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Fire Alarm Systems

Contents

Page

FIRE ALARM SYSTEMS

System EBL512 and EBL128 overview 4

Control & Indicating Equipment (C.i.e.)

EBL512, 1548, 1549, 1550 8
EBL128, 4550 10

Display Units

Alert annunciation units, 1728 12
Alert annunciation units, 1735, 1736 14
External Fire Brigade Panel, 1826 16
External Fire Brigade Panel, 1828 18

Options, Accessories

Frame for flush mounted EBL512, 1568 20
Web-server II, 1598 22
Web-server II, S/W Web512 / Web128 24
Web-server II, OPC512 26

Analog/Addressable Detectors

Analog base, 3312 28
Analog base, 3312F / FL 30
Analog base with short circuit isolator, 4313 32
Analog heat detector, 3308 34
Enclosed analog heat detector, 3309 36
Analog multi detector, 4300 38
Analog photoelectric smoke detector, 4301 40

Addressable COM Loop Units

Addressable manual call point, 3333 42
Enclosed addressable manual call point, 3339 44
Addressable multipurpose I/O unit, 3361 46
Addressable 2 voltage outputs unit, 3364 48
External power supply, 3366 50
Addressable siren, 3377 52
Addressable sounder base, 3378 54

Conventional Detectors/Units for Zone Line Inputs

Base, 2324 56
Multi detector, 4350 58
Photoelectric smoke detector, 4352 60
Combination heat detector, 4318 62
Heat detector, 4375 and 4376 64
Enclosed heat detector, 6295, 6296, 6297, 6298 66
Units for hazardous (Ex) areas—EBL512 68
Units for hazardous (Ex) areas—EBL128 70

Detector Accessories

External indicator (LED), 2218 72
Address setting tool, 3314 74
Drip pan for detector, 6218 76
Protective cover for detector, 6360 77
Rope elevator kit, 6362 78
Plate for wire installation, 6363 80
Duct detector chamber, 6367 82

PRODUCTS

Fire Alarm Systems EBL512 and EBL128

The demands on fire alarm systems are increasing. The system must be on the highest possible alert during the whole day in various activities. The most important task for a fire alarm system is early detection of a fire in order to save lives and property in all kinds of environments. Fires which are difficult to detect such as glowing or smouldering fires have to be quickly and effectively detected.

On the other hand, false alarms should also be reduced to a minimum. This means that the system must have both high sensitivity and a low sensitivity "at the same time".

The system is also exposed to an increasing number of interferences such as mobile telephones and changes in the surroundings. All these demands require an intelligent system, i.e. both the c.i.e. and the detectors have to be intelligent.



EBL512 Control and Indication Equipment



EBL128 Control and Indication Equipment

General

EBL512 and EBL128 are analog addressable fire alarm systems which can also be used with addressable detectors, inputs and outputs as well as with conventional detectors. Both fulfill the EN54 standards: EN54 part 2 (Control and indicating equipment) and EN54 part 4 (Power supply).

Detectors, manual call points, and general input and output units for free programmable customer specific functions can be connected to the COM loops. Each loop unit uses one address.

EBL512 and EBL128 – a unique concept for early and safe detection without false alarms

EBL512 and EBL128 are a new generation of fire alarm systems. With a unique functionality in cooperation with adaptation to the surrounding environment, self-diagnostics and interactivity, the system can be installed in most premises.

- Each analog detector in the system is individually adapted to the surrounding environment. The sensitivity of each analog detector is constant in spite of the individual contamination or background particle level. The long-term changes are, for example, distinguished from the short-term changes of a smouldering fire.
- Intelligent alarm algorithms and a unique self learning algorithm to detect smouldering fires.
- The self-diagnostics function detects every deviation from the accurate normal condition in the electronics and in the detection chamber.

- The interactivity function uses information from one, two or more detectors in the system to increase reliability in detection of a real fire.

- A family of state of the art analog detectors gives the c.i.e. accurate and noise-free information about occurrence of smoke and/or temperature changes in the installation.

A large variety of units can be connected to the COM loop:

- Analog addressable smoke and heat detectors
- Water proof heat detectors
- Addressable manual call points
- Addressable short circuit isolators
- Addressable sirens/sounder bases
- Addressable I/O units, also with monitored voltage outputs
- Addressable power supplies
- Conventional detectors via I/O units

Fire Alarm Systems EBL512 and EBL128

The EL512 and EBL128 fire alarm systems have a set of functions that meet the most stringent requirements relating to fire detection and fire prevention measures.

- Service signal is given when a detector is contaminated to a certain level.
- A large number of fire detection algorithms are supported by the system and can be set individually for each analog detector.
- Alert annunciation. The output for the alarm transmitter can be delayed for immediate on-site investigation of a fire alarm.
- Individual detectors, zones, programmable outputs and outputs for the alarm transmitter can be individually disabled.
- Internally and/or externally controlled time channels. E.g. one or more alarm points may be disabled via an external timer.
- User programmable outputs can be programmed in a very flexible way enabling control of sirens, fire doors, extinguishing systems, etc.
- External fire brigade panels can be connected to each c.i.e.
- Display of the actual system status in a PC or Pocket-PC via a web-server connected to an intranet (LAN) or the Internet. In the event of fire alarm, service signal, etc. an e-mail can be sent to the appropriate personnel. Also provides one-way communication to an external computer system.

Planning, commissioning and installation tool Win512/Win128

Modern fire alarm systems are very complex and versatile. In order to get optimal performance and cost effective planning, installation, commissioning and maintenance of a system, we provide our distributors with a powerful tool. This tool is the Windows based PC software Win512/Win128, which is a complete support packet for the respective system. All configurations and settings for the system are done in the PC and then downloaded to the respective c.i.e.



The analog 33xx detectors (left) received a design award at the 1998 Hanover Exhibition.

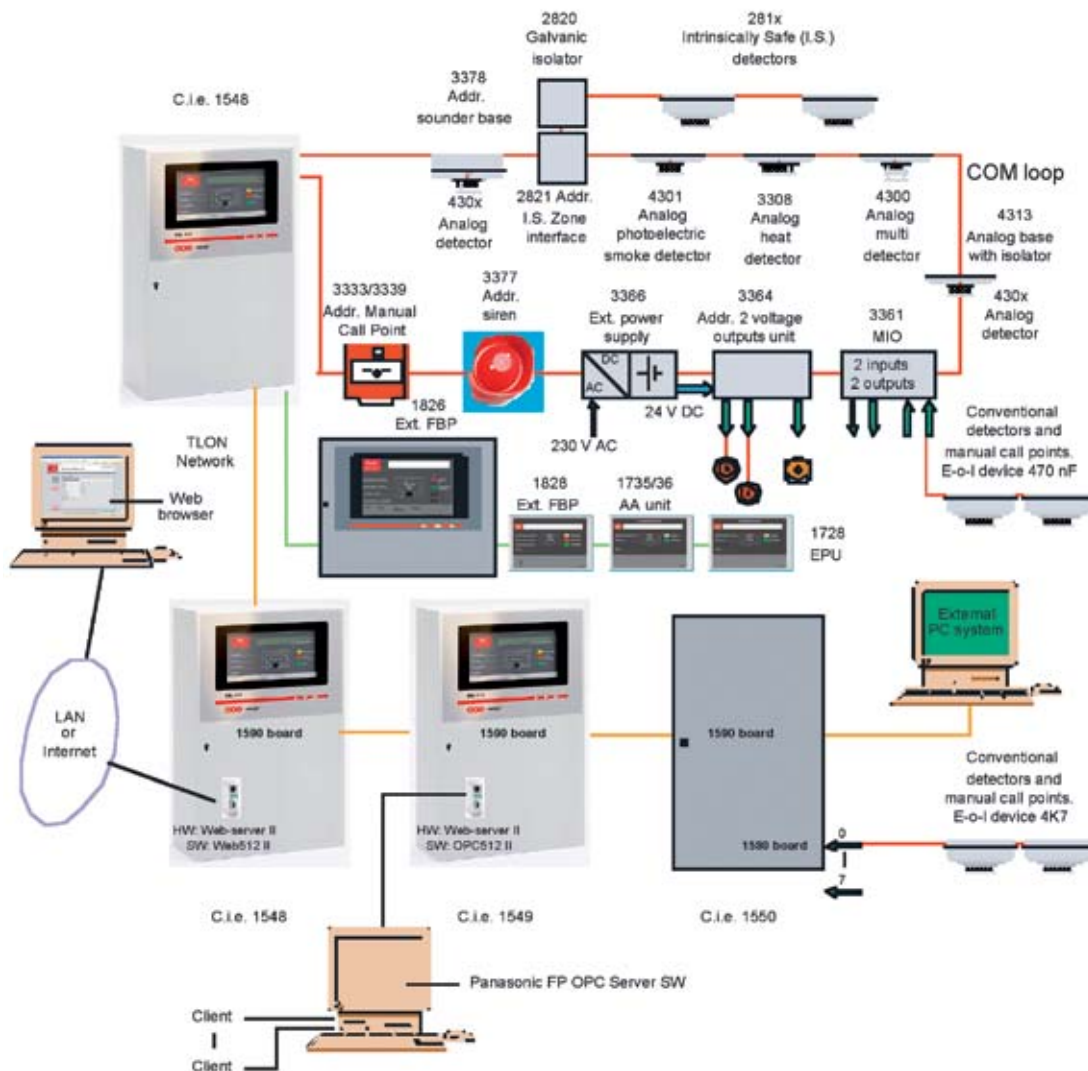
The analog 43xx detectors (right) have an even more attractive and slender design.

Fire alarm system EBL512

Win512 is used when planning an installation. After the planning, the "site specific data" is downloaded to the respective c.i.e. The data can also be uploaded from the c.i.e. Win512 can also be used to download new software, etc.



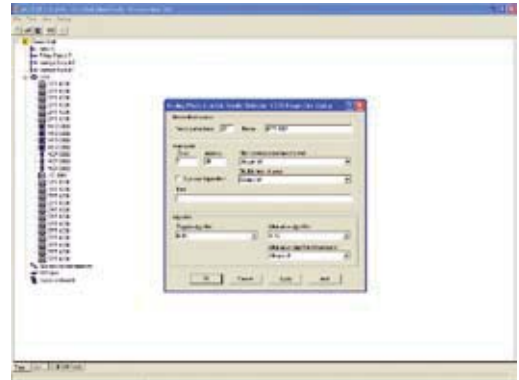
EBL512 system overview:



Fire alarm system EBL128

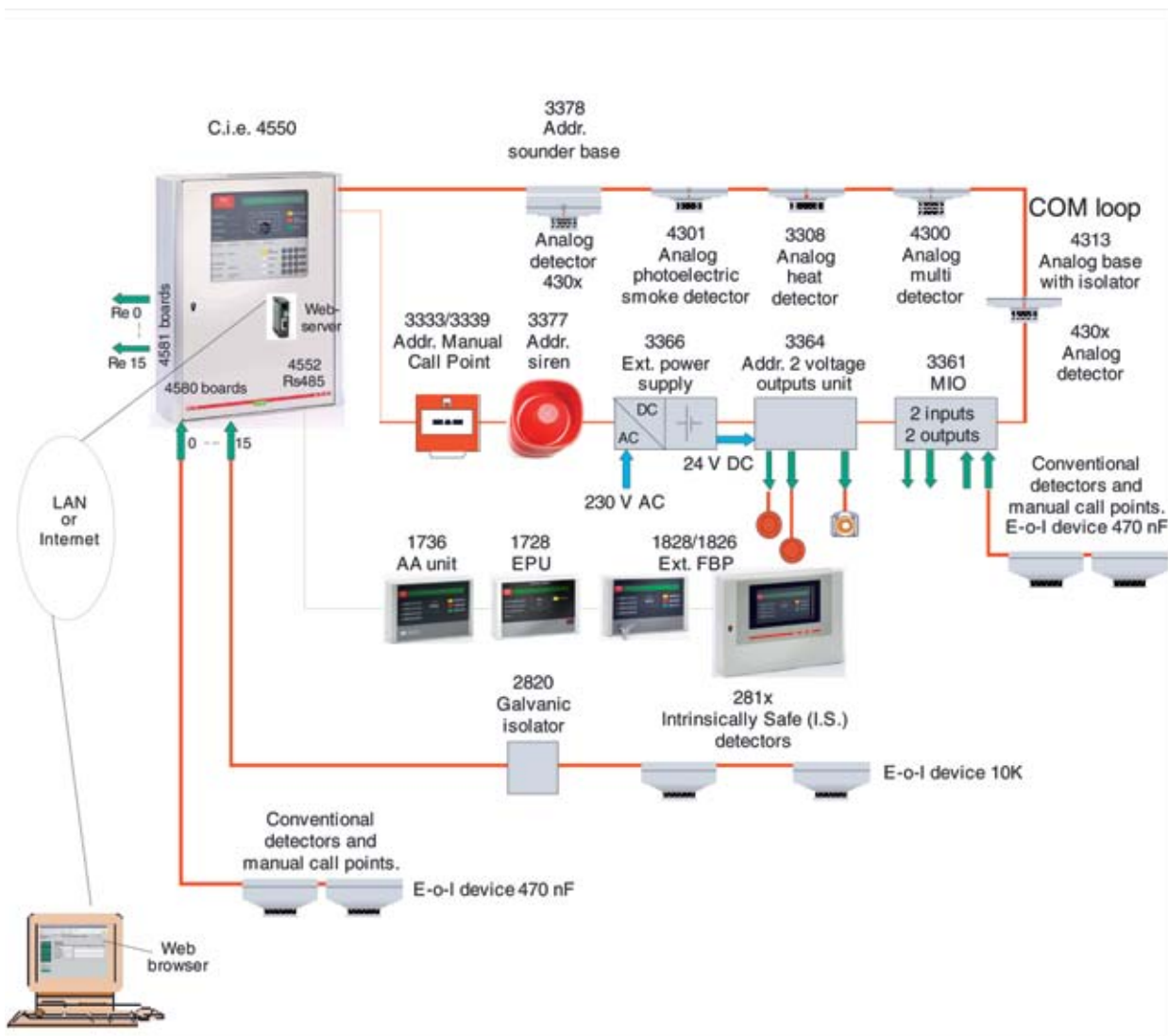
Planning, commissioning and installation tool Win128

Modern fire alarm systems are very complex and versatile. In order to get the optimal performance and cost effective planning, installation, commissioning and maintenance of a system, we provide Win128 – a powerful Windows based PC tool. Win128 is a complete support package for the EBL128 system. All configurations and settings for the system (SSD) are done in the PC and after that downloaded to the c.i.e. For faster and easier commissioning, an “SSD auto generation function” is available.



Win128 is used when planning an installation. After the planning phase the “site specific data” (SSD) is downloaded to the c.i.e. The data can also be uploaded from the c.i.e. Win128 is also used to download new software, etc.

EBL128 system overview:



EBL512, 1548, 1549, 1550



Features

- EBL512 is an intelligent analog addressable fire alarm system
- Up to 512 addresses per control and indicating equipment (c.i.e.)
- TLON network for up to 30 c.i.e.:s

Analog addressable system

EBL512 is an intelligent analog addressable fire alarm system, conforming to the EN54-2 and -4 standards.

Features/functions

The fire alarm system **EBL512** meets the most stringent requirements relating to fire detection and alarm.

A user-friendly PC software **Win512** is used for site specific data editing, download, backup and SW download.

Some features/functions:

- **Adaptation** of each analog detector's alarm level in relation to its contamination. Service signal when required.
- **Algorithms** for filtering and alarm, to reduce nuisance alarms. Algorithm for faster detection of smouldering fires.
- **Functions**, customer related: Test mode alert annunciation, disablements, etc.
- **Functions**: Fire door closing, interlocking combinations of outputs and inputs, time channels, alarm delay, two-unit dependence, user definable text message for each alarm point, etc.
- **Programmable inputs and outputs** and a large number of trigger conditions.
- **Expansion boards** (options) with zone line inputs or relay outputs.
- **Interface** (option) for external fire brigade panels, alert annunciation units, data converters, etc.

Up to 512 addresses

EBL512 has the capacity of connecting 512 addresses. Basic configuration is 128, 256 or 512 addresses. Can be upgraded on site.

Each c.i.e. has four COM loops for connection of up to 512 loop units. Each addressable loop unit uses one address.

Some **loop units** that can be connected:

- Analog detectors (sensors)
- Addressable manual call points
- Addressable short circuit isolators
- Addressable input and output units
- Addressable sirens & sounder bases
- Addressable external power supply units
- Conventional detectors and manual call points

TLON Network

Up to 30 EBL512 c.i.e.:s can be connected to a TLON network. A TLON connection board 1590 is then required in each c.i.e.


Miscellaneous

EBL512 has space in the cabinet for two sealed lead-acid batteries (24Ah).

In each c.i.e. up to six boards 1580-1587 can be mounted.

Web-server 1598 (option) connects system EBL512 to internet/ intranet (LAN) or OPC-server AFPS03510D.

Type numbers	
1548	EBL512 c.i.e., excluding printer, configured for 128, 256 or 512 addresses.
1549	EBL512 c.i.e., including printer, configured for 128, 256 or 512 addresses.
1550	EBL512 c.i.e., excluding front panel, excluding printer, configured for 128, 256 or 512 addresses.
1558	Printer board (option for 1548).
1580	8 zones expansion board (8 zone line inputs for conventional detectors).
1581	8 relays expansion board (8 programmable relay outputs).
1583	German FBP interface board (for connection of a "Feuerwehr-Bedienfeld", including a VdS Standardschnittstelle "Löschen").
1584	Autronica interface board (for connection of Autronica, BS100 units).
1585	Connection cable (male-male) for the 1580-1587 boards (no. 1 -> 2 and no. 5 -> 6)..
1586	Connection cable (female-female) for the 1580-1587 boards (no. 3 -> 4).
1587	External FBP/DU interface board (for connection of display units, e.g. external FBPs (1826/1828) and alert annunciation units (1735/1736).
1590	TLON connection board (for TLON network). One board in each c.i.e.

Technical data	
Voltage primary (V AC) secondary system (V DC)	230 24
Current consumption (mA)	Depending on type (1548-1550), expansion board(s), etc. see EBL512 planning instructions.
Ambient temperature (°C) operating storage	0 to +40 -40 to +70
Ambient humidity (% RH)	Max. 90, noncondensing
Ingress protection rating (estimated)	IP22
Inputs	4 COM loops for 128, 256 or 512 addresses 4 programmable
Outputs	4 programmable supervised voltage outputs 2 programmable relay outputs Relay outputs for routing equipment (fire brigade tx and fault tx) Power supply (24VDC) for routing equipment and external equipment
Size W x H x D (mm)	400 x 610 x 175
Weight (kg)	1548: 17.6; 1549: 18; 1550: 17.4
Color (metal cabinet)	Light gray (NCS S1500-N, PMS Cool Gray 2)
Approvals	 Conforms with EN54-2 and -4. The front conforms with SS3654.

Note: All voltages are nominal.

EBL128, 4550



Features

- **EBL128**, an intelligent analog addressable fire alarm system for up to 128 addresses
- Auto generation of the site specific data for easier c.i.e. programming

Analog addressable system

EBL128 is an intelligent analog addressable fire alarm system, conforming to the EN54-2 and the EN54-4 standards. It meets the most stringent requirements in order to secure real fire alarms and to reduce nuisance alarms.

Features/functions

A user-friendly PC software **Win128** is used to create, edit, download and upload (backup) the site specific data (SSD). An **SSD Auto generation function** is included in Win128. The units that are connected to EBL128 can be identified and the SSD can be auto generated with default settings and be edited before the download.

Some other features/functions:

- **Compensation for contamination**, i.e. analog smoke detectors have constant sensitivity in spite of any contamination. A **service signal** will be given when a detector has to be replaced.
- **Advanced alarm algorithms** are used to filter the nuisance alarms from the real fire alarms and one algorithm is used for detection of smouldering fires.
- **User related functions**, e.g. test mode, disablements, alert annunciation, fire door closing, interlocking combinations of outputs and inputs, time channels, coincidence alarm, user definable text message for each alarm point, etc.
- **Programmable inputs and outputs**. In the c.i.e. and/or via I/O units on the COM loop. A large number of trigger conditions are available.
- **Outputs for routing equipment**. Fire alarm, fault and power supply.

- **Socket** for an optional RS485 transceiver component to provide an interface for up to eight external fire brigade panels, external presentation units and/or alert annunciation units.
- **Interface** (RS232) for a PC (Win128)
- **Interface** (RS232) and power supply for Web-server. Optional RS485 transceiver 4552, provides an interface for up to four display units. Optional expansion boards 458x mounted in an expansion board holder 4551 provides 8 zone line inputs and 8 relay outputs respectively.

Up to 128 addresses

The EBL128 c.i.e. has one COM loop for connection of the loop units (address 001-127). Each loop unit uses one address.

Some **loop units** that can be connected:

- Analog heat and smoke detectors
- Addressable manual call points
- Addressable short circuit isolators
- Addressable input and output units (to which e.g. conventional detectors and manual call points can be connected)
- Addressable sirens and sounder bases
- Addressable external power supply units


Miscellaneous

The cabinet has a space for two sealed lead-acid batteries (2x12V, 16-18Ah).

EBL128 is intended for indoor use and in dry premises.

Type numbers	
4550	EBL128 c.i.e. (128 addresses). Batteries are not included.
4552	RS485 transceiver component, for up to four display units, i.e. external fire brigade panels 1826/1828, external presentation unit 1728 and/or alert annunciation units 1735/ 1736.
4551	Expansion board holder. (For two 4580 and two 4581 expansion boards.)
4580	8 zones expansion board. (Max. two per c.i.e.)
4581	8 relays expansion board. (Max. two per c.i.e.)

The 4580 board can be used to connect conventional detectors and manual call points to EBL128. An end-of-line capacitor (470nF) shall be connected in the last alarm point on each zone line. More information is available in the EBL128 Planning Instructions and Operating Instructions.

Technical data	
Voltage primary (V AC)	230
secondary system (V DC)	
normal	24
by battery backup	21-30
Current consumption (mA)	Depending on connected units, etc. See EBL128 Planning Instructions.
Ambient temperature (°C)	
operating	-5 to +40
storage	-40 to +75
Ambient humidity (% RH)	Max. 95, noncondensing
Ingress protection rating (estimated)	IP32
Inputs	1 COM loop for 128 addresses 1 programmable input (NO/NC). $R > 200\Omega$ = open circuit. Max. 2mA
Outputs	1 programmable supervised voltage output (24V DC, max. 500mA) 1 programmable supervised voltage output (24V DC, max. 200mA) 1 programmable relay output. Default set for routing equipment (Fire brigade tx). 1 non-programmable relay output. ¹ For routing equipment (Fault tx). Power supply (24V DC, max. 200mA) for routing equipment Power supply (24V DC, max. 500mA) for external equipment (Web-server, up to 4 external FBPs, etc.) Web-server requires approx. 65mA.
Interfaces	RS232 ("D" connector) for a PC (Win128) RS232 for a Web-server Socket for an optional RS485 transceiver, for external FBPs, EPU's and/or AAUs.
Size W x H x D (mm)	511 x 416 x 123
Weight (kg)	12.2 (excluding batteries)
Color (metal cabinet)	Aluminium and light gray (NCS S1500-N, PMS Cool Gray 2)
Approvals	 EN54 parts 2 and 4. The front is fully SS3654 compliant.

¹Relay contacts: max. 1A at 30VDC.

Note: All voltages are nominal. For more information see EBL128 Planning Instructions MEW00508.

External Presentation unit 1728



Features

- For presentation of pre-warnings, fire alarms, faults and disablements
- Compact size

Presentation unit 1728

This unit (S/W V1.2) is intended for pre-warning, fire and heavy smoke / heat alarm **presentation**. Point or zone alarm presentation is like in the c.i.e. it is connected to. You can scroll amongst two or more alarms in the system but the fire alarms can **not** be reset via this unit. All or selected alarms will be presented in a display (LCD, 2x40 characters with back-light). An alarm text will be presented together with each alarm, if programmed in the c.i.e. Furthermore, ≥617 texts for selected alarms can be stored in the unit and will in such a case be shown, instead of the texts sent from the c.i.e. for these alarms. A built-in buzzer will sound like in the c.i.e. It can be silenced but the alarm devices in the installation can not be silenced via this unit. Any fault in the system will be presented as „General fault in system“ and the buzzer will sound. It can be silenced. Any disablement in the system will be presented as „General disablement in system“. The unit is power supplied via the c.i.e. or external power supply.

LEDs, push buttons etc.

The unit has the following LEDs:

- **Fire (Brand)** and **Alarms queued (Flera larm)**, indicating pre-warning, co-incident and fire alarms.
- **Operation (Drift)**, indicating that the unit is connected to a c.i.e. and power supplied, i.e. it is in operation.
- **Extinguishing** (Släckanläggning aktiverad), indicating activated output for extinguishing equipment.
- **Ventilation (Brandventilation aktiverad)**, indicating activated output for ventilation equipment.
- **Fire brigade tx (Larmsändare aktiverad)**, indicating activated output for Fire brigade tx (routing equipment).

The unit has the following push buttons:

- **Alarms queued (Flera larm)**, used to scroll amongst the alarms.
- **Silence buzzer (Summer tyst)**, used to silence the buzzer (it will re-sound for a new alarm).

The designation texts on the front are in 1728SE in Swedish and in 1728UK in English.

Compact size

The compact size enclosure is made of grey high impact ABS. Fitted with a supplementary „O“ ring gasket, it will comply with IP61, in respect of dust and moisture. The push buttons on the front are disabled until they are supposed to be used. The unit shall be wall mounted. Two compression glands are attached.

SW mode and address setting

The display and the push buttons are used to set the **SW mode** and address, see the opposite side of this page.

Product application

The 1728 unit is intended for indoor use and in dry premises. SW mode **1728 - 1587** is intended to be used in the systems EBL512 and EBL128 and SW mode **1728 - 1582** in the systems EBL500 / 512 / 1000 / 2000.

Type numbers	
1728	External Presentation unit (S/W V1.2). 1728SE / 1728UK: Designation texts on the front in Swedish / English. NOTE! In Swedish convention (SBF): “General fault” presentation but no buzzer and no “General disablement” presentation.
1582	External FBP interface board. (Required in EBL512 / 500 when SW mode 1826/28 – 1582 shall be used.)
1587	External FBP / DU interface board. (Required in EBL512 when SW mode 1826/28 – 1587 shall be used. EBL512 software V \geq 2.3.2 ¹ required.)
4552	RS485 Transceiver component / comm. module. (Required in EBL128. SW mode 1826/28 – 1587 only. EBL128 software V \geq 1.0.5 ¹ required.)

¹ Only required if the new functions (buzzer for fault and “General disablement” presentation) shall be used.


Note: The number of units that can be power supplied via the c.i.e. / board / external power supply is also depending on all other units connected to the same c.i.e. / board / external power supply.² Up to 1200 m cable can be used.

The 1728 unit can run in one of two different SW modes:

a) 1728 in SW mode 1728 – 1587 has the highest performance with regard to functionality, response time, ability to store fire alarms, etc. In this mode it is intended to succeed the Display unit 2236SE but not as a spare part, since 2236SE is connected to a COM loop and 1728 requires an Ext. FBP / DU interface board 1587 in the EBL512 c.i.e. It is also intended to succeed the Ext. presentation display 2428SE but not as a spare part, since 2428SE requires an Ext. FBP interface board 1582 in the c.i.e. and 1728 requires an Ext. FBP / DU interface board 1587 in the EBL512 c.i.e.

b) 1728 in SW mode 1728 – 1582. In this mode it has the same functionality as the ext. Presentation display 2428SE and can be used as a spare part, i.e. the performance is the same but the look, dimensions, etc. are not the same. In this mode 1728 requires an Ext. FBP interface board 1582 in the c.i.e.

Regarding 2236SE / 2428SE: These units have designation texts in Swedish (**SE**).

Technical data	
Voltage (VDC) rated allowed	24 12-30
normal (in the system) normal (in the system by battery back-up)	24 21-27
Current consumption at norm. volt. (mA) quiescent / active	26 (at 24 V), 48 (at 12 V) / 49 (at 24 V), 88 (at 12 V)
Ambient temperature (°C) operating storage	0 to +40 -40 to +70
Ambient humidity (% RH)	Max. 90, non condensing
Ingress protection rating (estimated)	IP61 (with the “O” ring gasket)
Size W x H x D (mm)	220 x 145 x 50
Weight (g)	687
Colour (high impact ABS)	Gray (RAL 7035)
Approvals	 Compliant with EN 54-2 whenever applicable.

² On each 1582 board are up to eight addresses available and on each 1587 board up to sixteen addresses. In EBL128 are up to four addresses available.

Alert annunciation units 1735 and 1736



Features

- Control and indicating unit for alert annunciation
- Compact size

Alert annunciation unit

When the **Alert Annunciation** function shall be used in the systems EBL512&EBL128 an **AA** unit is required to present the **AA** alarms and for the related manoeuvres, i.e. to acknowledge/reset the alarms. For a detailed description of the **AA** function, see Planning and Operating instructions for the system respectively.

Point or zone alarm presentation is as in the c.i.e. it is connected to. When there are queued alarms in the system, you can scroll amongst them. All or selected alarms will be presented in the unit's display (LCD, 2x40 characters with backlight). A user definable text message will be presented together with each alarm, if programmed in the c.i.e. Furthermore, ≥ 617 texts can for selected alarms be stored in the unit and will in that case be shown, instead of the texts sent from the c.i.e. for these alarms. A built-in buzzer will sound to indicate a not acknowledged **AA** alarm. The unit is power supplied via the c.i.e. or external power supply.

LEDs, push buttons etc.

The unit has the following LEDs:

- **Fire** and **Alarms queued**, indicating fire alarm/**AA** alarm.
- **Operation**, indicating that the **AA** function is enabled in the system. Normally a time channel is used to enable this function.
- **Fire brigade alerted**, indicating that the "Fire brigade tx" output is activated in the c.i.e. because:
 - the activated alarm is not an **AA** alarm
 - the **AA** function has been ended, e.g. the acknowledge or investigation time has run out, etc.
- **Acknowledge**, indicating that the **AA** alarm has been acknowledged.

The unit has the following push buttons:

- **Alarms queued**, used to scroll amongst the alarms.
- **Acknowledge**, used to acknowledge an **AA** alarm and hereby also silence the buzzer.
- **Reset**, used to reset an **AA** alarm.

1735 has the designation texts in Swedish.

1736 has a neutral front for other languages, see the opposite side of this page. (This front also holds one extra LED and two extra push buttons.)

Compact size

The compact size enclosure is made of gray high impact ABS. Fitted with a supplementary "O" ring gasket, it will comply with IP61, 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. Two compression glands are attached.

SW mode and address setting

The display and the push buttons are used to set the **SW mode** and **address**.

The SW modes are described on the opposite side of this page.

Product application

The units are intended for indoor use and in dry premises. They are intended to be used in the systems EBL512 & EBL128. An External FBP / DU interface board 1587 is required in the EBL512 c.i.e. and a 4552 Transceiver component in the EBL128 c.i.e.

Type numbers	
1735	Alert annunciation unit. <u>Swedish designation texts.</u>
1736	Alert annunciation unit. <u>Designation texts in any language.</u>
1587	External FBP / DU interface board in EBL512, for connection of the 1735 and 1736 units in system EBL512. (Software version > 2.2 is required.)
4552	RS485 transceiver component, for connection of up to four display units, e.g. Alert Annunciation Units 1735 / 1736 in system EBL128.

Note: The number of units that can be power supplied via the c.i.e. (or an external power supply) is depending on all other units connected to the same c.i.e. / external power supply. Up to 1200 m cable can be used.

The **1736** unit has a neutral front where the designation texts, by production, are made separately and put into a transparent “text slot” for the LED and push button respectively.

1735 succeeds the Display unit (with alert annunciation) 2235SE but not as a spare part, since 2235SE is connected to a COM loop and **1735** requires an Ext. FBP/DU interface board 1587 in the c.i.e.
(2235SE = Swedish designation texts.)

1736 succeeds the Display unit (with alert annunciation) 2235xx but not as a spare part, since 2235xx is connected to a COM loop and **1736** requires an Ext. FBP/DU interface board 1587 in the c.i.e.
(2235xx = Designation texts in another language than Swedish.)

The **AA** unit 1735 and **AA** unit 1736 shall run in **SW mode 1735-1587** and **SW mode 1736-1587** respectively.

Technical data	
Voltage (VDC) rated allowed normal (in the system) normal (in the system by battery back-up)	24 12-30 24 21-27
Current consumption at norm. volt. (mA) AA unit 1735/1736 quiescent/active	26 (at 24V), 48 (at 12V)/ 42 (at 24V), 79 (at 12V)
Ambient temperature (°C) operating storage	0 to +40 -40 to +70
Ambient humidity (% RH)	Max. 90, noncondensing
Ingress protection rating (estimated)	IP61 (with the “O” ring gasket)
Size WxHxD (mm)	220 x 145 x 50
Weight (kg) 1735 1736	687 691
Color (high impact ABS)	Gray (RAL 7035)
Approvals	CE Conforms with EN54-2 and -4 whenever applicable. Conforms with SBF 110:6.

¹On each 1587 board are up to sixteen addresses available.

External Fire Brigade Panel 1826



Features

- Control and indicating panel for the fire brigade personnel
- Built-in printer (option)

External fire brigade panel


This unit is intended to be used by the fire brigade personnel, i.e. for pre-warning, co-occurrence, fire and heavy smoke/heat alarm presentation. Point or zone alarm presentation and fire alarm reset are as in the c.i.e. it is connected to. When there are queued alarms in the system, you can scroll amongst them. All or selected alarms will be presented in the unit's display (LCD, 2x40 characters with backlight). A user definable text message will be presented together with each alarm, if programmed in the c.i.e. Furthermore, ≥ 617 texts for selected alarms can be stored in the unit and will in that case be shown, instead of the texts sent from the c.i.e. for these alarms. A built-in buzzer will sound as in the c.i.e. It can be silenced and the alarm devices in the installation can also be silenced. They will re-sound for a new alarm. The unit is power supplied via the c.i.e. or external power supply.

LEDs, push buttons etc.

The unit has the following LEDs:

- **Fire and Alarms queued**, indicating pre-warning, co-occurrence, fire and heavy smoke/heat alarm.
- **Operation**, indicating that the unit is connected to a c.i.e. and power supplied, i.e. it is in operation.
- **Extinguishing**, indicating that outputs for extinguishing equipment are activated.
- **Ventilation**, indicating that outputs for ventilation equipment are activated.
- **Fire brigade tx**, indicating that outputs for fire brigade tx (routing equipment) are activated.

The unit has the following push buttons:

- **Alarms queued**, used to scroll amongst the alarms.
- **Silence buzzer**, used to silence the buzzer.
- **Silence alarm devices**, used to silence the alarm devices.
- **Reset**, used to reset the fire alarms.
-  used for paper feed, when the unit is provided with a printer 1835 (option).

The designation texts are in Swedish but a neutral front for other languages is available, see the opposite side of this page.

External FBP 1826 and printer 1835

The external FBP 1826 consists of a gray metal cabinet with a door. A key is required to open the door, which has a Plexiglas in front of the FBP front, see the picture. It has cable inlets on the top, bottom and back sides and is intended to be wall mounted. Two compression glands are attached. A **Printer 1835** can be mounted in the external FBP 1826. It will print all the alarms, including the user definable text messages.

SW mode and address setting

The display and the push buttons are used to set the **SW mode** and **address**. The SW modes are described on the opposite side of this page.

Product application

The 1826 unit is intended for indoor use and in dry premises. 1826 in SW mode **1826/28-1587** is intended to be used in the systems EBL512 & EBL128 and in SW mode **1826/28-1582** in the systems EBL500/512/1000/2000. For more information see opposite page.


Type numbers	
1826	External Fire Brigade Panel
1835	Printer for External Fire Brigade Panel 1826.
1582	External FBP interface board. (Required in EBL512 / 500 when SW mode 1826/28 – 1582 shall be used.).
1587	External FBP / DU interface board. (Required in EBL512 when SW mode 1826/28 – 1587 shall be used. EBL512 software version > 2.2 is required.)
4552	RS485 Transceiver component / comm. module. (Required in EBL128. Only SW mode 1826/28 – 1587 can be used.)

Note: The number of ext. FBPs that can be power supplied via the c.i.e. / board / external power supply, is depending on if each 1826 unit has a printer or not, as well as all other units connected to the same c.i.e. / board / external power supply. Up to 1200 m cable can be used. In EBL128 is no separate interface / connection board required, only the 4552 component.

The unit is available with a neutral front where the designation texts, by production, are made separately and put into a transparent “text slot” for the LED and push button respectively.

The external FBP 1826 can run in one of two different SW modes:

- **1826 in SW mode 1826/28-1587** has the highest performance with regard to functionality, response time, ability to store fire alarms, etc. and is intended to succeed the external FBP 2426 (1826+printer 1835 will succeed the external FBP 2425) but not as a spare part, since 1826, in this SW mode, requires an external FBP/DU interface board 1587 in the EBL512 c.i.e. and the look, dimensions, etc. are not the same. This mode is always used when the ext. FBP is connected to EBL128.
- **1826 in SW mode 1826/28-1582** has the same functionality as the external FBP 2426 and can be used as a spare part (1826+printer 1835 is a spare part for the external FBP 2425), i.e. the performance is the same but the look, dimensions, etc. are not the same. 1826, in this SW mode, requires an external FBP interface board 1582 in the EBL512 / EBL500 c.i.e.

Technical data	
Voltage (VDC) rated allowed normal (in the system) normal (in the system by battery back-up)	24 12-30 24 21-27
Current consumption at norm. volt. (mA) Ext. FBP 1826, quiescent/active Printer 1835, quiescent/active	26 (at 24V), 48 (at 12V)/ 49 (at 24V), 88 (at 12V) 4 (at 24V), 7 (at 12V)/ 161 (at 24V), 345 (at 12V)
Ambient temperature (°C) operating storage	0 to +40 -40 to +70
Ambient humidity (% RH)	Max. 90, noncondensing
Ingress protection rating (estimated)	IP52
Size W x H x D (mm)	400 x 288 x 95
Weight (g) External FBP 1826 Printer 1835 (paper roll included)	5140 345 (110)
Color (metal cabinet/door)	Light gray (NCS S 1500-N, PMS Cool Gray 2)
Approvals	 Conforms with EN54 2 and -4 whenever applicable. Conforms with SS3654 edition 1.

¹On each 1582 board up to eight addresses are available and on each 1587 board up to sixteen addresses. In EBL128 up to four addresses are available.

External Fire Brigade Panel 1828



Features

- Control and indicating panel for the fire brigade personnel (key required)
- Indicating panel for all personnel (key not required)
- Compact size

External Fire Brigade Panel

This unit is primarily intended to be used by the fire brigade personnel, i.e. for pre-warning, co-incident, fire and heavy smoke/heat alarm presentation. Point or zone alarm presentation and fire alarm reset are as in the c.i.e. it is connected to. When there are queued alarms in the system, you can scroll amongst them. All or selected alarms will be presented in the unit's display (LCD, 2x40 characters with backlight). A user definable text message will be presented together with each alarm, if programmed in the c.i.e. Furthermore, ≥ 617 texts for selected alarms can be stored in the unit and will in such a case be shown, instead of the texts sent from the c.i.e. for these alarms. A built-in buzzer will sound as in the c.i.e. It can be silenced and the alarm devices in the installation can also be silenced. They will re-sound for a new alarm. The unit is power supplied via the c.i.e. or external power supply.

LEDs, push buttons etc.

The unit has the following LEDs:

- **Fire and Alarms queued**, indicating pre-warning, co-incident, fire and heavy smoke/heat alarm.
- **Operation**, indicating that the unit is connected to a c.i.e. and power supplied, i.e. it is in operation.
- **Extinguishing**, indicating that outputs for Extinguishing equipment are activated.
- **Ventilation**, indicating that outputs for Ventilation equipment are activated.
- **Fire brigade tx**, indicating that outputs for Fire brigade tx (routing equipment) are activated.

The unit has the following push buttons:

- **Alarms queued**, used to scroll amongst the alarms.
- **Silence buzzer**, used to silence the buzzer.
- **Silence alarm devices**, used to silence the alarm devices.
- **Reset**, used to reset the fire alarms.

The designation texts are in Swedish but a neutral front for other languages is available, see the opposite side of this page.

Compact size

The compact size enclosure is made of gray high impact ABS. Fitted with a supplementary "O" ring gasket, it will comply with IP61, in respect of dust and moisture. The unit has no door, i.e. the front is accessed directly. A key is required to get access to the push buttons and they are disabled until they are supposed to be used. A key is not required for the alarm presentation and the buzzer to sound.

Two compression glands are attached. The unit shall be wall mounted.

SW mode and address setting

The display and the push buttons are used to set the **SW mode** and **address**. The SW modes are described on the opposite side of this page.

Product application

The 1828 unit is intended for indoor use and in dry premises. 1828 in SW mode **1826/28-1587** is intended to be used in the systems **EBL512 / 128** and in SW mode **1826/28-1582** in the systems **EBL500/512/1000/2000**. For more information see opposite page.

Type numbers	
1828	External Fire Brigade Panel
1582	External FBP interface board. (Required in EBL512 / 500 when SW mode 1826/28 – 1582 shall be used).
1587	External FBP/DU interface board. (Required in EBL512 when SW mode 1826/28 – 1587 shall be used. EBL512 software version ≥ 2.2 is required.)
4552	RS485 Transceiver component/comm. module. (Required in EBL128. Only SW mode 1826/28 – 1587 can be used.)

Note: The number of ext. FBPs that can be power supplied is depending on all other units connected to the same c.i.e. / board / external power supply¹. Up to 1200 m cable can be used. In EBL128 is no separate interface / connection board required, only the 4552 component.

The unit is available with a neutral front where the designation texts, by production, are made separately and put into a transparent “text slot” for the LED and push button respectively.

The external FBP 1828 can run in one of two different SW modes:

- **1828 in SW mode 1826/28-1587** has the highest performance with regard to functionality, response time, ability to store fire alarms, etc. and is an alternative to the external Presentation display 2428, the Display unit 2236 and a compact size alternative to the external FBP 2426 but not as a spare part, since 1828, in this SW mode, requires an Ext. FBP/DU interface board 1587 in the EBL512 c.i.e. and the look, dimensions, etc. are not the same.

This mode is always used when the ext. FBP is connected to EBL128.

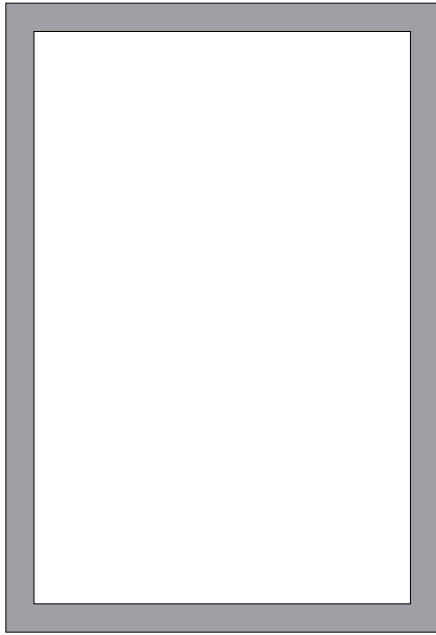
- **1828 in SW mode 1826/28-1582** is an alternative to the external presentation display 2428, the Display unit 2236 and a compact size spare part to the external FBP 2426, i.e. the performance is the same² but the look, dimensions, etc. are not the same². 1828, in this SW mode, requires an Ext. FBP interface board 1582 in the c.i.e.

Technical data	
Voltage (VDC) rated allowed normal (in the system) normal (in the system by battery back-up)	24 12-30 24 21-27
Current consumption at norm. volt. (mA) Ext. FBP 1828, quiescent/active	26 (at 24V), 48 (at 12V)/49 (at 24V), 88 (at 12V)
Ambient temperature (°C) operating storage	0 to +40 -40 to +70
Ambient humidity (% RH)	Max. 90, noncondensing
Ingress Protection rating (estimated)	IP61 (with the “O” ring gasket)
Size W x H x D (mm)	220 x 145 x 50
Weight (g)	750
Color (high impact ABS)	Gray (RAL 7035)
Approvals	CE Conforms with EN54 2 and -4 whenever applicable. Conforms with SS3654 edition 1.

¹On each 1582 board are up to eight addresses available and on each 1587 board up to sixteen addresses. In EBL128 are up to four addresses available.

²**Note:** The alarm presentation will be as in the c.i.e. that external FBP is connected to, not as in 2425/2426. The 1828 front does not hold any LED “Zone/Detector not reset”.

Frame for flush mounted EBL512, 1568



Features

- Same color as the c.i.e. housing
- Prepared for simple mounting

General

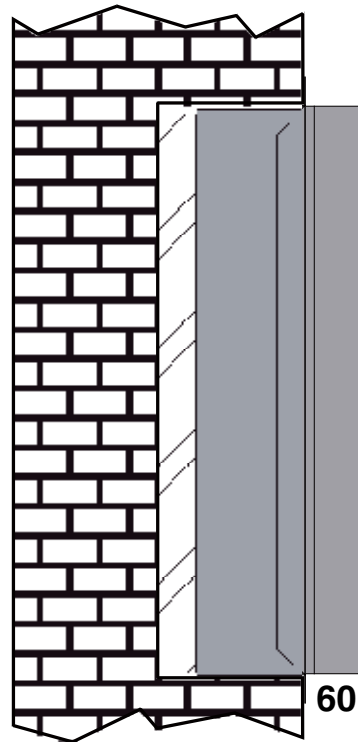
The frame 1568 is used when a c.i.e. EBL512 shall be flush mounted.

The frame is made of metal and has the same gray color as the EBL512 housing.

The frame width is 30mm on all four sides.

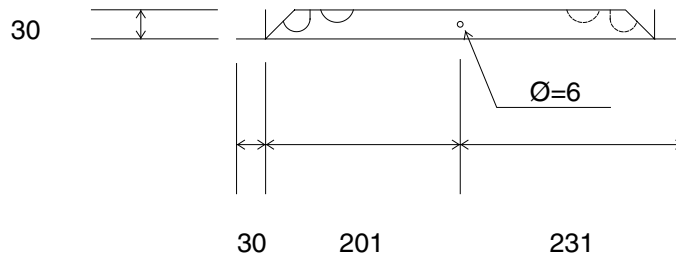
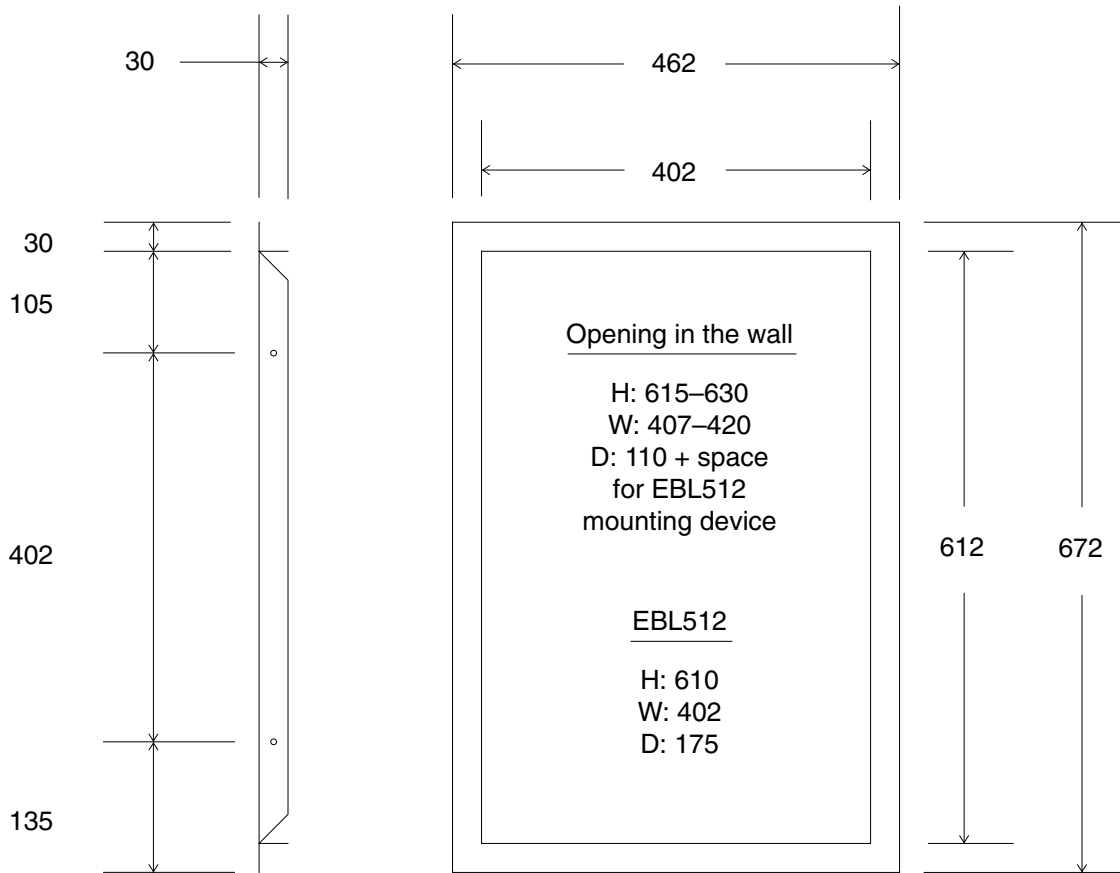
In order to make it possible to open the door, the housing has to be placed approx. 60mm out from the wall. Behind the housing there might be need of space for some mounting device. See figure to the right.

The frame is prepared with mounting holes ($\varnothing=6\text{mm}$), two holes on each side and one hole at the top and at the bottom. It is also prepared for access to the EBL512 housing's knock-outs for cable entries. See figure on the opposite page.



Type number

1568	Frame for flush mounted EBL512.
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Technical data	
Size H x W x D (mm)	672 x 462 x 30 See also the figure above.
Weight (g)	1365
Construction/Color	Metal/Light gray (NCS S1500-N, PMS Cool Gray 2)

Web-server II 1598



Features

- Web-server II, 1598; second Web-server generation
- Increased memory and faster CPU
- The same hardware can be used for the functions Web512, Web128 or OPC512

General

Web-server II has a plastic cabinet, which is vertically mounted on a symmetric 35 mm DIN rail outside and close to (< 3 m) an EBL512 c.i.e. or inside an EBL128 c.i.e. The EBL128 c.i.e. is supplied with a DIN rail. A cable & accessories kit for both systems is supplied with the Web-server II.

Web-server II software

Depending on the downloaded software, the web-server II can be used for the functions Web512, Web128 or OPC512. A configuration tool is used to create and download the configuration and the software for the function respectively to the web-server II.

Web512 / Web128

Web512 II Configuration tool.

Web128 II Configuration tool.

For presentation of the actual EBL512 (version ≥ 2.3) or EBL128 (version ≥ 1.0) status in a PC using the web browser Microsoft Internet Explorer, via Internet or an intranet (LAN).

User name and Password can be used.

For EBL512, version ≥ 2.5 or EBL128 version ≥ 1.1 , also remote control with encrypted and safe two-way communication. *User names and Passwords* for five different *User (access) levels*.

E-mails can be sent in case of fire alarm, pre-warning, test mode alarm, fault, disablement and/or service signal.

One of the following gateway functions can be used:

EBL Talk

Tateco

SIA (EBL512 only.)

OPC512

OPC512 II Configuration tool.

EBL512 version ≥ 2.5 can via the web-server II, be connected to a PC with Panasonic FP OPC Server, which allows high-performance data transfer between industrial applications (clients) supporting the universally accepted OPC DA Standard (v1-v3) and Panasonic FP Series PLCs.

Interfaces

Web-server II has the following interfaces:

PLC COM. (RS232C) RS232C (without handshake), for connection of Web-server II to an EBL c.i.e. One RS232 connection cable is supplied for connection to the Web-server II plug-in screw terminal block (**Send – Receive – Ground**).

Modem COM. (RS232C) For connection of Web-server II to a modem or a separate PC system. One 9 ways male „D“ connector, compatible to an IBM PC serial port. (The cable is not supplied.)

Ethernet COM. (10 BASE-T) For connection of Web-server II to Internet / an intranet (LAN). One RJ45 connector for a standard Ethernet cable (e.g. CAT.5). (The Ethernet cable is not supplied.)

Power supply For connection of Web-server II to 24 V DC (i.e. to an EBL c.i.e. or an external equipment).

A power cable for each system is supplied and shall be connected according to the supplied installation detail.

Type number	
1598	Web-server II, incl. cable & accessories kit (the RS232C and power supply cables for system EBL512 are 3m and for system EBL128, 0.65m.)

NOTE!

The configuration tools can be downloaded from our web page. Since the configuration tool is different depending on the system (EBL512 or EBL128), the EBL software version and also the function, there are different versions to be found on the web page. It is very important that the configuration tool has the same version as the EBL version, i.e. the two first digits (e.g. 2.5.x).

<http://www.panasonic-fire-security.com>

NOTE! User name and Password are required for software download.

Product applications

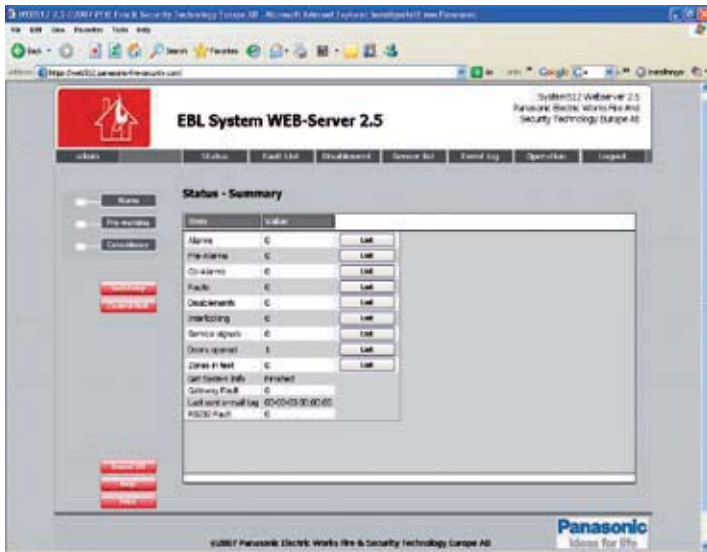
Web-server II 1598 is intended for indoor use and in dry premises. It can be used in systems EBL512 and EBL128 for c.i.e. status presentation. In system EBL512, version ≥ 2.5 also for remote control. In system EBL512, version ≥ 2.5 the web-server II can, as an alternative, be an interface to a Panasonic FP OPC Server.



Technical data	
Voltage (VDC) rated	24
allowed	10.8-26.4
normal	24
Current consumption at norm. volt. (mA) quiescent	60
max.	65
Ambient temperature (°C) operating	0 to +55
storage	-20 to +70
Ambient humidity (% RH)	Max. 85, non condensing
Ingress protection rating	IP20
Weight (g) Web-server only	90
Size H x W x D (mm) Web-server only	90 x 25 x 69.5
Construction / color Web-server	ABS plastic/light gray
Approvals	CE

All technical features and data are subject to changes without notice, resulting from continuous development and improvement.

Web-server II S/W Web512 / Web128



Features

- Software for the Web-server II, 1598
- Configuration tools for the function Web512 and Web128 respectively

General

The hardware, Web-server II 1598 (see product leaflet MEW00929) is mounted outside and close to (< 3 m) an EBL512 c.i.e. or inside an EBL128 c.i.e.

Web-server II software

Depending on the downloaded software, the web-server II can be used for different functions. A configuration tool is used to create and download the configuration and the software for the function, e.g. **Web512** or **Web128**.

Web512 / Web128

Web512 II Configuration tool.

Web128 II Configuration tool.

For presentation of the actual EBL512 (version ≥ 2.3) or EBL128 (version ≥ 1.0) status in a PC using the web browser Microsoft Internet Explorer, via Internet or an intranet (LAN).

User name and Password can be used.

For EBL512, version ≥ 2.5 or EBL128 version ≥ 1.1 , also remote control with encrypted and safe two-way communication. Depending on the access level, fire alarms can be reset, faults acknowledged, alarm points can be disabled etc. *User names and Passwords* for five different *User (access) levels*.

E-mails can be sent in case of fire alarm, pre-warning, test mode alarm, fault, disablement and/or service signal.

Gateway functions

One of the following gateway functions can be used:

EBL Talk, an open protocol, used to transmit and present EBL512 or EBL128 status information (fire alarms, faults, disablements etc.) in a separate PC application.

Tateco, a protocol used to transmit and present fire alarm information in an Ascom Tateco paging system.

SIA, a protocol used to transmit and present status information in a separate PC application. (EBL512 only.)

Configuration & S/W download

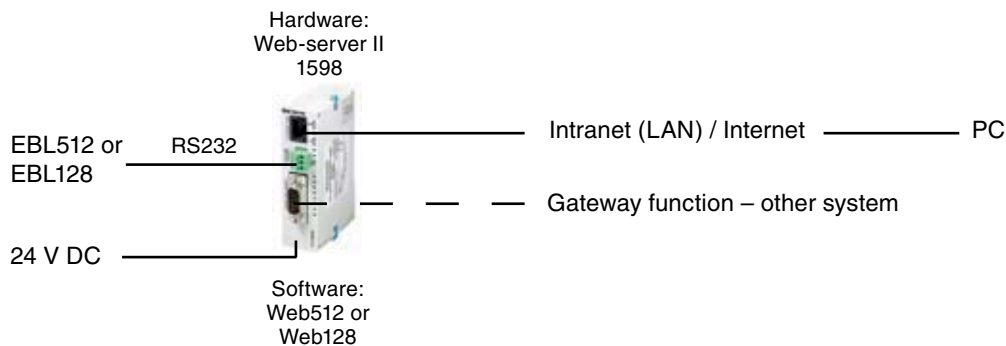
After the web page configuration (PC tool **Web512 II Config tool V2.x** or **Web128 II Config tool V1.0.4**), the web page and the web-server software are downloaded to the Web-server II via TCP/IP.

Type number	
1)	Web512 II Configuration tool for EBL512 version ≥ 2.3
1)	Web512 II Configuration tool for EBL512 version ≥ 2.5 . (Remote control possible.)
1)	Web128 II Configuration tool for EBL128 version ≥ 1.0 .
1)	Web128 II Configuration tool for EBL128 version ≥ 1.1 . (Remote control possible.)
1598	Web-server II, incl. cable & accessories kit (the RS232C and power supply cables for system EBL512 are 3m and for system EBL128, 0.65m.).

¹⁾ The configuration tools can be downloaded from our web page. Since the configuration tool is different depending on the system (EBL512 or EBL128) and also the EBL software version, there are different versions to be found on the web page. It is very important that the configuration tool has the same version as the EBL version, i.e. the two first digits (e.g. 2.5.x).

<http://www.panasonic-fire-security.com>

NOTE! User name and Password are required for software download.



Web-server II, OPC512



Features

- Software for the Web-server II, 1598
- Configuration tool for the function OPC512

General

Web-server II has a plastic cabinet, which is vertically mounted on a symmetric 35 mm DIN rail outside and close to (< 3 m) an EBL512 c.i.e. A cable & accessories kit is supplied with the Web-server II.

Web-server II software

Depending on the downloaded software, the web-server II can be used for different functions. A configuration tool is used to create and download the configuration and the software for the function, e.g. **OPC512**.

OPC512 (software)

OPC512 II Configuration tool.

EBL512, version > 2.5, can via the web-server II, be connected to a PC with Panasonic FP OPC Server, which allows high-performance data transfer between industrial applications (clients) supporting the universally accepted OPC DA Standard (v1-v3) and Panasonic FP Series PLCs.

Configuration & S/W download

After the configuration (with **OPC512 II Configuration tool**), the configuration and the web-server software are downloaded to the Web-server II via TCP/IP.

Panasonic FP OPC Server (software)

The FP OPC Server software is produced by Panasonic Electric Works Europe.

A Flyer and a User's manual describing the Panasonic FP OPC Server software can be downloaded from the web page:

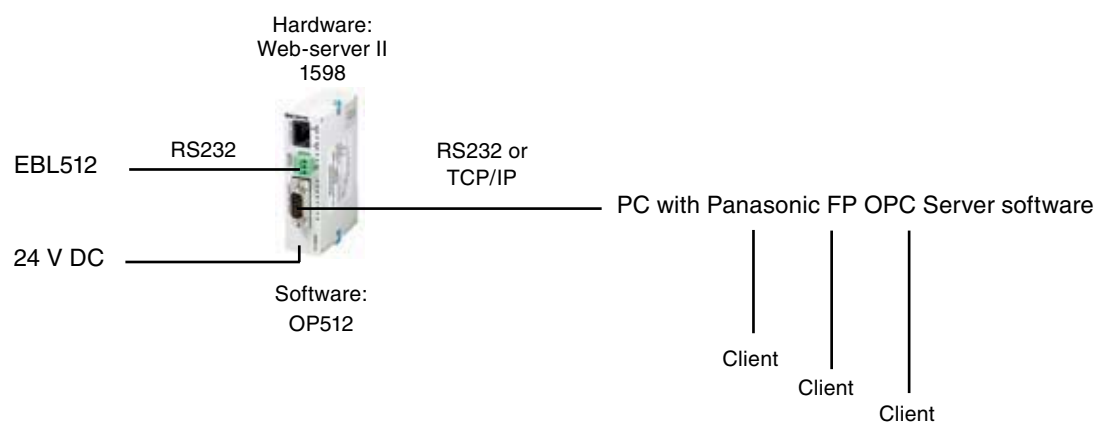
http://www.panasonic-electric-works.com/peweu/en/html/fp_opc_server.php

Type number	
1)	OPC512 II Configuration tool for EBL512 version ≥ 2.5 .
1598	Web-server II, incl. cable & accessories kit (the RS232C and power supply cables for system EBL512 are 3 m).
AFPS03510D	Panasonic FP OPC Server software and one license.

¹⁾The configuration tool can be downloaded from our web page. Since the configuration tool is different depending on the EBL software version, there might be different versions to be found on the web page. It is very important that the configuration tool has the same version as the EBL version, i.e. the two first digits (e.g. 2.5.x).

<http://www.panasonic-fire-security.com>

NOTE! User name and Password are required for software download.



Analog base 3312



Features

- Common base for the different analog detectors
- Easy connections including output for external LED
- Label holder recess

Common base

The analog base 3312 is connected to a COM loop. Analog heat, smoke and multi detectors type 33xx/43xx can be plugged in the base. (See Product Leaflet for the detector type respectively, for type of base.)

Easy connection

The base has screw terminals for the COM loop (in/out) and an external indicator (LED) e.g. 2218.

Label holder

A label holder could be mounted in the base (in the label holder recess). The label holder is intended for a label showing „zone-address“ or „technical number“ information, which can be read also when the detector is plugged in the base.

Miscellaneous

The base has an address label (AI) where the detector's COM loop address is to be written. Individual fault signal is obtained if wrong type of detector (compared with the programming) is plugged in the base or if the detector is unplugged. When a detector with a locking screw is plugged in the base, the detector can be locked in its base to prevent theft. The position of the detector's built-in LED is marked in the base, for correct mounting position of the base. For more information regarding detector types, connections, etc. see planning instructions and connection diagrams for the system respectively.

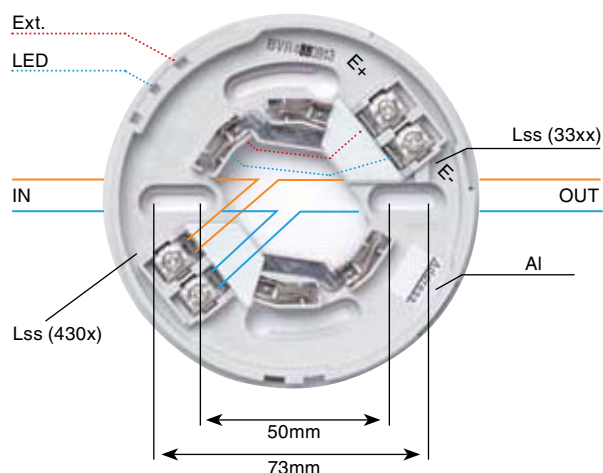
Product applications

Used in the systems EBL512/128/1000/2000.

The base is intended for indoor use and in dry premises.

Type numbers

3312	Analog base
3390	Label holder (100 holders per packet, excluding labels)
3391	Labels for 3390 (10 sheets à 132 labels)



- SA** Terminal for COM loop (in/out)
- SB** Terminal for COM loop (in/out)
- AI** Address Label
- Lss** Locking screw stopper (for detector type 33xx and 430x respectively)
- E-** Terminal for external LED
- E+** Terminal for external LED



The base is prepared for mechanical locking of the detector, when a detector with a locking screw is plugged into the base. Terminal wire diameter 0.6-1.6mm (approx. 0.3-2mm²). Analog detectors can be plugged in the base 3312, e.g. 33xx and 43xx.

Technical data

Voltage (VDC) rated allowed normal	28 12-30 24 (COM loop voltage)
Current consumption at nom. volt. from COM loop (mA) quiescent (base only) active (base only)	Depending on the type of detector that is plugged into the base. 0 0
Ext. LED terminals voltage (V) max. current output (mA)	Depending on the detector plugged in the base. Normally: 5 2
Ambient temperature (°C) operating storage	-10 to +50 -20 to +70
Ambient humidity (% RH)	Max. 95, noncondensing
Ingress protection rating (estimated)	IP51
Size Ø x H (mm)	102 x 15
Weight (g)	52
Construction/Color	ABS/gray (N8, munsell color code)
Approvals	CE Conforms with EN54-5 and -7 (when applicable)

Analog base 3312F / FL



Features

- Common base for the different analog detectors
- Fast connectors
- Label holder recess

Common base

The analog base 3312F / FL is connected to a COM loop. Analog heat, smoke and multi detector types 33xx / 43xx can be plugged in the base. (See Product Leaflet for the detector type respectively, for type of base.)

Fast connectors

3312F has fast connectors (blue) for the COM loop (in/out). 3312FL also has fast connectors (gray) for an external indicator (LED), e.g. 2218.

Label holder

A label holder could be mounted in the base (in the label holder recess). The label holder is intended for a label showing „zone-address“ or „technical number“ information, which can be read also when the detector is plugged in the base.

Miscellaneous

The base has an address label (AI) where the detector's COM loop address is to be written.

Individual fault signal is obtained if wrong type of detector (compared with the programming) is plugged in the base or if the detector is unplugged.

When a detector with a locking screw is plugged in the base, the detector can be locked in its base to prevent theft.

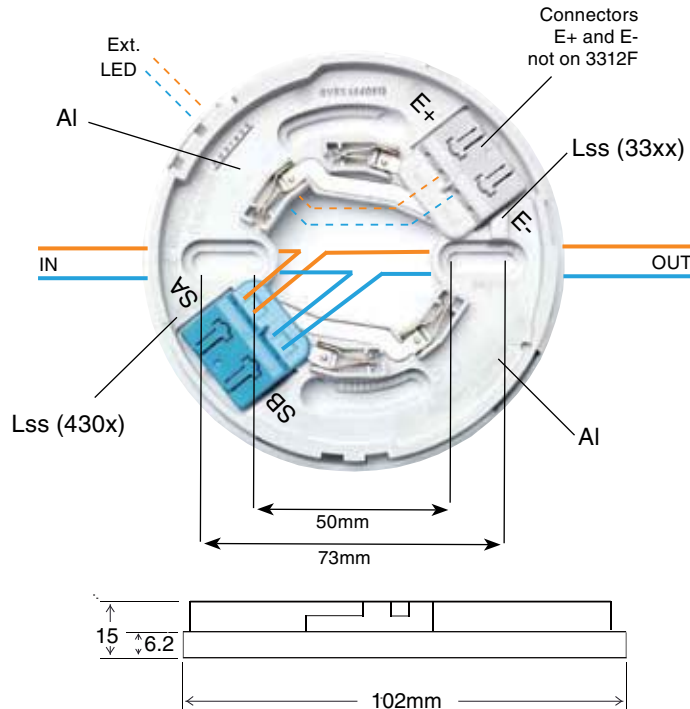
The position of the detector's built-in LED is marked in the base for correct mounting position of the base.

For more information regarding detector types, connections, etc. see planning instructions and connection diagrams for the system respectively.

Product applications

Used for analog detectors in the systems **EBL512 / 128 / 1000 / 2000**. The base is intended for indoor use and in dry premises.

Type numbers	
3312F	Analog base with fast connectors (blue) for the COM loop
3312FL	Analog base with fast connectors (blue) for the COM loop and fast connectors (gray) for one ext. LED (e.g. 2218)
3390	Label holder (100 holders per packet, excl. labels)
3391	Labels for 3390 (10 sheets à 132 labels)



The detector plugged in the base is connected on the SAo side.

- SA** Fast connector for COM loop (in)
- SB** Fast connector for COM loop in/out)
- AI** Address Label
- Lss** Locking screw stopper (for detector type 33xx and 430x respectively)
- E-** Fast connector for external LED
- E+** Fast connector for external LED
- Note!** E- and E+ on 3312FL only

The base is prepared for mechanical locking of the detector, when a detector with a locking screw is plugged into the base. Connector wire Ø 0.6 – 1.2 mm (approx. 0.28 – 1.13 mm²). If wire Ø 0.6 mm is used the release button may be pushed as the wire is pressed into the connector. Analog detector types 33xx and 43xx can be plugged in the base 3312F / FL.

Technical data	
Voltage (VDC) rated allowed normal	28 12-30 24 (COM loop voltage)
Current consumption at nom. volt. from COM loop (mA) quiescent (base only) active (base only)	Depending on the type of detector that is plugged into the base. 0 0
Ext. LED terminals voltage (V) max. current output (mA)	Depending on the detector plugged in the base. Normally: 5 2
Ambient temperature (°C) operating storage	-10 to +50 -20 to +70
Ambient humidity (% RH)	Max. 95, non condensing
Ingress protection rating (estimated)	IP51
Size Ø x H (mm)	102 x 15
Weight 3312F / 3312FL (g)	41 / 47
Construction/Color	ABS/gray (N8, munsell color code)
Approvals	CE Conforms with EN54-5 and -7 (when applicable)

Analog base with short circuit isolator 4313



Features

- Common base for the different analog detectors
- Built-in short circuit isolator
- Easy connections incl. output for external LED

Common base

The analog base 4313 is connected to a COM loop. Any analog heat, smoke and multi detector types 33xx / 430x can be plugged in the base. (For required type of base, see Product Leaflet for the detector type respectively.)

Short circuit isolator

The analog base 4313 has a built-in short circuit isolator with the same functions as the Addressable short circuit isolator 4370. The short circuit isolator will divide the COM loop into segments. A segment is the part of a loop between two isolators or between one isolator and the c.i.e. In case of a short circuit on a COM loop, only the affected segment will be disabled, i.e. the number of disabled loop units is minimised. All other loop units will continue to work normally. Up to eight isolators (4313 and/or 4370) can be connected on each COM loop.

Easy connection

A short circuit or a single break (cut-off) on a loop will generate a fault and a fault message, which gives specific information, i.e. short circuit or a break, COM loop number and between which isolators it is situated.

Label holder

An optional label holder could be mounted in the base (in the label holder recess) and is intended for a label showing „zone-address“ etc. Can be read also when the detector is plugged in the base and is ceiling mounted.

COM loop address

The COM loop address for the isolator is set with an Address setting tool 3314, which is also used to set the mode:

- **NORMAL mode:** Short circuit isolator 4313 in system **EBL128**.
- **2330 mode:** Short circuit isolator 4313 (2370/4370 in Win512) in system **EBL512**.
- **2312 mode:** Not used for 4313.

Miscellaneous

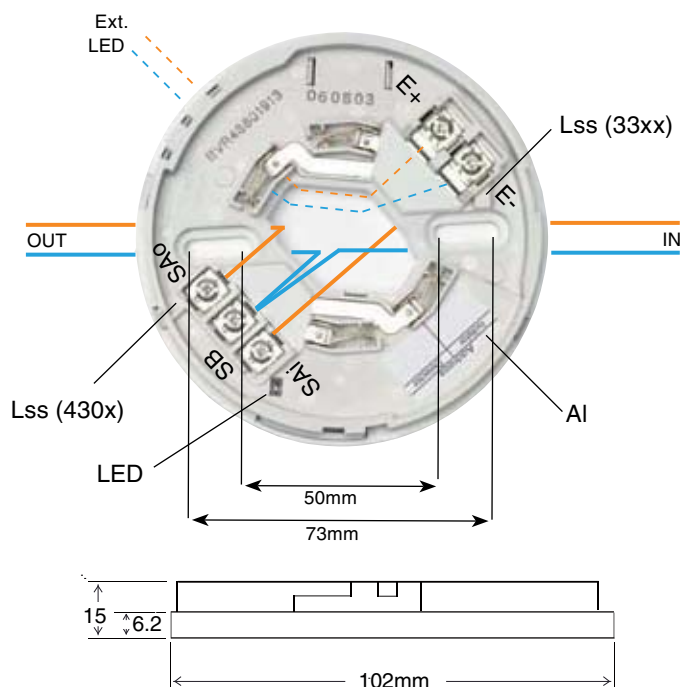
The base has an address label (AI) where the detector's and isolator's COM loop addresses can be written. Individual fault signal is obtained if wrong type of detector (compared with the programming) is plugged in the base or if the detector is unplugged. A short circuit or a single break (cut-off) on the loop will generate a fault and a fault message, e.g. short circuit or break, COM loop number and between which isolators. For more information regarding detector types, connections, etc. see Planning Instructions and connection diagrams for the system respectively.

Product applications

Used in the systems **EBL512 / 128** to increase the COM loop safety. The base is intended for indoor use and in dry premises.

Type numbers

Type numbers	
4313	Analog base with isolator
3390	Label holder (100 holders per packet, excl. labels)
3391	Labels for 3390 (10 sheets à 132 labels)



The detector plugged in the base is connected on the SAo side.

- SAi** Terminal for COM loop (in)
- SAo** Terminal for COM loop (out)
- SB** Common terminal for COM loop in/out
- AI** Address Label
- Lss** Locking screw stopper (for detector type 33xx and 430x respectively)
- E-** Terminal for external LED
- E+** Terminal for external LED
- LED** Isolator LED (yellow)

Isolator LED: Normal state = one blink 250ms / 3s. Isolated state = two blinks 250ms / 3s. NOTE! The LED is not visible when the detector is plugged in the base.

The base is prepared (Lss) for mechanical locking of detector with locking screw. Terminal wire diameter 0.6 – 1.6 mm (approx. 0.3 – 2 mm²).

Analog detector types 33xx and 430x can be plugged in the base 4313. The position of the detector's built-in LED is marked in the base for correct mounting position of the base.

Technical data	
Voltage (VDC) allowed normal	12-30 24 (COM loop voltage)
Current consumption at nom. volt. from COM loop (mA) quiescent (excl. detector) active (excl. detector)	Depending on the type of detector that is plugged into the base. ≤ 1.3 ≤ 1.3
Ext. LED terminals voltage (V) max. current output (mA)	Depending on the detector plugged in the base Normally: 5 2
Ambient temperature (°C) operating storage	-10 to + 50 -20 to +60
Ambient humidity (% RH)	Max. 95, non condensing
Ingress Protection rating (estimated)	IP54
Size Ø x H (mm)	102 x 15
Weight (g)	80
Construction/Colour	ABS/Gray (N8, Munsell color code)
Approvals	CE 07 EC Certificate no. 0845-CPD-232.1567; EN54-17

All technical features and data are subject to changes without notice, resulting from continuous development and improvement.

Analog heat detector 3308



Features

- Different modes for compatibility with other EBL systems
- Algorithms for class A1, A2 S or B S

General

The analog heat detector 3308 measures the temperature through a thermistor. The temperature range is 0°C to 100°C in steps of 0.5°C.

Programming/compatibility

The address setting tool 3314 is used to set the detector's COM loop address. The detector has an Address label (Al) where the programmed address is to be written.

3314 is also used to set the detector mode.

- **NORMAL** mode (analog): Detector 3308 + analog base 3312 used in the systems EBL512 (SW version $\geq 2.x$) and EBL128. The detector works as a temperature sensor where the analog readings (0°C to 100°C) are converted to digital "sensor values" that are read and evaluated by the c.i.e. Algorithms for class A1, A2 S or B S (set in Win512).
- **2330** mode (conventional): Detector 3308 + analog base 3312 is used in the systems EBL512/1000/2000 as an equivalent to the 60°C conventional fixed temperature heat detectors 6270/6275 + addressable base 2330, i.e. as a response grade 2 heat detector (static response temperature 57°C).

Note: The analog base 3312 has no external line input, like the addressable base 2330 has.

- **2312** mode: Not used for 3308.

Algorithms

EBL512 /EBL128 uses algorithms for class A1, A2 S and B S, according to EN54-5:2000, for fire alarm detection. Via Win512/Win128 is an algorithm selected for each 3308 in NORMAL mode.

Miscellaneous

The detector has an LED that will light up when the detector goes into alarm.

The detector is plugged in the analog base 3312. The COM loop is connected to the base, which also has terminals to connect an external LED 2218.

Product applications

The detector 3308 is used in the systems EBL512/EBL128/1000/2000. It is intended for indoor use and in dry premises. Heat detectors are normally used in small rooms where the temperature can be expected to rise rapidly in case of a fire or places where smoke detectors can not be used.

Type numbers

3308	Analog heat detector
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- SA** Contact pin for COM loop / address setting tool 3314
- SB** Contact pin for COM loop / address setting tool 3314
- TI** Type number label; Detector type
- Ae** Address label
- Ls** Locking screw
- Lsh** Locking screw hole (prepared for drilling through detector body)
- E+** Contact pin for External LED
- E-** Contact pin for External LED
- LED** Built-in LED


Prepared for mechanical locking, when plugged in the analog base 3312. One hexagon socket locking screw is attached (1.5mm Hex key to be used). One 2.5-2.7mm hole has to be drilled.

Technical data	
Voltage (VDC) rated allowed normal	28 12-30 24
Current consumption at nom. volt. (mA) quiescent active (including internal LED) ext. LED (connected via base 3312)	0.3 2.3 2
Ambient temperature (°C) operating (min./typical/max.) (min./typical/max.) storage	Depending on the mode. <u>NORMAL mode</u> : Class is depending on the algorithm. Class A1 : -20/+25/+50, A2 S : -20/+25/+50 or B S : -20/+40/+65 <u>2330 mode</u> : -10/+25/+50 -25 to +70
Ambient humidity (% RH)	Max. 95, noncondensing
Ingress protection rating (estimated)	IP51
Sensitivity (°C) Static response temperature (range)	<u>NORMAL mode</u> : Depending on the algorithm. Class A1 : 54-65, A2 S : 54-70 and B S : 69-85. <u>2330 mode</u> : Response grade 2 : 57
Size Ø x H (mm)	102 x 36
Weight (g)	51
Color (high impact ABS)	Gray (N8, Munsell color code)
Approvals	CE 05 EC Certificate no. 0845-CPD-232.1189 <u>NORMAL mode</u> : EN54-5:2000: Class P (depending on algorithm). <u>2330 mode</u> : EN54-5: Response grade 2 (yellow).

Enclosed analog heat detector 3309



Features

- Different modes for compatibility with other EBL systems/detectors
- Algorithms for class A1, A2 S or BS
-  ATEX compliance
- Waterproof (IP67)

General

The analog heat detector 3309 measures the temperature through a thermistor. The temperature range is 0°C to 100°C in steps of 0.5°C. The detector has an LED that will light up when the detector goes into alarm. The detector also has an output for an external LED 2218.

Programming/Compatibility

The address setting tool 3314 is used to set the detector's COM loop address. The detector has an address label inside, where the address is to be written. 3314 is also used to set the detector mode.

- **NORMAL** mode (analog): Used in the system EBL512 (SW version ≥ 2.0) and EBL128. The detector works as a temperature sensor where the analog readings (0°C to 100°C) are converted to digital "sensor values" that are read and evaluated by the c.i.e. Algorithms for class A1, A2 S or BS (set in Win512). When the class A1 or A2 S algorithm is used, 3309 is a spare part for detector 2340 and when the class BS algorithm is used, 3309 is a spare part for 2341.
- **2330** mode (conventional): Used in the EBL512/1000/2000 systems as an equivalent to the enclosed addressable fixed temperature heat detector 2340 (60°C), i.e. as a class A2 S heat detector (static response temperature 57°C).
- **2312** mode: Not used for 3309.

Algorithms

EBL512 / EBL128 uses algorithms for class A1, A2 S and BS, according to EN54-5:2000, for fire alarm detection. Via Win512/Win128 is an algorithm selected for each 3309 in NORMAL mode.

ATEX classification

3309 complies with the ATEX classification
Ex II 3GD EEx nA II T5.

Waterproof

The thermistor, the LED, all electronics, etc. is mounted in a waterproof detector housing, mounted on a connection box.

Label holder

A label holder, intended for a label showing "zone-address" or "technical number", can be mounted in the connection box.

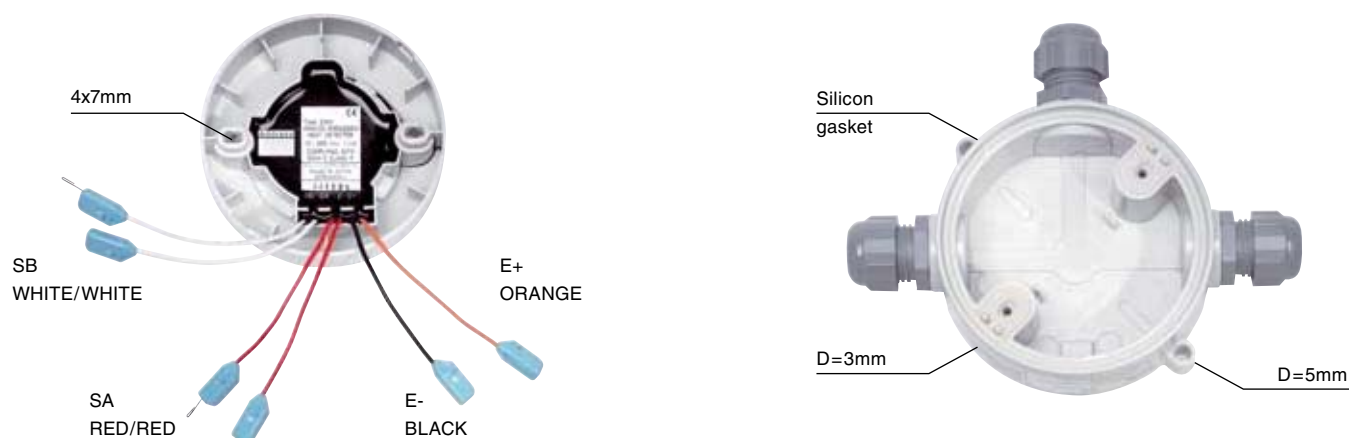
Miscellaneous

The COM loop is connected to the detector, which is provided with three pairs of flying leads with female push-on connectors.

Product applications

Used in the systems EBL512/128/1000/2000. Heat detectors are normally used where smoke detectors can not be used or in rooms where the temperature can be expected to rise rapidly in case of a fire. The detector is intended for outdoor use (must not be exposed to heavy sunlight) or in high humidity indoor premises.

Type numbers	
3309	Enclosed analog heat detector (including connection box, 3 compression glands and gasket)
3390	Label holder (100 holders per packet, excluding labels)
3391	Labels for 3390 (10 sheets à 132 labels)



Detector mounting holes, 2x(4x7mm) c/c = 70mm. **SA/SB** (Red/White) = COM loop in and out respectively. One SA and one SB connector is provided with a short „wire“ to be used to connect the address setting tool 3314 during mode and address setting. The „wires“ are to be pulled out before the COM loop wires are connected. **E+/E-** = External LED (cable length max. 30m.). Connectors for wire diameter 0.6-1.2mm (0.3-1.13mm² approx.).

Technical data	
Voltage (VDC) rated allowed normal (on the COM loop)	28 12-30 24
Current consumption at norm. volt. (mA) quiescent active (including internal LED) external LED	0.185 1.650 ≤ 2
Ambient temperature (°C) operating (min./typical/max.) storage	Depending on the mode. NORMAL mode (Class is depending on the algorithm) Class A1 : -20/+25/+50, A2 S : -20/+25/+50 or BS : -20/+40/+65 2330 mode : -20/+25/+50 -45 to +70
Ingress protection rating (estimated)	IP67 (attached connection box, silicon gasket and compression glands are required)
Sensitivity (°C) Static response temperature (range)	NORMAL mode : Depending on the algorithm. Class A1 : 54-65, A2 S : 54-70 and BS : 69-85 2330 mode : Class A2 S : 57
Size Ø x H (mm)	100 x 78
Weight (g) detector + connection box (including 3 glands)	116 + 160 = 276
Construction/color	Modified polycarbonate/gray (N8, munsell color code)
Approvals	CE 05 EC Certificate no. 0845-CPD-232.1190 NORMAL mode : EN54-5:2000: Class P (depending on algorithm). 2330 mode : EN54-5: 2000: Class A2 S.
ATEX classification	II 3GD EEx nA II T5 (T70°C), -20°C ≤ T _a ≤ 65°C

Analog multi detector 4300



Features

- Constant sensitivity / Service signal at a fixed level of contamination
- New advanced algorithms and functions and yet compatible with older EBL systems

General

The multi detector contains one photo-electric (optical) smoke detector and one heat detector within the low profile housing. The latest IC technology will secure the highest reliability possible. It has **unleaded soldering**. In the smoke detection chamber is a high-efficient optical system consisting of an LED and a photodiode with two lenses. Scattered light (i.e. reflection of infrared light) is used to detect smoke. The smoke enters the detection chamber through an insect filter and an optical labyrinth. This construction not only improves the smoke inflow, it also causes steam, fog, etc. to condense into moisture on its surfaces, to prevent false (nuisance) alarms.

The **heat** sensing element is a thermistor. The detector is supplied with two LEDs that will light when the detector goes into alarm. The detector is plugged in the analog base 3312x / 4313. The COM loop is connected to the base, which also has terminals for an external LED, e.g. 2218. The detector is intended for indoor use in dry premises and in the systems EBL512 / 128 / 1000 / 2000 depending on the detector mode.

Constant sensitivity

The detector maintains a constant sensitivity regardless of its contamination. A service signal will be given when the detector has reached a service level.

Address/Detector mode

The address setting tool 3314 is used to set the detector's

COM loop address and the detector mode NORMAL, 2330 or 2312. See Planning Instructions for the system respectively for more information about the modes and functions.

- **NORMAL mode** (analog): Detector 4300 is used in the systems EBL512 (SW version > 2.0) and EBL128, also as a spare part for the detector 3316 in NORMAL mode.
- **2330 mode** (conventional): Detector 4300 is used in the systems EBL512 / 1000 / 2000 as the best substitute for the detectors 2316 & 2317 + base 2330.
- **2312 mode** (analog): Not used for 4300.

The different modes have different functions and features, e.g. in the 2330 mode, the detector does the fire judgement but in the NORMAL mode this is done in the c.i.e. The detector is prepared for an „Advanced mode“ to be used in conjunction with future EBLxxx SW versions.

AI function

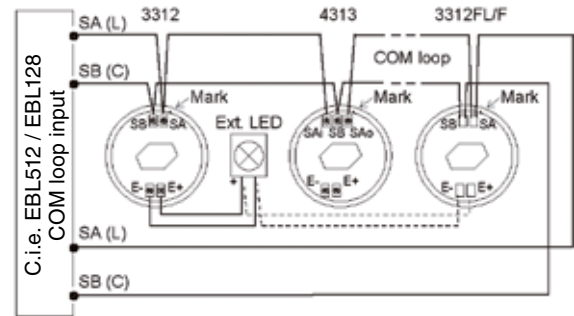
In the 2330 mode is the AI function used, i.e.:

- **Combined heat and smoke sensing** will guarantee reliable and accurate fire alarm detection.
- **Variable delay function**, i.e. the delay time before an alarm is influenced by temporary temperature and/or smoke obscuration changes.

Type number	
4300	Analog multi detector



The detector is plugged in the analog base 3312x / 4313. The COM loop/ Ext. LED are connected to the analog base.



See also „Engineering Instructions for detectors Type 430x“.

In the detector:

- SA/SB** Contact pins COM loop / address setting tool 3314)
- E+/E-** Contact pins for External LED
- TI** Type number label; Detector type
- AI** Address label; For the programmed COM loop address to be written.
- Lsh** Locking screw hole (prepared for drilling through detector body)
- Ls** Locking screw

Prepared for mechanical locking with analog base 3312x / 4313. One hexagon socket screw (Ls) is attached (1.5 mm Hex key to be used). The 2.5-2.7 mm hole (Lsh) has to be drilled.

Technical data	
Voltage (VDC) rated	28
allowed	12-30
normal (on COM loop)	24
Current consumption at nom. volt. from COM loop (mA)	
quiescent	0.3
active (including internal LED)	2.3
ext. LED (connected via base 3312)	max. 2
Ambient temperature (°C)	
operating	-10 to +50
storage	-25 to +75
Ambient humidity (% RH)	Max. 95, non condensing
Ingress protection rating (estimated)	IP51
Sensitivity (obscuration; %/m)	Depending on mode.
NORMAL mode	3.6/3.0/2.4 (low/normal/high)
2330 mode	5
	>2.5 in combination with temp. rate-of-rise (depending on algorithm)
Sensitivity (T=°C; deltaT=°C/min.)	Depending on mode.
NORMAL mode	56/46/60/74 (A1; ≤ 4/A1; > 4/A2 (S)/B (S))
2330 mode	57; 6.43
2312 mode	57; >1.07 in combination with smoke obscur. (depending on algorithm)
Size ØxH(mm)	102 x 44
Weight (g)	70
Construction/color	Modified polycarbonate/Gray (N8, Munsell color code)
Approvals	05 EC Certificate no. 0786-CPD-20145; EN54-7 (smoke) 05 EC Certificate no. 0786-CPD-20146; EN54-5 Class P (heat)

Analog photoelectric smoke detector 4301



Features

- Constant sensitivity/service signal at a fixed level of contamination
- New advanced algorithms and functions and yet compatible with older EBL systems

General

The photoelectric (optical) smoke detector has a low profile design, **unleaded soldering** and the latest IC technology, which will secure the highest reliability possible. In the detection chamber is a high-efficient optical system consisting of an LED and a photodiode with two lenses. Scattered light (i.e. reflection of infrared light) is used to detect smoke. The smoke enters the detection chamber through an insect filter and an optical labyrinth. This construction not only improves the smoke inflow but it also causes steam, fog, etc. to condense into moisture on its surfaces, to prevent false (nuisance) alarms. The detector is supplied with two LEDs that will light when the detector goes into alarm. The detector is plugged in the analog base 3312x / 4313. The COM loop is connected to the base, which also has terminals for an external LED, e.g. 2218. The detector is intended for indoor use in dry premises and in the systems EBL512 / 128 / 1000 / 2000 depending on the detector mode.

Constant sensitivity

The detector maintains a constant sensitivity regardless of its contamination. A service signal will be given when the detector has reached a service level.

Address/detector mode

The address setting tool 3314 is used to set the detector's COM loop address and the detector mode NORMAL, 2330 or 2312 See Planning Instructions for the system respectively for more information about the modes and functions.

- **NORMAL mode** (analog): mode (analog): Detector 4301 is used in the systems EBL512 (SW version > 2.0) and EBL128, also as a spare part for the detector 3304 in NORMAL mode.
- **2330 mode** (conventional): Detector 4301 is used in the systems EBL512/ 1000/2000 as a spare part for the detector 3304 in 2330 mode.
- **2312 mode** (analog): Detector 4301 is used in the systems EBL512/1000/2000 as a spare part for the detector 3304 in 2312 mode.

The different modes have different functions and features, e.g. in the 2330 mode, the detector does the fire judgement but in the NORMAL and 2312 modes this is done in the c.i.e. The detector is prepared for an „Advanced mode“ to be used in conjunction with future EBLxxx SW versions.

AI function

In the 2330 mode is the AI function used, i.e.:

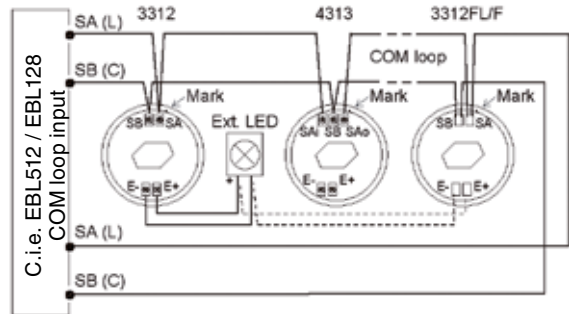
- **Variable delay function**, i.e. the delay time before an alarm is influenced by temporary smoke obscuration changes.

Analog photoelectric smoke detector 4301

Type number	
4301	Analog photoelectric smoke detector



The detector is plugged in the analog base 3312x / 4313. The COM loop/ Ext. LED are connected to the analog base.



See also „Engineering Instructions for detectors Type 430x“.

In the detector:

- SA/SB** Contact pins for COM loop/address setting tool 3314
- E+/E-** Contact pins for External LED
- TI** Type number label; Detector type
- AI** Address label; For the programmed COM loop address to be written.
- Lsh** Locking screw hole (prepared for drilling through detector body)
- Ls** Locking screw

Prepared for mechanical locking with analog base 3312x / 4313. One hexagon socket screw (Ls) is attached (1.5 mm Hex key to be used). The 2.5-2.7 mm hole (Lsh) has to be drilled.

Technical data	
Voltage (VDC) rated allowed normal (on COM loop)	28 12-30 24
Current consumption at nom. volt. from COM loop (mA) quiescent active (including internal LED) ext. LED (connected via base 3312)	0.3 2.3 max. 2
Ambient temperature (°C) operating storage	-10 to +50 -25 to +75
Ambient humidity (% RH)	Max. 95, non condensing
Ingress protection rating (estimated)	IP51
Sensitivity (obscuration; %/m) NORMAL mode 2330 mode 2312 mode	Depending on the mode. 3.6/3.0/2.4 (Low/Normal/High) 3.5 (Normal) 2.6
Size ØxH(mm)	102 x 36
Weight (g)	68
Construction/color	Modified polycarbonate/Gray (N8, munsell color code)
Approvals	CE 05 EC Certificate no. 0786-CPD-20144, EN54-7

Addressable COM Loop Units

Addressable manual call point 3333



Features

- Attractive design compliant with EN54-11
- Test key for routine testing without breaking the glass element
- Protection against accidental operation

General

The call point has an attractive design compliant with EN54-11, and is either surface mounted in the supplied red backbox or recess mounted in a standard UK single gang box or a Swedish 65mm circular backbox. It has a clip-retained front cover that reduces installation and commissioning time and adds security since the clips are concealed. The frangible element is a glass element with a protective plastic film. To operate the call point, the glass element is pressed until it is broken. This will activate the built-in microswitch, which will generate a fire alarm in the c.i.e.

Test key

Routine testing is made with a supplied test key, without breaking the glass element. Inserting the test key simulates the breaking of the glass element. The call point is automatically reset when the test key is removed. The test key is also used to release the security clips for the front cover.

Protective cover

To protect the call point against accidental operation, a transparent polycarbonate cover has to be lifted to get access to the glass element.

Encapsulated circuit

All electronics are encapsulated. Only the terminal block is accessible from the rear.

LED indicator

An LED on the front cover indicates fire alarm generated by the call point.

Flashing LED: The LED will flash each time the c.i.e. communicates with the call point, until the call point is operated and the LED is switched on.

Non-flashing LED: The LED is switched off, until the call point is operated and the LED is switched on.

Connections/Settings

The COM loop is connected directly to the call point via a 4-way terminal block. For COM loop address setting the address setting tool 3314 is used. 3314 is also used to set the call point type and the LED mode:

- **NORMAL mode** (EBL512 SW version ≥ 2.0 required): M.c.p. type 3333. (Flashing or non-flashing LED is set via Win512/Win128.)
- **2330 mode:** M.c.p. type 2333, flashing LED.
- **2312 mode:** M.c.p. type 2333, non-flashing LED.

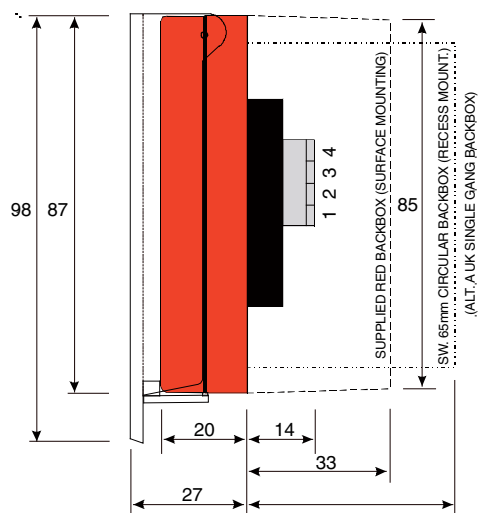
Two flying leads (wires) are connected to the terminal block, for connection of the 3314 address setting tool's connection cable. The wires are to be disconnected before the COM loop wires are connected.

Product applications

Used in the EBL512/1000/2000 systems and is intended for indoor use and in dry premises.

Type numbers

Type numbers	
3333	Addressable manual call point
2347	Replacement glass (10 pcs.)
2348	Replacement polycarbonate cover (10 pcs.)



How to perform routine testing

1. Insert the test key into the hole in the base.
2. The glass position will change, indicating that the call point is operated.
3. Wait until the LED is switched on.
4. Remove the test key.
5. The LED will be switched off, indicating the call point reset.

How to replace the glass element

1. Lift the polycarbonate cover.
2. Release the front cover security clips. Lift the front cover.
3. Remove the broken glass element.
4. Place the top edge of the replacement glass element against the microswitch plunger and push it upwards until the glass element is in correct position.
5. Put back the front cover.
6. Lower the polycarbonate cover.
7. Perform a routine test (see above)

Technical data	
Voltage (VDC) allowed nominal	12-30 24
Current consumption at nom. volt. from COM loop (mA) quiescent/active	2/5
Ambient temperature (°C) operating storage	-10 to +55 -40 to +85
Ambient humidity (% RH)	Max. 90 noncondensing
Ingress protection rating	IP42
Weight (g)	290
Construction/Color	ABS/Red (ISO 3864)
Approvals	CE EN54-11

Addressable COM Loop Units

Enclosed addressable manual call point 3339



Features

- Attractive design compliant with EN54-11. IP rating IP67
- Test key for routine testing without breaking the glass element
- Protection against accidental operation

General

The call point has an attractive design compliant with EN54-11, and is surface mounted in the supplied red backbox. It has a clip retained front cover that reduces installation and commissioning time and adds security since the clips are concealed. The frangible element is a glass element with a protective plastic film. To operate the call point, the glass element is pressed until it is broken. This will activate the built-in microswitch, which will generate a fire alarm in the c.i.e.

Test key

Routine testing is made with a supplied test key, without breaking the glass element. Inserting the test key simulates the breaking of the glass element. The call point is automatically reset when the test key is removed. The test key is also used to release the security clips for the front cover.

Protective cover

To protect the call point against accidental operation, a transparent polycarbonate cover has to be lifted to get access to the glass element.

Encapsulated circuit

All electronics are encapsulated. Only the terminal block is accessible from the rear. Mounted in the supplied red backbox and the tightening gasket on place (see the opposite page), the IP rating is IP67.

LED indicator

An LED on the front cover indicates fire alarm generated by the call point.

Flashing LED: The LED will flash each time the c.i.e. communicates with the call point, until the call point is operated and the LED is switched on.

Non-flashing LED: The LED is switched off until the call point is operated and the LED is switched on.

Connections/Settings

The COM loop is connected directly to the call point via a 4-way terminal block. For COM loop address setting is the address setting tool 3314 used. 3314 is also used to set the call point type and the LED mode:

- **NORMAL** mode: (EBL512 SW version \geq 2.0/EBL128. M.c.p. type 3339. (Flashing or non-flashing LED is set via Win512/Win128.)

- **2330** mode: M.c.p. type 2339, flashing LED.

- **2312** mode: M.c.p. type 2339, non-flashing LED.

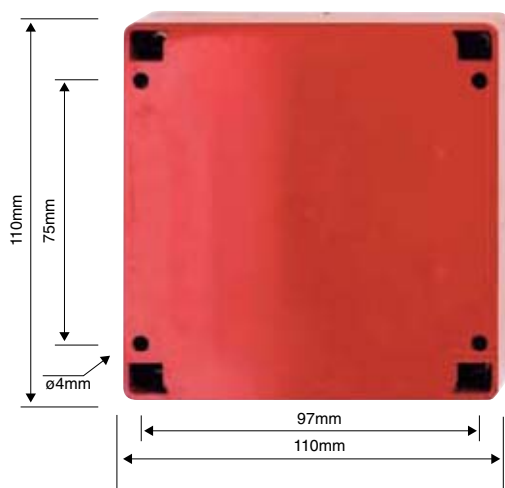
Two flying leads (wires) are connected to the terminal block for connection of the 3314 address setting tool's connection cable. The wires are to be disconnected before the COM loop wires are connected.

Product applications

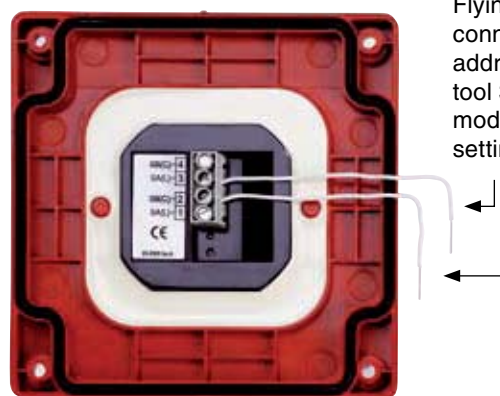
Used in the systems EBL512/128/1000/2000 and is intended for indoor use in premises where IP67 rating is required.

Type numbers

3339	Enclosed addressable manual call point
2347	Replacement glass (10 pcs.)
2348	Replacement polycarbonate cover (10 pcs.)

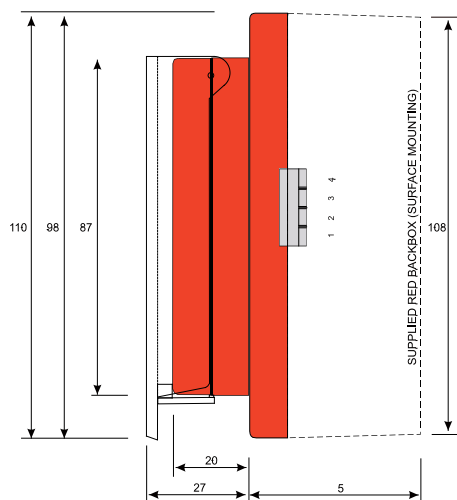


The supplied backbox backside view: Mounting holes and dimensions.



Flying leads to be connected to the address setting tool 3314 during mode and address setting.

The call point backside view (note the black tightening gasket and the 4-way terminal block).



How to perform routine testing

1. Insert the test key into the hole in the base.
2. The glass position will change, indicating that the call point is operated.
3. Wait until the LED is switched on, i.e. fire alarm is activated in the c.i.e..
4. Remove the test key and the glass position will return to normal.
5. The LED will be switched off when the fire alarm is reset in the c.i.e.

How to replace the glass element

1. Lift the polycarbonate cover.
2. Release the front cover security clips with the test key. Lift and remove the front cover.
3. Remove the broken glass element.
4. Place the top edge of the replacement glass element against the microswitch plunger and push it upwards until the glass element is in correct position.
5. Put back the front cover.
6. Lower the polycarbonate cover.
7. Perform a routine test (see above)

Technical data	
Voltage (VDC) allowed nominal	12-30 24
Current consumption at nom. volt. from COM loop (mA) quiescent/active	2/5
Ambient temperature (°C) operating storage	-10 to +55 -40 to +85
Ingress protection rating	IP67
Weight (g)	217 (m.c.p.), 105 (red backbox including four screws)
Construction/Color	ABS/Red (ISO 3864)
Approvals	CE EN54-11

Addressable multipurpose I/O unit 3361



Features

- Two programmable outputs
- Two programmable inputs

General

The unit has 14 screw terminals for cable connections. It has an LED indicator, see below. It is intended to be surface mounted and a plastic protection cover (with 10 cable inlets) is attached. When required, the unit can be mounted in a waterproof box (3362).

Two outputs

The unit has two **programmable** outputs:

- **Relay output (Re0):** NC or NO contacts (set via Win512).
- **Relay output (Re1):** NC or NO contacts (set via Win512).

Two inputs

The unit has two **programmable** inputs:

- **Monitored input** (two alternatives)
 - **used as zone line input (Z):** End-of-line capacitor 470 nF to be mounted in the last unit on the line. Short circuit could activate fault or fire alarm (set via Win512). This input is intended for conventional detectors.
 - **used as general input (In0):** An input for a NC or NO contact (set via Win512/Win128).
- **Isolated input (In1):** An optocoupler input (external 24VDC/8mA is required). Normally low or high (set via Win512/Win128).

Connections/Settings

The COM loop is connected directly to the unit via four screw terminals. The COM loop address is set with an Address setting tool 3314. The unit has an address label where the address is to be written. 3314 is also used to set the mode:

- **NORMAL mode:** I/O unit 3361.
- **2330 mode:** Not used for 3361.
- **2312 mode:** Not used for 3361.

LED indicator

3361 has an LED, indicating communication to the unit, 2 flashes (5s interval) each 80th second **or** indicating fire alarm condition on the monitored zone line input (Z), 2 flashes every 2½ seconds.

Waterproof box 3362

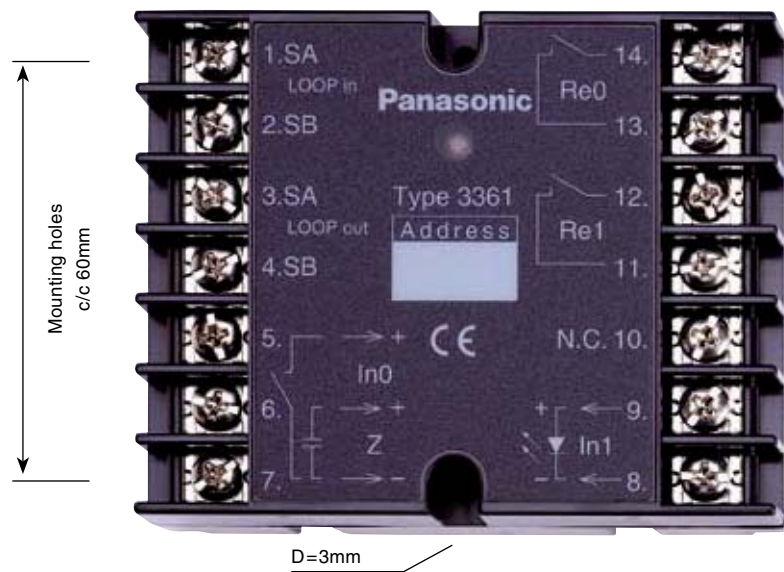
When required, the 3361 unit can be mounted in a waterproof box 3362 (IP66/67).

Product applications

Used in the EBL512 system (SW version \geq 2.0) and EBL128. The unit is intended for indoor use and in dry premises (if not the waterproof box is used). It can be DIN rail mounted with help of a DIN rail interface kit 3363.

Type numbers

3361	Addressable multipurpose I/O unit (including plastic protection cover).
3362	Waterproof box (IP66/67) (including four compression glands).
3363	DIN rail interface kit, for symmetric 35mm DIN rail (plate, clamp and screws)



Technical data	
Voltage (VDC) allowed normal	12-30 15-30 when the monitored input is used as a zone line input (Z) 24
Current consumption at nom. volt. from COM loop (mA) quiescent active	2.2 Max. 12
Ambient temperature (°C) operating storage	-10 to +50 -20 to +60
Ambient humidity (% RH)	Max. 95, noncondensing (if the waterproof box is not used)
Ingress protection rating (estimated)	IP54 (the unit itself with the plastic protection cover) IP66/67 (with the waterproof box)
Inputs Monitored (as zone line or general input) Isolated	12-30VDC, max. 1.5mA (short circuit current limitation 10mA), max. 50Ω cable resistance 12-30VDC (inactive for voltage < 1V), max. 10mA
Outputs (two) Relay contacts	Max. 2A at 30VDC/125V AC
Size L x W x H (mm)	90 x 70 x 32 (the unit itself) 129 x 73 x 45 (the plastic protection cover) 175 x 125 x 75 (the waterproof box)
Weight (g)	110 (the unit itself) 40 (the plastic protection cover) 376 (the waterproof box, excluding compression glands)
Construction / color	ABS/Black (the unit itself) ABS/Gray (N8, munsell color code) (the plastic protection cover) Polycarbonate/gray (the waterproof box)
Approvals	CE EN54-5, when applicable (e.g. environmental tests)

Addressable 2 voltage outputs unit 3364



Features

- Two programmable supervised voltage outputs
- A special fire door closing voltage output

General

The **Addressable 2 voltage outputs unit 3364** (AOU) is intended to be surface mounted. A plastic protection cover (with 10 cable inlets) is supplied. 3364 can be mounted in a waterproof box (3362). The unit is connected to a COM loop and require external 24VDC power supply (3366).

Inputs/outputs/connectors

All connections are done on screw terminals.

- COM loop (in)
- COM loop (out)
- 24VDC power supply input
- /Mains OK input (3366 output)
- Two programmable and supervised 24VDC outputs **VO0** and **VO1**, intended for alarm devices. End-of-line capacitor to be mounted in the last device alt. capacitors in up to five devices. For each capacitor is also a series diode required, see the opposite side of this page.
- One special 24VDC output **VO2**, intended for fire door closing. O2 is not only controlled by a control expression, it will also be powerless approx. 30 sec. after:
 - the **/Mains OK** input goes high (=3366 output//Mains OK goes high=no /Mains)
 - the COM loop communication is interrupted (=no communication with the c.i.e.)

Settings

The COM loop address is set with an address setting tool 3314. The unit has an address label where the address is to be written. 3314 is also used to set the mode:

- **NORMAL mode:** This mode can be used in system **EBL512** with S/W version ≥ 2.3 and in system **EBL128**.
- **2330 mode:** This mode is used in system **EBL512** with S/W version $\leq 2.2.x$ and in system **EBL1000**. The unit shall be programmed in Win512 and PLAN1000 respectively as "SU4 addressable 4 voltage outputs unit 2262/2263". The unit will in Win512 via "Check all loop units" be identified as an "SU4 addressable 4 voltage outputs unit 2262/2263". (Two 3364 units connected to one power supply 3366 are intended to succeed the current 2262 unit with four voltage outputs.)
- **2312 mode:** Not used for 3364.

Waterproof box 3362

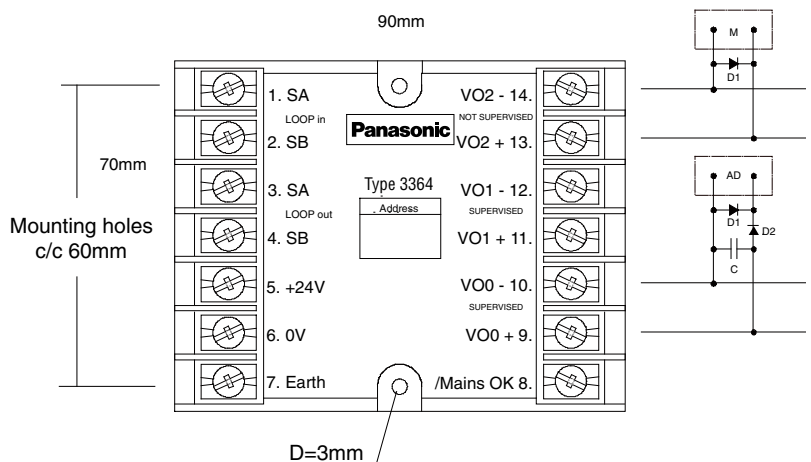
When required, the 3364 unit can be mounted in a waterproof box 3362 (IP66/67).

Product applications

The 3364 unit is intended for indoor use and in dry premises (if not the waterproof box is used). It can be DIN rail mounted with help of a DIN rail interface kit 3363.

Type numbers

Type numbers	
3364	Addressable 2 voltage outputs unit (including plastic protection cover and two 470nF capacitors).
3362	Waterproof box (IP66/67) (including four compression glands).
3363	DIN rail interface kit, for symmetric 35mm DIN rail (plate, clamp and screws)
XXXX	10 pieces of 470nF capacitors for the supervised outputs.
3366	External power supply. (230V AC/24VDC, 2.2 alt. 0.85A)



VO0 and VO1: **AD**=Alarm Device (bell, siren, etc.). **D1**=Protective diode (e.g. 1N4004), when required. **D2**=Series diode (e.g. 1N4004). **C** (470nF), to be connected in the last device or in up to five devices. **VO2: M**=Fire door release magnet(s).

Technical data	
Voltage (VDC) allowed normal	(COM loop) 12-30 24
Current consumption (mA) quiescent active	(COM loop) ≤ 6 ≤ 6
Inputs 24V DC power supply /Mains OK	Min. / Max. voltage 18 / 30V DC Normally low (Output in unit 3366, specially designed for 3364.)
Outputs (A) VO0 (supervised) VO1 (supervised) VO2 (not supervised)	24V DC. VO0 and VO1: Supervision voltage ≤ 0.6V DC. Max. 1 (One to five 470nF capacitors have to be used.) Max. 1 (One to five 470nF capacitors have to be used.) Max. 1
Ambient temperature (°C) operating storage	-20 to +55 -20 to +60
Ambient humidity (% RH)	Max. 90, noncondensing (if the waterproof box is not used)
Ingress protection rating	IP54 (the unit with the plastic protection cover) IP66/67 (the unit mounted in the waterproof box)
Size L x W x H (mm)	90 x 70 x 32 (the unit itself) 129 x 73 x 45 (the plastic protection cover) 175 x 125 x 75 (the waterproof box)
Weight (g)	110 (the unit itself) 40 (the plastic protection cover) 376 (the waterproof box, excluding compression glands)
Construction/Color	ABS/Black (the unit itself) ABS/Gray (N8, munsell color code) (the plastic protection cover) Polycarbonate/gray (the waterproof box)
Approvals	CE 07 EC certificate no. 0845-CPD-232.1563; EN54-18

Note: All current consumptions are valid by 24V DC (nominal voltage) at 25°C.

External power supply 3366



Features

- Connected to a COM loop.
- Monitored from the c.i.e.
- Space for batteries inside the housing.

General

The **Ext. power supply 3366** consists of a rectifier (the main power source) and a charger board mounted in a gray metal housing, which also has space for two maintenance-free sealed Lead-Acid backup batteries, rated 12V, 6.5-7.5 Ah (the second power source). Larger batteries (up to 60 Ah) have to be placed outside the housing.

The unit is addressable, i.e. it is connected to a COM loop and monitored from the c.i.e. and e.g. loss of the main power source (230 V AC) will generate a fault in the c.i.e.

There are many cable inlets in the housing, see figure on the opposite side of this page. Two compression glands are attached.

Charging mode

Low current charging mode is used for batteries $\leq 27\text{Ah}$.

24VDC output $\leq 2.2\text{A}$. **High current** charging mode is used for batteries **28-60Ah** if EN54-4 is to be fulfilled. 24VDC output $\leq 0.85\text{A}$. A fire alarm in the system will automatically turn off the battery charging, i.e. the output current can then be up to **4A**.

Inputs/outputs/connectors

All connections are done on screw terminals except for the batteries, which have tab terminals.

- Mains (230V AC)
- Battery no. 1 (12V, 7.5-60Ah)
- Battery no. 2 (12V, 7.5-60Ah)
- 24VDC output, 2.2A alt. 0.85A (4A)

- Earth connector
- /Mains OK output (Output designed for the 3364 unit.)
- COM loop (in)
- COM loop (out)

Settings

The COM loop address is set with an address setting tool 3314. The unit has an address label where the address is to be written. 3314 is also used to set the mode:

- **NORMAL mode:** This mode can be used in system **EBL512** with S/W version ≥ 2.3 and in system **EBL128**.
- **2330 mode:** This mode is used in system **EBL512** with S/W version $\leq 2.2.x$ and in system **EBL1000**. The unit has to be programmed in Win512 and PLAN1000 respectively as "SU4 addressable 4 voltage outputs unit 2262/2263". The unit will in Win512 via "Check all loop units" be identified as an "SU4 addressable 4 voltage outputs unit 2262/2263".
- **2312 mode:** Not used for 3366.

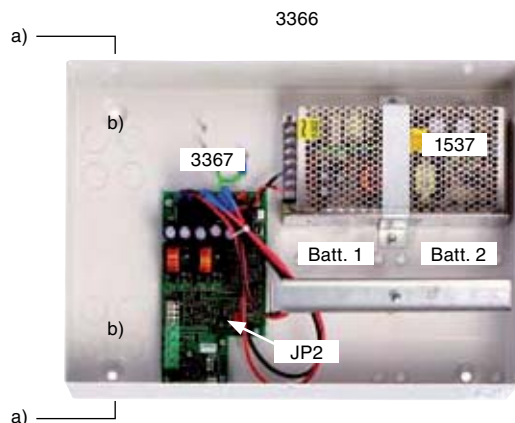
Product applications

The 3366 unit is used in the systems EBL128, EBL512 and EBL1000 when an external power supply monitored from the c.i.e. is required.

Two "addressable 2 voltage outputs unit" 3364 connected to one power supply 3366 are intended to succeed the current 2262 unit with four voltage outputs.

Type number

3366	External power supply (batteries are not included)
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External power supply (3366) inside view: Rectifier 230V AC/24VDC (1537), Charger board (3367) and space for two batteries rated 12V/6.5-7.5Ah (size 150x65x94mm).

JP2 open = **low current** charging mode. JP2 shunted = **high current** charging mode.

Jumper JP2 is situated on the charger board, see figure.

a) Four knock-outs 23.5 mm (on the long sides). b) Four knock-outs 23.5 mm (in the bottom).

Technical data	
Voltage	
Primary (V AC)	230
secondary (VDC)	
normal	24
by battery backup	19.4-28
COM loop (VDC)	
normal	24
allowed	12-30
Current consumption from COM loop (mA)	
quiescent	≤ 15
active	≤ 15
Board 3367 current consumption (mA)	35mA, by backup battery power supply
Mains OK output	Normally low (Output designed for the 3364 unit.)
24V output (A)	2.2 alt. 0.85 (low alt. high current charging mode.) 4 (when no battery charging, i.e. fire alarm in the system.)
Batteries, 12V (Ah)	
inside the housing	2x sealed lead-acid
outside the housing	6.5-7.5 (physical size 150x65x94mm) ≤ 60Ah Note: JP2 open or shunted depending on charging current mode.
Ambient temperature (°C)	
operating	0 to +40
storage	-20 to +70
Ambient humidity (% RH)	Max. 90, noncondensing
Ingress protection rating (estimated)	IP30
Weight (kg)	4.8 (excluding batteries)
Size H x W x D	288 x 400 x 95
Construction/Color	Metal housing/light gray (NCS S1500-N, PMS Cool Gray 2)
Approvals	CE 05 EC certificate no. 0845-CPD-232.1491; EN54-4

Note: All current consumptions are valid by 24VDC (nominal voltage) at 25°C.

Addressable siren 3377



Features

- High sound output but low current consumption
- Three different tones and priority levels
- Connected directly on the COM loop

General

The siren is a general purpose sounder that consists of a horn (including all electronics) and a back box, which has double cable entries. It is made of red ABS plastic. The COM loop is connected directly to the siren via a plug-in 4-way terminal block (2 in/2 out).

High sound output

The siren has a high sound output but a low current consumption. The volume can be adjusted via a potentiometer.

Tones

Three tones are available:

- Continuous 990Hz
- Pulsed (intermittent) 990Hz, 0.5s/0.5s
- Two-tone (alternating) 990/650Hz, 0.25s/0.25s

Priority levels

Three priority levels are available in system EBL512 and two in system EBL128. For each level an output control expression and a tone is programmed (via Win512 / Win 128).

The siren can, for example, be used for pre-warning, fire alarm and general fire alarm, with a different tone for each type of alarm.

Address and Mode setting

For COM loop address setting, the address setting tool 3314 is used. The siren has an address label where the address is to be written. 3314 is also used to set the mode:

- **NORMAL mode:** 3377 (3377 in Win512/Win128).
- **2330 mode:** Can not be used.
- **2312 mode:** Can not be used.

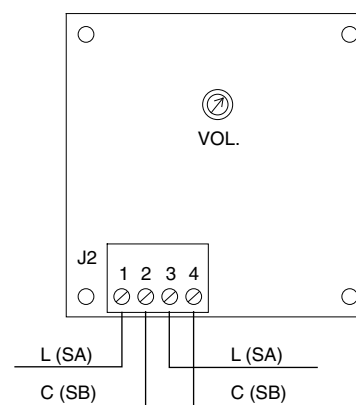
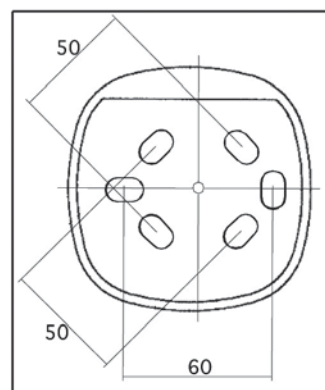
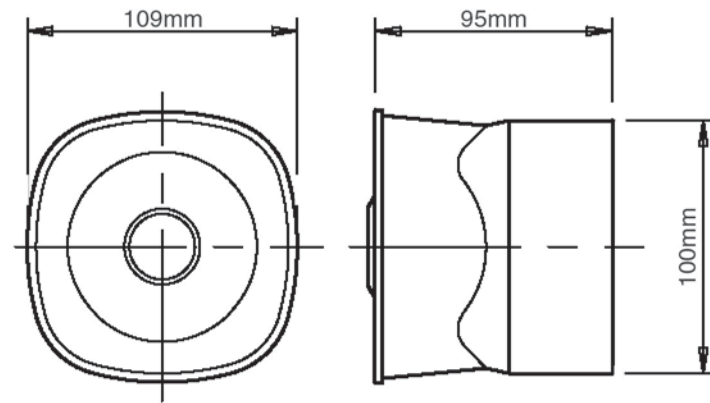
Miscellaneous

The address setting tool 3314 is connected directly to siren's connectors when the terminal block is unplugged. The siren is power supplied via the COM loop, i.e. the number of sirens is depending on the type and number of other units connected to the same COM loop.

Product applications

Used in the EBL512 system (SW version ≥ 2.2) and EBL128. The siren is intended for indoor use and in dry premises.

Type number	
3377	Addressable siren



Technical data

Voltage (VDC) rated (VAC) allowed (VDC) normal	24 12-30 24
Current consumption from COM loop at nom. voltage (mA) quiescent active	1 ≤ 13
Ambient temperature (°C) operating storage	-10 to +55 -25 to +70
Ambient humidity (% RH)	Max. 95, noncondensing
Ingress protection rating (estimated)	IP21C
Sound output (dB (A) at 1m)	96 ±3 (max. volume) 90 ±3 (min. volume)
Frequency stability (%)	±0.5
Weight (g)	212
Color	Red (ABS plastic case)
Approvals	CE

Addressable COM Loop Units

Addressable sounder base 3378



Features

- High or low sound output
- Three different tones and priority levels
- Connected directly on the COM loop

General

3378 consists of an analog base (a modified 3312) mounted together with a sounder, which gives an ultra slim profile. Two flying leads from the sounder are plugged into two flying leads from the base. The base is thereafter mounted on the sounder in the ceiling, so that the detector can be plugged in the base. The base is connected directly to the COM loop like the base 3312.

High or low sound output

The volume is selected via a jumper in the sounder (high or low sound output).

Tones

Three tones are available:

- Continuous 510Hz
- Pulsed (intermittent) 510Hz, 0.5s/0.5s
- Two-tone (alternating) 510/610Hz, 0.25s/0.25s

Priority levels

Three priority levels are available in system EBL512 and two in system EBL128. For each level an output control expression and a tone is programmed (via Win512 / Win 128). The sounder can, for example, be used for pre-warning, fire alarm and general fire alarm with a different tone for each type of alarm.

Address and Mode setting

For COM loop address setting, the address setting tool 3314 is used. The sounder has one address and the detector plugged in the base has one address. There are two address labels where the address respectively can be written.

3314 is also used to set the mode:

- **NORMAL mode:** 3378 (3378 in Win512/Win128).
- **2330 mode:** Can not be used.
- **2312 mode:** Can not be used.

Miscellaneous

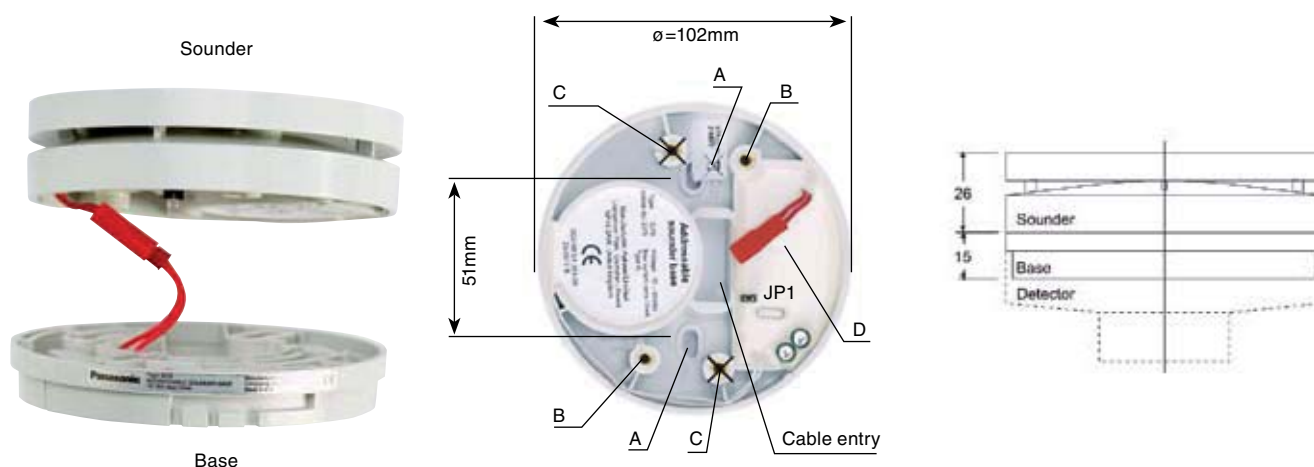
The address setting tool 3314 is connected to the COM loop terminals (SA/SB) to set the sounder's COM loop address. The detector's COM loop address is set in the detector. 3378 is power supplied via the COM loop, i.e. the number of sounder bases is depending on the other units connected to the same COM loop. Two 8mm spacers are supplied for easier access of surface mounted cables to the unit.

Product applications

Used in the EBL512 system (SW version ≥ 2.2) and EBL128 when a sounder is required in the same room as a detector (e.g. a hotel room). The sounder base is intended for indoor use and in dry premises.

Type number

3378	Addressable sounder base (sounder and a special version of analog base 3312)
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The sounder: **A** = Mounting hole ($\varnothing = 5 \times 9.5$) for the sounder. Between the sounder and the ceiling can an 8mm spacer ($\varnothing_0 = 13$) be mounted for easier access of surface mounted cables. **B** = Mounting hole (M4) for the base. **C** = Must not be used. **D** = Connector for the base connector. **JP1** = Jumper (in position = high output).

Analog detectors can be plugged in the base, e.g. 33xx and 430x.

Note: The COM loop address for 3378 is to be set before the COM loop is connected.

Another COM loop address has to be set in the detector.

Technical data	
Voltage (VDC) rated (VAC) allowed (VDC) normal	24 12-30 24
Current consumption from COM loop at nom. voltage (mA) quiescent active (low/high)	2 $\leq 6 / \leq 12$
Ambient temperature (°C) operating storage	-10 to +50 -20 to +70
Ambient humidity (% RH)	Max. 95, noncondensing
Ingress protection rating (estimated)	IP42
Sound output (dB (A) at 1m)	95 ±2 (high output) 86 ±2 (low output)
Frequency stability (%)	±0.5
Weight (g) sounder + base	160 + 55 = 215
Construction/Color sounder + base	ABS plastic/gray (N8, munsell color code)
Approvals	CE

Base 2324



Features

- Common base for the different conventional detectors
- Easy connections incl. output for external LED
- Locking mechanism

Common base

The base 2324 is connected to a zone line input for conventional alarm points. Conventional heat, smoke and multi detector types 23xx / 43xx / 627x can be plugged in the base. (See Product Leaflet for the detector type respectively.) The base is supplied with an LED that will light when the detector, plugged in the base, goes into alarm.

Easy connection

The base has screw terminals for the zone line (in/out) and external indicator (LED) e.g. 2218.

Locking mechanism

The base has a mechanical locking mechanism for conventional detector types 23xx / 43xx / 627x. The locking mechanism can be disabled.

Miscellaneous

Fault signal is obtained in the c.i.e. if the detector is unplugged, i.e. all the following alarm points on the zone line become disabled.

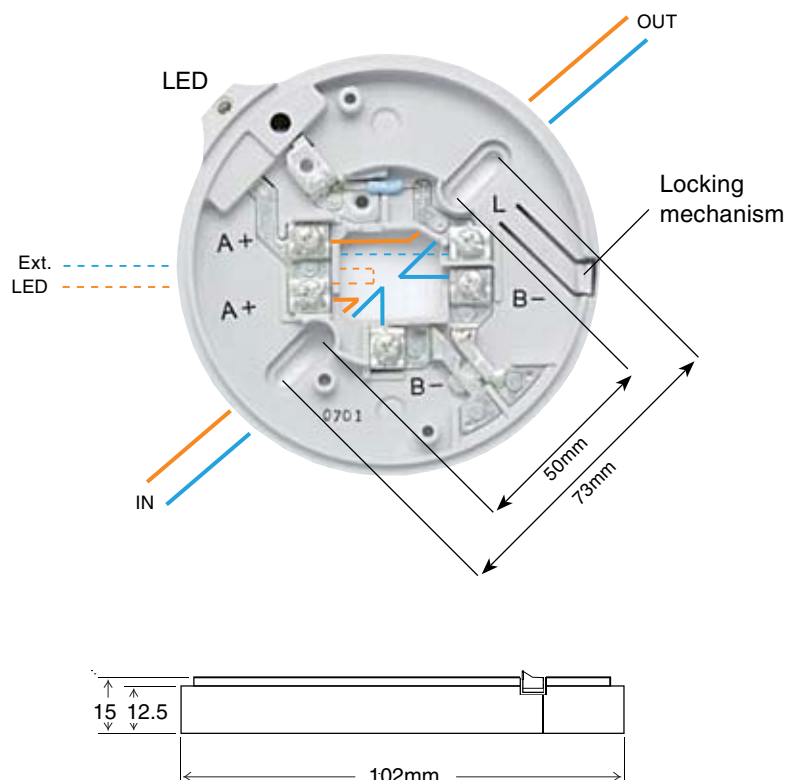
For more information regarding detector types, connections, etc. see Planning Instructions and connect

Product applications

Used in the systems EBL500 / 512 / 128 / 1000 / 2000 provided with some zone line inputs for the system respectively (e.g. an 8 zones expansion board 1580 / 4580 input, an addressable zone interface 2226 / 2335 input, an addressable multi purpose I/O unit 3361 input, etc.).

The base is intended for indoor use and in dry premises.

Type number	
2324	Base (for conventional detectors)



A+ / B- = Zone line (in/out). A+ / L = Ext. LED output. Terminal wire diameter 0.6 – 1.6 mm (approx. 0.3 – 2 mm²). Between B-in and B-out is a contact that is closed when the detector is plugged in the base. Conventional detector types 23xx, 43xx and 627x can be plugged in the base 2324.

Technical data	
Voltage (VDC) rated allowed normal	24 30 24 (zone line voltage)
Current consumption at nom. volt. (mA) quiescent (base only) active (including internal LED) external LED	Depending on the type of detector that is plugged in the base. Current limitation in all EBL equipment. 0 Max. 70 (Alarm resistance 360Ω) Max. 70 (Alarm resistance 320Ω)
External LED output voltage (V) max. current output (mA)	Zone line voltage minus 2 V 10 (no internal current limiter)
Ambient temperature (°C) operating storage	-10 to +50 -25 to +70
Ambient humidity (% RH)	Max. 95, non condensing
Ingress protection rating (estimated)	IP51
Weight (g)	59
Colour	Grey (N8, Muncell colour code)
Approvals	CE EN 54, when applicable (e.g. environmental tests).

Multi detector 4350



Features

- Low profile design/unleaded soldering/latest IC technology
- One detector housing, two detector types and AI function

General

This low profile multi detector contains one photoelectric (optical) smoke detector and one heat detector within one housing. The latest IC technology is used to secure the highest reliability possible.

In the **smoke** detection chamber is a high-efficient optical system consisting of an LED and a photodiode with two lenses. Scattered light (i.e. reflection of infrared light) is used to detect smoke.

The **heat** sensing element is a thermistor.

Reduces false fire alarms

The smoke enters the detection chamber through an insect filter and an optical labyrinth. This construction not only improves the smoke inflow but it also causes steam, fog, etc. to condense into moisture on its surfaces, to prevent false (nuisance) alarms.

The detector maintains a constant sensitivity regardless of the contamination. It has also a self diagnosis of the internal devices.

AI function

- **Combined heat and smoke sensing** will guarantee reliable and accurate fire alarm detection.
- **Variable delay function**, i.e. the delay time before fire alarm is activated, is influenced by temporary changes of the temperature and the smoke obscuration.
- **Learning function / condition** means that the detector will adapt an alarm algorithm according to the smoke and/or temperature conditions where the detector is located, i.e. temperature changes and occurrence of smoke. There is a normal algorithm (default) and there are less and more sensitive learning conditions (algorithms) that will be adapted after a learning period. If the conditions changes, the normal will be adapted again.

Environment friendly

The detector has unleaded soldering. The latest IC technology reduces the number of semiconductors and other electronic components to a minimum.

Compatibility

The conventional multi detector 4350 is the best substitute for the ionization smoke detectors 2316 and 2317.

Miscellaneous

The detector is plugged in a conventional base (2324), connected to a conventional zone line input. The base has an LED that will light when the detector goes into alarm. In the base there are terminals to connect an external LED, e.g. 2218.

Product applications

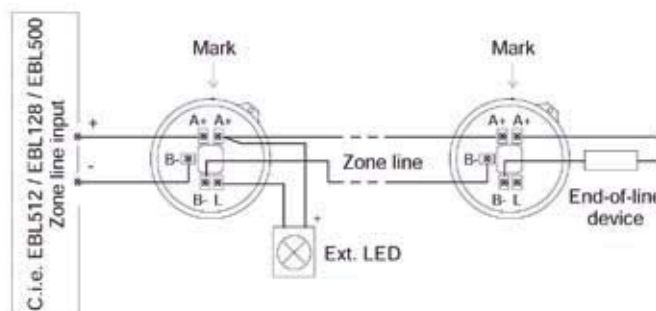
The detector is intended for indoor use and in dry premises. It is excellent to detect all types of fires, also a methylated spirits fire.

Used in the systems EBL500 / 512 / 128 / 1000 / 2000.

Type number	
4350	Multi detector



The zone line is connected to the base 2324 (A+ & B-) Ext. LED is connected to the base 2324 (A+ & L).



See also „Engineering Instructions for detectors Type 435x“.

In the detector:

A Contact for base 2324

B Contact for base 2324

The detector is plugged in a base 2324. End-of-line device depending on the zone line input.

Technical data	
Voltage (VDC) rated allowed normal	24 12-30 24
Current consumption at nom. volt. (mA) quiescent (detector only) active (detector only)	Depending on the base the detector is plugged into. For more details see the Product Leaflet respectively, e.g. MEW00008 (Base 2324). 0.04 min. 3
Ambient temperature (°C) operating storage	-10 to +50 -25 to +75
Ambient humidity (% RH)	Max. 95, non condensing
Ingress protection rating (estimated)	IP51
Sensitivity (obscuration; %/m)	3.7/5 (depending on algorithm) >2.5 in combination with temp. rate-of-rise (depending on algorithm)
Sensitivity (T=°C; ΔT=°C/min.)	57; 6.43/not used (depending on algorithm) 57; >1.07 in combination with smoke obscur. (depending on algorithm)
Size Ø x H (mm)	102 x 46
Weight (g)	84
Construction/color	Modified polycarbonate/grey (N8, Munsell colour code)
Approvals	CE 05 EC Certificate no. 0786-CPD-20143; EN54-7

Photoelectric smoke detector 4352



Features

- Low profile design
- Latest IC technology / highest reliability
- Unleaded soldering

General

The photoelectric (optical) smoke detector has a low profile design. In the detection chamber is a high-efficient optical system consisting of an LED and a photodiode with two lenses. Scattered light (i.e. reflection of infrared light) is used to detect smoke. The latest IC technology is used to secure the highest reliability possible.

Reduces false fire alarms

The smoke enters the detection chamber through an insect filter and an optical labyrinth. This construction not only improves the smoke inflow but it also causes steam, fog, etc. to condense into moisture on its surfaces, to prevent false (nuisance) alarms. The detector has a counter. A reading over the alarm level is +1 on the counter and a reading below the alarm level is -2. The counter starts at 0 and can not be negative. When the counter shows „9“ the detector goes into alarm, i.e. a minimum of nine consecutive readings over the alarm level are required before the detector goes into alarm. (One reading per sec.)

Environment friendly

The detector has unleaded soldering. The latest IC technology reduces the number of semiconductors and other electronic components to a minimum.

Compatibility

The conventional photoelectric smoke detector 4352 is a substitute for the photoelectric smoke detector 2321.

Miscellaneous

The detector is plugged in a conventional base (2324), connected to a conventional zone line input. The base has an LED that will light when the detector goes into alarm. There are also terminals in the base to connect an external LED, e.g. 2218.

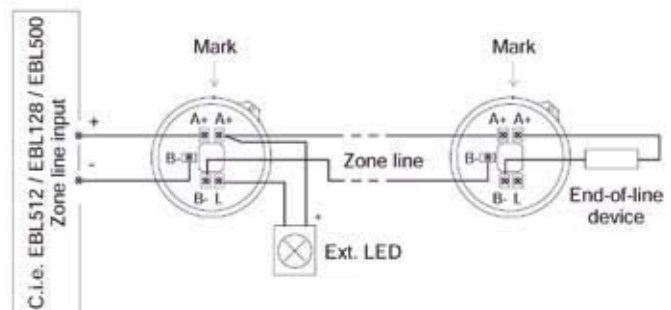
Product applications

The detector is intended for indoor use and in dry premises. It is excellent to detect large, bright smoke particles as from a smouldering fire. Used in the systems EBL500 / 512 / 128 / 1000 / 2000.

Type number	
4352	Photoelectric smoke detector



The zone line is connected to the base 2324 (A+ & B-).
Ext. LED is connected to the base 2324 (A+ & L).



In the detector:

A Contact for base 2324

B Contact for base 2324

The detector is plugged in a base 2324. End-of-line device depending on the zone line input.

See also „Engineering Instructions for detectors Type 435x“.

Technical data	
Voltage (VDC) rated allowed normal	24 12-30 24
Current consumption at nom. volt. (mA) quiescent (detector only) active (detector only)	Depending on the base the detector is plugged into. For more details see the Product Leaflet respectively (e.g. MEW00008 for the Base 2324). 0.04 min. 3
Ambient temperature (°C) operating storage	-10 to +50 -25 to +75
Ambient humidity (% RH)	Max. 95, non condensing
Ingress protection rating (estimated)	IP51
Sensitivity (obscuration; %/m)	4
Size ØxH(mm)	102 x 38
Weight (g)	82
Construction/color	Modified polycarbonate/grey (N8, Munsell colour code)
Approvals	CE 05 EC Certificate no. 0786-CPD-20142; EN54-7

Combination heat detector 4318



Features

- Conventional heat detector
- Rate-of-rise and fixed temperature alarm levels

General

Heat detector 4318 is a conventional combination heat detector, class A1R. It „gives an alarm“ at a certain fixed temperature (59°C) and/or at a certain temperature rise, „rate-of-rise“ function. The sensing element is a thermistor. The detector is plugged in a conventional base 2324 connected to a conventional zone line input. The base has an LED that will light when the detector goes into alarm. In the base there are terminals to connect an external LED, e.g. 2218.

Environment friendly

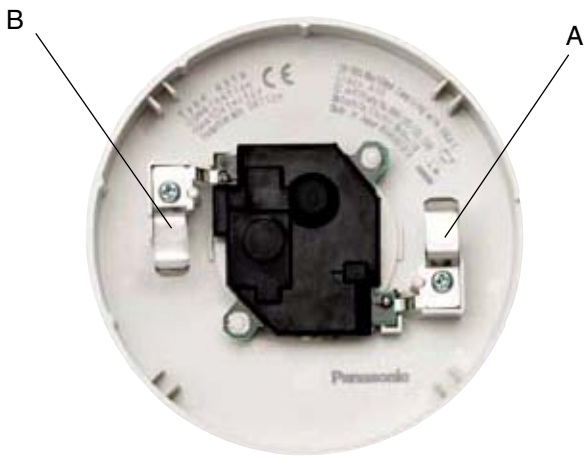
The detector has unleaded soldering. The latest IC technology reduces the number of semiconductors and other electronic components to a minimum.

Product applications

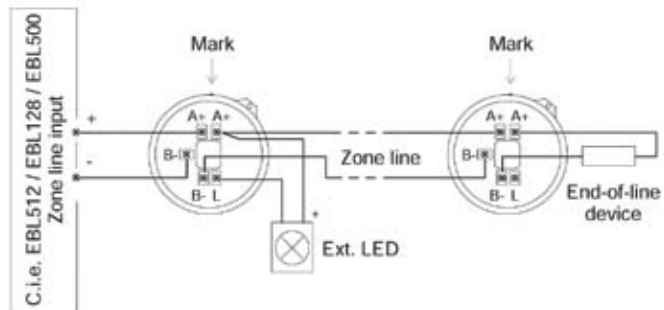
This conventional heat detector can be used in the systems EBL500 / 512 / 128 / 1000 / 2000. The detector is intended for indoor use and in dry premises. Heat detectors are normally used in small rooms where the temperature can be expected to rise rapidly in case of a fire or places where smoke detectors can not be used.

Type numbers

4318	Combination heat detector
-------------	---------------------------



The zone line is connected to the base 2324 (A+ & B-)
Ext. LED is connected to the base 2324 (A+ & L).



See also „Engineering Instructions for detectors Type 435x“.

In the detector:

A Contact for base 2324

B Contact for base 2324

The detector is plugged in a base 2324. End-of-line device depending on the zone line input.

Technical data

Voltage (V DC) rated allowed normal	24 10-30 24
Current consumption at nom. volt. (mA) quiescent (detector only) active (detector only)	Depending on the type of base it is plugged into. For more details see the Product Leaflet respectively, e.g. MEW00008 (Base 2324). 0.015 min. 3
Ambient temperature (°C) operating storage	-10 to +50 -25 to +70
Application temperature class A1 (°C) typical / max.	+25 / +50
Ambient humidity (% RH)	max. 95, non condensing
Ingress protection rating (estimated)	IP51
Alarm temp. (T= °C; $\Delta T = °C/168s$)	59; 18 (T=static response temp. Class A1 $T^{min.}=54$; $T^{max.}=65$.)
Size Ø x H (mm)	102 x 39
Weight (g)	54
Construction / Color	Modified polycarbonate / grey (N8, Muncell colour code)
Approvals	CE 07 EC Certificate no. 0845-CPD-232.1566; EN54-5, class A1R.

Note: All voltages are nominal.

All technical features and data are subject to changes without notice, resulting from continuous development and improvement.

Heat detectors 4375 and 4376



Features

- Conventional heat detector
- Fixed temperature (static) alarm level

Fixed temperature alarm level

The conventional fixed temperature (static) heat detectors will give an alarm within a static response temperature range, within a specified response time, in accordance with EN54-5:2000 + A1:2002.

The heat sensitive element is a thermistor.

The detector is plugged in a conventional detector base 2324, connected to a conventional zone line input. An LED on the base will light up when the detector goes into alarm. The base also has an output for an external LED, e.g. 2218.

4375 and 4376

The following types are available (type number, temperature and class):

4375, 60°C, class A2 S.

4376, 80°C, class B S.

Latching

The detectors are latching, i.e. they will not be automatically reset if the temperature, after the alarm, falls below the detector's static response temperature. The LED in the base and a connected external LED will be lit until the detector is reset via the c.i.e.

Environment friendly

The detectors have unlead soldering.

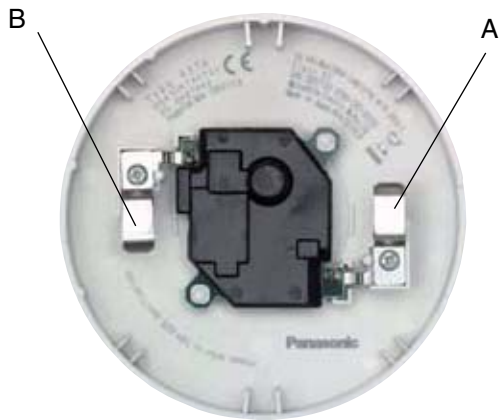
The latest IC technology reduces the number of semiconductors and other electronic components to a minimum. The detectors fulfil the RoHS Directive.

Product applications

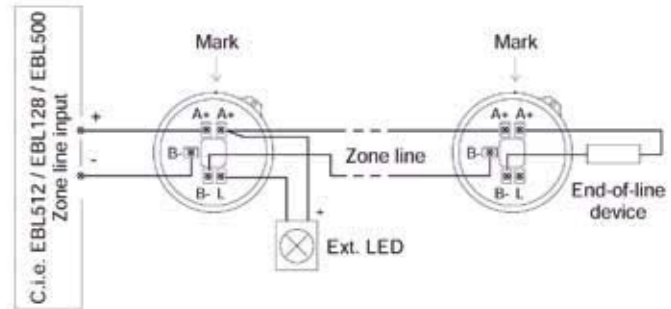
The detectors can be used in the systems EBL500 / 512 / 128 / 1000 / 2000 provided with some zone line inputs for the system respectively (e.g. an 8 zones expansion board 1580 / 4580 zone line input, an addressable multi purpose I/O unit 3361 zone line input, etc.).

Heat detectors are normally used in rooms where the temperature can be expected to rise rapidly in case of a fire or places where smoke detectors can not be used. The detectors are intended for indoor use and in dry premises.

Type numbers	
4375	Heat detector, 60°C, class A2 S.
4376	Heat detector, 80°C, class B S.



The zone line is connected to the base 2324 (A+ & B-)
Ext. LED is connected to the base 2324 (A+ & L).



See also „Engineering Instructions for detectors Type 435x“.

In the detector:

A Contact for base 2324

B Contact for base 2324

The detector is plugged in a base 2324. End-of-line device depending on the zone line input.

Technical data	
Voltage (VDC) rated allowed normal	24 10-30 24 (zone line voltage)
Current consumption at nom. volt. (mA) quiescent (detector only)	Max. 0.015
Current limitation required, when active (mA) (EBL equipment has current limitation.)	Must be min. 6 and max. 100
Ambient temperature (°C) operating (Min. / Typical / Max.) storage	4375 (A2 S): -10 /+25 /+40 -25 to +70 4376 (B S): -10 /+40 /+60 -25 to +70
Static response temperature (°C)	55 (4375) and 72 (4376)
Ingress Protection rating (estimated)	IP51
Size Ø x h (mm)	102 x 39
Weight (g)	54
Construction / Color	Modified Polycarbonate / Gray (N8, Munsell color code)
Approvals	CE 07 EC Certificate no. 0786-CPD-20334 (4375); EN54-5 + A1 CE 07 EC Certificate no. 0786-CPD-20335 (4376); EN54-5 + A1


All technical features and data are subject to changes without notice, resulting from continuous development and improvement.

Conventional Detectors/Units for Zone Line Inputs

Enclosed heat detectors 6295, 6296, 6297, 6298



Features

- Fixed temperature alarm level
-  ATEX compliance
- Waterproof (IP67)

Fixed temperature alarm level

The detectors are conventional fixed temperature heat detectors, i.e. they will give an alarm within a response temperature range in accordance with EN54-5:2000.

The sensing element is a heat pick-up shield and a bimetal switch.

An LED on the detector (not on 6298) will light up when the detector goes into alarm. The detector also has an output for an external LED 2218.

The following types are available (static response temperature, class and EN54-5 temp. range):

- **6295**, 57°C, class A2S (54 to 70°C).
- **6296**, 72°C, class BS (69 to 85°C).
- **6297**, 87°C, class CS (84 to 100°C).
- **6298**, 117°C, class ES (114 to 130°C).

Latching

The detectors are latching, i.e. they will not be automatically reset if the temperature, after the alarm, falls below the detector's static response temperature. The detector's LED and a connected external LED will be lit until the detector is reset via the c.i.e.

ATEX classification

The detectors **6295** and **6296** complies with the ATEX classification **Ex II 3GD EEx nA II T5**. See also the opposite side of this page.

Waterproof connection box

The heat pick-up shield, the LED, all electronics, etc. are mounted in a gray waterproof detector housing, to be mounted on the attached connection box, which has three cable inlets. Three compression glands and a silicon gasket for IP67 are also attached.

Label holder

A label holder intended for a label showing „zone number“, can be mounted in the connection box.

Miscellaneous

The detectors 6295 and 6298 are provided with three pairs of flying leads with female push-on connectors, see figure on the opposite side of this page. (Zone line cables (in/out) and an external LED.)

Product applications

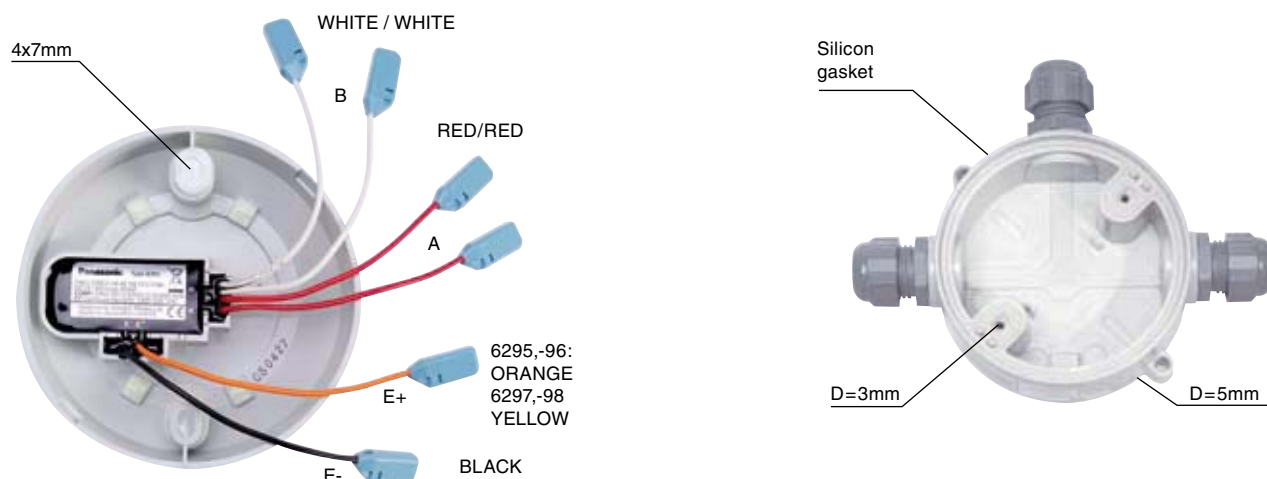
The detectors can be used in the systems EBL500 / 512 / 128 / 1000 / 2000 provided with some zone line inputs for the system respectively (e.g. an 8 zones expansion board 1580 / 4580 input, an addressable zone interface 2226 / 2335 input, an addressable multi purpose I/O unit 3361 input, etc.).

Heat detectors are normally used in rooms where the temperature can be expected to rise rapidly in case of a fire or places where smoke detectors can not be used.

The detectors are intended for outdoor use or indoor use in high humidity premises.

Type numbers

Type numbers	
6295	Enclosed heat detector, 57°C, class A2S (54 to 70°C).
6296	Enclosed heat detector, 72°C, class BS (69 to 85°C).
6297	Enclosed heat detector, 87°C, class CS (84 to 100°C).
6298	Enclosed heat detector, 117°C, class ES (114 to 130°C).
3390	Label holder (100 holders per packet, excluding labels).
3391	Labels for 3390 (10 sheets à 132 labels)

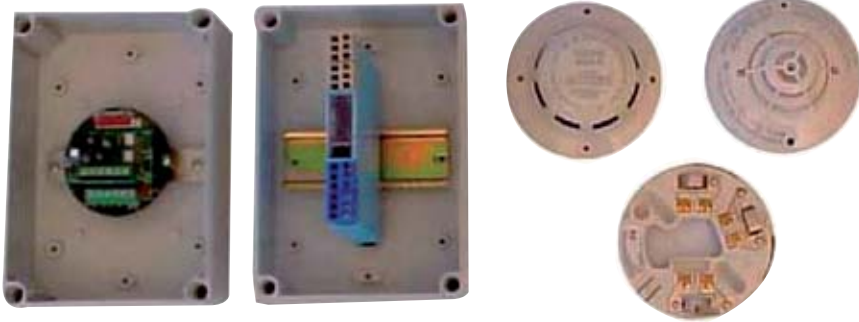


Detector mounting holes, 2x(4x7mm) c/c = 70mm. **E+/E-** = External LED. **A/B** = zone line in/out (or end-of-line device). Connectors for wire diameter 0.6-1.2mm (approx. 0.3-1.13mm²).

Connection box mounting holes, 2x(5mm) c/c = 108mm. The connection box is prepared for required number of compression glands, one, two or three. A gland is approx. 30mm high.

Technical data	
Voltage (VDC) rated allowed normal	24 12-30 24 (zone line voltage)
Current consumption at nominal voltage, quiescent (mA)	0
Current limitation required, when active (mA) (EBL equipment has current limitation.)	6295-6297: Must be min. 6 and max. 40 6298: Must be min. 6 and max. 30
External LED output voltage (V) max. current output (mA)	Zone line voltage minus 2V 10 (no internal current limiter)
Alarm resistance (Ω)	For 6295-6297: approx. 400. For 6298: approx. 680
Ambient temperature (°C) operating (Min./Typical/Max.) storage	6295 (A2S): -40 /+25 /+50 6296 (BS): -40 /+40 /+65 6297 (CS): -40 /+55 /+80 6298 (ES): -40 /+85 /+110 -45 to +70 -45 to +70 -45 to +70 -45 to +70
Ingress protection rating	IP67 (attached connection box, silicon gasket and compression glands required)
Static response temperature	57, 72, 87, or 117°C depending on detector/class. See text.
Size Ø x h (mm)	Detector: 95 x 42 Connection box: 100 x 35 Detector + Connection box: 100 x 75 (excl. compression glands)
Weight (g)	Detector: 100 Connection box (incl. 3 glands): 134
Construction	Body (6295, 6296): ABS Body (6297, 6298): modified polycarbonate. Protector (on the body) and connection box: modified polycarbonate.
Color	Gray (N8, munsell color code)
Approvals	CE 05 EC Certificate no. 0845-CPD-232.1192 (6295); EN54-5 CE 05 EC Certificate no. 0845-CPD-232.1193 (6296); EN54-5 CE 05 EC Certificate no. 0845-CPD-232.1194 (6297); EN54-5 CE 05 EC Certificate no. 0845-CPD-232.1195 (6298); EN54-5
ATEX classification (for 6295 and 6296 only)	6295: II 3GD EEx nA II T5 (T100°C), -40°C ≤ T _a ≤ 50°C 6296: II 3GD EEx nA II T5 (T100°C), -40°C ≤ T _a ≤ 65°C

Units for hazardous (Ex) areas–EBL512



Features

- Approved Intrinsically Safe interface, isolator, detectors and manual call point

General

In hazardous (Ex) areas, Intrinsically Safe (IS) and approved products are required. To the COM loop is connected an **Addressable IS zone line interface** to which, via a **Galvanic isolator**, the **intrinsically safe detectors and/or manual call points** are connected.

Addressable IS zone interface 2821

The interface is connected to a COM loop. It has one zone line input. A DIL-switch is used for the COM loop address setting. External power supply 24V DC (30mA) is required. The interface is mounted in a waterproof box (IP66/67). Supplied with four compression glands for the cable entries.

Galvanic isolator MTL5061

The isolator is used to connect the IS detectors and manual call points to the IS zone interface zone line input. Up to 20 units can be used on the zone line and an end-of-line resistor (10K) is to be connected in the last unit. The isolator has two in and outputs (channel 1 and 2) and is mounted in a waterproof box (IP66/67). Supplied with four compression glands for the cable entries and two 10K e-o-l resistors for system EBL512.

IS mounting base YBN-R/4 IS

In the base could be plugged a conventional IS smoke or heat detector. The base has terminals for the zone line (in/out) and for an external indicator (LED).

IS smoke detector SLR-E-IS

A conventional IS photoelectric (optical) smoke detector, to be plugged in the IS mounting base. The detector has two built-in LEDs to indicate that the detector has generated fire alarm.

IS heat detector DCD-1E-IS

A conventional IS Rate of Rise heat detector, fixed temperature 60°C (class A1), to be plugged in the IS mounting base. The detector has two built-in LEDs to indicate that the detector has generated fire alarm.

Product applications

The units are used in the EBL512 system. Connections, etc. according to dwg 512-55.

Type numbers

Type numbers	
2821	Addressable IS zone interface (including waterproof box and four compression glands)
MTL5061	Galvanic isolator (including waterproof box and four compression glands) ¹ (2820)
YBN-R/4IS	Intrinsically safe mounting base (2812)
SLR-E-IS	Intrinsically safe photoelectric smoke detector (2810)
DCD-1E-IS	Intrinsically safe heat detector (2811)

Technical data					
	IS zone interface	Galvanic isolator	Base	Smoke detector	Heat detector
Voltage (VDC) allowed normal	12-30 24	6-35 24	15-30 24	15-30 24	15-30 24
Current consumption at nom. volt. quiescent active	3 6 from the COM loop	<400µA 1-40mA	n/a	50µA max. 50mA	35 µA max. 50mA
Current consumption at nom. volt. from external power supply (mA)	≤ 30	n/a	n/a	n/a	n/a
Ambient temperature (°C) operating storage	-20 to +40 -40 to +70	-20 to +60	-10 to +55 -30 to +70	-10 to +55 -30 to +70	-10 to +55 -30 to +70
Ambient humidity (% RH)	max. 90 noncondensing	max. 95 noncondensing	max. 95 noncondensing at 40°C	max. 95 noncondensing at 40°C	max. 95 noncondensing at 40°C
Ingress Protection rating	IP66/67 (the box)	IP66/67 (the box)	IP22 ²	IP22 ²	IP22 ²
Size h (mm)	175 x 125 x 75	175 x 125 x 150	Ø=100 x 15	Ø=100 x 46 (incl. base)	Ø=100 x 46 (incl. base)
Weight (g)	~133	~650	50	115	95
Construction Color	Polycarbonate gray	Polycarbonate gray (RAL 7035)	ABS Ivory white	ABS Ivory white	Polycarbonate Ivory white
Approvals, except CE. BASEEFA	n/a	EEx ia IIC T _{amb} = 60°C	n/a	EEx ia IIC T5, T _{amb} = 50°C EN54-7	II 1 G EEx ia IIC T5, T _{amb} = 55°C EN54-5
Zone classification³			n/a	Zone 0, 1 or 2	Category 1, including lower categories

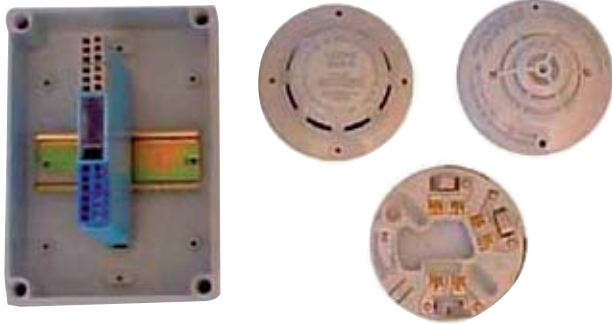
Note: Regarding current consumption for active detectors: All EBL equipment have a current limitation.

¹ Two end-of-line resistors (10K) are also included for system EBL512. Each has a body surface area >230mm² and has to be connected in the last unit on the zone line.

² IP rating not tested. Producer's estimation: IP43.

³ Regarding zone classification: Zone 0 = Category 1, Zone 1 = Category 2 and Zone 2 = Category 3.

Units for hazardous (Ex) areas–EBL128



Features

- Approved isolator and Intrinsically Safe detectors for conventional zone line input

General

In hazardous (Ex) areas, Intrinsically Safe (IS) and approved products are required. To a zone line input is connected a Galvanic isolator, to which the intrinsically safe detectors and/or manual call points are connected.

Galvanic isolator MTL5061

The isolator is used to connect the IS detectors and manual call points to a zone line input. Up to 5 units can be used on the zone line and an end-of-line resistor is to be connected in the last unit. The isolator has two in and outputs (Channel 1 & 2) and is mounted in a waterproof box (IP66/67). Supplied with four compression glands for the cable entries, two 12K e-o-l resistors for system EBL500 and two 10K e-o-l resistors for system EBL128.

IS mounting base YBN-R/4 IS

A conventional IS smoke or heat detector can be plugged into the base. The base has terminals for the zone line (in/out) and for an external indicator (LED).

IS smoke detector SLR-E-IS

A conventional IS photoelectric (optical) smoke detector, to be plugged in the IS mounting base. The detector has two built-in LEDs to indicate that the detector has generated fire alarm.

IS heat detector DCD-1E-IS

A conventional IS Rate of Rise heat detector, fixed temperature 60°C (class A1), to be plugged in the IS mounting base. The detector has two built-in LEDs to indicate that the detector has generated fire alarm.

Product applications

The units are used in the systems EBL500 and EBL12 with conventional zone line inputs available.

Connections, etc. according to connection diagram for the respective system.

Type numbers

Type numbers	
MTL5061	Galvanic isolator (including waterproof box and four compression glands) ¹ (2820)
YBN-R/4IS	Intrinsically safe mounting base (2812)
SLR-E-IS	Intrinsically safe photoelectric smoke detector (2810)
DCD-1E-IS	Intrinsically safe heat detector (2811)

Technical data					
		Galvanic isolator	Base	Smoke detector	Heat detector
Voltage (VDC) allowed normal		6-35 24	15-30 24	15-30 24	15-30 24
Current consumption at nom. volt. quiescent active		<400µA 1-40mA	n/a	50µA max. 50mA	35 µA max. 50mA
Current consumption at nom. volt. from external power supply (mA)		n/a	n/a	n/a	n/a
Ambient temperature (°C) operating storage		-20 to +60	-10 to +55 -30 to +70	-10 to +55 -30 to +70	-10 to +55 -30 to +70
Ambient humidity (% RH)		max. 95 noncondensing	max. 95 noncondensing at 40°C	max. 95 noncondensing at 40°C	max. 95 noncondensing at 40°C
Ingress Protection rating		IP66/67 (the box)	IP22 ²	IP22 ²	IP22 ²
Size h (mm)		175 x 125 x 150	Ø=100 x 15	Ø=100 x 46 (incl. base)	Ø=100 x 46 (incl. base)
Weight (g)		~650	50	115	95
Construction Color		Polycarbonate gray (RAL 7035)	ABS Ivory white	ABS Ivory white	Polycarbonate Ivory white
Approvals, except CE. BASEEFA		EEx ia IIC T _{amb} = 60°C	n/a	EEx ia IIC T5, T _{amb} = 50°C EN54-7	II 1 G EEx ia IIC T5, T _{amb} = 55°C EN54-5
Zone classification³			n/a	Zone 0, 1 or 2	Category 1, including lower categories

Note: Regarding current consumption for active detectors: All EBL equipment have a current limitation.
Regarding current consumption for active detectors: All EBL equipment have a current limitation.

¹ Two end-of-line resistors (12K) are included for the system EBL500. Two end-of-line resistors (10K) are included for system the EBL128. Each has a body surface area > 230 mm² and has to be connected in the last unit on the zone line.

² IP rating not tested. Producer's estimation: IP43.

³ Regarding zone classification: Zone 0 = Category 1, Zone 1 = Category 2 and Zone 2 = Category 3.

External indicator (LED) 2218



Features

- Symbol instead of text
- One indicator for all detector types

Symbol on the lid

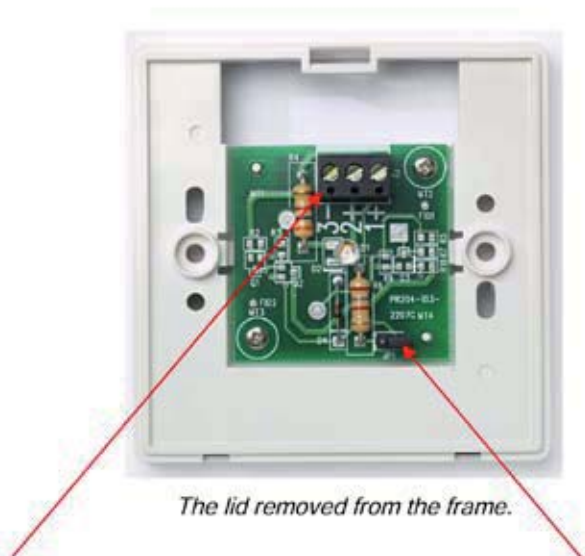
The external indicator (LED) 2218 consists of a white frame with a p.c.b. (electronics), a high brightness LED and a connector. On the frame is plugged a white lid with a red lens in front of the LED and a „burning house“ symbol instead of text. The LED is lit steady (continuous) when activated. 2218 is wall mounted, only 30 mm high.

Product applications

2218 can be used when a detector is placed out of view, hidden, etc. The ext. LED is lit at the same time as the LED in the detector / base it is connected to.

2218 can be connected to all types of detectors / bases with an ext. LED output. 2218 is intended for indoor use and in dry premises.

Type number	
2218	External indicator (LED)



The lid removed from the frame.

The connector **J2** inputs are polarised. 1 (+), 2 (+) and 3 (-). Link **JP1**
Analog detectors / bases are connected to **2 (+)** and **3 (-)**. (Max. 25 mA.)
Conventional detectors / bases are connected to **1 (+5 to 35 V DC)** and **3 (-)**.
 Link JP1 shall be open (out) for both analog and conventional detectors / bases.
 Mounting holes: c/c = 60.3 mm.

Technical data	
Voltage (VDC)	5-35
Current consumption (mA). J2:1 & 3 J2:2 & 3	6.7 (Link JP1 open) Max. 25 (Current limitation in all analog Panasonic detectors.)
Ambient temperature (°C) operating storage	-10 to +60 -10 to +60
Ambient humidity (% RH)	Max. 90, non condensing
Ingress protection rating (estimated)	IP42
Size W x H x D (mm)	87 x 87 x 30
Weight (g)	62
Construction/Color Body Lens	PC/ABS PMMA
Approvals	n/a

All technical features and data are subject to changes without notice, resulting from continuous development and improvement.

Address setting tool 3314



Feature

- Used for address and mode setting

COM loop address setting

Address setting tool 3314 is used to program the COM loop address on the analog detectors (33xx/430x) and all other addressable units (33xx and 43xx).

Mode setting

The address setting tool 3314 is also used to set the NORMAL, 2330 or 2312 mode to the units. See the instructions for the unit respectively.

Connection cable

Some units have flying leads for easier connection of 3314. Some units have screw terminals. A connection cable with insulated crocodile clips and push-on terminals is supplied with the address setting tool, to be used when required.

User friendly

The address setting tool is powered by four 1.5V batteries.

Procedure for reading/writing:

- Set the ON/OFF switch on the address setting tool in position "ON". LED "POWER" lights up. Wait for a beep.
- Plug the analog detector contact pins (SA/SB) into the address setting tool's snap connectors (SA/SB) or use the connection cable to connect other units.

How to read:

- Press the "READ" button. Wait for a beep and read the address and mode in the display.

How to write:

- Select MODE by pressing the "WRITE" and "READ" buttons at the same time until the marker in the display is in the correct MODE position.
- Type-in the COM loop address and press "WRITE". Wait for a beep.
- Press the "READ" button for a check. Wait for a beep and read the address and the mode.

Write the COM loop address on the Address label on the detector (and the base) or on the unit.

After using the address setting tool, it should be turned OFF. (If the tool is left not used for more than 2 minutes, it will automatically be turned off.)

Product applications

Used when analog detectors and other addressable COM loop units are to be used in the systems EBL512/128/1000/2000.

Type numbers	
3314	Address setting tool (including 3315)
3315	Connection cable for address setting tool 3314



Left: An analog detector is plugged into the address setting tool's snap connectors.
 Right: Connection cable, to be used when required.

Technical data	
Power supply (V DC)	4.6-6. 4 pieces of 1.5V batteries (LR6).
Current consumption at nom. volt. (mA)	≤100
Ambient temperature (°C) operating storage	0 to +40 0 to +40
Ambient humidity (% RH)	Max. 95, noncondensing
Ingress protection rating (estimated)	IP42
Material	ABS plastic (housing)
Size L x W x H (mm) L (mm)	153 x 68 x 42 540 (connection cable)
Weight (g)	270 (including batteries) 15 (connection cable)
Color (housing)	Black

Drip pan for detector 6218



Feature

- Protection against damp/moisture

Protection

The drip pan is made of gray polystyrene. It will protect the detector and its base against damp/moisture.

The detector base is mounted in the drip pan with the two supplied screws. It has two mounting flanges on the outside to make the drip pan leak proof from the ceiling.

For cable entries, it is supplied with:

- one cable gland (Pr15.2) for cable diameter 6-8mm (including a lock nut (Pr15.2))
- one cable gland (Pr18.6) for cable diameter 7-10mm

Product applications

Used together with any of the Panasonic heat or smoke detectors plugged in a base 2324, 2330, 2312/3312 or YBN-R/4 IS.

Type number

6218	Drip pan for detector.
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Technical data

Size ØxH (mm)	108x45
Mounting flange hole Ø (mm)	5
Mounting holes c/c (mm)	122
Weight (g)	71
Construction/Color	Polystyrene/gray

Protective cover for detector 6360



Features

- Protection against physical damage
- Protection against theft

Protection

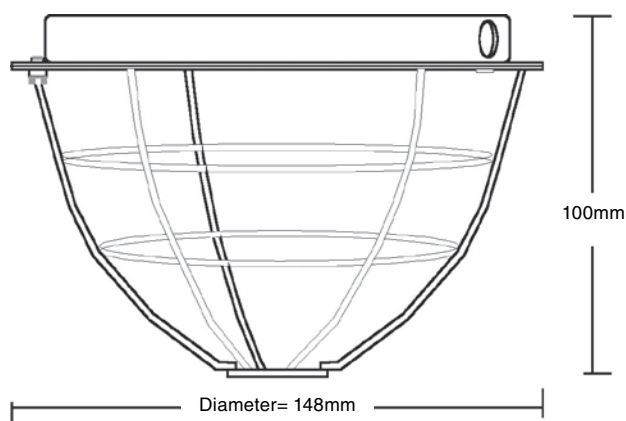
The protective cover for detector is made of white painted steel. It will protect the detector against physical damage and theft.

The cover is made of two parts, a mounting plate and a cage. An M4 screw is used to lock the two parts together.

Product applications

Used together with any of the Panasonic heat or smoke detectors plugged in a base.

Type number	
6360	Protective cover for detector.



The locking screw is an M4 (cheesehead, slotted). Could be changed, if required, to a more suitable type of head (Torx, Hexagon, etc.). Length 10mm.

Technical data	
Size Ø x H (mm)	150 x 100
Weight (kg)	0.32
Color	White

Rope elevator kit 6362



Feature

- A kit with all the necessary pieces for a rope elevator.

General

6362 is a kit to make a rope elevator for a detector and its base, e.g. detector 3304 and analog base 3312.

The kit

The kit consists of the following:

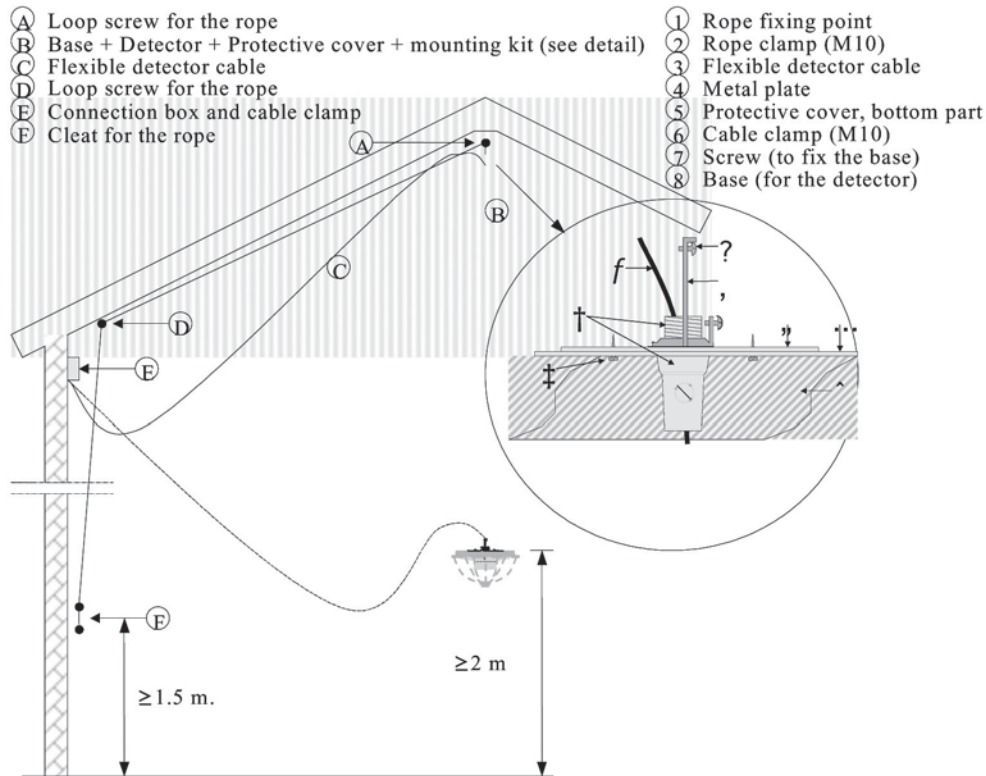
- Protective cover for detector (6360)
- Cleat (to fix the rope and hang it up; not shown in the figure above)
- 20m rope (Ø 2mm polyester)
- Metal plate
- Two screws (to fix the base)
- Two loop screws (for the rope)
- Two wood screws (to fix the cleat)
- Connection box (five screw term.)
- Cable clamp (for the connection box)
- Rope clamp (to fix the rope)
- Cable clamp (to fix the cable)

Product applications

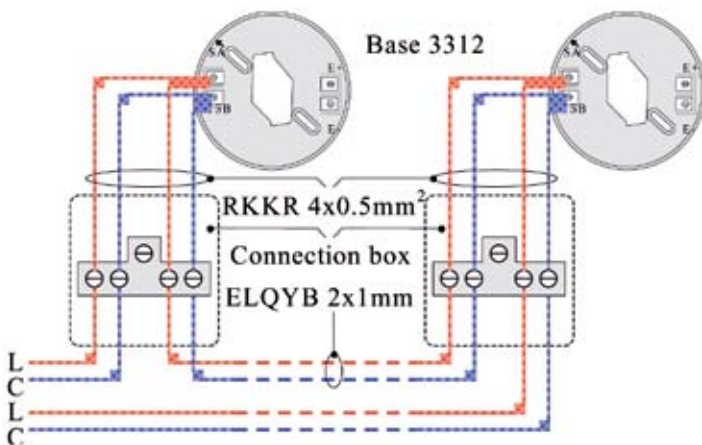
The rope elevator is used with any of the Panasonic heat or smoke detectors plugged in a base, allowing the user to access a detector mounted on a high ceiling height, in order to perform a test, maintenance, replace the detector, etc.

Type number	
6362	Rope elevator kit (Detector and base are <u>not</u> included.)

Mounting instructions

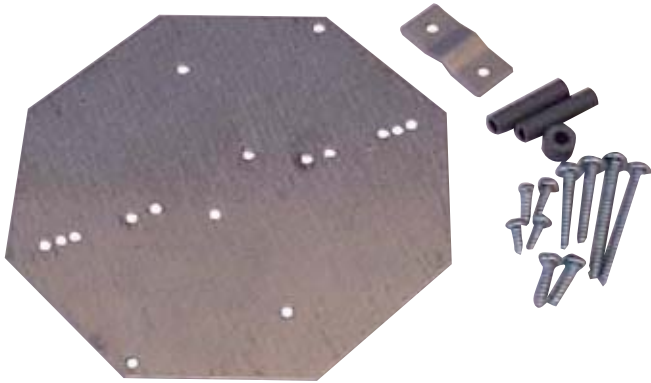


Connection instructions



Technical data	
Weight (g)	~500

Plate for wire installation 6363



Feature

- A kit for wire installation with all the necessary pieces for all kinds of detectors

General

6363 is a kit that consists of the following:

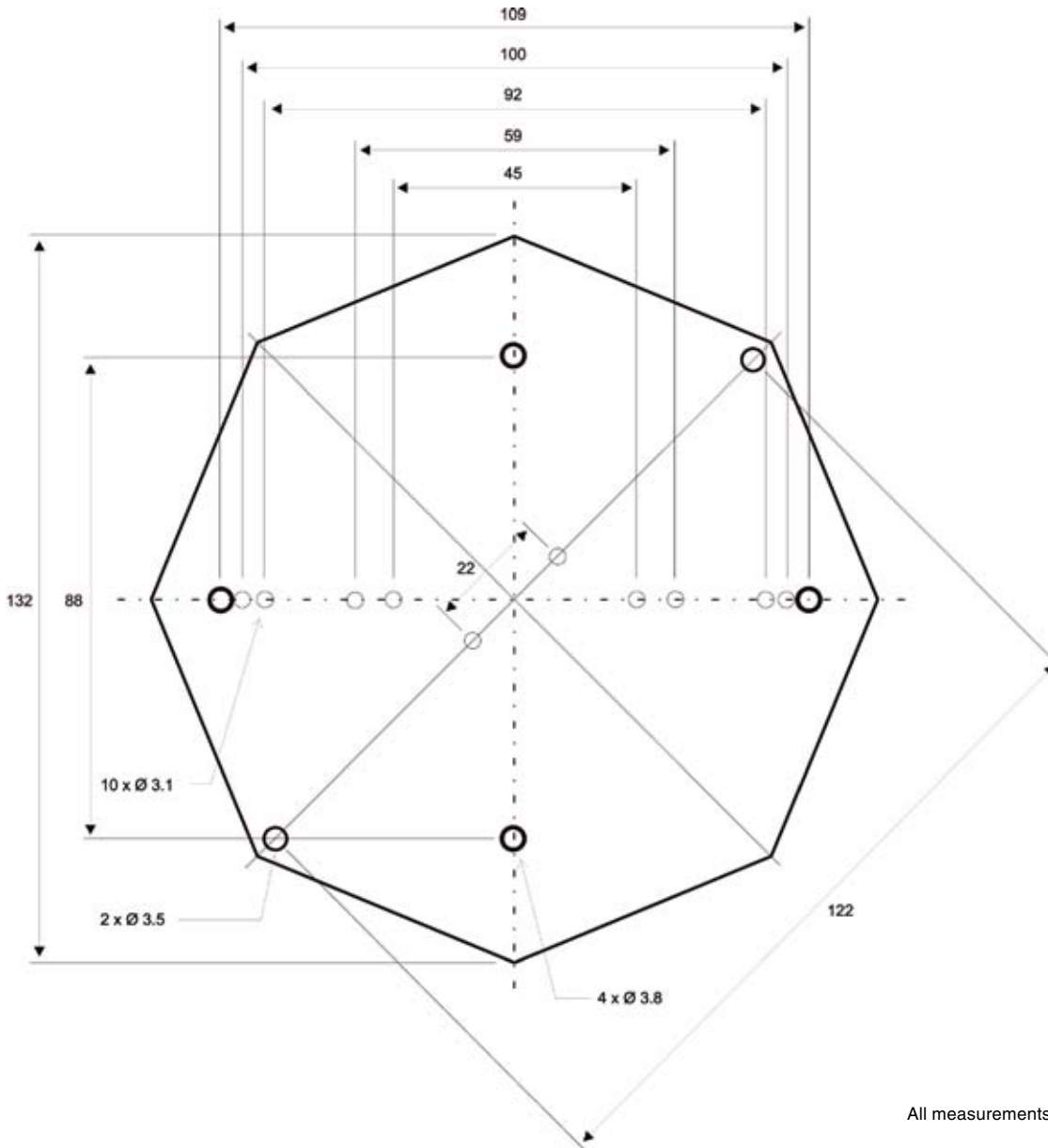
- A metal plate with pre-drilled screw holes for all kinds of detectors/bases.
- A clamp (to fix the plate to a wire)
- Two screws 3.5 x 10mm
- Two screws 3.5 x 12mm
- Two screws 4 x 15mm
- Two screws 4 x 27mm
- Two screws 4 x 40mm
- Two spacers 6.4mm Ø 9.5/4.5
- Two spacers 25.4mm Ø 6.4/4.5

Product applications

The kit is used with any of the Panasonic heat or smoke detectors plugged in a base, allowing the user to make a wire installation of the detector.

Type number	
6363	Plate for wire installation. (Detector and base are <u>not</u> included.)

Dimensions:



All measurements are in mm.

Technical data	
Weight (g)	~160
Material	Aluzink ®

Duct detector chamber 6367



Features

- Only one pipe is required
- Simple installation
- For conventional as well as analog and addressable systems

General

The Uniguard Duct detector chamber **6367** is used when smoke is to be detected in a ventilation duct. Both the „venturi pipe“ and the housing, where a smoke detector is to be placed, are especially designed for optimum airflow through the detector. The housing is made of gray ABS and the venturi pipe is made of aluminium. Supplied with two compression glands for cable entry.

6367 can be used in conventional as well as analog fire alarm systems, depending on the detector placed inside the housing.

The Photoelectric smoke detector 4352, plugged in the base 2324, is used in a conventional system (zone line input).

An attached space ring (11mm) is required between the base and the housing.

The Analog photoelectric smoke detector 4301, plugged in the analog base 3312, is used in an analog and addressable system. An attached space ring (19mm) is required between the base and the housing.

Venturi pipe 6371

The venturi pipe is available in three lengths and can easily be shortened to suit the ventilation duct. An attached plug is to be placed in the end of the pipe.

A ventilation duct with a width ≤ 0.6 m (diameter) requires a 0.6 m venturi pipe (6371-06), ended inside the duct.

A ventilation duct with a width > 0.6 m (diameter) requires an 1.5 or 2.8 m venturi pipe (6371-15 / -28), ended outside the duct.

See figure on the opposite page.

Air flow indicator

A built-in air flow indicator gives a confirmation that the air from the ventilation duct is flowing through the venturi pipe and the detector. If not, a booster fan 6373 is available as an option.

Accessories

Bracket **6372**, to be used when **6367** shall be mounted on a round ventilation duct. See figure on the opposite page.

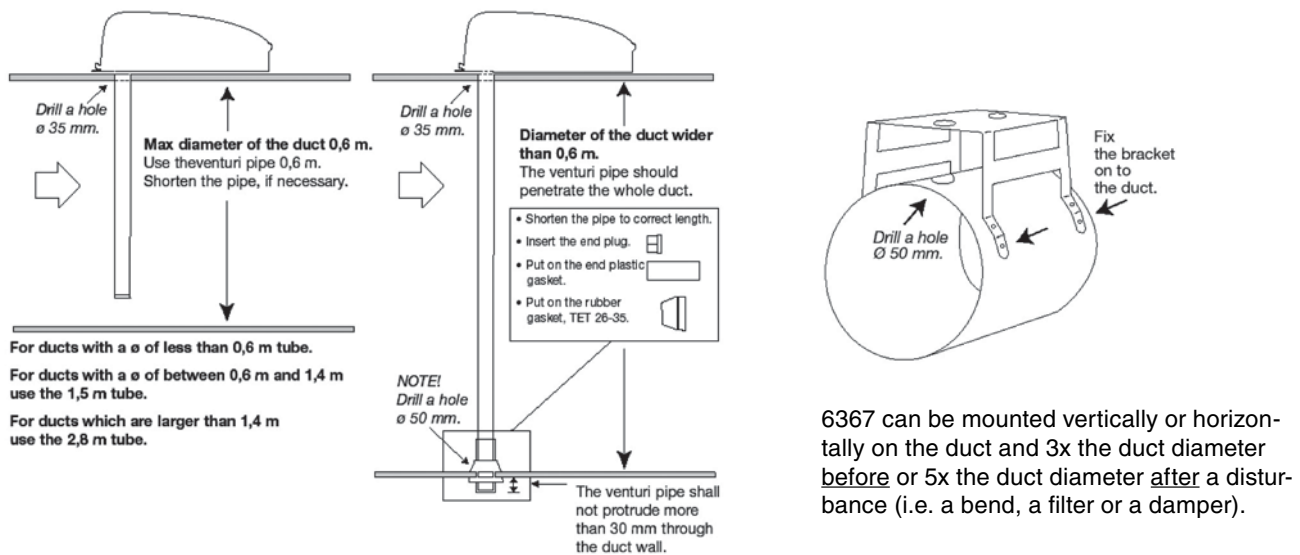
Booster fan **6373**, to be used when the air flow indicator is indicating no or very small air flow. The fan shall be mounted inside the housing and connected to the terminal block. External power supply (24V AC, 50mA) is required.

Filter 6374, can be used in an extremely dirty environment, as in a saw mill, a timber yard, etc. The filter shall be placed inside the housing, in a slot just before the detector.

Product applications

The Duct detector chamber can be used in the systems EBL500 / 512 / 128 / 1000 / 2000. It is intended for indoor use and in dry premises.

Type numbers	
6367	Duct detector chamber (Note: Detector and base have to be ordered separately).
6371-06	Venturi pipe 0.6m (Including end plug.)
6371-15	Venturi pipe 1.5m (Including end plug, plastic gasket and membrane gland TET 26-35.)
6371-28	Venturi pipe 2.8m (Including end plug, plastic gasket and membrane gland TET 26-35.)
6372	Bracket
6373	Booster fan (external 24V AC, 50mA required)
6374	Filter



Left: How to adapt the pipe to different widths of the ventilation duct.

Right: The Bracket 6372. Attached with each duct detector chamber are detailed mounting and installation instructions.

Technical data	
Duct air flow velocity (m/s)	0.2 to 15
Current consumption at nom. volt. (mA)	≤100
Ambient temperature (°C) operating storage	-10 to +50 -25 to +75
Ambient humidity (% RH)	Max. 95, noncondensing
Ingress protection rating (estimated)	IP54
Size L x W x H (mm)	287 x 150 x 110 (the housing only)
Weight (g)	680 (the housing only)
Construction/Color	ABS/gray (RAL7035)
Compression glands	M16 x 1.5 for cable Ø=3-10mm
Approvals	CE EN 54

See also product leaflets/technical data for the base and the detector to be used.

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