Modular Alarm Platform 5000 Overview

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BOSCH
Invented for life

▶ Provides an intuitive control center touch screen user interface in German, English, French, or Dutch

▶ Supports up to 8 LSN Gateways, with up to 127 devices each

▶ Supports up to 500 areas, 1500 addresses, and 1000 users

▶ Supports central station communication through the AT 2000 Communicator

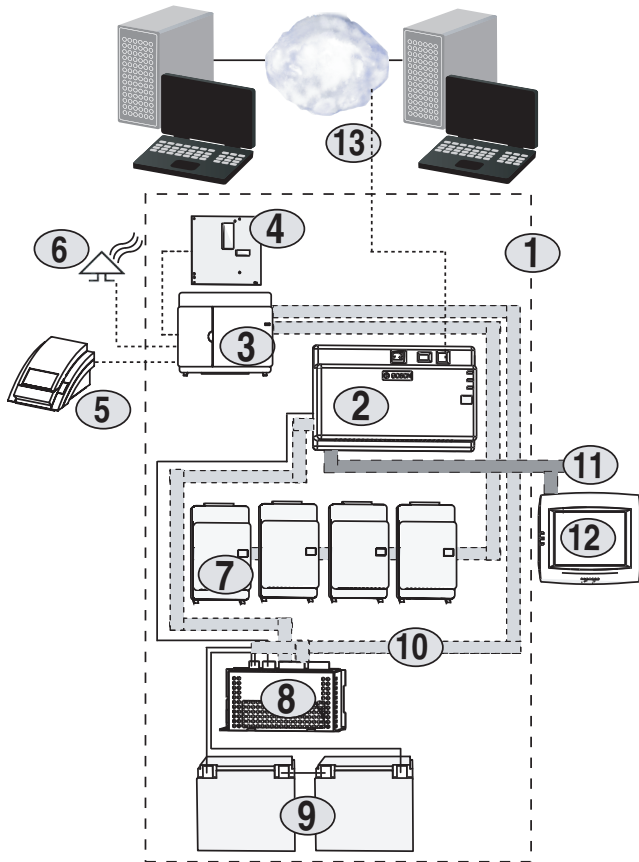▶ Connects to management systems such as Building Integration System (BIS)

The Modular Alarm Platform 5000 system is a scalable solution for medium-to-large applications. The system uses two isolated Bosch Data Buses (BDBs) based on Controller Area Network (CAN) technology, for maximum security and flexibility.

Users can arm and disarm the system using Bosch SmartKey systems. Each control center is ergonomically designed with a graphical color touch screen.

A MAP 5000 system can be fully integrated into a building management system like the Bosch Building Integration System (BIS) through Internet Protocol (IP).

The architecture expands easily to include new required intrusion or hold-up devices. Users can rely on the same intuitive control center interface within an expanded architecture.

System overview

10. Internal Bosch Data Bus (BDB)
    This is the internal backbone of the modular system, providing interoperability between the various MAP modules. It is limited to 6 m (19.5 ft) in total length.

11. External Bosch Data Bus (BDB)
    This bus spans across the premises to connect control centers, LSN Gateways, and supervised remote power supplies. It can be up to 1000 m (3280 ft) in total length.

12. MAP Control Center (IUI-MAP0001)
    Up to 32 control centers.

13. Ethernet Connection
    This allows the MAP system to connect to a management system such as the Bosch Building Integration System (BIS) and to programming software such as the Bosch Remote Programming Software (RPS).

1. MAP Panel Enclosure Kit (ICP-MAP0110)

2. MAP 5000 Main Panel (ICP-MAP5000)
   Supports wired inputs, tamper input, power drive outputs, dry contact outputs, power supply input, auxiliary power output, bus connectors, installer button, and Ethernet jack.

3. MAP DE Module (ICP-MAP0007)
   Supports AT 2000 Communicator and DR2020 Printer connectivity, provides three fully supervised and programmable outputs (intended for sirens, strobes, and other local notification devices), and provides two open-collector outputs.

4. AT 2000 Communicator

5. DR2020 Printer

6. Sirens, Strobes, and Local Notification Devices

7. MAP LSN Gateways (ICP-MAP0010)
   The Modular Alarm Platform 5000 solution supports a maximum of eight gateways. Each gateway supports one loop or two stub configurations.

8. MAP Power Supply 150W (IPP-MAP0005)
   This is the local power supply for the MAP 5000 Main Panel. It has two individually supervised battery circuits, each capable of supporting 24 V, 40 Ah. Additional remote power supplies can be placed on the external Bosch Data Bus (BDB).

9. Batteries
   The MAP Panel Enclosure Kit (ICP-MAP0110) houses either:
   • two 12 VDC, 40 Ah batteries in series on one of the two battery circuits, or
   • four 12 VDC, 18 Ah batteries with two batteries in series on each of the battery circuits.

Functions

Arming and Disarming

Users can arm or disarm the system using Bosch SmartKey systems. The number of SmartKey users is limited by the specific SmartKey devices up to a MAP system maximum of 996 SmartKey users.

Users can also arm or disarm the system using the MAP Control Center (IUI-MAP0001). For each user, a preferred language (English or German) is selected. When the user logs in, the preferred language is used at the control center. The MAP system supports up to 32 control centers and up to 1000 users.

Addresses

The MAP system supports up to 1500 addresses. An address represents a single input, single output, or a single tamper input. Any combination of inputs, outputs, and tamper inputs can be used to realize the maximum number of 1500 addresses system wide.

> **i** **Notice**
> Bosch Data Bus devices do **not** count toward the 1500 available addresses.

Bosch Data Buses with CAN Technology

The MAP system uses two data buses which have CAN technology and are used to connect devices to the MAP 5000 Main Panel (ICP-MAP5000). The first BDB, which can be up to 6 m (19.5 ft) in length from the main panel, is the internal backbone of the modular system, providing interoperability between the various MAP modules. A second, isolated BDB, which can be up to 1000 m (3280 ft) in length from the main panel, is the external bus, spanning across the premises to connect control centers and supervised remote power supplies.

Firmware Upgrades

The firmware of all devices in the MAP system can be upgraded or updated with the Bosch Remote Programming Software (RPS). This allows for on-site or off-site (IP through Ethernet) upgrades or updates.

Languages

For each user, a preferred language (German, English, French, or Dutch) is selected when the user is created. When the user logs in, the preferred language is used at the control center.

Communication with Bosch Security Systems, Inc. Software Packages

The MAP system allows separate communication with Bosch BIS and RPS software packages.

- **Bosch Building Integration System (BIS)**
  The MAP system can report alarm and trouble events, and share its user database with the Bosch Building Integration System (BIS) for full integration of the security system in the BIS application.
- **Bosch Remote Programming Software (RPS)**
  Programming and diagnostic software for control panels that provides remote programming, event log record storage, remote control, and troubleshooting options.

Certifications and approvals

The system is designed to comply with the certifications and standards listed here.

Region	Certification	
Germany	VdS- G VdS-S	Submitted for approval

Region	Certification	
Europe	CE	2004/108/EC EMC Directive (EMC), 2006/95/EC Low-voltage Directive (LVD)
Germany	VdS-S	S 112016 C MAP 5000

Installation/configuration notes

Compatibility Information

Software and Systems

Bosch Building Integration System (BIS)

Bosch Remote Programming Software (RPS)
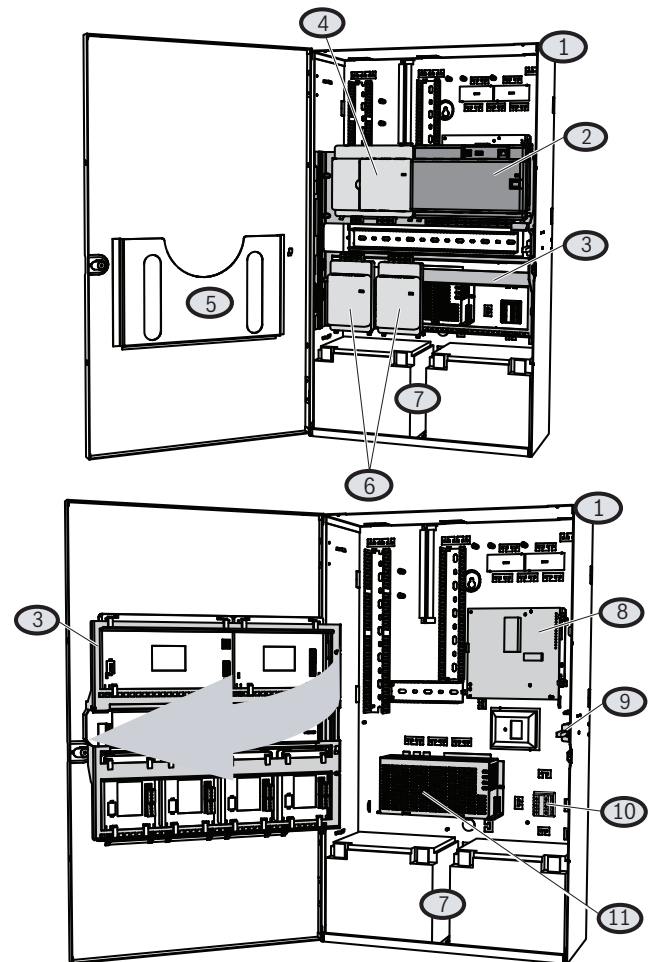
LSN Peripherals

Bosch LSN peripherals.

Wiring Considerations for Devices on the External Bosch Data Bus
- $0.6 \text{ mm}^2 - 1.0 \text{ mm}^2$ (18 AWG – 22 AWG)
- Solid or stranded
- Twisted or untwisted
- Shielded or unshielded
- Up to 1000 m (3280 ft)
- Each peripheral device has two sets of Bosch Data Bus terminals for daisy chain in/out wiring
- Peripheral devices are grounded through the Bosch Data Bus cable
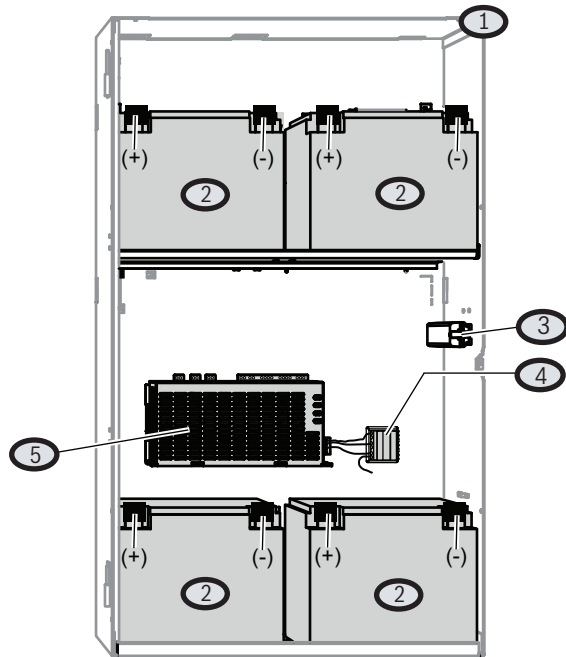
Parts included

Components Located in Panel Enclosure

1. MAP Panel Enclosure Kit (ICP-MAP0110)

2. MAP 5000 Main Panel (ICP-MAP5000)

3. MAP Hinged Mounting Plate (ICP-MAP0025)
   Mounting plate swings open to provide access to internal wiring.

4. MAP DE Module (ICP-MAP0007)

5. Document Tray
   Storage area for literature.

6. MAP LSN Gateway Modules (ICP-MAP0010)
   Up to four LSN Gateway Modules fit on the hinged bracket.

7. Batteries

8. AT 2000 Communicator mounted on the MAP Accessory Mounting Plate (ICP-MAP0020)

9. MAP Panel Enclosure Tamper Switch (ICP-MAP0050)

10. MAP AC Terminal Block (ICP-MAP0065)

11. MAP Power Supply 150W (IPP-MAP0005)

Components Located in a Power Enclosure

A power enclosure kit comes with the enclosure with a tamper switch and lockset, a MAP AC Terminal Block, and assorted cables. It can hold a MAP Power Supply 150W and up to four batteries (12 VDC, 40 Ah each).
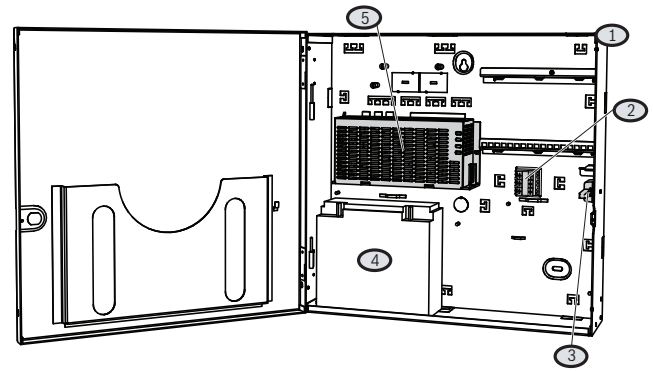

1   MAP Power Enclosure Kit (ICP-MAP0115)

2   Batteries (12 VDC, 40 Ah)

3   MAP Panel Enclosure Tamper Switch (ICP-MAP0050)

4   MAP AC Terminal Block (ICP-MAP0065)

5   MAP Power Supply 150W (ICP-MAP0005)

Components Located in an Expansion Enclosure

The MAP Expansion Enclosure Kit (ICP-MAP0120) can contain a MAP Power Supply 150W (IPP-MAP0005) and two 18 Ah batteries. Use the expansion enclosure for module expansion by using the MAP Hinged Mounting Plate (ICP-MAP0025) mounted inside the enclosure. Fit the MAP LSN Gateways (ICP-MAP0010) and the MAP Accessory Mounting Plates (ICP-MAP0020) on the hinged mounting plate. When the hinged mounting plate is used, the MAP Power Supply 150W (IPP-MAP0005) and batteries cannot fit inside the expansion enclosure.

Power Supply Application

Power supplies can be distributed across the premises to where the power is needed to avoid long power cable runs. The power supply remains fully supervised on the external BDB.

1.   MAP Expansion Enclosure Kit (ICP-MAP0120)

2.   MAP AC Terminal Block (ICP-MAP0065)

3.   MAP Expansion Enclosure Tamper Switch (IPP-MAP0050)

4.   Batteries
      Up to two 12 V, 18 Ah batteries connected in series.

5   MAP Power Supply 150W (IPP-MAP0005)

LSN Gateway Application

The MAP system supports up to eight LSN gateways. The Panel Enclosure Kit (ICP-MAP0110) supports up to four gateways mounted on the MAP Hinged Mounting Plate (ICP-MAP0025); additional gateways can be mounted in MAP Expansion Enclosure Kits (ICP-MAP0120) and connected to the internal or external BDB. Each gateway supports one loop configuration or two stub configurations.

1.   MAP Expansion Enclosure Kit (ICP-MAP0120)

2.   MAP Accessory Mounting Plate (ICP-MAP0020)
      Up to two can be placed on the upper level of the MAP Hinged Mounting Plate

3.   MAP 12V Converter (ICP-MAP0017)
      Up to two can be placed on a MAP Accessory Mounting Plate

4.   SIV Fuse Plate (one on each MAP Accessory Mounting Plate

5.   MAP Hinged Mounting Plate (ICP-MAP0025)
      Field wiring is accessible from the front; internal wiring is easily accessed by swinging the panel open.

6.   MAP LSN Gateway (ICP-MAP0010)
      Up to four optional MAP LSN Gateways fit on the Hinged Mounting Plate)

7.   One loop configuration

8.   Two stub configurations

Rack Mount Application

For specific application requirements, the MAP Expansion Enclosure Kit (ICP-MAP0120) fits into a 19-inch mounting rack. For these requirements, the expansion enclosure contains: the MAP Hinged Mounting Plate (ICP-MAP0025), the MAP 5000 Main Panel (ICP-MAP5000), the MAP DE Module (ICP-MAP0007), and up to four MAP LSN Gateways (ICP-MAP0010). The MAP Power Supply 150W (IPP-MAP0005) is located in a separate enclosure.

ℹ️ **Notice**

When the MAP Expansion Enclosure Kit (ICP-MAP0120) is used in a rack, the batteries cannot be stored in the enclosure. Place batteries on a support shelf which is not part of the MAP 5000 portfolio, but is an optional part of the rack itself.

Technical specifications

Electrical

AC Primary Supply Voltage:	100 VAC (-10%) to 230 VAC (+10%)
AC Line Frequency:	47 Hz to 63 Hz
Power Consumption:	150 W per power supply (up to 32 power supplies)
Absolute Range of DC Bus:	9 VDC to 30 VDC; 28 VDC nominal
Battery Capacity:	Up to 80 Ah per power supply (up to 32 power supplies)
Battery Charge Voltage:	28 VDC
Back-up Time:	Determined by battery capacity and system load

Mechanical

Dimensions

Panel Enclosure (HxWxD):	604 mm x 443 mm x 191 mm (24 in. x 17 in. x 7.5 in.)
Expansion Enclosure (HxWxD):	432 mm x 443 mm x 89 mm (17 in. x 17.4 in. x 3.5 in.)

System Parameters

Number of Addresses

Addresses:	Up to 1500

Number of Areas

Areas:	Up to 500

Number of Devices

MAP LSN Gateways (ICP-MAP0010):	Up to 8; each with either 1 loop or 2 stubs
MAP Command Centers (IUI-MAP0001):	Up to 32
MAP Power Supplies 150W (IPP-MAP0005):	Up to 32
DR2020 Printers:	1

Number of Inputs

Inputs:	Up to eight on-board inputs and one tamper input. Expands up to 1500 addresses.

Number of Users

PINs:	1000

	PINs can include up to 13 digits, supporting a 6-digit user ID and up to a 7-digit passcode.

Number of Outputs

Programmable Outputs on LSN Bus:	Limited to maximum number of addresses system wide
MAP Main Panel (ICP-MAP5000):	two power drive; two dry contact; one auxiliary power
MAP DE Module (ICP-MAP0007):	five total: three supervised and two open-collector outputs

Environmental

Operating Temperature:	-10ºC to +55ºC (+14ºF to +131ºF)
Storage Temperature:	-20ºC to +60ºC (-4ºF to +140ºF)
Relative Humidity:	5% to 95% (non-condensing) at the operating and storage temperatures.
IP Rating:	IP 30, IK04
Environmental Class II	EN60950-1; EN50130-4; EN50131-1; VdS 2110
Use:	Intended for indoor use.

Ordering information

MAP 5000 Main Panel
Provides wiring terminals for tamper and power supply inputs; eight supervised inputs; Form C relay and auxiliary power outputs; switched voltage outputs; two Bosch Data Bus ports, and an Ethernet port.
Order number **ICP-MAP5000-2**

MAP Control Center
Graphical color touch screen with adjustable backlight; built-in speaker with adjustable volume; user-selectable German and English languages.
Order number **IUI-MAP0001-2**

MAP LSN Gateway
Supports up to 127 LSN devices. Up to eight gateways can be supported by a Modular Alarm Platform 5000 system.
Order number **ICP-MAP0010**

MAP DE Module
Provides two RS-232 COM ports; three polarity-reversing supervised programmable outputs for sirens, strobes, and other audiovisual devices; two unsupervised programmable open-collector outputs, and seven dedicated outputs for communicator.
Order number **ICP-MAP0007-2**

MAP Power Supply 150W
Power supply and battery charger unit; converts up to 240 VAC input into 24 VDC and 28 VDC output.
Order number **IPP-MAP0005-2**

MAP 12V Converter
Supports power requirements for 12 V peripherals and communicator interfaces including various AT 2000 Transmission System models.
Order number **ICP-MAP0017**

Accessories

MAP AT2000 Serial Cable
Connection point between the MAP DE Module and the AT 2000 Analog Transmitter
Order number **ICP-MAP0152**

MAP Panel Enclosure Kit
Kit contains one MAP Panel Enclosure, one MAP Hinged Mounting Plate, one MAP Panel Enclosure Tamper Switch, one MAP Enclosure Lockset, and one MAP AC Terminal Block.
Order number **ICP-MAP0110**

MAP Panel Enclosure Tamper Switch
Fits in the MAP Panel and MAP Power Enclosures.
Order number **ICP-MAP0050**

MAP Expansion Enclosure Kit
Contains one MAP Expansion Enclosure, one MAP Expansion Enclosure Tamper Switch, one MAP Enclosure Lockset, and one MAP AC Terminal Block.
Order number **ICP-MAP0120**

MAP Expansion Enclosure Tamper Switch
Fits in the MAP Expansion Enclosure
Order number **ICP-MAP0055**

MAP Power Enclosure Kit
Kit contains one MAP Power Enclosure, one MAP Panel Enclosure Tamper Switch, one MAP Enclosure Lockset, one MAP AC Terminal Block, and an accessory pack containing connection cables.
Order number **ICP-MAP0115**

MAP Hinged Mounting Plate
Fits inside the MAP Panel Enclosure or the MAP Expansion Enclosure and holds up to six system modules
Order number **ICP-MAP0025**

MAP Accessory Mounting Plate
Mounts up to two MAP 12V Converters and one SIV Fuse Plate, or an AT 2000 module
Order number **ICP-MAP0020**

MAP Rack Mounting Kit
Brackets and fasteners for preparing the MAP Expansion Enclosure for rack mounting. Fasteners for mounting to rack **not** included.
Order number **ICP-MAP0035**

MAP Enclosure Lockset
Lock, two keys, and two warranty seals for use on MAP Panel Enclosure, MAP Power Enclosure, or MAP Expansion Enclosure.
Order number **ICP-MAP0060**

MAP AC Terminal Block
Connection point between facility power and MAP Power Supply 150W.
Order number **ICP-MAP0065**

MAP Spare Cable Kit
Kit containing cables and parts used for making electrical connections to MAP devices.
Order number **ICP-MAP0090**

MAP Spare Terminal Block Kit
An assortment of terminal blocks for the various MAP devices.
Order number **ICP-MAP0100**

DR 2020 T, Tabletop version including connection components to BE 2020
Order number

MAP Printer Cable
3 m (9.8 ft), 8-conductor gray PVC-sheathed cable provides connection point between the MAP DE Module and a DR2020 Printer
Order number **ICP-MAP0140**