name:

Device:

Type:

Index:

Access:

Minimum:

Maximum:

Last Value:

Preset Value:



## 6.3 Formatting Variables

In order to control the display of variables within TILA and message texts, you may specify additional formatting options for each variable. From the **Formatting** list box within the variable editor, select one of the following options. Please note that not all options may be available for all variable types.

### Binary (0,1)

This transforms the original variable value into a binary number.  
e.g.: original = 12345, formatted = 11000000111001

### Decimal (0...9)

This transforms the original variable value into a decimal number.  
e.g.: original = 12345, formatted = 12345

### Octal (0...7)

This transforms the original variable value into a decimal number.  
e.g.: original = 12345, formatted = 30071

### Hex (0...9, A...F)

This transforms the original variable value into a decimal number.  
e.g.: original = 6844, formatted = 1ABC

### Hex, small (0...9, a...f)

This does the same as "Hex (0...9, A...F)", except that it uses small instead of capital letters.  
e.g.: original = 6844, formatted = 1abc

### Logical Alternative

This replaces the actual value by predefined text strings, depending on the value being true or false in the boolean sense. If the variable value is 0, the text entered for "false" is displayed and if the value equals anything else, the text for "true" is used.

### Fixed Point

This is the most powerful formatting option. These settings are available for the "Fixed Point" option:

#### Prefix

Select "always" to always display the prefix, or "only if negative" to display a prefix only for negative values.

#### Output Length

Determine the number of digits that the displayed value will have. In order to use this option, we recommend to use "Zeros" as "Fill Characters". In order to not change the original digit number, select "dynamic".

#### Fill Characters

Select the character here that fills up the digits if a fixed output length is defined.

#### Decimal Separator

If you select decimal places from the next list box, define a decimal separator here.

#### Decimal Separator

In order to make decimal numbers out of the integers provided by the PLC, provide the number of decimal places here.

#### Thousand Separator

Large numbers can be read more easily when using thousands separators. Select which character will be used therefore.

#### String

Here you may provide prefix and suffix text, as well as a fixed string length.

If needed, you may provide **Prefix** and **Suffix** texts for every formatting option (except logical alternative), which will be displayed before resp. after the actual value.

Note that for bit variables the **Logical Alternative** is the only useful option. Thus, the others are offered for longer variables only.

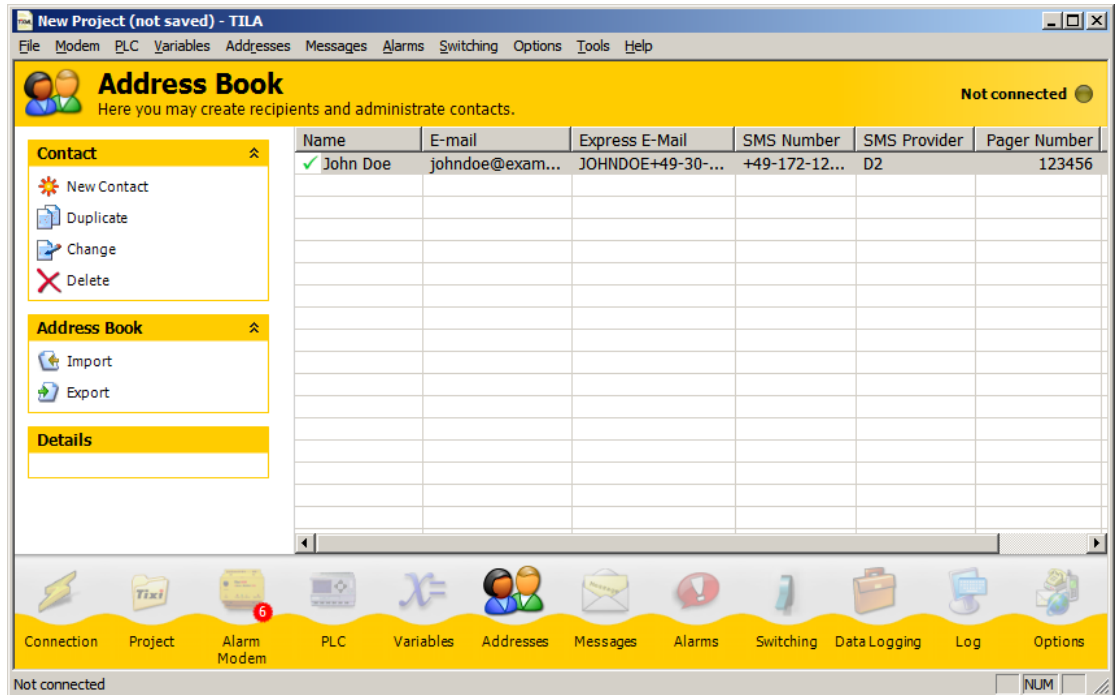
## 7 Contacts



Click on **[Addresses]** within the navigation bar in order to view and edit address book entries. These are used as recipients for alarm messages and notifications sent by the Alarm Modem.

### 7.1 Contacts: Overview

Clicking **[Addresses]** within the navigation bar opens up a table that shows all address book entries (contacts) within the current project. At first, this table will be empty. As soon as contacts are created, there will be these options to edit them:



#### New Contact

Use this button to create a new entry.

The following buttons show up only after custom entries have been created:

#### Duplicate

If an entry already exists, you may use this button to create a copy of it and edit it. This will save time on creating similar entries.

#### Change

opens the selected entry in the contact editor.

#### Delete

deletes the selected entry from the project.

#### Import

After exporting an address book via the **[Export]** option, you may import it using this button. Please note that only such address books should be imported that were exported by TILA, too.

#### Export

This option allows to export the address book as an XML file, so you can conveniently re-use it later via the **[Import]** option.

Click the **[New Contact]** button in order to open up the editor and create a new entry.

## 7.2 Adding Contacts

The contact editor allows to create and edit message recipients along with appropriate addresses.

### Name

This is to be entered at will and used to reference the contact within the Tixi Alarm Modem project.



### Contact

Destination addresses for messages.

### E-mail

Enter an E-mail address here, if this contact shall receive such messages.

### Express E-Mail

In case this recipient is to receive Express E-Mail messages, enter the appropriate address here.

### SMS Number

The number for receiving SMS messages will be a mobile number in most cases. Keep in mind to provide this number in international format, i.e. +44-160-1234567.

### SMS Provider

Select this recipients SMS provider. Usually, this will be the appropriate cell phone provider.

### Pager Number

If you want to send pager messages to this contact, enter his pager number here. This one is not necessarily to be given in international format.

### Fax Number

To send this recipient fax messages, enter a fax number in international format here.

Click **[OK]** to save your changes and to return to the overview table.

Using the **[New Contact]** button, you may add further entries from there.

Name:	<input type="text" value="John Doe"/>
E-mail:	<input type="text" value="johndoe@example.com"/>
Express E-Mail:	<input type="text" value="JOHNDOE+49-30-1234567"/>
SMS Number:	<input type="text" value="+49-172-1234567"/>
SMS Provider:	<input type="text" value="D2"/>
Pager Number:	<input type="text" value="123456"/>
Fax Number:	<input type="text" value="+49-30-1234567"/>

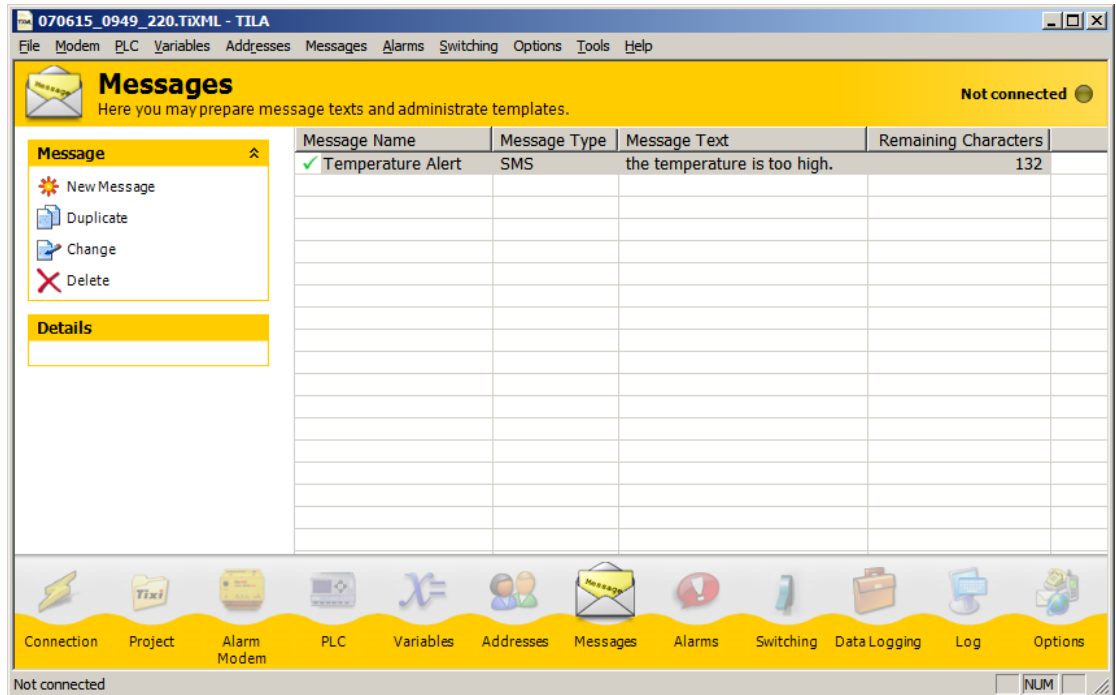
## 8 Messages



Click on **[Messages]** within the navigation bar in order to view and edit message templates. These will be sent to contacts as alarm messages or remote control notifications.

### 8.1 Messages: Overview

Clicking **[Messages]** within the navigation bar opens up a table that shows all message templates within the current project. At first, this table will be empty. As soon as templates are created, there will be these options to edit them:



#### New Message

Use this button to create a new entry.

The following buttons show up only after custom entries have been created:

#### Duplicate

If an entry already exists, you may use this button to create a copy of it and edit it within the message editor. This will save time on creating similar entries.

#### Change

opens the selected entry in the editor.

#### Delete

deletes the selected entry from the project.

Click the **[New Message]** button in order to open up the editor and create a new entry.

## 8.2 Adding Messages

The message editor lets you arrange message templates from all information needed. You may even insert references to variables, in order to send their current values in the message (see below).

### Message Name

This is to be entered at will and used to reference the message within the Tixi Alarm Modem project.

### Message Type

Select here how to send the message, i.e. using which medium. Fax, E-mail and Express E-Mail templates differ from those for SMS and pager messages.

### Subject

Enter the message subject here. This field won't appear when editing a SMS or pager template.

### Message Text

This field holds the message text. Keep in mind that SMS and pager messages are of a restricted length and must not contain umlaut or line breaks.

### Append Location Text

Enable this option in order to append the location text to the message. More information on the location text is to be found in chapter 4.5 of this manual.

### Remaining Characters

This field shows up only when editing SMS or pager message templates which are of a restricted length, and displays the remaining characters for that message.

### 8.2.1 Adding a Confirmation Code

If a message shall be confirmed by the recipient, it must contain a confirmation code: Only if this code is sent back to the Alarm Modem by the message recipient, the message dispatch counts as successful. Therefore, the confirmation code must be in the subject line of an Express-E-Mail or within the text of a SMS.

In order to insert a confirmation code, place the mouse cursor within the **Subject** (for SMS: within **Message Text** field), click there with the *right* mouse button and select this entry from the context menu that opens up: Modem > Alarm Cascade > Confirmation Code.

### 8.2.2 Adding Variable References

In order to insert variable references in message text or subject, click with the *right* mouse button at the appropriate place within the text and select a variable from the context menu that opens up. You may insert system variables (to be found at the Alarm Modems code designation within the context menu) as well as PLC variables, if a PLC is defined within the project.

PLC variables can be found within the context menu at the station name that has been defined within the PLC module (see chapter 5).

Click **[OK]** to save your changes and to return to the overview table.

Using the **[New Message]** button, you may add further entries from there.

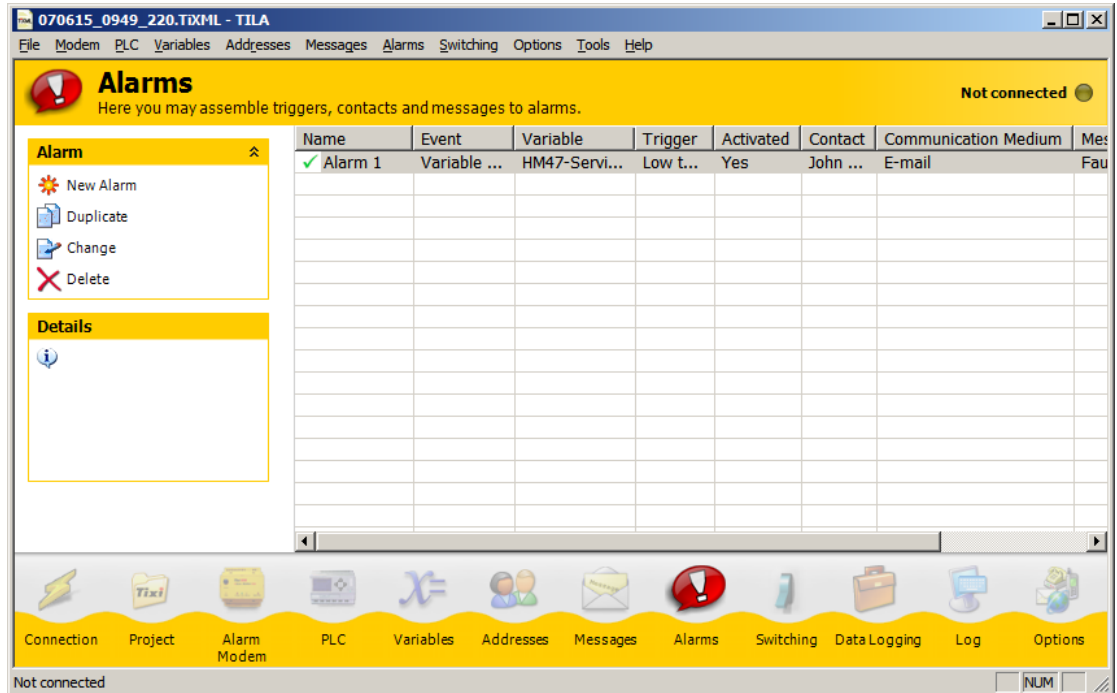
## 9 Alarms



Click on **[Alarms]** within the navigation bar in order to arrange the information from particular project modules to alarms.

### 9.1 Alarms: Overview

Clicking **[Alarms]** within the navigation bar opens up a table that shows all alarms within the current project. At first, this table will be empty. As soon as alarms are created, there will be these options to edit them:



#### New Alarm

This opens up the alarm editor, where you can create alarms from all items necessary.

The following buttons show up only after custom entries have been created:

#### Duplicate

If one or more entries already exist, you may use this option to create a copy of the selected and edit it. This can save some time when creating similar entries.

#### Change

Clicking here opens up the selected entry in the editor.

#### Delete

This deletes the selected entry.

#### Test Alarm

Click here in order to trigger the selected alarm. This is for testing purposes; you may check if the message is sent correctly, without having to fulfill the appropriate trigger condition.

Click the **[New Alarm]** button in order to open up the editor and create a new entry.

## 9.2 Adding Alarms

The alarm editor allows to "build" an alarm from trigger event (e.g. variable change), recipient and message template. When having prepared these elements of the alarm, the individual parts just need to be assembled here.

### 9.2.1 Event

Within these fields, you may select in which way the alarm message dispatch will be triggered.

If this shall happen by a variable change, at first the appropriate variable must be selected, as well as an **Event** type and a **Trigger** condition. These options are available:

#### Low to High

This triggers the alarm if the selected variable changes from low to high. This option is available for bit variables only.

#### High to Low

This triggers the alarm if the selected variable changes from high to low. This option is available for bit variables only.

(Note that the Alarm Modem IOs are "low" when closed and "high" when opened.)

#### Any Change

Use this option to trigger the alarm on any change of the variable, regardless of which direction. This option is available for bit variables only.

#### Threshold Range

This option is available for Byte, Word and DWord variables and requires a lower and an upper limit. The alarm is triggered if the variable value determines within this range and/or leaves it, depending on the **Trigger** type.

#### Equal

Enter an exact value here. The alarm is triggered if the variable reaches this value.

#### Not equal

Enter an exact value here. The alarm is triggered if the variable leaves this value.

#### Lower than

This option triggers the alarm as soon as the variable value falls below the threshold value to enter here.

#### Greater than

This option triggers the alarm as soon as the variable value exceeds the threshold value to enter here.

#### Bitmask

Enter a value here to define a bitmask. The alarm is triggered as soon as one or more bits of the alarm value correspond to the bitmask specified by the value provided here.

#### Active

The alarm is triggered only if this checkbox is enabled.

#### Delay

Enter a timespan here during which the given condition must be fulfilled, in order to trigger the alarm.

You may even select **Alarm Cascade** as a trigger. In this case you may select such alarm as a **Following Alarm** for an alarm that requires a confirmation.

If the alarm should not be triggered automatically, you may select **Manually**. Thus, the alarm may be triggered just by means of the **[Test Alarm]** button within the option bar.

**Event**

Specify event details of the Alarm.

Name:

Event:

Variable:

Trigger:

Alarm Delay:

Activated:

### 9.2.2 Alarm Destination

Assign a recipient to this alarm here that you chose from the contact entries created within the address book (see chapter 7).

Additionally, you must specify a communication medium, i.e. which way the message is to be sent.

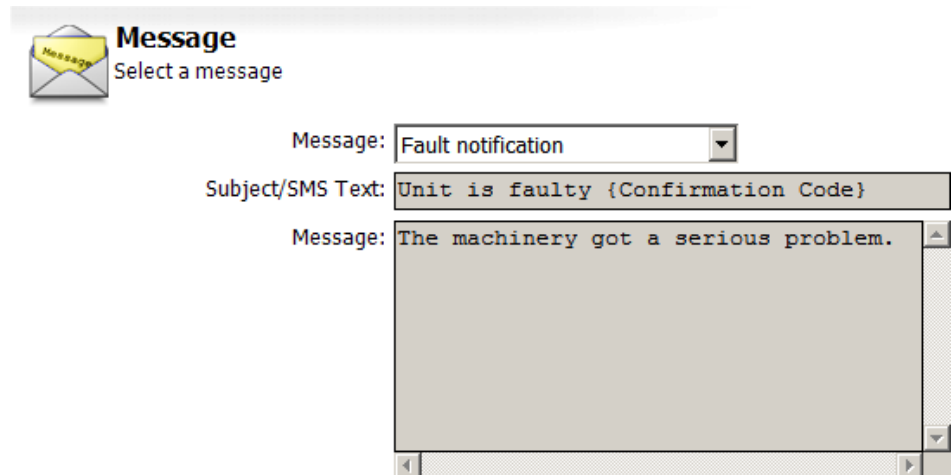
You can select only such communication mediums that the selected contact has an address defined for.



### 9.2.3 Message

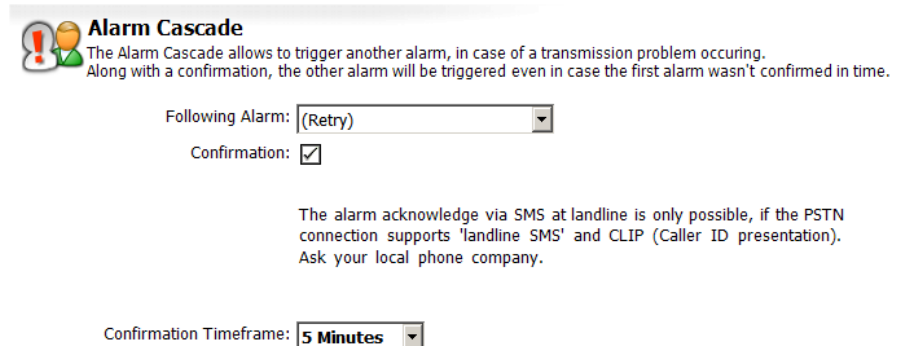
Select which of the defined message templates (see chapter 8) will be sent to the recipient if the alarm triggers.

You can select only such message templates that match the selected communication medium (see above).



### 9.2.4 Alarm Cascade

The alarm cascade allows to define actions to take place if the actual alarm message dispatch failed, or if the message was delivered but not confirmed in time by the recipient (by sending it back to the Alarm Modem).



#### Following Alarm

Select here which action is to be taken if message dispatch fails, or if the recipient doesn't confirm it within a given time span. You may even choose to create a new alarm for this purpose, or just repeat this one.

#### Confirmation

If the alarm sends a SMS or Express E-Mail message containing a confirmation code, you may activate this option in order to require the recipient to confirm the message receipt, i.e. send it back to the Tixi Alarm Modem. If he fails to do so, the **Following Alarm** (see paragraph above) will be triggered.

Note that this option requires a message template containing a confirmation code (see chapter 8.2.1).

#### Confirmation Timeframe

Select a time span here within which the Tixi Alarm Modem has to receive the confirmation, or send out the **Following Alarm**.

Click **[OK]** to save your changes and to return to the overview table.

Using the **[New Alarm]** button, you may add further entries from there. If you selected "(Create new alarm...)" from the **Following Alarm** listbox, clicking **[OK]** will get you directly to the creation of that following alarm.



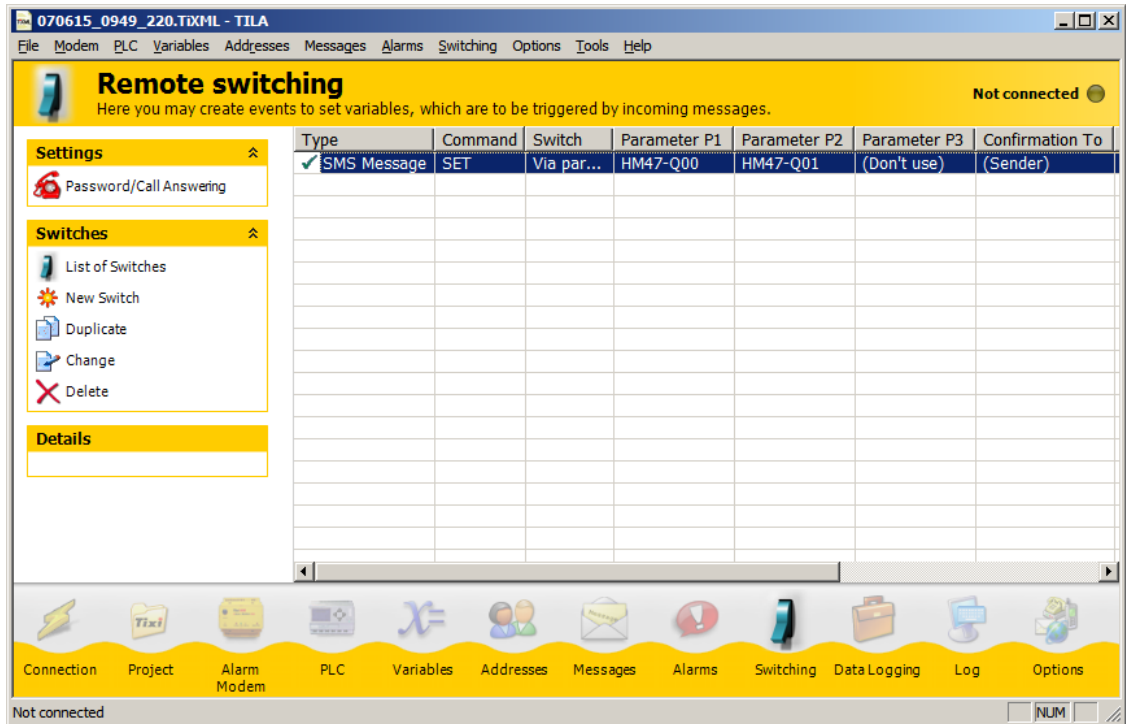
## 10 Remote Switching



Click on **[Switching]** within the navigation bar in order to define an access by which you can set variables of the Alarm Modem or the PLC by incoming messages and phone calls.

### 10.1 Switching: Overview

Clicking **[Switching]** within the navigation bar opens up a table that shows all remote switches within the current project. At first, this table will be empty. As soon as switching accesses are created, there will be these options to edit them:



#### Password/Call Answering

This button takes you to a form where you may define call acceptance and a password for remote switching. Call acceptance must be enabled in order to switch via incoming messages, as well as to gain remote access to the Alarm Modem resp. the connected PLC. For remote switching via CallerID, call acceptance doesn't need to be enabled.

The password applies to the Tixi Alarm Modem project globally. Click on **[List of Switches]** in order to get back to the overview, where these options will be available:

#### List of Switches

This button takes you to the overview table.

#### New Switch

This opens up the switching editor, where you can define all parameters necessary for remote switching.

The following buttons show up only after custom entries have been created:

#### Duplicate

If one or more entries already exist, you may use this option to create a copy of the selected and edit it. This can save some time when creating similar entries.

#### Change

Clicking here opens up the selected entry in the editor.

#### Delete

This deletes the selected entry.

Click the **[New Switch]** button in order to open up the editor and create a new entry.

## 10.2 Adding Remote Switches

Within the switching editor, you may define a switching access by selecting a trigger, one or multiple variable(s) to switch and a confirmation message.

### Type

At the very first, select if the switching shall be done by incoming phone call (CallerID), or by an incoming Express E-Mail or SMS message.

Switching via CallerID requires different settings than switching by incoming message. Chapter 10.2.1 covers CallerID, while chapter 10.2.2 describes switching by incoming messages.

### 10.2.1 Switching via Caller-ID

#### Phone Number

Enter the phone number here that is to activate the switch upon calling. Take care to type it in exactly as submitted by the telephone connection.

Note that the modem will recognize calls from this number, but will not accept them. Hence, you cannot remotely configure the modem from this number anymore.

#### Switch

You can set this "to specified value" only, as you cannot submit a variable value by CallerID.

If you select "Confirmation as status request", the Tixi Alarm Modem will send out a status report, instead of setting a variable. This only requires selecting a recipient and template for this report.

#### Variable

Select the variable to switch here.

#### Switch to

Set the value here that the variable should be set to, as soon as a call comes in from the phone number specified.

#### Confirmation to

If the switching action should be confirmed by sending a message, select the recipient here.

#### Type

This refers to the type of the confirmation message.

#### Name of Message

Select a template here to send as a confirmation message. Below, a preview of that message is displayed.

#### Delay Time

Enter a time that is to pass between switching and dispatch of the confirmation. This can make sure that the confirmation message contains the new value.

Click **[OK]** to save your changes and to return to the overview table.

Using the **[New Switch]** button, you may add further entries from there.

**Switch**  
Define a message to be interpreted by the Alarm Modem as a remote switching command.

Type:

Phone Number:

Attention: remote configuration is not possible from this Phone Number anymore!

**Switch Job**  
Definition of the variables to be switched.

Switch:

Variable:

Switch To:

**Acknowledgment**  
The switch operation can be confirmed with an acknowledgment message. Therefore, a recipient must be selected, along with message type and text.

Confirmation To:

Confirmation Type:

The alarm acknowledge via SMS at landline is only possible, if the PSTN connection supports 'landline SMS' and CLIP (Caller ID presentation). Ask your local phone company.

Name of Message:

Subject/SMS Text:

Delay Time:

## 10.2.2 Switching via incoming Message

### Type

Select the switching to be done by an incoming Express E-Mail or SMS message.



### Switch

Define a message to be interpreted by the Alarm Modem as a remote switching command.

Type:

Command:

Preview:

### Command

Enter a switching command. It must be contained within the message that is to activate this switching. Use upper case only.

### Preview

This shows how the subject or SMS text of the triggering message must look in order to succeed.

### Switch

Set this "to specified value" or to "via parameters". In case of the latter, the parameters to provide in the message are displayed in the preview as P1...P4.

If you select "Confirmation as status request", the Tixi Alarm Modem may send out a status report, instead of setting a variable. This only requires selecting a recipient and template for this report.

### Parameter P1...P4

Select the variable here that is to be set to the appropriate parameter. You may switch up to 4 different variables by one message.



### Switch Job

Definition of the variables to be switched.

Switch:

Parameter P1:

Parameter P2:

Parameter P3:

### Confirmation to

If the switching action should be confirmed by sending a message, select the recipient here.



### Acknowledgment

The switch operation can be confirmed with an acknowledgment message. Therefore, a recipient must be selected, along with message type and text.

### Type

This refers to the type of the confirmation message.

Confirmation To:

Confirmation Type:

### Name of Message

Select a template here to send as a confirmation message. Below, a preview of that message is displayed.

The alarm acknowledge via SMS at landline is only possible, if the PSTN connection supports 'landline SMS' and CLIP (Caller ID presentation). Ask your local phone company.

Name of Message:

Subject/SMS Text:

Delay Time:

### Delay Time

Enter a time that is to pass between switching and dispatch of the confirmation. This can make sure that the confirmation message contains the new value.

Click **[OK]** to save your changes and to return to the overview table.

Using the **[New Switch]** button, you may add further entries from there.

# 11 Data Logging

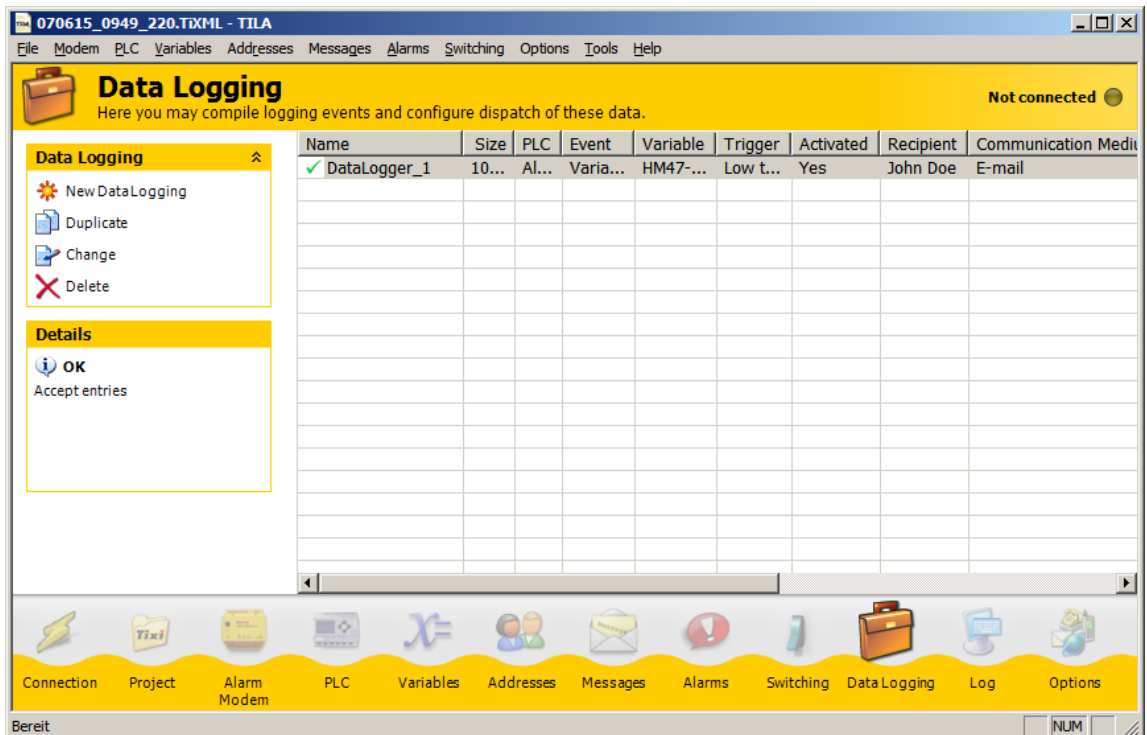


The Tixi Alarm Modem allows to log PLC data - e.g. variables or registers - and send these logfiles as Excel sheet (CSV file format) to an E-mail recipient.

As a requisite, you just need to define a PLC along with variables (see chapters 5 and 6). Please note that this is possible in the DL version of TILA only.

## 11.1 Data Logging: Overview

If PLC and variables are defined, click the **[Data Logging]** button within the navigation bar. This opens up an overview table of Data Loggers already defined, which at first will be empty. As soon as at least one Data Logger is defined, these options will be available:



### New Data Logging

This opens up an editor, where you can define all parameters for logging data and dispatch of the logfiles.

The following buttons show up only after custom entries have been created:

### Duplicate

If one or more entries already exist, you may use this option to create a copy of the selected and edit it. This can save some time when creating similar entries.

### Change

Clicking here opens up the selected entry in the editor.

### Delete

This deletes the selected entry.

### Empty content

Use this one to delete the content of the logfile, but not the Data Logger itself.

Click the **[New Switch]** button in order to open up the editor and create a new entry.

### Readout...

If connected to the Alarm Modem, you may manually read the logged data from the modem using this option. If the logfile content is displayed at the workspace, clicking **[Save...]** allows to save it as an CSV file.

### Send Logged Data

Click here in order to send the logged data, even if the condition for logfile dispatch is not matched..

At first, use the **[New Data Logging]** button in order to create a new entry.

## 11.2 Adding Data Logging

Within the Data Logging editor, you may define from which PLC the data will be logged, how big the logfile will be and when, how and to whom it will be sent. A maximum of six Data Loggers can be defined.

### Name

Enter a name for this Data Logger here. Along with the date, this name will be used as a filename for message attachments.



#### Data Logging

Choose the size and the data source for the data logging. Please note that logged data is stored in a compressed way, but will be decompressed before dispatch. Hence, the amount of data may increase by a factor which depends on variable types and formatting. In case this decompression causes memory problems, please adapt the logfile size accordingly.

Name:

Size:

PLC:

All Variables of the PLC are logged

### Size

Enter the logfile size in Bytes here, with a maximum of 209.715 Bytes. Logfiles are organized as ring buffers: As soon as the logfile is full, the oldest entries are overwritten by the newest ones.

Note that it takes computing time to generate messages from huge logfiles, thus the logfile size should be restricted to the amount necessary.

### PLC

Select the PLC station here which is to deliver the variable values to be logged.

### Event

This defines at which occasions logfile entries are written. This may be a variable change, or controlled by a regular time schedule.



#### Event

Specify event details of writing in the data logging.

Event:

Variable:

Trigger:

Activated:

### Variable

In case you want a variable to trigger the creation of a log entry, select it here.

### Trigger

In case you want a variable to trigger the creation of a log entry, select here on which flank or value of the variable this shall happen.

### Activated

If you disable this checkbox, a change of the selected variable doesn't trigger the creation of log entries.

If the creation of logfile entries shall be controlled by a time schedule, select "Schedule" as an **Event**. From the **Time Pattern** list box, you may choose from a variety of time patterns.

The **Activated** checkbox here does the same as when you use a variable change as trigger.



#### Event

Specify event details of writing in the data logging.

Event:

Time Pattern:

Activated:

If you select "(Manually)" as an **[Event]**, you may write logfile entries by using an option bar button.

The dispatch of logged data can be controlled using a time pattern, or upon variable change.

### Recipient

Select a contact here that was defined within the address book before (see chapter 7).

### Communication Medium

Select a message type here that is used to send the attachment with the logged data. Note that the selected contact must have an address defined for this message type. E-mail and Express-E-Mail messages only may be used to send logged data as attachments.

### Event

This defines at which occasions logfiles are sent. This may be a variable change, or controlled by a regular time schedule.

### Time Pattern

Select the time pattern here at which to send the logged data.

### Sending time

Provide an exact time here at which the data shall be sent on the selected pattern.

### Weekday

If "weekly" was selected as Time Pattern, you need to provide a weekday, too. (This option doesn't show up if you selected "daily" or "monthly").

### Day

If "monthly" was selected as Time Pattern, you need to provide a date of the month, too. (This option doesn't show up if you selected "daily" or "weekly").

The message to select next is used as a "carrier" - it just provides a way to send the log data as an attachment. The Alarm Modem will automatically convert it into Excel CSV file format.

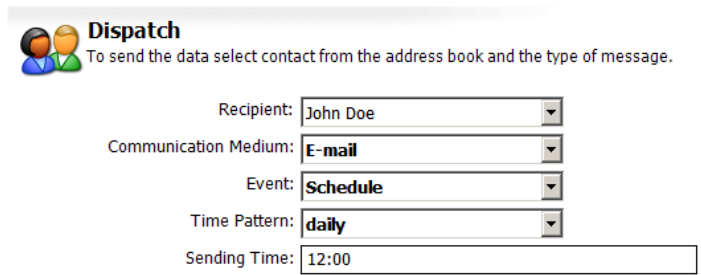
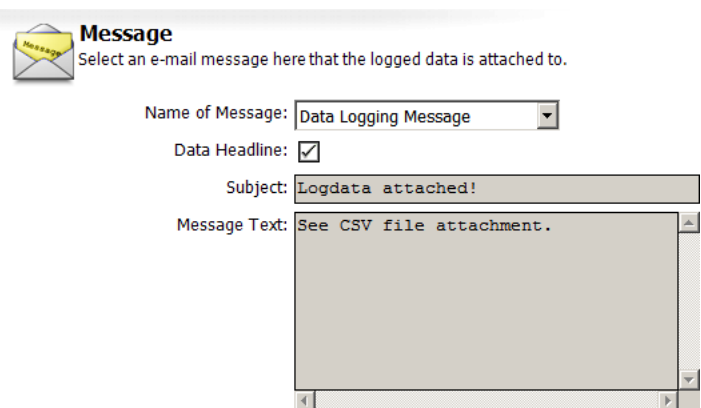
### Name of Message

Select the message template here that is used to send the logged data.

You must provide an E-mail or Express-E-Mail template, as attachments cannot be sent via SMS or pager.

### Data Headline

If this option is activated, a data headline with variable names is added to the Excel table.

After selecting a message, a preview is shown below the entry fields.

Click **[OK]** to save your changes and to return to the overview table.

## 12 System Logfiles

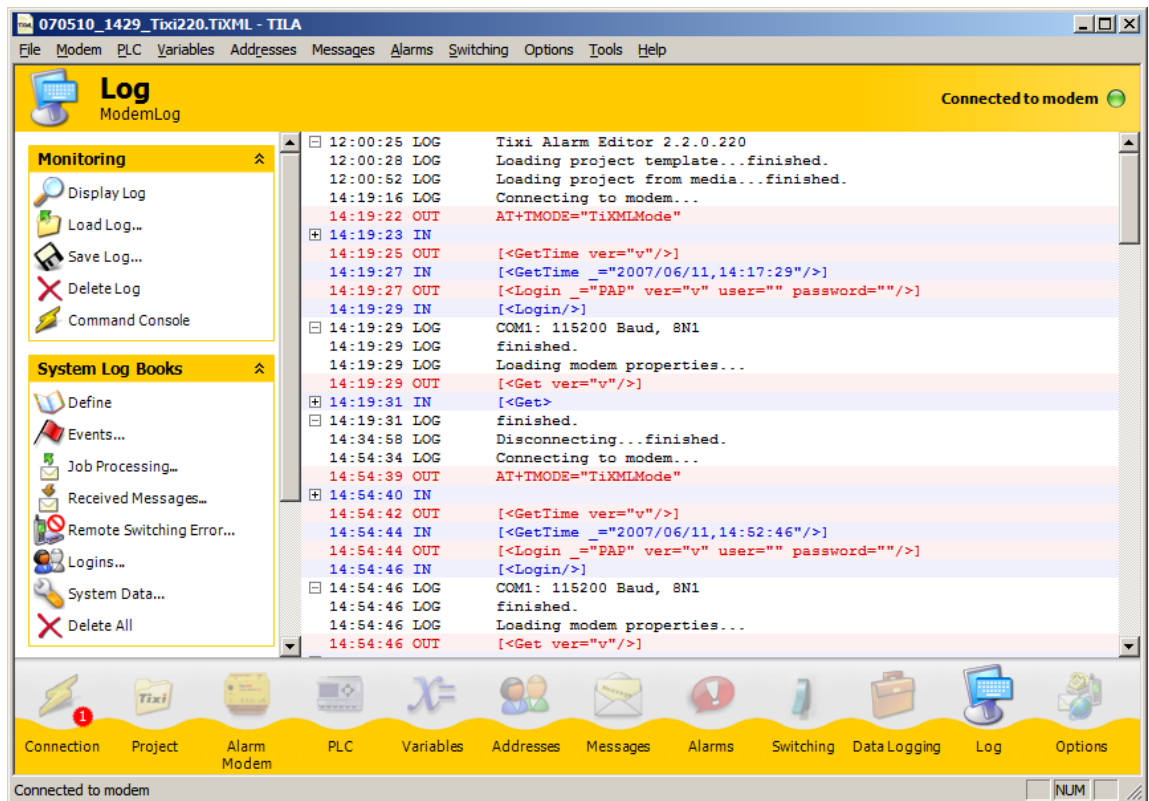


At the navigation bar, click on **Log** in order to get to the Tixi Alarm Modem logfiles. There you may read, save or load the protocol of communication between Tixi Alarm Modem and Tixi Alarm Modem Editor.

Additionally, you may access (and save to disk) the **[System Log Books]** from here, which contain details on event processing, message dispatch and other Tixi Alarm Modem activities.

### 12.1 Log Monitor

Click the **[Display Log]** button within the option bar in order to display the data transmitted between TILA and the Alarm Modem. Data sent to the modem is coloured in red, while data sent to TILA is blue. Notifications on successful project uploads etc. are displayed in black.



Within the option bar, click the name of a logfile in order to readout it's content. As soon as this content is displayed within the workspace, the option bar will provide a **[Save...]** button that allows to save the logfile content to a file.

Additionally, these options are available:

#### Load Log...

If the logfile of a recent session was saved to disk, you may use this option to load it and display it's content within the log monitor.

#### Save Log...

Click here in order to save the log monitor content to disk.

#### Delete Log

This one deletes the current log monitor display.

The **[Command Console]** option is intended as a tool to be used by the Tixi.Com technical support.

Longer records are shown in an abbreviated view, noticeable by a small square with a plus sign. Click this square in order to open and close the full length view.

If errors occur, these will be marked red and can be opened, too, in order to show detailed information.

## 12.2 System Log Books

Click on **[System Log Books]** > **[Define]** in order to open up a form that offers settings for these system log files. You may set their size here, as well as which events will be logged and how elaborate the records will be.

### Events

Here you'll find records on triggered events as alarm messages, as well as on switching variables upon incoming messages etc.

### Job Processing

This logfile records all details on message dispatch.

### Incoming Messages

Details on incoming messages are saved in this logfile.

### Failed Incoming Calls

This records errors that occur on remote switching via incoming messages.

### Logins

This logfile logs all attempts to login to the Alarm Modem.

### System Data

This one records internal system data of the Alarm Modem, which are intended predominantly for technical support purposes.

### Delete all

Click this button to delete all system logfiles from the Alarm Modem.

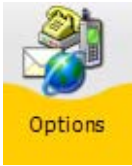
The screenshot displays a configuration window for system log books. It contains six sections, each with an icon, a title, a description, and input fields for 'Entries' and 'Size'.

- Events**: Log book for initiated events. Entries: **All (verbose)**, Size: 10240.
- Job Processing**: Log book for completed jobs. Entries: **All (verbose)**, Size: 10240.
- Incoming Messages**: Log book for incoming messages. Size: 10240.
- Failed Incoming Calls**: Log book for remote control errors. Size: 10240.
- Logins**: Login log book. Entries: **All (verbose)**, Size: 10240.
- System Data**: Alarm Modem system log book. Size: 10240.

Within the option bar at **[System Log Books]**, click the names of the logfiles to view their content. In order to return to the log monitor, click the **[Display Log]** button.



## 13 The Options Module



Within the navigation bar, click the **[Options]** button in order to open up the options module. There you may define further SMS service center for SMS dispatch and receive, as well as a connection timeout.

### 13.1 SMS Gateways

Here you'll find a list of predefined SMS service centers which the Alarm Modem can use to send SMS. If you need to use a service center that is not within the list, use the **[New SMS Provider]** option bar button in order to add another one.

#### Name

Enter a name here for this gateway.

#### Phone Number

Enter the dialup number here. The number format can be asked for at the service provider.

#### Phone Number Format

This depends on which service provider is used.

#### Type of Gateway

Select the type of this gateway here.

#### Network Type

Choose from analog and/or ISDN here.

#### Script

The script type used by the gateway can be asked for at the service provider, too.

**SMS-Gateway**  
Define a gateway for sending SMS. Ask your local landline or mobile phone provider for setup details.

Name:

Phone Number:

Phone Number Format:

Type of Gateway:

Network Type: **ISDN + PSTN**

Script:

### 13.2 Landline SMS Receipt

Here you may select SMS service centers that the Alarm Modem should accept SMS from. Some european countries are predefined, along with the phone numbers valid in these countries.

If you want to use the Alarm Modem in some other country, select "Other" from the **Country** listbox and enter the phone number(s) at the appropriate entryfields.

**Landline SMS receipt**  
Define service center for incoming SMS on landline. To define service center at your own, choose as 'Country' the entry 'Other'. Ask your local landline or mobile phone provider for details.

Country: **United Kingdom (+44)**

Service center 1: **0800587529**

Provider name: **BT-Text**

Service center 2: **0161274590**

Provider name: **BT-Text**

### 13.3 Connection

Here you may set the connection timeout for transmissions between TILA and the Alarm Modem. If the preset 30 sec should be insufficient - e.g. for reading huge logfiles from the device - then you may set a higher value here.

## 14 Appendix

### 14.1 Self-provided System Variables

Depending on which Alarm Modem type is used, TILA will automatically create some system variables which refer to the Alarm Modem itself. Please note that not all variables are generated for all device types.

Variable	Meaning
GSM Account	This variable holds the remaining credit of a prepaid SIM card. You may use this value as a trigger e.g. to send a reminder to top-up the SIM card credits.
Service Button	Using this variable, you may query the status of the "Service" button of the Tixi Alarm Modem.
DeviceState	If a PLC protocol has been defined, this variable shows if a PLC is actually connected to the Alarm Modem or not.

### 14.2 Other System Variables

These variables may be inserted into message templates via the context menu. Upon message dispatch, the references are replaced by the actual variable values.

Variable	Meaning
Event	This holds several details referring to the event that triggered the dispatch of the message.
Alarm Cascade	Insert a confirmation code into the message template in order to confirm alarms by sending the message back to the device. (Express-E-Mail und SMS only).
Date & Time	This section offers different timestamp notations to be inserted into your marvelous message template.
Hardware	The information found here is hardware specific - such as firmware version, memory size etc.
System	These variables describe incoming messages that triggered events, e.g. the sender of that message etc.

### 14.3 Special Features

Some special options are available by the menu bar only, which are described as follows.

#### 14.3.1 Factory-Reset

A factory reset deletes all data from the Alarm Modem memory (except the SIM PIN). This applies to logfiles, too ... so use this option cautiously.

You find this option within the menu bar at **[Modem] > [Factory Reset]** - but note that it's available only in case that TILA is connected to the Alarm Modem.

#### 14.3.2 Language and Popup Control

Additionally, you may set the language of TILA's user interface between English and German, as well as control the display of TILA popup messages.

These settings can be found within the menu bar at **[Tools] > [Settings]**.

If you disabled popup messages by the appropriate checkbox and want to reset this, the dialog field shows a list of all deactivated popup messages, along with checkboxes to reactivate them.