

# Technical Description

MEW00894

Revision -

## ***Alert Annunciation Units 1735 & 1736, ver.1.2***

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# 1 Introduction

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This document<sup>1</sup> describes the Alert Annunciation Units **1735 & 1736** (Larmlagringstablå).

For a detailed description of the **AA** function, see the system EBL512 Planning and Operating instructions.

The Alert annunciation units 1735 & 1736 shall run in **SW mode 1735 – 1587** and **SW mode 1736 – 1587** respectively.

See also chapter "General description", page 5.

This document is valid for the 1735 & 1736 software **version 1.2**.

A brief description of the difference between ver. 1.2 and 1.1:

New functions:

- The buzzer will, for an alarm, sound 0.4s / 5s instead of 0.04s / 5s, which results in a more distinct buzzer sound.

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<sup>1</sup> Original file name: K:\PRO\FIRE\EBL\Doc\Eng\MEW00894 (Rev -).doc

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## 2 Definitions / Explanations

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Definitions / explanations / abbreviations / etc. frequently used or not explained elsewhere in the document.

**AA** Alert Annunciation

**AAU** Alert Annunciation Unit

**AA alarm** Alert Annunciation alarm

**C.i.e.** Control and indicating equipment (=control unit)

**C.U.** Control unit (=Control and indicating equipment)

**SW** Software

**HW** Hardware

## 3 General description

When the Alert Annunciation function shall be used in the systems EBL512 and EBL128, one or more AA units are required to present the AA alarms and for the related manoeuvres, i.e. to acknowledge / reset the alarms.

The LED "Operation" (L6) is indicating if the "alert annunciation" function is enabled or disabled<sup>2</sup>.

When the "alert annunciation" function is enabled, the LED "Fire brigade alerted" (L3) is indicating if it is an AA alarm or not. Off = AA alarm. On = no AA alarm / Output "Fire brigade tx" activated.

The LED "Acknowledged" (L4) is indicating if the AA alarm has been acknowledged. See also chapter "Operation", page 27.

### 3.1 Alert annunciation unit 1735



*Figure 1. The Alert Annunciation unit 1735 has a Swedish front.*

The Alert Annunciation unit consists of a compact size enclosure made of grey (RAL 7035) high impact ABS, with temperature resistance up to 85° C. Fitted with a supplementary "O" ring gasket, it will comply with IP65, in respect of dust and moisture. The unit has no door, i.e. the front is accessed directly, when required. The push buttons are disabled until they are supposed to be used. The unit shall be wall mounted. The unit is intended for indoor use and in dry premises. Two compression glands TET 7-10 (IP67) for cable inlets are attached.

<sup>2</sup> The AA function is normally enabled (during daytime) / disabled (during night-time) via a time channel.

### 3.1.1 SW mode 1735 - 1587

The Alert annunciation unit 1735 has to run in SW mode 1735 – 1587. 1735 succeeds the existing Display unit with alert annunciation 2235SE (with Swedish designation texts) but not as a spare part, since the 2235SE unit is connected to a COM loop.

In system EBL512, 1735 units running in SW mode **1735 – 1587** have to be connected to an **Ext. FBP / DU interface board 1587** mounted in the EBL512 c.i.e. EBL512 software version  $\geq 2.2$  is required.

In system EBL128, 1735 units running in SW mode **1735 – 1587** are connected directly to the main board but an optional RS485 transceiver component 4552 is required on the main board.

## 3.2 Alert annunciation unit 1736



*Figure 2. The Alert Annunciation unit 1736. A neutral front where the designation texts, by production, are made separately and put into the transparent "text slot" for the LED and push button respectively. (It also holds one extra LED & two extra push buttons.)*

The Alert Annunciation unit consists of a compact size enclosure made of grey (RAL 7035) high impact ABS, with temperature resistance up to 85° C. Fitted with a supplementary "O" ring gasket, it will comply with IP65, in respect of dust and moisture. The unit has no door, i.e. the front is accessed directly, when required. The push buttons are disabled until they are supposed to be used. The unit shall be wall mounted. The unit is intended for indoor use and in dry premises. Two compression glands TET 7-10 (IP67) for cable inlets are attached.

### 3.2.1 SW mode 1736 - 1587

The Alert annunciation unit 1736 has to run in SW mode 1736 – 1587. 1736 succeeds the existing Display unit with alert annunciation 2235cc (with designation texts in another language than Swedish) but not as a spare part, since the 2235cc unit is connected to a COM loop.



In system EBL512, 1736 units running in SW mode **1736 – 1587** have to be connected to an **Ext. FBP / DU interface board 1587** mounted in the EBL512 c.i.e. EBL512 software version  $\geq 2.2$  is required.

In system EBL128, 1736 units running in SW mode **1736 – 1587** are connected directly to the main board but an optional RS485 transceiver component 4552 is required on the main board.

## 4 Selective Fire alarm presentation

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Normally all fire alarms will be presented in the c.i.e.s, ext. FBP:s and Presentation units, etc. There are some possibilities to select which alarms that shall be presented in each unit. It is also programmable, if the fire alarm presentation shall be according to EN54, i.e. when only one point in a zone is in alarm status it will be presented as a point alarm (zone and address), else presented as a zone alarm.

### 4.1 Alert Annunciation units 1735 & 1736

The alarm presentation in an **AA** unit will be like in the c.i.e. that the **AA** unit is connected to, i.e. point alarm or zone alarm presentation. See Operating Instructions, chapter "Fire alarm" for the system respectively.

Via Win512 / Win128, it is possible to select which alarms that shall be presented in the **AA** unit respectively. For example, if there are many buildings in an installation, the **AA** unit in one specific building shall only present alarms activated within this building.

The following, so called operands are available (CU alternatives not valid for EBL128):

1. Control unit (**CU**)
2. Consecutive control units (**CU1, CU2**)
3. Zone (**zone**)
4. Consecutive zones (**zone1, zone2**)
5. Zone – address (**zone, addr**)
6. Consecutive zone – addresses (**zone1, addr1, zone2, addr2**)

Explanations:

1. **CU** = Control unit number (c.i.e. no. 00-29)
2. **CU1** = The first control unit number in the sequence. **CU2** = The last control unit number in the sequence.
3. **zone** = Zone number (001-999) In EBL128 (01-32).
4. **zone1** = The first zone number in the sequence. **zone2** = The last zone number in the sequence.
5. **zone, addr** = Zone number and address within the zone (001, 01 – 999, 99)
6. **zone1, addr1** = The first zone number and address in the sequence. **zone2, addr2** = The last zone number and address in the sequence.

Up to 50 operands can be used to make a, so called selector for an **AA** unit. Here follows a selector example:

**Control unit (00), Consecutive zones (100, 500), Zone – address (900, 01)** In this **AA** unit will only be presented alarms that origin from the c.i.e. no. 00 or from zone 100 up to and including zone 500 or from the alarm point 900-01.

Default for each **AA** unit is, in system EBL512: **Control units (00, 29)**, i.e. all alarms from all c.i.e:s will be presented in all **AA** units.

Default for each **AA** unit is, in system EBL128: **Zones (01 - 32)**, i.e. all alarms will be presented in all ext. FBP:s.

## 5 LED indicators, Push buttons, etc.

The functions of the LEDs, push buttons, display and buzzer are described below.

### 5.1 Alert annunciation unit 1735

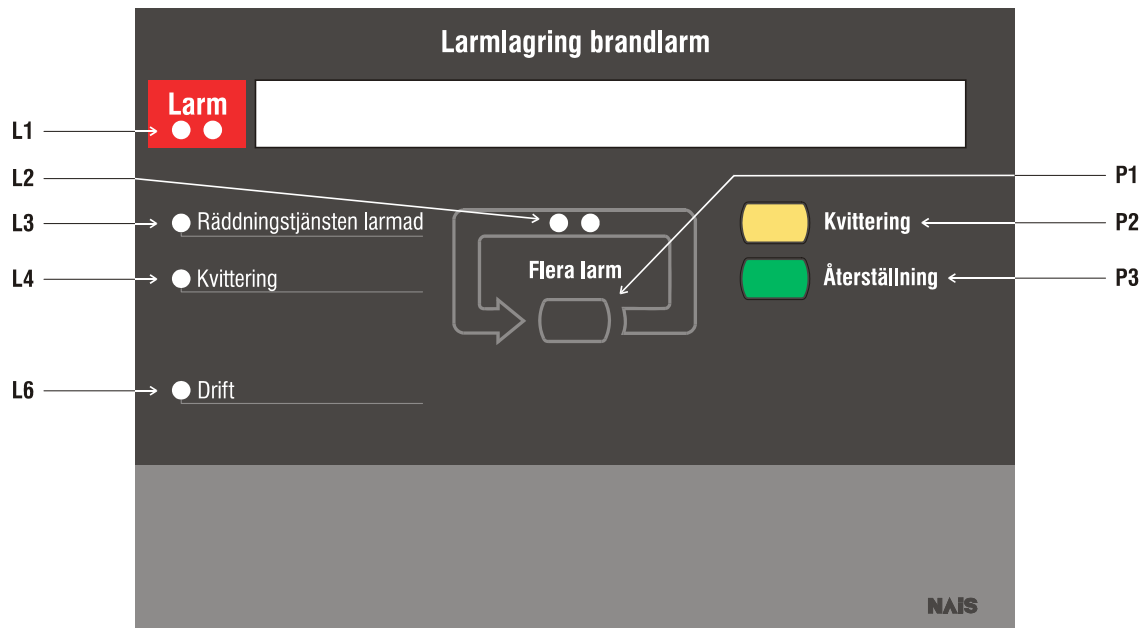


Figure 3. The Alert Annunciation unit 1735 front. The designation texts are in Swedish. See also tables below.

The following is valid in quiescent (normal) condition:

- LED "Operation" (L6) is turned on if the alert annunciation function is enabled<sup>3</sup>, else turned off.
- Buzzer is silent.
- No text in the display and no back-light.
- No button possible to use.<sup>4</sup>

In the following tables, **AA** = Alert Annunciation.

<sup>3</sup> The **AA** function is normally enabled (during daytime) / disabled (during night-time) via a time channel.

<sup>4</sup> Press simultaneously "Acknowledge" (P2) & "Reset" (P3) for a test of the LEDs, the buzzer and the display (back-light and dots). NOTE! This must be done only in quiescent condition.

Table of LED indicators:

LED indicator		Colour	Indicating	
L1	Alarm (Larm)	2 x Red	Blinking+ LED (L6) turned on + Buzzer (interm.)	<b>AA</b> alarm (Acknowledge time starts.)
			Blinking+ LED (L3) turned on (no buzzer).	Fire alarm (i.e. not an <b>AA</b> alarm).
			Cont. (no buzzer)	<b>AA</b> alarm(s) is/are acknowledged.
L2	Alarms queued (Flera larm)	2 x Red	Blinking	More than one alarm. Use push button "Alarms queued" (P1) to scroll.
L3	Fire brigade alerted (Räddningstjänsten larmad)	Red	Cont.	Output(s) for "Fire brigade tx" are activated. <sup>5</sup>
L4	Acknowledge (Kvittering)	Yellow	Cont.	All <b>AA</b> alarms have been acknowledged by the push button "Acknowledge" (P2) and new <b>AA</b> alarms will be automatically acknowledged.
L5	-	-	-	-
L6	Operation (Drift)	Green	Cont.	The <b>AA</b> function is <u>enabled</u> .
			Off	The <b>AA</b> function is <u>not enabled</u> .

**NOTE!** Regarding "L2", see also chapter "SW mode & Address setting, page 16.

<sup>5</sup> Indicating the same way as in the c.i.e. the **AA** unit is connected to, i.e. by activated output(s) of the corresponding type or an activated input.

Table of push buttons:

Push button		Colour	Operation / function
P1	Alarms queued (Flera larm)	Black	Used, when LED "Alarms queued" (L2) is turned on, to scroll through the queued alarms. (The first alarm will automatically be shown again after 20 seconds, if no button is used during that time.)
P2	Acknowledge (Kvittering) <sup>6</sup>	Yellow	Used to acknowledge an <b>AA</b> alarm. The unit's buzzer will also be silenced. (Investigation time starts.) Acknowledged <b>AA</b> alarm is indicated by LED "Acknowledge" (L4).
P3	Reset (Återställning) <sup>6</sup>	Green	Used to reset the <b>AA</b> alarm(s). (Fire alarms, i.e. <u>not</u> <b>AA</b> alarms, have to be reset in the c.i.e.).

**NOTE!** Regarding "P1" and "P2", see chapter "SW mode & Address setting, page 16 and regarding "P3", chapter "SW version", page 25.

Table of others:

Component	Indicating	
Buzzer <sup>7</sup>	1 beep/5 s	<b>AA</b> alarm.
	Cont. + <b>All</b> LEDs turned off as well.	There is a CPU / memory fault in the unit.
Display	All or selected Fire alarms <sup>8</sup> / <b>AA</b> alarms presented like in the c.i.e. that the <b>AA</b> unit is connected to and a user definable text message (if programmed). <b>(NOTE!</b> A fault message may be shown, indicating a communication fault (i.e. no connection between the unit and the c.i.e.).	

**NOTE!** Regarding the Buzzer and the Display, see also chapter "SW mode & Address setting, page 16.

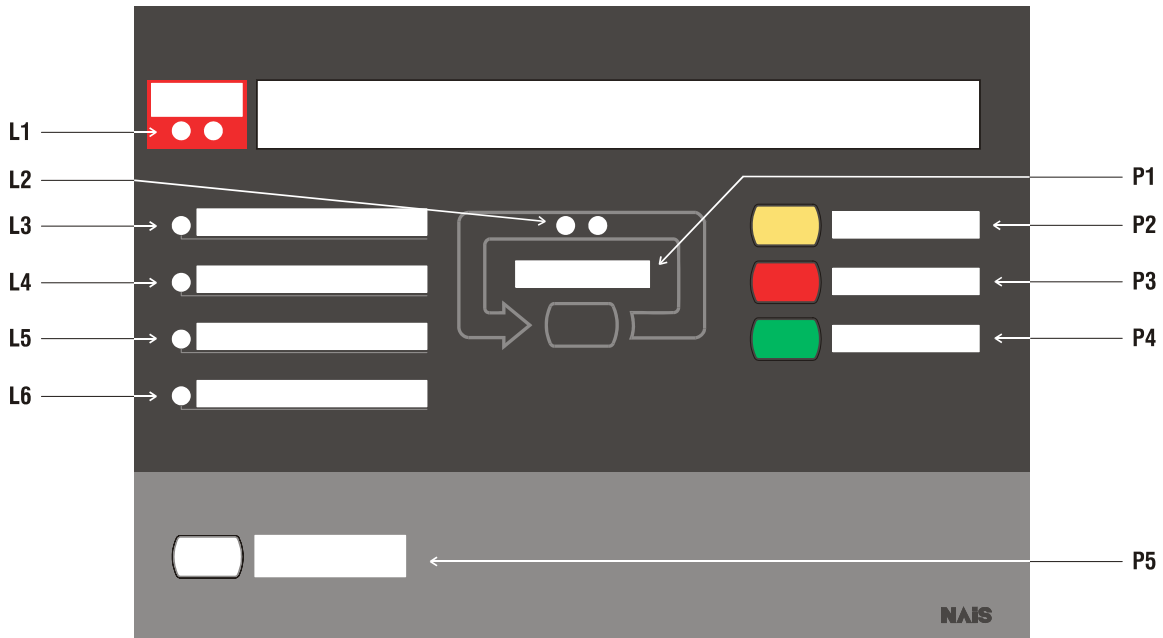
<sup>6</sup> Press simultaneously "Acknowledge" (P2) & "Reset" (P3) for a test of the LEDs, the buzzer and the display (back-light and dots). **NOTE!** This must be done only in quiescent condition.

<sup>7</sup> The buzzer may be programmed as "disabled" (via Win512 / Win128), i.e. it will not sound.

<sup>8</sup> Also Heavy smoke / heat alarms.

## 5.2 Alert annunciation unit 1736

The Alert Annunciation unit is also available with a neutral front. The designation texts for the LEDs and push buttons have to be made separately and put into a "text slot" for the LED / push button respectively.



*Figure 4. The Alert annunciation unit 1736 neutral front.*

The following is valid in quiescent (normal) condition:

- LED "L6" is turned on if the alert annunciation function is enabled<sup>9</sup>, else turned off.
- Buzzer is silent.
- No text in the display and no back-light.
- No button possible to use.<sup>10</sup>

<sup>9</sup> The AA function is normally enabled (during daytime) / disabled (during night-time) via a time channel.

<sup>10</sup> Press "Test" (P5) for a test of the LEDs, the buzzer and the display (back-light and dots). NOTE! This must be done only in quiescent condition.

Table of LED indicators:

LED indicator		Colour	Indicating	
L1	(Depending on language, etc. "Alarm")	2 x Red	Blinking+ LED (L6) turned on + Buzzer (interm.)	AA alarm (Acknowledge time starts.)
			Blinking+ LED (L3) turned on (no buzzer).	Fire alarm (i.e. not an AA alarm).
			Cont. (no buzzer)	AA alarm(s) is/are acknowledged.
L2	(Depending on language, etc. "Alarms queued")	2 x Red	Blinking	More than one alarm. Use push button (P1) to scroll.
L3	(Depending on language, etc. "Fire brigade alerted")	Red	Cont.	Output(s) for "Fire brigade tx" are activated. <sup>11</sup>
L4	(Depending on language, etc. "Acknowledge")	Yellow	Cont.	All AA alarms have been acknowledged by the push button (P2) and new AA alarms will be automatically acknowledged.
L5	(Depending on language, etc. "Extinguishing")	Red	Cont.	Output(s) for "Extinguishing" are activated. <sup>11</sup>
L6	(Depending on language, etc. "Operation")	Green	Cont.	The AA function is <u>enabled</u> .
			Off	The AA function is <u>not enabled</u> .

**NOTE!** Regarding "L2", see also chapter "SW mode & Address setting, page 16.

<sup>11</sup> Indicating the same way as in the c.i.e. the AA unit is connected to, i.e. by activated output(s) of the corresponding type or an activated input for the LED respectively.



Table of push buttons:

Push button		Colour	Operation / function
P1	(Depending on language, etc. "Alarms queued")	Black	Used, when LED (L2) is turned on, to scroll through the queued alarms. (The first alarm will automatically be shown again after 20 seconds, if no button is used during that time.)
P2	(Depending on language, etc. "Acknowledge")	Yellow	Used to acknowledge an <b>AA</b> alarm. The unit's buzzer will also be silenced. (Investigation time starts.) Acknowledged <b>AA</b> alarm is indicated by LED (L4).
P3	(Depending on language, etc. "Silence alarm devices")	Red	Used to silence the alarm devices. (Normal fire alarms & <b>AA</b> alarms.)
P4	(Depending on language, etc. "Reset")	Green	Used to reset the <b>AA</b> alarm(s). (Fire alarms, i.e. <u>not</u> <b>AA</b> alarms, have to be reset in the c.i.e.).
P5	(Depending on language, etc. ("Test") <sup>12</sup> )	White	Used for testing the LEDs, the buzzer and the display (back-light and dots). <b>NOTE!</b> This must be done only in quiescent condition.

**NOTE!** Regarding "P1" and "P2", see chapter "SW mode & Address setting, page 16 and regarding "P3", chapter "SW version", page 25.

Table of others:

Component	Indicating	
Buzzer <sup>13</sup>	1 beep/5 s	<b>AA</b> alarm.
	Cont. + <b>All</b> LEDs turned off as well.	There is a CPU / memory fault in the unit.
Display	All or selected Fire alarms / <b>AA</b> alarms presented like in the c.i.e. that the <b>AA</b> unit is connected to and a user definable text message (if programmed). ( <b>NOTE!</b> A fault message may be shown, indicating a communication fault (i.e. no connection between the unit and the c.i.e.).	

**NOTE!** Regarding the Buzzer and the Display, see also chapter "SW mode & Address setting, page 16.

<sup>12</sup> Press "Test" (P5) for a test of the LEDs, the buzzer and the display (back-light and dots). **NOTE!** This must be done only in quiescent condition.

<sup>13</sup> The buzzer may be programmed as "disabled" (via Win512 / Win128), i.e. it will not sound.

## 6 SW mode & Address setting

Alert Annunciation Unit **1735** can run in SW mode **1735 - 1587** only. It shall also have a unique **address** on the line connected to the 1587 board in the c.i.e. See EBL512 Planning Instructions.

Alert Annunciation Unit **1736** can run in SW mode **1736 - 1587** only. It shall also have a unique **address** on the line connected to the 1587 board in the EBL512 c.i.e. See EBL512 Planning Instructions.

The SW mode **1736 – 1587** has to be used in EBL128 and an optional RS485 transceiver component 4552 is required on the main board. See EBL128 Planning Instructions.

### 6.1 SW mode setting

A brand new **AA** unit has no SW mode. It is factory set to "**Not selected**" (and is hereby not addressable). When it is **powered** it will automatically be ready for the "SW mode setting".

As an alternative, an **AA** unit **in operation**<sup>14</sup> can be ready for the "SW mode setting" via the jumper "J4" in the unit. See the following chapter.

When the **AA** unit is ready for the "SW mode setting" this is indicated by the LED "Alarms queued" (L2). The back-light is turned on and the following information is shown in the display:

MODE SETTING!	Change = Black
Type: <b>XXXXXXXXXXXX</b>	Store = Yellow

**XXXXXXXXXXXX** can be changed to one of the following:

- **1735 - 1587**
- **1736 - 1587**
- **1826/28 - 1587**
- **1826/28 - 1582**
- **1728 - 1587**
- **1728 - 1582**
- **Not selected**

Scroll to the wanted SW mode<sup>15</sup> with the push button "P1" (black). Store the selected SW mode with the push button "P2" (yellow) and the unit will automatically be ready for the "Address setting ", see below.

<sup>14</sup> Or when a unit, not in operation but with the mode and address set before, is powered.

<sup>15</sup> For **AA** unit **1735** is only SW mode **1735 – 1587** valid and for **1736** is only SW mode **1736 – 1587** valid. ("Not selected" can also be selected.)

### 6.1.1 SW mode setting via jumper "J4"

An **AA** unit **in operation**<sup>14</sup> will be ready for the "SW mode setting" via the jumper "J4" in the unit. Activate "J4" **momentarily**.<sup>16</sup>

When the **AA** unit is ready for the "SW mode setting" this is indicated by the LED "Alarms queued" (L2). The back-light is turned on and the following information is shown in the display:

MODE SETTING!	Change = Black
Type: <b>XXXXXXXXXXXX</b>	Store = Yellow

Continue in accordance with chapter "SW mode setting", page 16.

## 6.2 Address setting

After the SW mode setting, the **AA** unit is ready for the "address setting".

As an alternative, an **AA** unit **in operation**<sup>17</sup> can be ready for the "address setting" directly via the c.i.e. (menu H5/A9). See the following chapter.

When the **AA** unit is ready for the "address setting" this is indicated by the LED "Alarms queued" (L2). The back-light is turned on and the following information is shown in the display:

ADDRESS SETTING	Change = Black
Address: <b>XX</b>	Store = Yellow

**XX** can be changed to the following:

For an **AA** unit, the address can be set to **00-15**.<sup>18</sup> (Default is "00".)

Scroll to the wanted address with the push button "P1" (black). Store the selected address with the push button "P2" (yellow) and the unit will automatically restart and enter its normal operation mode.<sup>19</sup>

### 6.2.1 Address setting mode via the c.i.e.

A specific AA unit or all the AA units connected to the same line (RS485) can, in normal operation, from the c.i.e. receive a command and get ready for the "Address setting" directly. This is done via menu H5/A9, see Operating instructions for the system respectively.

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<sup>16</sup> If "J4" is not removed, the **AA** unit will not enter its normal operation mode after the restart but start from the beginning again, ready for the SW mode setting.

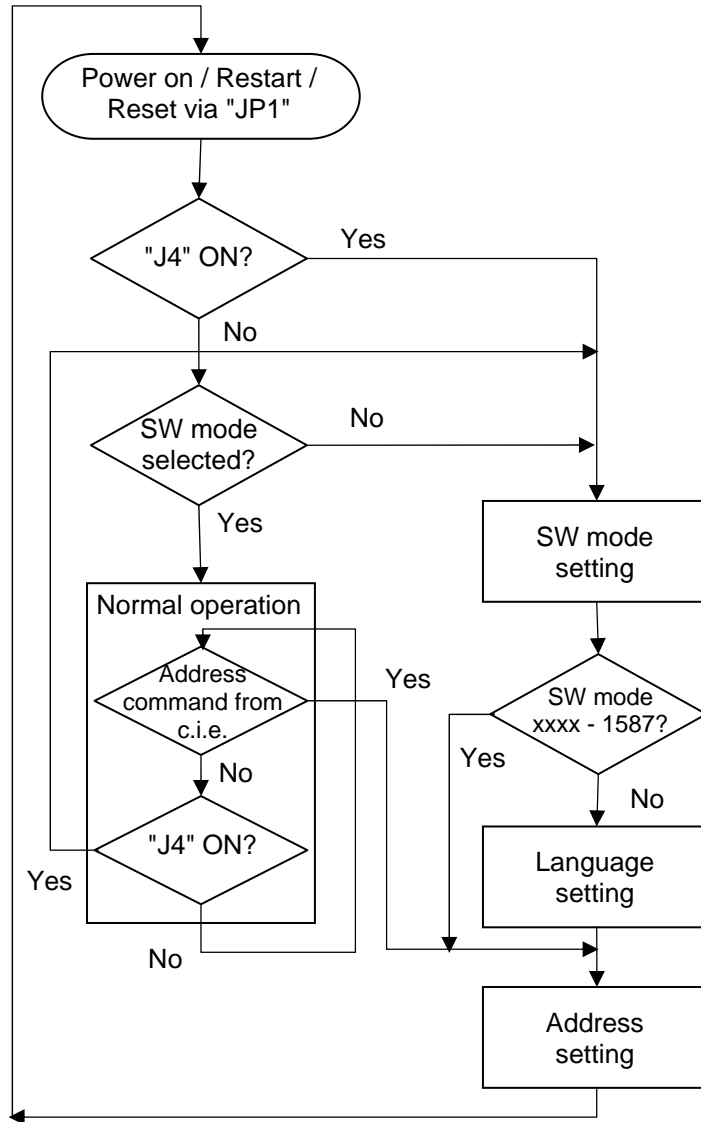
<sup>17</sup> Or all the **AA** units connected to the same Ext. FBP / DU interface board 1587.

<sup>18</sup> This is the max. no. of addresses. The max. no. of units connected to a board is depending on the type of units and if ext. power supply is used.

<sup>19</sup> If the unit has no SW mode, i.e. "Not selected", it will not enter its normal operation mode after the restart but start from the beginning again, ready for the SW mode setting.

## 6.3 Flow chart

On the following page is a flow chart, showing the SW mode setting, Language setting<sup>20</sup>, Address setting, etc.



<sup>20</sup> Language setting is not valid for the AA units 1735 & 1736.

## 7 User definable text messages

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In the c.i.e., each alarm point (zone – address) and each zone can have an individual user definable text message (alarm text)<sup>21</sup> presented in the alphanumeric display by fire alarm, see the Planning and Operating Instructions for the system respectively.

The user definable text messages shown in the c.i.e. will also be sent to each Alert Annunciation unit and shown in its display.

As an alternative, text messages for all or selected alarm points / zones can be stored in each **AA** unit.<sup>22</sup> If so, these text messages will be shown instead of the text messages sent out from the c.i.e.

The priority order is as follows:

1. Point alarm text stored in the **AA** unit.
2. Zone alarm text stored in the **AA** unit.
3. Default alarm text stored in the **AA** unit.
4. Text sent out from the c.i.e.

When text messages shall be stored in all or in some **AA** units, the unique text messages are created in Win512 / Win128 and downloaded when the c.i.e. site specific data (SSD) is downloaded.

**NOTE!** It is also possible to select which fire alarms that shall be presented in the **AA** unit respectively, see chapter "Selective Fire alarm presentation", page 8.

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<sup>21</sup> Each text message (up to 40 alphanumeric characters) will be shown on the second row. The text messages are created and downloaded via Win512 / Win128.

<sup>22</sup> At least 617 text messages can be stored in each unit.

## 8 Commissioning of a new unit / SSD download

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The 1582 / 1587 board shall be mounted in the EBL512 c.i.e. and the fuse "F1" shall be removed. The cable (RS485 line) to the **AA** unit(s)<sup>23</sup> shall be connected.

The EBL128 c.i.e. shall be powerless and the "RS485 transceiver component 4552" shall be plugged on the main board. The cable (RS485 line) to the **AA** unit(s)<sup>23</sup> shall be connected.

The SW mode and the address have to be set in each new unit according to chapter "SW mode & Address setting", page 16. Here follows a brief summary:

1. Connect the cable from the c.i.e. to the **AA** unit 's terminal block.
2. When all connections are done put back the fuse "F1" on the 1582 / 1587 board in the EBL512 c.i.e. / power up the EBL128 c.i.e., i.e. the **AA** unit(s) will now be powered up.
3. A brand new unit will automatically be ready for the SW mode setting.
4. After SW mode and address setting press "P2" (yellow) and the unit will restart, see chapter "Restart", page 22.
5. Since the SSD is not downloaded in the c.i.e. there will be a fault message in the unit's display: "No contact with Control unit". All LED:s in the unit will be turned off.
6. Now the SSD have to be downloaded via Win512 / Win128.<sup>24</sup> Connect the PC to the c.i.e. In the "Win512 / Win128 download SSD" dialog box, verify that the "Download FBP / AAU" checkbox is marked. Start the download of SSD.
7. After download of SSD to the c.i.e. it will restart and the download of SSD to the **AA** unit(s) will take place. During the download to the **AA** unit will in the display be shown:  
**"SSD download in progress....."**
8. After download of SSD to an **AA** unit, will in the display be shown (very quickly):

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<sup>23</sup> One or more ext. FBPs and/or Alert Annunciation Units can be connected.

<sup>24</sup> Via Win512 is the 1582 / 1587 board programmed. Via Win512 / Win128 is each unit (e.g. an **AA** unit) programmed regarding Address, Selective alarm presentation, if the buzzer should be disabled etc. When required, also "User definable text messages" (alarm texts).

**"SSD Download Memory OK"**

(or **"SSD Download Memory Fault"**)

After that it will restart, see chapter "Restart", page 22.

9. The unit will then start working in normal operation mode.

## 9 Restart

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The AA unit will restart:

- After the unit is powered up
- If the jumper "JP1" is activated momentarily
- After address setting (i.e. "P2" is pressed).
- When the contact with the Control unit is OK again after "No contact with Control unit".

During the restart will in the display be shown (no back-light):

**"Checking program memory..."**

and after that (very quickly)

**"Program memory OK."**

and

**"SSD memory OK."**

All LED:s will be turned on during the restart.

If there is a program memory fault, there will be a fault message in the display:

**"Memory fault in program area (n)"** (n=1 or 2).

The AA unit will not work.

There will also be a fault message in the c.i.e.:

In the EBL512 c.i.e.:

**"FAULT: Comm, AAU xx, 1587 board x, CU xx".**

In the EBL128 c.i.e.:

**"FAULT: No reply AAU x.**

If there is an SSD (Site Specific Data) memory fault or no SSD downloaded, there will be a fault message in the display:

**"SSD memory fault"**

The AA unit will work since the user definable text messages will be sent out from the c.i.e.

There will also be a fault message in the c.i.e.:

In the EBL512 c.i.e.:

**"FAULT: SSD, AAU xx, 1587 board x, CU xx".**

In the EBL128 c.i.e.:

**"FAULT: Site specific data (SSD), AAU x.**



## 10 Fault messages

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Here follows a list of the fault messages that might be displayed in the AA unit and in the c.i.e. respectively.

### 10.1 Fault messages in the AA unit

**"No contact with control unit"** The contact with the c.i.e. is interrupted for  $\geq 45$  sec. In a brand new AA unit this message will be in English. After commissioning of the AA unit (i.e. after SSD download) the message will be in the same language as in the c.i.e. Check the cable, all connections, the 1582 / 1587 board in the EBL512 c.i.e. and the RS485 transceiver component 4552 in the EBL128 c.i.e. Is a correct / complete SSD download (via Win512 / Win128) performed? Check the address setting (1582 / 1587 board in EBL512 / the AA unit), SW mode setting, etc.

**"SSD memory fault"** See chapter "Restart", page 22.

**"SSD Download Memory Fault"** in conjunction with SSD download, see chapter "Commissioning of a new unit / SSD download", page 20.

**"Memory fault in program area (n)"** See chapter "Restart", page 22.

### 10.2 Fault messages in the c.i.e.

#### 10.2.1 EBL512 c.i.e.

**"FAULT: 1587 board x, CU xx"**

Fault on / no communication to the 1587 board No. x in control unit No. xx. Check address setting and connections on the board. Check programming (Win512).

**"FAULT: Comm, AAU xx, 1587 board x, CU xx"**

The contact with the AA unit is interrupted. Check the cable, all connections and the 1582 / 1587 board. Is a correct / complete SSD download (via Win512) performed? Check the address setting (1582 / 1587 board / the AA unit), SW mode setting, etc. See also chapter "Restart", page 22.

**"FAULT: AAU xx, 1587 board x, CU xx"**

The AA unit is programmed (via Win512) as another type of unit or there is a fault in the AA unit.

**"FAULT: Fuse, 1587 board x, CU xx"**

Check for blown fuse(s) on the 1587 board.

**"FAULT: SSD, AAU xx, 1587 board x, CU xx"**

See chapter "Restart", page 22.

## 10.2.2

### **EBL128 c.i.e.**

**"FAULT: No reply AAU x.**

The contact with the **AA** unit is interrupted. Check the cable and all connections. Is a correct / complete SSD download (via Win128) performed? Check the address setting, SW mode setting, etc. See also chapter "Restart", page 22.

**"FAULT: AAU x "**

The **AA** unit is programmed (via Win128) as another type of unit or there is a fault in the **AA** unit.

**"FAULT: Site specific data (SSD), AAU x.**

See chapter "Restart", page 22.

# 11 Software (SW)

The software is stored in a flash memory in each **AA** unit. This software can be replaced / updated (i.e. downloaded via Win512 / Win128). All units connected to the same RS485 line have to have the same SW version and it is highly recommended to have the same SW version in all the display units in the system.

## 11.1 SW version

The SW version can be presented as follows:

- 1 Do the same as by SW mode and address setting, see chapter "SW mode setting", page 16.
- 2 When the following is displayed:

MODE SETTING!	Change = Black
Type: <b>XXXXXXXXXXXX</b>	Store = Yellow

...press push button "P2" (yellow) and the following will be displayed:

ADDRESS SETTING	Change = Black
Address: <b>XX</b>	Store = Yellow

...press push buttons "P1" (black) and "P2" (yellow) simultaneously and the following will be displayed:

Latest restart type: <b>nn</b>	Addr: <b>aaaaaaaa</b>
Program version: <b>V.vvvv</b>	

**nn** = restart type (code) and **aaaaaaaa** = memory address before restart.

- nn=00: Power On Reset. (Power supply connected)
- nn=01: Watchdog Reset.
- nn=02: Accidental jump to reset vector.
- nn=03: External reset caused by external watchdog/user (e.g. after SSD download) or jumper "JP1" (RESET) has been used.
- nn=4-19: Unexpected interrupt.

If nn=01, 02 or 04-19 appear often, call for service personnel / engineer.

**V.vvvv** = SW version (e.g. 1.2).

- 3 Press push buttons "P1" (black) and "P2" (yellow) simultaneously and the following will be displayed:

ADDRESS SETTING	Change = Black
Address: <b>XX</b>	Store = Yellow

- 4 Press push button "P2" (yellow).
- 5 The **AA** unit will restart, i.e. the buzzer will sound for approx. two seconds and the unit will return to normal operation.

## 11.2 SW download

Each **AA** unit is equipped with an RS232 interface ("J2"), which makes it possible to connect a PC and carry out the downloading directly in the **AA** unit respectively.

1. Prepare the PC and start Win512 / Win128. In Win512 select the ext. AAU icon and click the right mouse button. In win128, in menu "Tools" select "Download FBP/ EPU / AAU Software". Select "Download program" and select the SW file to be downloaded, i.e. DU\_version.BIN (where "version" is the valid program version, e.g. 12=program version 1.2). Check / set the port and baud rate. See also the Win512 / Win128 help.
2. Connect the PC to the **AA** unit ("J2").
3. Put the jumpers "JP3" and "JP4" in position "A".
4. Put the jumper "JP2" (BOOT) in position.
5. Put the **AA** unit in "bootstrap" mode, i.e. put the jumper "JP1" (RESET) in position **momentarily**. The buzzer will sound.
6. Start the downloading. (The buzzer will be silenced.)
7. When the download is ready remove the jumper "JP2" (BOOT).
8. Put the jumpers "JP3" and "JP4" in position "B".
9. Do a restart, i.e. put the jumper "JP1" (RESET) in position **momentarily**. The buzzer will sound for approx. two seconds and the **AA** unit will return to normal operation.
10. Regarding fault messages, see chapter "Restart", page 22.

## 12 Operation

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The LED "Operation" (L6) is indicating if the "alert annunciation" function is enabled or disabled<sup>25</sup>.

When the "alert annunciation" function is enabled, the LED "Fire brigade alerted" (L3) is indicating if it is an **AA** alarm or not. Off = **AA** alarm. On = no **AA** alarm / Output "Fire brigade tx" activated.

The LED "Acknowledged" (L4) is indicating if the **AA** alarm has been acknowledged.

The following page / figure show an operation summary for the Alert annunciation units 1735 & 1736.

See also chapter "SW mode & Address setting, page 16.

**AA** alarm acknowledged in any Alert Annunciation unit will be indicated in all "Alert annunciation units".

**AA** alarm reset in any Alert annunciation unit (or in the c.i.e.) will also be "reset" in all other Alert Annunciation units.

**NOTE!** The Alert Annunciation unit in the figure is only schematic, i.e. the positions of the different LEDs, push buttons, etc. are not according to Figure 3, on page 10.

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<sup>25</sup> The AA function is normally enabled (during daytime) / disabled (during night-time) via a time channel.

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## Alert annunciation unit (Larmlagringstablå) 1735

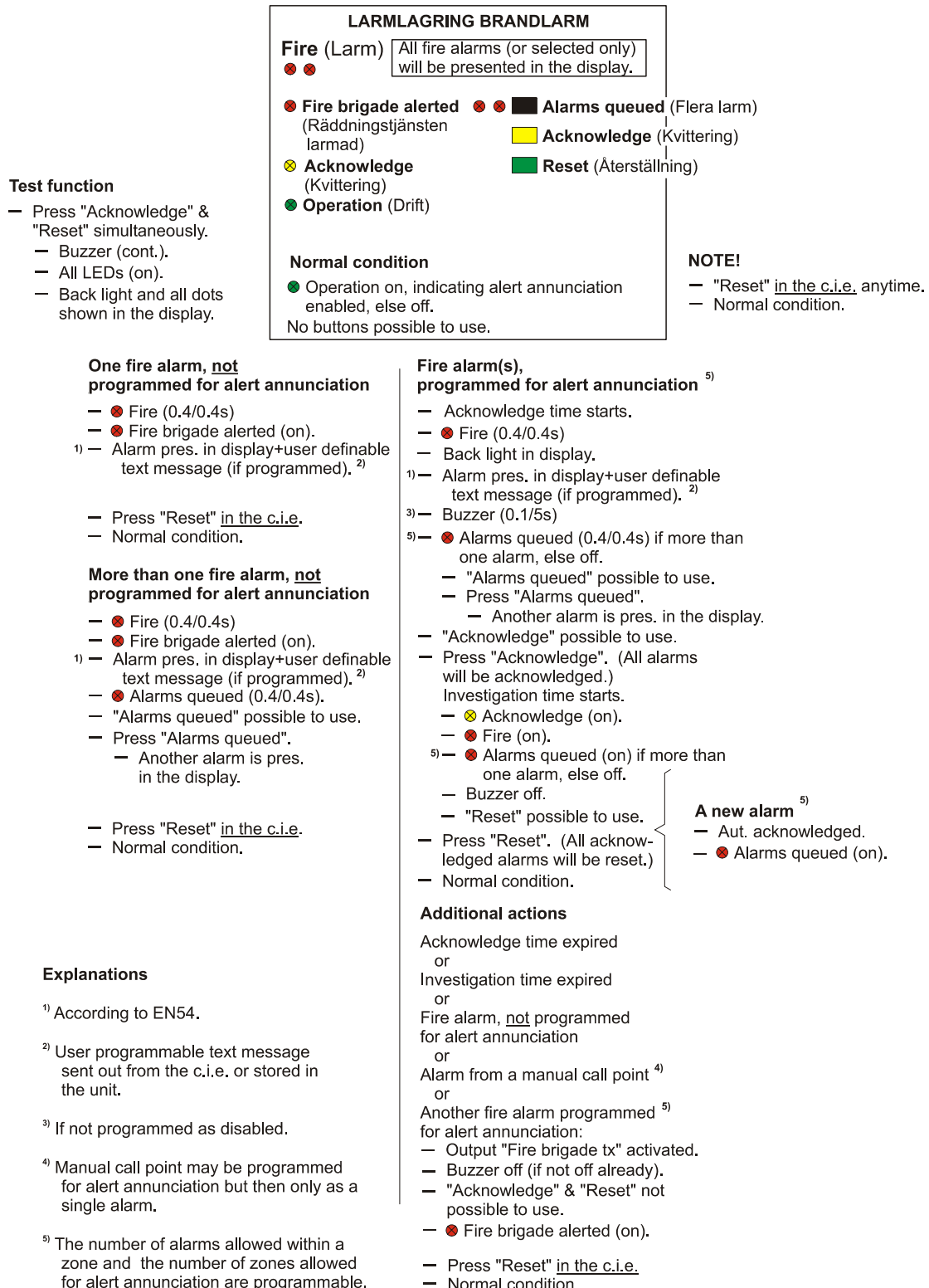


Figure 5. Operation summary for the AA unit 1735. The AA unit 1736 is like 1735 but it also has an LED "Extinguishing" and push buttons "Silence alarm devices" and "Test".

# 13 Connections

The AA units 1735 & 1736 main board is equipped with a plug-in terminal block (J1:1-8) for the cable connections. Up to 1.5 mm<sup>2</sup> conductor area can be used.

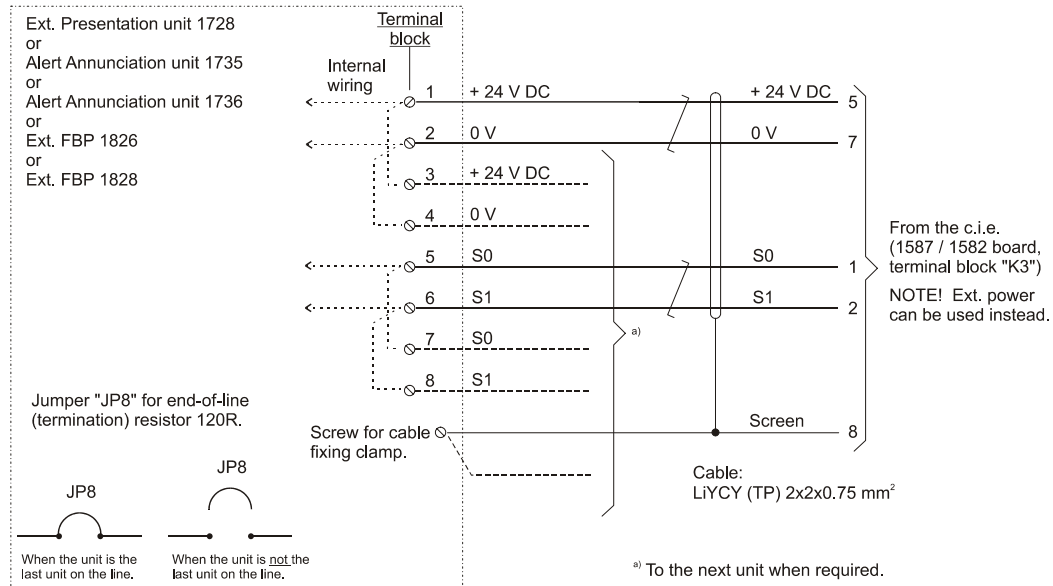


Figure 6. The Alert Annunciation units 1735 & 1736 connections to the terminal block "J1". The jumper "JP8" only has to be on place (shunted) if the unit is the last unit on the line. **NOTE!** The AA units 1735 & 1736 can in EBL512 only be connected to a 1587 board (not 1582). Connections in EBL128: +24 V / 0V / S0 / S1 to terminal block J1: 13 / 14 / 15 / 16.

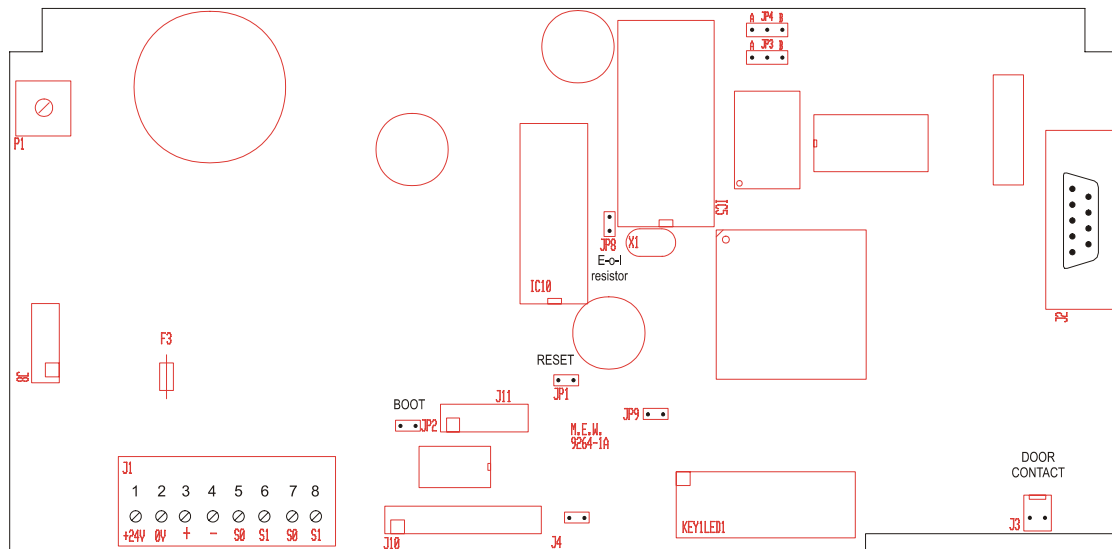


Figure 7. The Alert Annunciation units 1735 & 1736 main board p.c.b. Position of the terminal block "J1", the jumper "JP8", etc.

## Comments to the components:

<b>F3</b>	1.5 A fuse (not replaceable; the whole p.c.b. should be replaced).
<b>J1</b>	Terminal block for the unit's connections.
<b>J2</b>	"D" connector (9 ways, male), RS232 interface for SW download. (Note, jumpers "JP3" and "JP4" have to be in pos. "A".)
<b>J3</b>	Not used in this unit.
<b>J4</b>	Used when SW mode and address setting shall be done.
<b>J8</b>	Not used in this unit.
<b>J10</b>	Not used in this unit.
<b>J11</b>	Not used in this unit.
<b>JP1</b>	Reset. (Restart of the unit.)
<b>JP2</b>	Boot. (The unit has to be in "bootstrap" mode before SW download.)
<b>JP3</b>	Pos. "A": PC, for SW download, connected via "J2". Pos. "B": The unit is connected to the c.i.e. (default).
<b>JP4</b>	Pos. "A": PC, for SW download, connected via "J2". Pos. "B": The unit is connected to the c.i.e. (default).
<b>JP8</b>	Used when the unit is the last unit on the line, i.e. to connect the built-in end-of- line resistor (120R).
<b>JP9</b>	For future use.
<b>KEY1LED1</b>	Connector for the front panel.
<b>P1</b>	Potentiometer for LCD contrast adjustment.



## 14 Technical data

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### 14.1 Power supply

Nominal voltage for the **AA** units 1735 & 1736 is 24 V DC.<sup>26</sup>

The number of **AA** units<sup>27</sup> that can be power supplied from the c.i.e. is depending on all other units connected to the same RS485 line (i.e. the current consumption).

As an alternative, the units can be power supplied from an external power supply.

### 14.2 RS485

The **AA** units communicate with the c.i.e. via RS485, i.e. in EBL512 via the "Ext. FBP / DU interface board" 1587 (data rate 9600 baud), mounted in the c.i.e. and in EBL128 via the "RS485 transceiver component 4552" plugged on the mother board in the c.i.e.

In the last unit on the line, a termination resistor (120R) has to be connected. In the **AA** units 1735 & 1736 this is done via jumper "JP8". ("JP8" mounted = the termination resistor is connected.)

#### 14.2.1 Cable

The cable to be used should be LiYCY (Twisted Pairs) 2 x 2 x 0.75 mm<sup>2</sup> (screened - tinned copper braid) or equivalent. Cable length up to 1200 m (theoretically). Note! The cable length is also depending on the current consumption, i.e. the type and number of units connected.

**NOTE!** In system EBL128 the screen is not used / connected.

2 x ELQYB 2 x 1 mm (0.75 mm<sup>2</sup>) can be used.

### 14.3 RS232

The **AA** units are equipped with an RS232 interface (J2), which makes it possible to download new SW directly to the **AA** unit respectively.

### 14.4 Connection

The **AA** units are equipped with a plug-in terminal block (J1) for the cable connections. Up to 1.5 mm<sup>2</sup> conductor area can be used.

### 14.5 Current consumption

The current consumption is depending on the actual voltage on the line.

The following table shows the current consumption in relation to the actual line voltage (min. and normal respectively):

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<sup>26</sup> Allowed voltage is 12 – 30 V DC.

<sup>27</sup> On each 1587 board are up to sixteen addresses available.

Unit	Current consumption			
	Quiescent (mA)		Active (mA)	
	12 V DC	24 V DC	12 V DC	24 V DC
AA unit 1735	48	26	79	42
AA unit 1736	48	26	79	42

## **15**      **Revision history**

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