B8512G Control Panel

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The B9512G Control Panel and the B8512G Control Panel are the new premier commercial control panels from Bosch. B8512G control panels integrate intrusion, fire, and access control providing one simple user interface for all systems.

With the ability to adapt to large and small applications, the B8512G provides up to 99 individually identified points that can be split into 8 areas. The control panel includes a built-in Ethernet port for IP network communications, and is compatible with modules that send events to selected public switched telephone networks (PSTN), IP networks, or cellular network destinations through four programmable route groups.

For users, programmable keypad shortcuts, situation sensitive on-screen help, and a bilingual user interface make system operation simple and easy. With the B8512G, you can:

- Fully integrated intrusion, fire, and access control allows users to interface with one system instead of three
- Supports up to 99 points using a combination of hardwired or wireless points for installation flexibility, and up to 8 areas and 8 doors for up to 500 users
- On-board Ethernet port for Conettix IP alarm communication and remote programming, compatible with modern IP networks including IPv6/ IPv4, AutoIP, and Universal Plug and Play
- Installer-friendly features including on-board USB for easy on-site RPS programming, plus plug-in PSTN and Cellular communication modules for simple installation and future proof upgrades
- Email and text notifications as well as remote control of your system using Android or iOS mobile devices
 - Monitor alarm points for intruder or fire alarms while operating keypads and other outputs (up to 99 programmable outputs including three on-board).
 - Program all system functions local or remote using Remote Programming Software (RPS) or by using basic programming through the keypad.
 - Add up to 8 doors of access control using the optional B901 Access Control Module or D9210C Access Control Interface Module.

The B8512G is a direct replacement for previous G Series control panel models D7412GV4, D7412GV3, D7412GV2, and D7412G.

Functions

Programmable outputs

- Four alarm-output patterns
- Programmable bell test

System response

- High-performance micro-controller provides industry leading system response
- 31 point indexes, including fire supervisory
- Selectable point response time
- Cross point capability
- Fire alarm verification
- Dangerous gas indicator includes carbon monoxide (NFPA 720)
- Watch mode
- Scheduled events (SKEDs) perform several functions, such as turn on (arm) the system, turn off (disarm) the system, bypass and unbypass points, and control relays

User interface

- Supervision of up to 16 keypads
- Custom keypad text is fully programmable through RPS
- Full function menu including customizable shortcuts
- Authority by area and 32 character name for each user
- 14 custom authority levels control user's authority to change, add, or delete passcodes to disarm or bypass areas; and to start system tests
- Programmable primary and secondary language by user and keypad; select from English, Spanish, French, and Portuguese

Area configuration

Area programming offers a wide selection of different system configurations. Make area arming conditional on other areas (master or associate), if desired. You can configure any area for perimeter and interior arming, not requiring a separate area for this function. Link multiple areas to a shared area which is automatically controlled (hallway or lobby). For higher security applications, the Area Re-Arm feature guarantees that areas are always rearmed, and are disarmed for no longer than a specific, configurable, amount of time (for example, service time).

Custom functions

For added convenience, the installer can program custom functions that allow customers to complete complex tasks with one simple action. For example, a custom function can bypass a group of points and arm the system, allowing the user to perform these functions with one easy command. Users can activate custom functions with a keypad, keyfob, token, or card, or the control panel can activate a function in reaction to a faulted point, or automatically through a scheduled event (SKED).

Passcode security

- Two-man rule. Requires two people with two unique passcodes to be present at the time of opening.
- Early ambush. Allows users to verify that the facility is safe by requiring two passcodes. The control panel sends a duress event if the user does not enter the passcode a second time after inspecting the premises.

• Dual authentication. Requires two forms of identification before processing certain system commands, including turning off the system and opening doors. A standard system user must have a passcode, a credential (token or card), and appropriate command authority permissions assigned in the door and keypad's assigned area.

Easy exit control

The control panel changes from one On (armed) state to another without turning off (disarming) the system. For example, if you change the state from Part On (Perimeter Arm) to All On (Master Arm), the control panel complies and reports the change. Easy Exit Control reduces the number of keystrokes, simplifying system operation.

Programmable passcode-controlled menu list

Passcode-controlled shortcuts provide users only with the options and information pertinent to them, simplifying system operation.

Flexible control

The system provides the flexibility to choose added convenience or high security. For example, you can restrict to a keypad's immediate local area turning on (arming) and turning off (disarming) the system with a passcode, even if the user has access to other areas. This is particularly useful for high security areas, where a user may have access to the area, but would prefer to only turn off (disarm) the area individually rather than with the rest of the system. Another option is to program the system to turn off all areas the user can access from any keypad.

Monitor Delay/Delayed Response

Create a special point index that delays the reaction of a point for a specified time (up to 1 hour in minutes and seconds). This delay provides time for the specified condition to reset before activating any annunciation. The system can annunciate locally and send a report, if desired. When the system is armed, the point can respond like a normal point – providing dual functionality. Use this feature to ensure that perimeter doors have not been propped open, or to monitor critical areas such as computer rooms and safes, for example.

System users

The system supports up to 500 users. Each user can have a personalized passcode, a wireless keyfob, and a credential to control the system. User passcodes contain three to six digits. You can assign passcodes to one of 14 customized authority levels in each area that can be restricted to operate only during certain times. You can program a primary and secondary language for each user and by keypad (select from English, Spanish, French, and Portuguese). The keypad changes to the user's programmed language when the user enters his passcode or holds the Help key.

Communication formats

The control panel prioritizes and sends reports to four route groups. Network and phone communications can use either the Modem4 or the Contact ID communications formats. Each group has a programmable primary and backup destination. The control panel provides flexible communications for most central stations with reporting capabilities such as:

- Individual point numbers
- Opening or closing reports by user and area number
- Remote programming attempts
- Diagnostic reports

IP communication

The control panel uses on-board Ethernet (IP) connection (the on-board Ethernet port is excluded on "E" versions) to communicate with a Conettix D6600 or a Conettix D6100IPv6 Communications Receiver/ Gateway.

The control panel can optionally communicate with a Conettix D6600 or a Conettix D6100IPv6

Communications Receiver/Gateway using a B426 Conettix Ethernet Communication Module or a Conettix Plug-in Cellular Communicator (B440/B441/ B442/B443).

Using Conettix IP communication offers a secure path that includes anti-replay/anti-substitution features and provides enhanced security with AES 256-bit encryption (using Cipher Block Chaining (CBC)). The control panel supports Domain Name System (DNS) for both remote programming and central station communication. DNS provides ease of use, eliminating the need to use static IP addresses as your reporting destination, and accommodates a simple solution for central station disaster recovery. IP Setup is available via the keypad Installer menu and the remote programming software, eliminating the need to use complicated internet programming tools such as ARP and Telnet. The control panel supports both IPv6 and IPv4 networks.

For more information on the enhanced communications capabilities, refer to *RPS Help* or the control panel's *Program Entry Guide*.

Communication paths

The control panel accommodates up to four separate phone and four separate network paths to the central station receiver. When resetting alarms or turning a system on and off, the user is identified by name and number.

Personal notification

The control panel can send text messages and emails for personal notification over Ethernet or using a cellular communicator. You can configure up to 32 destinations using a combination of cellular phone numbers and email addresses. The control panel sends notifications in the user's programmed primary language.

Firmware updates

The system allows remote firmware updates through Remote Programming Software (RPS) using the RPS Firmware Update Wizard. The Firmware Update Wizard uses the on-board USB connection or the on-board Ethernet (IP) connection (the on-board Ethernet port is excluded on "E" versions) to transmit firmware updates.

The control panel can optionally receive firmware updates from RPS using a B426 Conettix Ethernet Communication Module or a Conettix Plug-in Cellular Communicator (B440/B441/B442/B443). **Notice!** Cellular firmware updates require more time than Ethernet updates and carrier data rates apply.

- Control panel updates. Remotely update the control panel firmware for easy feature enhancements without replacing ROM chips.
- Module update support. Remotely update the firmware on connected SDI2 modules for easy feature enhancements without visiting each individual module.

A wide variety of input options

Each point:

- Accommodates normally-open (NO) and normally-closed (NC) devices with end-of-line (EOL) resistor supervision.
- Accepts programming for fire, gas, fire supervisory, or intrusion applications.
- Supports hardwired and wireless devices.
- Supports IP cameras by Bosch as point sources.

IP camera support

The control panel can use its on-board Ethernet to connect directly to Bosch IP cameras. The control panel communicates with Bosch IP cameras, allowing the camera's video motion detection to activate points on the control panel and control panel events to trigger camera actions, including sending video snapshots via email.

Security and fire detection

The control panel provides eight on-board points, and up to 91 additional off-board points (depending on model and expansion interfaces). You can program individual points to monitor some types of burglar alarms, fire alarms, and supervision devices.

Event log

The event log stores up to 2048 local and reported events. The event log includes time, date, event, area, point, and user. View the event log from a keypad or use RPS to remotely retrieve event information. When the event log reaches a programmed threshold of stored events, it can send an optional report to a receiver.

Scheduled events (SKEDs)

The internal clock and calendar start individually scheduled events (SKEDs). SKEDs perform functions such as turn on or off, relay control, or point bypassing.

The control panel offers:

- 40 scheduled events with up to 31 different functions
- 8 opening windows and 8 closing windows
- 8 user group windows
- Day-of-week, date-of-month, or holiday only schedules
- 4 holiday schedules of 366 days (leap year)

Programming

Installers can perform limited programming on-site with a keypad (critical parameters; such as account IDs, central station and RPS IP addresses and phone numbers, reporting formats, and more). They can also do full programming on-site or remotely (attended or unattended) with RPS. A programmable system passcode prevents unauthorized remote programming.

Diagnostics

Keypads and RPS offer diagnostic help for monitoring and troubleshooting. The diagnostics features allow you to view the status of the on-board Ethernet connection, plug-in communicators, and SDI2 devices, including inputs, outputs, and RF. The features provide the status of the control panel and its connected devices, such as firmware version, power, and missing conditions. View the status of each area. Diagnostics also include connection data for connected wireless and Ethernet devices.

Certifications and approvals

Region	
US	UL 365 - Police Station Connected Burglar Alarm Units and Systems
	UL 609 - Local Burglar Alarm Units and Systems
	UL 636 - Holdup Alarm Units and Systems
	UL 864 - Control Units and Accessories for Fire Alarm Systems (Commercial Fire)
	UL 985 - Household Fire Warning System Units
	UL 1023 - Household Burglar Alarm System Units
	UL 1076 - Proprietary Burglar Alarm Units and Systems
	UL 1610 - Central Station Burglar Alarm Units
	CP-01-2010-Control Panel Standard - Features for False Alarm Reduction
	CSFM - California Office of The State Fire Marshall
	FCC Part 15 Class B
Canada	CAN/ULC S304 - Signal Receiving Centre and Premise
	CAN/ULC S545 - Residential Fire Warning System Control
	ICES-003 - Indormation Technology Equipment (ITE)
	ULC-ORD C1023 - Household Burglar Alarm System Units
	ULC-ORD C1076 - Proprietary Burglar Alarm Units and System
	CP-01-2010-Control Panel Standard - Features for False Alarm Reduction

Installation/configuration notes

Compatible products

Keypads

B942/B942W Touch Screen Keypad (SDI2)

B930 ATM Style Alphanumeric Keypad (SDI2) (SDI2)

B926F Fire Keypad (SDI2)

B925F Fire Keypad (SDI2)

B921C Two-line Capacitive Keypad (SDI2)

B920 Two-line Alphanumeric Keypad (SDI2) (SDI2)

B915 Basic Keypad (SDI2)

D1255 Series Keypads

D1260 Series Keypads

D1256RB Fire Keypad

D1257RB Remote Fire Alarm Annunciator

Transformers

D1640 16.5 VAC 40 VA Transformer D1640-CA 16.5 VAC 40 VA Transformer for Cananda

Enclosures

B8103 Universal Enclosure (White) D8103 Universal Enclosure (Gray) D8108A Attack Resistant Enclosure D8109 Fire Enclosure

Accessories

B56 Keypad Surface Mount Box

B96 Keypad Trim Bezel

B99 USB Direct Connect Cable

B501-10 Interconnect wiring cables (pack of 10)

D122 Dual Battery Harness

D122L Dual Battery Harness with Long Leads

D161 Dual Modular Telephone Cord (7 f)

D162 Modular Telephone Cord (2 ft)

D166 Telephone Jack (RJ31X)

Detectors

D7050 Series Addressable Photoelectric Smoke and Smoke Heat Detector Heads

F220-B6PM/S 12/24 VDC Addressable Detector Bases with POPITs

F220-B6 12/24 VDC Two-wire Base

F220-B6R Standard 12/24 VDC Four-wire Base)

F220-P Photoelectric Smoke Detector

F220-PTH Photoelectric Smoke Detector with +135°F (+57°C) Heat Sensor

F220-PTH Photoelectric Smoke Detector with +135°F (+57°C) Heat Sensor and Carbon Monoxide Sensors

F220-B6C 12/24 VDC Four-wire Base with Auxiliary Form C Relay

FCC-380 Carbon Monoxide Detector

MX775i Addressable PIR Detector

MX794i Long Range Multiplex PIR Detector

MX934i Addressable PIR Detector MX938i Addressable PIR Detector

ZX776Z PIR Detector

ZX794Z Long Range PIR Detector

ZX835 TriTech Microwave/PIR Detector

ZX935Z PIR Detector

ZX938Z PIR Detector

ZX970 PIR/Microwave Detector

Bosch conventional detectors, including Professional Series, Blue Line Gen2, Blue Line, Classic Line, Commercial Line, and Ceiling Mount motion detectors, as well as glass break, seismic, request-to-exit, photoelectric, heat, and smoke detectors.

Modules

B208 Octo-input Module

B299 POPEX Module

B308 Octo-output Module

B426 Conettix Ethernet Communication Module

B430 Plug-in Telephone Communicator

B440 Conettix Plug-in Cellular Communicator (using 3G)

B441 Conettix Plug-in Cellular Communicator (using CDMA)

B442 Conettix Plug-in Cellular Communicator (using GPRS for Latin America)

B443 Conettix Plug-in Cellular Communicator (using HSPA+ for Canada)

B450 Conettix Plug-in Communicator Interface

B520 Auxiliary Power Supply Module

B600 Retrofit (ZONEX) Module

B810 wireless receiver (RADION)

B820 SDI2 Inovonics Interface Module

B901 Access Control Module

D113 Battery Lead Supervision Module

D125B Dual Class B Initiating Module

D126 Standby Battery (12 V, 7 Ah)

D129 Class A Initiating Module

D130 Auxiliary Relay Module

D133 Single Relay Module D134 Dual Relay Module D185 Reverse Polarity Signaling Module D192G Class "B", Style Y Bell Circuit Supervision D1218 Battery (12 V, 18 Ah) D8125 Addressable Expansion Module D8125MUX Multiplex Bus Interface D8128D OctoPOPIT Eight-point Expander D8129 Octo-relay Module D8130 Door Release Module D9127U/T POPIT Module DS7461i Single-zone Input Module DS7465i Input-output Module D9210C Access Control Interface Module ICP-EZTS Cover and Wall Tamper Switch

D132A Smoke Detector Reversing Relay Module

ICP-SDI-9114 SDI Splitter

Programming

Remote Programming Software (RPS or RPS-LITE) v6.00 or higher

Conettix receivers

(Managed and configured with Conettix D6200 Programming/ Administration Software v2.10)

Conettix D6600 Communications Receiver/Gateway (with only D6641 line cards installed) with CPU version 01.10.00

Conettix D6100IPv6 Communications Receiver/Gateway with CPU version 61.10.00

Conettix D6100i Communications Receiver/Gateway with CPU version 61.10.00

RADION wireless from Bosch

B810 wireless receiver (RADION)

RFBT-A bill trap

RFDL-11-A TriTech motion detector

RFDW-RM-A recessed mount door/window contact

RFDW-SM-A surface mount door/window contact

RFGB-A glass break detector

RFIN-A inertia detector

RFKF-A two-button keyfob

RFKF-FB-A four-button keyfob

RFKF-TB-A two-button keyfob

RFPB-SB-A single-button panic

RFPB-TB-A two-button panic

RFRP-A repeater

RFSM-A smoke detector

RFPR-12-A PIR motion detector

RFPR-C12-A PIR curtain motion detector

RFUN-A universal transmitter

Inovonics Wireless

B820 SDI2 Inovonics Interface Module

 $\mathsf{ENKIT}\mbox{-}\mathsf{SDI2}\xspace$ SDI2 Inovonics Interface and Receiver Kit. Includes B820 and $\mathsf{EN4200}\xspace$

EN1210 Universal Transmitter (Single-input)

EN1210EOL Universal Transmitter with EOL Resistor

EN1210W Door-Window Transmitter with Reed Switch

 $\mathsf{EN1215EOL}$ Universal Transmitter with Wall Tamper, Reed Switch, and EOL Resistor

EN1223D Water-resistant Pendant Transmitter (Double-button)

EN1223S Water-resistant Pendant Transmitter (Single-button)

EN1224-ON Multiple-Condition Pendant Transmitter

EN1233D Necklace Pendant Transmitter (Double-button)

EN1233S Necklace Pendant Transmitter (Single-button)

EN1235D Beltclip Pendant Transmitter (Double-button)

EN1235DF Fixed-location Transmitter (Double-button)

EN1235S Beltclip Pendant Transmitter (Single-button)

EN1235SF Fixed-location Transmitter (Single-button)

EN1247 Glass-break Detector Transmitter

EN1249 Bill Trap Transmitter

EN1242 Smoke Detector Transmitter

EN1260 Wall Mount Motion Detector

EN1261HT High Traffic Motion Detector

EN1262 Motion Detector with Pet Immunity

EN1265 360° Ceiling Mount Motion Detector

EN4200 Serial Receiver

EN5040-T High Power Repeater with Transformer

Parts included

The B8512G includes the following:

Quant. Component

1 B8512G

Literature pack

1

1

- UL Installation Instructions
- Owner's Manual
- Release Notes
- SIA Quick Reference Guide
- Literature CD containing product literature

The B8512G-E is available only in kits. Refer to *Ordering information*.

Each B8512G-E control panel kit includes the following:

Quant. Component

- 1 B8512G-E (without on-board Ethernet port)
- 1 Plug-in communicator (telephone or cellular, depending on the kit)
- 1 Plug-in Transformer (16.5 VAC 40 VA)
- 1 Control panel enclosure
- 1 Literature pack
 - UL Installation Guide
 - Owner's Manual
 - Release Notes
 - SIA Quick Reference Guide
- 1 Literature CD containing product literature

Technical specifications

Properties

Dimensions	10.625 in x 7.75in x 1.875 in (26.99 x 19.69 x 4.76 cm)
Weight	1.95 lbs (0.88kg)

Environmental considerations

Relative humidity	5% to 93% at +32°C (+90°F)
Temperature (operating)	0°C to +49°C (+32°F to +120°F)

Power requirements

Current (maximum)	Standby: 180 mA Alarm: 260 mA
Output (alarm)	2 A at 12 VDC
Output (auxiliary, continuous power, and switched auxiliary combined)	1.4 A at 12 VDC nominal
Voltage (operating)	12 VDC nominal
Voltage (AC)	16.5 VAC 40 VA plug-in transformer (D1640/D1640-CA)

Wiring

Terminal wire size	12 AWG to 22 AWG (2.0 mm to 0.65 mm)
SDI2 wiring	Maximum distance – Wire size (unshielded wire only): 7,500 ft (2,286 m) – 22 AWG (0.65 mm)

Communications

Ethernet

One on-board Ethernet connector*

Number of...

Areas	8
Custom functions	8
Events	Up to 2048
Passcode users	500, plus 1 Installer passcode
Points	99 (8 on-board, up to 91 off-board)
Programmable outputs	99 (3 on-board, up to 96 off-board)
RF points	91
SKEDs	40

*The "E" control panels do not include an on-board Ethernet connector.

Ordering information

B8512G/B8512G-E

The B8512G is available individually or in kits. The B8512G-E is available only in kits. For kits, refer to *Quick Selection Guide (B9512G/ B8512G Kits)* on the Documents tab of the control panel's Product Page at us.boschsecurity.com. Order number **B8512G**

Accessories

B520 Auxiliary Power Supply Module

Provides auxiliary power to 12VDC devices or to SDI2 modules. Order number **B520**

B208 Octo-input Module

Provides 8 programmable inputs. Order number **B208**

B308 Octo-output Module

Provides 8 programmable relays. Order number **B308**

SDI2 Inovonics Interface and Receiver Kit

Kit containing B820 and EN4200 for use on SDI2 bus panels.

Order number ENKIT-SDI2

D122 Dual Battery Harness

Harness with circuit breaker. Connects two batteries to a compatible control panel. Order number **D122**

D122L Dual Battery Harness with Long Leads

Color-coded harness with circuit breaker and leads measuring 89 cm (35 in.). Connects 12 V batteries to compatible control panels. Order number **D122L**

D126 Standby Battery (12 V, 7 Ah)

A rechargeable sealed lead-acid power supply used as a secondary power supply or in auxiliary or ancillary functions. Order number **D126**

D1218 Battery (12 V, 18 Ah)

A 12 V sealed lead-acid battery for standby and auxiliary power with two bolt-fastened terminals. Includes hardware for attaching battery leads or spade connectors Order number **D1218**

D137 Mounting Bracket

Used to mount accessory modules in D8103, D8108A, and D8109 enclosures. Order number **D137**

D138 Mounting Bracket, Right Angle

Used to mount accessory modules in D8103, D8108A, and D8109 enclosures. Order number **D138**

D1640 Transformer

System transformer rated at 16.5 VAC, 40 VA. Order number **D1640**

D1640-CA Transformer

For use in Canada. System transformer rated at 16.5 VAC, 40 VA. Order number **D1640-CA**

D8004 Transformer Enclosure

For applications such as fire alarm that might require a transformer enclosure. Order number **D8004**

D9002-5 Mounting Skirt

Mounts inside B8103, D8103, D8108A, and D8109 enclosures. Can accept up to six standard 7.62 cm x 12.7 cm (3 in. x 5 in.) cards. Order number **D9002-5**

D101 Lock and Key Set

Short-body lock set with one key supplied. Uses the D102 (#1358) replacement key. Order number **D101**

D110 Tamper Switch

Screw-on tamper switch that fits all enclosures. Shipped in packages of two. Order number **D110**

ICP-EZTS Dual Tamper Switch

Combination tamper switch with a wire loop for additional tamper outputs. Order number ICP-EZTS

B8103 Enclosure

White steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.). Order number B8103

D8103 Enclosure

Grey steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.). Order number D8103

D8108A Attack Resistant Enclosure

Grev steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.). UL Listed. Includes lock and key set. B520, B4512, and B5512 require the B12 mounting plate. Order number D8108A

D8109 Fire Enclosure

Red steel enclosure measuring 40.6 cm x 40.6 cm x 8.9 cm (16 in. x 16 in. x 3.5 in). UL Listed. Includes a lock and key set.

Order number D8109

BATB-40 Battery Box\Enclosure

The BATB-40 Battery Box holds two dry or wet cell batteries. The box can be used with fire alarm systems or intrusion systems. Order number BATB-40

BATB-80 Battery Box\Enclosure with Shelf

The BATB-80 Battery Box holds up to four dry or wet cell batteries. The box can be used with fire alarm systems or with intrusion systems. Order number BATB-80

Software Options

RPS Kit (USB)

Account management and control panel programming software with USB security key (dongle). Order number D5500C-USB

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