

Lift Alarm TSA5100 AutoDial



PSTN

Installation & User Guide

Rev. 2.0 UK
18. december 2009



Backup battery
(ABP TeleTech part number 9101221000)
12 VDC battery tested and approved by ABP
TeleTech A/S to be used in the TSA5100
AutoDial. Including yellow label with replace-
ment date.
(ABP TeleTech A/S always use VdS approved batteries)



Inductive Loop Adaptor ILT-1
(ABP TeleTech part number 9300000075)
Wire loop for pickup coil to help hearing
impaired people communicate with the
rescue service.



PitSafe PSB10
(ABP TeleTech part number 9170310100)
Emergency pushbutton with microphone to be
placed under the lift car. Enables the installer
to call for help if trapped in the lift pit.



LineSaver ALC10
(ABP TeleTech part number 9151100000)
With a ALC10 LineSaver you can connect up
to 8 TSA5100 and TSA2100 lift alarms to one
telephone line and still have the possibility to
call a specific lift alarm.

Table of Contents

Preface.....	3
Obligations.....	3
Package contents.....	3
Technical specifications.....	3
Placing and connecting.....	4
Connections.....	5
Accessories and options.....	6
14 way connector.....	6
Jumper setting; Outputs.....	7
Wiring; Bell and emergency light output.....	8
Wiring; Bell and pictograms.....	9
Wiring; Emergency light and pictograms.....	10
Programming.....	11
Local programming.....	11
Remote programming.....	11
Minimum programming.....	11
Programming an answering the TSA5100 AutoDial; using protocols.....	12
General information.....	12
TeleTech+.....	12
Guided Confirmation.....	13
Voice detect.....	14
Common programming.....	14
Speech messages.....	15
Jumper setting; Speech messages.....	15
Manual self test.....	16
Automatic self test.....	16
Maintenance.....	17
Turn TSA5100 Autodial on.....	19
Turn TSA5100 Autodial off.....	19
Master reset.....	19
Accessories.....	19



CAUTION: DISCONNECT BOTH 230 VAC AND TELEPHONELINE BEFORE OPENING THE TSA5100 AutoDial FOR BATTERY REPLACEMENT.

CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.



Turn TSA5100 Autodial on

To turn on the TSA5100 Autodial connect 230 VAC. The TSA5100 Autodial starts with a loud beep. If a telephone line is connected and the Check call number and ID code is programmed a test call to the programmed telephone number is made. When the call is acknowledged the TSA5100 Autodial will go into standby mode.

Turn TSA5100 Autodial off

To turn off the TSA5100 Autodial remove 230 VAC, then press and hold the reset button until 3 beeps is heard. Check that the green control light is off (see figure 2).

Master reset

To perform a master reset turn off the TSA5100 Autodial. Press and hold the reset button while it is turned on again, make sure to hold the reset button until the loud beep stops. Please notice that a master reset set all programming back to factory defaults, the speech messages can however be protected via the jumper setting (see page 15).

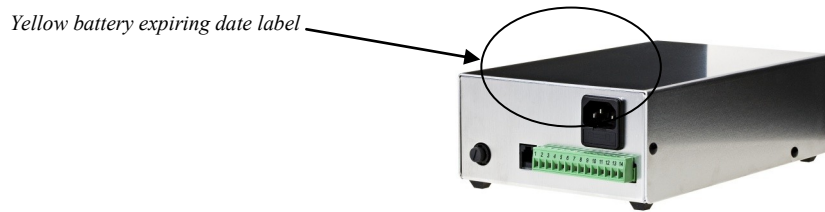
Accessories

Below you find a short list of accessories to the TSA5100 AutoDial, for a complete list please visit our homepage www.abp-teletech.com, contact your local distributor or sales@abp-teletech.com



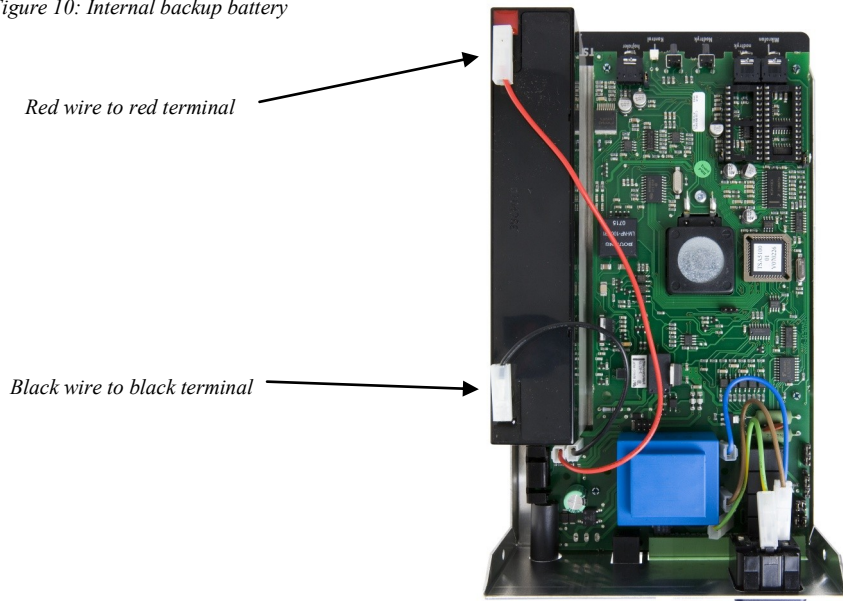
External Loudspeaker - ESP1
(ABP TeleTech part number 9300000040)
External loudspeaker to be used where the TSA5100 AutoDial is installed in very noisy environments, in very large lifts or where the lift materials subdue the sound from the lift roof.

Figure 9: Location of yellow battery expiring date label



When the battery is replaced make sure that it is connected correctly (red wire to red terminal and black wire to black terminal). Remember to replace the yellow “battery expiring date label” with the label that came with the new battery.

Figure 10: Internal backup battery



DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTION

SUITABLE FOR MOUNTING ON CONCRETE OR OTHER
NON-COMBUSTIBLE SURFACE ONLY

Preface

This guide is intended for the installers of lift alarms. On the basis of this guide the installer will be able to connect, program and test the lift alarm.

The installer will also be able to instruct the owner of the lift in how the lift alarm is tested and maintained.

This guide is not a complete instruction in all functions and programming possibilities. If you require this information a Technical manual can be obtained on our homepage www.abp-teletech.com, by contacting your local distributor or e-mail support@abp-teletech.com.

Obligations

The package contains a document named Owner of Elevator Document (OED). According to EN 81-28 the installer is obliged to fill in this document and hand it over to the owner of the lift. Also the installer must give the owner of the lift instructions in how the lift alarm is tested, programmed and maintained.

Package contents

- Qty:
- 1 TSA5100 Lift Alarm
 - 1 Power cable
 - 1 Microphone with 3 metre cable
 - 1 Rubber grommet
 - 1 Manual
 - 1 Owner of Elevator Document (OED)

Technical specifications

Physical measurements

Dimensions (L,W,H):.....273x147x72 mm
Weight:.....3 Kg with battery

Surroundings

Operational temperature:.....0 to 50°C

Storage temperature:.....20 to 40°C
Humidity:.....80%

Electrical connections

Power supply:.....IEC plug (EN 60 320, BS 44918)
I/O:.....14 PIN screw terminal
Telephone connector:.....RJ-11 6/4
Microphone:.....Jack 3,5 mm 3 pole
External loudspeaker:.....Jack 3,5 mm (8-32Ω)
Under cabin alarm:.....Jack 3,5 mm 3 pole

Power Supply

Main power:.....230 V, 50Hz
Main fuse:.....50 mA (slow)
Backup battery:.....12V/2A Lead battery
Operation time on backup battery:.....8 hours (without emergency light)

Placing and connecting

Place the TSA5100 on the roof of the lift car in such a way that the risk of damage to the connectors is minimized (a protecting bracket can be purchased from ABP TeleTech A/S or your local distributor).

Connect the microphone to the jack socket shown in figure 2, often you can also place the microphone on the lift roof. If you however have a noisy environment (for instance a ventilator in the lift) it can be necessary to place the microphone behind the panel or otherwise in the lift cabin. If you chose to place the microphone on the lift car's roof, you shall place it as far away from the loudspeaker as possible.

Make sure that the 230 VAC is not coming from a source (for instance cabin light) that for power saving reasons is turned off if the lift haven't been in use for a period of time.

It is recommended that you connect all required in- and outputs before you connect 230 VAC.

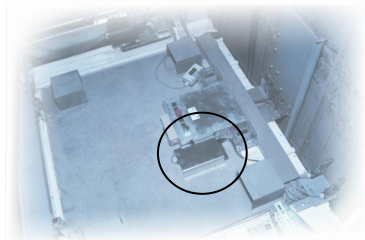


Figure 1: TSA5100 AutoDial on top of a lift car

If one or both tests fails the TSA5100 AutoDial will call the technical alarm number (the 4th telephone number). If this call is going to a computer using the TeleTech+ protocol the failures are registered in clear text.

No matter how the tests turned out the TSA5100 AutoDial will then call the “Check call number” (the 5th telephone number) to indicate that both the TSA5100 AutoDial and the telephone line is working.

Maintenance

The TSA5100 AutoDial must be function tested and maintained when ever the lift is maintained. This function test includes both the manual self test described on previous page and a test of the 2-way communication which is done using one of the following methods:

EN 81-28 compatible:


- 1: Make sure that the lifts service switch is activated (see the lifts instructions).
- 2: Press the emergency button until you hear the lift alarm dialling.
- 3: When the rescue service answers, check the 2 way communication.
- 4: Check that the rescue service is ending the call correct (the TSA5100 AutoDial hangs up).
- 5: Deactivate the service switch and wait 1 second.
- 6: Reactivate the service switch (for at least 1 second) to send an “End Of Alarm” signal.
- 7: Deactivate the service switch, the test is now completed.


Non EN 81-28 compatible:

- 1: Press the emergency button until you hear the lift alarm dialling.
- 2: When the rescue service answers, check the 2 way communication.
- 3: Check that the rescue service is ending the call correct (the TSA5100 AutoDial hangs up).

If the TSA5100 AutoDial indicates a battery failure during the automatic or manual test, the battery must be replaced as soon as possible. A new battery can be ordered from your local distributor (ABP TeleTech A/S part number: 9101221000).

The internal backup battery must be replaced before the expiring date noted on the yellow label on the TSA5100 AutoDial.

 Jumper = closed; recording and reset (erasing) possible.

 Jumper = open; recording and reset (erasing) not possible.

Manual self test

When a manual self test is performed first ensure that all inputs are in the required normal state (normally open/normally closed). then press the Reset button until 1 beep is heard.

The TSA5100 AutoDial will then test the acoustic system by sending out 3 short tones from the loud speaker, that must be registered by the microphone. If this fails (for instance due to a defective or wrongly placed microphone) you will hear one long tone instead of 3 short tones.

The TSA5100 AutoDial will then test the internal backup battery for 10 seconds during which a short beep every second is heard. If the battery fails during the test the TSA5100 Autodial will send out a series of rapid tones.

After these self tests the TSA5100 AutoDial “reads” all inputs (normally open/normally closed) and register this as normal/standby state.

Automatic self test

According to EN 81-28 the a lift alarm must perform a check call at least every 72 hours. In connection with this check call the TSA5100 AutoDial can perform an acoustic test as well as a battery test (if you wish to enable one or both of these tests please refer to the technical manual, contact your local distributor or contact support@abp-teletech.com).

During the acoustic test the TSA5100 AutoDial will send out 3 short tones which must be registered by the microphone, if the test fails one long tone will be heard instead.

The battery test is a 10 seconds load test of the battery during which the battery Voltage must not drop under 11 Volts.

Connections

Figure 2: Front view

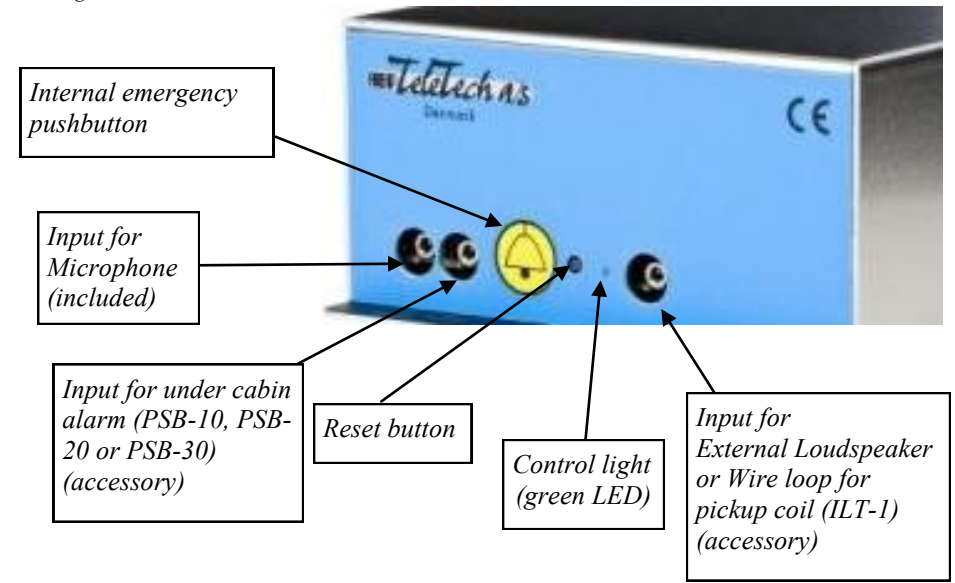
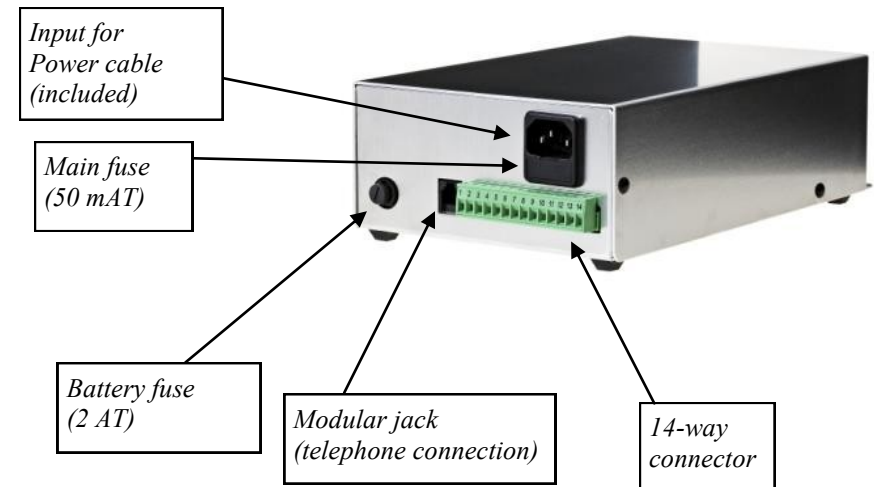


Figure 3: Rear view



Accessories and options

It is possible to connect emergency pushbuttons from ABP TeleTech's PSB series to be used under the lift or in the pit shaft. The PSB series include the following:
PSB-10 Emergency pushbutton with microphone.
PSB-20 Emergency pushbutton with microphone and loudspeaker.

It is also possible to connect a wire loop for pickup coil, ILT-1, to allow hearing impaired people to communicate with the rescue service.

14-way connector

Please notice that the output terminals (terminal 11, 12, 13 & 14) can work in different modes depending on the jumper setting of J8 & J9. The functions of the connections are listed below, for wiring diagram please refer to pages 8-10 and chose the one appropriate for you.

Terminals 1 and 2: Telephone line (PSTN).

Terminals 3 and 4: Motor room handset, to establish communication between motor room and lift car. Can also be used to connect an optional Fire Fighter Communication system. Finally you can also use the terminals as programming connection.

Terminals 5 and 6: Emergency pushbutton in lift car. Make sure that it is electrical isolated from any sounders (Bell, Siren etc.) and external Voltages.

Terminal 7: Common input (-) for the technical alarms on terminals 8, 9 and 10.

Terminal 8: Filtering/Doors open (Requires external power supply), when activated the Emergency pushbutton can't be activated. Can also be used to activate a technical alarm call for blocked (open) doors.

Terminal 9: Service/End Of Alarm/Lift in Service (Requires external power supply). Can be used to generate a technical alarm if the lift has been running continually for to long ,or as Service/End Of Alarm (EOA) switch in EN81-28 mode. For further information on EN81-28 mode please contact your local distributor or support@abp-teletech.com.

Terminal 10: Technical alarm (free choice) input (Requires external power supply).

Delay Time – Technical Alarm 2 ('Door Open'): * * 3 * T # (T = 1 - 99 minutes, 0 = disabled, Default = 0)

Delay Time – Technical Alarm 3 (Free choice): * * 4 * T # (T = 1 - 99 seconds, 0 = disabled, Default = 0)

Delay Time – Under car/Pit shaft Emergency: * * 5 * T # (T = 1 - 99 seconds, 0 = disabled, Default = 0)

Delay Time – Emergency Push Button on AutoDial: * * 6 * T # (T = 1 - 99 seconds, 0 = disabled, Default = 2)

Pick-up Delay for Local telephone/motor room handset: * * 7 * T # (T = 1 - 99 seconds, 0 = disabled, Default = 0)

Audio Output level: * * * 0 N # (N = 1 - 9, Default = 5)

End programming by pressing *# to enter standby mode or **# if you want to end programming with a test call to last programmed telephone number.

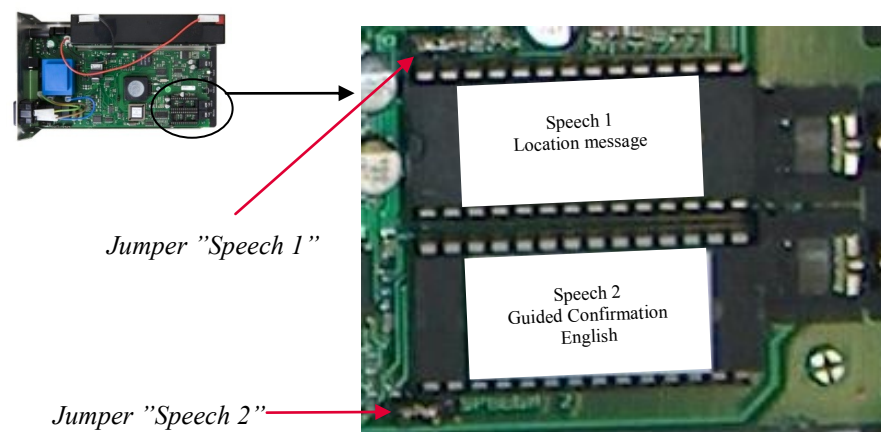
Speech messages:

Speech message 1 = Location message, will be played to Alarm receiver on request or when you call the TSA5100.

Speech message 2 = Guided Confirmation message, will be played to the Alarm receiver.

Notice that you can protect the recorded messages via the jumpers "Speech 1" & "Speech 2".

Figure 8: Jumpers; speech chips



When you received the call and started the two way communication you also acknowledged the call so that the Autodial will not redial no matter how you end the call.

Voice detect

Programming

Alarm number 1: *1 <Telephone number>**0#

Alarm number 2: *2<Telephone number>**0#

Alarm number 3: *3<Telephone number>**0#

Technical alarm number: *4<Telephone number>**0#

“Check call number”: *5<Telephone number>**1# (using “TeleTech+” protocol)

Receiving calls

When the TSA5100 calls and the alarm receiver answer, the AutoDial will detect the voice of the person answering. The AutoDial will then play the location message from speech module 1 (must be recorded by the lift engineer) and will then switch to two way communication.

The rescue service will have 180 seconds to speak with the trapped passengers before the AutoDial will hang up. It will warn with a series of beeps 10 seconds before the time limit is reached.

To end the call press “*#” to have the AutoDial hang up (if it is possible from the telephone you are using). Alternative just hang up the telephone, the TSA5100 AutoDial will then give the engaged tone for the remaining time of the 180 seconds.

When the call was received and two way communication started the call was also acknowledged so that the AutoDial will not redial no matter how the call is ended.

Common programming

Pick-up Delay: * **6 T** # (T = 1 - 9 rings, 0 = disabled, Default = 1)

Record Speech message 1: * **71 <speech>** (please refer to the jumper settings shown on page 15)

Record Speech message 2: * **72 <speech>** (is pre-recorded and protected, please refer to the jumper settings shown on page 15)

Listen to Speech message 1: * **81**

Listen to Speech message 2: * **82**

Access code: * **9 <access code>** #

Delay Time – Emergency Push Button in lift car: * * **1 * T** # (T = 1 - 99 seconds, 0 = disabled, Default = 5)

Delay Time – Technical Alarm 1 (‘Lift in Service’): * * **2 * T** # (T = 1 - 99 minutes, 0 = disabled. Default = 0)

Terminals 11 and 12: Relay contact for sounder (bell, siren etc.) alternative the outputs can be used as yellow and green pictograms depending on jumper setting (see “Jumper settings; Outputs” chapter and wiring diagrams page 8-10).

Terminals 13 and 14: Outputs for yellow and green pictograms alternative emergency light output (12 VDC maximum 1Amp.) depending on jumper setting (see “Jumper settings; Outputs” chapter and wiring diagrams page 8-10).

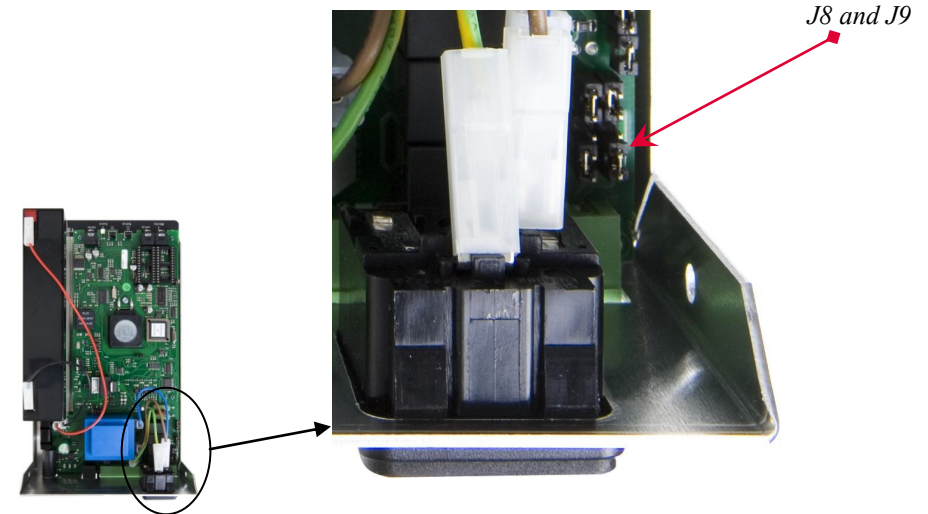
Jumper settings; Outputs

The outputs from the TSA5100 Autodial can be configured, by the use of the jumpers J8 and J9 (shown on figure 4), to activate pictograms, emergency light or sounder switch.

Yellow pictogram, is used to indicate to deaf people (via light) that an alarm call is in progress. Output maximum is 12VDC 100mA.

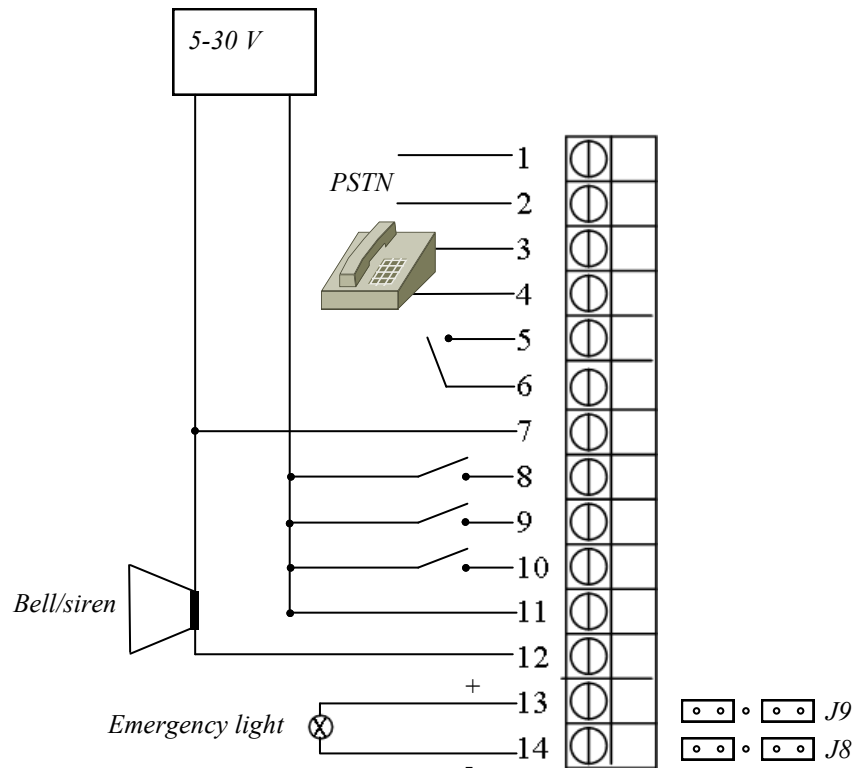
Green pictogram, is used to indicate to deaf people (via light) that communication is established with the rescue service and the alarm is given. Output maximum is 12VDC 100mA.

Figure 4: Output jumpers



Wiring; Bell and emergency light output (no pictograms)

Figure 5: Wiring; Bell and emergency light output



With the jumpers “J8” and “J9” in the position shown above the TSA5100 AutoDial can supply backup power for emergency light in the lift car (12 VDC maximum 1 Amp).

The TSA5100 AutoDial can also operate as a (NO) relay contact for an external sounder, for instance a bell or a siren.

Technical alarm number: *4<Telephone number>**1#
 “Check call number”: *5<Telephone number>**1#

Receiving calls

When the TSA5100 AutoDial is calling using the “TeleTech+” protocol the alarm call will appear on a computer screen. The person who is receiving the call must then sign the call using the computer mouse or function keys and can then pick up the telephone and speak with the trapped passengers, while seeing where the lift is located and who to contact for onsite assistance. The call is ended by clicking on the “End” button using the computer mouse or the function keys. All technical alarms will be received in clear text and the check calls will be logged or registered/marked as missing if necessary.

Guided Confirmation

Programming

Alarm number 1: *1<Telephone number>#

Alarm number 2: *2<Telephone number>#

Alarm number 3: *3<Telephone number>#

Technical alarm number: *4<Telephone number>#

“Check call number”: *5<Telephone number>**1# (using “TeleTech+” protocol)

Receiving calls

When the TSA5100 Autodial calls, the receiver will hear the pre-recorded message (from speech module 2), “Lift emergency – Press 3 for lift location - press 9 to speak with trapped passengers”.

If you then press 3 on the telephone you’ll hear the location message recorded in speech module 1 (must be recorded by the lift engineer), the Autodial will then shift to two way communication and its possible to speak with the trapped passengers. If you at any point need to hear the location message again you just need to press “3”. If you, when receiving the call, press 9 the Autodial will go directly into two way communication and its possible to talk with the trapped passengers. If you at any point want to hear the location message, just press “3”.

No matter how you received the call you can speak with the trapped passengers for 180 seconds. 10 seconds before the time limit is reached a series of beeps will warn you that the Autodial is about to hang up. If you during these 10 seconds press any key on the telephone, you’ll prolong the time with another 180 seconds.

When you want to end the call you press “*#” and the Autodial hangs up. If you hang up the telephone without pressing “*#” the Autodial will stay online giving the engaged tone for the remaining time of the 180 seconds.

Programming and answering the TSA5100 AutoDial; using protocols.

General information about protocols

The TSA5100 AutoDial can be programmed to use different protocols. In the default setting it is at present possible to use “Guided Confirmation”, “Voice detect” and “TeleTech+” protocols (for more protocols please see the TSA5100 technical guide, contact your local distributor or support@abp-teletech.com).

On the 4th telephone number (technical alarm number) any protocol can be used as it can with the alarm numbers. However if you’re to have optimum use of it you should program it to call a computer with an alarm receiver software, using the “TeleTech+” protocol.

If the “Manual Acknowledge protocol” or “Guided confirmation” protocol are used you’ll only know there is a technical problem but not what it is. If it’s the same number as the alarm calls the call might be recognised as a false alarm.

On the 5th telephone number (Check call number) “TeleTech+” protocol must be used.

Please notice that you can mix the protocols in a call sequence (For instance you can use “Guided confirmation” on the first and third alarm number and “Voice detect” on the second alarm number).

During an alarm call cycle the TSA5100 AutoDial will, if not answered or properly acknowledged, call the next programmed telephone number (1-3). The call cycle will, due to legislation be repeated for a maximum of up to 15 times.

TeleTech+

Please notice that when TeleTech+ protocol is used the ID code received from the rescue service/alarm receiver software must be programmed.

Programming

ID code: *0<ID code>#

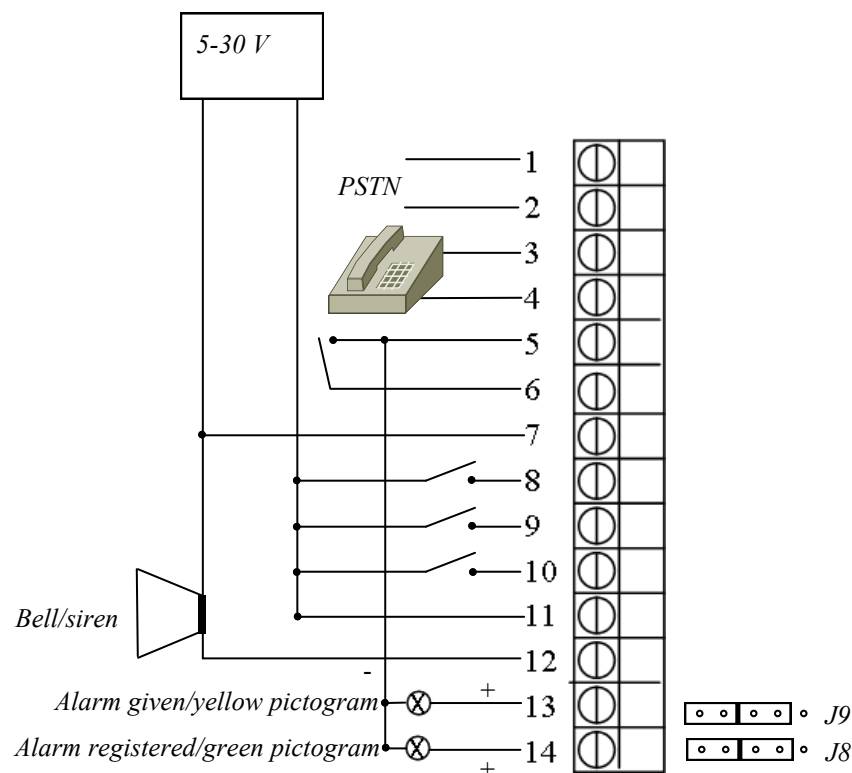
Alarm number 1: *1 <Telephone number>**1#

Alarm number 2: *2<Telephone number>**1#

Alarm number 3: *3<Telephone number>**1#

Wiring; Bell and pictograms

Figure 6: Wiring; Bell and pictograms

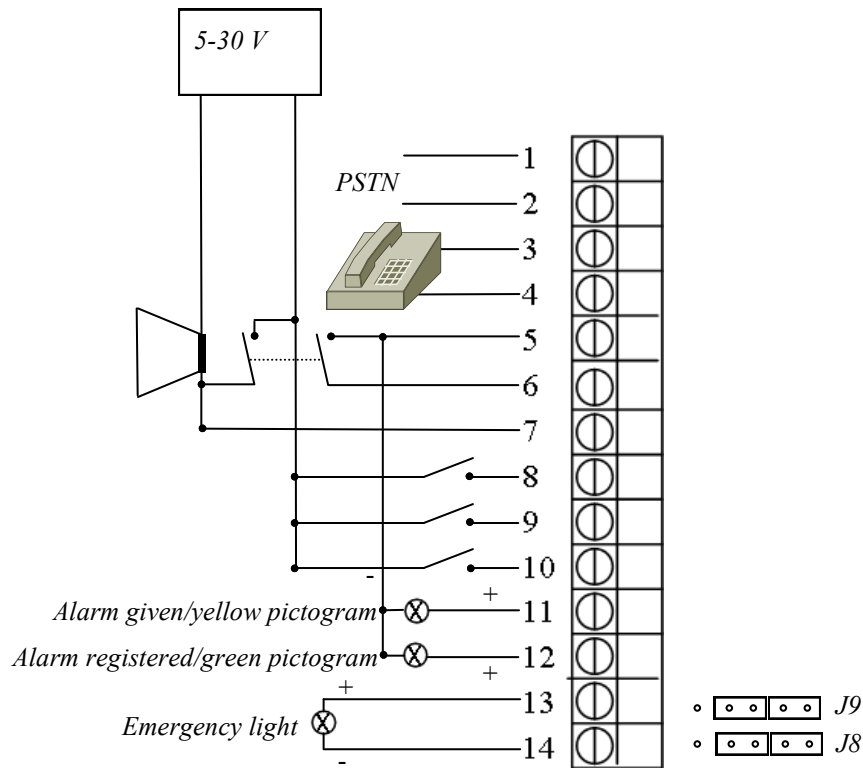


With the jumpers “J8” and “J9” in the position shown above the TSA5100 AutoDial can operate pictograms according to EN 81-28/EN 81-70.

The TSA5100 AutoDial can also operate as a (NO) relay contact for an external sounder, for instance a bell or a siren.

Wiring; Emergency light and pictograms

Figure 7: Wiring; Emergency light and pictograms



With the jumpers “J8” and “J9” in the position shown above the TSA5100 AutoDial can supply backup power for emergency light in the lift car (12 VDC maximum 1 Amp).

The TSA5100 AutoDial can also operate pictograms according to EN 81-28/EN 81-70.

If a sounder is needed it can be activated via the emergency pushbutton in the lift car. The sounder must however be electrical isolated from the inputs on the TSA5100 AutoDial (terminals 5 and 6).

Programming

Local programming	Remote programming
<p>Connect a telephone to the programming terminals (3 & 4). Press and hold the reset button until you hear 3 beeps. The TSA5100 answers with 2 beeps<break>2 beeps. Press <Access code># to enter programming mode. (If no access code is programmed press “#”)</p>	<p>Call the TSA5100, which will answer with the location message (if recorded) followed by two beeps (will be repeated). Press “*<Access code># to enter programming mode. (If no access code is programmed press “*#”)</p>

Minimum programming:

Alarm number 1: *1<Telephone number to alarm receiver>#

Technical Alarm number: *4<telephone number># (if technical alarms are required)

Background call/Check call: *5<telephone number>**1# (if Check calls are required, please notice that TeleTech+ protocol must be used)

ID code: *0<ID code># (must be programmed if TeleTech+ protocol are used on any telephone number)

End programming by pressing *# to enter standby mode or **# if you want to end programming with a test call to last programmed telephone number.

Speech messages:

Speech message 1 = Location message, will be played to Alarm receiver on request or when you call the TSA5100.

Speech message 2 = Guided Confirmation message, will be played to the Alarm receiver.

(Notice that recorded messages can be protected via the jumpers “Speech 1” & “Speech 2”. Please find more information on page 15).

For recording instructions see Common programming chapter on page 14.