

## Fire Alarm Control Panel

BS-100 DYFI®



### Applications

Fire alarm control panel type BS-100 DYFI® is a control panel for analogue addressable fire detectors for medium and larger installations. DYFI® (Dynamic Filter Process) is the registered name for a number of dynamic filters built into the BS-100 software that ensure discrimination between "real" fire conditions and other "non-fire" phenomena.

### Features

- \* Standard unit includes two detector loops, each allowing connection of up to 99 addresses. Additional modules can be added to allow a total of 16 loops (1584 addresses).
- \* "Pre-warning" enables the system to inform about a fire, in its earliest stages.
- \* Faulty, damaged or missing detectors are reported without compromising the system.
- \* User controls through multi-level menu.
- \* All detectors and manual callpoints have a unique address.
- \* Multiple microprocessor control for increased reliability.
- \* Cause and effect, and message data stored in non-volatile memory with on-site changing capability.
- \* Monitoring of all field devices and alarm path.

- \* Optional programmable control outputs, in modules of 16 to a maximum of 240 outputs.
- \* RS232C and 20 mA current loop interface for data communication to remote text or graphics displays, repeaters or building management systems.
- \* 2 x 40 character fluorescent dot-matrix alphanumeric display for clarity.
- \* Detector or loop disablement with timed automatic or manual restoration.
- \* Historical event logging. On optional printer, all events and changes of status are printed.
- \* Day/night alarm organisation facility.
- \* Self-diagnosis of "fault" condition.
- \* Sensitivity of all devices easily examined.
- \* Reduces maintenance costs due to inherent reliability.
- \* Tested and complies with BS-5839 part 4: 1988 for control and indicating equipment.
- \* Full range of devices for hazardous areas available.

Protecting environment, life and property ...



P-BS100/HE- Rev.E, 000825

## Technical Specifications: BS-100 DYFI®

### Mechanical data:

Dimensions:	Cabinet sizes vary in accordance with system specification, details on request.
Material:	Steel cabinet with "Lexan" front door. Colour: Grey RAL 9003.
Protection class:	IP 43



### Electrical data:

Power supply:	230 V AC +10/-15 %. Frequency: 44 - 440 Hz.
Batteries:	2 x 12 V = 24 V, not included.
Current cons.:	Normal condition: 170 mA without detectors and no outputs connected. (370 mA in alarm condition.) More information: See "Calculation sheet for power consumption".
Inputs:	* 2 detector loops as standard. (16 loops max by using 7 additional modules BSD-100). * Day/Night alarm organization (D/N): 1 circuit, activated when connected to 0 V. * Monit. of ext. equipment (E): 1 circuit, activated when disconnected from 0 V. * General alarm (GA): 1 circuit, activated when connected to 0 V. * Group disablement (GRU 1 to 3): 3 circuits, freely programmable, activated when connected to 0V.
Outputs:	* Alarm outputs, bells/sounders (AK): Standard 4 circuits, each max. load 1 A / 24 V DC. (20 circuits by using 4 additional modules BSB-100.) * Remote alarm signal (BMA): 1 circuit, max. load 1 A / 24 V DC. (Volt. free relay contact). * Prewarning signal (BMFO): 1 circuit, max. load 100 mA / 24 V DC. (NPN transistor with open collector.) * Remote fault signal (BMF): 1 circuit, max. load 100 mA / 24 V DC. (NPN transistor with open collector.) * Special national function (SP): 1 circuit, max. load 100 mA / 24 V DC. (NPN transistor with open collector.) * Electromagnetic door holders (DHM): 1 circuit, max. load 1 A / 24 V DC. (Normally closed relay contact). * Control output (AUX): 1 circuit, max. load 1 A / 24 V DC. (Volt. free relay contact) * Optional Control output module(s) (BSJ-100 / BSJ-101): Max. 15 modules, each with 16 outputs. * Optional Communication module(s) (data output module(s)) (BSL-100): 20mA current loop or RS232C output.

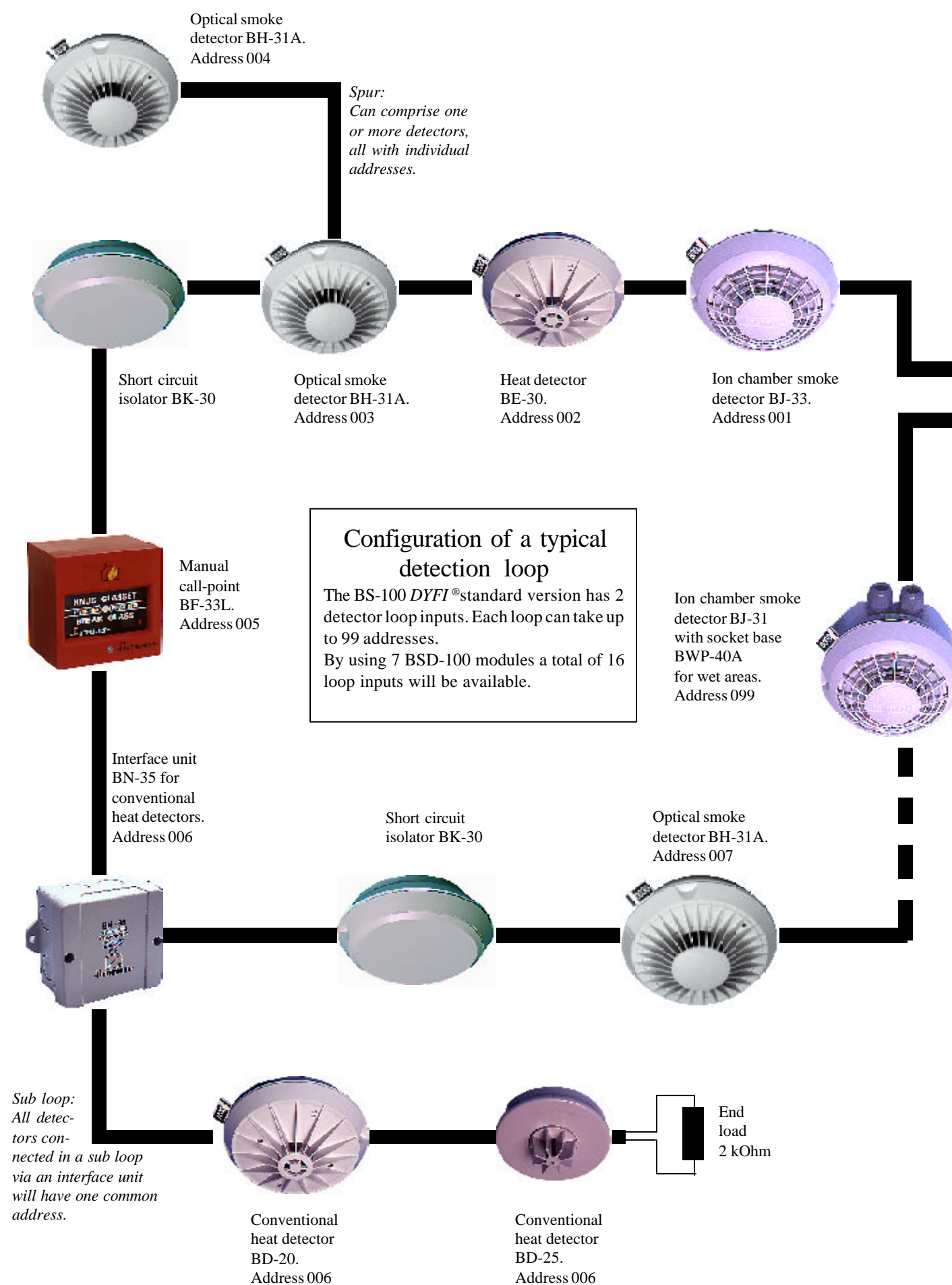
### Approvals:

• American Bureau of Shipping 90-GB23984-X No.17, • Bureau Veritas 3781/3590/AO/O, • Det Norske Veritas A-4024, • Germanischer Lloyd 94552 HH, • Lloyd's Register of Shipping 91/0287, • Polski Rejestr Statkow TE/362/930052/89, • Registro Italiano Navale 5/075/91, • Sjøfartsdirektoratet A-60726/90, • Sjøfartsverket 9074579, • Statens Skibstilsyn Y.20-2-6-19, • USSR Register of Shipping 90.289.262, • Forsikringssekskapenes Godkjenningnemnd S-022/89, • Dansk Forening for Skadeforsikring 232.740.01, • Vation Teknillinen Tutkimuskeskus SM 794/91. • BS-5839 Pt.4 1988.

### Autronica Fire and Security AS

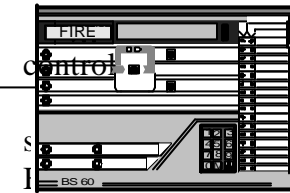
Fire and Security, Trondheim, Norway. Phone: + 47 73 58 25 00, fax: + 47 73 58 25 01.  
Oil & Gas, Stavanger, Norway. Phone: + 47 51 84 09 00, fax: + 47 51 84 09 99.  
Autronica Industrial Ltd., Watford, United Kingdom. Phone: 1923 23 37 68, fax: 1923 22 55 77.

# BS-100 *DYFI*® System design



**Configuration of a typical detection loop**  
The BS-100 *DYFI*® standard version has 2 detector loop inputs. Each loop can take up to 99 addresses. By using 7 BSD-100 modules a total of 16 loop inputs will be available.

Communication line: ASSP, BS



**BS-60** fire alarm panel.  
Here connected as a unit to the

The total number of detector loops including the number of BS-60s must not exceed 16.



## BS-100 *DYFI*® fire alarm control panel

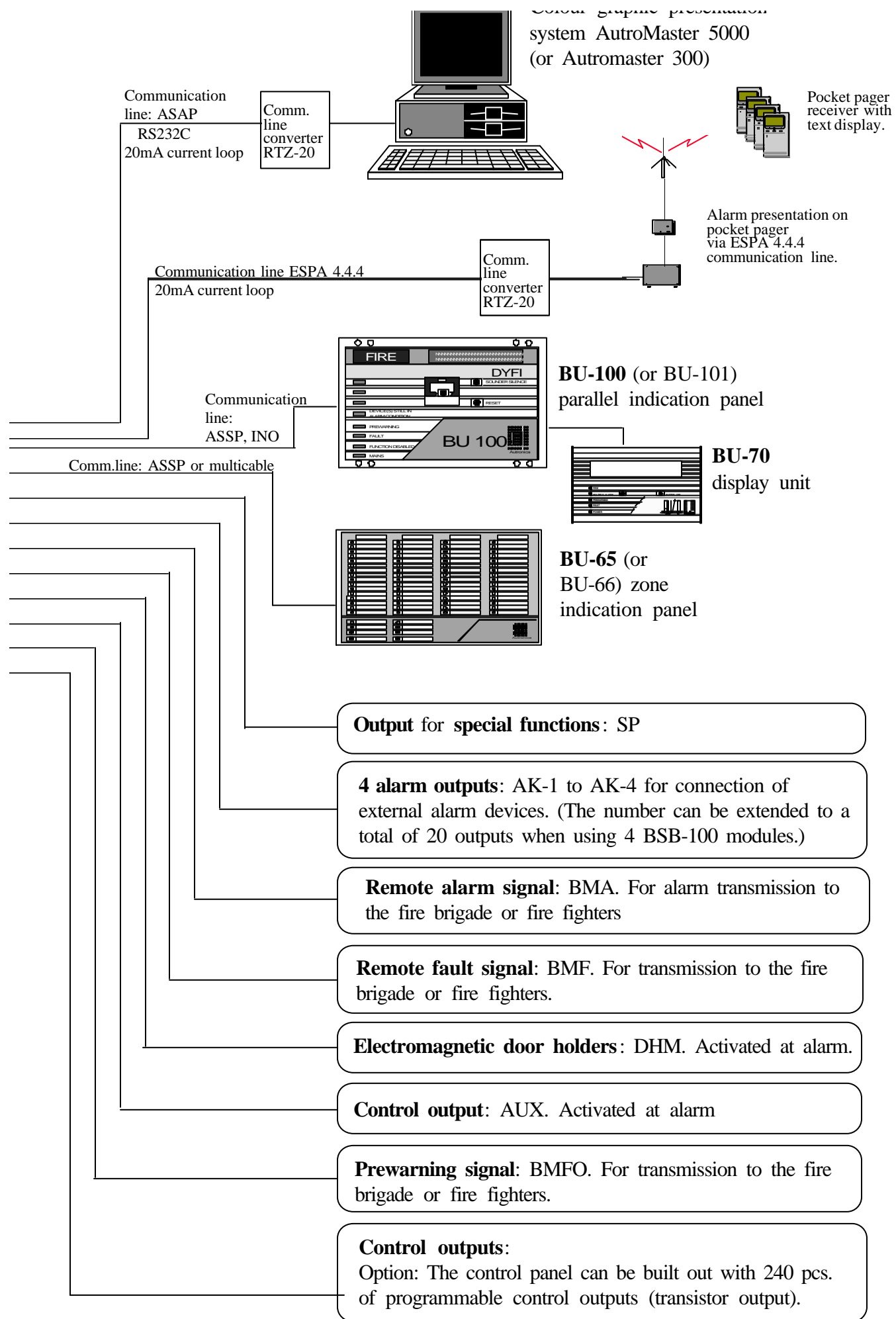
230 V AC mains      24 V DC

General alarm input: GA

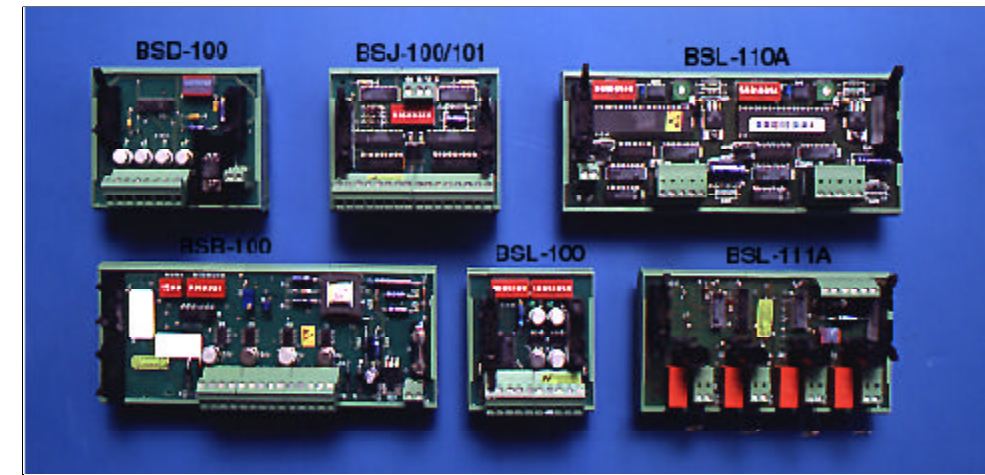
3 inputs for (detector) group disablements: GRU-1 to GRU-3

Input for monitoring of external equipment: E (EKFE)

Input for day-/night alarm organization of the fire alarm control panel: D/N



# BS-100 *DYFI*® expansion modules



BS-100 *DYFI*® is of a modular construction and allows for expansion of all parts of the system.

## BSD-100

### Additional detection loops.

Each BSD-100 module allows for the connection of 2 additional detection loops each with a maximum of 99 addresses. The BS-100 can monitor up to 16 detection loops. (7 additional BSD-100 modules per BS-100).

## BSB-100

### Additional alarm outputs.

The BSB-100 module allows for the connection of 4 additional alarm outputs, each with a maximum of 1 Amp loading at 24 volt DC. The BS-100 can control up to 20 standard sounder outputs (4 additional BSB-100 modules per BS-100).

## BSJ-100 (BSJ-101)

### Programmable control outputs.

Each BSJ-100 and BSJ-101 can provide 16 programmable control outputs. The BS-100 can control up to 240 programmable control outputs. (8 BSJ-100 modules and 7 BSJ-101 modules per BS-100).

## BSL-100

### Communications output.

The BSL-100 module provides a single output which can be selected as either RS232C or 20mA current loop. The module is used to operate remote displays or PC based information systems.

## BSL-110A

### Transmitter unit.

Each BSL-110A module provides facilities via an 12C bus to remotely control sounder outputs or programmable control outputs.

## BSL-111A Receiver unit.

The BSL-111A module is mounted remote from BS-100 and acts as a receiver for the 12C-bus output from any BSL-110A.