

SafeLine MX3+





www.safeline-group.com

SafeLine MX3+

TECHNICAL DATA

Supply voltage:	10 to 30 VDC					
Supply current:	In standby: 50 mA at 12 VDC When connected: 160 mA at 12 VDC					
Alarm button input:	10 to 30 VDC, 5 mA optically isolated					
Input:	10 to 30 VDC, 5 mA optically isolated					
Output:	2x 12 to 24 VDC, max 200 mA (transistor negative)					
Weight:	Flush mounted (no button): 535 g Flush mounted with button: 555 g Surface mounted (no button): 510 g Surface mounted with button: 575 g Car Operating Panel: 380 g					
Size (H x W x D):	Flush mounted (no button): 155 x 90 x 14 mm Flush mounted with button: 155 x 90 x 28 mm Surface mounted (no button): 136 x 78 x 16 mm Surface mounted with button: 155 x 90 x 31 mm Car Operating Panel: 88 x 53 x 14 mm					
IP class:	IP 43					
Bluetooth:	Bluetooth 4.0 BLE 2,4 GHz					

INTRODUCTION

General information	4
Declaration of conformity	4
Safety Precautions	4

INSTALLATION

Overview	5
Measurements and components list	6
Wiring diagram	9
Wiring diagram, output 1 and 2	10
Wiring diagram, External Button	11
Wiring diagram, HL1/HL2	12
Wiring diagram, when updating to MX3+	13

CONFIGURATION

CONNECT	14
Outputs	15
Configuration interfaces	17
Configuration method	18
Configuration examples	19
Parameter list	20

OPERATING

27
28
29

SERVICE Troubleshooting 30

Introduction

GENERAL INFORMATION

This unit was built to 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: <u>www.safeline-group.com</u>

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. Products marked with the WEEE mark (shown below), shall not be disposed together with your normal household waste. 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.

(WEEE = Waste of Electrical & Electronic Equipment).



1. Connections

2. RS232 PC connection

Firmware update and configuration with SafeLine Pro.

3. Volume control

To increase volume, press Button "2"; to decrease volume, press Button "8".

It is also possible to adjust the volume in the SafeLine CONNECT app (available on both Google Play and Apple App Store).

4. Output for additional voice unit

5. Keyboard

Installation

MEASUREMENTS AND COMPONENTS LIST

Flush mount SafeLine MX3+ with pictograms

Article number: *SLMX3-REC-PIC



Flush mount SafeLine MX3+ with pictograms and emergency alarm button Article number: *SLMX3-REC-PICB



MEASUREMENTS AND COMPONENTS LIST

Surface mount SafeLine MX3+ with pictograms

Article number: *SLMX3-SM-PIC



Surface mount SafeLine MX3+ with pictograms and emergency alarm button Article number: *SLMX3-SM-PICB



Installation

MEASUREMENTS AND COMPONENTS LIST

SafeLine MX3+ COP

Article number: *SLMX3-COP





WIRING DIAGRAM

Installation



Parallel-wiring, SafeLine MX3+ on PSTN Line (max 9 units)



MX3+ v1.06 EN © 2018 SafeLine and all the SafeLine products and accessories are copyrighted by law.

WIRING DIAGRAM, OUTPUT 1 AND 2

Use CABLE13 to connect SafeLine MX3+ with external accessories.



WIRING DIAGRAM, EXTERNAL BUTTON

Use CABLE13 to connect SafeLine MX3+ with external accessories.



MX3+

Installation

WIRING DIAGRAM, HL1/HL2

Use CABLE15 to connect SafeLine MX3+ with a hearing loop.



Installation

WIRING DIAGRAM, WHEN UPDATING TO MX3+ FROM MX2

When updating to MX3+ from MX2, the RS2 cable kit is required (RJ45 to 6 pin connector).





Unconnected cables must be isolated in order to avoid short circuiting.

CONNECT

CONNECT is the new tool from SafeLine that will make configuring SafeLine products even easier than before.

Configuration is done wirelessly with compatible products and the SafeLine CONNECT smartphone app (available free of charge on the Apple App Store and on Google Play). The app has an easy to use interface for the configuration and settings of the SafeLine product.

CONNECTINSIDE

If the unit has been idle for more then 10 minutes when trying to connect, it will ask for a password.

If that is the case, please turn the unit off and on again, and then try to reconnect.

Easy to learn and use

Thanks to the well designed user interface, CONNECT is very intuitive to use, with quick and easy configuration of SafeLine products. Simply follow the steps in the app to configure the SafeLine unit. There is no longer any need to use a computer or to remember a wide list of configuration codes in order to configure SafeLine products. CONNECT functions includes templates which will allow pre-configured settings.

CONNECT secure

CONNECT is protected against unauthorised use, and all SafeLine products with built-in CONNECT functionality, are password protected.

Always accessible

With the built-in CONNECT functionality in the SafeLine products, the product configuration is always accessible, all that is needed is a smartphone (or tablet) with the free app installed. No computer will be needed to make any configuration or settings changes.

App Store, iPhone



Google play, Android



OUTPUTS

Output 1 and 2 can be configured independently.



Outputs

The two outputs can be configured independently with a number of functions. The configuration is performed via SafeLine Pro or with the configuration code *88*XY#, where X specifies output 1 or 2 and Y specifies the function:

- 0 = Pictogram
- (Output 1 Yellow, Output 2 Green)
- 1 = Activate with DTMF 8/9 (Output 1 - DTMF8, Output 2 - DTMF9)
- 2 = System Failure
- 3 = Emergency Bell

E.g. *88*13# configures output 1 for an emergency bell.

Pictogram Yellow

(Output 1, Configuration code 0)

The output is activated at the following events:

- Input for Emergency Bell is activated.
- Input for Emergency Bell is set active at a certain time.

The output is deactivated at the following events:

- Distress input deactivated before set time.
- Active alarm ended.
- Reset button (#) is pressed.

Pictogram Green

(Output 2, Configuration code 0)

The output is activated at the following events:

- Voice communication activated.
- Incoming call connected.

The output is deactivated at the following events:

- Outgoing call ended/timeout/cancelled.
- Incoming call ended/timeout/cancelled.
- Reset button (#) is pressed.

Activate with DTMF 8 (Output 1, Configuration code 1)

The output is activated at the following events: - DTMF tone 8 is received.

The output is deactivated at the following events: - 3 seconds after activation.

Activate with DTMF 9 (Output 2, Configuration code 1)

The output is activated at the following events: - DTMF tone 9 is received.

The output is deactivated at the following events: - 3 seconds after activation.

System Failure

(Output 1 & 2, Configuration code 2)

The output is activated at the following events: - Telephone line OK.

The output is deactivated at the following events: - Telephone line missing.

Emergency Bell (Output 1 & 2, Configuration code 3)

The output is activated at the following events:

- Emergency alarm button input active.
- The call is not yet connected.

The output is deactivated at the following events:

- Emergency alarm button input deactivated.
- The call is connected.

Silence Disconnect

The function will automatically disconnect a call if no sound is received from the alarm operator within a set time. Only works for voice calls, not for P100/CPC/Q23.

The configuration is performed via SafeLine Pro or with the configuration code *92*X#, where X specifies the time:

- **O** = The function is off.
- 1 = 30 seconds.
- **2** = 60 seconds (default).
- **3** = 90 seconds.

Software controlled volume control

The speaker volume is adjusted via the keyboard control. Key 2 raises and Key 8 lowers the volume in 6 steps. The volume can also be adjusted using the command *76*X# where X is the desired volume position between 1 and 6. Default value is 3.

The set volume mode are stored in the EEPROM so that the unit remembers the set position.

External Mic/speaker part

When a call is activated by the emergency alarm button on the external mic/speaker part, the microphone on the external mic/speaker part will be used and the internal microphone disconnected.

The speaker sound will however be heard from both speakers simultaneously.

CONFIGURATION INTERFACES

Keyboard configuration

The integrated keyboard at the rear of the MX3+ enables a fast configuration of the unit.

Configuartion with SafeLine Pro

The unit can be configured at the office prior to the installation or at site after installation, with a configuration cable (*PCable).

Remote configuration

Play).

For remote configuration, you can use any PSTN tone dial phone. Please find the instructions of how to perform it in the section "Configuration method" (page 18).

Remote configuraion with SafeLine Pro Connect an SLPro Link to a computer with

SafeLine Pro and a serial cable.

Remote configuration with CONNECTable Remote configuration with the SafeLine CONNECT smartphone app (available free of charge on the Apple App Store and on Google









The unit has to be connected to a power source before the configuration begins!

SafeLine Pro can be downloaded on our website: http://www.safeline-group.com/en/downloads/

SafeLine Pro 4.42 or later is required.

CONFIGURATION METHOD

If the time between the operation of two keys exceeds 10 seconds, the code has to be reentered.

If the time exceeds 30 seconds, the call is disconnected or configuration mode is ended.



CONFIGURATION 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.



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

1.	Start configurat	ion:			0	0]													
2.	Enter P100 ID c	nter P100 ID code:			* Lif	0 t ID	1 code	* (ea	4 ch li	5 ft m	6 ust	4 nave	5 its	6 own	4 uni	5 que	# code).		
3.	Set test alarm t	et test alarm type:			*	3	1	*	0	#		-	Exai	nple	e: Te	st al	arm	type	P100.	
4.	Set number of days between test alarm:			*	2	7	*	0	3	#	- [Exam	nple:	3 da	ys be	etwee	n tes	t alarm		
5.	LMS phone number:			*	1 Dnly	6 if us	* ing S	9	8	7	6	5	4	3	2	#				
6.	Test alarm:	larm:			* (F	* 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	ion: * 0 0 * #																		
			 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. 																	

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: 1-20 digits.
2nd Phone number	*12*	#	If calling through a switch board, delay time
3rd Phone number	*13*	#	can be set by adding asterisks between leading
4th Phone number	*14*	#	number of the switchboard and telephone number for the alarm call receiver.
			Each asterisk (*) is equal to one second delay.
			Example #1: *11*0**1234567# Example #2: *11*# deletes the phone number.
CALL TYPE	CODE	DATA	COMMENTS
Call type 1st number	*21*	- #	Change the call type of the stored telephone
Call type 2nd number	*22*	- #	numbers:
Call type 3rd number	*23*	- #	0 = P100
Call type 4th number	*24*	- #	1 = VOICE (default) 2 = Q23
			3 = CPC
			Change this only if your alarm operator is using any of the mentioned protocols.
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 or SLCC.
Test alarm	*17*	#	Phone number to test alarm receiver or 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*	- #	0 = P100 3 = CPC 4 = Caller ID
ALARM TYPE	CODE	DATA	COMMENTS
Alarm type 1st number	*41*	#	Only when using CPC as alarm protocol Normally 10 or 27, check with your alarm
Alarm type 2nd number	*42*	#	company!
Alarm type 3rd number	*43*	#	
Alarm type 4th number	*44*	#	
Alarm type LMS	*45*	#	LMS (Lift Monitoring System) (Battery alarm) Normally 17
Alarm type Test alarm	*46*	#	Normally 26

51	"Speak" #	This message will be played in the lift car				
		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.				
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 nose in the background when recording the message.				
		Example of message: This is an alarm from the lift on 5th avenue.				
		To hear the quality of the message, press "1"				
		To terminate the call press "#".				
61	-#	To play the recorded message, press the				
61	#	desired parameter followed by #.				
62	- #	0 = Disable recorded message.				
.02	**	T – Enables recorded message.				
	52 *61* *62* *62*	*52* "Speak" # *61* -# *61* # *62* -# *62* #				

OTHER CODES	CODE	DATA	COMMENTS
Emergency signal in speaker	*71*	- #	The speaker siren will sound at emergency call. 0 = Off (default) 1 = On
Ring-tone timeout	*72*	#	Number of ring signals before dialling the next number (default = 08).
Additional input function	*73*	- #	 Selects input function: O = 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 4 = Call Delay
Additional input type	*74*	- #	0 = Normally-open contact, N/O (Default) 1 = Normally-closed contact, N/C
Hotline	*75*	- #	Phone connects directly to a fixed receipient without phone number O = Standard phone line (default) 1 = Hotline
Volume control	*76*	- #	Adjustabel volume, between 1-6. (Default = 4)

OTHER CODES	CODE	DATA	COMMENTS
Compatibility mode	*77*	- #	O = 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 reciept 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 programmed as automatic by pressing "*". No ascending tones will be heard. For repeating the Alarm messages to operator, press "1" in all in/out going calls.
			3 = Swiss M (Alarm operator mode) Only to be used in voice mode. Disconnect by "O". Dials the next number if call timeout, blocking tone, new dailing tone, and operator silence.
Indicator mode	*78*	- #	0 = Standard (default) 1 = Strictly EN81-28 2 = Strictly single EN81-28
Voice communication time-out	*79*	#	Value 1 - 20 minutes. 05 = default value 08 = default value for other protocols
Reset active alarm automatically	*80*	- #	0 = Off 1 = On (default)
Auto answer	*81*	#	Number of signals before SafeLine answers incoming call. Can be set from 00-16 (default = 02). 00 = Never answering.
Unit number	*82*	- #	Unit number [0] is set by default, and means that the unit will respond immediately.
			Unit number [1-9] is used when the units are sharing the same phone line. When the unit number is assigned, the specified unit is accessible for configuration.

OTHER CODES	CODE	DATA	COMMENTS
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 with P100 protocol	*84*	- #	Select which message(s) to send to the alarm receiver at an alarm call. O = 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. O = 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
Outputs	*88*	#	The first digit specifies the output, i.e Output 1 or Output 2. The second digit specifies the function: O = Pictogram (Output 1 - Yellow, Output 2 - Green) 1 = Activate with DTMF 8/9 (Output 1 - DTMF 8, Output 2 - DTMF 9) 2 = System failure 3 = Alarm Example: *88*11# - Output 1, Activate with DTMF 8 *88*23# - Output 2, Alarm
Alarm button type	*89*	- #	0 = Normally-open contact, N/O (Default) 1 = Normally-closed contact, N/C

OTHER CODES	CODE	DATA	COMMENTS
Microphone sensitivity	*90*	- #	The sensitivity of the microphone can be reduced in three levels. O = No reduction (default) 1 = 20 % Reduction 2 = 40 % Reduction 3 = 60 % Reduction
Change password	*91*	#	Change password (default=0000).
Operator silence disconnect	*92*	- #	Disconnects the call when the alarm operator has been quiet for longer than the time set. 0 = Off (default) 1 = 30 sec 2 = 60 sec 3 = 90 sec
Simulate an alarm event	*94*	- #	Triggers an alarm event after configuration is terminated. 1 = Emergency call 2 = Test alarm 3 = Battery failure 4 = Microphone/Speaker failure 5 = Receipt on voice call 6 = Maintenance 7 = Main unit power failure 8 = Stuck button alarm
Reset to default settings	*99*	- #	<pre>1 = Factory standard 2 = Default P100 (The following codes will be set): *21*0#, *22*0#, * 27*03#, *76*4#, *80*1#, *84*1#, *88*1# 3 = Default CPC (The following codes will be set): *21*3#, *22*3#, *27*03#, *76*4#, *80*1#, *84*1#, *88*1# 4 = Default VOICE (The following codes will be set): *21*1#, *22*1#, *27*03#, **76*4#, 80*1#, *84*1#, *88*1#</pre>

LED INDICATION



Standard (*78*0#)

Yellow LED

Light off: Telephone line OK, call terminated.

Flashing once every 5 seconds: Telephone line not OK.

Flashing twice every second: Emergency signal button active.

Yellow steady: Activated alarm. Remains lit until reset.





System LED The system LED is located on the backside of the unit.

System LED

Flashing once every 5 seconds: Telephone line OK.

Flashing two times every 5 seconds: Telephone line **not** OK.

Flashing twice every second: Calling out.

Light steady: Call connected.

Flashing rapidly: Incoming call.

Strictly EN81-28 (*78*1#)

Yellow LED

Green LED

mode.

Green LED

Light off:

5 seconds:

5 seconds:

Green steady:

Call connected.

Telephone line **not** OK.

Flashing once every

Telephone line is OK.

Alarm filter activated.

Continuous flashing:

Telephone in configuration

Flashing two times every

Flashing twice every second: Emergency signal button active. **Green steady:** Call connected.

Yellow steady:

Activated alarm. Remains lit until reset.

Strictly single (*78*2#)

As strictly EN81-28 except that the LEDs will not be lit simultaneously, but one at a time.

Operating



Operating

EMERGENCY CALLING PROCESS



Service TROUBLESHOOTING



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 N/C to N/O or from N/O to N/C.
- Emergency button is stuck.

No sound transmitted from the lift car to the call receiver

Press "O" 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*).





Your partner in lift safety

SafeLine Headquarters

Antennvägen 10 · 135 48 Tyresö · Sweden Tel.: +46 (0)8 447 79 32 · info@safeline.se Support: +46 (0)8 448 73 90

SafeLine Denmark

Erhvervsvej 19 · 2600 Glostrup · Denmark Tel.: +45 44 91 32 72 · info-dk@safeline.se

SafeLine Norway

Solbråveien 49 · 1383 Asker · Norway Tel.: +47 94 14 14 49 · post@safeline.no

SafeLine Europe

Industrieterrein 1-8 · 3290 Diest · Belgium Tel.: +32 (0)13 664 662 · info@safeline.eu Support: +32 (0)4 85 89 08 95

SafeLine Deutschland GmbH

Kurzgewannstraβe 3 · D-68526 Ladenburg · Germany Tel.: +49 (0) 6203 - 840 60 03 · sld@safeline.eu

SafeLine Elevator Parts UK

3 Evegate Park Barn \cdot Station Road \cdot Smeeth \cdot Ashford \cdot Kent \cdot TN25 6SX \cdot United Kingdom Tel.: +44 (0)1303 813414 \cdot info@safeline.uk.com

www.safeline-group.com