CAT12CE

Alarm transmitter
User manual

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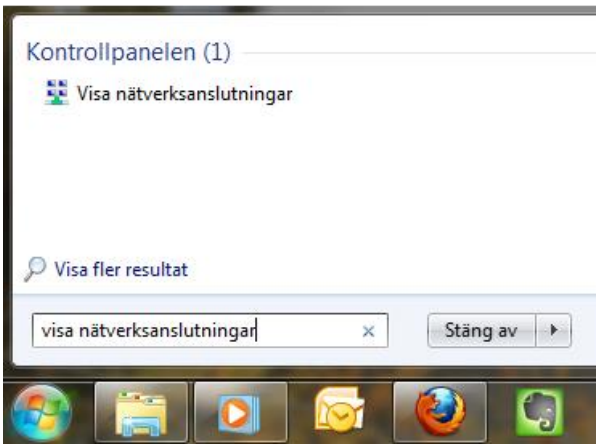
1 ALARM TRANSMITTER CAT12CE

1.1 Login

Configuration for the ethernet connection on PC to connect to - CAT12CE.
Click Start, type in the search box:
View network connections and click the icon.



Double-click Local Area Connection -
Properties - Internet protocol version 4.
Select Use the following IP address.
Fill in IP: 192.168.1.10
Subnet Mask:255.255.255.0
Press OK.

Now you can connect a network cable between the PC and CAT12CE for programing via the WEB interface.

To configure alarm terminal CAT12 CE, a WEB interface is used located at the URL http://<CAT12CE ip address>. (The default ip address is 192.168.1.100).
After the user enters this address in the WEB browser, a logon dialog opens with the following appearance:

Note: This window also opens automatically when the user resets or upgrades the device.

To access the alarm terminal object window, a ***User Name*** and password ***Lösenord*** must be entered.

Note: The alarm terminal comes with the following standard username and password, ***admin*** *or* ***admin.***.
These are used at the first login to the alarm terminal and are recommended to be deleted after the first new user has been created and verified.

When approved ***User Name*** and ***Password*** are entered and the login is pressed, an information message is displayed:

Successfully logged in, redirecting to main page.

If incorrect name or password has been entered, you receive the following error message:

Wrong username or password

If web interface access is not available within 5 minutes, session timeouts occur and you receive the following error message:

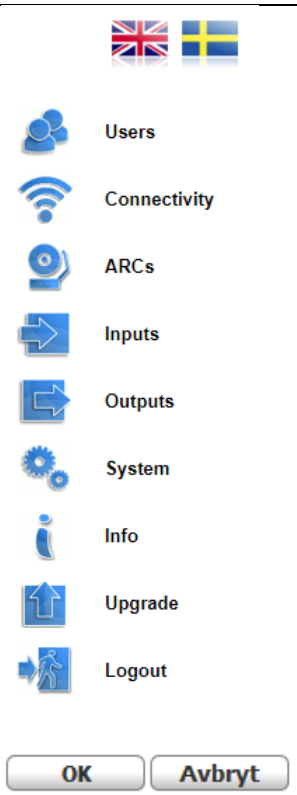
Session timed out / not authenticated. Redirecting to login page

1.2 WEB interface

1.3 WEB interface, main parts

The WEB interface contains two main parts, on the right there is a menu to enter the different settings pages of the alarm terminal and on the left is shown the content of the settings pages. The following buttons are in the picture:

If the mouse pointer is transferred over any of the blue texts (the arrow switches to hand) alongside the slides, you'll see quick information about what the button means.



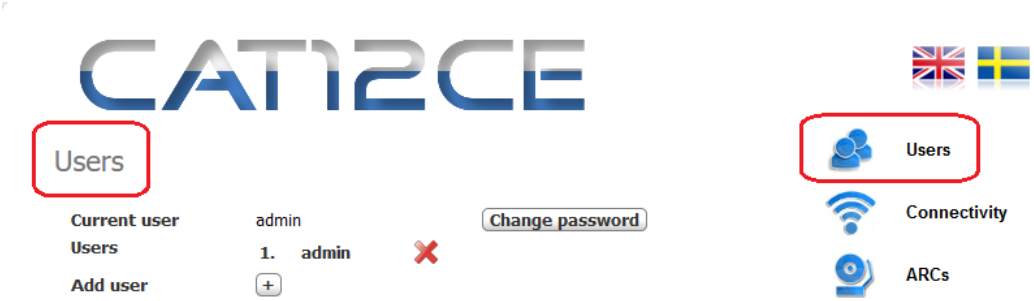
- **Flags** - Used to select languages.
- **Users -** Add/change users.
- **Connections -** Settings of connection parameters.
- **Alarm receiver** - Configuration of alarm receivers.
- **Inputs -** Configuration of the alarm terminal inputs.
- **Outputs -** Configuration of the alarm terminal relay outputs.
- **System -** Setting functions for sms-passwords, RS232 ports, etc.
- **Info -** Display of the status of the alarm terminal and event log
- **Upgrade** - Software upgrade.
- **Logoff** - Exit of the web application.

In addition to these buttons, two buttons may appear on the interface pages.

- **OK** - When the user wants changes made to be saved/implemented, he clicks on this button.
- **Cancel** - When the user does not want changes made to be saved, he clicks on this button.

2 USERS

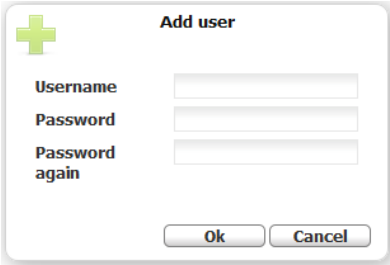
This window is used to configure/change user and password settings.



- **Logged in user** - Currently logged in user
- **Change password** - This button opens a dialog in which logged-in users can change their password.
- **Users** - A list showing the user names created.
- **Add User** - This button opens a dialog for creating a new user (see next paragraph).

2.1 Add User

Any user can create additional users. A user account is used to change settings in the alarm terminal, create and change passwords, etc.

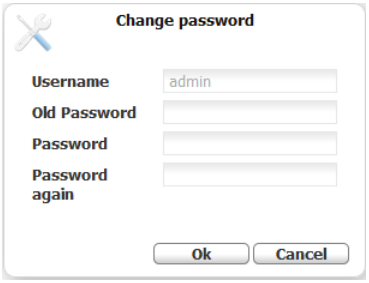


To create a user account, the following steps must be completed:

1. Fill in the ***User Name*** field
2. In the ***Password*** field, type a new password
3. To *confirm the* new password, type it in the Password field ***again***.
4. Click **OK**.
5. After a new user is created, you receive the following informational message:

   User <name> successfully added

2.2 Change password



To change an already created user account, the following steps are performed:

1. Fill in the ***User Name*** field on the account.
2. In the ***Old Password*** field, type the old password.
3. To confirm the new password, type it in the Password field ***again***.
4. Click **OK**. A dialog indicates that the password has been changed.

   Password for user <user name> successfully changed

   After the new password is saved, this can be used for authentication when the WEB page is to be opened the next time. Please note that the user name and password supplied with the alarm terminal should be avoided.

2.3 Delete User

When a created user is to be removed from the terminal, click the delete icon to the right of the user name.

A window for acknowledging the deletion opens and you can press Ok to confirm deletion of the user, or Cancel to abort the deletion.

Removal is confirmed by pressing **OK**. A dialog indicates removed user with text:

User <user name> removed

If you try to remove logged-in users, you receive the following error message:

Cannot remove currently logged user

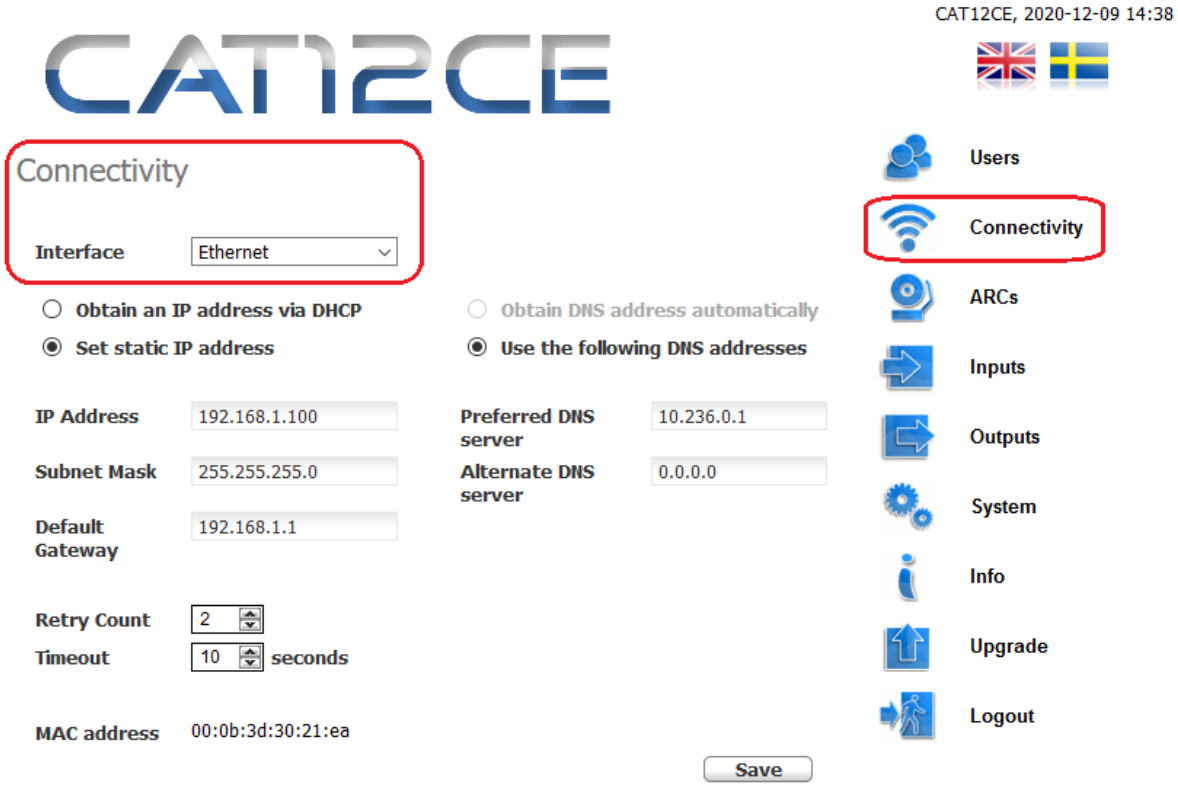
3 CONNECTIONS

Alarm terminal CAT12 CE can be connected to alarm receivers with two different alarm routes, *primary* and *secondary* alarm path. The ***primary alarm route*** normally means that alarms are transmitted via *Ethernet* and the secondary alarm ***route*** that alarms are transmitted via *GSM modem*. *Secondary emergency route* (back-up route) is the route used when the primary connection is out of order.

When the WEB interface for connections is opened, the use of the drop-down menu to select the type of connection in the ***Ansl via field.***

3.1 Ethernet connection

The settings that can be made on this page refer to the indication of *the IP address, Subnet Mask,* and *Standard Gateway, Number of Retries,* and *Timeout*..

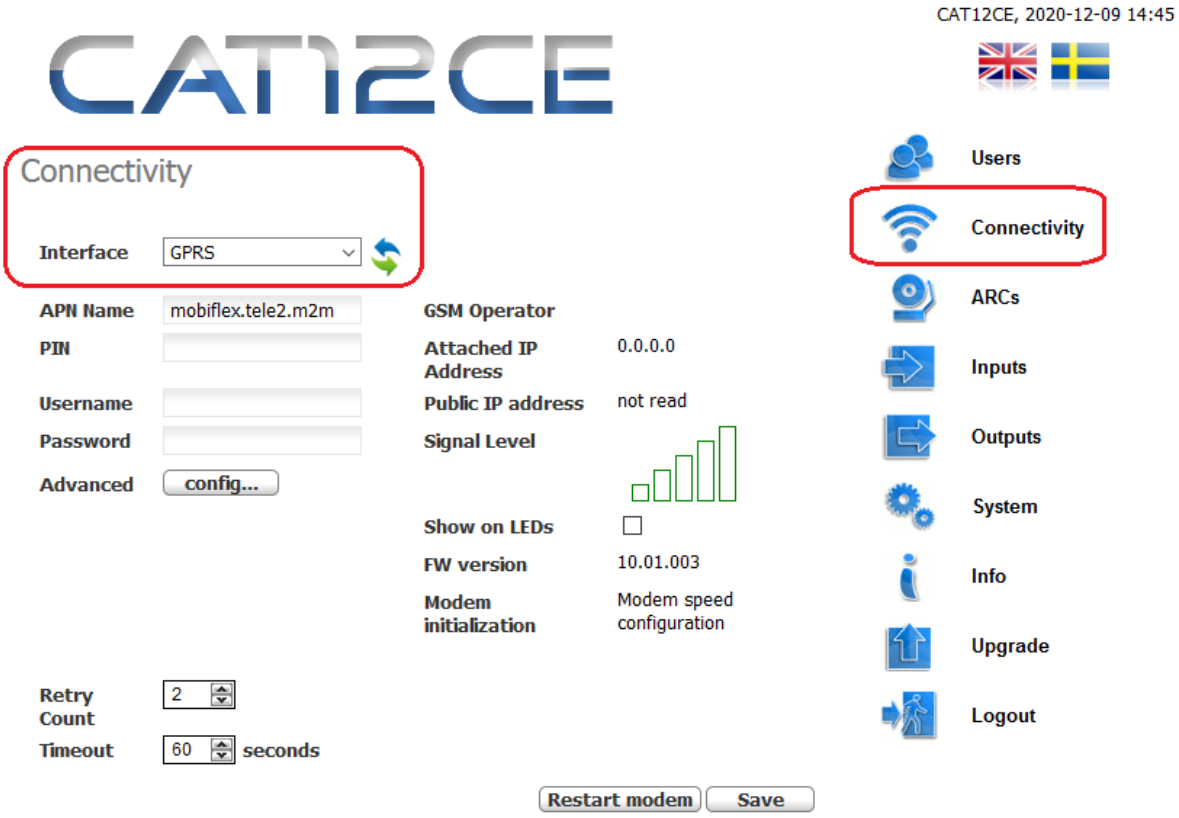


Settings - Ethernet

- **IP Address** - The alarm terminal own IP address. The radio buttons select whether the addresses should be obtained via DHCP or if static IP address should be used. (Note: The default setting is 192.168.1.100 when selecting a static IP address.)
- **Subnet mask** - Subnet mask used to divide an IP address range into a number of subnets. (Used only for static IP address)
- **Default Gateway address** - The network address used as a connection point when connecting to other networks. (Used only for static IP address)
- **Number of retries** - Number of retries in case of failed connection, 2 retries are recommended and set by default. If alarms cannot be transmitted, the queue is saved and sent as soon as CAT12CE has contact with the receiver again
- **Timeout** - Waiting time between retries if the alarm terminal does not receive receipt on sent alarm. The default and recommended time is 10 seconds.
- **Save** – Saving changes for the page. If the button is not affected before the page is left, the changes are not saved.

3.2 Connection via GSM

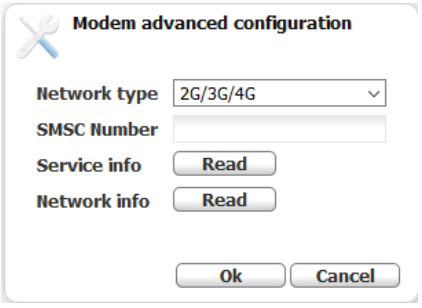
When the WEB page for connections is opened, select in **Interface** using the *GPRS* drop-down menu.



- **APN - Name** - The name of the access point via GSM data.

AddSecure Link Telia	mobiflex.ts.m2m
AddSecure Link, up to 1 GB:	mobiflex.tele2.m2m
AddSecure Link, over 1 GB:	mobiflex.4g.tele2.m2m
Maingate open network:	maingate.telia.se
Maingate end network:	maingatelan.telia.se
Maingate 500mb net:	mg500mb.tmhlan7
Telia:	online.telia.se
Tele2:	internet.tele2.se
Telenor:	internet.telenor.se

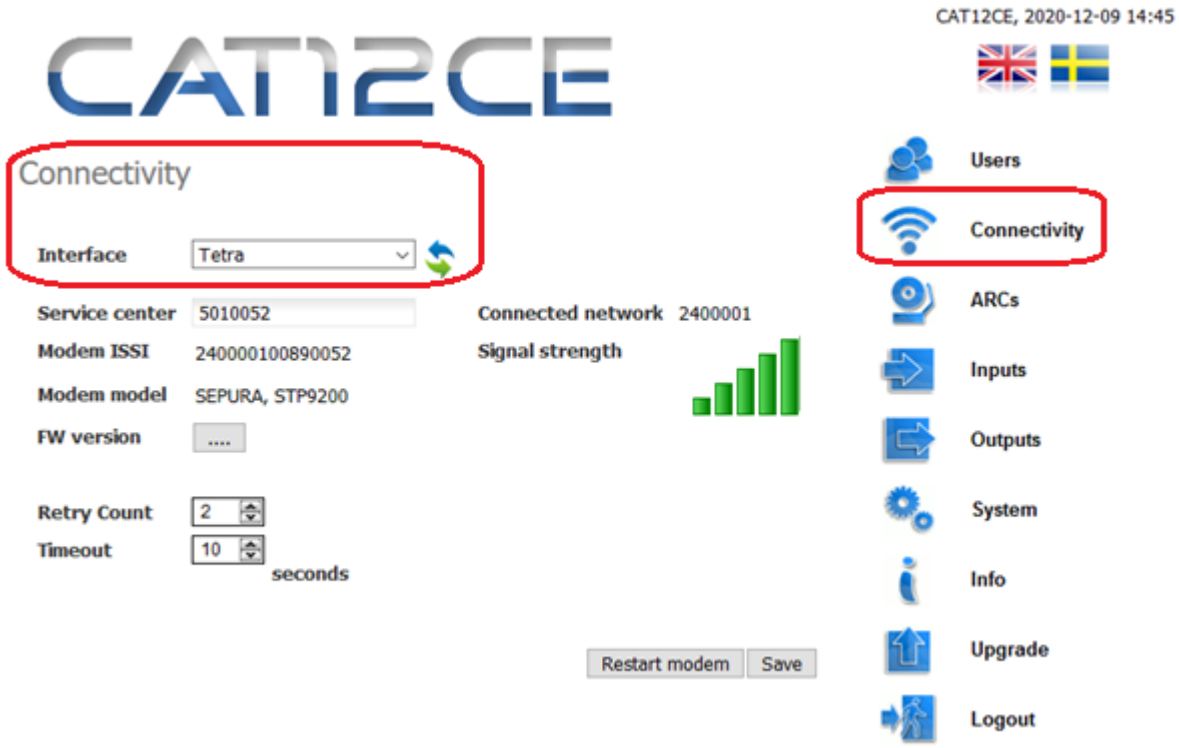
- **Username** - Used in conjunction with passwords to access the GPRS network. The name may be empty if it is not specified for used SIM cards.
- **Password -** Used in conjunction with user name for access to the GPRS network. The name may be empty if it is not specified for used SIM cards.
- **PIN -** Enter the SIM card PIN if used. The Sim card can be put in regular mobile phone to turn off pin control, not used pin control, the field can be left blank.
- **Advanced -** Opens dialog for the indication of SMSC numbers and selection of network technology to use.



- **Number of retries -** The number of retries in case of failed transmission, 2 retries are recommended and set by default.
- **Timeout** - Waiting time between retries if the alarm terminal does not receive receipt on sent alarm. Adjustable time at least 40 seconds. The recommended time is 40 seconds. If alarms cannot be transmitted, it is saved in a queue and sent as soon as CAT12CE has contact with the receiver again.
- **Network status -** *Name of connected GSM Operator - Connected IP address - Signal level and Modem function, etc.,* i s displayed in the middle part of the image when GPRS connection is established.

3.3 Connection via Tetra modem

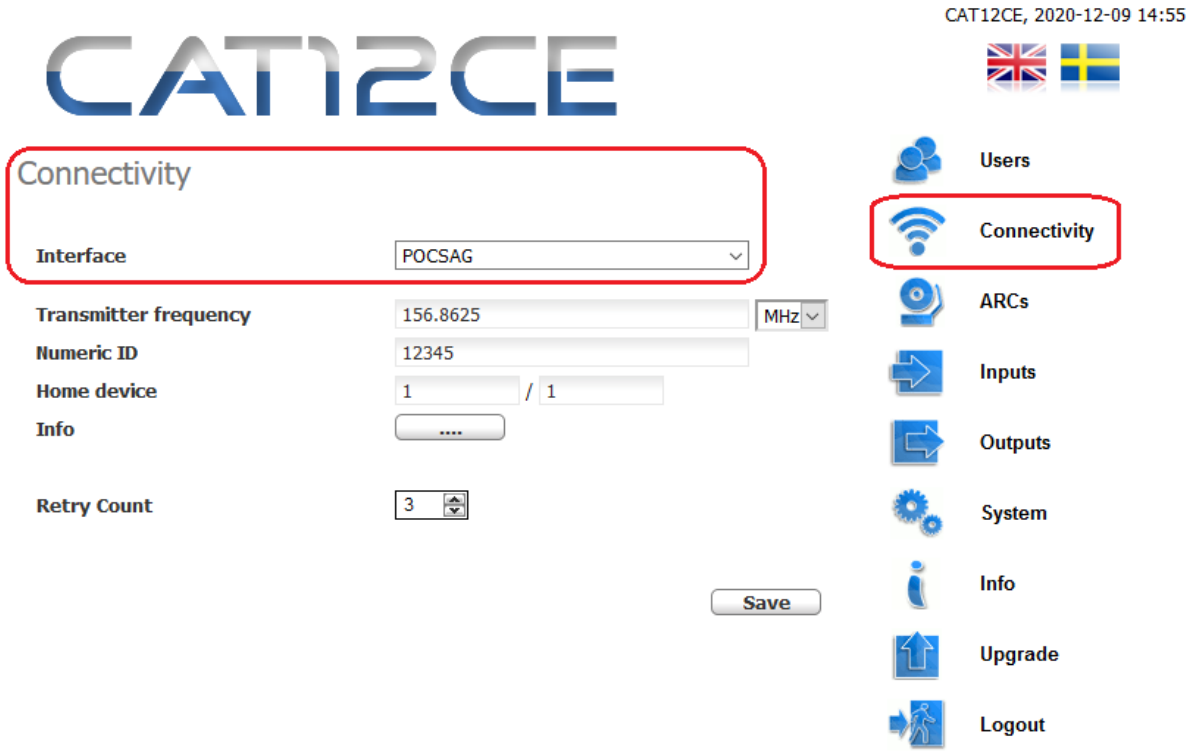
If a Tetra modem is used to send alarms to Tetra terminals, you can see the status of the modem on this page.



- **Service center** Service Center number used to send message to MSISDN number
- **Modem's ISSI** TC8000 modem fixed number in the Tetra network
- **Modem model** Model of radio in the TC8000 modem
- **Fw...** Radio software version
- **Number of retries** the number of times CAT12CE will try to send a message if it does not succeed the first time
- **Timeout** between retries

3.4 Connection of Pocsag

Settings to handle POCSAG transmitters connected to CAT12CE via the rs485 port. POCSAG can be used to send alarms to pagers.



- **Transmitter frequency** Displays the frequency of the transmitter used in paging. This value can be changed. Select in the scroller to specify / display the frequency in MHz/kHz/Hz
- **Numerik-id** Unique identifier of the transmitter
- **Network/Device** Network specifies the network number of the POCSAG network. Device indicates device number in the network (max 15)
- **Info** Displays the device status of the transmitter as an ex. current software

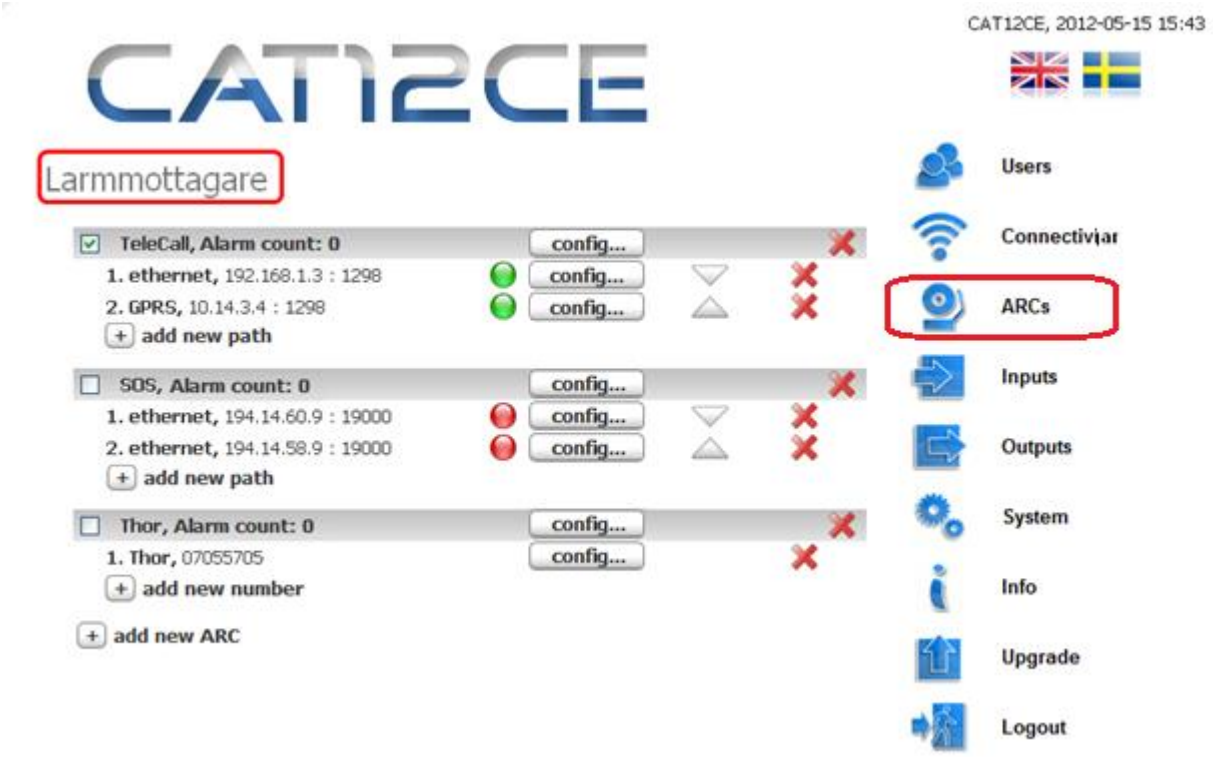
3.5 Connection via analog phone

Here you can set up audio on microphone and speakers for analog telephone line. This is the function of the extension card Alarm phone / V22M. Activation of the function is done by selecting Alarm Phone / V22M in menu Inputs\Extension card.

Below is the default connected phone setting.

- Volume speakers. Speaker volume to connected phone.

4 ALARM RECEIVER



4.1 General information about Alarm Receivers

Alarms can be sent to one or more receivers.

Different types of alarm receivers can be configured to send different alarms.

Note! The receiver must be activated to start communication/polling. If this is not activated, no alarms will be sent to this alarm receiver. This is achieved by marking the check box next to the alarm receiver's name.

Alarms – number: Here is listed the amount of alarms that are in queue and not yet sent to the alarm receiver. If you want to clear this queue, to prevent the alarms from being sent, clear the check box next to the alarm recipient's name. Note! Remember to activate the check box again if you want to re-establish communication with the alarm receiver.

4.1.1 Alarm via IP / GPRS. SOS Access v4

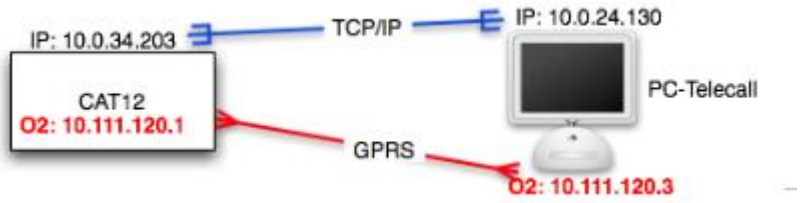
Alarms via IP / GPRS are sent with the protocol SOS Access v4.

The alarm transmitter sends pings message for control of communication routes and alarms for various alarm events e.g. activated alarm input.

Example.

CAT12CE communicates with Telecall alarm receiver

Primary alarm message route via Ethernet IP and secondary via GSM modem



4.1.2 SMS message

Alarms can be sent as SMS to any mobile number.

The alarm terminal can, if desired, be handled with SMS message from mobile phone. For detailed information about the function, see SMS management page 42.

4.1.3 Tetra

Alarm events can be sent as SDS or Flash SDS to Rachel terminals. Both ISSI and MSISDN can be used.

4.1.4 POCSAG

Alarms can be sent via POCSAG to pagers

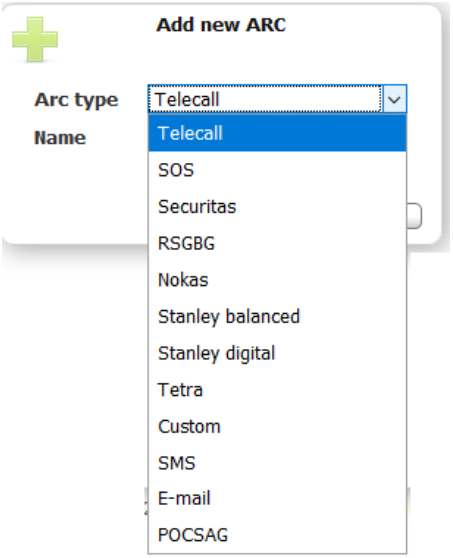
4.1.5 Email

E-mail can be configured to be sent to any email address in case of an alarm event. E-mail can only be sent via ethernet connection.

-

4.2 Add alarm receiver

When adding a new alarm receiver, click **Add new alarm receiver**. The following dialog opens:



- **TeleCall** – Selected if alarms are to be sent to TeleCall alarm receivers. Since there are many emergency services that use Telecall as receivers it is needed to ask the ARC for the specific IP addresses, etc.
- **SOS** – Selected if alarms are to be sent to SOS Alarm AB in Sweden. SOS has 2 receivers that are the same for the whole country. Alarm routes with IP addresses, etc. are automatically configured when selecting SOS as the receiver.
- **Securitas** - Selected if alarms are to be sent to Securitas Sweden. Securitas has 2 receivers that are the same for CAT12CE across the country. Alarm routes with IP addresses, etc. are automatically configured when selecting Securitas as the receiver.
- **RSGBG** – Selected if alarms are to be sent to the Emergency Services of Gothenburg Alarm Fire Department Routes and ip addresses are automatically configured when selecting RSGBG as the receiver.
- **Nokas** - Selects whether alarms are to be sent to Nokas Alarm Central Sweden. Alarm routes with IP addresses etc. are automatically configured when selecting Nokas as the receiver.
- **Stanley** – Predefined parameters for sending alarms to Stanley Emergency Center. Balanced inputs or unbalanced (On/Off). In both selections, rs232 CH-2 is set to EBL SIA for connection of serial communication with Ebl fire alarm.
- **Tetra** – Choice to send alarms to Rachel terminals, both ISSI and MSISDN can be used
- **Custom** – Selected if self-defined alarm receiver is added. The selection opens a dialogue for the name of the alarm receiver. Alarm routes with IP addresses, etc. are manually configured with specific recipient data.
- **SMS** – Selected if alarms are to be sent as SMS to mobile phone(s).
- **E-mail** – Selected if alarms should be sent as E-mail
- **POCSAG** - Selected if alarms are to be sent to pagers

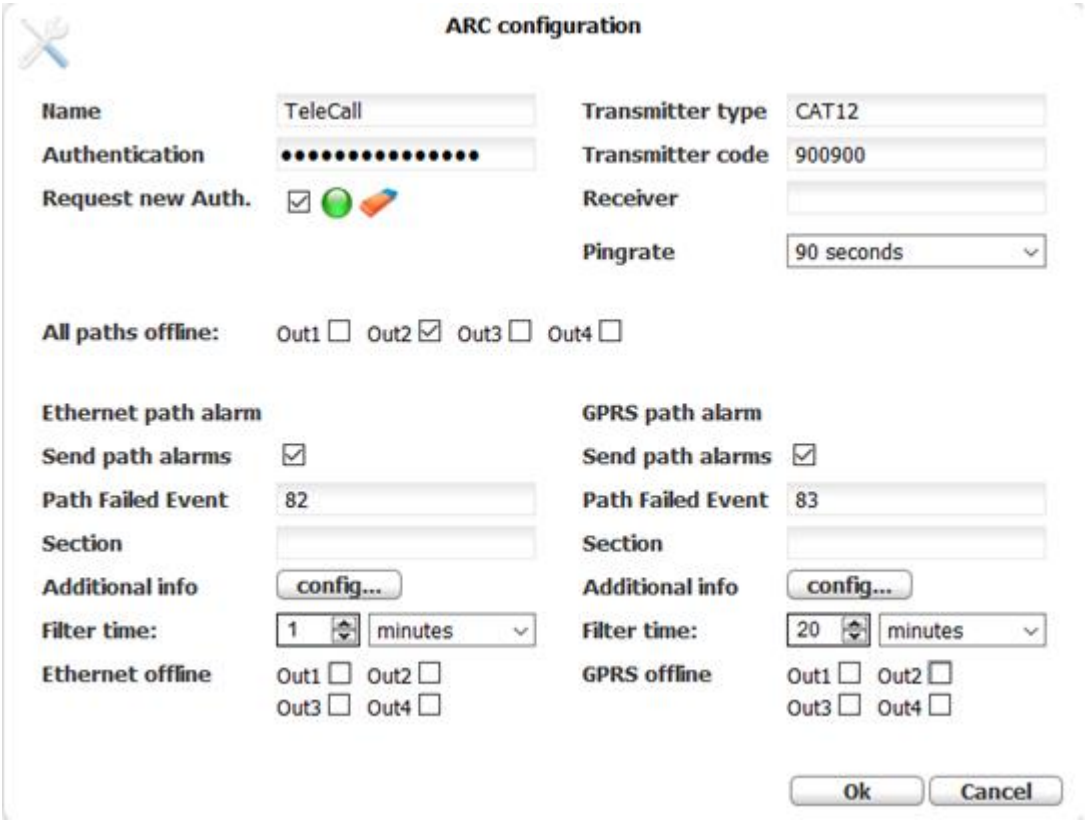
4.3 Remove alarm receiver

An existing alarm receiver is removed by clicking on the far right of each receiver's line.

Press OK in the confirmation dialog and the message that the alarm receiver has been removed will appear.

4.4 Alarm Receiver - Configuration

Access V4 alarm receiver configuration takes place in the following window

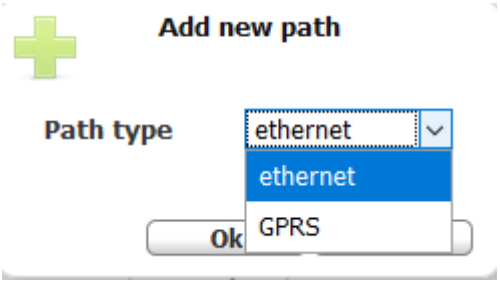


- **Authentication -** This field specifies the authentication code to use. (Obtained from alarm receiver).
- **Request new authentication -** This feature is standard checked and requests new authentication code from the alarm receiver. When a new code is received, the orb turns green and the old code is no longer valid. This is a function that reduces the risk that another transmitter can use the same Transmitter code and send incorrect alarms to the receiver.
- **Transmitter type -** Type of alarm transmitter. (According to the alarm receiver's information).
- **Transmitter code -** Alarm transmitter code (transmitter ID, obtained by alarm receiver).
- **Distribution** - Here is the receiver (receiver) of the alarm. e.g. 36 for SOS Alarm in Gothenburg
- **Pingrate -** Ping interval setting to the alarm receiver. The first alarm path that is ok to the alarm receiver uses this interval.
- **All paths offline** - Specify which output to activate by marking the relevant check box. Out 2 should be used for this function. (Ut1 is used for operation indication, General system failure Ut4)

- **Ethernet /GPRS - Path Configuration**
  - **Send path alarms –** is checked if communication errors are to be sent to the recipient.
  - **Path failed event** – Alarm code used.
  - **Distribution** - Specifies the receiver (receiver) of the alarm. E.g. 36 for SOS Gothenburg
  - **Additional info** – Opens windows for additional information about the alarm, see 5.1 page 20 Extended alarm info.
  - **Filter time** - Time to expire before the path alarm is sent.
  - **Ethernet/GPRS offline:** - Specify the output to be activated by marking the relevant box.(Ut1 is used for operation indication, Out4 for general system failure)

4.5 Add alarm path

To add the alarm path, click **Add Alarm Path**. The following dialog opens:



Select the type of alarm path and click **OK**. The alarm route is confirmed by the following message:

Path successfuully added

4.5.1 Remove alarm path

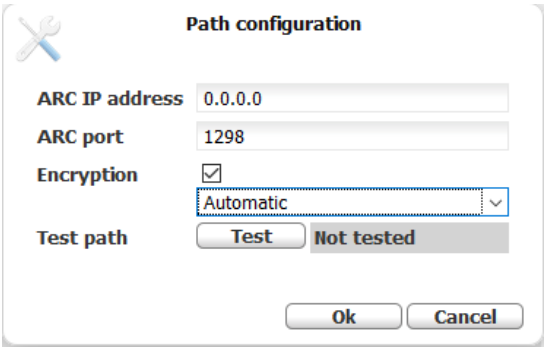
An existing alarm route is removed by clicking on the remove icon for the alarm route.

A dialog to confirm the removal of the alarm path is shown and pressing ok confirms the removal. Cansel aborts the action.

4.5.2 Add alarm path IP address

To add a new address for an alarm receiver, click on **the config** to the right of the affected alarm route.

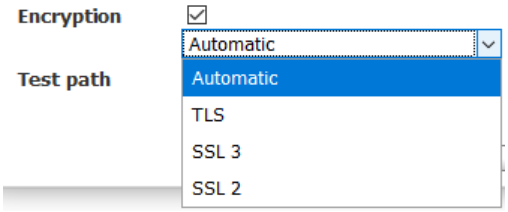
The following dialog opens:



Configuring the alarm path

In this dialog you can configure:

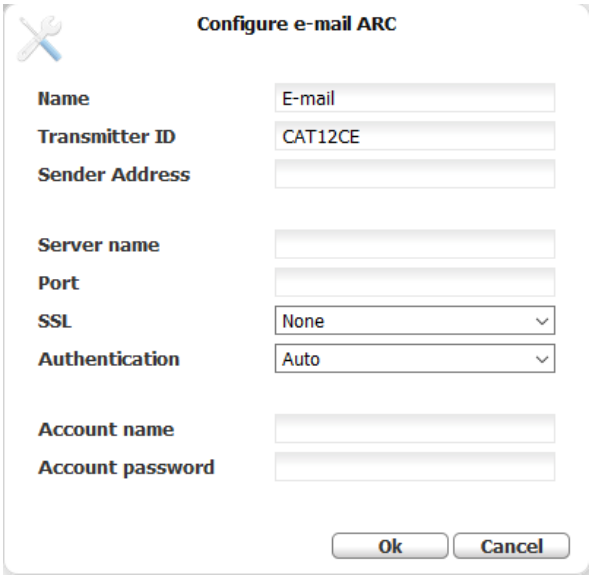
- **ARC-IP address -** Specifies the recipient's IP address.
- **ARC Port -** Specifies the port number used.
- **Encryption -** Specifies whether (box checked) and how to use SSL encryption.



- **Test alarm path – When the** button is pressed, a test message is sent over the alarm route. This is not an alarm, only a ping message to the recipient.

4.6 E-mail - Configuration

In configuration for the email function you can For the email

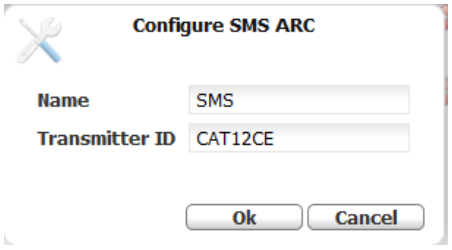


- **Name** - Name displayed in alarm receiver menu
- **Transmitter - ID** - Sender ID displayed in e-mail at the recipient.
- **Sender address** - Here you can enter the name of the sender. Address must be valid e-mail format. (xxxx@xxxxx.xx)

Information for the remaining settings depends on the e-mail provider used.

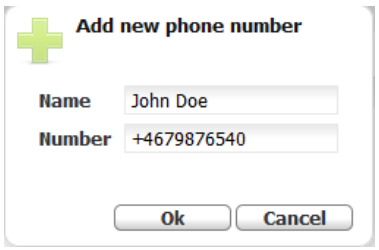
4.7 SMS - Configuration

Configuration of SMS receivers.



- **Name** - Name displayed in alarm receiver menu
- **Transmitter ID** - Sender ID displayed in SMS at the recipient.

Add number.



- **Name** - Names that appear in the list of sms recipients.
- **Number** – Phone number to which SMS should be sent.

4.8 Tetra - Configuration

Configuration of Tetra receivers is working the same way as for SMS receiver.

Configuration of Tetra receiver

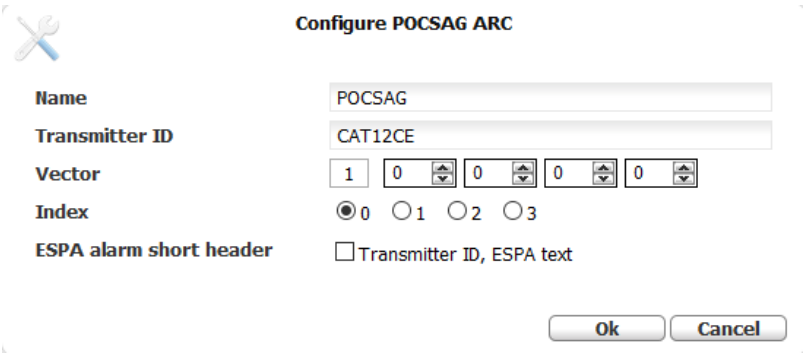
- **Name** - Name displayed in alarm receiver menu
- **Transmitter - ID** - Sender ID displayed in the SDS of the receiver.

Add number

- **Name** - Names that appear in the list of message recipients.
- **Number** – Number of Tetra terminal to which the message should be sent and setting for ISSI or MSISDN
- **Type -** Choice to send SDS or Flash SDS

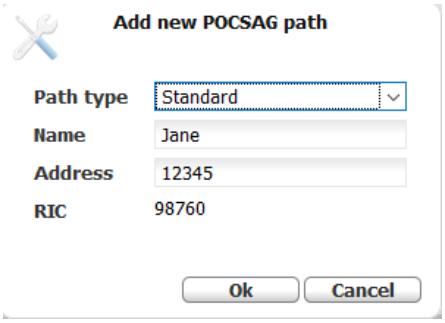
4.9 POCSAG Configuration

POCSAG receiver configuration



- **Name** - Name displayed in menu Alarm Receiver
- **Transmitter -ID -** Sender ID displayed in receiving pager
- **Vector -** The first value shows device numbers, see 3.4. This is the POCSAG transmitter number and thus the device from which the message is sent. The other 4 values are set if the message is to be repeated on other transmitters on the same POCSAG network.
- **Index -** Index on which to send the message
- **ESPA alarm short header –** Only adds information from Transmitter ID before text information from received ESPA alarm

Add Pager Address



- **Type -** Standard or ESPA
  - **Standard -** Configured address used for paging
  - **ESPA -** Address received in ESPA alarm used for paging
- **Name -** Name displayed in Pocsag recipient list
- **Address -** Enter the address of the pager, not necessary if ESPA is selected as type
- **RIC -** RIC calculated based on address and index

5 INPUTS

The alarm terminal contains as standard eight alarm inputs for the transmission of fire alarms, burglar alarms, etc. as well as an entrance, V22M modem for receiving SIA alarms from burglar alar.

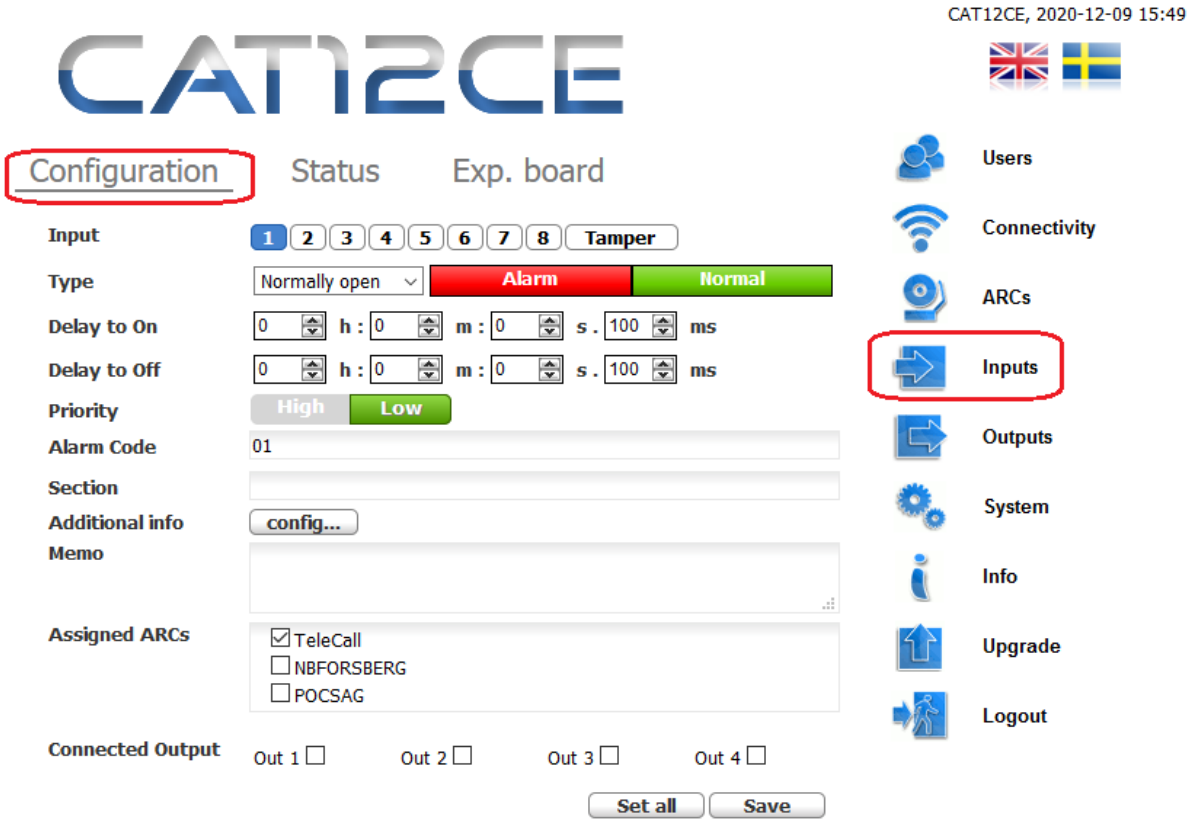
Expansion of the number of inputs can be done with expansion cards containing an additional eight inputs, this cannot be used in combination with SIA modems.

5.1 Inputs 1-8

Inputs contain at the top of the *Input* field : a button bar with input 1-8 and Sabotage. V22M and entrance 9-16 are displayed only if selections have been made in the Expansion Board submenu.

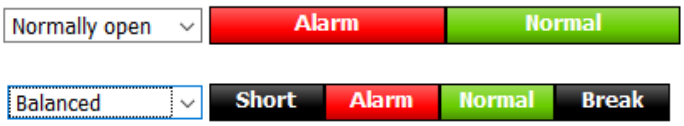
Each button corresponds to one input. The desired input is selected by clicking the button in progress.

Depending on the extension card selected in "Extension Board", buttons for that selection are displayed.



Inputs - Configuration

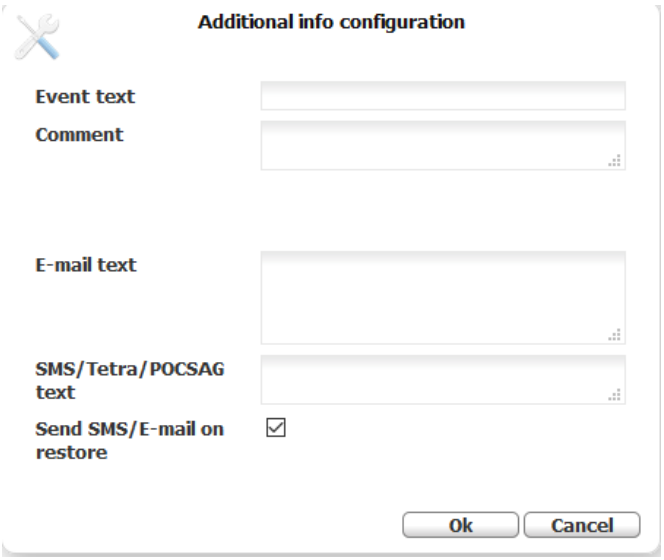
- **Input** - Select the input to be configured by clicking the respective button.
- **Type** - The drop-down menu selects the input type that can be specified or defined as Normally Open, Normally Closed, or Balanced.



- **Delay to off- -Delay to on** - The time-out that applies in the event that the limit values are exceeded e.g. in case of variations in the voltage supply. The time is specified in *hh:mm:ss:ms*format. The minimum value is 100 ms. Maximum 59 hours, 59 minutes, 59 seconds and 999 ms.
- **Priority -** Selection of priority for handling in alarm queue. High priority takes precedence over low. Fire alarms shall be set as a high priority

- **Alarm code** – The alarm code associated with the entrance. 01, 02, etc. applies to most receivers.
- **Section -** Used for specific section number.

- **Additional info** - Opens a window for completion with information specific to the alarm
  - **Evemt text –** Used when a specific alarm event is to be reported for the entrance.
  - **Comment -** Provides additional information for the alarm.
  - **E-mail text –** Alarm text sent only to connected E-mail recipients
  - **SMS Text -** Alarm text sent only to connected SMS/Tetra/Pocsag recipients.
  - **Send SMS on reset –** checked for sending SMS when alarm is reset.

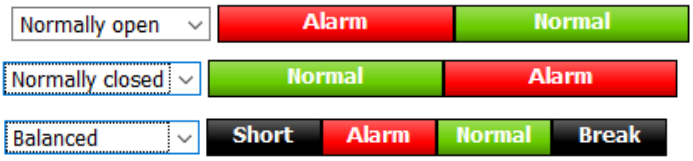


- **Memo**– Own notes about the alarm, are not sent to recipients.
- **Assigned ARCs -** Receivers to which alarms are sent. Multiple recipients can be selected.
- **Connected output** - The selected box means that the corresponding output in the alarm terminal is activated when the input is active. An output can be connected to multiple inputs. The output shall go to active status if one of the connected inputs goes into alarm state. The output shall be in passive condition if all connected inputs are in normal status. Note! (Out1 is used for operation indication, General system failure Out4)
- **Set all** - Function to copy and save settings for the input to all other inputs. A message dialog will indicate that all inputs are set.
- **Save -** Changes made are saved. If the button is not pressed before going to other menu, the changes made are not stored.

Note: Low battery voltage and AC OK are special inputs. Configuration is defined under the System **section.**

5.1.1 Configuration of input status

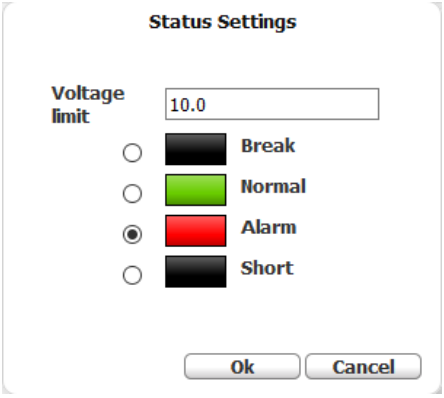
The entry type selection is made in the scroll with selections: Normally open, Normally closed, or Balanced.



5.1.2 Balanced input

Setting the balanced input is done by clicking on one of the fields shown for the input:

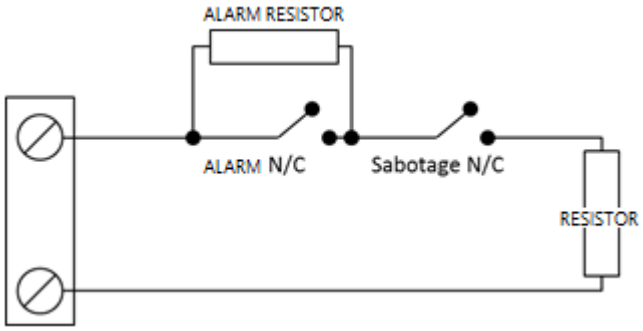
Clicking on a field opens the following dialog:



In the dialog you can set *voltage limit* for each field and any type of events *Break. Normal, Alarm* or *Short Circuit*.

- **The levels** are adjustable in the high voltage limits. Main groups have fixed 20V upper voltage limit.
  The default setting is up to 10V for closed contact and up to 20V for open contact.
- **Voltage limit –** Can be set to accuracy of 0.1V.

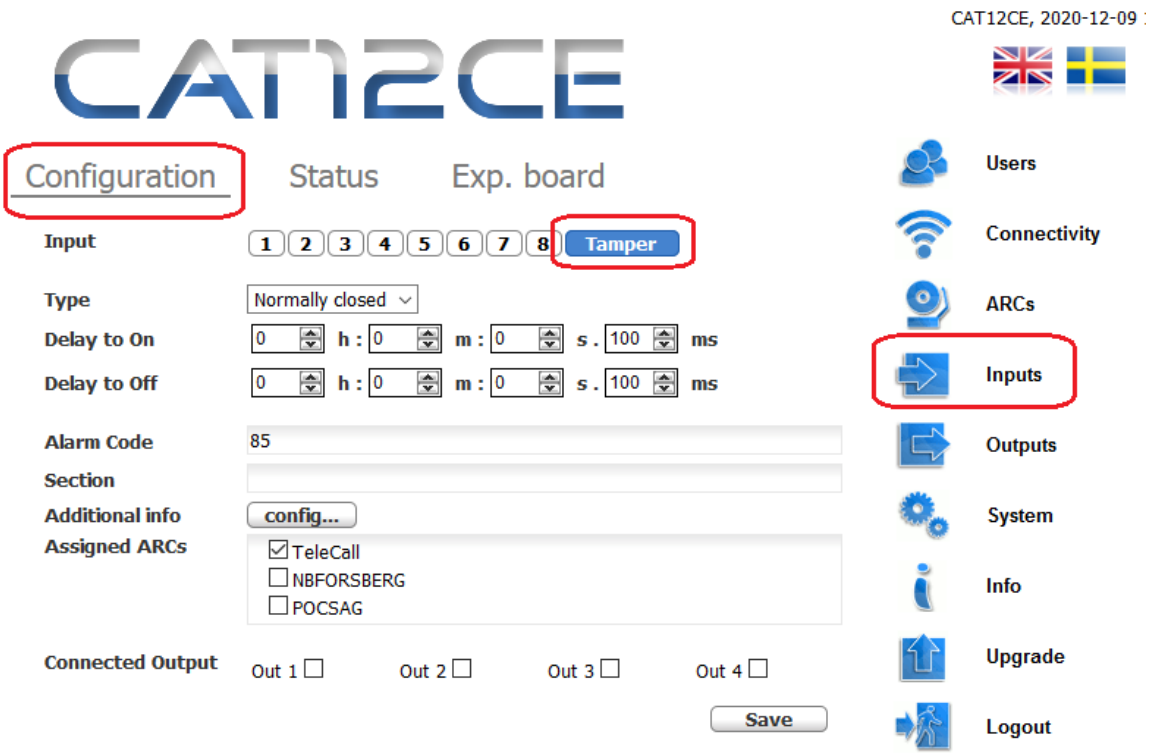
Connect the loop for an input as shown, the loop should not exceed 100 meters.



Examples of values depending on the end resistors used. Alarm resistors of 1 kΩ shall not be used when end resitor is 4,7 or 5,6 kΩ,.

Input mode	1 kΩ	2.2 kΩ	3 kΩ	4.7 kΩ	5.6 kΩ
Short circuit	1,5	1,5	1,5	1,5	1,5
Normal	3,0	5,0	6,0	7,8	8,2
Alarm	18,0	18,0	18,0	18,0	18,0
Break	20,0	20,0	20,0	20,0	20,0

5.2 Input Sabotage



The tamper switch indicates that the CAT12CE cover has been opened

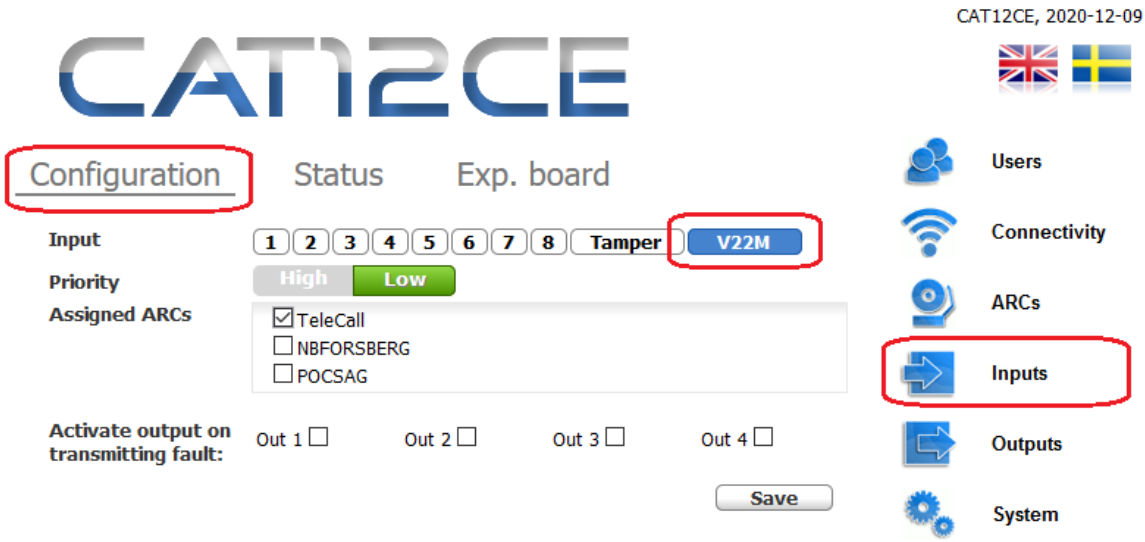
Configuration according to 5.1 Inputs with the exception of:

- **Type** - Choice Balanced is missing.
  The setting is "Normally Closed" by default.

5.3 Input V22M, SIA Modem

The alarm terminal can be extended with an input, V22M. An extension card with modem for receiving SIA alarms from burglar alarm central, e.g. Honeywell Galaxy and others.
Connect the terminal block on the upper right corner of the SIA modem marked TIP and CALL to the calling burglary central phone-line connector, often marked LINE IN.

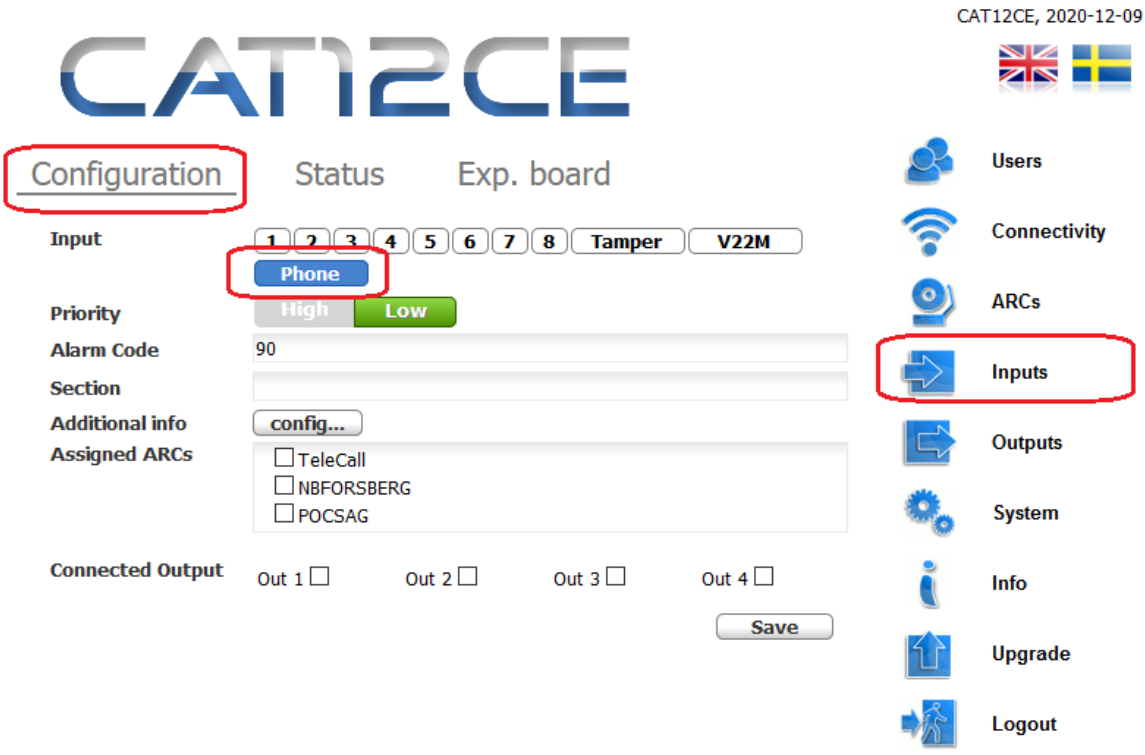
The V22M input is activated by selecting V22M or Alarm Phone / V22M in the Expansion Board submenu.



- **Priority -** Selection of priority for handling in alarm queue. High priority takes precedence over low.
- **Assigned ARCs -** Receivers to which alarms are sent. Connected ARCs transmitter code (see 6.4) becomes the object ID / customer number of the burglar alarm at the receiver. ID / customer number programmed in calling Burglary Central is ignored.
- **Connected output** – If alarms from the connected central cannot be sent to the specified receiver activated the selected output, the output should be connected to the input at the alarm central for indication of transmission errors.
(Out1 is used for operation indication, General system failure Out4)
- **Save -** Changes made are saved. If the button is not pressed before the page is left, the changes made are not stored.

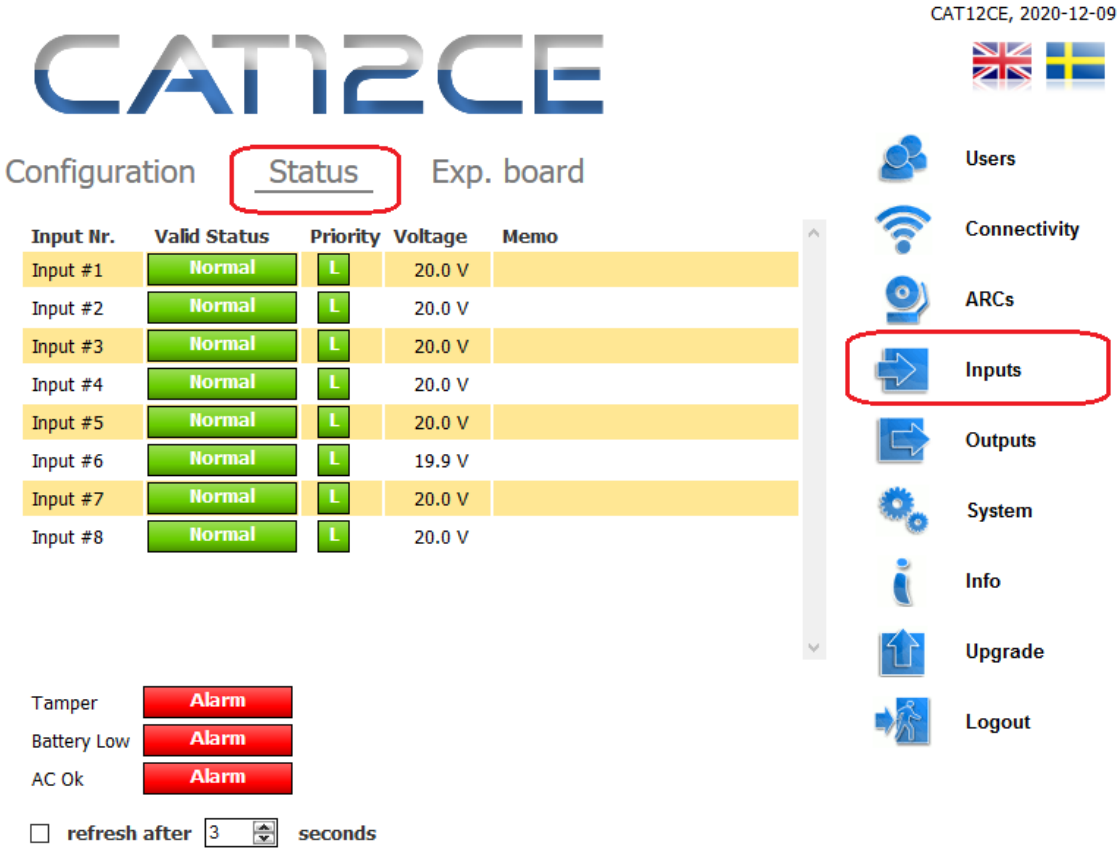
5.4 Input Alarm phone

This function is no longer used and therefore not described in this manual.



5.5 Inputs. Tab: Status

This tab provides an overview with details of the current status of each input.

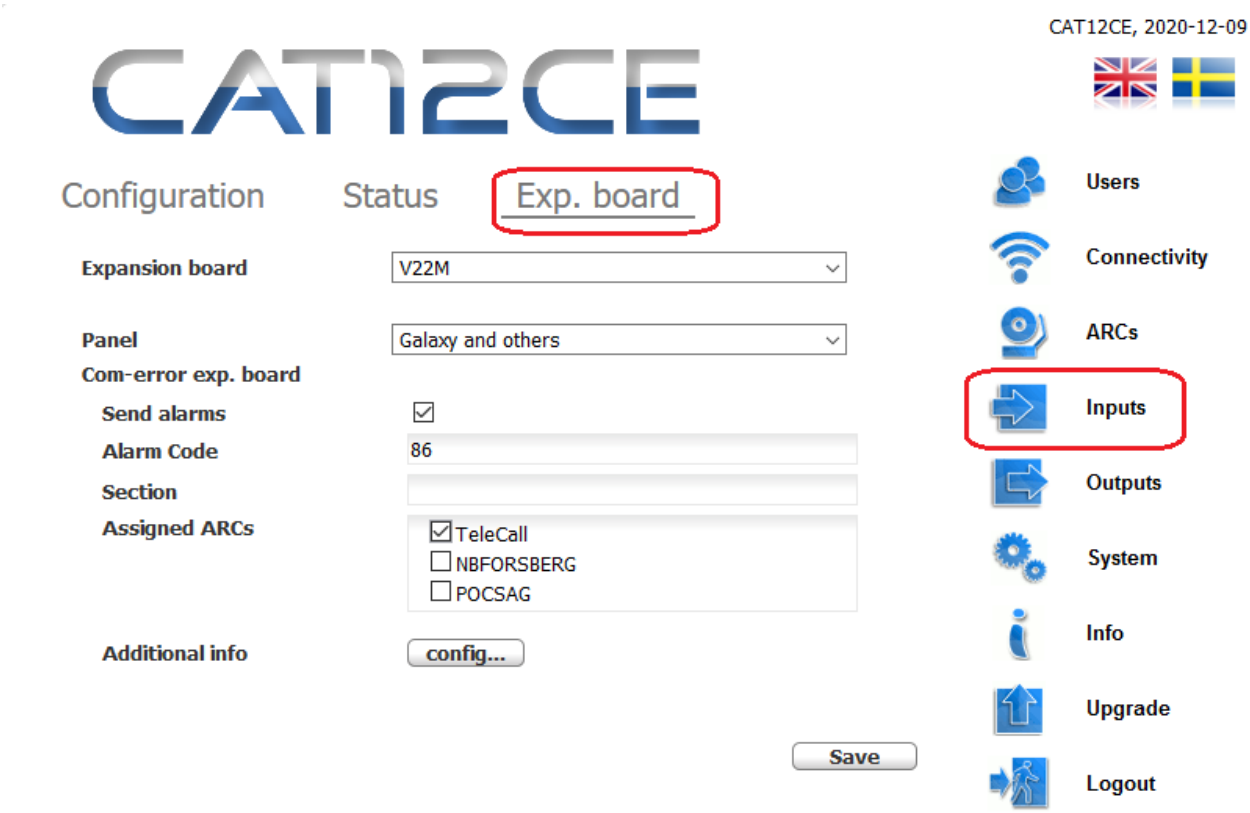


Inputs Overview

- **Input Nr. -** The column shows defined inputs.
- **Valid status -** Displays the current status of each input.
- **Priority -** Indicates the priority setting of the input.
- **Voltage -** Current voltage on the input
- **Memo -** This shows what is specified as the local note for the input
- **Tamper** - Shows status of Tamper input (cover contact).
- **Battery low** - Shows the status of input Low battery voltage.
- **AC OK -** Shows the status of input Mains voltage OK.
- **Refresh after {count}sec** - Status can be regularly updated by time set by using the arrow buttons.

5.6 Inputs. Tab: Extension card

Here you will have selections for used extension cards. Inputs / Outputs, V22M or Alarm Phone / V22M



- **Extension board -** Choice for mounted extension board. None, Inputs /Outputs, V22M or Alarm Phone /V22M.
- **Panel -** Choose whether to connect the V22M card to the ASSA Arx or Galaxy/other central unit
- **Send alarms –** mark the check box to send alarms in case of errors in communication with extension board.

Remaining fields - see 5.1 Inputs

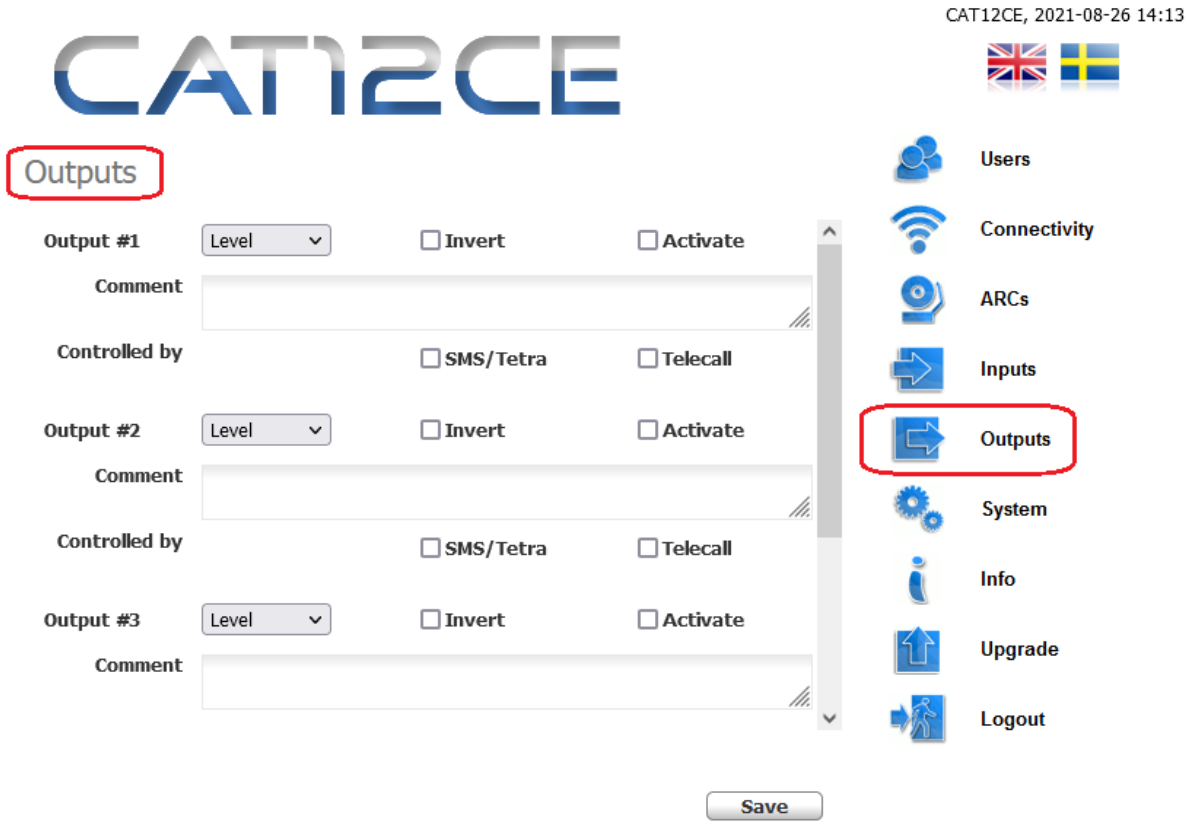
6 OUTPUTS

The CAT12 CE alarm terminal is equipped with four outputs in the standard version.

Expansion of the number of outputs can be done with expansion cards containing four additional outputs, this cannot be used in connection with SIA modems.

6.1 General information about outputs

This page contains a table of four rows where each row corresponds to one output



Exits - General information

Note! (Out1 is used for operation indication, General system failure Out4)

- **Output #1 - #4** - The type of output is selected using the drop-down menu. The following three types of outputs are available:
  - **Level (On/Off)**– in case of an alarm, the output will follow the state of the input.
  - **Pulse** – an impulse is activated for time defined in Pulse ***Time***.
  - **Frequency** – impulses are given with specified **On**- and **Off**- times until it is restored.

  An overview of the functions of the outputs can be found in the next section.
- **Invert** - The output has reverse (inverted) function.
- **Activate** – Ticked check box means that the output is activated.
- **Comment** - Used for own comments for the output. E.g. “Connected to Siren”
- **Control via SMS/Tetra or Telecall** – mark the check box to be able to control the output via sms command and Tetra status message or from a AddSecure Telecall system. Password etc. for sms is defined under **System**
  To control from Telecall, contact AddSecure Smart Rescue for further information.

6.2 Output status overview

Level output	Normal	Inverted
Active	Always to	Always OFF
Passive	Always OFF	Always to

Frequency output	Normal	Inverted
Active	impulse to TO	impulse to OFF
Passive	Always OFF	Always to

Impulse output	Normal	Inverted
Active	alternating to:FROM	alternating FROM:TO
Passive	Always OFF	Always to

For the operation indication on Output 1, this shall be set to Level and inverted

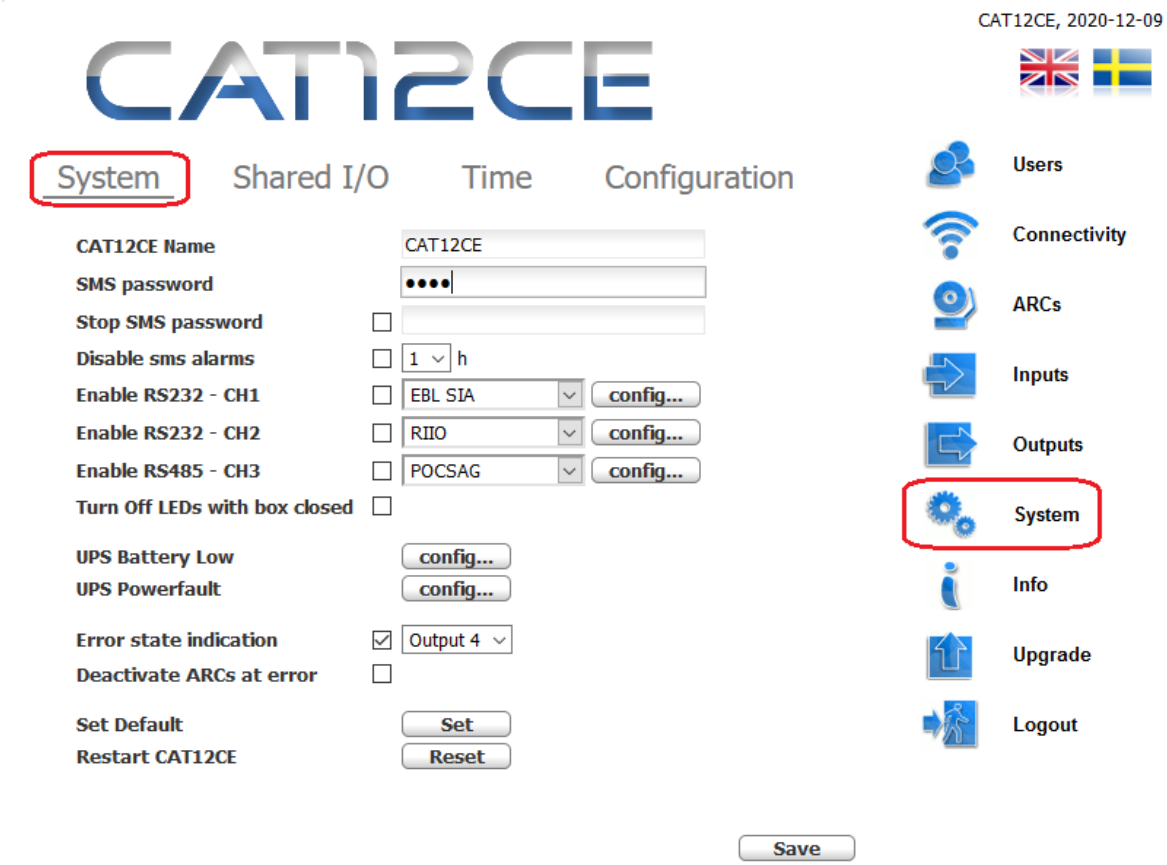
Output used for All alarm paths should be set to Level

Output 4 is activated in case of system failures such as configuration errors and should be set to Level

7 SYSTEM.

7.1 System. Tab: System

This tab provides information about the alarm terminal that is not specified elsewhere.



Alarm terminal CAT12 CE - System

- **CAT12CE Name -** Object name, shown in the upper right corner along with the alarm terminal system time.
- **SMS password -** Password for using SMS commands.
  See Chapter 10 SMS Management.
- **Stop SMS Password –** setting to use different password than the sms password that is for SMS commands. See Chapter 10 SMS Management.
- **RS232 and RS485 are handled in their own Chapter 7.2**
- **Turn off LED's with box closed** - If this box is checked, the LEDs will turn off when the terminal cover is mounted. Controlled by the alarm terminal's tamper contact.
- **Set default** – By clicking this button, the alarm terminal can always be reset to its default values,saved configuration is deleted..
- **Restart Cat12CE** - Restarts the alarm terminal.

- **UPS Battery low** - Button for configuring battery alarms from connected power supply.

  Configuration similar to inputs

- **UPS Power fault** - Button for configuring supply voltage alarms.

  Configuration similar to inputs

7.2 System. Tab: System RS232 / RS485

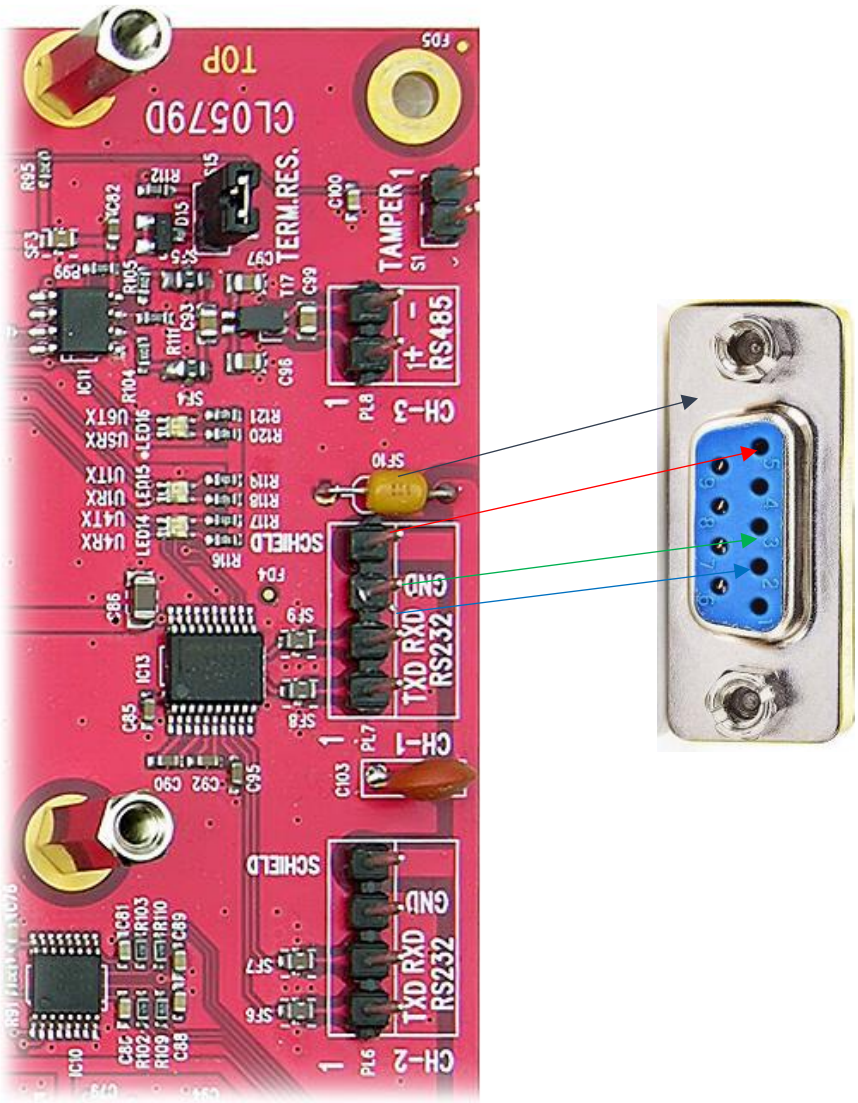
Settings for communication on RS232 and RS485.
Setting parameters can only be done when the channel is idle.

Activate RS232 port 1 / 2, Activate RS485 port 3
Alarm terminal CAT12CE can communicate with external devices using RS232 and RS485.

Connecting to CAT12CE RS232 serial port

For connection to devices using 9-pin D-sub to CAT12CE CH1/CH2

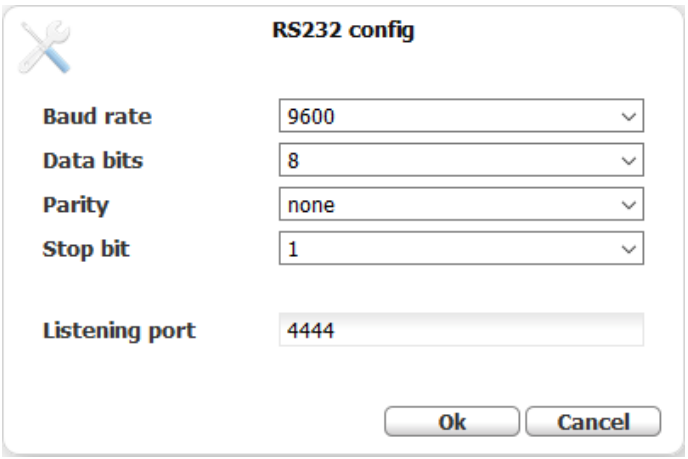
Pin 2 to TX
Pin 3 to RX
Pin 5 to GND
Screen to Shield



- **Transparent port**

  Transparent port is used for communication over IP and configured port for listening to connected equipment on RS232 / RS485, for example remote connection to fire alarm center or similar.

  Configure button opens the following dialog:

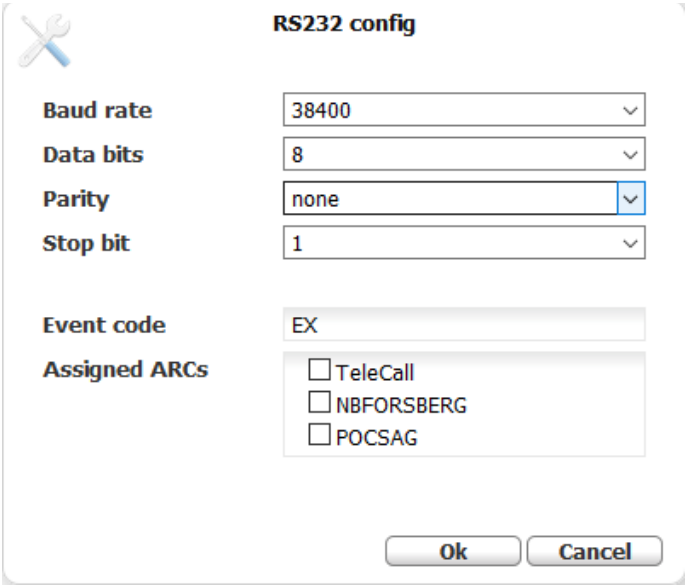


Setting rs232 connections

  - **Baud rate –** Data transfer Rate (Baudrate)
  - **Data bits** - Number of data bits per character
  - **Parity** - Parity check 1=negative, 0=positive voltage
  - **Stop Bit** - Number of stop bits, 1 or 2
  - **Listening Port –** Port for connection to IP Settings according to the above should be made by service technician or other person experienced in serial communication.

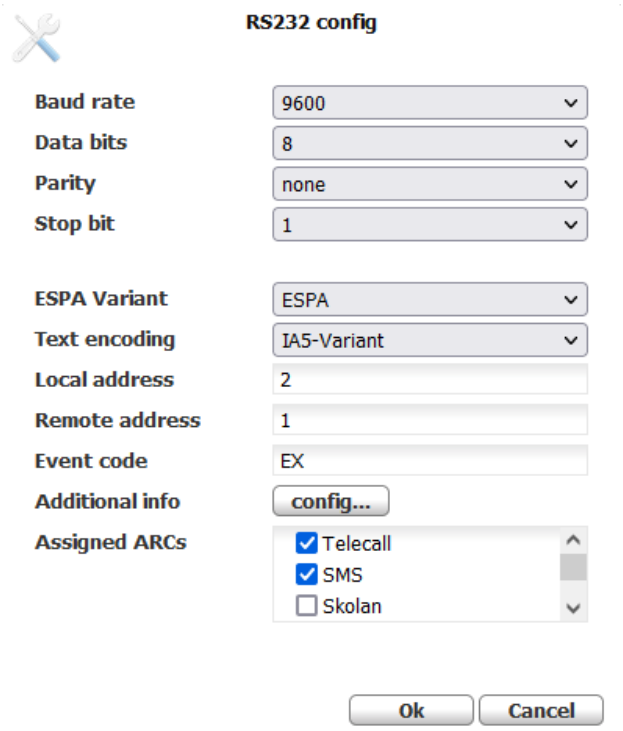
- **Tetra**
  Communication with Tetra modem AddSecure Smart Rescue TC8000. This provides the possibility to send alarm events to Rachel terminals. See alarm receiver

  For communication with addsecure smart rescue TC8000, communication parameters as shown below should be used



  - See Transparent port for information about the first four settings
  - **Event code -** Alarm code to be sent to the receiver if CAT12CE loses communication with the Tetra modem
  - **Assigned ARCs** - Alarm receivers that communication faults with the Tetra modem should be sent to

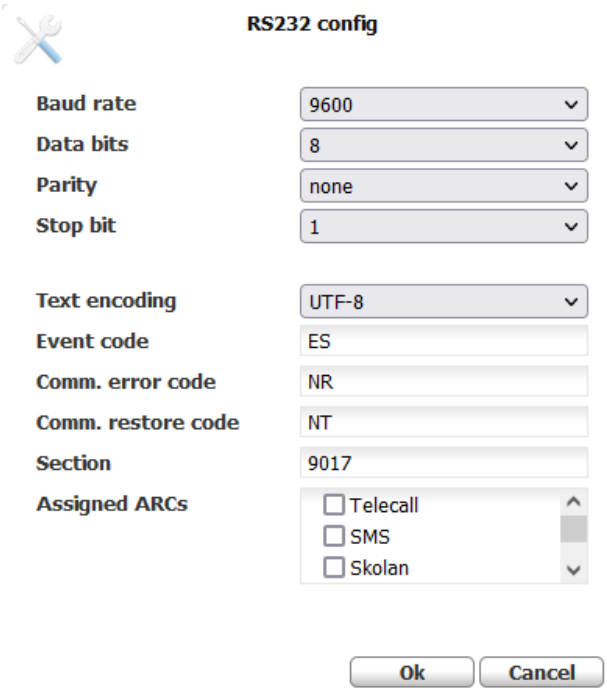
- **ESPA**
  The Espa 444 can be transferred to an alarm receiver via CAT12CE.



  - See Transparent port for information about the first four settings
  - **Text encoding** – Selection of encoding for the communication
  - **ESPA Variant** - Here you can choose to use either standard ESPA 444 or EBL-Talk which is a special protocol for specific EBL fire alarm centrals. CAT12CE only receives fire information from EBL.
  - **Local address -** CAT12CE device address in ESPA communication.
  - **Remote address -** Unit address for e.g. fire alarm central in ESPA communication.
  - **Additional info –** Configuration of heading in alarms such as email and sms.

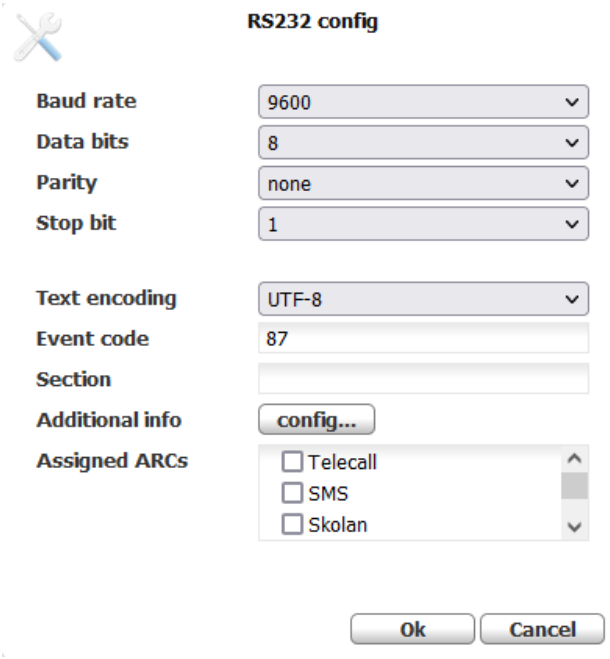
  - **Event code –** Alarm code to be sent to the receiver in case of alarm.
  - **Assigned ARCs -** Receiver to which the alarm is to be sent.

- **EBL SIA**
  Serial communication with EBL Fire Alarm Centre for extended alarm information



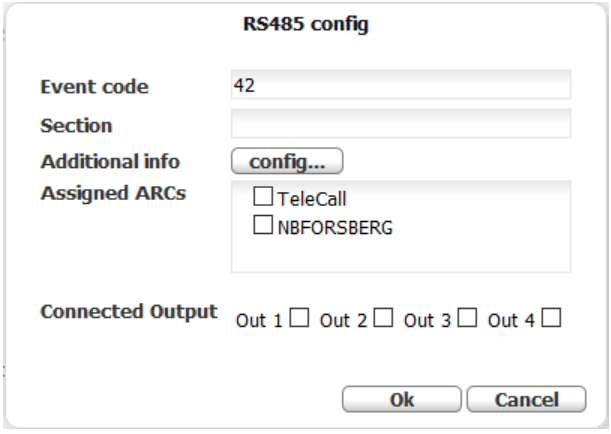
  - See Transparent port for information about the first four settings
  - **Text encoding** – Selection of encoding for the communication
  - **Event code** Alarm code to be sent to the receiver if in case of alarm informationcomplete information is sent its own field in the protocol and works only with AddSecure Smart Rescue Telecall as receiver
  - **Com,. Error coe, Comm. Restore code & section**
    These settings are used to indicate which alarm codes to use for communication errors / communication restored between CAT12CE and EBL fire alarm central
  - **Assigned ARCs -** Receivers to which alarms are to be sent

- **Sentrion**
  Communication with Central Equipment Sentrion S3/S4. The connection is made via rs232 (Note. Use common ground point to Sentrion/CAT12CE to avoid communication disturbance).



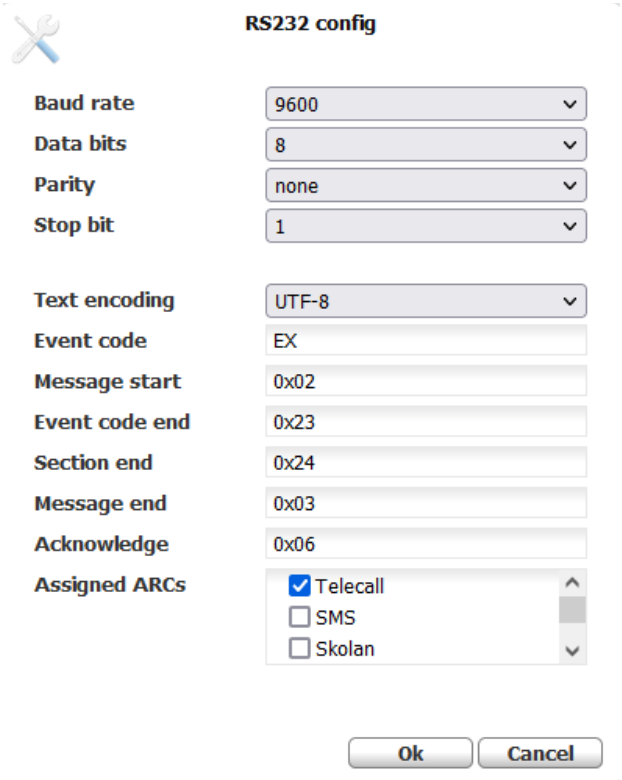
  - **Event code -** Alarm code to be sent to the receiver if CAT12CE loses communication with Sentrion. By default set to 87, but this can be changed freely.
  - **Text encoding** – Selection of encoding for the communication
  - **Assigned ARCs -** Alarm receivers that communication faults with the Sentrion should be sent to

- **POCSAG**
  Communication with POCSAG transmitters can only be connected to the RS485 port



  - **Event code -** Alarm code to be sent to the receiver if CAT12CE loses communication with the POCSAG transmitter. Alarm code can be freely selected.
  - **Additional info -** set additional text that is sent in the alarm to SMS/E-mail/Tetra/POCSAG receiver.
  - **Assigned ARCs -** Alarm receivers to which communication errors with POCSAG transmitters must be sent.
  - **Connected output –** Mark check box for an output if it ius wanted to activate relay on comm.error. Note! (Ut4 is generally used for general system failure)

- **RIIO**
  Function for connection to serial printer port to receive alarm information.
  This can be used with AddSeccure Blis Boss or other systems to send alarm information via CAT12CE



  - **Text encoding** – Selectin of encoding for the communication
  - **Event code** Alarm code to be sent to the ARC when a message is received on the serial port
  - **Message start -** Hexadecimal character indicating the start of a message on the serial port
  - **Event code end -** Hexadecimal character indicating the end of Event code
  - **Section end** – Hexadecimal character indicating end of section
  - **Message end -** Hexadecimal character indicating end of message
  - **Acknowledge -** Hexadecimal character sent by CAT12CE as acknowledgement that the message is received

  - **Assigned ARCs -** Alarm receivers to which received information is to be sent

Example

Setting

Message start - 0x02 = STX (Start of Text)
Event code end - 0x23 = #
Section end - 0x24 = $
Message end – 0x03 = ETX (End of Text)
Acknowledge – 0x06 = CAT12CE sends 0x06 reception of an ok message

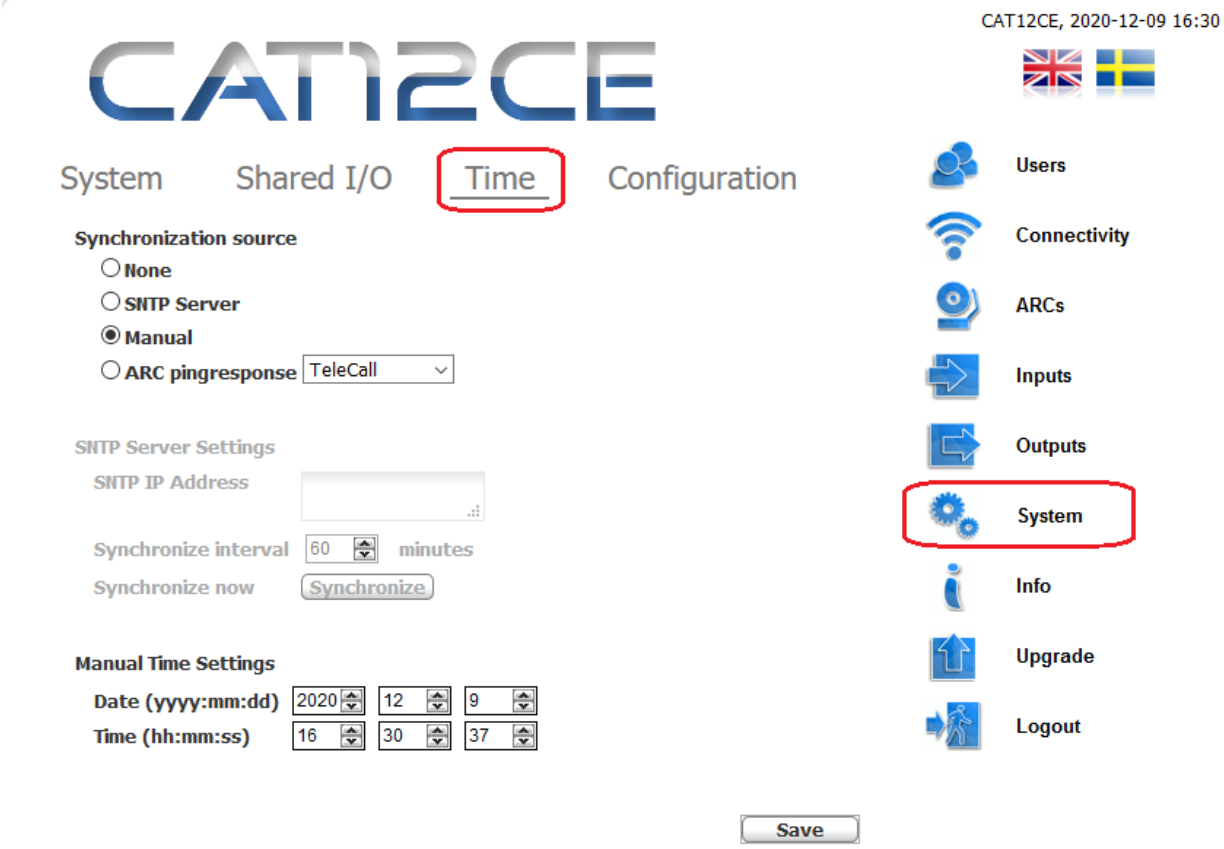
Received message ”STXA12#12345$LarmknappETX” will give Event code ”A12”,
Section ”12345” and Additional info ”Larmkapp”
Configured event code will be used if there is no value between start character and Event code end character.

You can also set the same character as Message start and Event code end if no event code is expected in received messages.
Example ”#12345$LarmknappETX” this will gice Event code according to ckonfiguration, sektion ”12345” and Additional info ”Larmknapp”

7.3 System. Tab: Shared In/Out

CAT12CE, in combination with Nova system, can act as a central unit (CCU) for access and burglary and alarm transmitters. It sets out the inputs and outputs to belong to CAT12CE or Nova

7.4 System. Tab: Time



System - Time

Time can be set either manual or synchronized with SNTP Server or connected ARC.
Selection is made using the radio buttons.

Selected synchronization with SNTP Server, the server's IP address and the synchronization interval to use are specified.

If synchronization with Alarm Receivers is selected, the time is synchronized with the time specified in the ARCs response to the ping request. Synchronization takes place 2 times a day.

7.5 System Tab: Configuration

- **Export Configuration -** Press the Export button to save the CAT12CE configuration file to your computer.
- **Import Configuration -** Press the Browse button... to download the configuration file from your computer. Then press the Import button, the configuration file loads.

The load is confirmed with a text dialog confirming the import of configuration file

In case of configuration load fail, there will be a message telling that the import was not successful

8 INFORMATION

When this page is opened, either the status of the alarm terminal, *the Status*, or an overview of the terminal occurred its events, *Event Log*.

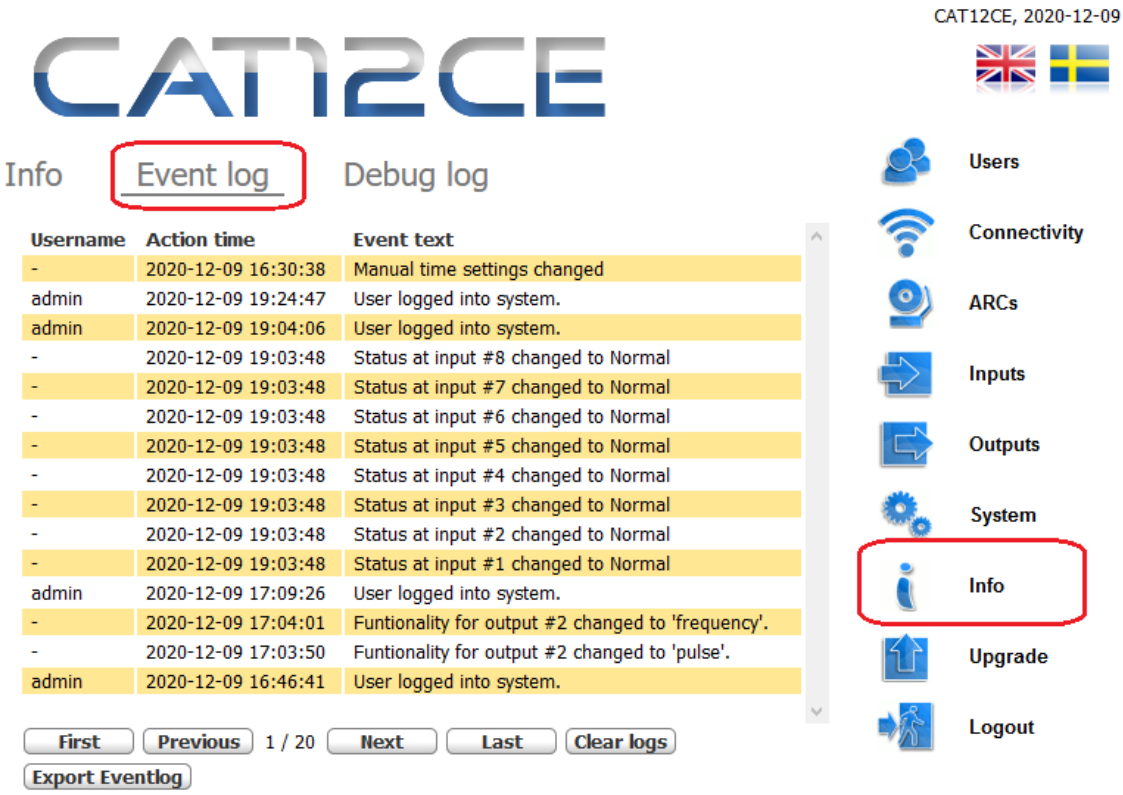
8.1 Information. Tab: Info

The current status of the alarm terminal, the program version of the alarm terminal and whether any expansion board is installed.

V22M info: displayed only if V22M extension board is enabled.
Here you can see the fw. version of the card from version 15 and up

8.2 Information. Tab: Event Log

In the alarm terminal, events are stored and displayed in an event log.

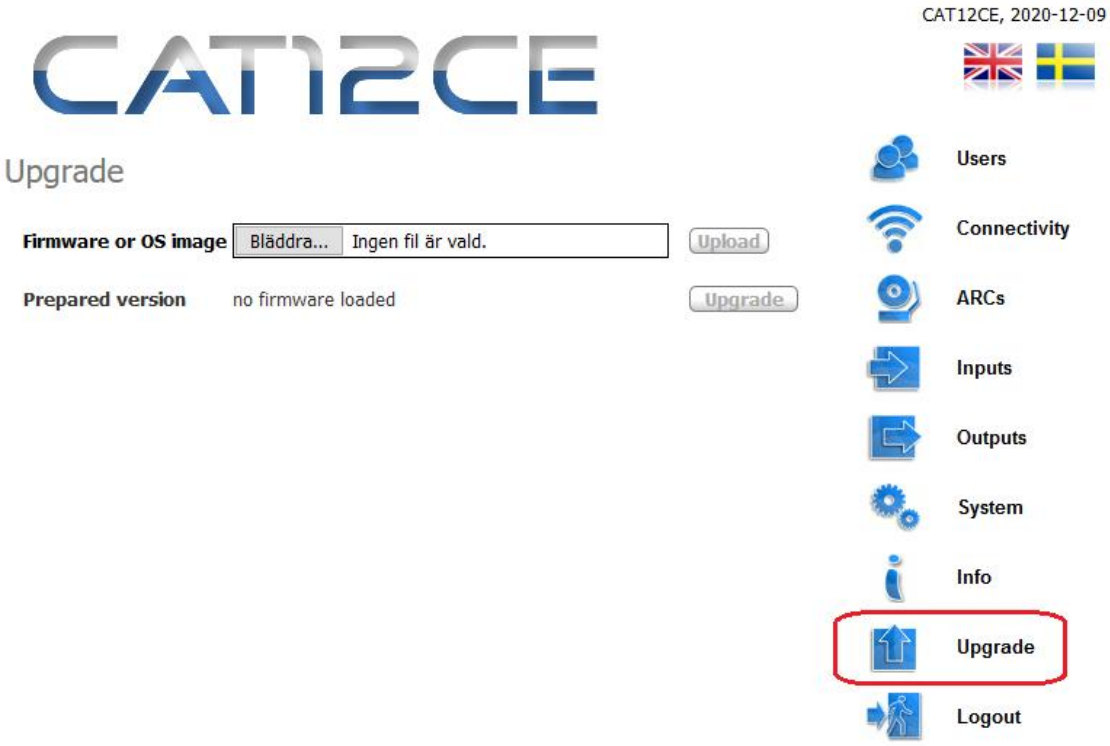


Event log

Browsing the log and clearing the log is done using buttons at the bottom of the image

The event log can be saved to a file in html format that can be opened and printed in browsers.

9 SOFTWARE UPGRADE



Opening of windows for upgrading the program in the alarm terminal.

Select a fw file to use for upgrade by pressing the Browse button next to **Firmware or OS image**

Press **Upload** to load the file to CAT12CE.

Prepared version Shows version when the file is loaded

Press **Upgrade** to start upgrading the fw

Now CAT12CE will restart and the browser will count down for reconnection.

10 SMS MANAGEMENT

When sending SMS to alarm terminal CAT12CE, no distinction is made between lowercase or uppercase letters.

The ***primary password*** is checked only if it is configured on the system page.

A ***secondary password*** can also be configured on the system page to disconnect the SMS function.
If this password is not configured, the primary password is used.

10.1 SMS messages

The following commands are handled by CAT12CE

1. Network configuration (ip address, mask, gateway): SMS request to CAT12CE: <password>, ip? SMS response from CAT12CE:IP: xxx.xxx.xxx.xxx, Mask: xxx.xxx.xxx.xxx, Gateway: xxx.xxx.xxx.xxx

GPRS IP: xxx.xxx.xxx.xxx APN: xxxxxx

2. GPRS signal strength:
SMS request to CAT12CE: < password >, sig?
SMS response from CAT12CE:Signal strength: xx%

3. Firmware and OS version:
SMS request to CAT12CE: <password>, fw?
SMS response from CAT12CE: OS: <os_version>, FW: <cat12ce_fw_version>

4. **Device info:**

This feature lists various current settings in CAT12CE

1. SMS request to CAT12CE: <password>, stats?

2. SMS response from CAT12CE:MAC: <xx:xx:xx:xx:xx:xx:xx>
GPRS signal: <xx>%
GPRS IP: <xxx.xxx.xxx.xxx>
APN: <apn_name>
Telit FW: <telit_fw>
V22Modem FW: <modem_fw>
Tetra ISSI: <tetra_issi>
Tetra model: <tetra_model>
Tetra signal: <tetra_signal>
POCSAG num. id: <POCSAG_num>
POCSAG dev. num: <POCSAG_dev>
RFS FW: <rfw_fw_version>
ARCc info: < list of activated ARCs with name, ID and ping intervall l>

5. Status of inputs:
SMS request to CAT12CE: < password >, in?
SMS response from CAT12CE:In1 Alarm, In2 Normal, etc.

6. Status of outputs:
1.SMS request to CAT12CE: < password >, out?
2. SMS response from CAT12CE:Out1 level ON, Out2 freq OFF, Out3 impulse OFF, Out4 level OFF

7. Output control :

SMS

Syntax for a single output is the keyword **out** followed by the output number
(**1- 4** or **1 - 8** if extension cards are used) and then **ON** or **OFF**,

Several outputs can be controlled simultaneously via a common SMS. In this case, a **comma (,) is** used as a separator. Outputs can be controlled via SMS only if they are not used for other signalling (e.g. ethernet loss) and provided that SMS control has been configured on the output page (Checked via ticked SMS checkbox).

Example of SMS request to CAT12CE: <password>, out1 on, out3 off, out4 on

Tetra status message

Output	On status code	Off status code
1	39001	39011
2	39002	39012
3	39003	39013
4	39004	39014
5	39005	39015
6	39006	39016
7	39007	39017
8	39008	39018

Status message 39000 deactivates all outputs

8. Disabling SMS transmission:
This function is mainly used in alarm tests to disconnect SMS transmission when it would normally have been sent. This function will be canceled after 1 hour of disconnection.

To use this function, the ***secondary password*** is used on the system page (marked with SMS Password). If this SMS is received when the SMS sending is already disconnected, the timeout time will be extended for another hour. When the timeout time expires after 1 hour, an SMS message will be sent to the phone number that has been used for the disconnection of the SMS sending with content indicating that sms transmission is enabled again

SMS request to CAT12CE: <stop sms password>, sms dis

11 DOCUMENT HISTORY

11.1 Audits

Date	Document name	Rev	
2010-09-12	*Alarm terminal CAT12 CE*	*1*	*Thor Valdemarsson*
2010-11-25	*Alarm terminal CAT12 CE*	*2*	*Thor Valdemarsson*
2012-05-23	*Alarm terminal CAT12 CE*	*3*	*Thor Valdemarsson*
2013-11-29	*Alarm terminal CAT12 CE*	*3*	*Johan Forsberg*
2014-03-13	*Alarm terminal CAT12CE*	*4*	*Johan Forsberg*
2015-02-03	*CAT12CE_UM_211*	*5*	*Johan Forsberg*
2015-07-09	*CAT12CE_UM_214*	*6*	*Johan Forsberg*
2016-01-26	*CAT12CE_UM_215*	*7*	*Johan Forsberg*
2016-03-18	*CAT12CE_UM_217*	*8*	*Johan Forsberg*
2017-08-28	*CAT12CE_UM_219*	*9*	*Johan Forsberg*
2020-01-16	*CAT12CE_UM_223*	*10*	*Johan Forsberg*
2020-04-01	*CAT12CE_UM_223.1*	*11*	*Johan Forsberg*
2020-12-09	*CAT12CE_UM_223.2_EN*	*12*	*Johan Forsberg*
2021-08-26	*CAT12CE_UM_223.3_EN*	*13*	*Johan Forsberg*

11.2 Relaterade dokument

- CAT12CE_ReleaseDocument_223_20210826_SE.pdf
- CAT12CE MLS – FX-central – Beskrivning för fjärruppkoppling mot ESMI FX Brandcentral
- CAT12CE_IM_CL0664 Larmtel_V22M – Installationsbeskrivning för utökningskort för larm/hisstelefon

12 NOTES