

SIA DC-09

SIA is a communication protocol used to communicate with Alarm communication centers.

There are a few things that are essential for a successful communication setup. This document will guide and help you to do a successful setup of this communication.

First it is important to know which company you are setting up the communication with. There you have to take a subscription and request the communication stack.

For all setups you need the following information from the alarm communication center:

- Data format (SIA DC-04 or Contact ID DC-05)
- Server Address and TCP port
- Backup Server Address and TCP port
- Key
- Account
- Account Prefix
- Receiver number
- Polling cycle and server timeout
- Zone and Event list.

Data Format

The main difference between SIA DC-04 and Contact ID DC-05 is that SIA DC-04 supports text to be added to the communication, whereas Contact ID DC-05 only supports Event and Zone communication to the Alarm communication center.

This is crucial to know as this is an important part of how the communication setup has to be made in Loxone Config. I would suggest using SIA DC-04 as text can be added to give extra information to the operator.

Server Address and TCP port, Back-up Server Address and TCP port.

This is the place where the information will be sent to make sure you use 2 different servers.

Also, it is important to check that the TCP ports you are using are open on the network. If not, then set up port forwarding for those ports.

Key and Account

This is how the Miniserver can login to the servers.

Account Prefix

Some companies can choose to add an extra measure of security by adding an Account Prefix. This is a HEX code that you have to also add in Loxone Config. If there is no account prefix, then you have to place a 0 in the cell.

Receiver number

Also, this is a HEX value that can be given by the company. If not used, then this cell can stay empty.

Polling Cycle and server timeout

This is information you can ask also from the alarm company or put it in by yourself. Make sure to choose the time of the polling cycles according to the speed of the network and distance you are from the servers of the alarm central. If you set the time too short, you will receive an error message that the server is not reachable. Make sure that for the backup polling cycle you take a longer time.

Zone and Event list

SIA communication has a specific setup on how you can give information to the Alarm company. If you do not follow this setup, then the Alarm company will not receive the information correctly and cannot do anything with what you are sending. The setup is based on action patterns that happen by using the Event and Zone information; a specific operator will receive a notification on their screen and take the correct action. a.k.a a fire alarm event is triggered the customer will be called, if no answer is given the fire department will be called.

If the burglar alarm is triggered, that customer is called and an agent of the alarm company will be sent to the location. If the customer does not give the correct key, then the police will be called.

The action patterns are automatically created by the EVENT and ZONE information. If this is not in the communication, then SIA will not work. It is very important to request the list that you can use from the alarm company. If you do not have this list, then you are not able to set up SIA.

How does a SIA message look for a SIA server and how do we send this with the Miniserver and Loxone Config?

This is how a **successful** SIA message is received by the SIA server.

8:39:17	FAC	melding	BR	DC09 D2 90 sec, sectie, Woonkamer NM	345800 BR ALARM [z1, Woonkamer NM] (test)
9:14:41	FAC	melding	BR	DC09 D2 90 sec, sectie, Woonkamer NM	BR HERSTEL [z1, Woonkamer NM] (test)
10:00:17	FAC	melding	ME	proces 1, sectie, zone 106	347545 ME ALARM [z106] (test)
10:44:23	FAC	melding	ME	proces 1, sectie, Livingroom NM	348152 ME ALARM [z101, Livingroom NM] (test)

This is how **unsuccessful** SIA communication is received by the SIA server:

11:27:43	CNF	melding	KZ	Loxone test met KEY	UN0025E100190Acc101010L10rg1] CNF ONGELDIG "S191
11:27:43	CNF	melding	KZ	Loxone test met KEY	+"10 N1]"^" (test)
11:27:43	CNF	blok	KZ	Loxone test met KEY	KZ101010 209 1] Niet gevonden (test)
11:27:43	CNF	melding	KZ	Loxone test met KEY	CNF INFO (test)
11:27:43	CNF	tekst	KZ	Loxone test met KEY	"" (test)

How looks a successful message sent by the Miniserver (this can be seen in the debug monitor)?

00000105 192.168.1.110 16:58:52.548 16:58:53.502 221995008 SIA before encryption:
5|#101010|NFA01^Woonkamer NM][M504F94A040BC]_14:58:53,05-10-2021

First part is the internal IP address of the Miniserver followed by the time it is sent. Then you will find the SIA before encryption, so you see what the Miniserver is sending to the SIA server.

- The message contains as first part the account number.
- After this it will add the Event and Zone information that you have placed in the message in Loxone Config.

LOXONE

- Followed by a text message if this is programmed in Loxone Config.
- It will then end the message with the Serial number of the Miniserver and the time and Date.

For the Event and Zone information the letter 'N' is automatically added by the Miniserver. In SIA the 'N' stands for 'New' so the server knows if this is a repeated message or a new message.

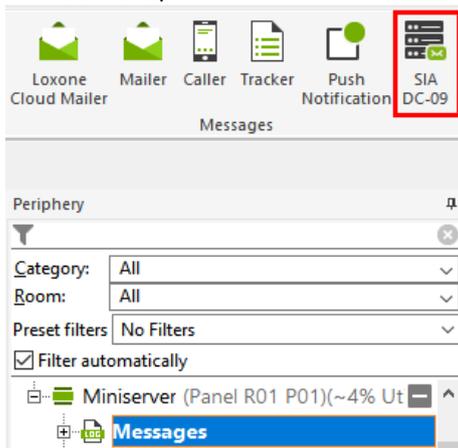
What do you have to place in Loxone Config for a successful SIA communication?

- First of all, start with the **Event** that happened. This will most likely always exist out of 2 letters in CAPS.
- Then directly after the event, add the **Zone** information. This is a value that can be between 0 and 8000.
- After the zone you can add **text** to give extra information to the operator. What we have seen for SIA to know that you are going from EVENT and ZONE to text you have to add ^, directly after the zone (**no spaces** in between). If this symbol is not used, the SIA message will look like the unsuccessful message above.
- This is what you add as text in Loxone Config: **EventZone^Text NM**
 - Example: MA101^Living Room NM
 - NM stands for New Message this is sometimes asked by the Alarm company to add this to the text.

SIA DC-09	
Message for ON/analog change	ZR5210^Kitchen NM
Message for OFF	ZA5210^Kitchen NM

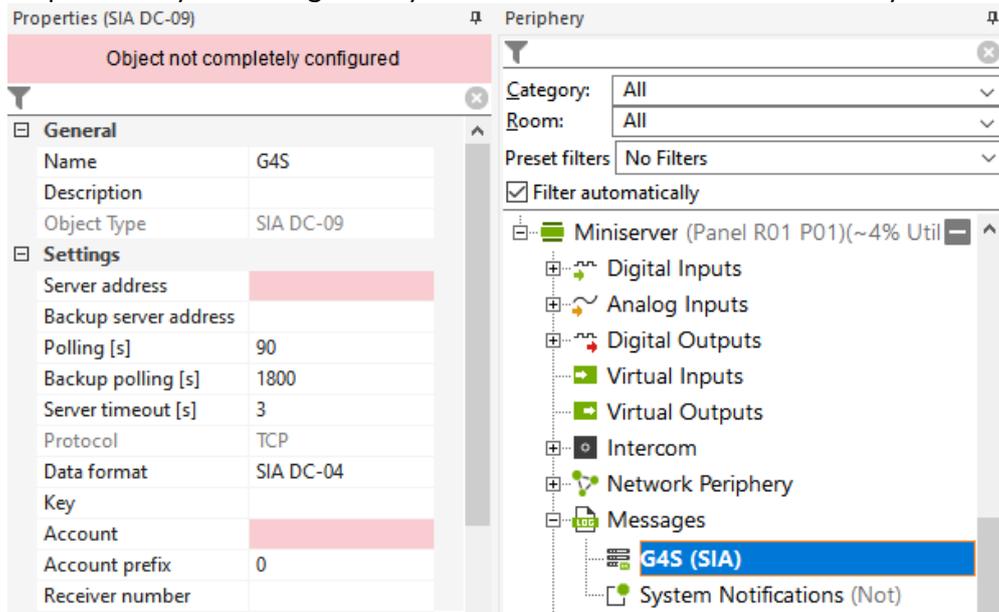
How to set up SIA in Loxone Config:

1. Go to 'Messages' in the Periphery and select this.
2. In the menu at the top, you select SIA DC-09 (this only works with 2nd gen. Miniservers)

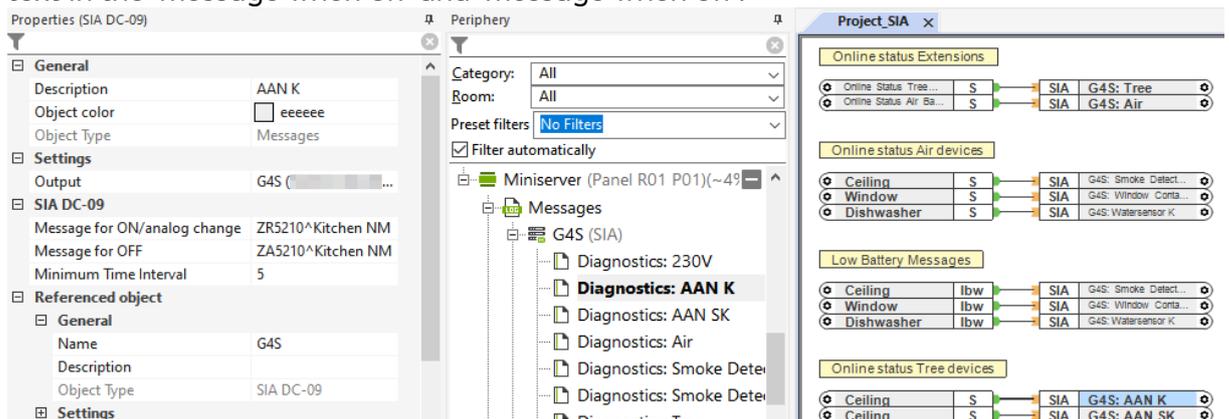


3. Select in the Periphery the SIA-message.

4. Setup all info you were given by the alarm communication center you are using.



- Server address and port: 123.123.123.123:1234
 - Backup server address and port
 - SIA format you are using
 - The key
 - The account number
 - The account prefix and if there is no prefix that add 0
- Then you take the SIA message out of the periphery and place it on the programming page and connect it to the output you want to give information to the Alarm central.
 - You select the SIA output on the programming page and open the Properties of the output. There you can change the properties of the output and put in the correct text in the 'message when on' and 'message when off'.



- For SIA communication you always have an EVENT trigger and an EVENT reset. This means you always use the 'message when on' and the message when off'. You can put all info direct in the cell or you can choose to use the command <v>, this will add all info that is connected to the output in the message.
 - Example of how this message can look in Loxone Config.
 - ZR5210^Kitchen NM
 - ZR5210^<v> NM (room is provided on the input of the cell as text)
 - <v> (the event, zone and room are provided on the input of the cell through logic as text)

Problems:

Check first that all information is in the SIA setup.

- Server address and TCP port
- Back-up Server address and TCP port
- Data format
- Key
- Account
- Account prefix

Then check the setup of the message.

Buildup: **EventZone**^Text

Or **EventZone**

If the message is not configured as this, it will not work.

Get the Event and Zone list from the specific company you want to set up communication with. If a zone or event is not supported by the company, then it will not work.

Check list:

- Is the customer account active?
- SIA properties are all customer and server info correct?
- Is the correct SIA format selected?
- Message is the Event and Zone information correct?
- Is the text correct and not too long?
- Did you use '^' before putting in text?
- Did you save it into the Miniserver?
- Is the Event ID supported by the Alarm central?
- Is the Zone supported by the Alarm central?

Mostly used Events:

This is an example. Always check with the company if they support them and that you can use them.

- RP (control message)
- MA-MR (medical alarm)
- FA-FR (fire alarm)
- WA-WR (water alarm)
- BA-BR (burglar alarm)
- TA-TR (technical alarms)
- AT-AR (Technical alarms)
- YP-YR (power AC and UPS alarms)
- ZA-ZR (technical alarms)