

Installation of the LiftAlert Monitoring system with AD1000EN4 functions

Overview

The Equipment to be installed will provide the functions of the standard AD1000EN-4 i.e. the Autodialling from the lift car, Top of car, Lift Pit and Intercom from the Motor room. In addition to the voice communication, the LiftAlert system will monitor a lift.

Equipment

LiftAlert Main unit

NB: Install this unit so that the four fixing screws (2 top/ 2 left hand side) are accessible, for future upgrade/ expansion.

This unit needs to be connected to the Lift Controller, the Phone line and to the speaker box assembly in the lift car.

Speaker box assembly

The speaker box assembly can be provided in various formats, the standard speaker box assembly will provide the two way voice link over the phone line and also the speech synthesis prompts.

Installation

LiftAlert Main unit

The following terminal needs to be connected to the lift controller with appropriate resistors soldered and such as not to compromise the safety circuit. USE a RELAY for SAFETY Circuit.
(27K red/violet/orange for 230V or 12K brown/red/orange for 110V or 2K2 red/red/red for 24V)

Gate Lock	Use Special INLINE Resistors and links on the pcbs 1 for 110V and 2 for 230V installed in the Lift Controller. DO NOT BRING THE SAFETY LINE INTO THE WINDCREST LIFTALERT SYSTEM
Door Limit switch	Resistors R22 to feed Opto Isolator
Door Zone	Resistors R19 to feed Opto Isolator
Pref. SW	Resistors R16 to feed Opto Isolator
Land Calls	Resistors R13 to feed Opto Isolator
Msc.	Resistors R10 to feed Opto Isolator
Top Floor Test Call	Relay output NC/C/NO
Bottom Floor Test Call	Relay output NC/C/NO
Doors Open Test	Used for Pictogram Operation (for new versions)
Feed Eng. LED	To Drive an LED in Engineer Switch (pre-connected)
Eng. Switch	N/O Switch for Engineer ON/OFF Site (pre-connected)
Two wires (positive – Red) to drive a Green PICTOGRAM	

Installation

Please look at the drawings provided below.

Operation

The equipment will operate as a standard Autodialler when the "ALARM" button is pressed. In addition to this, the LiftAlert has the facility to inform an Engineer of a lift, which has not operated correctly after it, receives a landing call. This information can also be passed onto a Central Station.

Call from the LiftAlert

All calls are terminated by the pressing of the "0" button on the telephone before replacing the handset.

The LiftAlert, if programmed to do so, will attempt calling the Central Station.

If however there is no central station computer and the option of "Faults Voiced" is selected during programming, the LiftAlert system will call and make a repeated announcement of "Hello Windcrest....Hello Windcrest.." the recipient needs to press the star "*" button on his telephone. On doing so, the LiftAlert will announce the type of problem that has been encountered. Once this has been announced, the system will connect you directly to the speaker in the lift car. Again the call needs to be terminated by a "0".

Car Speaker Pictogram and Inductive loop connections

The car speaker has an additional built in inductive loop and pictogram facility.

The white lead has 3 wires i.e. Red wire, Blue wire and a Black wire, from the car speaker that needs to be connected as follows:-

- a) The red wire from the speaker box needs to be connected to a +12V (+Ve feed i.e. the Red wire from the Main Communication Box).
- b) The Blue wire from the speaker box needs to be connected to second wire (orange) from the Main Communication Box.
- c) The Black wire from the speaker box needs to be connected to the "Try to Open Doors" N/O Contact on the LiftAlert interface board. (A wire has been connected from the Common to the 0v (-) on the interface board).

Pictogram Operation

When the lift alarm has been activated the yellow pictogram will illuminate. When the call has been acknowledged by the pressing of the star button on the telephone, the green pictogram will illuminate.

The pressing of the "0" button will reset the system, otherwise it will reset after the call duration has expired.

Introduction

The LiftAlert system is a Elevator Monitoring system which not only monitors the general operation of the elevator but also allows a trapped person to contact several Helpers by means of a two way Voice link.

Various parameters of the elevator are directly and indirectly monitored. On detecting a possible fault, a test call is made by the LiftAlert system to confirm fault exists. On detecting a lift failure, a call is made to a Computer based Central Station; where the data is logged for future report generation.

The signals required are as follows to be terminated on a DIN terminal Block:-

Signals (Must NOT be part of Safety Circuit)	Description	Type of Signal	Actual Provided
Gate Lock USE SPECIAL RESISTORS ONLY	Signal which is High when the Gate is closed	AC/DC	
Door Limit	Signal is Low when the Doors are fully Open	AC/DC	
Door Zone	Signal is High when in Doors Zone (Inc. Advance opening)	AC/DC	
Preference (Service) Switch	High when lift in Preference mode or when in Service	AC/DC	
Landing Calls	High when a Landing call is placed	AC/DC	
Msc Signal (Eng. 2)	High for activation	AC/DC	
Test Calls (Top and Bottom)	Test placed by LiftAlert	Voltage Free Contacts	
Doors Open Push	Doors attempted to be opened by LiftAlert	Voltage Free Contacts	
ALARM	Lift Car Alarm signal	Voltage Free	
Engineer ON/OFF Site	High when Engineer on site and Low when he leaves	Voltage Free	
Spare Terminal			

AC/DC These signals can have voltages ranging from 12 Volts to 230V AC or DC. Resistors will need to be installed on the Interface Board at installation.

Voltage Free Contacts These are voltage free contacts to be connected across existing push button within the lift car operating panel

Speaker box connection to the Lift car will be required from the LiftAlert Unit. A 2 pair screened and twisted cable of 0.5mm min be used.

Inductive Loop These voltage free contacts are operated by the LiftAlert system to switch ON/OFF the power to an Inductive loop amplifier, if installed.

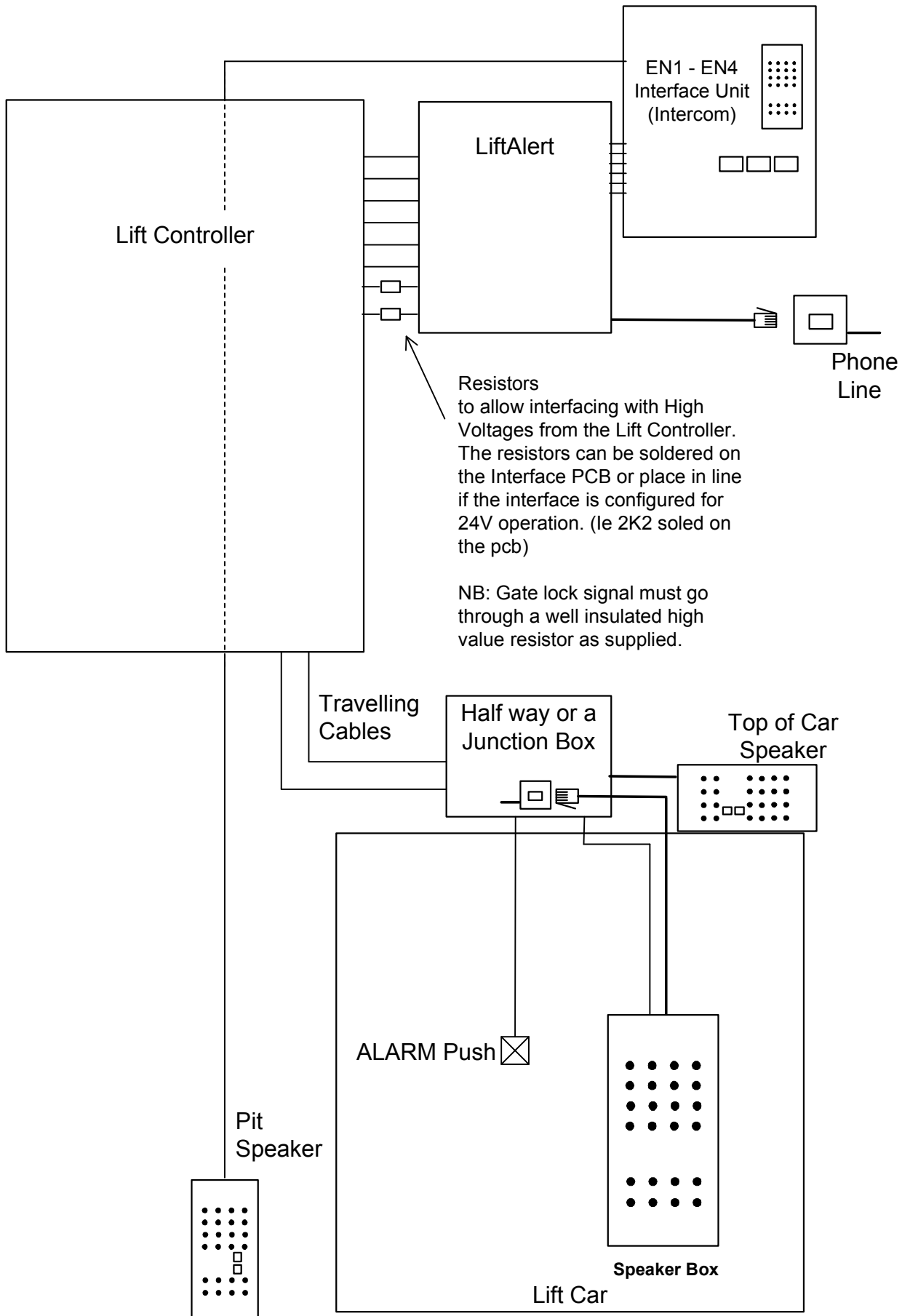
**Lift Controller Interface
Requirements for the LiftAlert
Elevator
Monitoring System**

Drawing LiftAlert Requirements VSD

DATE: 17/01/03

Winderest (UK) Ltd

Tel: 0208 795 0333
Fax: 0208 795 0444



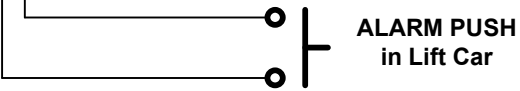
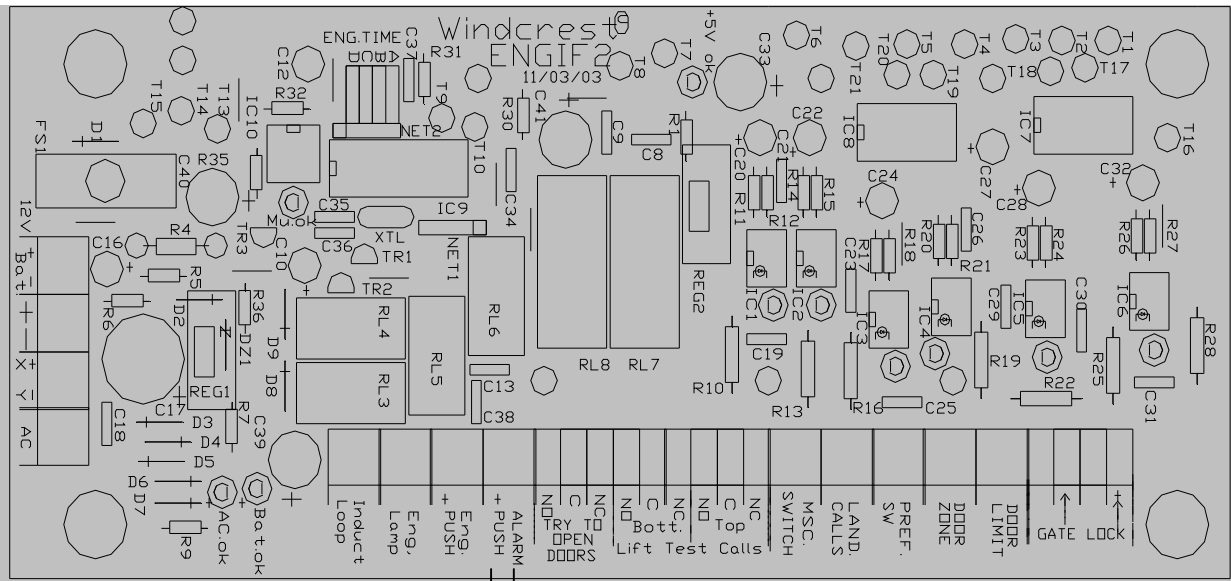
General arrangements to Interface a Lift Controller to the LiftAlert Elevator Monitoring System

Drawing LiftAlert Requirements VSD

DATE: 17/01/03

Winderest (UK) Ltd

Tel: 0208 795 0333
Fax: 0208 795 0444

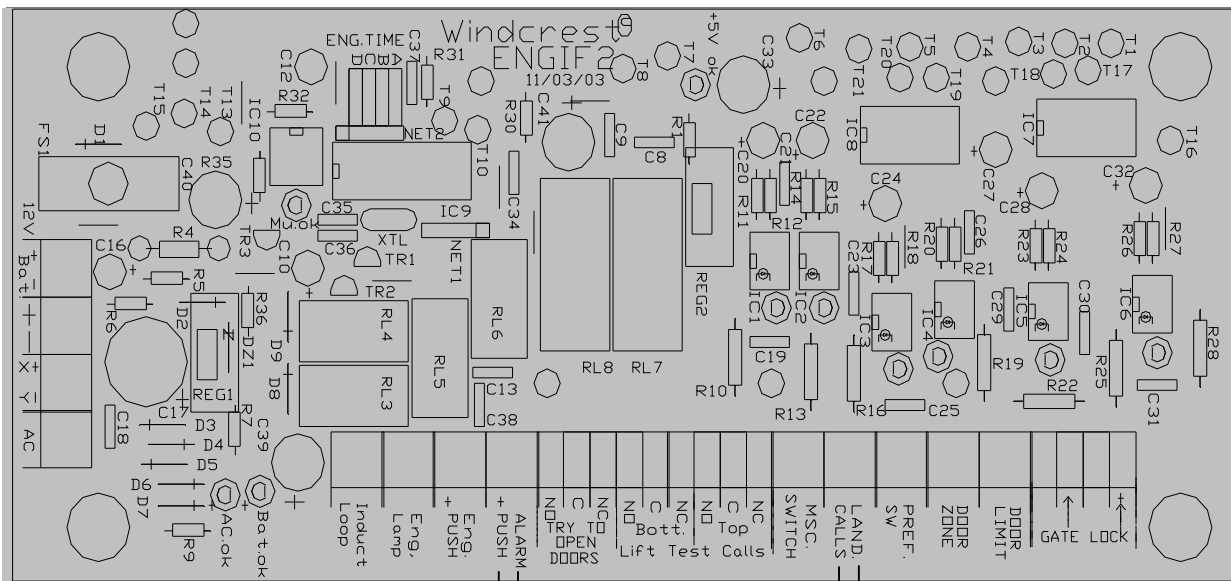


Alarm Push wiring to LiftAlert 2000 System

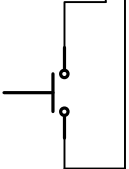
Drawing: Alarm Push 17/01/06 Issue: 1.0

Windcrest (UK) Ltd

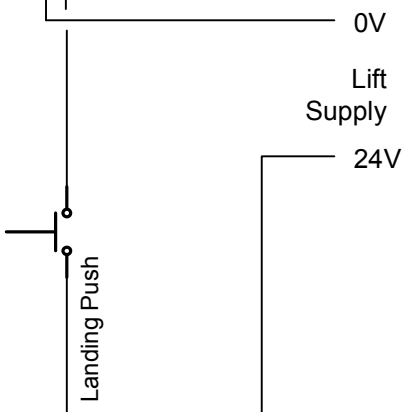
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Alarm Push



Landing Push

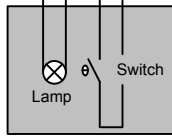
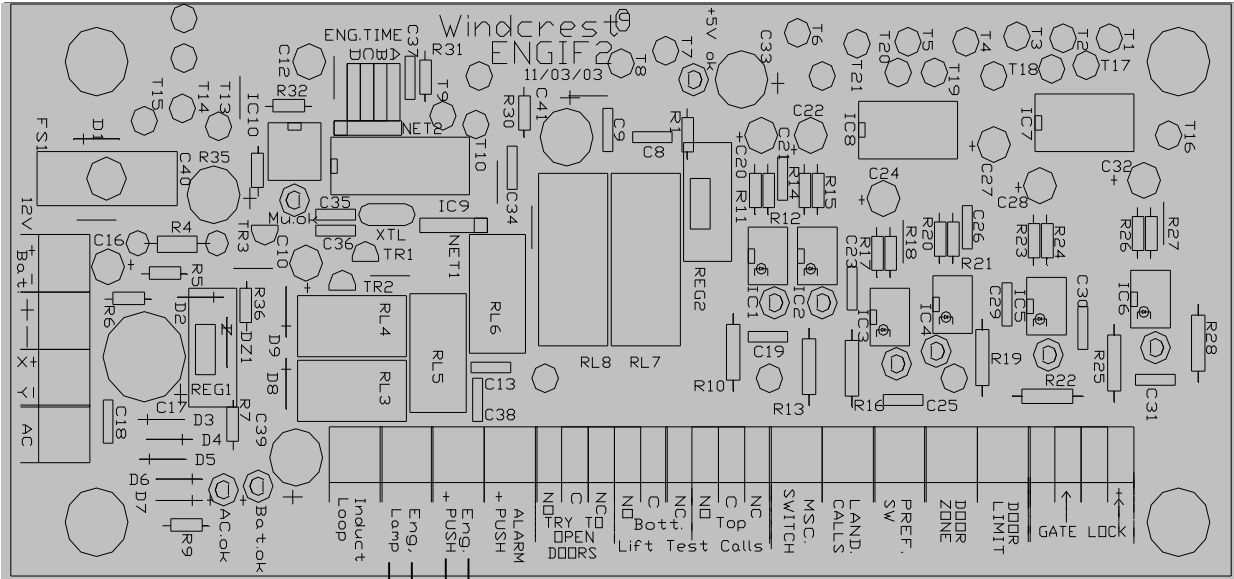


**Interfacing LiftAlert 2000
with Push Buttons
(Alarm & Landing Calls)**

Drawing: Interface 02 17/01/06 Issue: 1.0

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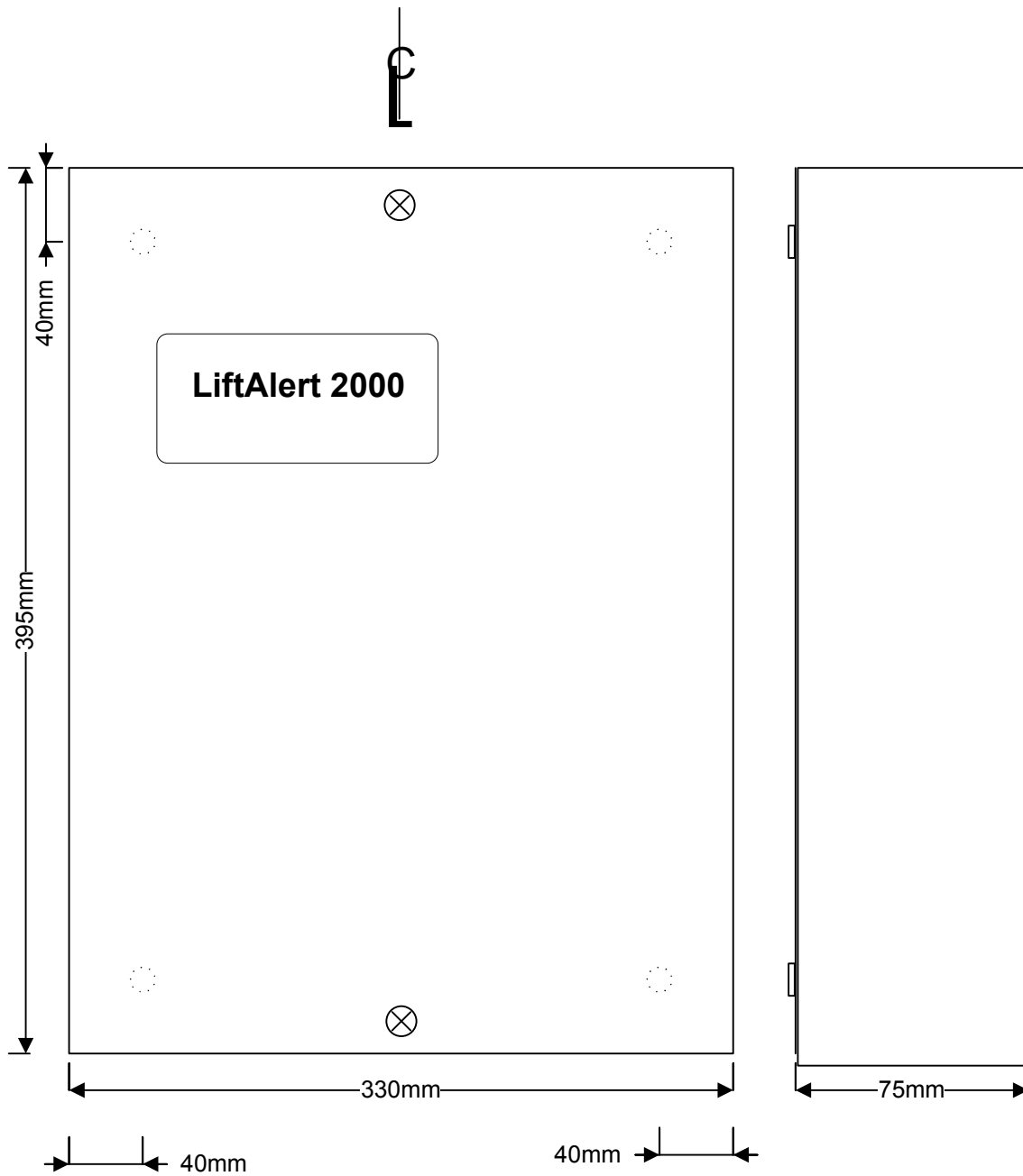
Engineer ON/OFF Site
Switch & Lamp
(factory installed on the
LiftAlert 2000 system)

**Interfacing LiftAlert 2000
with OPTIONAL Signals for Eng.
On/Off Site**

Drawing: Interface 04 17/01/06 Issue: 1.0

Windcrest (UK) Ltd

Tel: 0208 795 0333
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Unit Mounting Holes 5mm

LiftAlert 2000

Drawing: Dimentions 17/01/06 Issue: 1.0

Winderest (UK) Ltd

Tel: 0208 795 0333
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Programming

Plug in the Programmer and power up and within 10 seconds Press [ENTER]

*Note: If the number is being programmed is International then do not put either international code or 0 in front of the number. i.e. if unit is installed outside UK and needs to be programmed **00442089035820**. Instead of programming whole number, in case of International Number **2089035820** needs to be programmed.*

Example: Case of international number.

Telephone number: 0044-2089035820

*The system will show "ENTER 1st C/S No" key in number **2089035820** followed by [ENTER]
"PABX OPERATION?" key in [NO] if on a direct BT Line
"ENTER I/D CODE" 12345678
followed by [ENTER].
"INTERNATIONAL?" Key in [Yes]. This will add 0044 prior to dial the programmed number.*

Case of Local Dialling:

Telephone Number 02089035820

*The system will show "ENTER 1st C/S No" key in number **02089035820** followed by [ENTER]
"PABX OPERATION?" key in [NO] if on a direct BT Line
"ENTER I/D CODE" 12345678
followed by [ENTER].
"INTERNATIONAL?" Key in [No]. This will not add any digits prior to dialling number.*

Follow the same procedure for all numbers to be programmed.

The system will show "ENTER 1st C/S No" key in the required 1st Central station number followed by [ENTER].
"PABX OPERATION?" key in [NO] if on a direct BT Line
"ENTER I/D CODE" key in the ID code. 4 digit Account no and 4digit lift number followed by [ENTER].
"INTERNATIONAL?" Key in [Yes] if international dialling, key in [NO] for Local dialling.

The system will show "ENTER 2nd C/S No" key in the required 2nd Central station number followed by [ENTER]
"REPORT TO C/S?" key in [NO] if not required or [YES] if Central Station is set up
"ENTER I/D CODE" key in the ID code 4 digit Account no and 4 digit lift number followed by [ENTER]
"INTERNATIONAL?" Key in [Yes] if international dialling, key in [NO] for Local dialling.

The system will show "ENT.Helper 1. No" key in the required 1st Helper for a voice link followed by [ENTER]
"PABX OPERATION?" key in [NO] if on a direct BT Line
"ENTER I/D CODE" key in the ID code 4 digit account no and 4 digit lift number followed by [ENTER]
"INTERNATIONAL?" Key in [Yes] if international dialling, key in [NO] for Local dialling.

The system will show "ENT.Helper 2. No" key in the required 2nd Helper for a voice link followed by [ENTER]
"FAULTS VOICED?" key in [NO] if not required, or [YES] if voiced fault reporting is required
"ENTER I/D CODE" key in the ID code 4 digit Account no and 4digit lift number followed by [ENTER]
"INTERNATIONAL?" Key in [Yes] if international dialling, key in [NO] for Local dialling.

The system will show "ENT. 1st Eng. No" key in the required 1st Engineer for a voice link followed by [ENTER]
"MODERN LIFT?" key in [NO] if a Hydraulic Lift and [YES] if Traction Lift
"ENTER I/D CODE" key in the ID code 4 digit Account and 4digit lift number followed by [ENTER]
"INTERNATIONAL?" Key in [Yes] if international dialling, key in [NO] for Local dialling.

The system will show "ENT.2nd Eng No. No" key in the required 2nd Engineer for a voice link followed by [ENTER]
"PABX OPERATION?" key in [NO] if on a direct BT Line
"ENTER I/D CODE" key in the ID code 4 digit Account no and 4digit lift number followed by [ENTER]
"INTERNATIONAL?" Key in [Yes] if international dialling, key in [NO] for Local dialling.

"PULSE DIALLING?" key in [NO] so DTMF Tone is used for dialling

"INSTANT TRIGGERING" key in [NO] for the 3 second press down delay before triggering

"SINGLE UNIT" key in [YES]

"SERVICE PERIOD" key in a value, say, [10000] for the number of lift starts before reporting to central station that a service is required.

"REPORT (DAYS)" this is an automatic test frequency in days [03] for 3 days and [ENTER]

"SET TIME/DATE" The entry of real time and date in the format HHMMSSddmmyy. (eg for 142507211102 for 2:25:07 pm on the 21st Nov 2002)

"HAVE U Finished?" if you key [ENTER] the system will go in to the display content mode. In this mode, repeated pressing of [ENTER] will scroll through all the parameters which have been entered.

If a [YES] is entered, the system will go into normal mode of operation; whilst a [NO] will allow you to re-enter any of the parameters.

TEST Options

Key in [TEST]

[4] Voice unit test i.e. the speech synthesis announcement of numbers.



























[5] "Open Door Test" ie Now used for Pictogram Test.

[6] "CALL LIFT TEST" will place a test call on the lift, top and bottom.

[*] This will show the status of all the input signals as they are at present i.e. will display a character for each signal present on the interface board for example, 'a' if Alarm Pushed, 'p' if lift in preference mode, etc.

[CANCEL] will return the system back in the normal mode of operation.

Signal Example

 LED ON  LED OFF	Gate Lock	Door Limit	Door Zone	Pref.Sw	Landing Call	Msc.
Lift with Gate Locked, Doors Closed and in Landing Zone; with Pref.Switch OFF, and No Landing Calls or MSc,Signal.						
Lift with Gate Locked, Doors Closed and Out of Landing Zone; with Pref.Switch OFF, and No Landing Calls or MSc,Signal.						
Lift with Gate Locked, Doors Closed and in Landing Zone; with Pref.Switch OFF, and a Landing Call and No MSc,Signal.						
Lift with Gate Open, Doors Open and in Landing Zone; with Pref.Switch OFF, and a Landing Call and No MSc,Signal.						

General Product Requirement addressed by the LiftAlert system

A Lift Communication/Monitoring system is required to provide a voice link between the lift car and various Helpers/Engineers over a standard telephone system. The voice link must be two ways. Assistance and guidance must be provided by means of a visual indication and voice prompts using speech synthesis.

The product must also be capable of monitoring the operation of the lift installation. If and when the system detects a fault, the fault must be logged in the memory of the system so that the Maintenance Service Engineers can be alerted to the failure. The alert must be selectable in two forms ie by means of speech prompts and/or reporting to a Computer based Central Station.

The interface between the Communication/Monitoring system must be via voltage free contacts terminated on a DIN rail or a suitable terminal block.

The signals required are Gate Lock, Door limit, Landing Zone, Landing Calls, Preference switch, and Inspection switch. The system must provide Voltage Free contacts to operate the Top and Bottom floor car test calls.

The system must be mains operated, battery backed and be capable to be expanded to meet the new BS EN81-28 and BS EN81-70 regulations.

ENGINEER ON/OFF SITE SWITCH (To be installed by the customer, if required)

The LiftAlert system has a built in an Engineer ON/OFF site switch. This switch is to be operated by an Engineer when he arrives on site; and when he leaves site.

However, it is not uncommon for an Engineer to forget to operate this switch when he leaves site. For this reason Windcrest has provided an electronic timer on the switch. The time frame which can be set up will be controlled by the 4 DIL switched on the Interface PCB as follows:-

The DIL Switch setting.

SW1 ON = 4 hours delay
SW2 ON = 2 hours delay
SW3 ON = 1 hour delay
SW4 ON = 30 minutes delay

If all switches are in the OFF position then a 10 second delay will be presented.

A warning will be provided as the time is coming to the end of the set period, by means of the LAMP starting to flash, within the Engineer ON/OFF switch.

REMOTE ACCESS FOR LIFT ALERT

The following procedure needs to be followed to remotely change

Person Calling the LiftAlertLiftAlert	Response
Call the LiftAlert Unit	LiftAlert answers (online) & sends a * tone for 1 second
<u>Wait for 5 seconds after the tone</u>	Line connects to Speaker in car
Press [*] for 0.5 seconds	LiftAlert beeps twice
Wait for 2 sec. Press [1] [2] [3] [4] [#] (ie the PIN number for your use)	LiftAlert beeps twice
Wait for 2 sec.Press [*] [1] [#] to change 1 st number	Unit beeps
On hearing the beep, key in the new number for Location 1	
After keying in the number wait for 2 sec. and Press [#]	Unit beeps (number accepted & changed)
Press [*] [2] [#] to change 2 nd number and follow above Procedure	As above
Press [*] [3] [#] to change 3 rd number and so on...	As above
Press [*] [0] [#] to exit remote programming	Call Terminated Message & unit goes offline

All numbers between [] brackets indicates DTMF tones from phone to the LiftAlert unit.