EasyAlarm®
ELEVATOR

Independent elevator emergency call by Swiss market leader
- ☞ can be installed / operated by any elevator company
- ☞ operation with self-contained alarm center possible (e.g. alarm center of facility management)

Cost savings due to easy installation
- ☞ various retrofit options
- ☞ no fixed landline costs if operating over GSM network

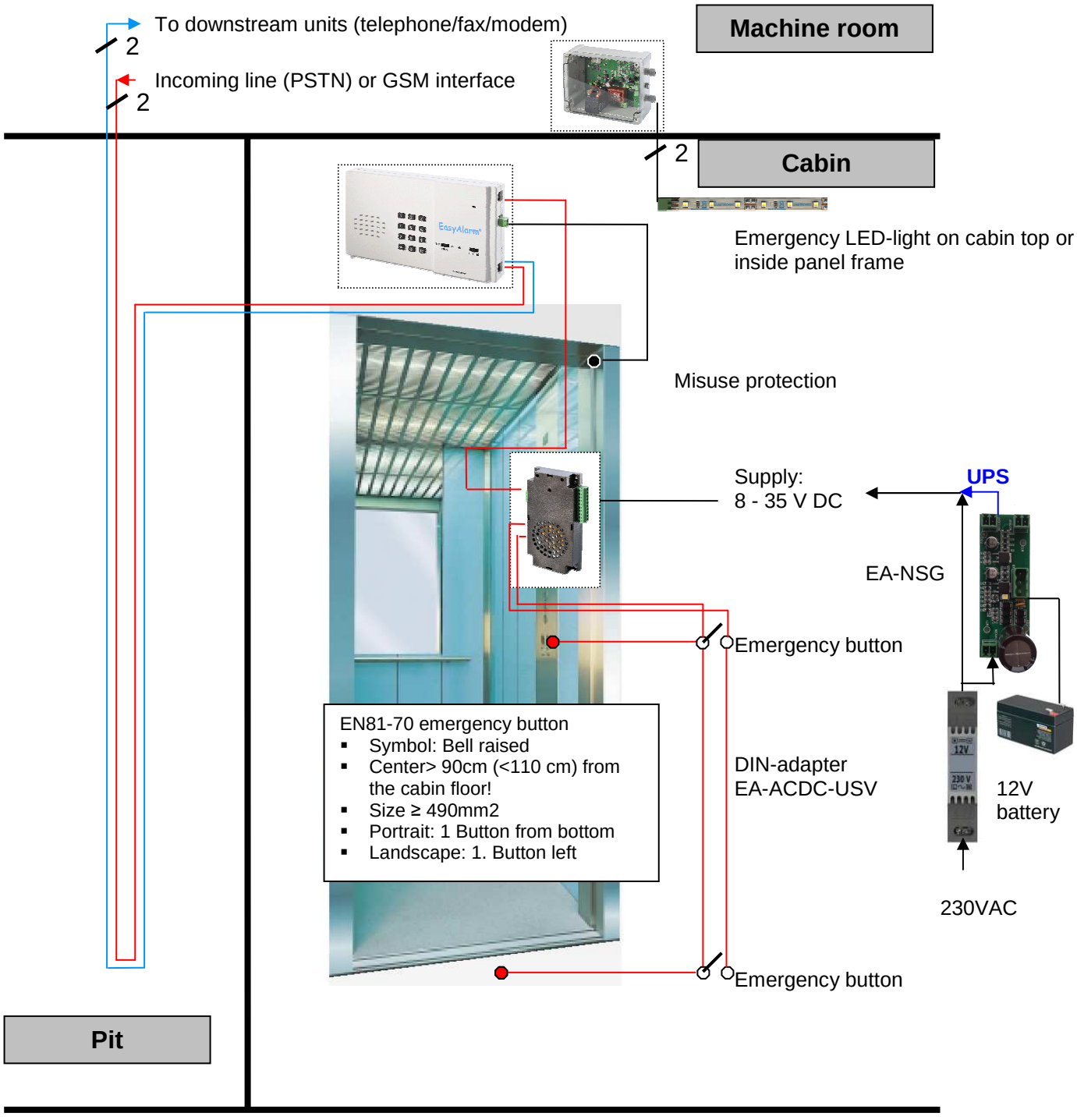
Cost savings in operation
- ☞ lifts can share landline with other telephone/modem
- ☞ optionally alarm over the GSM network with affordable sub-scription
- ☞ Intelligent misuse protection prevents false alarms

Expandable
- ☞ connection to a building control system
- ☞ technical summery alarm
- ☞ ATEX version available

Swiss Made / Swiss Support

Issue: 3 October 2011

1. Standard SET: 8 – 35 V DC (e.g. Set: EA8 DPX LMK70B)

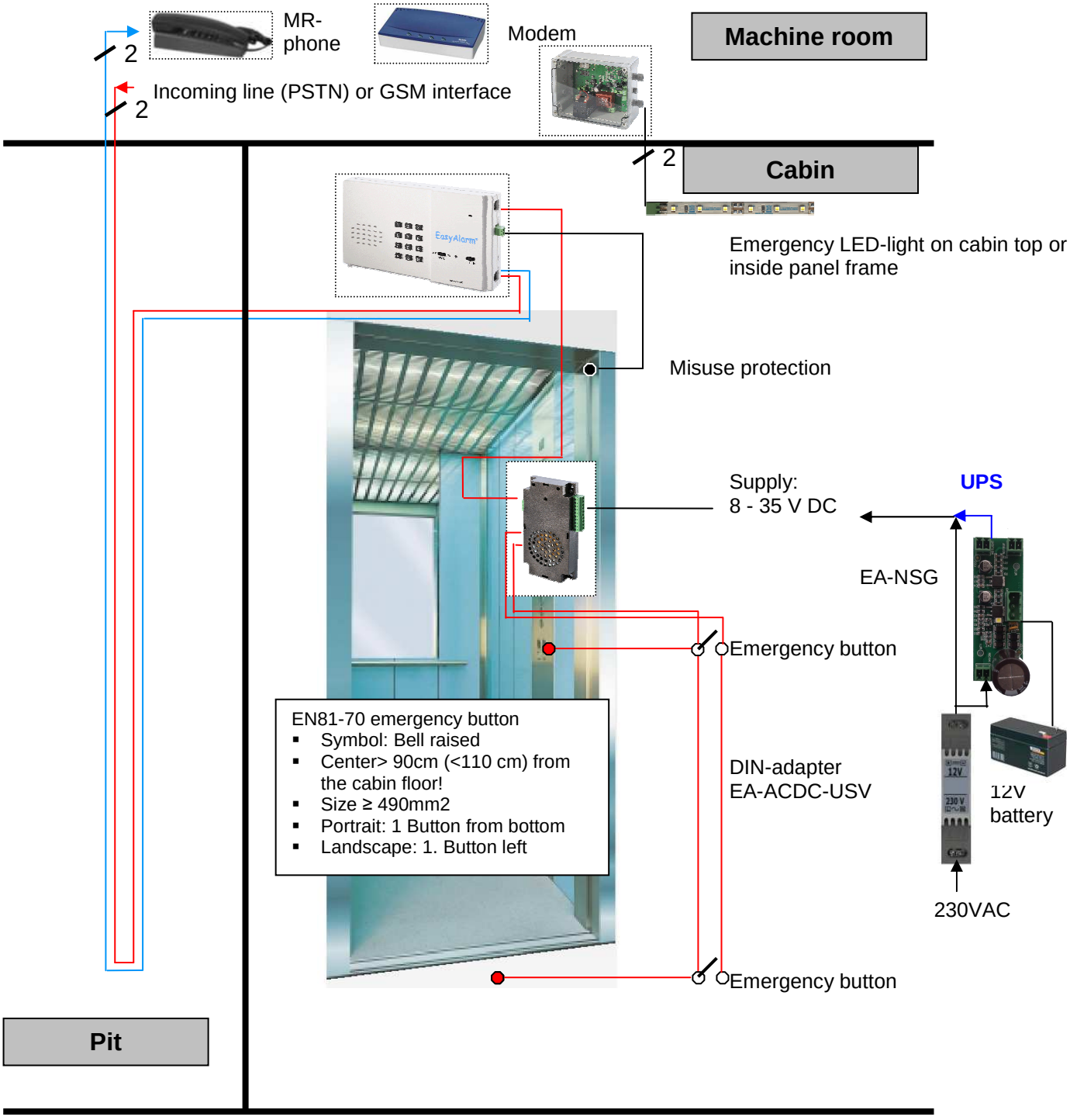


Telephone line
⚠ separate from control wires

Control wires/ Supply wires

Return line from DPXN
⚠ separate from control wires

2. Machine Room SET (8 – 35 V DC) (e.g. Set: EA8 DPXM LMK70B)

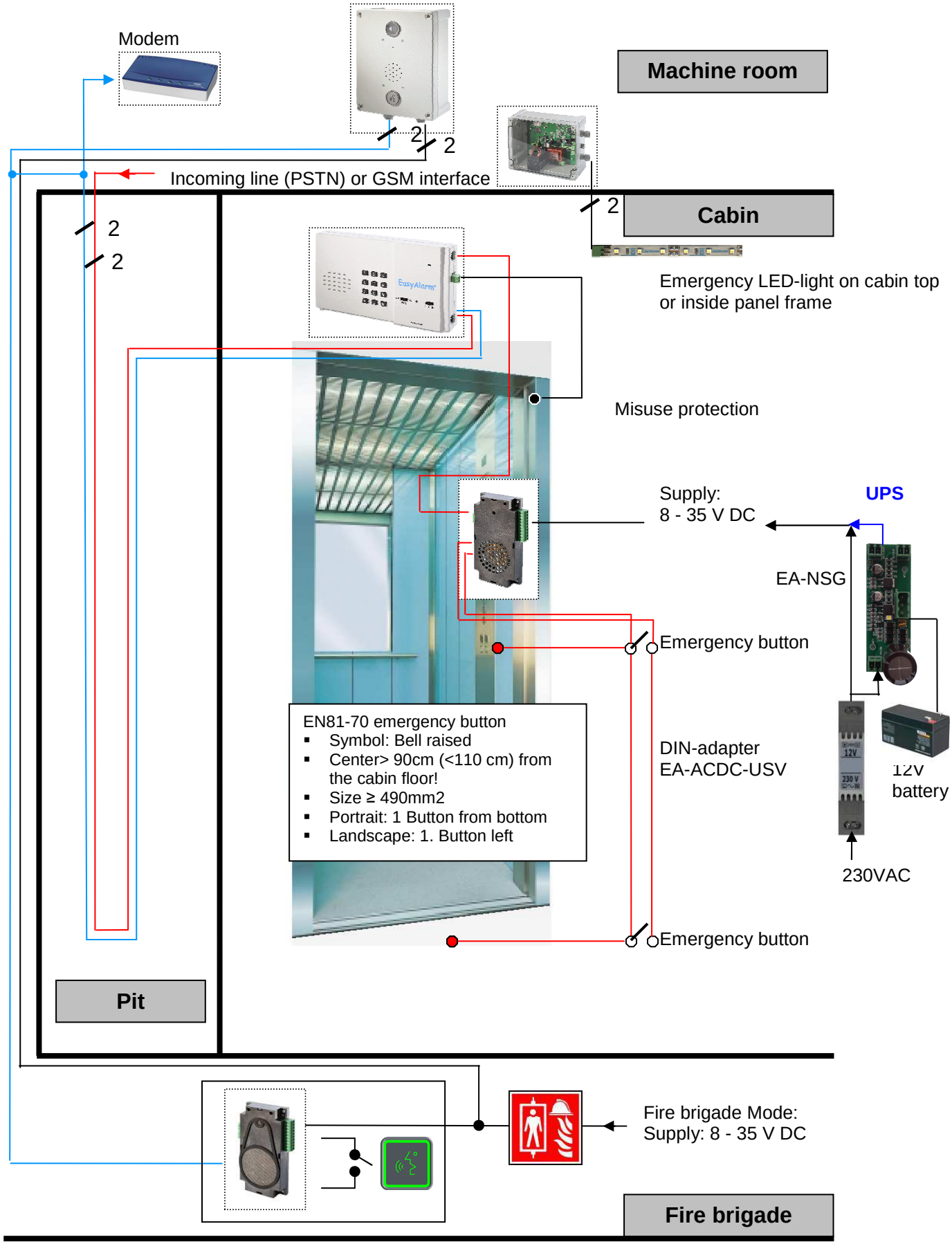


Telephone line
separate from control wires

Return line from DPXM
separate from control wires

Control wires/ Supply wires

3. Fire brigade-SET (8 – 35 V DC) (EA8 DPXM LMK70B-WG + FWS-Set)



Telephone line
⚠ separate from control wires

Control wires/ Supply wires

Return line from DPXM
⚠ separate from control wires

4. Module Description

	**EasyAlarm ELEVATOR EA-8-DPX** This is the alarm unit located on top of the cabin in a protected area. The alarm unit includes full hands free communication using the integrated loudspeaker and microphone.
	**EasyAlarm ELEVATOR EA-8-DPXN** Same as alarm unit EA-8-DPX but including an additional telephone interface to share telephone line with a downstream telephone/fax/modem to save costs.
	**EasyAlarm ELEVATOR EA-8-DPXM** This unit includes an additional telephone interface to establish hands free communication with the machine room phone simply by lifting the handset.
	**EA-ACDC-USV** This DIN-adapter supplies sub-unit EA-LMK70B from 230 V mains.
	**Sub-unit EA-LMK70B (EN 81-70)** Unit is equipped with speaker and microphone to provide full hands free communication inside the cabin. It has a pluggable screw terminal a) to connect the emergency button. b) to supply alarm unit by 8..35 V DC from the control system or from the emergency light c) to connect the yellow and green indicator according to EN 81-70 d) to connect programmable output, i.e. : a. Lampe „Help is coming“ b. Connectivity with external alarm server (filtered alarm) c. Remote control unit (fire brigade key / Reset) e) Output to activate a remote-controlled emergency button f) integrated amplifier
	**Machine room telephone** Used in combination with alarm unit EA-8-DPXM. 2 wire intercom to the cabin
 	**Fire brigade solution according to EN81-72** 1 Set placed in machine room (MR) (e. g. integrated into an IP-Box): Interface EA-LMK72B-WG 1 Set placed in fire brigade entrance (FBR): Interface EA-LMK72B-WG
	**GSM interface** (alarm transmission over GSM network) Supply voltage: 230 VAC / 50 Hz, 12 V / 1.2 Ah battery Connectors: Tel, Output : Operation, Output: Emergency light

5. System Properties

- **Highly Integrated Open System**
  The elevator customer is free to choose the alarm centre because the alarm unit can be used as hands free dialler with clear voice instructions to any called party or alarm centre or as an alarm dialler with protocol exchange with a machine or PC.

- **Share Telephone Line (Cost Reduction)**
  Up to eight alarm units can share a single telephone line without additional equipment. During dialling in you can select the desired alarm unit simply by entering the corresponding pin code.

- **Alarm Prioritization (DPXN / DPXM)**
  It is possible to share the telephone line (PSTN) between EasyAlarm and a telephone, fax or modem due to the automatically alarm prioritization. Therefore the costs of a second line can be saved. The alarm prioritization interface is included inside the alarm unit so no external components are necessary.

- **Large Range of Accessories**
  A large range of extension units (Microphone / Speaker) provide full hands free communication on a second location i.e. inside the cabin. The fire brigade interface allows three-point communication. Optional radio interface allows integrating radio sensors to adapt to individual applications.

- **Reliable Platform**
  The EasyAlarm platform is already in use in more than 10’000 locations.

- **Self test Functions**
  Various self test functions such as line test, battery test and periodic test call (= routine call according to EN81-28) make a high reliable system and serve determining the sources of problem during the installation process.

- **Voice Guided User Interface**
  The voice guidance permits a simple use of the system. In case of emergency the alarm unit announces the cause of the alarm followed by the individually up-spoken announcement (e.g. the location) so that the alarm centre is immediately informed where the call comes from.

- **PIN-Code**
  The pin code prevents from of unauthorized access (local programming or dial-in). It also can be used to identify the alarm unit during telephone connection in clear voice (using DTMF #) or as DTMF sequence (using DTMF A).

- **Remote Access (Dial-in)**
  The alarm or service centre can call back the alarm units either directly or with a two-step dialling in procedure. After identification by pin code it is possible or to establish a hands free communication with the cabin or to program the alarm number or change the individual announcement.

- **Ways to Identify Alarm Units**
  The identification ensured by the individually up-spoken announcement text, by the pin code announcement in clear voice (elevator number/asset number), as DTMF sequence or using standard alarm protocol (Call centre/Ademco Point-ID/P-100).

- **Individual Configurations**
  The varieties at attitude and configuration options permit to adapt the system to your needs, i.e. adjust activation time for emergency button, hands free volume, connection timeout and many more.

- **Busy tone Detection**
  The integrated busy tone detection allows to forward the alarm call to a next programmed telephone number avoiding unnecessary delay. Thus no valuable time is lost in the case of emergency.

- **Misuse Protection**
  The misuse protection circuit prevents from false alarm i.e. if the cabin door opens within the adjusted timeout.

- **Installation test**
  A special test mode facilitates the installation and debugging process of the wiring. All input signals are announced thereby: "Sensor 1/2/3 activated or deactivated".

- **Intelligent Machine Room Communication**
  Lifting the handset of the machine room telephone connects automatically with the cabin. If you press key 0 at the machine room telephone you get an external line (same function as in a hotel exchange). If the EasyAlarm needs the telephone line in order to set off an emergency call, the machine room telephone will be disconnected. Additionally the engine room telephone rings with an arriving call.

- **Fire brigade communication (EN81-72)**
  - Key switch activates fire brigade mode.
  - Standby: Microphone in the cabin is active (Speak); Machine room and fire brigade location are in listening mode.
  - If “Speak”-Button is pressed the microphone of this location is active (Speak) and the other locations are in listening mode.

- **ISDN, DECT, GSM**
  The connection to an ISDN telephone system is possible, if an analogue interface is available (i.e. for fax). The telephone connection can be provided also via a GSM or DECT terminal.

- **Alarm Centre Management**
  The alarm unit supports the standard alarm protocol ADEMCO POINT-ID and P-100. Thus the alerting can be made to any alarm centre. The management program WinMOS can handle the 72-hour routine calls on a standard PC avoiding heavy installation and costs (☞ section 7).

- **Standards**
  EasyAlarm is conforming to regulations: EN81-28, EN81-70 and EN81-72.

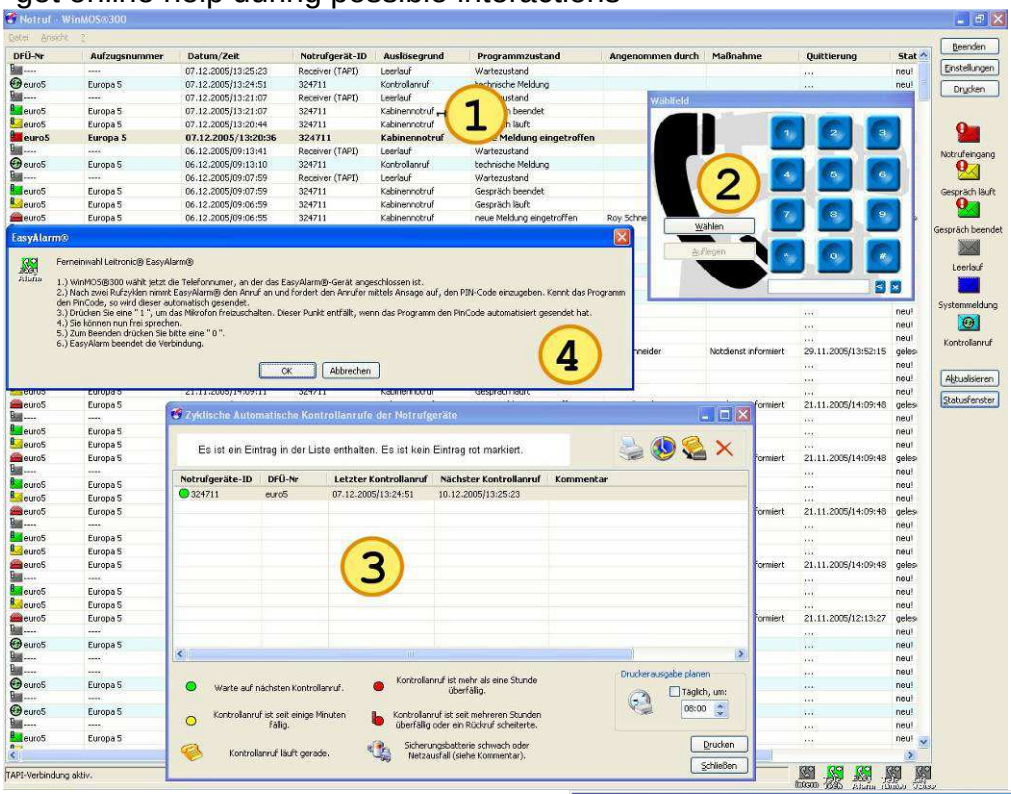
6. Call Centre Solution

- **Hardware**
  The management software runs on a standard PC with ISDN interface. No expensive auxiliary equipment is needed!

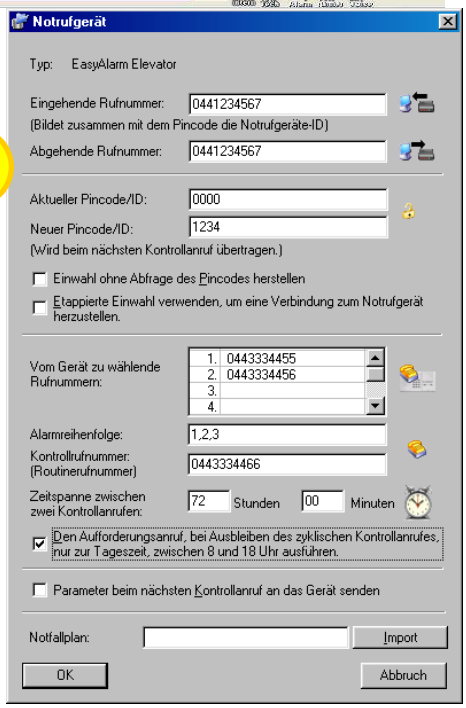
- **Management Software**
  The management program WinMOS is based on the Windows platform.

  With WinMOS you:

1. can handle and log emergency calls (automatic identification of the location)
2. can automatically dial back into the cabin
3. can administrate test calls (every 72h according to EN81-28)
4. get online help during possible interactions



5. Remote configuration for Leitronic units: EasyAlarm, Exicall ENxx
   - Dialling numbers
   - PIN-Code
   - Dialling-in
   - Periodical test interval



7. Frequently asked questions

How many EasyAlarm can share a telephone line

Limitation due to alarm scenario:

The simplest and safest way to use several elevators in a building complex would be the use of separate telephone lines for each emergency call equipment! Unfortunately this is the most cost intensive way (monthly charges * number of devices). The following possibilities can be recommended to the owner of the elevator to reduce the operating costs.

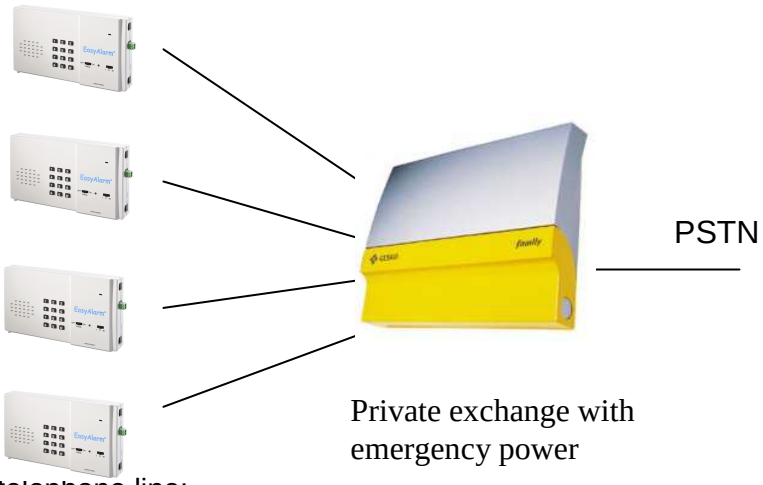
Scenario 1) First called alarm number is not staffed 24h

If the first called alarm party is not staffed 24h a day, the telephone line must not be shared by several alarm units because it can not guaranteed that in case of an alarm the second alarm number can be dialled because of a time shift of alarm trigger inside the different cabins. Reason: If after the alarm release the first dialled party is not attainable, the alarm must release the telephone line during a minimum time before the next alarm number can be dialled. If during this period another alarm unit takes line the telephone line is never on-hook!

Correctives:

A) Each alarm unit has its own telephone line

B) Connect alarm units to the PSTN using a private exchange. To avoid malfunction in case of a mains power failure the private exchange must have an emergency power supply!



Private exchange with emergency power

a. Analogue telephone line:
   i. EA-ICOM (1xPSTN, 4 internal). The first alarm unit will be connected to the PSTN, other units get a busy tone! => Automatically re-dial (if programmed) or manual re-dial in case of a renewed alarm release.

b. Digital telephone line (ISDN: two simultaneous connections)
   i. ISDN108 (1xexternal So-Bus, 8 analogue internal)
   ii. ISDN1016 (1xexternal So-Bus, 16 analogue internal)

Scenario 2) First called alarm number is staffed at any time (24h)

If the first called alarm number is the same for all the alarm units and staffed around the clock several alarm units can be used in parallel on a single telephone line. In case of emergency all cabins are connected simultaneous to the telephone line which makes the dialogue difficult and reduces the connecting quality due to impedance mismatch.

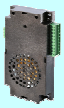
Calling Back

If several EasyAlarm are attached at the same telephone line, each individual equipment can be addressed effectively using a different pin code and/or with a different procedure (direct or two step dialling-in).

Is it possible to reduce costs by sharing a line with a telephone/fax/modem?

EasyAlarm ELEVATOR DPXN or DPXM can disconnect a downstream telephone/ fax/modem in case of an emergency, so that the alarm can always be set off, even if telephone line is already occupied.

8. Set Overview

Cable length: for sensor cable and telephone cable 3m (other length on request) Standard user languages: DE/FR/GB/IT: German/French/English/Italian (others languages on request)			EA8 DPX LMC70	EA8 DPX LMK70B	EA8 DPXN LMC70	EA8 DPXN LMK70B	EA8 DPXM LMC70	EA8 DPXM LMK70B
Picture	**EasyAlarm alarm dialler**	**Art. No.**						
	**EA-8-DPX**	101.0220	✔	✔	-	-	-	-
	EA-8-DPXN disconnects post-connected modem/phone	101.0230	-	-	✔	✔	-	-
	EA-8-DPXM incl. machine room communication	101.0260	-	-	-	-	✔	✔
Picture	**Sub-communication units in cabin panel**	**Art. No.**	✔: incl. in set **O**: Optional ✖: not compatible					
	**EA-LMC70** (pluggable screw terminal and RJ45-jack) Primary voltage: 8..35 V DC 2xEN81-70 indicator (yellow/green): internal with light pipes, external symbols 1xInput for emergency button: potential free	118.0155	✔	-	✔	-	✔	-
 WG	**EA-LMK70B** like EA-LMC70, but incl. audio amplifier to adjust level 1xTechnical alarm input (S3): 10..50 V (AC/DC) 1xOpen-Collector-Output „Help is coming“ / Filtered alarm 1xOpen-Collector-Output for remote controlled EC-Button	118.0160	-	✔	-	✔	-	✔
	EA-LMK70B-WG water resistant P54 Base for fire-brigade solution: Set EA8 DPXM LMK70B-WG	118.0161	-	O	-	O	-	O
Picture	**Remote-communication unit to communicate with cabin**	**Art. No.**						
	**Wall mount telephone** incl. cable 3m ☞ machine room solution	118.0120	✖	✖	✖	✖	✔	✔
	**EA-FWS** ☞ fire-brigade solution according EN81-72 Remote-unit EA-LMK72B-WG, Supply voltage: 8..35 V DC	118.0202	✖	✖	✖	✖	O	O
	EA-FWS-IP-Box ☞ fire-brigade solution according EN81-72 EA-FWS pre-mounted in IP54 protective housing incl. talk-button and listen-display	118.0212	✖	✖	✖	✖	O	O
Picture	**Mechanical accessories for panel mounting of sub-units**	**Art. No.**						
	**Panel EA-TAB** Inox, 200 x 100 x 2 mm	100.0220	O	O	O	O	O	O
	Panel EA-TAB-NT Inox, 200 x 100 x 2 mm / incl. emergency button RT42 bell	100.0221	O	O	O	O	O	O
	Panel EA-TAB-HK Inox, 200 x 100 x 2 mm / incl. display RA42 „Help is coming“	100.0222	O	O	O	O	O	O
	Transparent frame for wall mounting 200 x 100 x 25 mm (Emergency light ☞ 100.087x)	100.0230	O	O	-	O	-	O
	Transparent frame for wall mounting 220 x 100 x 23 mm (Emergency light ☞ 100.087x)	100.0231	O	O	-	O	-	O
	**SNEL-conversion kit** 1xAdhesive film for quick-mounting sub-unit 2xEngraved, self-adhesive symbols, including light-pipes	100.0277	O	O	O	O	O	O
Picture	**Electrical accessories**	**Art. No.**						
	**Emergency call buttons adapter EA-NT-IN** 1xInput 1.5 to 35 VDC / limited to 10 mA, 1xOutput normally closed	100.0250	O	O	O	O	O	O
	**Misuse-protection for two individual doors EA-2DOOR** 2xDoor-state signal input 8 to 24 VDC, 2xRJ45-jacks	100.0260	O	O	O	O	O	O
Picture	**Power supply**	**Art. No.**						
	**DIN-adapter-interface EA-ACDC-USV** Primary voltage: 230 V+-15% / 50 Hz, Output: 14.3 V DC / 10 W	118.0117	O	O	O	O	O	O
	**DIN-USV-interface EA-NSG (uninterruptible supply voltage)** Primary +voltage: 14.3 V DC ☞ from 118.0117 / Connect 12 V-battery ☞ 100.0880 Output: 12 V DC (400 mA for EasyAlarm, 200 mA for emerg. light ☞ 100.087x)	100.0117	O	O	O	O	O	O
	**Battery** 12 V / 1.2 Ah ☞ 100.0117 and 100.0880	100.0880	O	O	O	O	O	O
	**Voltage converter EA-DCDC (battery replacement)** PCB assembled in battery cover incl. terminals: 8 to 35 V DC / Isolation: 3kV Incl. emergency button connection cord (Art. No. 118.0140)	100.0290	**For use without sub-communication units**					
Picture	**Alarm transmission over GSM**	**Art. No.**						
	**EA-GSM interface** incl. internal antenna Primary voltage: 230 VAC/50 Hz, Backup: 12V / 1.2Ah battery ☞ i.e. 100.0880 Connectors: Tel, Outputs: Operation mode + Emergency light ☞ i.e. 100.087x	100.0800	O	O	O	O	O	O
	Same as 100.0800, but including additional connectors (USB/DB9) to connect a compatible elevator control that can use the interface as a GSM-Modem	100.0802	O	O	O	O	O	O
	**External GSM-Antenna cable** 5m ☞ 100.0800	100.0864	O	O	O	O	O	O
Picture	**Emergency-Lights** ☞ suitable to 100.0117 and 100.0800	**Art. No.**						
	Emergency-Light LED-strip 10cm 12 V / 0.8 W, 16 cd 120°, 52 lm ☞ 100.023x	100.0870	O	O	O	O	O	O
	Emergency-Light LED-strip 10cm 12 V / 1.6 W, 33 cd 120°, 104 lm	100.0871	O	O	O	O	O	O
	**Emergency-Light LED-strip 2x10cm** 12 V / 1.6 W, 33 cd 120°, 104 lm ☞ 100.023x	100.0873	O	O	O	O	O	O
	**Emergency-Light LED-screw M8** 12 V / 0.2 W, 44 cd 20°, 4 lm, cable	100.0872	O	O	O	O	O	O