FIRE

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SAFETY & SECURITY SYSTEMS
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# Addressable Fire Detection System BSR-100X

## Quick Installation Guide & Generic Design

**DESCRIPTION**

The Addressable Fire Alarm systems BSR-100x of 1,2 and 4 loop outputs, all sharing the same control interface, functionality and indications. The provided software PC-1004 for Windows PC, not only provides utilities and tools for calculating installation parameters, but also is able to set and configure the control panel as well as keeping an event log record. All the models include 4 outputs for conventional sirens, three BMS relays and 24V outputs. Each loop output connection can support up to 150 addressable units and the " Loop Calculator " tool shall be used for cable selection according to your installation size. All features and indications are in accordance with European standards EN 54 - 2 and EN 54 - 4.

**PRODUCTS**

- BSR-1001 – 1 LOOP
- BSR-1002 – 2LOOP
- BSR-1004 – 4LOOP

**SPECIFICATIONS**

Dimensions: 355 x 115 x 345mm
Weight : <4.33Kg (Without batteries)
Input Power: 230VAC, 50-60Hz, <130VA
Operating Temperature: -5° ~40°C (23°F – 104°F)
Degrees of cover protection : IP30

**CAUTION**

- This product may only be installed or maintained by a qualified Electrician.
- The system must be installed in accordance with national regulations and requirements.
- All power must be disconnected before installation or maintenance.
- Only original spare parts must be used for this product.
- The panel is compatible only with the corresponding Olympia Electronics addressable luminaires.

**NEEDED MATERIALS**

- Mounting Hardware.
- Screwdrivers
- Multi-meter
- Pliers
- Cutter

**MAINTENANCE**

The periodical checks must follow the EN54-14 or be verified according to local regulations.

**WARRANTY**

Olympia Electronics guarantees the quality, condition and operation of the goods. The period of warranty is specified in the official catalogue of Olympia Electronics and also in the technical leaflet, which accompanies each product. This warranty ceases to exist if the buyer does not follow the technical instructions included in official documents given by Olympia Electronics or if the buyer modifies the goods provided or has any repairs or re-setting done by a third party, unless Olympia Electronics has fully agreed to them in writing. Products that have been damaged can be returned to the premises of our company for repair or replacement, as long as the warranty period is valid. Olympia Electronics reserves the right to repair or to replace the returned goods and to or not charge the buyer depending on the reason of defection. Olympia Electronics reserves the right to charge or not the buyer the transportation cost.

**CONTACT DETAILS**

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## PREREQUISITE REQUIREMENTS AND PRELIMINARY PROCEDURES

Loop Calculation with PC-1004

- Download, install and run the PC-1004 software.
- Prepare and set all parameters for each point.
- Use the Tools->Loop Calculator and choose the option “Get from the Loop”.
- Check all the desired setup parameters – Calculate maximum cable length – Calculate required cable diameter.

Loop Calculation Manually

- Count and gather the number for each type of points.
- Find the respective technical manuals from website.
- Multiply the alarm consumption (mA) by the number of each type and find the total consumption of all points.
- The total consumption should not exceed the 400mA per Loop in alarm state.
- Having the estimated cable distance, cable cross section and the total (loop) consumption, refer to the following table.

| Cable length (m) / Alarm Current (mA) | 200m | 500m | 1000m | 1500m | 2000m |
|---|---|---|---|---|---|
| 100mA | **1.0 mm²** | **1.0 mm²** | **2.0 mm²** | **2.5 mm²** | **2.5 mm²** |
| 250mA | **1.0 mm²** | **1.5 mm²** | **2.5 mm²** | **2.5 mm²** | **2.5 mm²** |
| 300mA | **1.5 mm²** | **1.5 mm²** | **2.5 mm²** | **2.5 mm²** | **2.5 mm²** |

Address Points

- Maximum 150 points per loop.
- Each point of a loop must be unique addressed.
- No limitation with the address numbering, none arithmetic sequence is obligatory.
- Note all the points with their Names and Addresses. Use the UID stickers.

Addressable Siren Setup

- 32 modes of alarm signaling selectable by internal DIP switches.
- Mode selection: 1 to 5 DIP switches .
- Sound level : 6 and 7 DIP switches.
- Flash frequency : 8 DIP switch.
- Please refer to the BSR-5132 for more information.

Correct cable and connection

- We recommend: - FIP200 - MICC - PYROFIL.
- Choose the correct cross section for each zone. Refer to the previous table.
- All points must be connected according to the following diagrams.

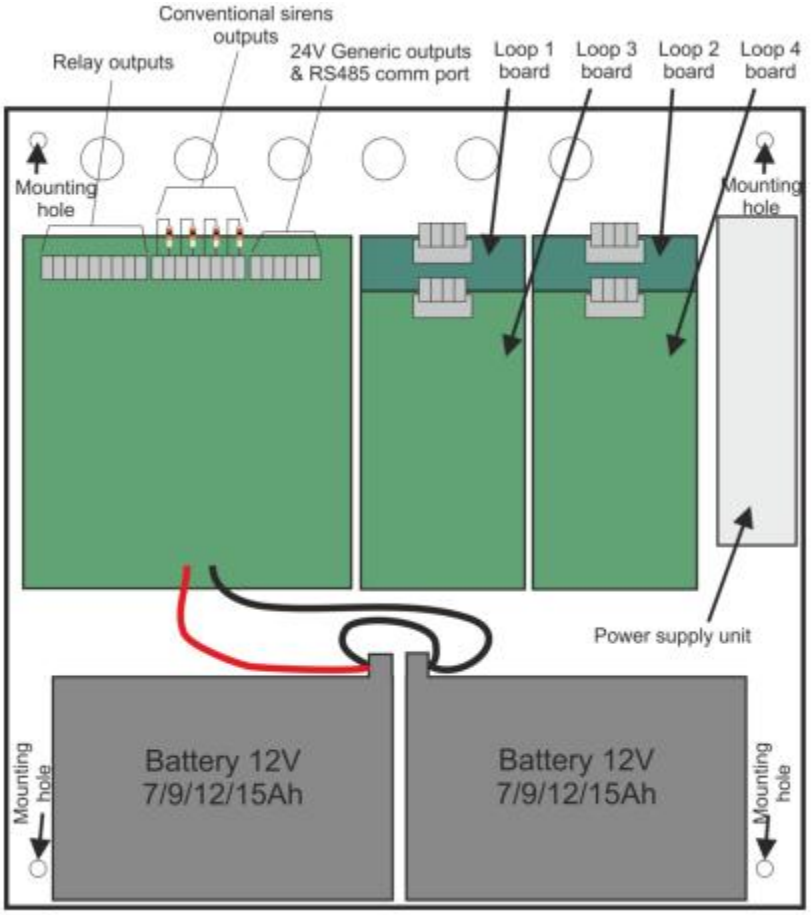



**Fig.1 Mounting holes and inside overview**

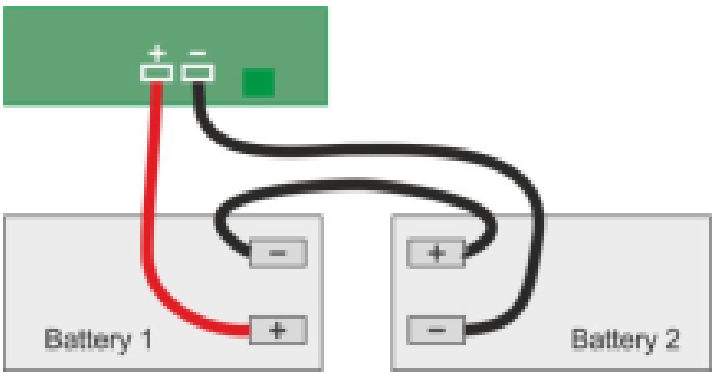



**Fig.2 Battery Connection**

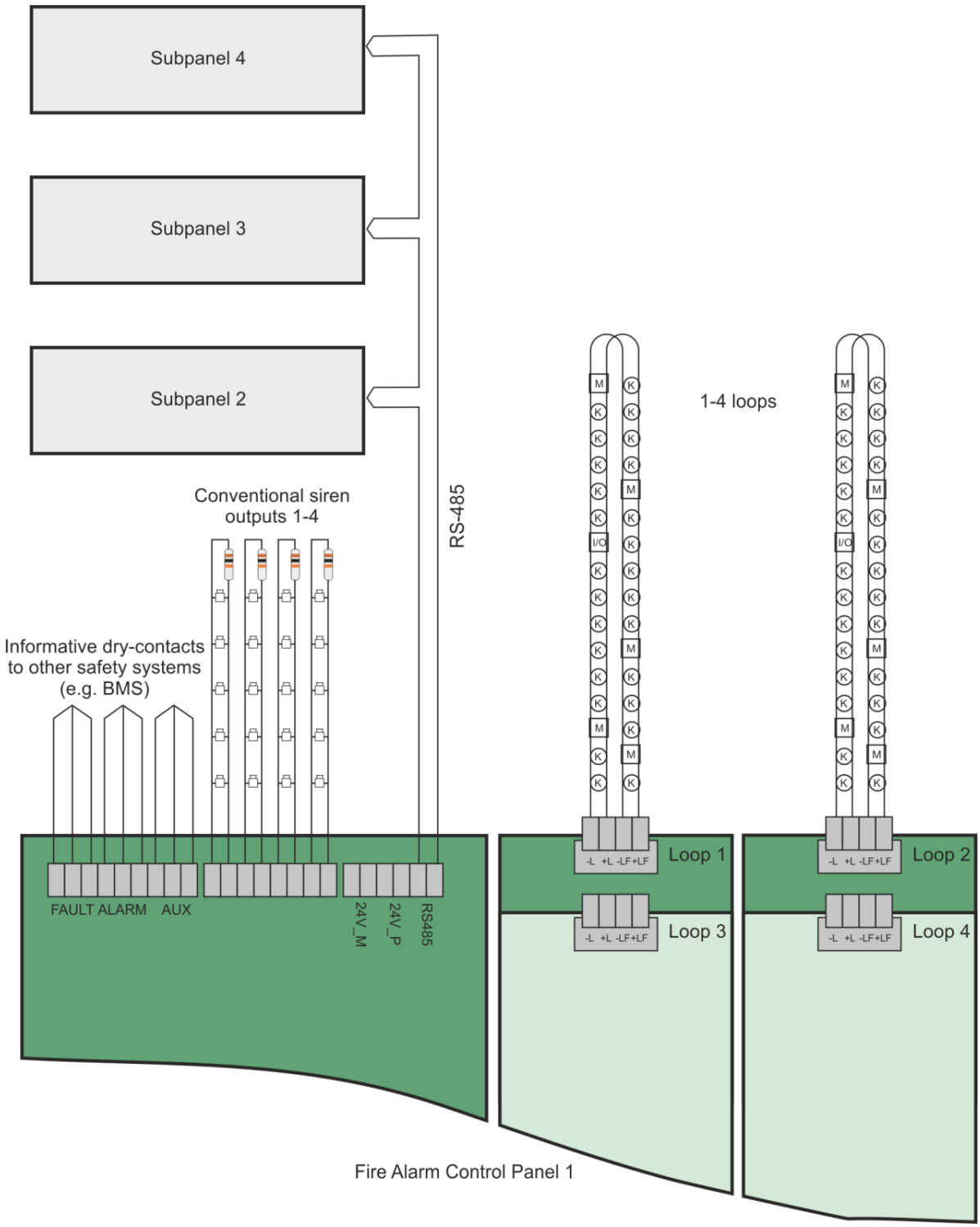



**Fig.3 General connection diagram**

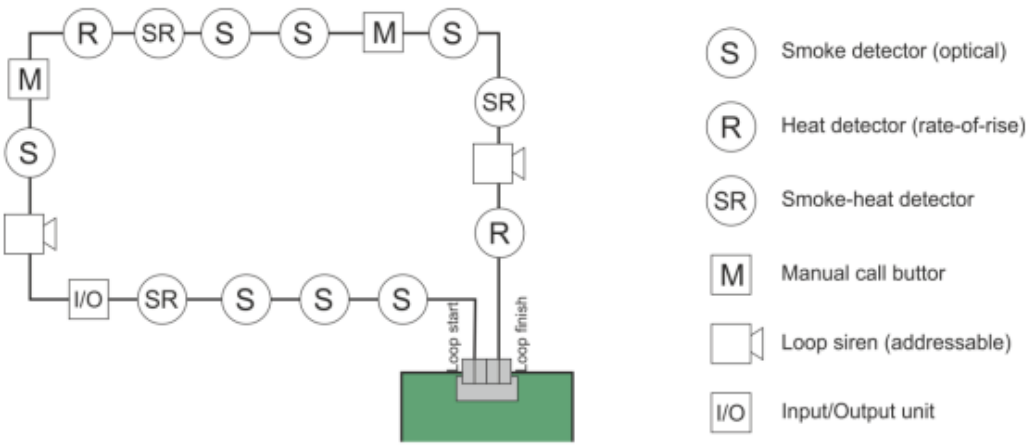



**Fig.4 Loop Diagram**

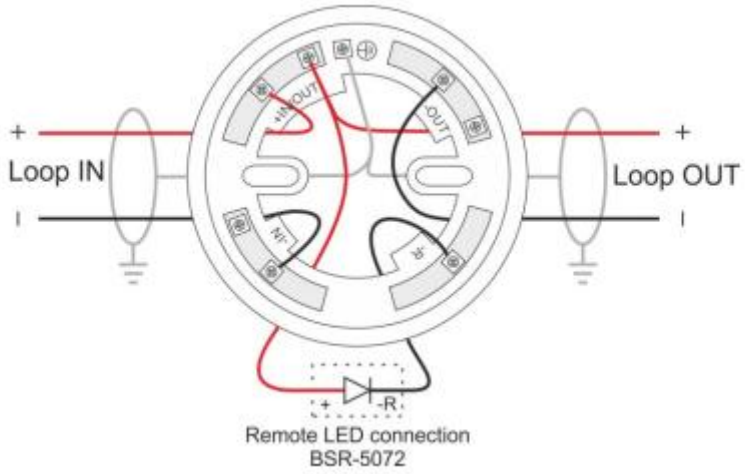



**Fig.5 Detector base connections BSR-6155, BSR-6157 and BSR-6160 (Optional BSR-5072 Remote LED)**

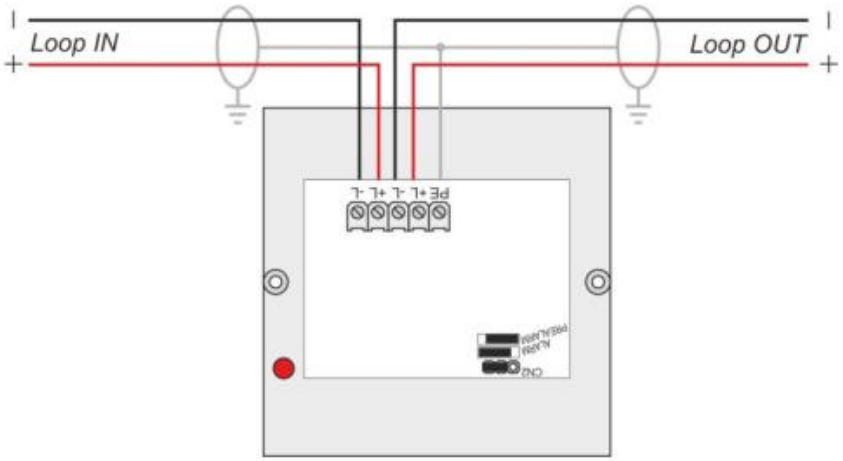



**Fig.6 Connection of manual call point BSR-5136**

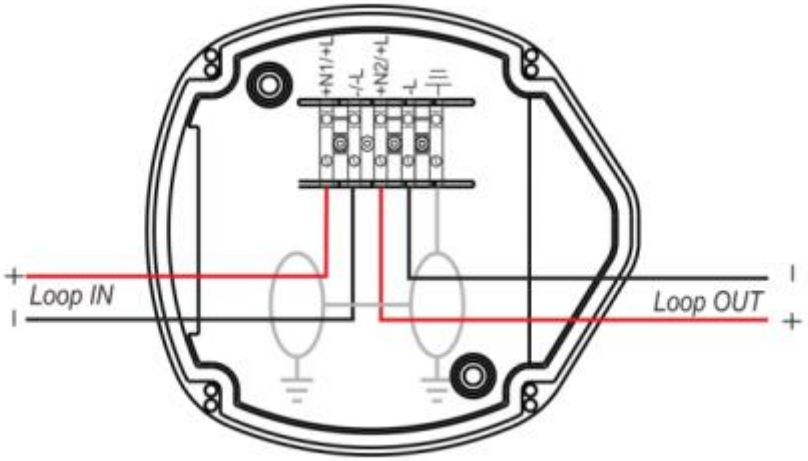



**Fig.7 Addressable Siren connection**

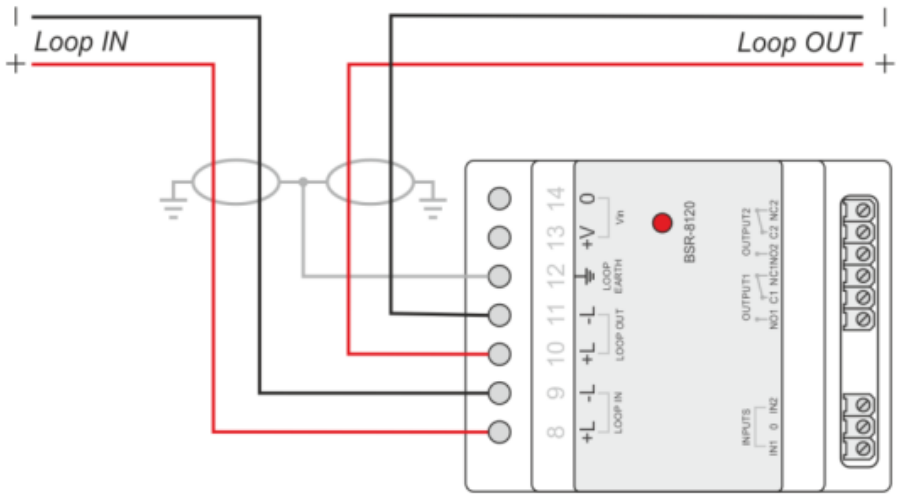



**Fig.8 Input/Output unit BSR-8120 connection**

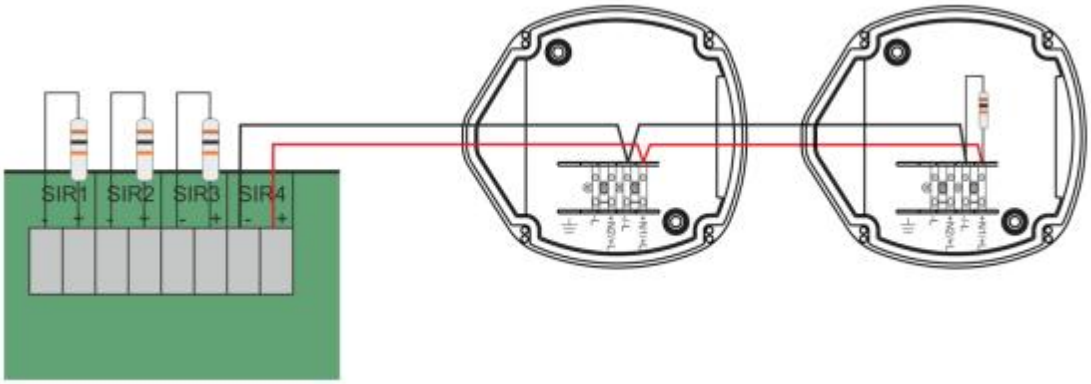



**Fig.9 Conventional Siren connection**

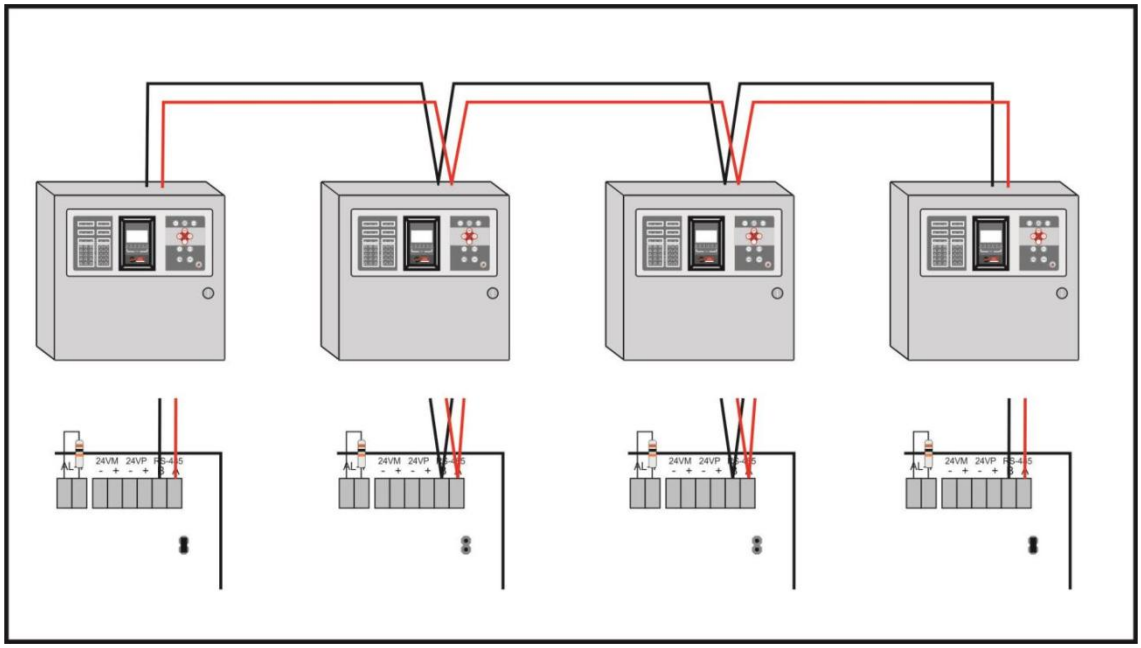


**Fig.10 Panel Network connections**

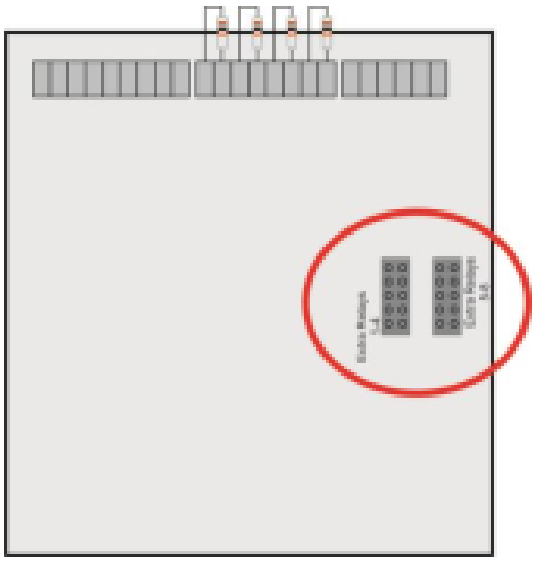


**Fig.11 Extra Relay BS-613 placement( Optional/On Demand)**

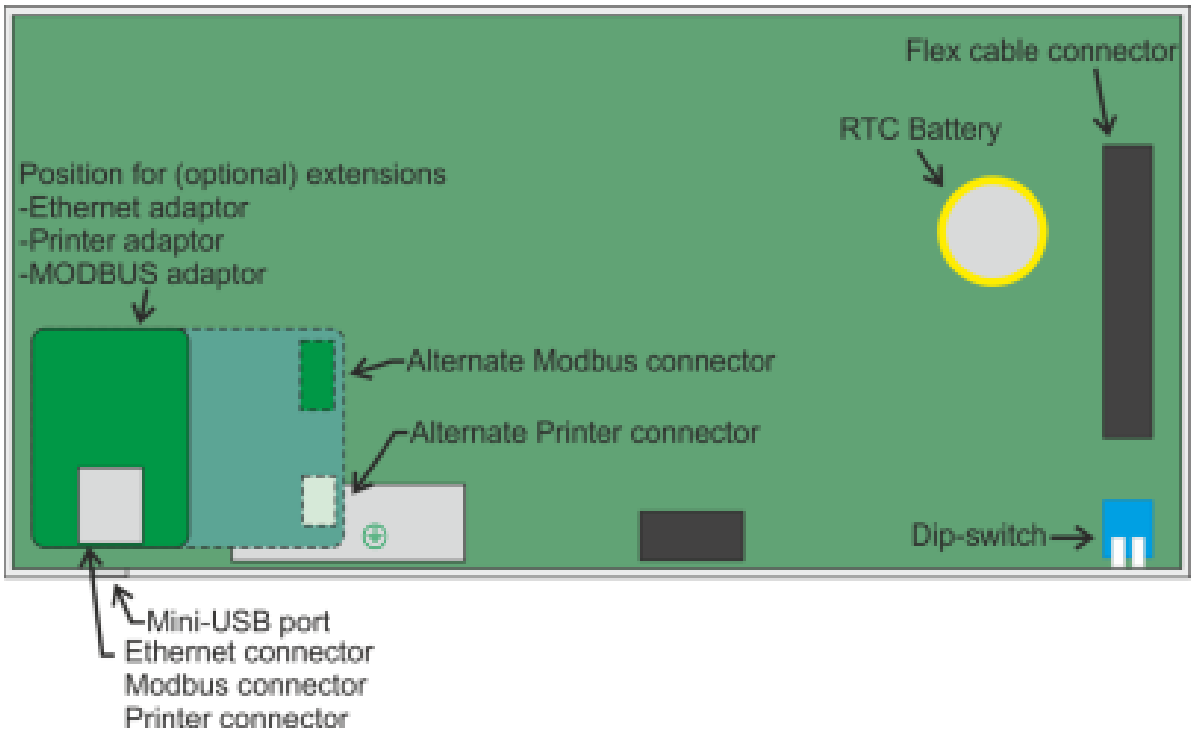
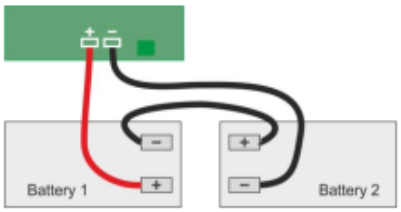



**Fig.12 External modules placement**

*Note: Place the Ethernet Adaptor all the way to the left. i.e use the first 10 pins.*

## STEP BY STEP INSTALLATION ISTRUCTIONS

- Mount the panel on a surface, able to support 20kgs at least.
- Perform all the requisite connections and wirings according to all the above figures.
- If shielded cable, it must be attached to the EARTH TERMINAL connector of the panel.
- Connect the BMS Relays. (Optional).
- Connect the two batteries in series, 7Ah/9Ah/12Ah/15Ah .
- The autonomy capacity should be calculated by the PC-1004.




**Battery connection**

Very important: Make sure to disconnect any 24V external power supply has been applied to any **BSR-8120** device of an installation, before you perform AUTOADDRESSING or POINT DETECTION (see page 11). After these actions are complete, then apply again the 24V external power supply back.

## ACTIVATION

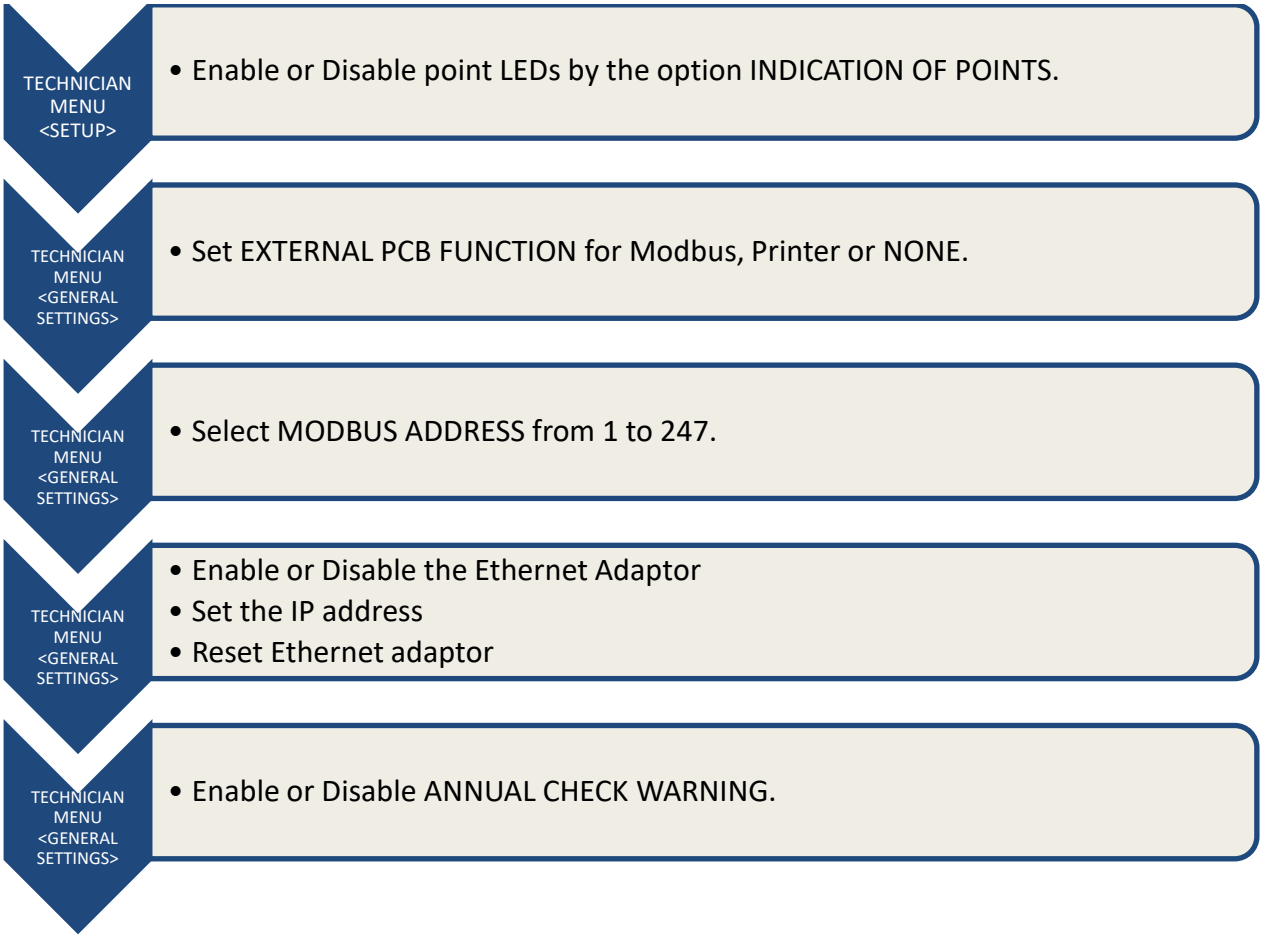
- **Make sure there is no short circuit and the POWER EARTH is connected to EARTH terminal.**
- The commissioning checklist has been successfully completed and passed by the commissioner.
- Connect the panel to power Mains.

## PC COMMUNICATION

- Option to upload the installation configuration to the panel.
- Option to download to the PC the installation configuration to the PC.
- Get Event Log in .csv file.
- For the connection between panel and PC, the option PC COMMUNICATION on the Technician's Menu should be enabled.

## INSTALLATION PROCEDURE

| | |
|---|---|
| TECHNICIAN MENU <SETUP> | • Perform AUTOADDRESSING POINT.<br>*This action erases all previous addresses and it does re-addressing of the points.*<br>*Common use: New panel and loop installation / First operation.* |
| TECHNICIAN MENU <SETUP> | • Perform POINT DETECTION, only if the existing addresses need to be read and registered to the system.<br>*Common use: On existing loop installation, a new panel installation.* |
| TECHNICIAN MENU <SETUP> | • Configure and setup the CONVENTIONAL SIRENS. |
| TECHNICIAN MENU <SETUP> | • Configure and setup the AUX RELAY. |
| TECHNICIAN MENU <SETUP> | •Configure and setup the EXTRA RELAYS(Optional). |
| TECHNICIAN MENU <PANEL NETWORK> | • Select PANEL ADDRESS.<br>*Set Panel address "1" if it is standalone or the Master panel of the network.* |
| TECHNICIAN MENU <NETWORK SETUP> | • Enable or Disable the Panel Network. |
| TECHNICIAN MENU <PANEL NETWORK> | • Perform Panel Detection network. |
| TECHNICIAN MENU <SETUP> | • Set the maximum indicators per loop during an alarm event. |
| TECHNICIAN MENU <SETUP> | • Set the DETECTORS DEPENDENCY status and the DEPENDENCY TIME alarm event, if the specific detector should be triggered when the detected alarm value is constantly above the limit for the time that it has been set. |




## TROUBLESHOOTING

| FAULT | PROBABLE CAUSE | ACTION |
|---|---|---|
| ***DISCONNECTED BATTERY*** | The internal batteries of the panel are not connected to the main board. No voltage across the battery leads. | Connect the batteries in series.. Check the battery leads. Check with a voltmeter if there is around 24V on the battery leads. Check if the batteries are good. |
| ***BATTERY UNTERCHARGE, CUT OFF*** | One or both batteries need to be replaced. Wrong type or operating voltage batteries.<br>The charger cuts off and restarts the system. Protection circuit is enabled. | Replace the batteries. 2x12V 7Ah, 9Ah, 12Ah or 15Ah. |

| | | |
|---|---|---|
| ***CHARGER FAULT*** | One or both batteries need to be replaced. | Replace the batteries. |
| ***POINT X.XX NOT REGISTERED*** | 1) AUTOADDRESSING or POINT ADDRESSING have not been performed.<br>2) The 24V external power supply of one or more BSR-8120 devices, have not been disconnected before AUTOADDRESSING or POINT DETECTION.<br>3) New point on the installation. | 1)Perform AUTOADDRESSING or POINT DETECTION –see page 11 for the difference–<br>2) Make sure the external power supply of all the BSR-8120 had been disconnected before the AUTOADDRESSING or POINT DETECTION. |
| ***PANEL EARTH*** | 1) There is a voltage presence across EARTH -L and +L.<br>2) There is a short circuit across -L or +L or both.<br>3)The USB cable is connected to a PC | 1) Make sure the EARTH conductor and cable shield have infinite Ohms across the -L,+L,-LF and +LF.<br>2) If the USB cable is connected with a PC, it is normal. |
| ***OPEN CIRCUIT*** | 1) Point not connected.<br>2) Incorrect wiring or cable cut.<br>4) Bad communication due to long distance and small cable cross section.<br>5) Isolator is active because of a short circuit. | 1) Make sure all points are connected.<br>2) Proper wiring.<br>3) Check for short circuits. |
| ***POINT X.XXX ISOLATOR IS ACTIVE*** | 1) Short circuit near to POINT X.XXX. | 1) Make sure there are no short circuits.<br>2) Proper wiring. |
| ***ETHERNET COMM.*** | 1) The ETHERNET PCB option is active but the adaptor GR-8530 is not plugged.<br>2) The Ethernet adaptor GR-8530 is faulty.<br>3)The Ethernet adaptor GR-8530 not plugged correctly. | 1) Deactivate the ETHERNET PCB if there is no GR-8530 plugged/in use.<br>2) Replace the GR-8530.<br>3) Plug the Ethernet adaptor GR-8530 all the way to the left. The first 10 left pins should be used. |

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