

## ADDENDUM TO THE CONTRACT DOCUMENTS

	ADDENDUM NO. 002
	Project: Solano Community College District Fairfield Campus Baseball-Softball Clubhouses Project Project Number: 22-003
	Date: November 01, 2021

**Addendum No. 002 – The following clarifications are provided and must be added/considered when completing your bid:** Acknowledgement of receipt of this **Addendum No. 002**, is required on the Bid Form. Please clearly note the addendum date and number.

### **ITEM NO. 1 – GENERAL INFORMATION**

#### **1.1. DOCUMENT 00 01 20 – LIST OF SCHEDULES**

- Replace Construction Schedule section with the following:
  - ~~Project Duration: March 7<sup>th</sup>, 2021 – July 1<sup>st</sup>, 2021~~
  - Project Duration: March 7<sup>th</sup>, 2022 – July 1<sup>st</sup>, 2022

#### **1.2. DOCUMENT 00 52 13 – AGREEMENT**

- Replace Section 4. Time for Completion with the following:
  - ~~Time for Completion: It is hereby understood and agreed that the Work under this Contract shall be completed by July 1<sup>st</sup>, 2021 (“Contract Time”)~~
  - **Time for Completion:** It is hereby understood and agreed that the Work under this Contract shall be completed by July 1<sup>st</sup>, 2022 (“Contract Time”)

#### **1.3. DOCUMENT 00 55 00 – NOTICE TO PROCEED**

- Date of Completion updated to the following:
  - ~~the date of completion is July 1<sup>st</sup>, 2021~~
  - the date of completion is July 1<sup>st</sup>, 2022

#### **1.4. DOCUMENT 01 32 13 – SCHEDULING OF WORK**

- Section 1.03 Construction Schedule dates updated to the following:
  - ~~Notice to Proceed – March 7<sup>th</sup>, 2021~~
  - ~~Final Project Completion – July 1<sup>st</sup>, 2021~~
  - Notice to Proceed March 7<sup>th</sup>, 2022
  - Final Project Completion July 1<sup>st</sup>, 2022

**1.5. ALTERNATE #01: INTRUSION ALARM SYSTEM – ADDITIONAL INFORMATION**

- Contractor shall provide an Intrusion Alarm system and install in each clubhouse for a complete and operational installation. The system shall be Bosch or approved equal. See attached Intrusion Alarm Devices PDF for specific equipment. Contractor shall install the Intrusion Alarm system in the Coach’s Office with a keypad near the clubhouse entry door, door contacts installed in the clubhouse entry door & jamb, motion detector in the Coach’s Office, and a motion detector in the common area. The system shall be connected to the IDF for monitoring over the ethernet system on campus. Contractor shall provide the required software and coordinate with the Solano Community College IT department for software installation for monitoring. Contractor shall coordinate with Solano Community College departments as required for a complete and operational Intrusion Alarm system.

**ITEM NO. 2 – DRAWINGS**

**2.1.** *None*

**ITEM NO. 3 – RESPONSES TO QUESTIONS SUBMITTED**

**3.1.** *None*

**List of Attachments:**

- Intrusion Alarm Devices – Product Information

END OF DOCUMENT

# B8512G Control Panels

www.boschsecurity.com



**BOSCH**  
Invented for life



- ▶ Fully integrated intrusion, fire, and access control allows users to interface with one system instead of three
- ▶ Provides up to 99 points using a combination of hardwired or wireless devices for installation flexibility, and up to 8 areas and 8 doors for up to 500 users
- ▶ On-board Ethernet port for Conetix IP alarm communication and remote programming, compatible with modern IP networks including IPv6/IPv4, Auto-IP, and Universal Plug and Play
- ▶ Installer-friendly features for simple installation and communications, including on-board USB for easy on-site RPS programming, plus support for Remote Connect Service (not available in Europe, the Middle East, or Africa), and plug-in PSTN and cellular communication modules for simple installation and communications
- ▶ Remote Security Control (RSC) app which allows users to control their security systems – and view system cameras - remotely from mobile devices such as phones and tablets

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 can communicate through its built-in Ethernet port (not applicable to “E” control panels), or through compatible plug-in modules that can send events over the public switched telephone network (PSTN) or over cellular network communications.

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:

- Monitor alarm points for intruder, gas, or fire alarms.
- 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 control panel models D7412GV4, D7412GV3, D7412GV2, and D7412G.

## Functions

### Programmable outputs

- Four alarm-output patterns
- Programmable bell test

### Point response

- Selectable point response time
- Selectable EOL values and configuration
- Cross point capability
- Fire alarm verification
- Dangerous gas indicator includes carbon monoxide (NFPA 720)
- Watch mode
- Selectable point response time

### User interface

- Supervision of up to 32 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 to restrict system features that each user can access
- Programmable primary and secondary language by user and keypad; select from English, Spanish, French, and Portuguese

### Area configurations

Link multiple areas to a shared area such as a lobby or common entryway. The shared area then automatically turns On (arms) when all associate areas are armed and turns Off (disarms) when any one associate area is disarmed. 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.

### Door control

Using the B901 Access Control Module or D9210C Access Control Interface Module, the control panel provides a fully supervised access control solution. The solution offers 14 programmable levels of access authority. Authority for door access is controlled by the user level, the group of the user, the time of day, the door state, and the area armed (On/Off) state.

### 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.

### 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. 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 one of two communication formats: Modem4, Contact ID. 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 can use IP to communicate with a Conettix D6600 or a Conettix D6100IPv6 Communications Receiver/Gateway. Use one of the following for IP:

- The on-board Ethernet connection (the on-board Ethernet port is excluded on “E” versions).
- A B426.
- A plug-in cellular communicator (B440/B440-C/B441/B441-C/B442/B443/B444).

Conettix IP communication provides a secure path that includes anti-replay/anti-substitution features, and enhanced security with up to 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. The control panel supports both IPv6 and IPv4 networks.

### 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.

### Bosch Remote Connect (Cloud)

Remote Connect simplifies connections from RPS, and the Remote Security Control app, using Bosch Cloud services. This service creates a secure connection to the control panel without specific router settings or the need for a static IP address or DNS.



#### Notice

The Bosch Remote Connect service is not available in Europe, the Middle East, or Africa.

### Firmware updates

The system allows remote firmware updates:

- 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.

Firmware updates occur through Remote Programming Software (RPS) and 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 transfer firmware updates.

The control panel can optionally receive firmware updates from RPS. Use one of the following communication methods:

- B426
- Plug-in cellular communicator: B440/B440-C/B441/B441-C/B442/B443/B444



#### Notice

##### Data rate apply

Cellular firmware updates require more time than Ethernet updates and carrier data rates apply.

### A wide variety of input options

Each point:

- Single 1 k $\Omega$ , single 2 k $\Omega$ , dual 1 k $\Omega$  (1 k $\Omega$  + 1 k $\Omega$ ), and No EOL (end-of-line) (EOL) resistor options (for on-board and B208 inputs)
- Programmable for Fire, Intrusion, Access, Gas, and Supervisory devices
- Supports hardwired and wireless devices
- Supports IP cameras by Bosch as point and output devices

### IP camera support

The control panel can integrate directly with Bosch IP cameras, using them as fully supervised points and outputs.

Integration of cameras allows the camera’s video motion detection to activate points on the control panel. The control panel’s virtual outputs can be configured 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 several 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)

### Dual bus and SDI keypad retrofits

The dual SDI2 device bus design provides greater installation flexibility, such as bus isolation for Intrusion and Fire. To use popular SDI keypads (for example D1255 and D1260), program one of the two SDI2 buses for SDI operation.

### ZONEX and POPEX retrofits

To retrofit legacy Bosch control panels that use ZONEX and POPEX devices, the control panel is compatible with the B600 Retrofit (ZONEX) Module. The B600 adds two ZONEX buses to the control panel which can connect to existing legacy point bus (POPEX) devices (for example, the D8125).

### 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 wired and wireless devices. 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.

### Remote Security Control app

The Remote Security Control (RSC) app allows users to control their security systems remotely from their devices. Users can:

- Turn their security system On or Off
- Turn specific areas On or Off
- Control outputs for applications such as lighting control
- View live video from Bosch IP cameras
- Grant access remotely by unlocking and locking doors

The app requires the installing dealer to create a Remote Access Profile for users, and to install the profile on their devices.

### Bosch Video Management System integration

With Bosch Video Management System (Bosch VMS) and an intrusion system, the VMS operator has a single user interface to monitor and control the intrusion system combined with video surveillance. With Bosch VMS and a control panel, the operator can, for example:

- View videos triggered by intrusion events, including all relevant information such as areas, point, and user show in the display with the event.
- View areas, points, outputs, and doors – with their statuses – on the Bosch VMS map, providing the exact location in the system.
- Turn on (arm) and turn off (disarm) areas.
- Bypass and unbypass points.
- Lock and unlock doors (Bosch VMS 6.0 and higher).

Requirements to integrate Bosch VMS with a control panel:

- A licensed Bosch VMS system using Professional Editions v5.5 or higher or Bosch VMS Enterprise Edition v5.5 or higher.
- Expansion license to integrate the intrusion control panel. One license needed per control panel. Order number MBX-XINT-xx for the expansion license added to a Bosch VMS base license. Refer to the Bosch Video Management Software product page on the Bosch website, [www.boschsecurity.com](http://www.boschsecurity.com).
- Access to Remote Programming Software (RPS).

### Certifications and approvals

Region	Regulatory compliance/quality marks	
USA	ANSI-SIA	CP-01-2010-Control Panel Standard - Features for False Alarm Reduction
Australia	RCM	[B9512G]
	RCM	[B8512G]
	RCM	ACMA
Europe	CE	EMC, LVD, RoHS [B9512G, B9512G-E, B8512G, B8512G-E]
USA	UL	[B9512G, B9512G-E, B8512G, B8512G-E, B299, B600, B901, B925F, B926F]
	UL	UL 294 - Standard for Access Control Units and Systems
	UL	UL 365 - Police Station Connected Burglar Alarm Units
	UL	UL 609 - Standard for Local Burglar Alarm Units and Systems
	UL	UL 636 - Holdup Alarm Units and Systems
	UL	UL 864 - Standard for Control Units and Accessories for Fire Alarm Systems
USA	UL	UL 985 - Household Fire Warning System Units

Region	Regulatory compliance/quality marks	
	UL	UL 1023 - Household Burglar Alarm System Units
	UL	UL 1076 - Proprietary Burglar Alarm Units and Systems
	UL	UL 1610 - Central Station Burglar Alarm Units
	UL	UL 1635 - Standard for Digital Alarm Communicator System Units
	FM	Central Station
	FM	Local Protective Signaling
	FM	Remote Station
	CSFM	California State Fire Marshal (see our website)
	FCC	Part 15 Class B
	FDNY-CoA	Fire Department of New York City [B9512G, B9512G-E, B8512G, B8512G-E]
Canada	ULC	[B9512G, B9512G-E, B8512G, B8512G-E, B299, B600, B901, B925F, B926F]
	ULC	CAN/ULC S303 - Local Burglar Alarm Units and Systems
	ULC	CAN/ULC S304 - Standard for Signal Receiving Center and Premise Burglar Alarm
	ULC	CAN/ULC S545 - Residential Fire Warning System Control Units
	ULC	CAN/ULC S559 - Fire Signal Receiving Centres and Systems
	ULC	ULC-ORD C1023 - Household Burglar Alarm System Units
	ULC	ULC-ORD C1076 - Proprietary Burglar Alarm Units and Systems
	IC	ICES-003 - Information Technology Equipment (ITE)
Brazil	ANATEL	04450-16-01855 [B9512G, B8512G when used with B430 or B442]

## Installation/configuration notes



### Notice

Not all products and features are available in all regions. Consult your local Bosch representative for availability details.

## Compatible products

### Keypads

B942/B942W Touch Screen Keypad (SDI2)

B930 ATM Style Alphanumeric Keypad (SDI2)

B926F Fire Keypad (SDI2)

B925F Fire Keypad (SDI2)

B921C Two-line Capacitive Keypad (SDI2)

B920 Two-line Alphanumeric Keypad (SDI2)

B915/B915I Basic Keypad (SDI2)

D1255 Series Keypads

D1260 Series Keypads

D1256RB Fire Keypad

D1257RB Remote Fire Alarm Annunciator

### Power

D1640 16.5 VAC 40 VA Transformer

DE-45-18 Transformer

D126 Standby Battery (12 V, 7 Ah)

D1218 Battery (12 V, 18 Ah)

D122 Dual Battery Harness

D122L Dual Battery Harness with Long Leads

### Enclosures

B8103 Universal Enclosure (White)

D8103 Universal Enclosure (Gray)

D8108A Attack Resistant Enclosure

D8108A-CE Attack Resistant Enclosure with Built-in Transformer

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)

D161 Dual Modular Telephone Cord (7 ft)

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

FCH-T320 Heat Detector

FCP-OT320 Multisensor Detector Optical/Thermal

FCP-O320 Optical Smoke 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)

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

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

D132A Smoke Detector Reversing 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

ICP-SDI-9114 SDI Splitter

### Applications

Remote Programming Software (RPS or RPS-LITE) v6.03 and higher

Bosch Video Management System v5.5 and higher

Remote Security Control (RSC)

### 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/RFBT bill trap

RFDL-11-A/RFDL-11 TriTech motion detector

RFDW-RM-A/RFDW-RM recessed mount door/window contact

RFDW-SM-A/RFDW-SM surface mount door/window contact

RFGB-A/RFGB glass break detector

RFKF-A/RFKF two-button keyfob

RFKF-FBS-A/RFKF-FBS four-button keyfob

RFKF-TBS-A/RFKF-TBS two-button keyfob

RFPB-SB-A/ RFPB-SB single-button panic

RFPB-TB-A/RFPB-TB two-button panic

RFRP-A/RFRP repeater

RFSM-A/RFSM smoke detector

RFPR-12-A/RFPR-12 PIR motion detector

RFPR-C12-A/RFPR-C12 PIR curtain motion detector

RFUN-A/RFUN universal transmitter

### Inovonics Wireless

B820 SDI2 Inovonics Interface Module

ENKIT-SDI2 SDI2 Inovonics Interface and Receiver Kit. Includes B820 and EN4200

EN1210 Universal Transmitter (Single-input)

EN1210EOL Universal Transmitter with EOL Resistor

EN1210W Door-Window Transmitter with Reed Switch

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

### Technical specifications

#### Properties

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

#### Communications

Ethernet	10/100 full duplex (N/A for "E" control panels)
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#### 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)

#### 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 and virtual)
Programmable outputs	99 (3 on-board, up to 96 off-board and virtual)
RF points	91

IP cameras	8
SKEDs	40

### Ordering information

#### B8512G IP control panel, 8 areas, 99 points

Supports up to 99 points, 3 on-board outputs, and 8 areas for intrusion, commercial fire. On-board Ethernet.

Order number **B8512G**

#### B8512G-E Control panel, 8 areas, 99 points, no IP

The B8512G-E is available only in kits.

Order number **B8512G-E**

#### B901 Door Controller

Fully supervised, addressable SDI2/SDI bus device that allows access control integration for Bosch G and B Series Control Panels.

Order number **B901**

#### Accessories

##### B520 Auxiliary power supply module, 2A 12V

Provides auxiliary power to 12 VDC devices or to SDI2 modules.

Order number **B520**

##### B208 SDI2 8-Input Expansion Module

Provides 8 programmable inputs.

Order number **B208**

##### B308 SDI2 8-Output Expansion Module

Provides 8 programmable relays.

Order number **B308**

##### B810 RECEIVER-SDI2

Receives RF signals from RADION transmitters, repeaters, and glassbreaks. Operates at 433.42 MHz. For use with compatible SDI2 bus control panels.

Order number **B810**

##### D122 Dual battery harness, 17" 18AWG

Harness with circuit breaker. Connects two batteries (in parallel) to a compatible control panel.

Order number **D122**

##### D122L Dual battery harness, 35", 12V

Harness with circuit breaker and leads measuring 35 in. (89 cm). Connects two batteries (in parallel) to a compatible control panel in a separate enclosure.

Order number **D122L**

##### D126 Battery, 12V 7Ah

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

Order number **D126**

##### D1218 Battery, 12V 18Ah

The D1218 is a 12 V 18 Ah sealed lead-acid battery with two bolt-fastened terminals. It is used for standby and auxiliary power. It connects to a compatible control panel using a D122 or D122L Dual battery harness.

Order number **D1218**

##### D137 Accessory mounting bracket for enclosure

Used to mount accessory modules in B8103, D8103, D8108A, and D8109 enclosures.

Order number **D137**

##### D1640 Transformer plug-in, 16V 40VA

System transformer rated at 16.5 VAC, 40 VA.

Order number **D1640**

##### D1640-CA 16VAC 40VA xfmr Canada

For use in Canada. System transformer rated at 16.5 VAC, 40 VA.

Order number **D1640-CA**

##### D9002-5 Mounting plate, 6 location 3-hole, 5 pcs

5 pack of mounting skirts for B8103, D8103, D8108A, and D8109 enclosures. Each skirt can hold up to six standard 3-hole mounting modules.

Order number **D9002-5**

##### D101 Enclosure lock and key set

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

Order number **D101**

##### D110 TAMPER SWITCH 2/PKG

Screw-on tamper switch that fits all enclosures. Shipped in packages of two.

Order number **D110**

##### ICP-EZTS TAMPER SWITCH-DUAL

Combination tamper switch with a wire loop for additional tamper outputs.

Order number **ICP-EZTS**

##### B8103 Universal enclosure, white

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 Steel enclosure, large, grey

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, large, grey

Grey steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.). UL Listed. Includes a lock and key set.

Order number **D8108A**

**D8109 Fire enclosure, 16x16x3.5", red**

Red enclosure measuring 16 in. x 16 in. x 3.5 in. (41 cm x 41 cm x 9 cm). Made from 16 gauge (1.5 mm) cold-rolled steel with a full-length hinge. Includes a lock and key set. UL Listed for commercial fire/burglary alarm applications.

Order number **D8109**

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**D8004 Transformer enclosure kit, grey**

For applications that might require a remote transformer in an enclosure. Can be used with B Series control panels and D9412GV4/D7412GV4 control panels.

Order number **D8004**

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**BATB-40 Battery box/enclosure, 22x20.75x7.25"**

Holds two dry or wet cell batteries. Optional BATB-SHELF battery shelf increases number of batteries. Suitable for residential/commercial fire or burglary applications.

Order number **BATB-40**

---

**BATB-80 Battery box/enclosure, 14x20.75x7.25"**

Battery box/enclosure with shelf holds up to four dry or wet cell batteries. Suitable for residential/commercial fire or burglary applications.

Order number **BATB-80**

---

**B99 USB direct connect cable**

Male A to Male A USB cable for local programming of control panels with on-board USB ports.

Order number **B99**

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**B915 Basic Keypad**

Two-line alphanumeric basic keypad with English function keys.

Order number **B915**

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**B915I LCD keypad, icon keys, SDI2**

Two-line alphanumeric basic keypad with icon function keys.

Order number **B915I**

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**B920 2 Line Alpha Numeric Keypad (SDI2)**

Two-line alphanumeric keypad

Order number **B920**

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**B921C Two-line Keypad w/Touch keys, Inputs**

Two-line alphanumeric keypad with inputs and capacitive touch keys in black.

Order number **B921C**

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**B930 ATM Style-Alpha Numeric Keypad (SD12)**

Five-line ATM style alphanumeric keypad

Order number **B930**

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**B942 Touch Screen KP Prox/Input/Output, black**

Black SDI2 touch screen keypad with inputs and one output.

Order number **B942**

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**B942W Touch screen KP, prox/input/output,white**

White SDI2 touch screen keypad with inputs and one output.

Order number **B942W**

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**B925F Fire and intrusion keypad, SDI2**

Two-line alphanumeric fire and intrusion keypad.

Order number **B925F**

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**B926F Fire keypad, SDI2**

Two-line alphanumeric fire keypad

Order number **B926F**

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**Software Options****D5500C-USB Kit with DVD and USB security dongle**

Account management and control panel programming software with USB security key (dongle).

Order number **D5500C-USB**

---

**Represented by:**

**Europe, Middle East, Africa:**  
Bosch Security Systems B.V.  
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5600 JB Eindhoven, The Netherlands  
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www.boschsecurity.asia

# B920 2 Line Alpha Numeric Keypad (SDI2)

www.boschsecurity.com



**BOSCH**  
Invented for life



- ▶ 2-line LCD display with up to 32 character point, user, and area names
- ▶ Simple menu-style user interface with dedicated function buttons for common commands, including status indication
- ▶ Situation sensitive on-screen help makes system operation simple and easy
- ▶ Highly visible on (arm)/alarm, ready to turn on (arm), power and gas alarm indicators
- ▶ Simple installation with self-locking base and chassis design, plus built-in bubble level

- Audible tones from the keypad sounder alert personnel to fire events and assist fire fighters in locating the keypad.

The B920 Two-line Alphanumeric Keypad (SDI2) is a SDI2 bus compatible device. Each keypad has user adjustable options such as volume and display brightness. The B920 shows two-line system messages for all areas.

## Keypad languages

Available languages: English, Dutch, French, German, Hungarian, Italian, Portuguese, Spanish, Swedish.

## System overview

- For commercial use, install the keypad in building entrances and areas with unrestricted access. Mounting a keypad near exterior doors in hotel or business lobbies allows people to identify the type and location of the emergency.
- For residential use, install the keypad near the front and rear entrances to the home. Install additional keypads in a kitchen or in a bedroom.
- Use multiple keypads in a large building with many separate areas of security. Program multiple keypads to control multiple areas.

## Functions

### LCD display

The keypad uses words, numbers, and symbols to show the status of the security system. When several events occur, the keypad shows each event in order of priority.

### Keys

Each keypad has 10 number keys, 7 function keys, and 6 navigation keys. When pressed, keys turn on keypad backlighting and emit the keypress tone (short beep). The function keys include programmable function keys and keys to initiate arming and bypassing with one keypress.

### Audible tones

The keypad has a built-in speaker that produces several distinct warning tones. The tones are differentiated so that the user can recognize an event

simply by hearing its associated tone. The keypad backlight illuminates when it emits an audible tone. Users can use a passcode to silence the tone.

### Status indicators

The status indicators on the keypad provide a quick visual reference for system status.

✓	The indicator lights when the system is ready to turn on (arm).
🔒	The indicator lights when the system is on (armed).
⚠️	The indicator lights when there is a trouble condition.
🚒	The indicator lights when dangerous gases are present including carbon monoxide (NFPA 720).
⚡	The indicator lights when the system has power.

### Certifications and approvals

Region	Regulatory compliance/quality marks	
Australia	RCM	ACMA
Europe	CE	EMC, RoHS [B915, B920, B930, B430, B208, B308, B901]
USA	UL	
	UL	UL 365 - Police Station Connected Burglar Alarm Units
	UL	UL 609 - Standard for Local Burglar Alarm Units and Systems
	UL	UL 636 - Holdup Alarm Units and Systems
	UL	UL 985 - Household Fire Warning System Units
	UL	UL 1023 - Household Burglar Alarm System Units
	UL	UL 1076 - Proprietary Burglar Alarm Units and Systems
Canada	UL	UL 1610 - Central Station Burglar Alarm Units
	CSFM	see <a href="http://www.boschsecurity.com">www.boschsecurity.com</a> (the Bosch website)
	FCC	Part 15 Class B
	ULC	CAN/ULC S303 - Local Burglar Alarm Units and Systems
	ULC	CAN/ULC S304 - Standard for Signal Receiving Center and Premise Burglar Alarm
	ULC	CAN/ULC S545 - Residential Fire Warning System Control Units
	ULC	CAN/ULC S559 - Fire Signal Receiving Centres and Systems
ULC	ULC-ORD C1023	Household Burglar Alarm System Units
	ULC-ORD C1076	Proprietary Burglar Alarm Units and Systems

Region	Regulatory compliance/quality marks	
	ULC	S1871-20121210
	IC	ICES-003 - Information Technology Equipment (ITE)

### Installation/configuration notes

#### Mounting considerations

Mount in indoor, dry locations.

#### Power supply

A compatible control panel supplies the power and data requirements to the keypad through a four-wire connection.

#### Enclosure and wiring

The sliding self-locking enclosure has an integrated bubble level and custom gap-free, lift-gate style terminal blocks to make installation easier.

#### Compatible control panels

B9512G/B9512G-E

B8512G/B8512G-E

B6512

B5512/B5512E firmware v2.02 and higher

B4512/B4512E firmware v2.02 and higher

B3512/B3512E firmware v2.02 and higher

D9412GV4/D7412GV4 firmware v2.02 and higher

### Parts included

Quantity	Component
1	Keypad
1	Hardware pack
1	Set of ABC key labels
1	Installation Guide
1	User's Quick Reference Guide

### Technical specifications

#### Properties

Dimensions	158 mm x 120 mm x 26 mm (6.2 in x 4.7 in x 1 in)
Weight	11.3 oz (0.32 kg)
Material	Acrylonitrile butadiene styrene (ABS) Poly(methyl methacrylate) (PMMA)
Display window	2 line display 18 characters per line
Indicators	Illuminated keys Status indicators Warning and indicating tones

**Environmental considerations**

Relative humidity	5% to 93% at +32°C (+90°F) non-condensing
Temperature (operating)	0°C to +50°C (+32°F to +122°F)

**Power requirements**

Current	Standby: 35 mA Alarm: 70 mA
Voltage (input)	12 VDC nominal

**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): 305 m (1000 ft) - 22 AWG (0.65 mm)

**Ordering information****B920 2 Line Alpha Numeric Keypad (SDI2)**

Two-line alphanumeric keypad  
Available languages: English, Dutch, French, German, Hungarian, Italian, Portuguese, Spanish, Swedish.  
Order number **B920**

**Accessories****B56 Keypad surface mount box**

Surface mount box for mounting a keypad to concrete or block.

Order number **B56**

**B96 Trim plate for keypad**

Cover the wall footprint of previous keypads when replacing them with the new, slim design of B Series keypads. The white trim bezel is 8.6 in x 6.3 in x 0.12 in (22 mm x 16 mm x 3 mm).

Order number **B96**

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www.boschsecurity.asia

# D9127 Series POPIT Modules

www.boschsecurity.com



**BOSCH**  
Invented for life



- ▶ Provides point identification of initiating devices
- ▶ Supervises wiring to devices for circuit integrity
- ▶ Expands the number of points in the system
- ▶ Compact size
- ▶ Terminal connections for reliability

The D9127 Series POPIT Modules includes the D9127T (with magnetic tamper switch) and the D9127U (without tamper). They are used with a D8125 Addressable Expansion Module when there is a need to expand a compatible control panel beyond its standard number of on-board initiating zones or points. Future system expansion is very economical as D9127 Series POPITs can be added anywhere along the two-wire data expansion loop from the D8125 module.

Both modules include proven technology that combines zone and point supervision with individual device addressing on one pair of wires. Screw terminals provide reliable connections for the data expansion loop and supervised sensor loop wiring. Install a 33 kΩ end-of-line resistor at the farthest point on the loop for proper supervision. The units are small and easily installed in standard outlet boxes, above false ceilings, closets, or other accessible locations.

## Certifications and approvals

Region	Certification
USA	UL
	UL 365 - Police Station Connected Burglar Alarm Units
	UL 464 - Standard for Audible Signal Appliances
	UL 609 - Standard for Local Burglar Alarm Units and Systems
	UL 864 - Standard for Control Units and Accessories for Fire Alarm Systems
	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
	UL 1635 - Standard for Digital Alarm Communicator System Units
	FM

Region	Certification	
	CSFM	see our website
	FDNY-CoA	6059 [D9412GV3 & D7412GV3]
	FDNY-CoA	6174
	FDNY-CoA	6196
Australia	CTICK	C-Tick
Canada	ULC	AMCX7.S1871 - Central Station Alarm Units Certified for Canada
	ULC	AOTX7.S1871 Local Alarm Units Certified for Canada
	ULC	APAW7.S1871 Police-station-connected Alarm Units Certified for Canada
	ULC	APOU7.S1871 Proprietary Alarm Units Certified for Canada
	ULC	NBSX7.S1871 Household Burglar Alarm System Units Certified for Canada

## Installation/configuration notes

### Compatibility Information

Control Panels All G Series control panels, D9412, D7412, D7212, D7212B1, D9112, D9112B1, D8112G1, D8112G2, and D9124

Module D8125

The D8125 Multiplex Zone Expander is required. The D9127 modules are wired in parallel on the D8125 data loop.

### Number of POPIT Modules per Control Panel

D7212G, D7212GV2, D7212GV3	32 D9127 POPITs
D7212B1	40 D9127 POPITs
D7212, D7412, D7412G, D7412GV2, D7412GV3	67 D9127 POPITs
D9124	119 D9127 POPITs
D9112B1	126 D9127 POPITs
D9112, D9412, D9412G, D9412GV2, D9412GV3	238 D9127 POPITs

### Wiring Considerations

Wire Size	Maximum Length of all Data Expansion Loops Combined
0.8 mm (22 AWG)	549 m (1800 ft)
1.0 mm (20 AWG)	881 m (2890 ft)
1.2 mm (18 AWG)	1402 m (4600 ft)
1.5 mm (16 AWG)	2231 m (7320 ft)
1.8 mm (14 AWG)	3551 m (11650 ft)

### D8125 to POPIT Loops

Use one two-wire data expansion loop, or distribute the POPITs on up to three loops. The maximum lengths shown in the following table are for all data expansion loops combined connected to the same D8125 module. Setting DIP switches on the POPIT modules assigns them to point numbers. The switch setting on each POPIT assigns it a point number, regardless of its physical location.

### POPIT to Sensor Loops

The number of detection devices each sensor loop can supervise is limited only by the resistance on the loop. Resistance on each sensor loop must be less than 100  $\Omega$  not including the end-of-line (EOL) resistor. Certain UL and National Fire Protection Association (NFPA) applications can limit the number of detection devices. Consult the appropriate UL or NFPA standards.

Terminate each POPIT sensor loop with the 33 k $\Omega$  EOL resistor included with each POPIT.

Use a twisted-pair wire (six twists per foot) in all POPIT installations for both the data expansion loop wiring and the POPIT sensor loops. Run wires away from AC sources to prevent AC induction.

## Parts included

Quantity	Component
1	POPIT module
1	33 k $\Omega$ EOL resistor
1	Magnet (D9127T only)
1	Hardware pack
1	Literature pack

## Technical specifications

### Environmental Considerations

Relative humidity	Up to 93% non-condensing
Temperature (operating)	0°C to +50°C (+32°F to +122°F)

### Properties

Color	Off white
Dimensions	8.1 cm x 3.8 cm x 2.4 cm (3.2 in. x 1.5 in. x 0.9 in.)
Material	UL Listed fire-resistant

**Power Requirements**

Current draw	0.8 mA maximum
Resistance	Maximum increase in resistance on the POPIT loop is 1000 Ω. Maximum resistance between the D8125 module and each POPIT is 90 Ω.
Voltage (operating)	12 VDC nominal

**Sensor Loop**

Resistance	Maximum resistance on the sensor loop is 100 Ω.
Response time	1 sec approximately

**Ordering information****D9127T POPIT Module**

Includes a magnetic tamper switch.  
Order number **D9127T**

**D9127U POPIT Module**

No tamper switch.  
Order number **D9127U**

**Represented by:****Americas:**

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## 180 Series 3/4" and 1" Steel Door Recessed Switch Sets



**180-12**



**184-12**

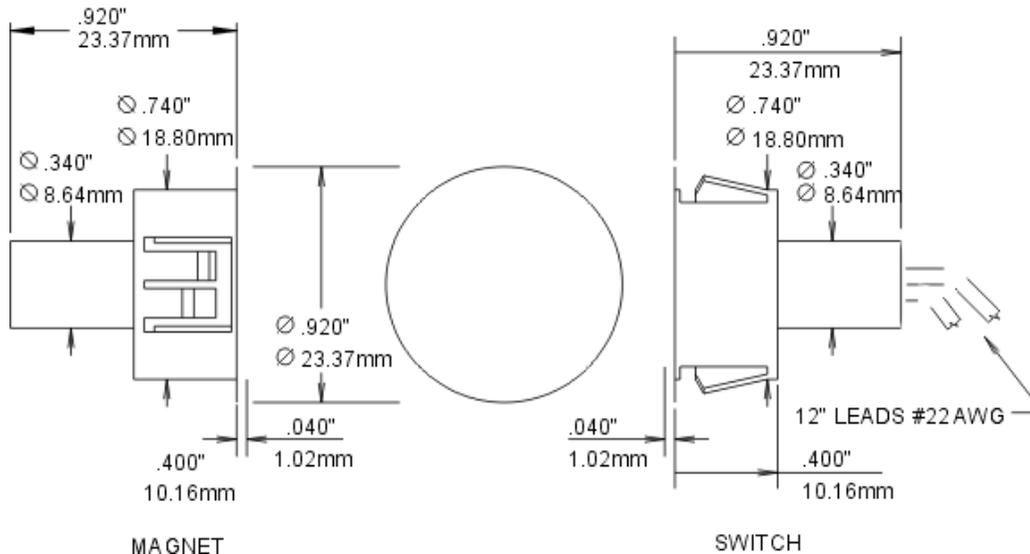


**8080-T**

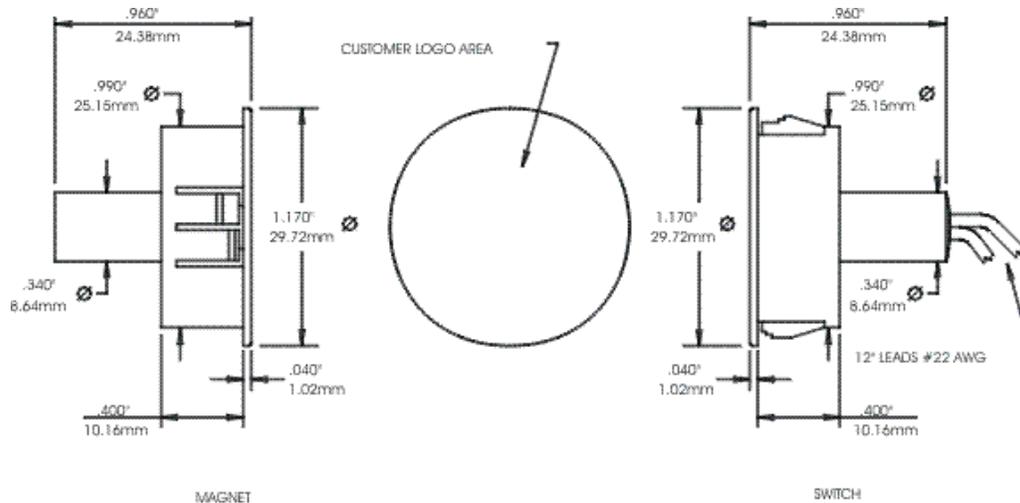
- Lifetime Warranty
- Colors: White, Brown, Grey or Black
- UL and ULC Approved
- 180-12 & 184-12 UL 10C Fire Rated
- Available in Closed Loop, Open Loop and SPDT
- 3/4" and 1" Diameter Mounting
- Standard 12" Leads or Terminals
- Self-Locking
- Solid, One Piece Design
- 7/8" Diameter also Available - Call Factory
- Switches or Magnets are Available Separately
- Standard 1/2"+ Gap on Steel
- Wide Gap 1"+ Gap on Steel
- Supervisory Loops Available

The GRI 180 Series is the industry standard 3/4" diameter recessed steel door switch set with 12" leads. The 184 Series is a 1" diameter switch set.

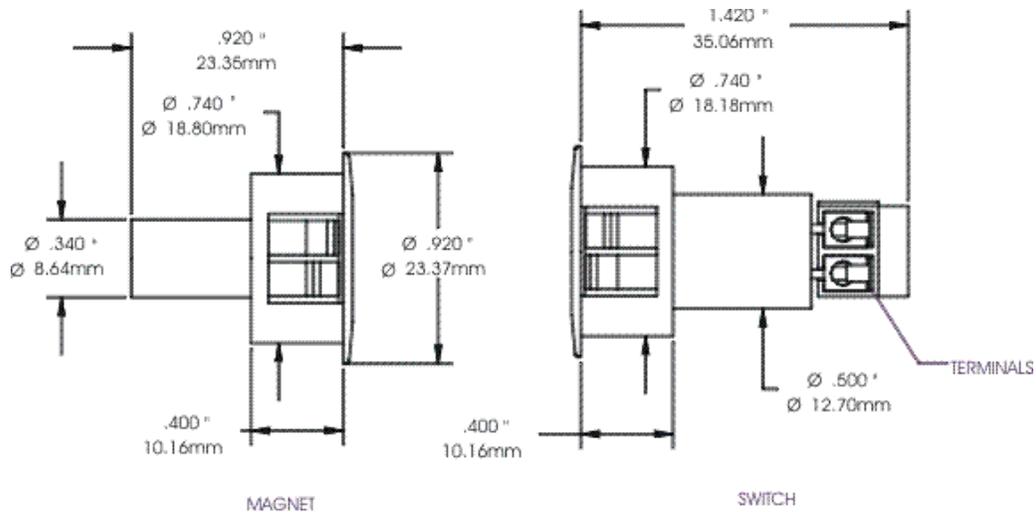
The innovative GRI 8080-T Series is a 3/4" diameter recessed switch set designed for residential, commercial and industrial steel doors and frames. The shorter length and the introduction of PC board type terminals makes the installation of the set quick and simple with no soldering, B connectors or tape to catch during installation or removal, reducing the cost of installation and creating greater profitability.



**180-12 Series Recessed Steel Door Switch Set**



### 184-12 Series Recessed Steel Door Switch Set



### 8080-T Series Recessed Steel Door Switch Set

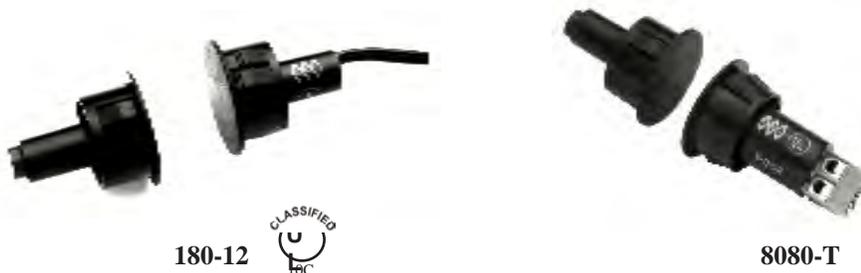
# RECESSED 3/4" & 1" STEEL DOOR SWITCH SET



## 180/184/8080-T SERIES



- ◆ Recessed Magnetic Contact
- ◆ 12" #22AWG Leads or Screw Terminals
- ◆ Longer Leads, Zip Cord or Jacketed Cable Upon Request
- ◆ Built-in E.O.L. Resistors and Diodes Upon Request
  - ◆ Supervisory Loops Upon Request
- ◆ Switches and Magnets Available Separately
  - ◆ Colors: White, Brown, Gray, Black
  - ◆  Indicates U.L. 10C Fire Rated



180-12



8080-T

### PART NUMBERS:

		<b>Closed Loop</b>	<b>Open Loop</b>	<b>SPDT</b>	<b>DPDT</b>
Standard Gap Up To 1/2" On Steel*	3/4" Dia.	180-12 	185-12	190-12	195-12
	1" Dia.	184-12 	189-12	194-12	199-12
	3/4" Dia.	8080-T	8585-T		
	1" Dia.	8484-T	8989-T		
Wide Gap 3/4" + On Steel*	3/4" Dia.	180-12WG 	185-12WG	190-12WG	195-12WG
	1" Dia.	184-12WG 	189-12WG	194-12WG	199-12WG
	3/4" Dia.	8080-TWG	8585-TWG		
	1" Dia.	8484-TWG	8989-TWG		

\*Gaps will increase substantially for installations other than steel

\*Gaps up to one inch on steel when paired with MC-180 Door Channel Magnet

7/8" Diameter Also Available. P/N 81-12 and 81-12WG. White or Black only. Please call factory.

### WARRANTY:

Lifetime warranty against workmanship, material and factory defects.

GEORGE RISK INDUSTRIES, INC.  
G.R.I. PLAZA  
KIMBALL, NE 69145



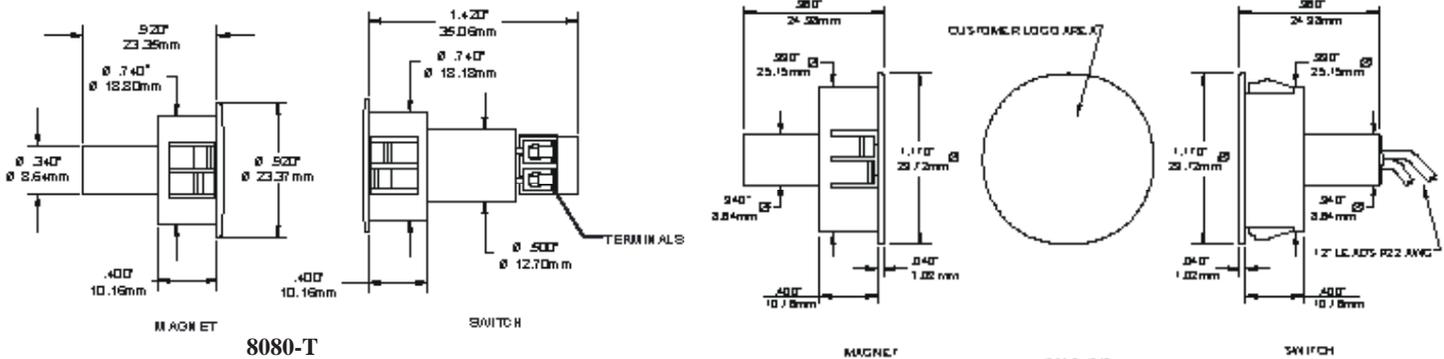
MADE IN U.S.A.

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E-MAIL: sales@grisk.com  
WEB SITE: www.grisk.com



# RECESSED 3/4" & 1" STEEL DOOR SWITCH SET

**INSTALLATION APPLICATIONS:** The G.R.I. 180-12 is the industry standard 3/4" diameter recessed steel door switch set with 12" leads. The innovative G.R.I. 8080-T series is a 3/4" diameter recessed switch set designed for residential, commercial and industrial steel doors and frames. The shorter length terminals makes the installation of the set quick and simple.



**GRI products meet or exceed these minimum general specifications:**

PART NUMBER	LOOP TYPE	ELECTRICAL CONFIG.	REED FORM	MAXIMUM INITIAL CONTACT RESISTANCE (Ω)	MAXIMUM CONTACT RATING (W)	MAXIMUM SWITCHING VOLTAGE (VDC)	MAXIMUM SWITCHING CURRENT (A)
180-12	Closed	N/O	A	.150	10	200	.400
180-12WG	Closed	N/O	A	.150	10	200	.400
184-12	Closed	N/O	A	.150	10	200	.400
184-12WG	Closed	N/O	A	.150	10	200	.400
8080-T	Closed	N/O	A	.150	10	160	.400
8080-TWG	Closed	N/O	A	.150	10	160	.400
8484-T	Closed	N/O	A	.150	10	160	.400
8484-TWG	Closed	N/O	A	.150	10	160	.400
185-12	Open	N/C	B	.140	5	175VDC	.250
185-12WG	Open	N/C	B	.140	5	175VDC	.250
189-12	Open	N/C	B	.140	5	175VDC	.250
189-12WG	Open	N/C	B	.140	5	175VDC	.250
8585-T	Open	N/C	B	.140	5	175VDC	.250
8585-TWG	Open	N/C	B	.140	5	175VDC	.250
8989-T	Open	N/C	B	.140	5	175VDC	.250
8989-TWG	Open	N/C	B	.140	5	175VDC	.250
190-12	Open/Closed	SPDT	C	.140	5	175VDC	.250
190-12WG	Open/Closed	SPDT	C	.140	5	175VDC	.250
194-12	Open/Closed	SPDT	C	.140	5	175VDC	.250
194-12WG	Open/Closed	SPDT	C	.140	5	175VDC	.250
195-12		DPDT	C X 2	.140	5	175VDC	.250
195-12WG		DPDT	C X 2	.140	5	175VDC	.250
199-12		DPDT	C X 2	.140	5	175VDC	.250
199-12WG		DPDT	C X 2	.140	5	175VDC	.250

**CONTACT YOUR G.R.I. DISTRIBUTOR OR CALL:**

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KIMBALL, NE 69145



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FAX (308) 235-3561  
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WEB SITE: www.grisk.com



# ZX776Z PIR Intrusion Detector



The ZX776Z PIR Intrusion Detector uses Motion Analyzer II signal processing to reduce false alarms. The detector's internally pointable mirrors and three coverage patterns provide installation flexibility. The ZX776Z includes an internal POPIT for addressable alarm and trouble signaling while communicating on the Zonex bus.

## Functions

### Motion Analyzer II Processing

Motion Analyzer II uses multiple thresholds and timing windows to analyze timing, amplitude, duration, and polarity of signals to make an alarm decision. It tolerates extreme levels of heat and light disturbances caused by heaters, air conditioners, hot and cold drafts, sunlight, lightning, and moving headlights.

### Motion Monitor Supervision

Confirms the detector has a clear view of the detection area. The Zonex Bus indicates a trouble condition and the LED pulses if the detector has not alarmed at least once during a selected time period.

### Insect and Draft Immunity

The sealed optical chamber provides immunity to drafts and insects.

- ▶ **Internal POPIT**
- ▶ **Motion Analyzer II processing**
- ▶ **Motion Monitor supervision**
- ▶ **Insect and draft immunity**
- ▶ **PIR supervision**
- ▶ **Test pins**
- ▶ **Three sensitivity settings**

### PIR Supervision

PIR operation is checked electronically approximately every 12 hours. If the circuit fails, the LED pulses four times and the trouble output is indicated through the Zonex bus.

### Test Pins

Internal noise voltage test pins provide precise pattern location and background disturbance evaluation using a standard analog meter.

### Three Sensitivity Settings

- **Standard Sensitivity:** Recommended setting for maximum false alarm immunity. Tolerates environment extremes on this setting. Not recommended for barrier or long range coverage patterns.
- **Intermediate Sensitivity:** Recommended setting for any location where an intruder is expected to cover only a small portion of the protected area. Tolerates normal environments on this setting.
- **High Sensitivity:** Fast response to intruder signals. For use in quiet environments where fluctuations in heat or light are not anticipated.

## Certifications and Approvals

Region	Certification
USA	UL ANSR: Intrusion Detection Units (UL639)

**Installation/Configuration Notes**

**Compatibility Considerations**

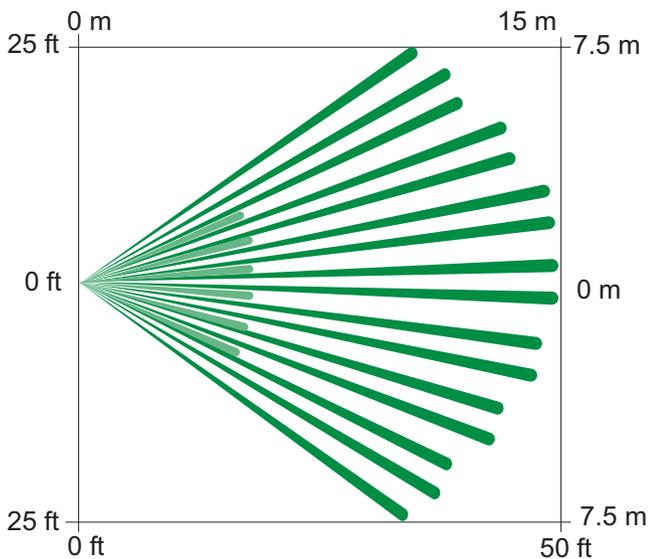
Model	Compatible Control Panels
ZX776Z	<ul style="list-style-type: none"> <li>• GV2 and G Series</li> <li>• 9000 Series</li> <li>• D9112B1</li> <li>• D7212B1</li> </ul>

**Note** The ZX776Z connects to control panels on a Zonex bus.

**Mounting Considerations**

Select a location that is most likely to intercept an intruder moving across the coverage pattern. Ensure the mounting surface is solid and vibration free. Avoid hot and cold drafts, direct sunlight, heat sources, windows, air conditioning, and small animals. The ZX776Z does not detect through glass.

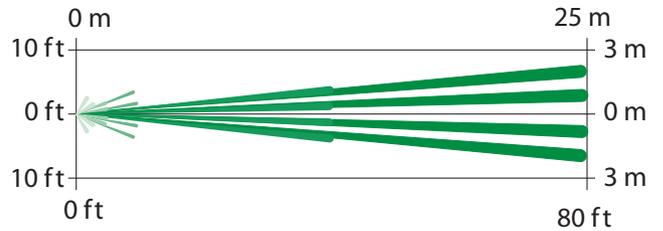
**Note** Misaligning the detector in an optional mounting bracket can reduce its range.



**Top View**  
**Broad: 15 m x 15 m (50 ft x 50 ft)**



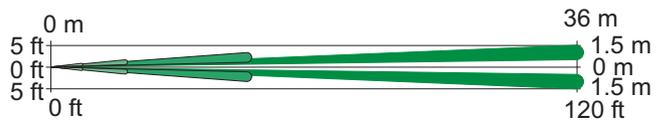
**Side View**  
**Broad: 15 m x 15 m (50 ft x 50 ft)**



**Top View**  
**Barrier (OMB77): 25 m x 5 m (80 ft x 16 ft)**



**Side View**  
**Barrier (OMB77): 25 m x 5 m (80 ft x 16 ft)**



**Top View**  
**Long Range (OMLR77): 36 m x 3 m (120 ft x 10 ft)**



**Side View**  
**Long Range (OMLR77): 36 m x 3 m (120 ft x 10 ft)**

**Technical Specifications**

**Enclosure Design**

Dimensions: 14.6 cm x 9.5 cm x 6.4 cm (5.75 in. x 3.75 in. x 2.5 in.)

**Environmental Considerations**

Temperature (Operating): -29°C to +49°C (-20°F to +120°F)  
For UL Listed Applications, 0°C to +49°C (+32°F to +120°F)

Radio Frequency Interference: No alarm or setup on critical frequencies in the range from 26 MHz to 950 MHz at 50 V/m.  
(RFI) Immunity:

**Mounting**

Height (recommended):	2 m to 2.6 m (6.5 ft to 8.5 ft)
Location:	Surface or corner mount.
Internal Pointability:	Coverage is adjustable ±10° horizontally, +2° to -18° vertically.

### Power Requirements

Alarm Supervision:	Signals through Zonex bus.
Current Draw:	Less than 1.7 mA during alarm condition
Input (Voltage):	Power comes from the control panel's two-wire Zonex bus
Standby Power:	There is no internal standby battery.

### Ordering Information

<b>ZX776Z PIR Intrusion Detector</b> Provides 15 m x 15 m (50 ft x 50 ft) coverage, Motion Analyzer II signal processing, movable mirrors, three coverage patterns, and an internal POPIT.	<b>ZX776Z</b>
<b>Accessories</b>	
<b>B328 Gimbal-mount Bracket</b> Mounts on a single-gang box and allows rotation of a detector. Wires are hidden inside.	<b>B328</b>
<b>Swiveling B335-3 low-profile mount</b> Swiveling, low-profile, plastic mount for wall mounting. The vertical swivel range is +10° to -20°, while the horizontal swivel range is ±25°. Available in triple packs.	<b>B335-3</b>
<b>OMB77-3 Barrier Mirror</b> Provides barrier coverage with a 25 m x 5 m (80 ft x 16 ft) pattern. Shipped in packages of three.	<b>OMB77-3</b>
<b>OMLR77-3 Long-range Mirror</b> Provides long-range coverage with a 40 m x 3 m (120 ft x 10 ft) pattern. Shipped in packages of three.	<b>OMLR77-3</b>
<b>TC6000 Test Cord</b> Test cord for connecting a compatible detector's test pins to a voltmeter. It is 4.6 m (15 ft) long.	<b>TC6000</b>

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www.boschsecurity.com

**Represented by**

# Multi-Conductor, Unshielded, Plenum

NEC/CEC Type CMP and/or NEC Type CL3P and FPLP

## Product Construction:

### Conductor:

- Stranded or solid bare copper per ASTM B3, B8 and B286

### Insulation:

- Premium-grade, color-coded Flexguard® PVC
- Color code: See chart below

### Jacket:

- Premium-grade Flexguard® PVC, natural
- Sequential footage markings to facilitate installation
- Temperature range: 0°C to +75°C

### Applications:

- Power-limited control circuits
- Wiring of the following systems:
  - Intercom
  - Security
  - Audio
  - Background music
- Suggested voltage rating: 300 volts

### Compliances:

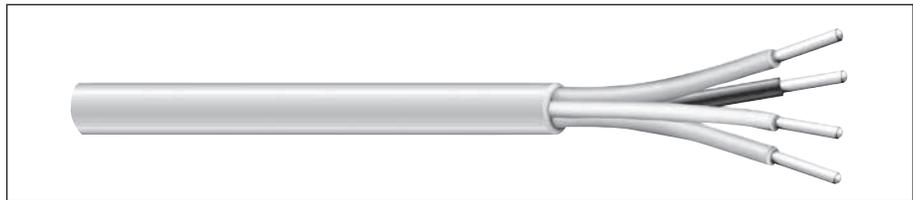
- NEC Article 725 Type CL3P (UL: 75°C, 150 V)
- NEC Article 800 Type CMP (UL: 75°C, 300 V)
- NEC Article 760 Type FPLP (UL: 75°C, 300 V)
- Designed to meet NFPA 262 Flame Test
- Suitable for use in the State of California

### Packaging:

- Please contact Customer Service for packaging and color options

### Color Code Chart

NO. OF COND.	COLOR	NO. OF COND.	COLOR
1	Black	7	Orange
2	Red	8	Yellow
3	White	9	Purple
4	Green	10	Gray
5	Brown	11	Pink
6	Blue	12	Tan



CATALOG NUMBER	NO. OF COND.	AWG SIZE	COND. STRAND	NOM. INSULATION THICKNESS		NOM. JACKET WALL		NOMINAL O.D.	
				INCHES	mm	INCHES	mm	INCHES	mm
E3000S	2	22	Solid	0.007	0.18	0.015	0.38	0.108	2.74
E3001S	4	22	Solid	0.007	0.18	0.015	0.38	0.124	3.15
E3002S	2	22	7/30	0.008	0.20	0.015	0.38	0.120	3.05
E3003S	3	22	7/30	0.008	0.20	0.015	0.38	0.127	3.23
E3004S	4	22	7/30	0.008	0.20	0.015	0.38	0.139	3.53
E3006S	6	22	7/30	0.008	0.20	0.015	0.38	0.164	4.17
E3008S	8	22	7/30	0.008	0.20	0.015	0.38	0.178	4.52
E3010S	10	22	7/30	0.008	0.20	0.015	0.38	0.194	4.92
E3012S	12	22	7/30	0.008	0.20	0.015	0.38	0.211	5.36
E3022S	2	20	7/28	0.009	0.23	0.008	0.20	0.134	3.40
E3023S	3	20	7/28	0.009	0.23	0.008	0.20	0.142	3.61
E3024S	4	20	7/28	0.009	0.23	0.008	0.20	0.156	3.96
E3030S	2	18	Solid	0.008	0.20	0.015	0.38	0.142	3.61
E3032S	2	18	7/26	0.008	0.20	0.015	0.38	0.156	3.96
E3033S	3	18	7/26	0.008	0.20	0.015	0.38	0.166	4.22
E3034S	4	18	7/26	0.008	0.20	0.015	0.38	0.187	4.75
E3036S	6	18	7/26	0.008	0.20	0.015	0.38	0.216	5.49
E3038S	8	18	7/26	0.008	0.20	0.015	0.38	0.235	5.97
E3042S	2	16	19/.0117	0.008	0.20	0.015	0.38	0.174	4.42
E3043S	3	16	19/.0117	0.008	0.20	0.015	0.38	0.185	4.70
E3044S	4	16	19/.0117	0.009	0.23	0.008	0.20	0.205	5.21
E3052S*	2	14	19/.0147	0.011	0.28	0.015	0.38	0.216	5.49
E3054S*	4	14	19/.0147	0.011	0.28	0.015	0.38	0.255	6.48
E3062S*	2	12	19/.0185	0.011	0.28	0.015	0.38	0.252	6.40
E3064S*	4	12	19/.0185	0.011	0.28	0.015	0.38	0.298	7.57

\* NEC CL3P/FPLP only  
Data subject to change.

EQUIVALENT PRODUCT BY A DIFFERENT MANUFACTURER MAY BE PROVIDED.