**Technical Description**

# 1736

**Rev 1.0**

# Alert Annunciation Unit

# 1736

## S/W Ver. 1.4.x

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# 1 Introduction

This document describes the **A**lert **A**nnunciation **U**nit **1736.**

For a detailed description of the **AA** function, see Technical and Operation Manuals for the system respectively.

The Alert annunciation unit 1736 shall run in **SW mode 1736 – 1587**.

See also chapter "General description", page 6.

This document is valid for the 1736 software **version 1.4.x**.

The Alert annunciation unit 1736 can be used in the systems FT512, FT128 and FT1020G3.

In system FT1020G3 the 1736 software version $\geq$ 1.4.x. **must** be used.

# 2 Definitions / Explanations

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 |
| **AA** function | Alert Annunciation function |
| **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 **A**lert **A**nnunciation function shall be used in the systems FT512, FT128 and FT1022G3, one or more **AA** units are required to present the **AA** alarms and for the related manoeuvres, i.e. to acknowledge / reset the **AA** alarms.

The LED "L6" (Operation) is indicating if the "**A**lert **A**nnunciation" function is enabled or disabled[1].

When the **AA** function is enabled ("L6" on) and a fire alarm in the system, the LED "L3" (Fire brigade alerted) is indicating whether the alarm is an **AA** alarm or normal alarm.
LED L3 will be OFF for **AA** alarm and ON for non - **AA** alarm / Output "Fire brigade tx" activated.

The LED "L4" (Acknowledged) is indicating if the **AA** alarm has been acknowledged.  See also chapter "Operation", page 25.

## 3.1 Alert Annunciation Unit 1736



*Figure 1.  The Alert Annunciation Unit (AAU) 1736.*

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 an **AA** alarm is activated. The unit shall be wall mounted. The unit is intended for indoor use and in dry premises. Two compression glands (IP67) for cable inlets are attached.

### 3.1.1 SW mode 1736 - 1587

The Alert Annunciation Unit 1736 <u>must</u> run in SW mode 1736 – 1587.

In system **FT512**, 1736 units running in SW mode **1736 – 1587** have to be connected to a **DU interface board 1587** mounted in the FT512 C.I.E.

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[1] The **AA** function is normally enabled (during daytime) / disabled (during night-time) via a time channel.

In system **FT128**, 1736 units running in SW mode **1736 – 1587** are connected directly to the main board connector "J1" or via the termination board terminal 15 & 16 (Australian convention) but an optional **RS485 transceiver component (chip) 4552** is required on the main board.

In system **FT1020G3**, 1736 units running in SW mode **1736 – 1587** are connected directly to the main board connector "J4". No additional interface required.

# 4 Selective Fire alarm presentation

Normally all fire alarms will be presented in the C.I.E's, external FBP's, Presentation units, etc. There are some possibilities to select which alarms that shall be presented in each unit. It is also programmable, 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 Unit 1736

The alarm presentation in an **AA** unit will be similar to the one in the C.I.E. that the **AA** unit is connected to, i.e. point alarm or zone alarm presentation. See Operation Manual, chapter "Fire alarm" for each system.

Via Win512 / Win128 / WinG3, 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 FT128):

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 FT128 (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 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 originated 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 FT512 and FT1020G3: **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 FT128:  **Zones** (**01 - 32**), i.e. all alarms will be presented in all units.

# 5 LED indicators, Push buttons, etc.

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

## 5.1 Alert Annunciation Unit 1736
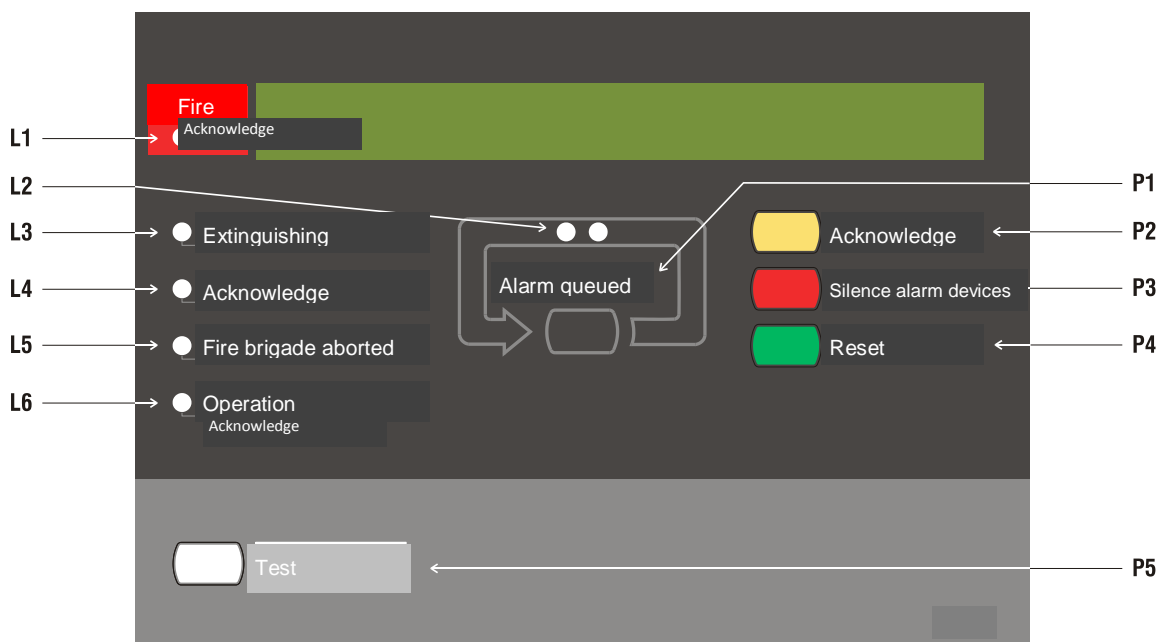


*Figure 2. Alert Annunciation Unit (AAU) 1736 front*

The following is valid in quiescent (normal) condition:

- LED "L6" is turned on if the alert annunciation function is enabled[2], else turned off.

- Buzzer is silent.

- No text in the display and no back-light.

- No control button can be used.[3]

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[2] The **AA** function is normally enabled (during daytime) / disabled (during night-time) via a time channel.

[3] Press "P5" (Test) 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 1 of LED Indicators:*

| LED indicator | | Colour | Indicating | |
|---|---|---|---|---|
| L1 | Fire | 2 x Red | Blinking + LED "L6" turned on + Buzzer (intermittent) | **AA** alarm  (Acknowledge time starts) |
| | | | Blinking + LED "L3" turned on (no buzzer). | Fire alarm (i.e. not an **AA** alarm). |
| | | | Steady (no buzzer) | **AA** alarm(s) is/are acknowledged. |
| L2 | Alarms queued | 2 x Red | Blinking | More than one alarm.  Use push button "P1" (Alarms queued) to scroll. |
| L3 | Extinguishing | Red | Steady | Outputs for Extinguishing are activated |
| L4 | Acknowledge | Yellow | Steady | All **AA** alarms have been acknowledged by the push button "P2" (Acknowledge) and new **AA** alarms will be automatically acknowledged. |
| L5 | Fire brigade alerted | Red | Steady | Output(s) for "Fire brigade tx" are activated.4 |
| L6 | Operation | Green | Steady | 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 13.

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[4] Indicating same as indicated in the C.I.E. where the **AA** unit is connected, i.e. by activated output(s) of the corresponding type or an activated input.

Table 2 Push Buttons:

| Push button | | Colour | Operation / function |
|---|---|---|---|
| P1 | 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 | Acknowledge | Yellow | Used to acknowledge an **AA** alarm. The unit's buzzer will also be silenced. (Investigation time starts.) Acknowledged **AA** alarm is indicated by LED "L4". |
| P3 | Silence alarm devices | Red | Used to silence the alarm devices. (Normal fire alarms & **AA** alarms.) [5] |
| P4 | Reset | Green | Used to reset all **AA** alarm(s). (Fire alarms, i.e. not **AA** alarms, have to be reset in the C.I.E.). |
| P5 | Test[6] | White | Used for testing the LEDs, the buzzer and the display (back-light and dots). **NOTE!** This must be done only in quiescent condition. |

**NOTE!** Regarding "P1" and "P2", see chapter "SW mode & Address setting, page 13 and regarding "P3", chapter "SW version", page 23.

*Table 3 Buzzer and LCD:*

| Component | Indicating | |
|---|---|---|
| Buzzer[7] | 1 beep/5 s | **AA** alarm. |
| | Continuous + **All** LEDs turned off as well. | A CPU / memory fault in the unit. |
| Display | All or selected Fire alarms / **AA** alarms presented same as the C.I.E. that the **AA** unit is connected to, including a user definable text message (alarm text), if programmed. (**NOTE!** 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 13.

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[5] If the "Silence alarm devices" button in the C.I.E. has been programmed to "Disable alarm devices", "P3" will have the same function. "P3" cannot be used until a fire or **AA** alarm is activated in the system.

[6] Press "P5" (Test) to test LEDs, buzzer and the display (back-light and dots). **NOTE!** This must be done only in quiescent condition.

[7] The buzzer may be programmed as "disabled" (via Win512 / Win128 / WinG3), i.e. it will never sound.

# 6 SW mode & Address setting

Alert Annunciation Unit **1736** can run in SW mode **1736 - 1587** only. It shall also have a unique **address** on the RS485 line connected to the 1587 board in the FT512 C.I.E.

The SW mode **1736 – 1587** shall be used in system FT128. An optional **RS485 transceiver component 4552** is required on the main board in the FT128 C.I.E. It shall also have a unique **address** on the RS485 line connected to the main board connector "J1" or pin 15 & 16 on the FT128 termination board. See FT128 Technical Manual.

The SW mode **1736 – 1587** shall be used in system FT1020G3. It shall also have a unique **address** on the RS485 line connected to the main board connector "J4". See FT1020G3 Technical Manual.

## 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 addressed). When a new AA unit is **powered** it will automatically be ready for the "SW mode setting".

As an alternative, an **AA** unit **in operation**[8] 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 "L2" (Alarms queued). The back-light is turned on and the following information is shown in the display:

```
MODE SETTING!              Change = Black

Type: xxxxxxxxxxxx         Store = Yellow
```

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

- **1735 – 1587**  (1735 Swedish only)
- **1736 - 1587**
- 1826 – 1587  2nd Cab
- 1826 – 1582  2nd Cab
- 1826/28 - 1587
- 1826/28 - 1582
- **1728 - 1587**
- 1728 - 1582
- **Not selected**

Scroll to the required SW mode using 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.

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[8] Or when a unit, not in operation but with the mode and address set before, is powered.

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

An **AA** unit **in operation**[8] will be ready for the "SW mode setting" <u>via the jumper "J4"</u> in the unit.  Shunt jumper link "J4" **momentarily**.[9]

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

```
MODE SETTING!              Change = Black

Type: xxxxxxxxxxxx         Store = Yellow
```

Continue in accordance with chapter "SW mode setting", page 13.

## 6.2 Address setting

Following the SW mode setting, the **AA** unit will be ready for the "address setting".

As an alternative, an **AA** unit **in operation**[10] can be ready for the "address setting" directly <u>via the C.I.E. menu</u>.  See the following chapter.

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

```
ADDRESS SETTING            Change = Black

Address: XX                Store = Yellow
```

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

For an **AA** unit, the address can be set to **00-15**.[11]  (Default is "00".)

Scroll to the required 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.[12]

### 6.2.1 Address setting mode via the C.I.E.

<u>A specific **AA** unit</u> **or** <u>all the **AA** units</u> 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 (A7 in system FT1020G3), see Operation Manual for the system respectively.

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[9] 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.

[10] Or all the **AA** units connected to the same External FBP / DU interface board 1587.

[11] This is the <u>max. no. of addresses</u>. The max. no. of units connected to a board is dependent on type of units and if external power supply is used.

[12] 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
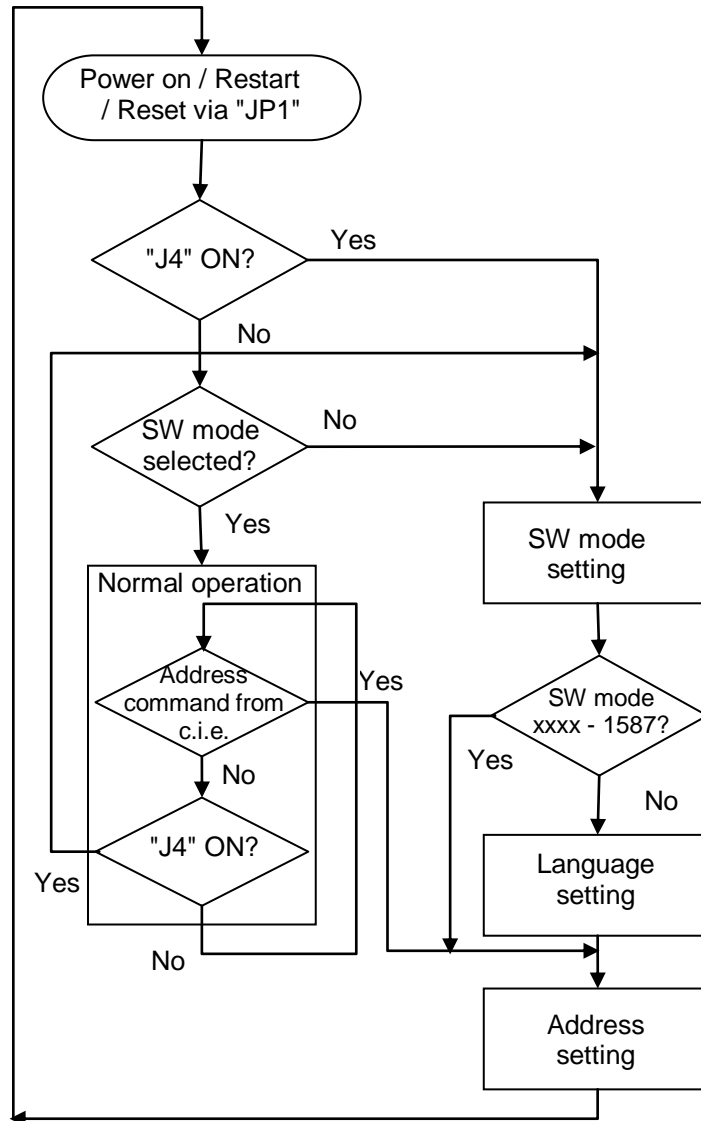
On the following page is a flow chart, showing the SW mode setting, Address setting, etc.

# 7    User definable text messages (alarm texts)

In the C.I.E., each alarm point (zone – address) and each zone can have an individual user definable text message (alarm text)[13] presented in the display by fire alarm, see the Technical and Operation Manuals 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.[14]  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 alarm texts shall be stored in <u>all</u> or in <u>some</u> **AA** units, the unique alarm texts are created in Win512 / Win128 / WinG3 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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[13]  Each alarm text (up to 40 alphanumeric characters) will be shown on the second row.  The text messages are created and downloaded via Win512 / Win128 / WinG3.

[14]  At least 617 text messages can be stored in each unit.

# 8    Commissioning of a new unit / SSD download

The cable (RS485 line) to the **AA** unit(s)[15] shall be connected. See connection diagram for the system respectively.

In the **FT512** C.I.E. the 1587 board shall be mounted.  Remove the fuse "F1" on the 1587 board.

The **FT128** C.I.E. Power shall be switched off and the "RS485 transceiver component 4552" shall be plugged on the main board (4556).

On the **FT1020G3** main board (5010) remove the fuse "F19".

The SW mode and the address have to be set in each new unit according to chapter "SW mode & Address setting", page 13.  Here follows a brief summary (a recommended sequence of actions):

1.  Connect the cable from the C.I.E. to the **AA** unit's terminal block "J1".

2.  When all connections are done put back the fuse "F1" on the 1587 board in the FT512 C.I.E. / power up the FT128 C.I.E. / put back the fuse "F19" on the main board (5010) in the FT1020G3 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 <u>SW mode setting</u>.

4.  After SW mode and address setting press "P2" (yellow) and the unit will restart, see chapter "Restart", page 19.

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 <u>SSD have to be downloaded</u> via Win512 / Win128 / WinG3.[16]  Connect the PC to the C.I.E.  In the "Win512 / Win128 / WinG3 download SSD" dialog box, verify that the "Download FBP / AAU" checkbox is marked.  Start the download of SSD.

7.  When the download of SSD to the C.I.E. is finished, it will restart. Then the download of SSD to the **AA** unit(s) will take place. During the download to an **AA** unit, the following will be shown in its

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[15]  One or more external FBPs and/or Alert Annunciation Units can be connected.

[16]  Via Win512 is the 1587 board programmed. Via Win512 / Win128 / WinG3 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).

display:

**"SSD download in progress....."**

8.    After download of SSD to an **AA** unit, the following will be shown in its display (very quickly):

**"SSD Download Memory OK"**

or

**"SSD Download Memory Fault"**

Then the AAU will restart, see chapter "Restart", page 19.

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

# 9 Restart

The **AA** unit will **restart**:

- When the unit is powered up

- If the jumper "JP1" is shunted momentarily

- After address setting (i.e. "P2" is pressed).

- If the contact with the Control unit is OK again after:

**"No contact with Control unit".**

During the restart the LCD will display the following (no back-light):

**"Checking program memory…"**

followed by (very quickly)

**"Program memory OK."**

followed by

**"SSD memory OK."**

All LEDs will be turned "ON" during the restart.

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

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

The **AA** unit will not work.
A fault message will also be shown in the C.I.E.:

In system FT512:

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

In system FT128:

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

In system FT1020G3:

**"FAULT: No reply, alert annunciation unit ##, control unit ##"**

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 alarm texts will be sent out from the C.I.E.

There will also be a fault message in the C.I.E.:

<u>In system FT512</u>:

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

<u>In system FT128</u>:

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

<u>In system FT512 G3</u>:

**"FAULT: Site specific data, alert annunciation unit ##, control unit ##"**

# 10 Fault messages

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. Check the cable, all connections as well as the 1587 board in the FT512 C.I.E. and the RS485 transceiver component 4552 in the FT128 C.I.E.  Is a correct / complete SSD download (via Win512 / Win128 / WinG3) performed?  Check the address setting on the 1587 board in FT512 and check the address and SW mode settings in the **AA** unit), etc.

**"SSD memory fault"**

See chapter "Restart", page 19.

**"SSD Download Memory Fault"**

In conjunction with SSD download, see chapter "Commissioning of a new unit / SSD download", page 17.

**"Memory fault in program area (n)"**

See chapter "Restart", page 19.

## 10.2 Fault messages in the C.I.E.

### 10.2.1 System FT512

**"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 1587 board. Is a correct / complete SSD download (via Win512) performed? Check the address setting (1587 board / the **AA** unit), SW mode setting, etc.  See also chapter "Restart", page 19.

**"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 19.

### 10.2.2  System FT128

**"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 19.

**"FAULT:  AAU x "**

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

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

See chapter "Restart", page 19.

### 10.2.3  System FT1020G3

**"FAULT: No reply, alert annunciation unit xx, control unit xx**

The contact with the external AAU is interrupted. Check the cable and all connections. Is a correct / complete SSD download (via WinG3) performed? Check the address setting, SW mode setting, etc.  See also chapter "Restart", page 19.

**"FAULT:  Alert annunciation unit xx"**

The AAU is programmed (via WinG3) as another type of unit <u>or</u> there is a fault in the AAU.

**"FAULT: External presentation unit xx, control unit xx"**

The AAU is programmed (via WinG3) as another type of unit <u>or</u> there is a fault in the AAU.

**"FAULT:  Site specific data, alert annunciation unit xx, control unit xx**.

See chapter "Restart", page 19.

# 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 / WinG3). All units connected to the same RS485 line **must 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 same as per the SW mode and address setting, see chapter "SW mode setting", page 13.

2. When the following is displayed:

```
MODE SETTING!            Change = Black

Type: xxxxxxxxxxxx       Store = Yellow
```

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

```
ADDRESS SETTING          Change = Black

Address: XX              Store = Yellow
```

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

```
Rst: nn  Addr: aaaaaaaa    Version: V.vvvv

Return = Yellow    Erase SSD = Black
```

**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=04-19:    Unexpected interrupt.

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

**V.vvvv** = SW version (e.g. 1.4.x).

3. Press **yellow** push button ("P2") – **or see 6 below** – and the following will be displayed:

```
ADDRESS SETTING          Change = Black

Address: XX              Store = Yellow
```

4. Press yellow push button ("P2").

5. The **AA** unit will restart (Restarting....), i.e. the buzzer will sound for approx. two seconds and the unit will return to normal operation.

6. Continue from 3 above: or press **black** push button ("P1") and the SSD will be erased (Erasing SSD....). The **AA** unit will restart (Restarting....), 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 / WinG3. In Win512 select the AAU icon and click the right mouse button. In win128 and WinG3, 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. 14x=program version 1.4.x). Check / set the port and baud rate. See also the Win512 / Win128 / WinG3 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 19.

# 12    Operation

The LED "Operation" (L6) indicates whether the "Alert Annunciation" function is enabled or disabled[17].

When the "Alert Annunciation" function is enabled, the LED "L3" (Fire brigade alerted) indicates whether the alarm is AA alarm or not i.e. Off = **AA** alarm and On = no **AA** alarm / Output "Fire brigade tx" activated.

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

The following page / figure show an operation summary for the Swedish version of the Alert Annunciation unit 1735. It is applicable to the English version 1736.

See also chapter "SW mode & Address setting, page 13.

**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 2 on page 10

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[17] The AA function is normally enabled (during daytime) / disabled (during night-time) via a time channel.
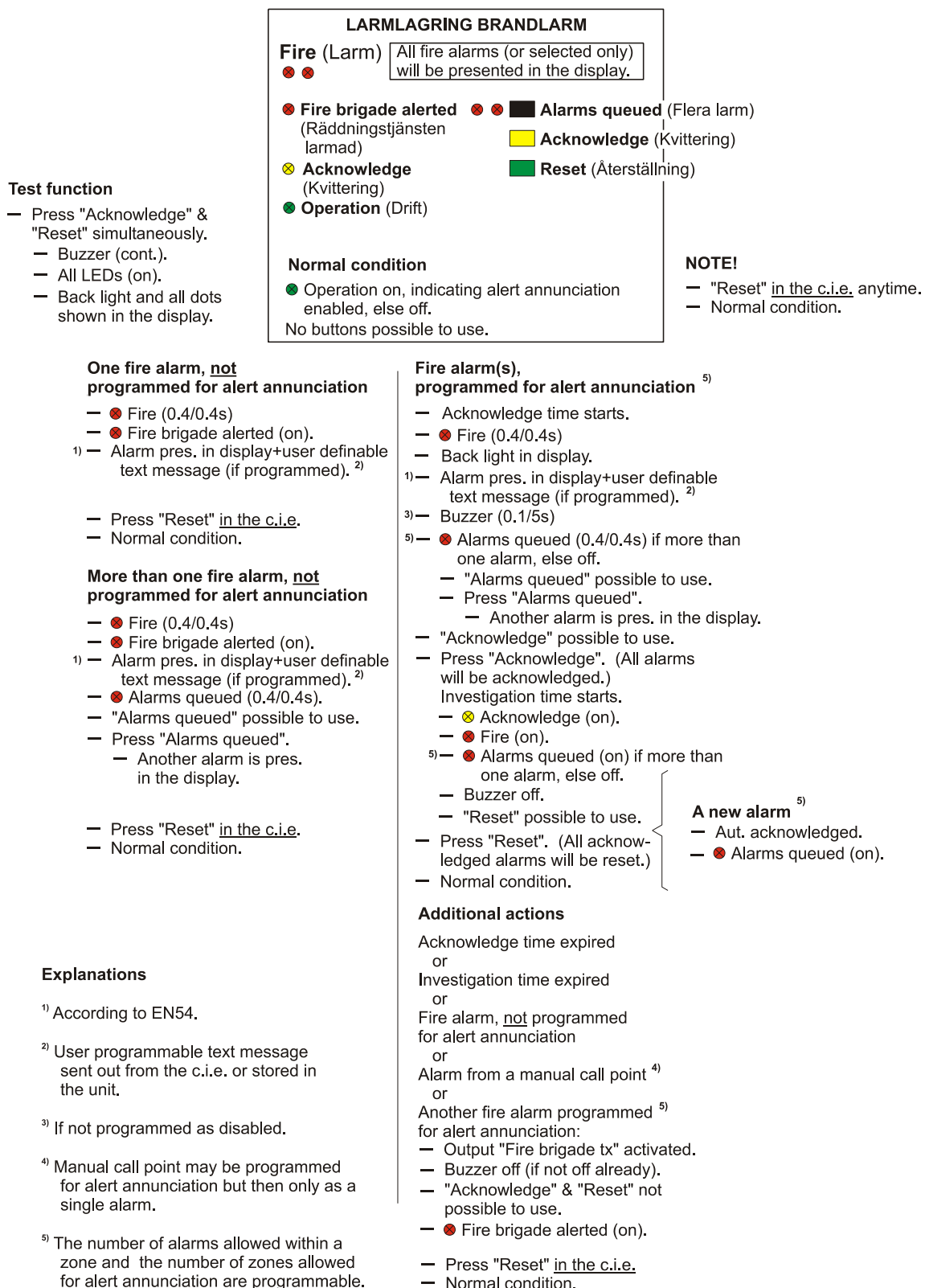
# Alert annunciation unit (Larmlagringstablå) 1735

**LARMLAGRING BRANDLARM**

**Fire** (Larm) | All fire alarms (or selected only) will be presented in the display.

⊗ ⊗

⊗ **Fire brigade alerted**    ⊗ ⊗ ■ **Alarms queued** (Flera larm)
(Räddningstjänsten larmad)     ■ **Acknowledge** (Kvittering)
⊗ **Acknowledge**     ■ **Reset** (Återställning)
(Kvittering)
● **Operation** (Drift)

**Normal condition**
● Operation on, indicating alert annunciation enabled, else off.
No buttons possible to use.

**NOTE!**
− "Reset" <u>in the c.i.e.</u> anytime.
− Normal condition.

**Test function**
− Press "Acknowledge" & "Reset" simultaneously.
   − Buzzer (cont.).
   − All LEDs (on).
   − Back light and all dots shown in the display.

**One fire alarm, <u>not</u> programmed for alert annunciation**
   − ⊗ Fire (0.4/0.4s)
   − ⊗ Fire brigade alerted (on).
[1] − Alarm pres. in display+user definable text message (if programmed). [2]

   − Press "Reset" <u>in the c.i.e.</u>
   − Normal condition.

**More than one fire alarm, <u>not</u> programmed for alert annunciation**
   − ⊗ Fire (0.4/0.4s)
   − ⊗ Fire brigade alerted (on).
[1] − Alarm pres. in display+user definable text message (if programmed). [2]
   − ⊗ Alarms queued (0.4/0.4s).
   − "Alarms queued" possible to use.
   − Press "Alarms queued".
     − Another alarm is pres. in the display.

   − Press "Reset" <u>in the c.i.e.</u>
   − Normal condition.

**Fire alarm(s), programmed for alert annunciation** [5]
   − Acknowledge time starts.
   − ⊗ Fire (0.4/0.4s)
   − Back light in display.
[1] − Alarm pres. in display+user definable text message (if programmed). [2]
[3] − Buzzer (0.1/5s)
[5] − ⊗ Alarms queued (0.4/0.4s) if more than one alarm, else off.
   − "Alarms queued" possible to use.
   − Press "Alarms queued".
     − Another alarm is pres. in the display.
   − "Acknowledge" possible to use.
   − Press "Acknowledge". (All alarms will be acknowledged.) Investigation time starts.
     − ⊗ Acknowledge (on).
     − ⊗ Fire (on).
[5] − ⊗ Alarms queued (on) if more than one alarm, else off.
     − Buzzer off.
     − "Reset" possible to use.
   − Press "Reset". (All acknowledged alarms will be reset.)
   − Normal condition.

**A new alarm** [5]
   − Aut. acknowledged.
   − ⊗ Alarms queued (on).

**Additional actions**

Acknowledge time expired
   or
Investigation time expired
   or
Fire alarm, <u>not</u> programmed for alert annunciation
   or
Alarm from a manual call point [4]
   or
Another fire alarm programmed [5] for alert annunciation:
   − Output "Fire brigade tx" activated.
   − Buzzer off (if not off already).
   − "Acknowledge" & "Reset" not possible to use.
   − ⊗ Fire brigade alerted (on).

   − Press "Reset" <u>in the c.i.e.</u>
   − Normal condition.

**Explanations**

[1] According to EN54.

[2] User programmable text message sent out from the c.i.e. or stored in the unit.

[3] If not programmed as disabled.

[4] Manual call point may be programmed for alert annunciation but then only as a single alarm.

[5] The number of alarms allowed within a zone and the number of zones allowed for alert annunciation are programmable.

*Figure 3. Operation summary for the **AA** unit 1735.*

Note: The **AA** unit 1736 is same as 1735 but it also has an LED "Extinguishing" and push buttons "Silence alarm devices" and "Test".

# 13   Connections

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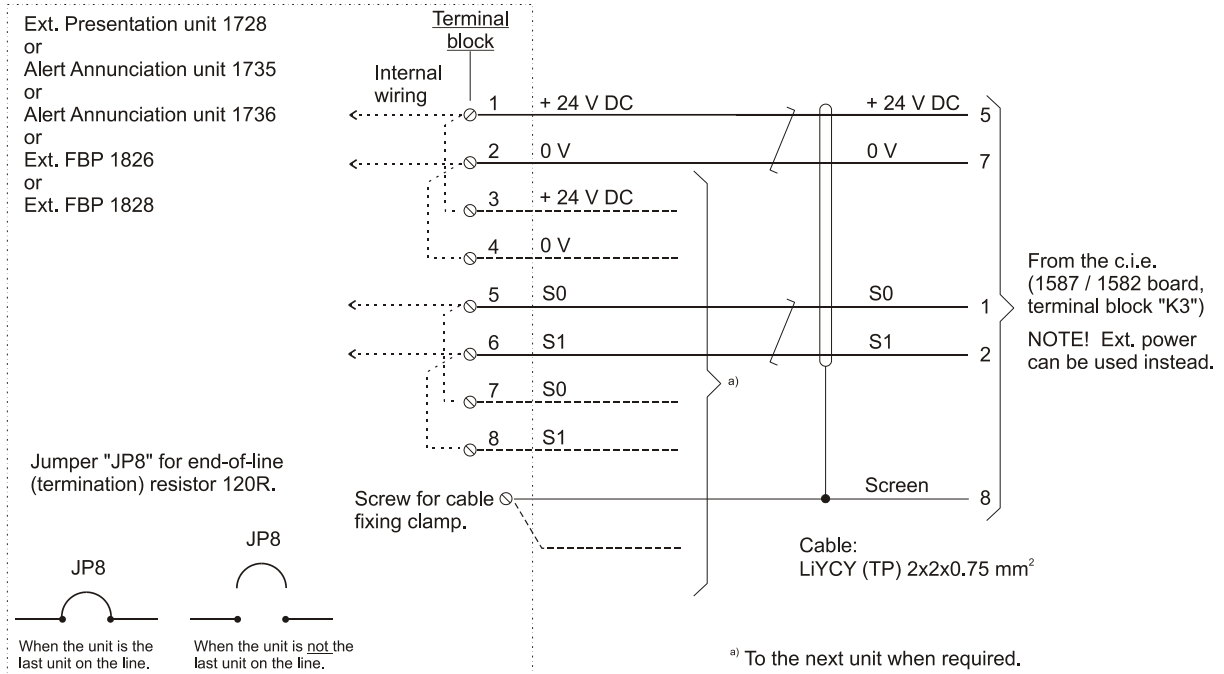


*Figure 4.  Alert Annunciation units 1736 Connections*

The 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 1736 can in FT512 only be connected to a 1587 board.
In FT128:  +24 V / 0V / S0 / S1 to terminal block J1: 13 / 14 / 15 / 16.
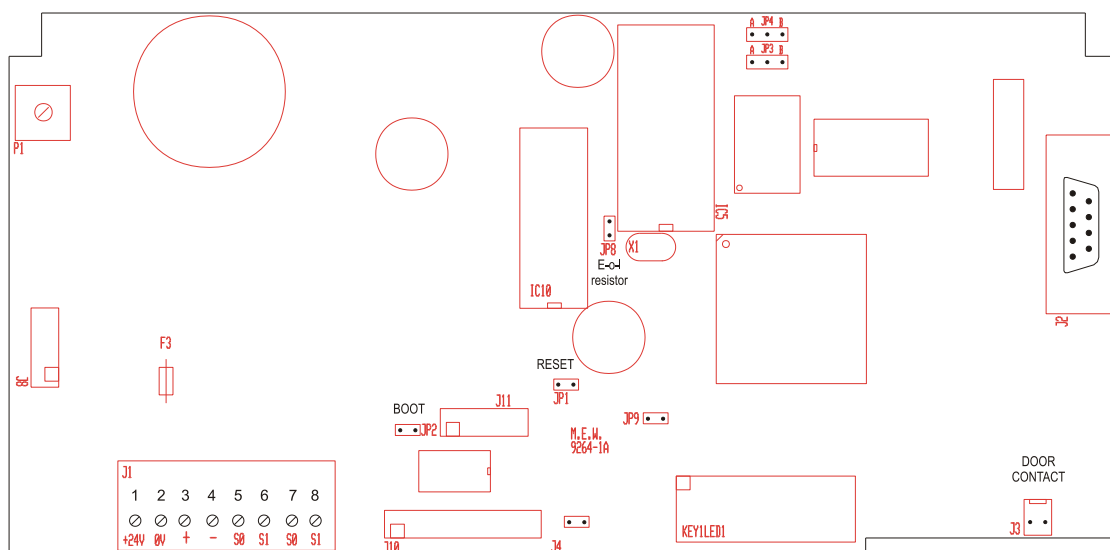In FT1020G3:  +24 V / 0V / S0 / S1 to terminal block J4: 35 / 36 / 37 / 38.



*Figure 5. 1736 PCB  position of  terminal block "J1",  jumper "JP8"*

Comments to the components:

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

# 14 Technical data

## 14.1 Power supply

Nominal voltage for the **AA** units 1736 is 24 V DC.[18]

The number of **AA** units[19] that can be power supplied from the C.I.E. is dependent on all other units connected to the same RS485 line and cable type (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 system FT512 via the "External FBP / DU interface board" 1587 (data rate 9600 baud) mounted in the C.I.E. and in system FT128 via the "RS485 transceiver component 4552" plugged on the mother board in the C.I.E.

In system FT1020G3 the required components are mounted on the main board as a standard feature.

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

### 14.2.1 Cable

The cable to be used in systems FT512 and FT1020G3 should be Twisted Pairs 2 x 2 x 1 mm2 (screened - tinned copper braid). Cable length up to 1200 m (theoretically) depending on the cable type but the cable length is also dependent on the current consumption, i.e. the type and number of units connected. For more details regarding cable type and current consumption, refer to the technical manual of each system.
**NOTE!** In system FT128 the screen is not used / connected.
A twisted pair not screened cable can then 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$^2$ conductor area can be used.

## 14.5 Current consumption

The current consumption is depending on the type of units and the actual voltage on the line.

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[18]  Allowed voltage is 12 – 30 V DC.

[19]  On each 1587 board are up to sixteen <u>addresses</u> available.

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

*Table 4 Current Consumption*

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

# 15 Revision history

| Issue | Date | Description | Software revision | Written By | Checked By |
|-------|------|-------------|-------------------|------------|------------|
| Initial | 15/8/2011 | Original Panasonic issue MEW01295 Rev 2 | V1.4 | Jan Patterson | |
| 1.0 | 20/8/2012 | Change Panasonic issue to suit AU / NZ Market | V1.4 | Anis Shenouda | |

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