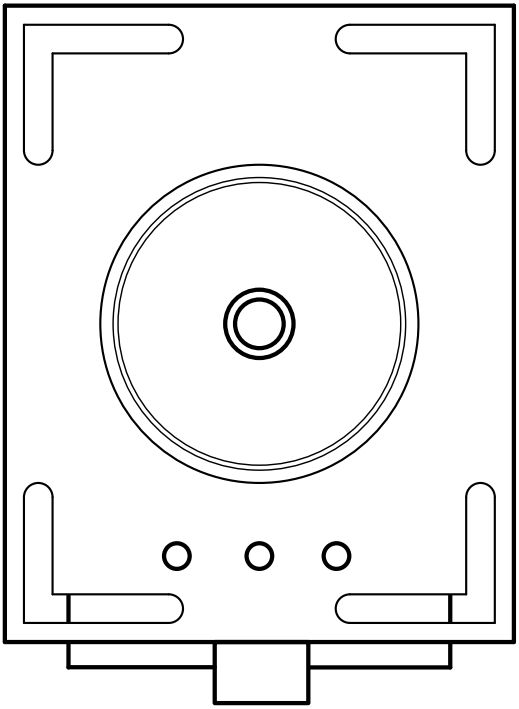
SafeLine

SL1 manual



Lift Emergency Telephone
www.safeline-group.com

Reliability – brought to you from **Tyresö** Sweden

02.2023
SL1 v.2.1.0 EN

Technical data

Power	Supply voltage: 10-30 VDC Current consumption max 50 mA.
Emergency signal button	Can be set as N/O or N/C, 10-30 VDC
Auxillary input	Can be set as N/O or N/C, 10-30 VDC
Size (H x W x D)	100 x 60 x 24mm
Operation temperature	+5°- 40°
Air humidity	30%-90% R

Content

General information

This unit was built with state-of-the-art technology and to generally recognised safety related technical standards currently applicable. These installation instructions are to be followed by all people working with the unit, in both installation and maintenance.

It is extremely important that these installation instructions are made available at all times to the relevant technicians, engineers or servicing and maintenance personnel. The basis prerequisite for safe handling and trouble free operation of this system is a sound knowledge of the basic and special safety regulations concerning conveyor technology, and elevators in particular. The unit may only be used for its intended purpose. Note in particular that, no unauthorised changes or additions may be made inside the unit or individual components.

Exclusion of liability
The manufacturer is not liable with respect to the buyer of this product or to third parties for damage, loss, costs or work incurred as a result of accidents, misuse of the product, incorrect installation or illegal changes, repairs or additions. Claims under warranty are likewise excluded in such cases. The technical data is the latest available. The manufacturer accepts no liability arising from printing errors, mistakes or changes.

Declaration of conformity
Download "The declaration of conformity" at our website: www.safeline-group.com

Safety Precautions!
- Only trained professionals, who are authorised to work on the equipment, should install and configure this product.

- This quality product is dedicated for the lift industry. It has been designed and manufactured to be used for its specified purpose only. If it is to be used for any other purpose, SafeLine must be contacted in advance.

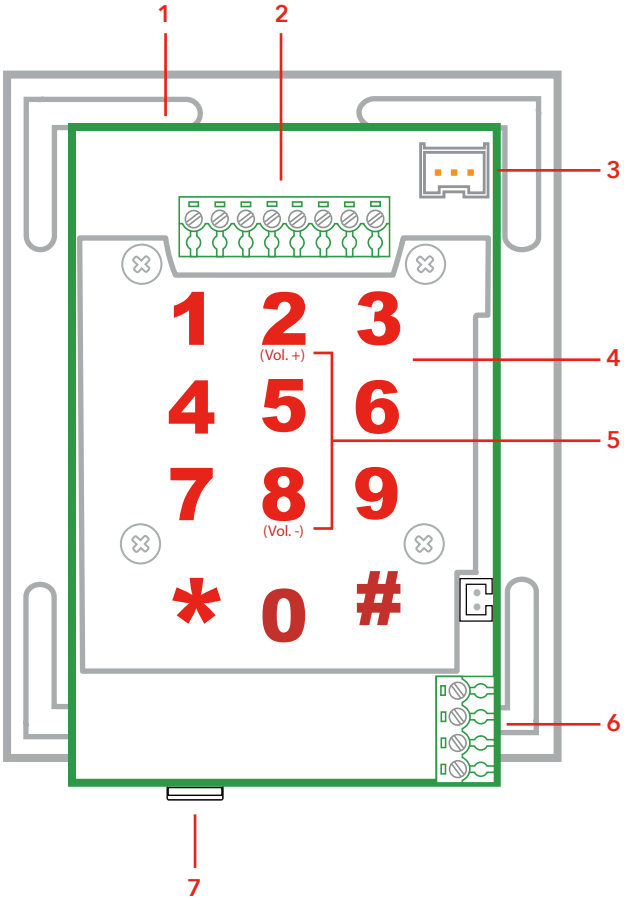
- It should not be modified or altered in any way, and should only be installed and configured strictly following the procedures described in this manual.

- All applicable health and safety requirements and equipment standards should be considered and strictly adhered to when installing and configuring this product.

- After installation and configuration this product and the operation of the equipment should be fully tested to ensure correct operation before the equipment is returned to normal use.

Electrical and electronic products may contain materials, parts and units that can be dangerous for the environment and human health. Please inform yourself about the local rules and disposal collection system for electrical and electronic products. The correct disposal of your old product will help to prevent negative consequences for the environment and human health.

Overview



1. **System LED**

2. **Connector terminal**
   Power, emergency button, phone line and auxillary inputs.

3. **RS232 PC connection**
   For firmware update and configuration with SafeLine Pro.

4. **Keyboard**
   For configuration.

5. **Volume control**
   Buttons 2 and 8 raises respectively lowers the speaker volume.

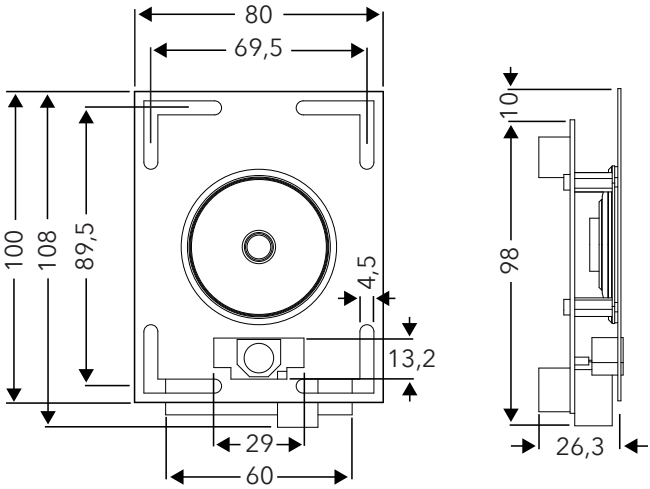
6. **Connector terminal**
   Connections for external pictograms and button.

7. **RJ12 connector**
   Connections for extra button, microphone and speaker.

Measurements

SafeLine SL1 COP

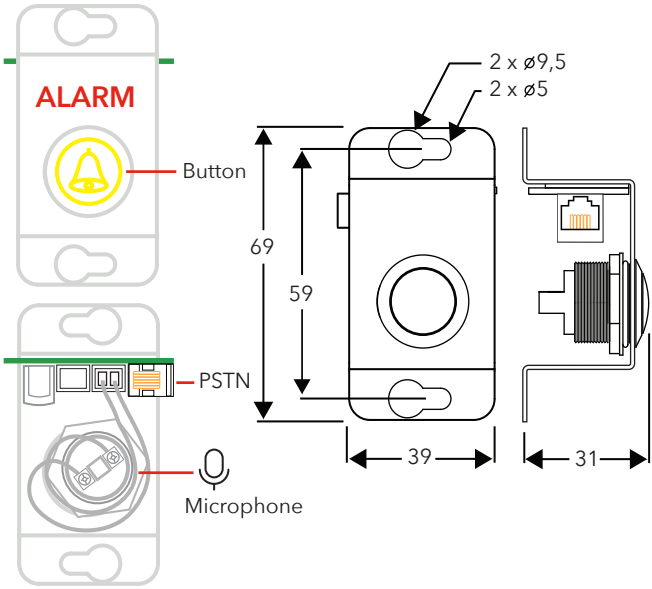
Article number: *SL1



Measurements and component list

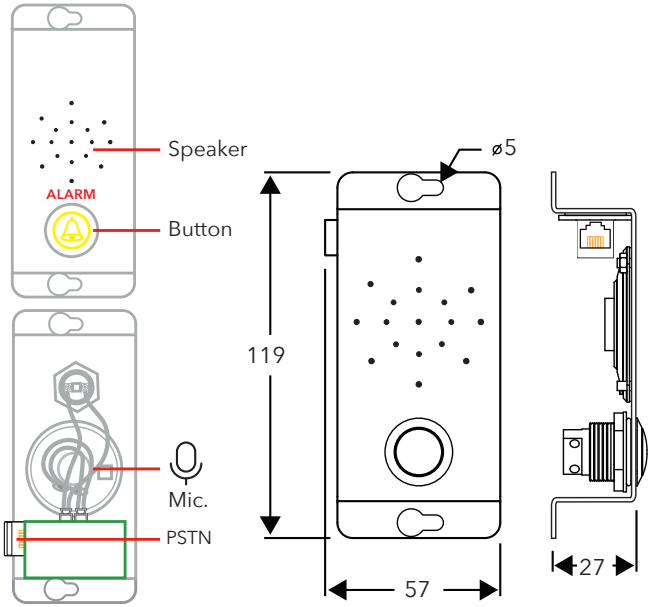
SafeLine SL1 - alarm button with microphone

Article number: *LT-stat01



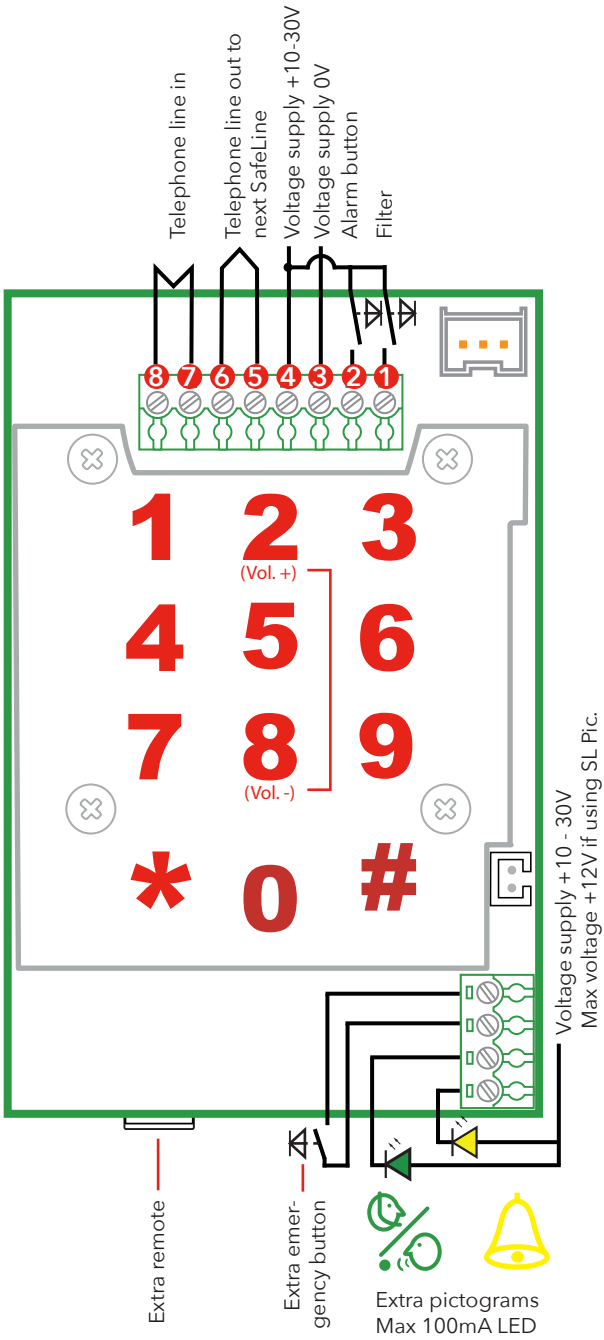
SafeLine SL1- alarm button, microphone and speaker

Article number: *LT-stat02



Installation

Wiring diagram

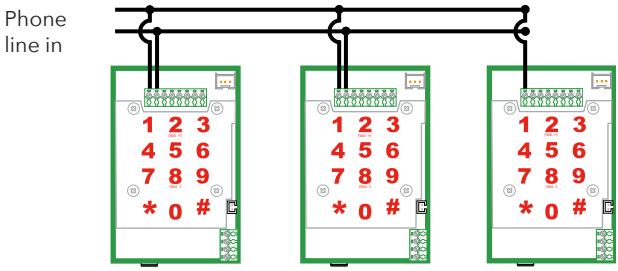


Wiring diagram, SafeLine SL1 on a PSTN LINE

(Max 9 units)

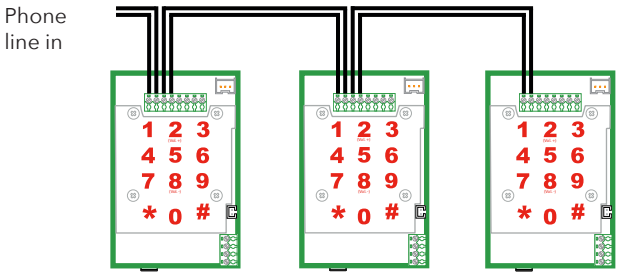
Parallel-wiring

Two wires required. Unit numbers must be pre-configured.



Daisy-chain-wiring (serial wiring)

Four wires required. Unit numbers can be configured remotely.



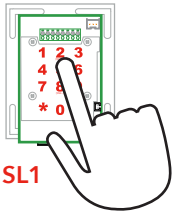
Configuration

Configuration overviews

Configuration methods and configuration codes with a telephone is described later on the following pages: "Remote configuration with telephone" and "On-site configuration with telephone".

Keyboard configuration

The integrated keyboard at the rear of the SafeLine enables a fast configuration of the unit.



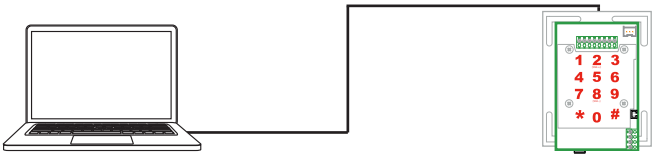
SL1

Configuration with SafeLine Pro

The unit can be configured at the office prior to the installation or at site after installation.

The configuration software SafeLine Pro can be downloaded from www.safeline-group.com.

The configuration cable is provided by SafeLine.

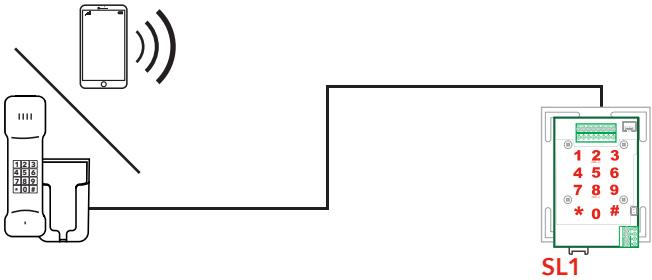


SafeLine Pro

SL1

Remote configuration

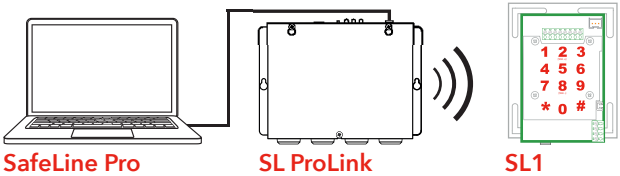
For remote configuration, you can use any PSTN tone dial phone. Dial the phone number of the SafeLine. Enter the function codes on the phone keypad to start the configuration (password has to be entered).



Remote configuration with SafeLine Pro/ProLink

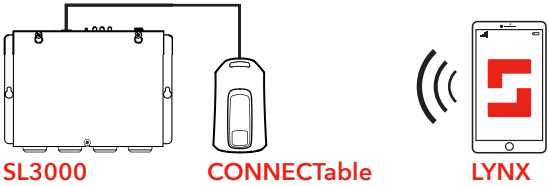
The unit can also be remotely configured at the office after installation.

Connect a SafeLine ProLink modem with a phone line to a computer with SafeLine Pro and a serial cable.



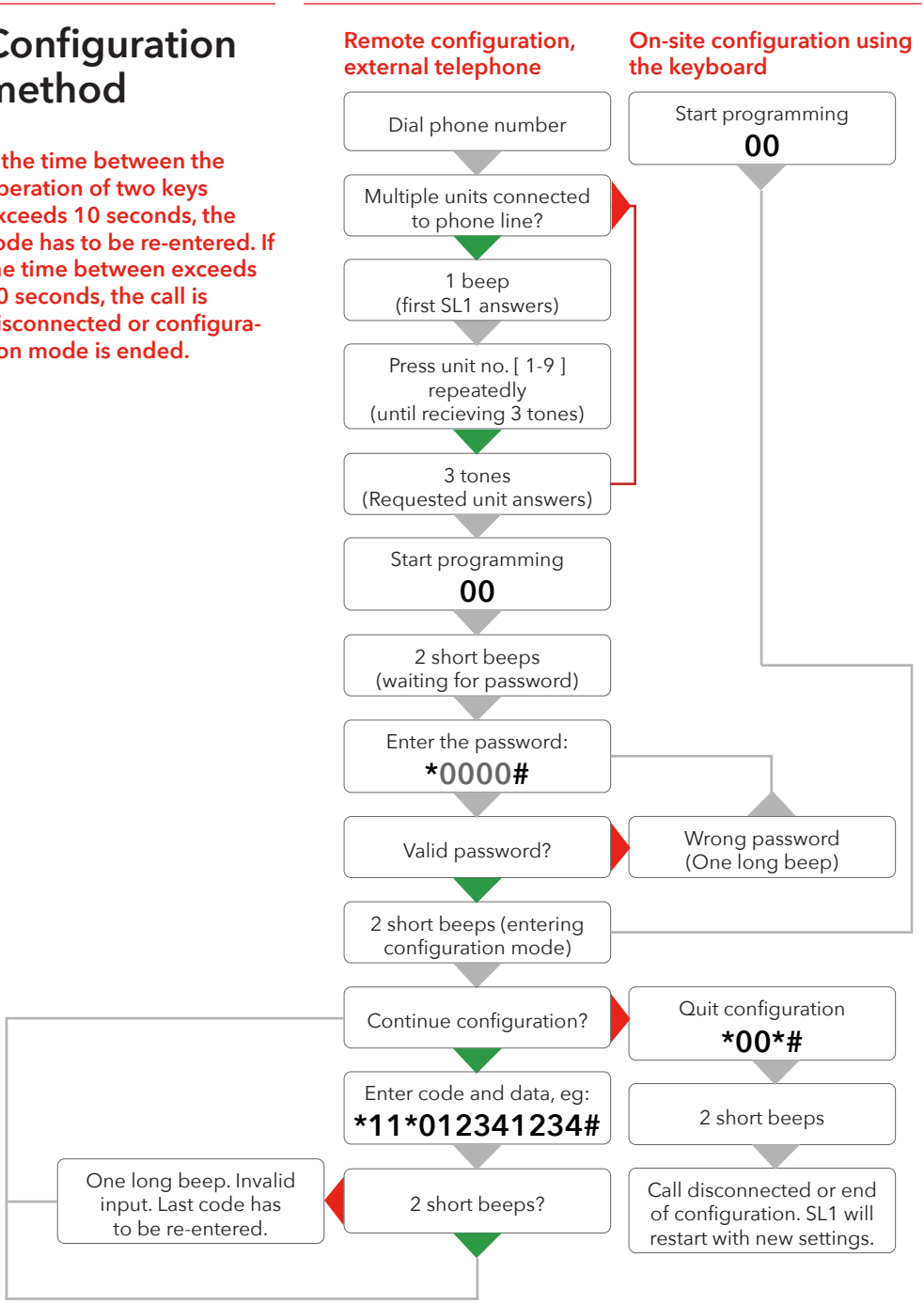
LYNX app

To configure the unit through the LYNX app, the CONNECTable (*CONNECTABLE) is required. Plug in CONNECTable through the unit's serial port and configure the unit through the app just like any other unit.



Configuration method

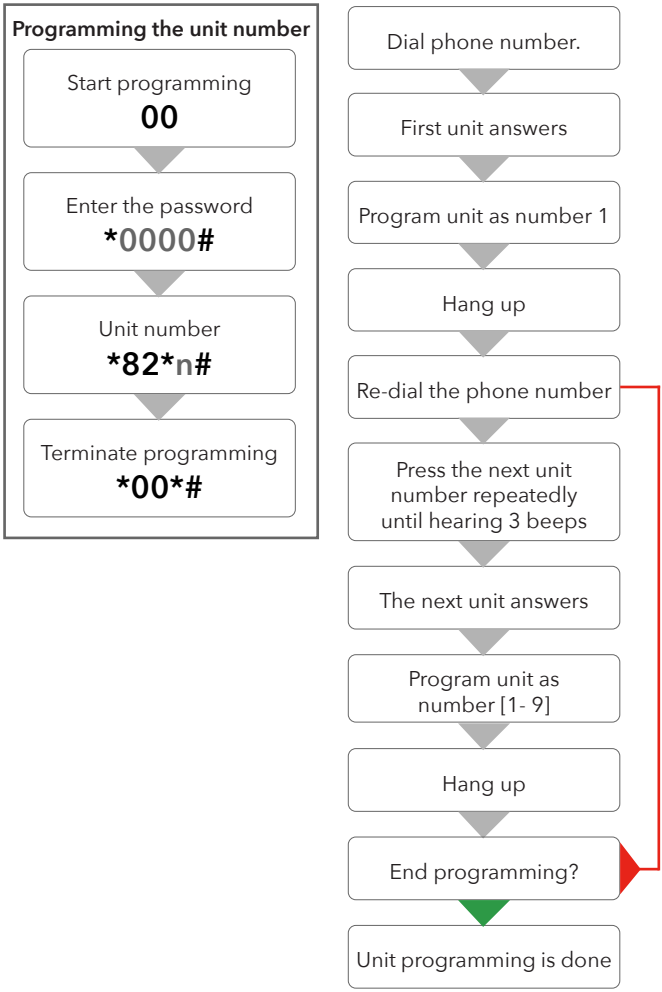
If the time between the operation of two keys exceeds 10 seconds, the code has to be re-entered. If the time between exceeds 30 seconds, the call is disconnected or configuration mode is ended.



Configuration unit numbers

To remotely program a parallel connected unit, the unit number has to be pre-programmed. If units are connected in series (daisy chain), unit numbers can be remotely programmed.

Remotely program unit numbers in SafeLines connected in series:



Configuration examples

If at any time you need to start over, use the factory reset command *99*1#. Please refer to the full configuration setup in the "Parameter list" as these are merely examples.

SafeLine emergency telephone units

Example 1.
Storing of two different telephone numbers, one to be answered by P100 code and the other one with voice. (For test facility, see example 2.)

1. **Start configuration:**
   0 0
2. **1st phone number:**
   *** 1 1 * 1 2 3 4 5 6 7 8 #**
3. **2nd phone number:**
   *** 1 2 * 2 3 4 5 6 7 8 9 #**
4. **Call type 1st number:**
   *** 2 1 * 0 #** - Example: Answered with P100 code.
5. **Call type 2st number:**
   *** 2 2 * 1 #** - Example: Answered as voice call.
6. **Alarm button delay:**
   *** 8 7 * 0 3 #**- Example: 3 seconds delay.
7. **End configuration:**
   *** 0 0 ***

Example 2
SLCC (SafeLine Call Centre) and 3 day test.

1. **Start configuration:**
   0 0
2. **Enter P100 ID code:**
   *** 0 1 * 4 5 6 4 5 6 4 5 #**
   Lift ID code (each lift must have its own unique code).
3. **Set test alarm type:**
   *** 3 1 * 0 #** - Example: Test alarm type P100.
4. **Set number of days between test alarm:**
   *** 2 7 * 0 3 #**- Example: 3 days between test alarm.
5. **LMS phone number:**
   *** 1 6 * 9 8 7 6 5 4 3 2 #** (Only if using SLCC)
6. **Test alarm:**
   *** 1 7 * 1 2 3 1 2 3 1 2 #**
   (For more information, please refer to parameter *17* in the "Parameter list")
7. **End configuration:**
   *** 0 0 ***

Parameter list

Configuration data	Code	Data	Comments
Enter configuration mode		00	
Enter password		* - - - - #	Default = 0000
Exit configuration mode		*00*#	

Alarm codes	Code	Data	Comments
P100 ID code	*01*	- - - - - - - - #	P100 is always 8 digits
CPC ID code	*02*	- - - - - - #	CPC 6-8 digits
Q23 ID code	*03*	- - - - - - - - - - - - #	Q23 is always 12 digits

Telephone numbers	Code	Data	Comments
1st Phone number	*11*	- - - - - - - - - #	Phone number to alarm receiver 0-16 digits. If calling through a switch board, delay time can be set by adding asterisks between leading number and telephone number. Each asterisk is equal to one second delay. Example: *11*(0)**1234567#
2nd Phone number	*12*	- - - - - - - - - #	
3rd Phone number	*13*	- - - - - - - - - #	
4th Phone number	*14*	- - - - - - - - - #	

Call type	Code	Data	Comments
Call type 1st number	*21*	- #	Change call type: 1-4:th number 0 = P100 1 = VOICE (Default) 2 = Q23 3 = CPC Change this only if your alarm operator is using any of the mentioned protocols.
Call type 2nd number	*22*	- #	
Call type 3rd number	*23*	- #	
Call type 4th number	*24*	- #	
Call type LMS number	*30*	- #	LMS(Lift Monitoring System) call type 0 = P100 3 = CPC (Only battery alarm)

Test alarm & battery alarm	Code	Data	Comments
LMS phone number	*16*	- - - - - - - - - #	LMS(Lift Monitoring System) phone number to alarm receiver / SLCC
Test alarm	*17*	- - - - - - - - - #	Phone number to test alarm receiver / SLCC
Days between tests	*27*	- - #	Number of days between test alarms, 00-99 days. Always two digits. Max 3 days according to EN 81-28. 00 = No test alarms
Test alarm protocol	*31*	- #	Protocol test alarm 0 = P100 3 = CPC 4 = Phone number used as ID.

Alarm character	Code	Data	Comments
Alarm character 1st no.	*41*	- - #	Alarm character. only when using CPC as alarm protocol normally 10 or 27 check with your alarm company !
Alarm character 2nd no.	*42*	- - #	
Alarm character 3rd no.	*43*	- - #	
Alarm character 4th no.	*44*	- - #	
Alarm character LMS	*45*	- - #	LMS (Lift Monitoring System) (Battery alarm) Normally 17
Alarm character Test alarm	*46*	- - #	Normally 26

Distress message	Code	Data	Comments
Record distress message played in the lift car.	*51*	"Speak" #	This message will be played in the lift cabin when the emergency lift telephone starts calling the alarm centre. Make sure that there is no noise in the background when recording the message. Example of message: Please do not panic, the emergency telephone is now calling the emergency call centre.
Record alarm message from Lift Car to alarm central	*52*	"Speak" #	This message will be played to the alarm receiver and in the car when the call is answered. Make sure that there is no noise in the background when recording the message. Example of message: This is an alarm from the lift on 5th avenue. To hear this message again, press "1". To terminate the call, press "#" before hanging up.
Options for the recorded distress message	*61*	- #	0 = Disable recorded message. 1 = Enables recorded message.
	61	#	Play the the recorded message.
Options for the recorded message from lift car	*62*	- #	0 = Disable recorded message. 1 = Enables recorded message.
	62	#	Play the the recorded message.

Other codes	Code	Data	Comments
Emergency signal in speaker	*71*	- #	The speaker siren will sound at emergency call. 1 = On (Default) 0 = Off
Ring tone timeout	*72*	- - #	Number of ring signals before dialling the next number.
Additional input function	*73*	- #	Selects input function: 0 = None (Default) 1 = Filter, blocks the alarm input when active. 2 = LMS(Lift Monitoring System), sends a lift monitoring alarm at input activation. 3 = Clear/Maintenance
Additional input type	*74*	- #	0 = Normally-open contact, NO (Default) 1 = Normally-closed contact, NC
Hot Line	*75*	- #	Phone connects directly to a fixed receipient without dialling a phone number 0 = Standard phone line (Default) 1 = Hotline
Compatability mode	*77*	- #	0=Automatic voice switching The call is validated when there is a voice response. The call is terminated by pressing "#". 1=Kone ECII (lift telephone) When there is a voice response, some ascending tones will be heard. The call is validated by pressing "4". The call is terminated by pressing "0". The call is terminated without receipt notification by pressing "2"(the unit will call the next number). 2=Manual voice switching When there is a voice response, some ascending tones will be heard. The call is validated by pressing "4". Unit is still in automatic mode. To enter manual mode and talk press "*". To listen press "7". Go back to automatic mode press "4". The call is terminated by pressing "#". It is possible to enter manual voice switching mode although the unit is configured as automatic by pressing "*". No ascending tones will be heard.
Indicator mode	*78*	- #	0 = Standard 1 = Strictly EN81-28
Voice communication time-out	*79*	- #	1 - 20 minutes. Standard = 8 min
Reset active alarm automatically	*80*	#	0 = OFF, 1 = ON (Default)

Other codes	Code	Data	Comments
Auto answer	*81*	- - #	No of signals before SafeLine answers incoming call. Can be set from 00-16. (Default = 02) 00=no answer.
Unit number	*82*	- #	Configure Unit number 1-9 (Default = 0)
Detect dial tone	*83*	- #	0 = Off 1 = On (Default) Set to off if SafeLine has problem to detect the dial tone.
Receipt to alarm receiver	*84*	- #	Select which message(s) to send to the alarm receiver at an alarm call. 0 = None (Default) 1 = Start of alarm 2 = Start+end of alarm
Break on new alarm	*86*	- #	Disconnects a call longer than 60 seconds at new activation of the alarm button and calls the next emergency call number. 0 = OFF 1 = ON (Default)
Alarm button delay time	*87*	- - #	Delay time from pressing the alarm button until activating the alarm. 00-25 seconds. (Default = 05)<
Alarm button type	*89*	- #	0 = Normally-open contact, NO (Default) 1 = Normally-closed contact, NC
Change password	*91*	- - - - #	Change password (default=0000)
Simulate an alarm event	*94*	- #	Triggers an alarm event after configuration is terminated. 1 = Emergency call 2 = Test alarm 3 = Battery failure 4 = Microphone/Loudspeaker failure 5 = Emergency call 6 = Maintenance 7 = Main unit power failure
Reset to default settings	*99*	- #	1 = Factory default 2 = Default P100(The following codes will be set): *21*0#, *22*0#, * 27*03#, *80*1#, *84*1#, *88*1# 3 = Default CPC(The following codes will be set): *21*3#, *22*3#, *27*03#, *80*1#, *84*1#, *88*1# 4 = Default VOICE(The following codes will be set): *21*1#, *22*1#, * 27*03#, *80*1#, *84*1#, *88*1#

LED indication for pictogram in car

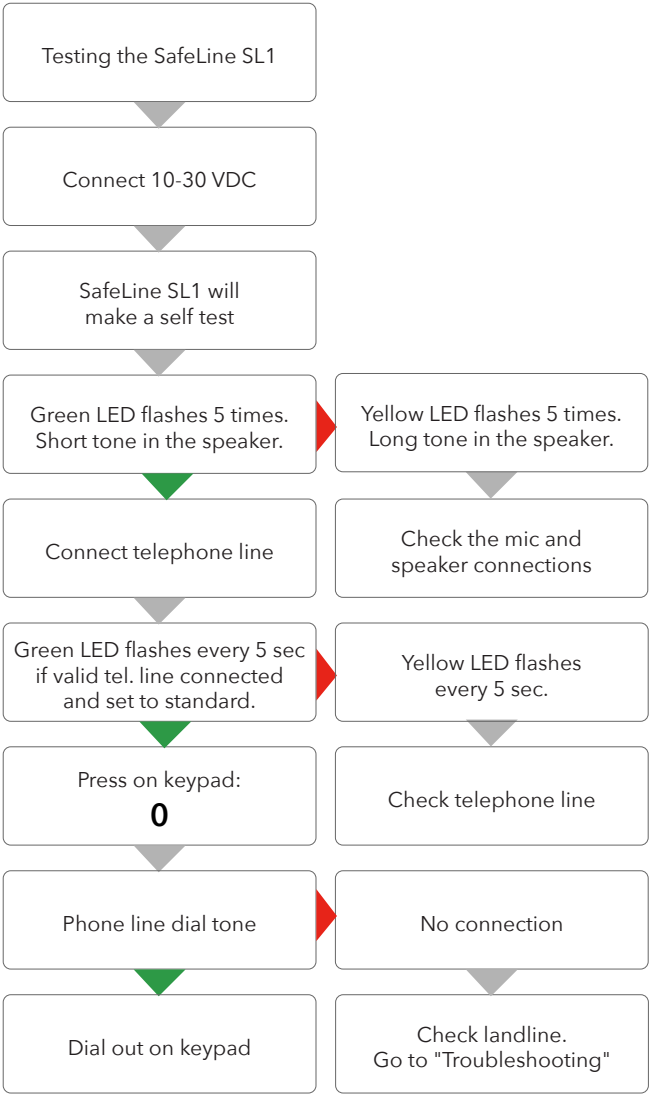
	Yellow LED	Green LED	System LED
	Call in progress The yellow pictogram LED is lit as soon as the alarm button is pressed.	**Call connected** The green pictogram LED turns on as soon as the SafeLine unit detects a responding voice. The LED is turned off when the call is terminated.	The system LED is located on the back-side of the unit.

Standard (*78*0#)	Yellow LED	Green LED	System LED
Light off	No alarm activated	Telephone line not OK.	-
Flashing slowly	**Flashing once every 5 seconds** Telephone line not OK.	**Flashing once every 5 seconds** Unit is OK.	**Flashing once every 5 seconds:** Telephone line OK.
Flashing quickly	**Flashing twice every second** Alarm button active.	**Flashing two times every 5 seconds** Alarm filter activated.	**Flashing two times every 5 seconds:** No telephone connec-tion available. **Flashing rapidly:** Incoming call.
Continuous light	Activated alarm. Remains lit until reset.	Call connected.	Call connected.

Strictly EN81-28 (*78*1#)	Yellow LED	Green LED
Flashing	**Flashing twice every second** Alarm button active.	-
Continuous light	Activated alarm. Remains lit until reset.	Call connected.

Test alarm failure	Yellow LED	Green LED
Light on for 1 second then light off for 1 second	**Test alarm (line check) failed** Returns to normal at next valid test alarm.	**Test alarm (line check) failed** Returns to normal at next valid test alarm.

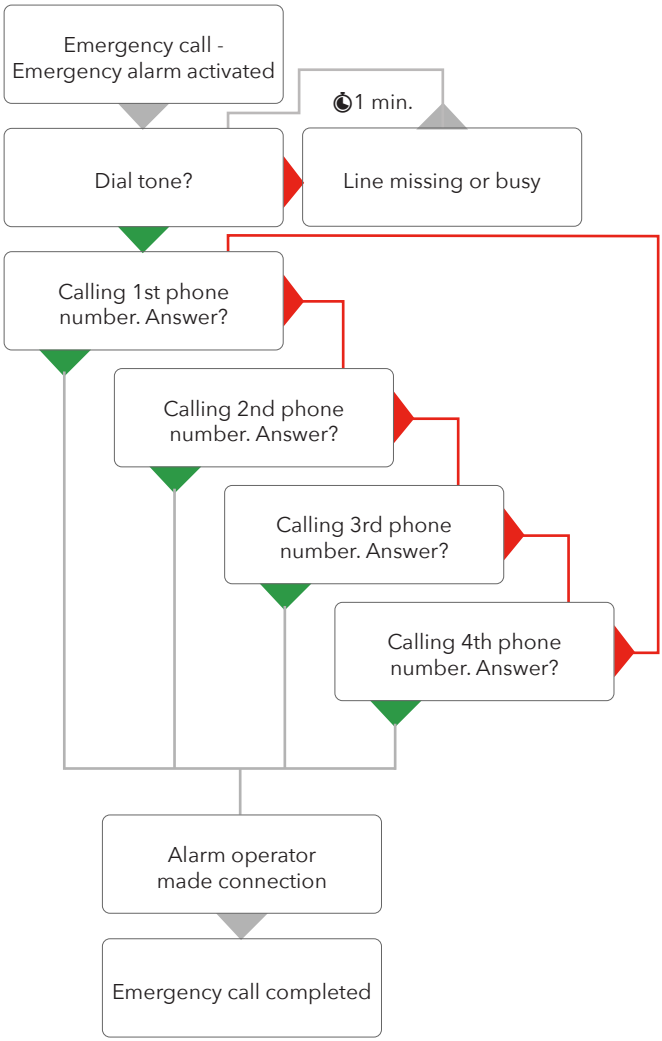
Testing


Testing the SafeLine SL1
Connect 10-30 VDC
SafeLine SL1 will make a self test
Green LED flashes 5 times. Short tone in the speaker.
Yellow LED flashes 5 times. Long tone in the speaker.
Connect telephone line
Check the mic and speaker connections
Green LED flashes every 5 sec if valid tel. line connected and set to standard.
Yellow LED flashes every 5 sec.
Press on keypad: 0
Check telephone line
Phone line dial tone
No connection
Dial out on keypad
Check landline. Go to "Troubleshooting"

Emergency calling process

With 4 stored telephone numbers in the system, each number can be called 3 times. This adds up to the 12 call limit.

Push the alarm button in the lift cabin to initiate an emergency call. To restart the dialling process, push the alarm button again.



Trouble-shooting

Emergency button NO

Emergency button NC

The telephone beeps every 5 seconds.

This is to notify the passengers of the ongoing call (anti eaves dropping)

The unit makes an alarm call when powered up.

- Improper type of emergency button selected. Change from NC to NO or from NO to NC.
- Emergency button is stuck.

No sound transmitted from the lift car to the call receiver.

Press "0" to get an outside line. Make a call. If the sound transmission is OK in both directions, check if your emergency operator supports the chosen alarm type. If no protocol is used, change the call type to "VOICE". If no sound is transmitted from the lift car, check the microphone.

Poor/distorted sound quality.

Volume might be set too loud! Lower the volume and check again.

Interfering noise when the call is connected

The problem might be due to induction in the phone cable. According to the phone companies' regulations, the phone line must be installed in a separate cable.

GSM noise.

Change the antenna position when a call is connected until you find the optimal antenna position. Do not install the antenna near the unit or close to the cabelling.

Can not dial out

- Broken line connection. (LED not blinking green)
- No money on refill SIM-card, verify the SIM-card by inserting it into a normal mobile phone.

No voice switching

- The volume is set too high.
- The problem might be due to induction in the phone cable.

The unit can not make an alarm call.

At least one phone number (and one ID code if using data identification) must be configured to enable making a call from the unit. Refer to the parameter list (*11*).

EU Declaration of Conformity

Product:	Lift telephone: SafeLine 1
Type / model:	**SL1**
Article no:	*SL1, *SL1-RE, *SL1-RECB, *SL1-SM
Manufacturer:	SafeLine Sweden AB
Year:	2017

We herewith declare under our sole responsibility as manufacturer that the products referred to above complies with the following EC Directives:

Directives

Electro Magnetic Compatibility:	2014/30/EU
RoHS 2:	2011/65/EU

Standards applied

EN 81-20:2014	Lift: Safety & Technical requirements
EN 81-28:2003	Lift: Remote alarm on passenger and goods passenger lifts
EN 12015:2014	EMC: Emission, Electromagnetic compatibility
EN 12016:2013	EMC/Lifts: Immunity, Electromagnetic compatibility
EN 50581:2012	RoHS: Technical doc. for assessment of restriction of RoHS.

Tyresö, 2017-04-07

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