



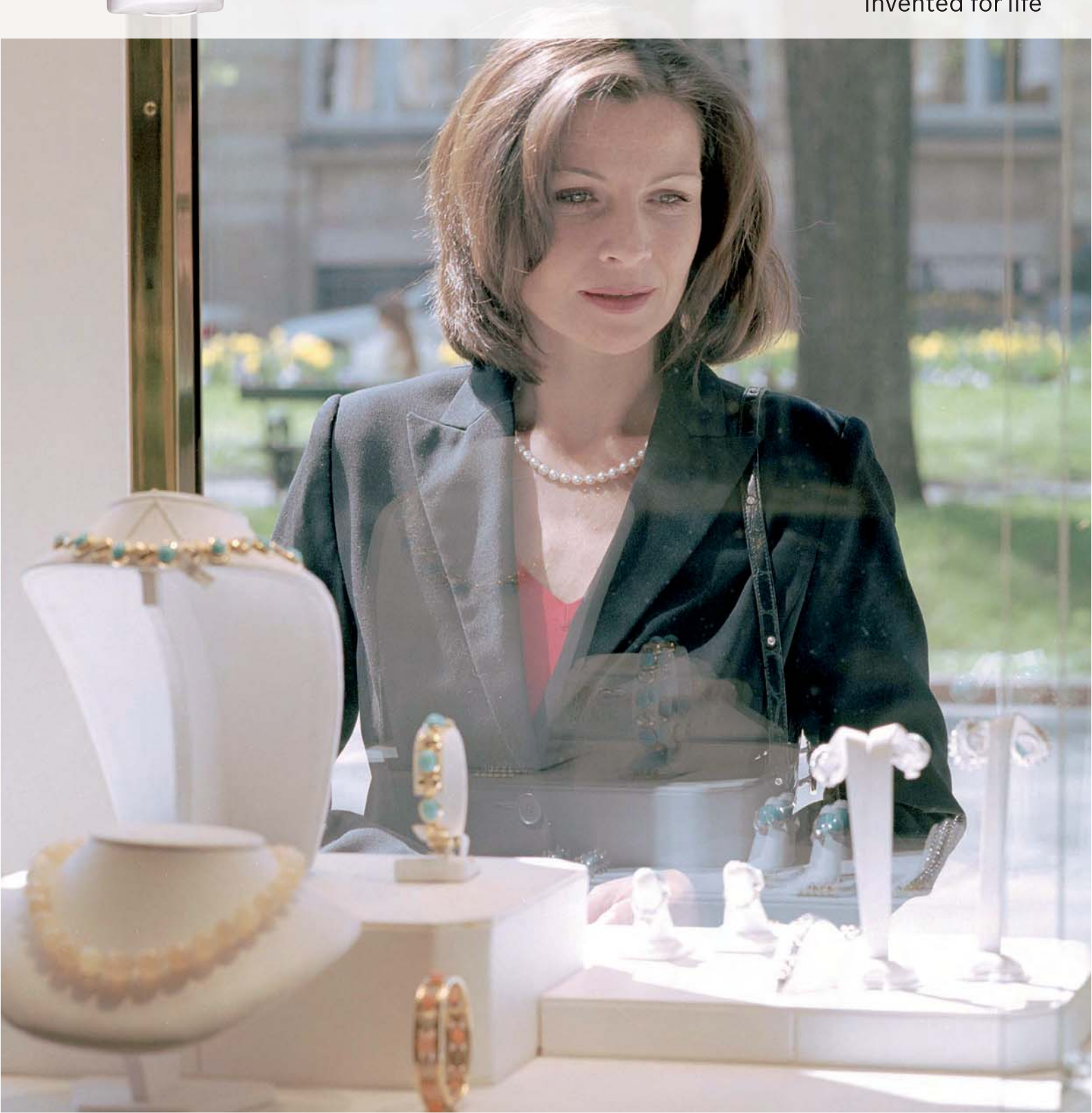
Intrusion Alarm Systems

Databook EMEA 12/2008



BOSCH

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CC408 Solution 880 Control Panel



Features

- ▶ **Eight programmable user codes and eight radio remote user codes**
- ▶ **Two areas**
- ▶ **DTMF telephone remote arming**
- ▶ **Three arming modes**
- ▶ **Day alarm, duress alarm, and codepad tamper alarm**
- ▶ **Built-in telephone line fault monitor**
- ▶ **Zone lockout**
- ▶ **Automatic battery testing**
- ▶ **Event memory recall**
- ▶ **Programmable ring burst time**

The CC408 Solution 880 Control Panel provides eight programmable zones.

Functions

Functions for All Models

Eight Programmable User Codes and Eight Radio Remote User Codes

Users can program up to eight user codes and eight radio user codes. Only the Master Code holder can add or change other system user codes.

Two Areas

The control panel is partitioned into two areas. Users can operate both areas from one master codepad or from multiple separate area addressable codepads.

Three Arming Modes

Users can arm the system using one of three modes:

AWAY Mode: Arms the entire system.

STAY Mode 1: Arms most zones. Does not arm zones programmed as isolated (installer).

STAY Mode 2: Arms most zones. Does not arm zones programmed as isolated (Master Code holder).

Dual-tone Multi-frequency (DTMF) Telephone Remote Arming

Users can arm the system from any remote location using a DTMF telephone. Once a communication link is established between a DTMF telephone and the system, users can operate the system using the telephone in the same way as a codepad.

Day Alarm

Day alarm monitors a group of zones when the system is disarmed. For example, the front door of a shop has a pressure mat or electronic beam that customers turn on as they enter or exit. The codepad beeps each time the mat or beam turns on.

Duress Alarm

A codepad duress alarm can work as a silent hold-up alarm and is useful when the system reports to a monitoring station or pocket pager.

Codepad Tamper Alarm

Codepad tamper limits the number of times that someone can try to enter the wrong user code. When someone exceeds the limit, the system starts an alarm and sends a report to a security monitoring station.

End-Of-Line (EOL) Resistor Value Choice

Users can choose different EOL resistor values when programming the control panel. The selected value applies to all zones at once. Users can add the control panel into an existing system without changing the EOL resistors.

Built-in Telephone Line Fault Monitor

When the system detects a telephone line failure, it creates a telephone line fault. Users can program the system to sound an alarm if the telephone line is cut while the control panel is armed.

Zone Lockout

The first zone to send an alarm condition is locked and a siren runs for a specified time. All other zones that send alarm conditions are reset when the sirens reset, but continue to report if another alarm condition occurs. This prevents an intruder from setting off the alarms in all zones, waiting for the sirens to stop, and then entering the site.

Automatic Battery Testing

The system performs a battery test each time a user arms the system, and automatically every four hours. When the system detects a low capacity back-up battery, it creates a low battery fault.

Event Memory Recall

Event Memory Recall plays the last 40 system events, including all alarms, system arming, and system disarming. If the control panel is partitioned, Event Memory Recall plays the last 10 system events.

Programmable Ring Burst Time

Telephone ring times might be longer or shorter depending on the technology in a system. Different timing can cause control panels to answer calls that should be answered by an answering machine, fax, or a person. Users can program the control panel for the correct ring burst time. Adjust the ring time by 5 ms up to a total of 75 ms, or by 80 ms up to a total of 1200 ms.

Functions for CC408 Models

Call Forwarding

The telecommunications provider must offer a call forward option. Users can program call forwarding modes to operate when the system is armed in the AWAY Mode.

Call Forward Modes

- **Immediate On:** Redirects all incoming calls to another number, including mobile phone, pagers, and answering services. The telephone called first does not ring.
- **No Answer:** Redirects all incoming calls to another number when the telephone that was called first is not answered within 20 seconds. Outgoing calls can still be made from the first telephone.

Certifications and Approvals

Region	Certification
Europe	CE
China	CCC
A-Tick Supplier Code	N663
New Zealand Telepermit	PTC 211/98/083

Installation/Configuration Notes

Compatibility Information

RF Receivers	RE005E RF Receiver with Outputs WE800E RF Receiver
RF Transmitters	RE012E Two-channel Hand-held Transmitter RE013E Four-channel Hand-held Transmitter
Codepads	<ul style="list-style-type: none"> • CP105A Night Arm Station • CP500AW LED Area Addressable • CP500ALW LCD Area Addressable • CP500PW LED Partitionable • CP516LW LCD • CP516W LED
Modules	MO144 Universal Timer Module

Technical Specifications

Specifications for All Models

Environmental Considerations

Relative Humidity:	10% to 95% non-condensing
Temperature (Operating):	0°C to +45°C (+32°F to +113°F)

Power Requirements

Current Draw (Standby):	65 mA
Current Draw (Alarm):	115 mA
Current Draw (with Codepad):	105 mA
Primary:	240 VAC, 18 VAC at 1.3 A from a TF008 Plug Pack
Secondary:	12 VDC, 6 Ah from a rechargeable sealed lead acid battery

Specifications for CC408 Solution 880 Control Panel

Enclosure

Dimensions:	30.6 cm x 26.2 cm x 8.4 cm (12 in x 10.3 in x 3.3 in) Packed in carton
Weight:	2.5 kg (5.5 lb)

Ordering Information

CC408P Solution 880 Control Panel	CC408P
Includes assembled printed circuit board (PCB), power connector, EOL resistors, terminals, and battery leads.	
CC408PSP Solution 880 Control Panel	CC408PSP
Includes assembled printed circuit board (PCB), power connector, EOL resistors, terminals, battery leads, and literature in Spanish.	
Accessories	
CC808 Direct Link Cable	CC808
Cable to connect CC816 Alarm Link Software (A-Link) to Solution 862, Solution 880 Ultima, and Solution 16 Control Panels.	
CC811S Modem Module	CC811S
Modem module for Solution 862, 880, and Ultima Control Panels for SMS reporting.	
CC891 Programming Key	CC891
Uploads and downloads program settings for Solution 16, Solution 862, Solution 880, and Ultima Control Panels.	

CC488 Solution Ultima 880 Control Panel



Features

- ▶ **Eight programmable user codes and eight radio remote user codes**
- ▶ **Two areas**
- ▶ **DTMF telephone remote arming**
- ▶ **Remote programming**
- ▶ **Three arming modes**
- ▶ **Day alarm, duress alarm, and codepad tamper alarm**
- ▶ **Built-in telephone line fault monitor**
- ▶ **Zone lockout**
- ▶ **Automatic battery testing**
- ▶ **Event memory recall**

The CC488 Solution Ultima 880 Control Panel provides eight programmable hard-wired or wireless burglary zones. Remote programming provides added convenience and adaptability.

Functions

Eight Programmable User Codes and Eight Radio Remote User Codes

Users can program up to eight user codes and eight radio user codes. Only the Master Code holder can add or change other system user codes.

Two Areas

The control panel is partitioned into two areas. Operate both areas from one master codepad or from multiple separate area addressable codepads.

Remote Programming

Users can program the zones remotely with CC816 Alarm Link (A-Link) software on a PC with MS-DOS® and a modem. Users can run diagnostics, arm systems, and bypass zones with an off-site computer. This reduces service visits to a site and provides quick customer service, saving time and money. Remote programming is useful for country locations where a control panel might be located hundreds of kilometers (miles) from an office.

Three Arming Modes

Users can arm the system using one of three modes:

AWAY Mode: Arms the entire system.

STAY Mode 1: Arms most zones. Does not arm zones programmed as isolated (installer).

STAY Mode 2: Arms most zones. Does not arm zones programmed as isolated (Master Code holder).

Dual-tone Multi-frequency (DTMF) Telephone Remote Arming

Users can arm the system from any remote location using a DTMF telephone. Once a communication link is established between a DTMF telephone and the system, users can operate the system using the telephone in the same way as a codepad.

Day Alarm

Day alarm monitors a group of zones when the system is disarmed. For example, the front door of a shop has a pressure mat or electronic beam that customers turn on as they enter or exit. The codepad beeps each time the mat or beam turns on.

Duress Alarm

A codepad duress alarm can work as a silent hold-up alarm and is useful when the system reports to a monitoring station or pocket pager.

Codepad Tamper Alarm

Codepad tamper limits the number of times that someone can try to enter the wrong user code. When someone exceeds the limit, the system starts an alarm and sends a report to a security monitoring station.

Choice of End-Of-Line (EOL) Resistor Value

Users can choose different EOL resistor values when programming the control panel. The selected value applies to all zones at once. Users can add the control panel into an existing system without changing the EOL resistors.

Built-in Telephone Line Fault Monitor

When the system detects a telephone line failure, it creates a telephone line fault. Users can program the system to sound an alarm if the telephone line is cut while the control panel is armed.

Zone Lockout

The first zone to send an alarm condition is locked and a siren runs for a specified time. All other zones that send alarm conditions are reset when the sirens reset, but continue to report if another alarm condition occurs. This prevents an intruder from setting off the alarms in all zones, waiting for the sirens to stop, and then entering the site.

Automatic Battery Testing

The system performs a battery test each time a user arms the system, and automatically every four hours. When the system detects a low capacity back-up battery, it creates a low battery fault.

Event Memory Recall

Event Memory Recall plays the last 40 system events, including all alarms, system arming, and system disarming. If the control panel is partitioned, Event Memory Recall plays the last 10 system events.

Programmable Ring Burst Time

Telephone ring times might be longer or shorter depending on the technology in a system. Different timing can cause control panels to answer calls that should be answered by an answering machine, fax, or a person. Users can program the control panel for the correct ring burst time. Adjust the ring time from 0 ms to 1200 ms in 5 ms increments.

Call Forwarding

The telecommunications provider must offer a call forwarding option. Users can program call forwarding modes to operate when the system is armed in the AWAY Mode.

Call Forward Modes

- **Immediate On:** Redirects all incoming calls to another number, including mobile phones, pagers, and answering services. The telephone called first does not ring.
- **No Answer:** Redirects all incoming calls to another number when the telephone that was called first is not answered within 20 seconds. Outgoing calls can still be made from the first telephone.

Certifications and Approvals

Region	Certification
Europe	CE
A-Tick Supplier Code	N663
New Zealand Telepermit	PTC 211/98/083

Installation/Configuration Notes

Compatibility Information

RF Receivers	RE005E RF Receiver with Outputs
RF Transmitters	RE012E Two-channel Hand-held Transmitter RE013E Four-channel Hand-held Transmitter
Codepads	<ul style="list-style-type: none"> • CP105A Night Arm Station • CP500AW LED Area Addressable • CP500ALW LCD Area Addressable • CP500PW LED Partitionable • CP516LW LCD • CP516W LED
Modules	MO144 Universal Timer Module

Technical Specifications

Enclosure

Dimensions:	30.6 cm x 26.2 cm x 8.4 cm (12 in x 10.3 in x 3.3 in) Packed in carton
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Weight:	2.5 kg (5.5 lb)
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Environmental Considerations

Relative Humidity:	10% to 95% non-condensing
Temperature (Operating):	0°C to +45°C (+32°F to +113°F)

Power Requirements

Current Draw (Standby):	65 mA
Current Draw (Alarm):	115 mA
Current Draw (with Codepad):	105 mA
Primary:	240 VAC, 18 VAC at 1.3 A from a TF008 Plug Pack
Secondary:	12 VDC, 6 Ah from a rechargeable sealed lead/acid battery

Trademarks

MS-DOS® is a registered trademark of Microsoft Corporation in the United States and/or other countries.

Ordering Information

CC488P Solution Ultima 880 Control Panel	CC488P
Includes assembled printed circuit board (PCB), power connector, EOL resistors, terminals, and battery leads.	

Accessories

CC808 Direct Link Cable	CC808
Cable to connect CC816 Alarm Link Software (A-Link) to Solution 862, Solution 880 Ultima, and Solution 16 Control Panels.	
CC811S Modem Module	CC811S
Modem module for Solution 862, 880, and Ultima Control Panels for SMS reporting.	
CC891 Programming Key	CC891
Uploads and downloads program settings for Solution 16, Solution 862, Solution 880, and Ultima Control Panels.	
Enclosure with Transformer (220 VAC)	EDM-ENCL-KIT
Metal enclosure with 220 VAC transformer, fuse and terminal block, front and rear tamper switch, and key lock on door.	

CC880 Solution 16 Control Panel



Features

- ▶ **16 zones**
- ▶ **32 programmable codes**
- ▶ **Four areas**
- ▶ **Remote programming**
- ▶ **DTMF telephone remote arming (optional)**
- ▶ **Three arming modes**
- ▶ **Day alarm, duress alarm, and codepad tamper alarm**
- ▶ **Telephone line fault monitor (optional)**
- ▶ **Automatic battery testing**
- ▶ **Event memory recall**

The CC880 Solution 16 Control Panel is part of an electronic surveillance system suitable for home or business needs. The control panel supports 16 zones. Eight zones use programmable end-of-line (EOL) resistor values. Add an eight-zone expansion board or use zone doubling to achieve 16 zones.

Functions

Functions for All Models

32 Programmable User Codes

The control panel system supports 32 personal identification number (PIN) user codes. Each PIN can have up to seven digits. Any number of users can be assigned a master PIN. Master PIN users can program other PINs and perform general system configuring. All other user PINs are assigned to one of five authority levels.

Four Areas

The control panel is partitioned into four areas. One master codepad or multiple separate area addressable codepads can operate each area.

Remote Programming

Users can program the zones remotely with CC816 Alarm Link (A-Link) software on a PC with MS-DOS® and a modem. Users can run diagnostics, arm systems, and bypass zones with an off-site computer. This reduces service visits to a site and provides quick customer service, saving time and money. Remote programming is invaluable for country locations where a control panel might be located hundreds of kilometers (miles) from an office.

Dual-tone Multi-frequency (DTMF) Telephone Remote Arming

The optional CC886 Telephone DTMF Command Module allows a DTMF telephone to arm the system from any remote location. Once a communication link is established between a DTMF telephone and the system, users can operate the system using the telephone in the same way as a codepad.

Three Arming Modes

Users arm the system in one of three modes:

AWAY Mode: Arms the entire system.

STAY Mode 1: Arms most zones. Does not arm zones programmed as isolated (Installer).

STAY Mode 2: Arms most zones. Does not arm zones programmed as isolated (Master Code holder).

Day Alarm

Day alarm monitors a group of zones when the system is disarmed. For example, the front door of a shop has a pressure mat or electronic beam that customers turn on as they enter or exit. The codepad beeps each time the mat or beam turns on.

Duress Alarm

A codepad duress alarm can work as a silent hold-up alarm and is useful when the system reports to a monitoring station or pocket pager.

Codepad Tamper Alarm

Codepad tamper limits the number of times that someone can try to enter the wrong user code. When someone exceeds the limit, the system starts an alarm and sends a report to a security monitoring station.

Telephone Line Fault Monitor Option

The optional CC887 Telephone Line Fault Module creates a telephone line fault when a telephone line fails. Users can program the system to sound an alarm if the telephone line is cut while the control panel is armed.

Automatic Battery Testing

The system performs a battery test each time a user arms the system, and automatically every four hours. When the system detects a low capacity back-up battery, it creates a low battery fault.

Event Memory Recall

Event Memory Recall plays the last 40 system events, including all alarms, system arming, and system disarming. If the control panel is partitioned, Event Memory Recall plays the last 10 system events.

End-Of-Line (EOL) Resistor Value Choice

Users can choose from different EOL resistor values when programming the control panel. The selected value applies to all eight programmable zones at once. Users can add a control panel into an existing system without changing the EOL resistors.

For 16 zones, use zone doubling or add an eight zone expansion board. With zone doubling, zones one to eight are 3 K3, and zones nine to 16 are 6 K8. The CC883 Eight Zone Expansion Board supports adjustable EOL resistor values.

Functions for CC880 Models

Call Forwarding

The telecommunications provider must offer a call forwarding option. Users can program call forwarding modes to operate when the system is armed in the AWAY Mode.

Call Forward Modes

- **Immediate On:** Redirects all incoming calls to another number, including mobile phones, pagers, and answering services. The telephone called first does not ring.
- **No Answer:** Redirects all incoming calls to another number when the telephone that was called first is not answered within 20 seconds. Outgoing calls can still be made from the first telephone.

Functions for CC880PSP Models

Programmable Ring Burst Time

Telephone ring times might be longer or shorter depending on the technology in a system. Different timing can cause control panels to answer calls that should be answered by an answering machine, fax, or a person. Users can program the control panel for the correct ring burst time. Adjust the ring time from 0 ms to 1200 ms in 5 ms increments.

Certifications and Approvals

Region	Certification
Europe	CE
A-Tick Supplier Code	N663
New Zealand Telepermit	PTC 211/95/246

Installation/Configuration Notes

Compatibility Information

RF Receivers	RE005E RF Receiver with Outputs
RF Transmitters	RE012E Two-channel Hand-held Transmitter RE013E Four-channel Hand-held Transmitter
Codepads	<ul style="list-style-type: none"> • CP105A Night Arm Station • CP500AW LED Area Addressable • CP500ALW LCD Area Addressable • CP500PW LED Partitionable • CP516LW LCD • CP516W LED
Modules	MO144 Universal Timer Module

Technical Specifications

Enclosure

Dimensions (case, packed in carton):	30.6 cm x 26.2 cm x 8.4 cm (12 in. x 10.3 in. x 3.3 in.)
Weight:	2.5 kg (5.5 lb)

Environmental Considerations

Relative Humidity:	10% to 95% non-condensing
Temperature Range:	0°C to +45°C (+32°F to +113°F)

Power Requirements

Current Draw (Stand-By):	65 mA
Current Draw (Alarm):	115 mA
Current Draw (with Codepad):	105 mA
Primary:	240 VAC to 18 VAC at 1.3 A from a TF008 Plug Pack
Secondary:	12 VDC, 7 Ah from a rechargeable sealed lead acid battery

Trademarks

MS-DOS® is a registered trademark of Microsoft Corporation in the United States and/or other countries.

Ordering Information

CC880P Solution 16 Control Panel **CC880P**

Includes assembled printed circuit board (PCB), power connector, EOL resistors, terminals, battery leads, and spare fuses.

CC880PSP Solution 16 Control Panel **CC880PSP**

Includes assembled printed circuit board (PCB), power connector, EOL resistors, terminals, battery leads, and spare fuses. Has a programmable ring burst time option.

Accessories

CC808 Direct Link Cable **CC808**

Cable to connect CC816 Alarm Link Software (A-Link) to Solution 862, Solution 880 Ultima, and Solution 16 Control Panels.

CC811S Modem Module **CC811S**

Modem module for Solution 862, 880, and Ultima Control Panels for SMS reporting.

CC883 Eight-zone Expansion Board **CC883**

Works with Solution 16 Control Panels. Has adjustable EOL resistor values. Plugs on the control panel, providing space for wiring.

CC886 Telephone DTMF Command Module **CC886**

Works with Solution 16 Control Panels. Allows a touch-tone telephone to arm and disarm.

CC887 Telephone Line Fault Module **CC887**

Works with Solution 16 Control Panels. Monitors the telephone line connection and activates an alarm if the line fails or disconnects.

CC888 Programmable Voice Control Module **CC888**

Works with the Solution 16 Control Panel. Plays a 16 second recording as an alarm message.

CC891 Programming Key **CC891**

Uploads and downloads program settings for Solution 16, Solution 862, Solution 880, and Ultima Control Panels.

D126 Standby Battery (12 V, 7 Ah) **D126**

Sealed lead-acid standby and auxiliary rechargeable power supply.

CP500ALW Area Addressable LCD Codepad



Features

- ▶ **Single button arming of alarm system**
- ▶ **Fire, medical and panic alarms**
- ▶ **Stylish and modern design**
- ▶ **Clear and easy to use**
- ▶ **Backlit buttons for illuminated operation during day or night**

The CP500ALW is an eight zone LCD codepad with protective door that is compatible with the Solution 16 Control Panel when partitioned. The display is designed with a combination of numbers and ICONS to display the alarm systems condition and creates an easy interface for users.

The codepad will notify you when a zone is unsealed, when there has been an alarm and in which zone the alarm has occurred.

Also included as a standard feature are a number of single button functions that will allow a user to perform various system operations by simply holding down a button for two seconds. For example, holding the AWAY button will arm the system, holding the 1 button will test the sirens and holding the 3 button will test the strobe lights.

System Overview

If programmed to do so Fire, Panic and Medical alarms can be easily triggered from any codepad by pressing the outside buttons of a row at the same time.

Arming Methods

- **Method #1:** Enter the User code followed by the AWAY button. The AWAY indicator will display.

- **Method #2:** Hold down the AWAY button for two seconds. The AWAY indicator will display. For further details on codepad operation please see the Solution panels listed in the Install and Configuration Notes, and then refer to the appropriate Operator Guide for the panel.

To disarm the system in AWAY mode, enter the user code followed by the AWAY button.

Installation/Configuration Notes

Compatibility Information

Control Panels	Solution 16 partitioned Solution 880 partitioned Solution Ultima 880 partitioned
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Mounting Considerations

The CP500ALW can be surface mounted indoors through two to four screws.

Technical Specifications

Enclosure Design

Dimensions:	7.2 cm x 12.7 cm x 2.3 cm (2.8 in. x 5 in. x 1 in.)
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Environmental Considerations

Storage Temperature:	+0°C to +50°C (+32°F to 122°F)
Relative Humidity:	20% to 90% (non-condensing)

Power Requirements

Operating Voltage:	11 VDC to 14VDC
Current Draw:	50 mA (maximum)
Radio Frequency Interference (RFI) Immunity:	Complies with AS/NZS3548

Ordering Information

CP500ALW Area Addressable LCD Codepad	CP500ALW
Shows 8 zones, provides LCD, and provides a protective door. Compatible with Solution 16 Control Panels when partitioned.	

CP500AW Area Addressable LED Codepad



Features

- ▶ **Single button arming of alarm system**
- ▶ **Fire, medical and panic alarms**
- ▶ **Stylish and modern design**
- ▶ **Clear and easy to use**
- ▶ **Backlit buttons for illuminated operation during day or night**

The CP500AW is an eight zone LCD codepad with protective door that is compatible with the Solution 16 Control Panel when partitioned. The display is designed with a combination of numbers and words to display the alarm systems condition and creates an easy interface for users.

The codepad will notify you when a zone is unsealed, when there has been an alarm and in which zone the alarm has occurred.

Also included as a standard feature are a number of single button functions that will allow a user to perform various system operations by simply holding down a button for two seconds. For example, holding the AWAY button will arm the system, holding the 1 button will test the sirens and holding the 3 button will test the strobe lights.

System Overview

If programmed to do so Fire, Panic and Medical alarms can be easily triggered from any codepad by pressing the outside buttons of a row at the same time.

Arming Methods

- **Method #1:** Enter the User code followed by the AWAY button. The AWAY indicator will display.

- **Method #2:** Hold down the AWAY button for two seconds. The AWAY indicator will display. For further details on codepad operation please see the Solution panels listed in the Install and Configuration Notes, and then refer to the appropriate Operator Guide for the panel.

To disarm the system in AWAY mode, enter the user code followed by the AWAY button.

Installation/Configuration Notes

Compatibility Information

Control Panels	Solution 16 partitioned Solution 880 partitioned Solution Ultima 880 partitioned
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Mounting Considerations

The CP500AW can be surface mounted indoors through two to four screws.

Technical Specifications

Enclosure Design

Dimensions:	7.2 cm x 12.7 cm x 2.3 cm (2.8 in. x 5 in. x 1 in.)
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Environmental Considerations

Storage Temperature:	+0°C to +50°C (+32°F to 122°F)
Relative Humidity:	20% to 90% (non-condensing)

Power Requirements

Operating Voltage:	11 VDC to 14VDC
Current Draw:	50 mA (maximum)
Radio Frequency Interference (RFI) Immunity:	Complies with AS/NZS3548

Ordering Information

CP500AW Area Addressable LED Codepad	CP500AW
Shows 8 zones, provides LCD, and provides a protective door. Compatible with the Solution 16 Control Panel when partitioned.	

CP500PW Partitionable LED Codepad



Features

- ▶ **Single button arming of alarm system**
- ▶ **Fire, medical and panic alarms**
- ▶ **Stylish and modern design**
- ▶ **Clear and easy to use**
- ▶ **Backlit buttons for illuminated operation during day or night**

The CP500PW is a master partitioned codepad for use with the Solution 16 Control Panel when partitioned into areas. Comes with protective codepad lid.

The Master Partitioned codepad has eight zone indicators to notify you when a zone is unsealed, or when there has been an alarm, and in which zone the alarm has occurred.

At a touch of the # key, you can also select which area the eight zone information corresponds to. The area On/Off LED's tell you which areas are armed at a glance.

System Overview

If programmed to do so Fire, Panic and Medical alarms can be easily triggered from any codepad by pressing the outside buttons at the same time.

Arming Methods

- **Method #1:** Enter the User code followed by the AWAY button. The AWAY indicator will display.
- **Method #2:** Hold down the AWAY button for two seconds. The AWAY indicator will display.

The back DIP switches can be set to select the codepad area. For further details on codepad operation please see the Solution panels listed in the Install and Configuration Notes, and then refer to the appropriate Operator Guide for the panel.

To disarm the system in AWAY mode, enter the user code followed by the AWAY button.

Installation/Configuration Notes

Compatibility Information

Control Panels	Solution 16 partitioned Solution 880 partitioned Solution Ultima 880 partitioned
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Mounting Considerations

The CP500PW can be surface mounted indoors through two to four screws.

Technical Specifications

Enclosure Design

Dimensions:	7.2 cm x 12.7 cm x 2.3 cm (2.8 in. x 5 in. x 1 in.)
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Environmental Considerations

Storage Temperature:	+0°C to +50°C (+32°F to 122°F)
Relative Humidity:	20% to 90% (non-condensing)

Power Requirements

Operating Voltage:	11 VDC to 14VDC
Current Draw:	50 mA (maximum)
Radio Frequency Interference (RFI) Immunity:	Complies with AS/NZS3548

Ordering Information

CP500PW Partitionable LED Codepad	CP500PW
Master codepad for viewing status of all areas of partitioned systems.	

CP508W LED Codepad



Features

- ▶ **Single button arming of alarm system**
- ▶ **Fire, medical and panic alarms**
- ▶ **Stylish and modern design**
- ▶ **Clear and easy to use**
- ▶ **Backlit buttons for illuminated operation during day or night**

The CP508W is an eight zone LED codepad, with protective door, which is compatible with the Solution range of alarm panels. The display is designed with a combination of numbers and words to display the alarm systems condition and creates an easy interface for users.

The codepad will notify you when a zone is unsealed, when there has been an alarm and in which zone the alarm has occurred.

Also included as a standard feature are a number of single button functions that will allow a user to perform various system operations by simply holding down a button for two seconds. For example, holding the AWAY button will arm the system, holding the 1 button will test the sirens and holding the 3 button will test the strobe lights.

System Overview

If programmed to do so Fire, Panic and Medical alarms can be easily triggered from any codepad by pressing the outside buttons at the same time.

To arm the system in AWAY Mode:

- Method #1: Enter the User code followed by the AWAY button.

The AWAY indicator will display:

- Method #2: Hold down the AWAY button for two seconds.

The AWAY indicator will display.

For further details on codepad operation please see the Solution panels listed in the Install and Configuration Notes, and then refer to the appropriate Operator Guide for the panel.

To Disarm the system in AWAY mode:

- Enter the user code followed by the AWAY button.

Installation/Configuration Notes

Compatibility Information

Control Panels	Solution 4 + 4(Older Panel), Solution 6, Solution 6 + 6, Solution 8, Solution 862, Solution 880, Solution Ultima 880, Solution Ultima 862, Solution 16
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Mounting Considerations

The CP508W can be surface mounted indoors through two to four screws.

Technical Specifications

Enclosure Design

Dimensions:	7.2 cm x 12.7 cm x 2.3 cm (2.8 in. x 5 in. x 1 in.)
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Environmental Considerations

Storage Temperature:	+0°C to +50°C (+32°F to 122°F)
Relative Humidity:	20% to 90% (non-condensing)

Power Requirements

Operating Voltage:	11 VDC to 14VDC
Current Draw:	50 mA (maximum)
Radio Frequency Interference (RFI) Immunity:	Complies with AS/NZS3548

Ordering Information

CP508W LED Codepad	CP508W
Shows 8 zones and provides a protective door. Compatible with Solution Alarm Panels.	

CP516LW LCD Codepad



Features

- ▶ **Single button arming of alarm system**
- ▶ **Fire, medical and panic alarms**
- ▶ **Stylish and modern design**
- ▶ **Clear and easy to use**
- ▶ **Backlit buttons for illuminated operation during day or night**

The CP516LW is a 16 zone LCD codepad with protective door that is compatible with the Solution 16 alarm panel. The display is designed with a combination of numbers and ICONS to display the alarm systems condition and creates an easy interface for users.

The codepad will notify you when a zone is unsealed, when there has been an alarm and in which zone the alarm has occurred.

Also included as a standard feature are a number of single button functions that will allow a user to perform various system operations by simply holding down a button for two seconds. For example, holding the AWAY button will arm the system, holding the 1 button will test the sirens and holding the 3 button will test the strobe lights.

System Overview

If programmed to do so Fire, Panic and Medical alarms can be easily triggered from any codepad by pressing the outside buttons at the same time.

To arm the system in AWAY Mode:

- Method #1: Enter the User code followed by the AWAY button.

The AWAY indicator will display:

- Method #2: Hold down the AWAY button for two seconds.

The AWAY indicator will display.

For further details on codepad operation please see the Solution panels listed in the Install and Configuration Notes, and then refer to the appropriate Operator Guide for the panel.

To Disarm the system in AWAY mode:

- Enter the user code followed by the AWAY button.

Installation/Configuration Notes

Compatibility Information

Control Panels Solution 16

Mounting Considerations

The CP516LW can be surface mounted indoors through two to four screws.

Technical Specifications

Enclosure Design

Dimensions: 7.2 cm x 12.7 cm x 2.3 cm
(2.8 in. x 5 in. x 1 in.)

Environmental Considerations

Storage Temperature: +0°C to +50°C (+32°F to 122°F)
Relative Humidity: 20% to 90% (non-condensing)

Power Requirements

Operating Voltage: 11 VDC to 14VDC
Current Draw: 50 mA (maximum)
Radio Frequency Interference (RFI) Immunity: Complies with AS/NZS3548

Ordering Information

CP516LW LCD Codepad

Shows 16 zones, provides LCD, provides a protective door, and is compatible with Solution 16 Alarm Panels.

CP516LW

CP516W LED Codepad



Features

- ▶ **Single button arming of alarm system**
- ▶ **Fire, medical and panic alarms**
- ▶ **Stylish and modern design**
- ▶ **Clear and easy to use**
- ▶ **Backlit buttons for illuminated operation during day or night**

The CP516W is a 16 zone LED codepad, with protective door, that is compatible with the Solution 16 alarm panel. The CP516W has a user-friendly design. It uses a combination of numbers and words to display the alarm system condition and creates easy operation for users.

The codepad will notify you when a zone is unsealed, when there has been an alarm and in which zone the alarm has occurred.

Also included as a standard feature are a number of single button functions that will allow a user to perform various system operations by simply holding down a button for two seconds. For example, holding the AWAY button will arm the system, holding the 1 button will test the sirens and holding the 3 button will test the strobe lights.

System Overview

If programmed to do so Fire, Panic and Medical alarms can be easily triggered from any codepad by pressing the outside buttons at the same time.

Arming Methods

- **Method #1:** Enter the User code followed by the AWAY button. The AWAY indicator will display.
- **Method #2:** Hold down the AWAY button for two seconds. The AWAY indicator will display.

For further details on codepad operation please see the Solution panels listed in the Install and Configuration Notes, and then refer to the appropriate Operator Guide for the panel.

To disarm the system in AWAY mode, enter the user code followed by the AWAY button.

Installation/Configuration Notes

Compatibility Information

Control Panels Solution 16

Mounting Considerations

The CP516W can be surface mounted indoors through two to four screws.

Technical Specifications

Enclosure Design

Dimensions: 7.2 cm x 12.7 cm x 2.3 cm
(2.8 in. x 5 in. x 1 in.)

Environmental Considerations

Storage Temperature: +0°C to +50°C (+32°F to 122°F)
Relative Humidity: 20% to 90% (non-condensing)

Power Requirements

Operating Voltage: 11 VDC to 14VDC
Current Draw: 50 mA (maximum)

Radio Frequency
Interference (RFI) Immunity: Complies with AS/NZS3548

Ordering Information

CP516W LED Codepad	CP516W
Shows 16 zones and provides a protective door. Compatible with the Solution 16 Alarm Panel.	

ISM-BLP1 Blue Line PIR Detector



5

Features

- ▶ **11 m x 11 m (35 ft x 35 ft) broad coverage**
- ▶ **EN50131-2-2 Grade 2 compliant**
- ▶ **First Step Processing (FSP)**
- ▶ **Flexible mounting height from 2.3 m to 2.7 m (7.5 ft to 9 ft)**
- ▶ **No range or height adjustments required**
- ▶ **Installation-friendly two-piece design**
- ▶ **Easy wiring access with plug-in terminals**
- ▶ **Draft and insect immunity**
- ▶ **Eight detection layers including optional look-down zone**
- ▶ **Temperature compensation**

The ISM-BLP1 Detector uses a high-density (77 zone) Fresnel lens designed to produce sharply-focused images throughout the field of view providing superior response to intruders. Easy installation and flexible mounting options provide state-of-the-art detection.

Functions

Signal Processing

First Step Processing (FSP) almost instantly responds to human targets without producing false alarms from other sources. FSP adjusts the detector's sensitivity based on signal amplitude, polarity, slope, and timing. This eliminates the need for the installer to select the sensitivity level.

Test Features

The externally-visible alarm LED can be disabled after installation.

Draft and Insect Immunity

The sealed optical chamber prevents drafts and insects from affecting the detector.

Temperature Compensation

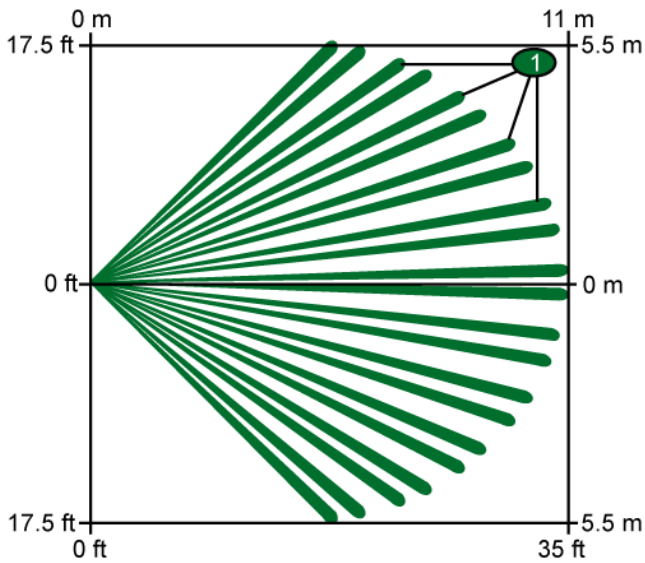
The detector adjusts its sensitivity so that it can identify human intruders at critical temperatures.

Certifications and Approvals

Region	Certification	
Europe	CE	89/336/EEC, EN55022:1998 +A1:2000 +A2:2003 (ANSI C63.4:2001), EN50130-4:1996 +A1:1998 +A2:2003, EN61000-3-3:1995 +A1:2001, EN61000-4-2:1995 +A1:1998 +A2:2001, EN61000-4-3:2002 +A1:2002, EN61000-4-4:1995 +A1:2000 +A2:2001, EN61000-4-5:1995 +A1:2001, EN61000-4-6:1996 +A1:2001, EN61000-4-11:1994 +A1:2001, EN300440:1996, TS 50131-2-2:2004 (Version 1)
	EN50131	EN 50131-1, TS 50131-2-2 August 2004, EN 50130-4, EN 50130-5
Belgium	INCERT	B-509-0009/a
Poland	CNBOP	80/04
Russia	GOST	IEC 60839-1-3-2001, IEC 60839-2-2-2001, IEC 60839-2-6-2001, GOST 26342-84, GOST 27990-88
		GOST 12997-84, GOST R 50009-2000, GOST R 51317.3.2-99, GOST R 51317.3.3-99, GOST R MEK 60065-2002
USA	UL	ANSR: Intrusion Detection Units (UL639), ANSR7: Intrusion Detection Units Certified for Canada (cULus)
Italy	IMQ	
Czech Republic	NBU	T1207/2004
France	AFNOR	NF, A2P (262262-00)
Sweden	INTYG	05-132
		Nr05-132
Australia	C-tick	
Ukraine		IEC 60839-1-3-2001, IEC 60839-2-2-2001, IEC 60839-2-6-2001, GOST 26342-84, GOST 27990-88
Europe		Complies with EN50131-2-2 Grade 2

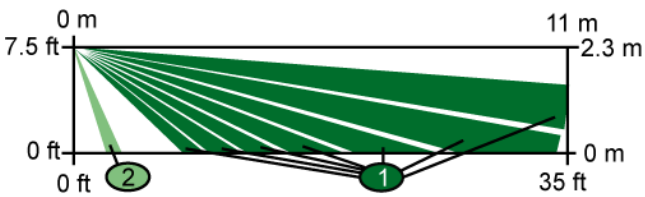
Installation/Configuration Notes

Coverage Patterns



Top View Broad: 11 m x 11 m (35 ft x 35 ft)

1 PIR coverage pattern



Side View Broad: 11 m x 11 m (35 ft x 35 ft)

1 PIR coverage pattern 2 Look-down zone

Mounting

The recommended mounting height is 2.3 m to 2.7 m (7.5 ft to 9 ft).

The detector can be mounted:

- On a flat wall (surface, semi-flush) with the optional B335 Swivel-mount Bracket, or with the optional B328 Gimbal-mount Bracket,
- In the junction of two perpendicular walls, or
- On the ceiling with the optional B338 Ceiling-mount Bracket.

Note The use of optional mounting brackets can reduce the detector's range and increase the dead zone areas.

Power Considerations

Power Limits

Input power must be provided by an Approved Limited Power Source. All outputs must be connected to SELV (safety extra-low voltage) circuits only.

Standby Power

This detector has no internal standby battery. *For UL Listed product installations, 4 hr (40 mAh) of standby power must be supplied by the control unit or by a UL Listed burglary power supply.*

Parts Included

Quant.	Component
1	Detector
1	Hardware pack
1	Literature pack

Technical Specifications

Environmental Considerations

Designed to comply with EN50131-2-2 Environmental Class II, Security Grade 2

Relative Humidity: 0 to 85%, non-condensing

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

Mechanical Properties

Color: White

Dimensions: 10.7 cm x 6.1 cm x 4.8 cm (4.2 in. x 2.4 in. x 1.9 in.)

Material: High-impact ABS plastic

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

Outputs

Digital Alarm: 5 V normally, grounded for 4 sec during alarm.

Relay: Solid state, supervised, Form A normally-closed (NC) contacts rated for 125 mA, 28 VDC, 3 W.

Tamper: Normally-closed (NC) contacts (with cover on) rated at 28 VDC, 125 mA maximum. Connect tamper circuit to 24-hour protection circuit.

Power Requirements

Current (Alarm): 18 mA

Current (Standby): 10 mA maximum at 12 VDC

Voltage (Operating): 10 VDC to 14 VDC

Ordering Information

ISM-BLP1 Blue Line PIR Detector Produces sharply-focused images throughout the field of view providing superior response to intruders	ISM-BLP1
ISM-BLA1-CC Blue Line Color Camera Module (NTSC format) NTSC format	ISM-BLA1-CC-N
ISM-BLA1-CC Blue Line Color Camera Module (PAL format) PAL format	ISM-BLA1-CC-P
ISM-BLA1-LM Blue Line Nightlight Module Fits all Blue Line detectors	ISM-BLA1-LM
ISM-BLA1-SM Blue Line Sounder Module Fits all Blue Line detectors	ISM-BLA1-SM

Ordering Information

B328 Gimbal-mount Bracket**B328**

Mounts on a single-gang box and allows rotation of a detector. Wires are hidden inside.

Swiveling B335-3 low-profile mount**B335-3**

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.

ISM-BLP1-P Blue Line Pet-Friendly PIR Detector



Features

- ▶ **11 m x 11 m (35 ft x 35 ft) broad coverage**
- ▶ **EN50131-2-2 Grade 2 compliant**
- ▶ **Pet Friendly®**
- ▶ **First Step Processing (FSP)**
- ▶ **Flexible mounting height from 2.3 m to 2.7 m (7.5 ft to 9 ft)**
- ▶ **No range or height adjustments required**
- ▶ **Installation-friendly two-piece design**
- ▶ **Easy wiring access with plug-in terminals**
- ▶ **Eight detection layers including optional look-down zone**
- ▶ **Draft and insect immunity**

The ISM-BLP1-P Pet Friendly® Detector can distinguish between signals caused by humans and signals caused by one or two animals with a combined total weight of 13.6 kg (30 lb).

Functions

Signal Processing

First Step Processing (FSP) almost instantly responds to human targets without producing false alarms from other sources. FSP adjusts the detector's sensitivity based on signal amplitude, polarity, slope, and timing. This eliminates the need for the installer to select the sensitivity level.

Test Features

The externally-visible alarm LED can be disabled after installation.

Draft and Insect Immunity

The sealed optical chamber prevents drafts and insects from affecting the detector.

Temperature Compensation

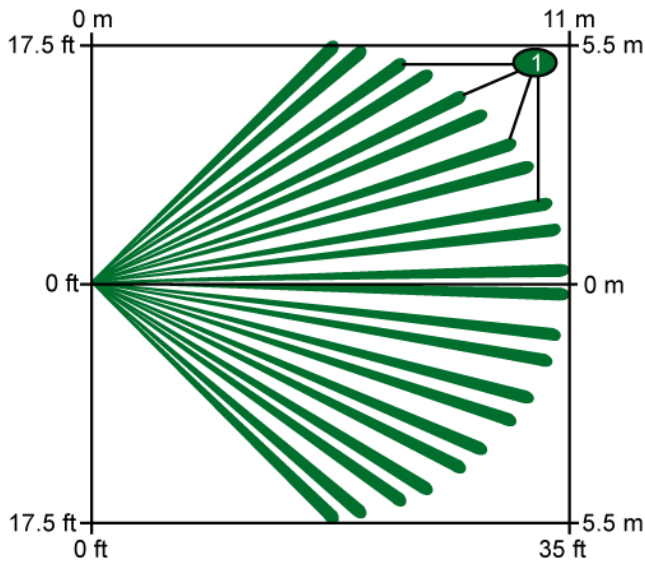
The detector adjusts its sensitivity to maintain its ability to identify human intruders at critical temperatures.

Certifications and Approvals

Region	Certification	
Europe	CE	89/336/EEC, EN55022:1998 +A1:2000 +A2:2003 (ANSI C63.4:2001), EN50130-4:1996 +A1:1998 +A2:2003, EN61000-3-3:1995 +A1:2001, EN61000-4-2:1995 +A1:1998 +A2:2001, EN61000-4-3:2002 +A1:2002, EN61000-4-4:1995 +A1:2000 +A2:2001, EN61000-4-5:1995 +A1:2001, EN61000-4-6:1996 +A1:2001, EN61000-4-11:1994 +A1:2001, EN300440:1996, TS 50131-2-2:2004 (Version 1)
	EN50131	EN 50131-1, TS 50131-2-2 August 2004, EN 50130-4, EN 50130-5
Belgium	INCERT	B-509-0009/a
Poland	CNBOP	83/04
Russia	GOST	IEC 60839-1-3-2001, IEC 60839-2-2-2001, IEC 60839-2-6-2001, GOST 26342-84, GOST 27990-88
		GOST 12997-84, GOST R 50009-2000, GOST R 51317.3.2-99, GOST R 51317.3.3-99, GOST R MEK 60065-2002
USA	UL	ANSR: Intrusion Detection Units (UL639), ANSR7: Intrusion Detection Units Certified for Canada (cULus)
Italy	IMQ	
Czech Republic	NBU	T1207/2004
France	AFNOR	NF, A2P (262263-00)
Sweden	INTYG	Nr05-134
Ukraine		IEC 60839-1-3-2001, IEC 60839-2-2-2001, IEC 60839-2-6-2001, GOST 26342-84, GOST 7990-88
Europe		Complies with EN50131-2-2 Grade 2

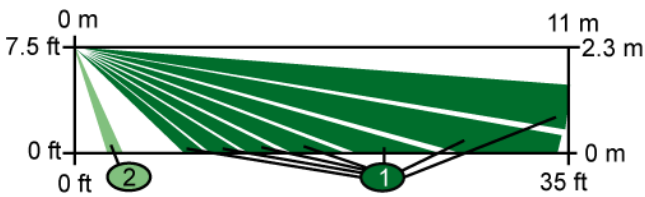
Installation/Configuration Notes

Coverage Patterns



Top View Broad: 11 m x 11 m (35 ft x 35 ft)

1 PIR coverage pattern



Side View Broad: 11 m x 11 m (35 ft x 35 ft)

1 PIR coverage pattern 2 Look-down zone

Mounting

The recommended mounting height is 2.3 m to 2.7 m (7.5 ft to 9 ft).

The detector can be mounted:

- On a flat wall (surface, semi-flush) with the optional B335 Swivel-mount Bracket, or with the optional B328 Gimbal-mount Bracket,
- In the junction of two perpendicular walls, or
- On the ceiling with the optional B338 Ceiling-mount Bracket.

Note The use of optional mounting brackets can reduce the detector's range and increase the dead zone areas.

Power Considerations

Power Limits

Input power must be provided by an approved limited power source. All outputs must be connected to SELV (safety extra-low voltage) circuits only.

Standby Power

This detector has no internal standby battery. *For UL Listed product installations, 4 hr (40 mAh) of standby power must be supplied by the control unit or by a UL Listed burglary power supply.*

Parts Included

Quant.	Component
1	Detector
1	Hardware pack
1	Literature pack

Technical Specifications

Environmental Considerations

Complies with EN50131-2-2 Environmental Class II, Security Grade 2

Relative Humidity: 0 to 85%, non-condensing

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

Mechanical Properties

Color: White

Dimensions: 10.7 cm x 6.1 cm x 4.8 cm (4.2 in. x 2.4 in. x 1.9 in.)

Material: High-impact ABS plastic

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

Outputs

Digital Alarm: 5 V normally, grounded for 4 sec during alarm.

Relay: Solid state, supervised, Form A normally-closed (NC) contacts rated for 125 mA, 28 VDC, 3 W.

Tamper: Normally-closed (NC) contacts (with cover on) rated at 28 VDC, 125 mA maximum. Connect tamper circuit to 24-hour protection circuit.

Power Requirements

Current (Alarm): 18 mA

Current (Standby): 10 mA maximum at 12 VDC

Voltage (Operating): 10 VDC to 14 VDC

Trademarks

Pet Friendly® is a registered trademark of Bosch Security Systems in the United States.

Ordering Information

ISM-BLP1-P Blue Line Pet-Friendly PIR Detector **ISM-BLP1-P**

Distinguish between signals caused by humans and signals caused by small animals

Accessories

ISM-BLA1-CC Blue Line Color Camera Module (NTSC format) **ISM-BLA1-CC-N**
 NTSC format

ISM-BLA1-CC Blue Line Color Camera Module (PAL format) **ISM-BLA1-CC-P**
 PAL format

ISM-BLA1-LM Blue Line Nightlight Module **ISM-BLA1-LM**
 Fits all Blue Line detectors

Ordering Information

ISM-BLA1-SM Blue Line Sounder Module Fits all Blue Line detectors	ISM-BLA1-SM
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B328 Gimbal-mount Bracket Mounts on a single-gang box and allows rotation of a detector. Wires are hidden inside.	B328
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Swiveling B335-3 low-profile mount 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.	B335-3
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ISM-BLQ1 Blue Line Quad PIR Detector



5

Features

- ▶ **11 m x 11 m (35 ft x 35 ft) broad coverage**
- ▶ **EN50131-2-2 Grade 2 compliant**
- ▶ **Dual sensor, quad element design (two separate pyroelectric elements)**
- ▶ **Flexible mounting height from 2.3 m to 2.7 m (7.5 ft to 9 ft)**
- ▶ **No range or height adjustments required**
- ▶ **Installation-friendly two-piece design**
- ▶ **Easy wiring access with plug-in terminals**
- ▶ **Eight detection layers including optional look-down zone**
- ▶ **Draft and insect immunity**
- ▶ **Cover tamper**

The ISM-BLQ1 Quad PIR Detector uses two individual sensors that operate like two PIRs in one. Each sensor processes signals separately. Both must activate to cause an alarm. This increases reliability, because false alarm sources such as noise spikes and small animals are ignored. Quad detectors combine an unsurpassed level of catch performance with the highest level of false alarm immunity. Therefore, they are particularly well suited for challenging installation situations; for example, cases where cross catch of intruders cannot be guaranteed or where intruders are able to cross the detection pattern very quickly.

Functions

First Step Processing (FSP)

First Step Processing (FSP) almost instantly responds to human targets without producing false alarms from other sources. FSP adjusts the detector's sensitivity based on signal amplitude, polarity, slope, and timing. This eliminates the need for the installer to select the sensitivity level. Each of the two PIR sensors processes signals individually, and both sensors must agree there is an alarm before the alarm relay activates.

Test Features

Externally visible alarm LED can be disabled after installation.

Tamper

The switch opens when the cover is removed.

Draft and Insect Immunity

The sealed optical chamber prevents drafts and insects from affecting the detector.

Certifications and Approvals

Region	Certification	
Europe	CE	89/336/EEC, EN55022:1998+A1:2000+A2:2003 (ANSI C63.4:2001), EN50130-4:1996+A1:1998+A2:2003, EN61000-3-3:1995+A1:2001, EN61000-4-2:1995+A1:1998+A2:2001, EN61000-4-3:2002+A1:2002, EN61000-4-4:1995+A1:2000+A2:2001, EN61000-4-5:1995+A1:2001, EN61000-4-6:1996+A1:2001, EN61000-4-11:1994+A1:2001, EN300440:1996, TS 50131-2-2:2004 (Version 1)
	EN50131	EN50131-1, TS 50131-2-2 August 2004, EN 50130-4, EN 50130-5
Belgium	INCERT	B-509-0009/a
Poland	CNBOP	81/04
Russia	GOST	IEC 60839-1-3-2001, IEC 60839-2-2-2001, IEC 60839-2-6-2001, GOST 26342-84, GOST 27990-88 GOST 12997-84, GOST R 50009-2000, GOST R 51317.3.2-99, GOST R 51317.3.3-99, GOST R MEK 60065-2002
USA	UL	ANSR: Intrusion Detection Units (UL639), ANSR7: Intrusion Detection Units Certified for Canada (cULus)
Italy	IMQ	
Czech Republic	NBU	T1207/2004
France	AFNOR	NF, A2P (262264-00)
Sweden	INTYG	Nr05-133

Australia	C-tick	
Ukraine		IEC 60839-1-3-2001, IEC 60839-2-2-2001, IEC 60839-2-6-2001, GOST 26342-84, GOST 27990-88
Europe	Complies with EN50131-2-2 Grade 2	

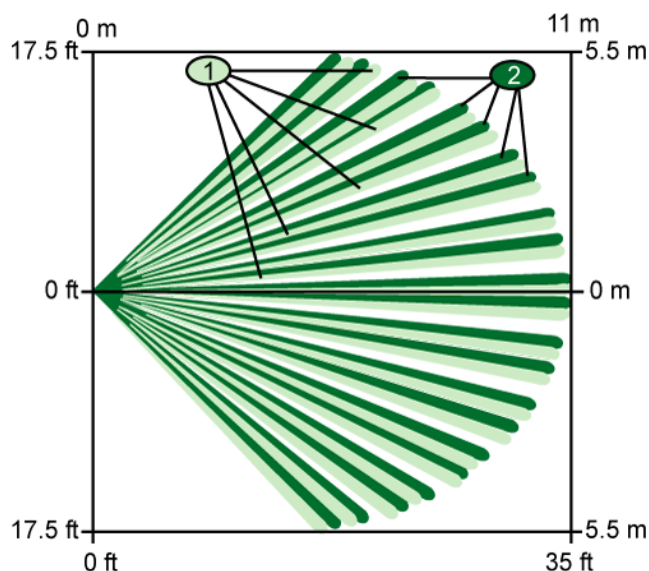
Input power must be provided by an approved limited power source. All outputs must be connected to SELV (safety extra-low voltage) circuits only.

Standby Power

This detector has no internal standby battery. *For UL Listed product installations, 4 hr (40 mAh) of standby power must be supplied by the control unit or by a UL Listed burglary power supply.*

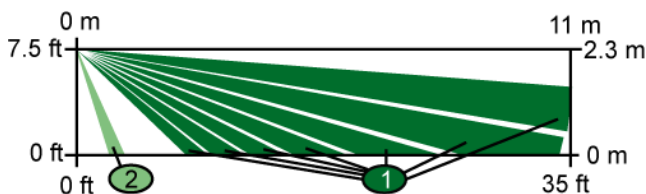
Installation/Configuration Notes

Coverage Patterns



Top View Broad: 11 m x 11 m (35 ft x 35 ft)

- 1 PIR pattern 1
- 2 PIR pattern 2



Side View Broad: 11 m x 11 m (35 ft x 35 ft)

- 1 PIR coverage patterns (1 and 2)
- 2 Look-down zone

Mounting

The recommended mounting height is 2.3 m to 2.7 m (7.5 ft to 9 ft).

The detector can be mounted:

- On a flat wall (surface, semi-flush), with the optional B335 Swivel-mount Bracket, or with the optional B328 Gimbal-mount Bracket.
- In a corner (the junction of two perpendicular walls).
- On the ceiling with the optional B338 Ceiling-mount Bracket.

Note The use of optional mounting brackets can reduce the detector's range and increase the dead zone areas.

Power Considerations

Power Limits

Parts Included

Quant.	Component
1	Detector
1	Hardware pack
1	Literature pack

Technical Specifications

Environmental Considerations

Complies with EN50131-2-2 Environmental Class II, Security Grade 2

Relative Humidity: 0 to 85%, non-condensing

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

Mechanical Properties

Color: white

Dimensions: 13.2 cm x 6.1 cm x 4.8 cm (5.2 in. x 2.4 in. x 1.9 in.)

Material: High-impact ABS plastic

Radio Frequency Interference (RFI) Immunity: No alarm or setup on critical frequencies in the range from 26 MHz to 2 GHz at field strengths less than 30 V/m.

Outputs

Digital Alarm: 5 V normally, grounded for 4 sec during alarm.

Relay: Solid state, supervised, Form A normally-closed (NC) contacts rated for 125 mA, 28 VDC, 3 W.

Tamper: Normally-closed (NC) contacts (with cover on) rated at 28 VDC, 125 mA maximum. Connect tamper circuit to 24-hour protection circuit.

Power Requirements

Current (alarm): 18 mA

Current (standby): 10 mA maximum at 12 VDC

Voltage (operating): 10 VDC to 14 VDC

Ordering Information

ISM-BLQ1 Blue Line Quad PIR Detector **ISM-BLQ1**
 Uses two individual sensors that operate like two PIRs in one

Accessories

ISM-BLA1-CC Blue Line Color Camera Module (NTSC format) **ISM-BLA1-CC-N**
 NTSC format

ISM-BLA1-CC Blue Line Color Camera Module (PAL format) **ISM-BLA1-CC-P**
 PAL format

ISM-BLA1-LM Blue Line Nightlight Module **ISM-BLA1-LM**
 Fits all Blue Line detectors

ISM-BLA1-SM Blue Line Sounder Module **ISM-BLA1-SM**
 Fits all Blue Line detectors

B328 Gimbal-mount Bracket **B328**
 Mounts on a single-gang box and allows rotation of a detector. Wires are hidden inside.

Swiveling B335-3 low-profile mount **B335-3**
 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.

ISM-BLD1

Blue Line TriTech Detectors



5

Features

- ▶ **11 m x 11 m (35 ft x 35 ft) broad coverage**
- ▶ **EN50131-2-4 Grade 2 compliant**
- ▶ **Dual detection technologies with advanced signal processing**
- ▶ **Flexible mounting height from 2.3 m to 2.7 m (7.5 ft to 9 ft)**
- ▶ **No range or height adjustments required**
- ▶ **Supervised microwave; microwave range can be adjusted**
- ▶ **Eight detection layers including optional look-down zone**
- ▶ **Draft and insect immunity**
- ▶ **Temperature compensation**
- ▶ **Combined cover and wall tamper**

The ISM-BLD1 TriTech® Detectors use a combination of passive infrared (PIR) and microwave detection technologies with advanced signal processing. These unobtrusive detectors are simple to install and do not need field adjustments.

These detectors are available in three frequencies:

Frequency	Detector
9.9 GHz	ISM-BLD1-F3
10.525 GHz	ISM-BLD1-F1
10.687 GHz	ISM-BLD1-F4

Functions

Advanced Signal Processing

Adaptive processing adjusts to background disturbances, reducing false alarms without sacrificing intruder detection.

First Step Processing (FSP) almost instantly responds to human targets without producing false alarms from other sources. FSP adjusts the detector's sensitivity based on signal amplitude, polarity, slope, and timing. This eliminates the need for the installer to select the sensitivity level. Each sensor (PIR and microwave) processes signals individually, and both sensors must agree there is an alarm before the alarm relay activates.

Test Features

An externally-visible, tricolor (blue, yellow, green) alarm LED (light-emitting diode) indicates each sensor's status.

Supervised Microwave

The microwave circuit is fully-supervised. If the microwave subsystem fails, the PIR subsystem provides single technology coverage.

Draft and Insect Immunity

The sealed optical chamber prevents drafts and insects from affecting the detector.

Temperature Compensation

The detector adjusts its sensitivity to maintain its ability to identify human intruders at critical temperatures.

Certifications and Approvals

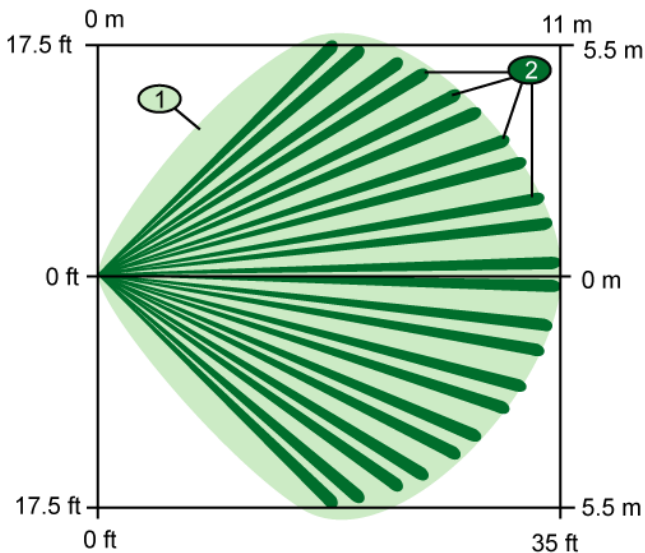
Region	Certification
Belgium	INCERT ISM-BLD1-F1: B-509-0014/c
Russia	GOST ISM-BLD1-F1: GOST 12997-84, GOST R 50009-2000, GOST R 51317.3.2-99, GOST 51317.3.3-99, GOST R MEK 60065-2002
France	AFNOR ISM-BLD1-F3: NF, A2P (282112-00)
Brazil	ANATEL ISM-BLD1-F1: 0251-06-1855
Europe	ISM-BLD1-F1 complies with EN50131-2-4 Grade 2

Installation/Configuration Notes

Application Information

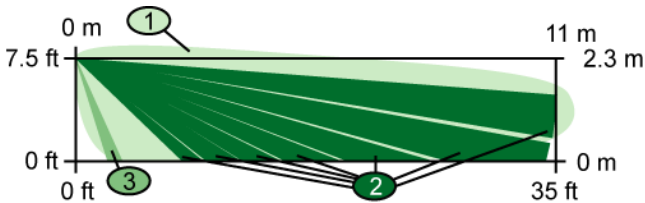
Coverage Patterns

Note An alarm occurs only when an intruder is detected in areas in which the PIR and microwave patterns overlap.



Top View Broad: 11 m x 11 m (35 ft x 35 ft)

- 1 Microwave coverage area
- 2 PIR coverage pattern



Side View Broad: 11 m x 11 m (35 ft x 35 ft)

- 1 Microwave coverage area
- 2 PIR coverage pattern
- 3 Look-down zone

Mounting

The recommended mounting height is 2.3 m to 2.7 m (7.5 ft to 9 ft).

The detector can be mounted:

- On a flat wall (surface, semi-flush), with the optional B335 Swivel-mount Bracket, or with the optional B328 Gimbal-mount Bracket.
- At the junction of two perpendicular walls.
- On the ceiling with the optional B338 Ceiling-mount Bracket.

Standby Power

This detector has no internal standby battery.

Parts Included

Quant.	Component
1	Detector
1	Hardware pack
1	Literature pack

Technical Specifications

Environmental Considerations

Complies with EN50131-2-4 Environmental Class II, Security Grade 2

Relative Humidity: 0 to 85%, non-condensing

Temperature (operating): -29°C to +49°C (-20°F to +120°F)

Mechanical Properties

Color: White

Dimensions: 13.2 cm x 6.1 cm x 4.8 cm (5.2 in. x 2.4 in. x 1.9 in.)

Material: High-impact ABS plastic

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

Outputs

Digital Alarm: 5 V normally, grounded for 4 sec during alarm.

Relay: Solid state, supervised, Form A normally-closed (NC) contacts rated for 125 mA, 28 VDC, 3 W.

Tamper: Normally-closed (NC) contacts (with cover on) rated at 28 VDC, 125 mA maximum. Connect tamper circuit to 24-hour protection circuit.

Power Requirements

Current (Alarm): 22 mA

Current (Standby): 15 mA maximum at 12 VDC

Voltage (Operating): 10 VDC to 14 VDC

Trademarks

TriTech® is a registered trademark of Bosch Security Systems, Inc. in the United States.

Ordering Information

Accessories

ISM-BLA1-CC Blue Line Color Camera Module (NTSC format) NTSC format	ISM-BLA1-CC-N
ISM-BLA1-CC Blue Line Color Camera Module (PAL format) PAL format	ISM-BLA1-CC-P
ISM-BLA1-LM Blue Line Nightlight Module Fits all Blue Line detectors	ISM-BLA1-LM
ISM-BLA1-SM Blue Line Sounder Module Fits all Blue Line detectors	ISM-BLA1-SM
B328 Gimbal-mount Bracket Mounts on a single-gang box and allows rotation of a detector. Wires are hidden inside.	B328
Swiveling B335-3 low-profile mount 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.	B335-3

ISM-BLD1-P Blue Line Pet Friendly TriTech Detectors



5

Features

- ▶ **11 m x 11 m (35 ft x 35 ft) broad coverage**
- ▶ **EN50131-2-4 Grade 2 compliant**
- ▶ **Pet Friendly®**
- ▶ **Dual detection technologies with advanced signal processing**
- ▶ **Flexible mounting height from 2.3 m to 2.7 m (7.5 ft to 9 ft)**
- ▶ **No range or height adjustments required**
- ▶ **Supervised microwave; microwave range can be adjusted**
- ▶ **Eight detection layers including optional look-down zone**
- ▶ **Draft and insect immunity**
- ▶ **Temperature compensation**

The ISM-BLD1-P Pet Friendly® TriTech® Detectors use a combination of passive infrared (PIR) and microwave detection technologies. With advanced signal processing and these detection technologies, the detectors generate alarms for human intruders without generating false alarms for pets. These small unobtrusive detectors are simple to install and do not need field adjustments.

These detectors are available in three frequencies:

Frequency	Detector
9.9 GHz	ISM-BLD1-P-F3
10.525 GHz	ISM-BLD1-P-F1
10.687 GHz	ISM-BLD1-P-F4

Functions

Advanced Signal Processing

Adaptive processing adjusts to background disturbances, reducing false alarms without sacrificing the ability to respond to an intruder.

First Step Processing (FSP) almost instantly responds to human targets without producing false alarms from other sources. FSP adjusts the detector's sensitivity based on signal amplitude, polarity, slope, and timing. This eliminates the need for the installer to select the sensitivity level. Each sensor (PIR and microwave) processes signals individually, and both sensors must agree there is an alarm before the alarm relay activates.

Test Features

An externally-visible, tri-color (blue, yellow, green) alarm LED (light-emitting diode) indicates each sensor's status.

Supervised Microwave

The microwave circuit is fully supervised. If the microwave subsystem fails, the PIR subsystem provides single technology coverage.

Pet Immunity (not tested by UL)

The detector can distinguish between signals caused by humans and signals caused by pets. It ignores signals caused by one or two pets up to 45 kg (100 lb) or numerous rodents.

Draft and Insect Immunity

The sealed optical chamber prevents drafts and insects from affecting the detector.

Temperature Compensation

The detector adjusts its sensitivity to maintain its ability to identify human intruders at critical temperatures.

Certifications and Approvals

Region	Certification
Europe	CE 89/336/EEC, EN55022:1998+A1:2000+A2:2003 (ANSI C63.4:2001), EN50130-4:1996+A1:1998+A2:2003, EN61000-3-3:1995+A1:2001, EN61000-4-2:1995+A1:1998+A2:2001, EN61000-4-3:2002+A1:2002, EN61000-4-4:1995+A1:2000+A2:2001, EN61000-4-5:1995+A1:2001, EN61000-4-6:1996+A1:2001, EN61000-4-11:1994+A1:2001, EN300440:1996, TS 50131-2-2:2004 (Version 1)
Belgium	INCERT ISM-BLD1-P-F1: B-509-0014/c
Poland	CNBOP ISM-BLD1-P-F1: 82/04

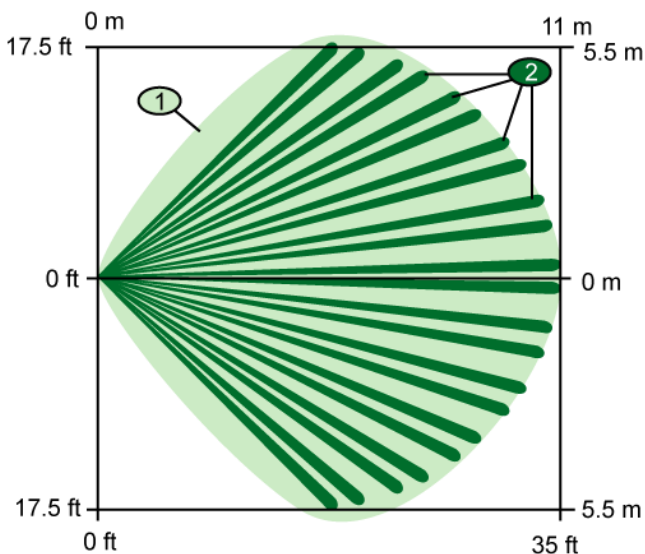
Region	Certification
Russia	GOST ISM-BLD1-P-F1: IEC 60839-1-3-2001, IEC 60839-2-2-2001, IEC 60839-2-6-2001, GOST 26342-84, GOST 27990-88 ISM-BLD1-P-F1: GOST 12997-84, GOST R 50009-2000, GOST R 51317.3.2-99, GOST R 51317.3.3-99, GOST R MEK 60065-2002
USA	UL ANSR: Intrusion Detection Units (UL639), ANSR7: Intrusion Detection Units Certified for Canada (cULus)
	FCC ISM-BLD1-P-F1: ESVD1
Italy	IMQ
Canada	IC ISM-BLD1-P-F1: 1249A-ISMBLD1
Czech Republic	NBU SIM-BLD1-P-F1: T1209/2004
France	AFNOR ISM-BLD1-P-F3: NF, A2P (282111-00)
Sweden	INTYG ISM-BLD1-P-F1 only: Nr05-270
Brazil	ANATEL ISM-BLD1-P-F1: 0251-06-1855
Australia	C-tick F1 model only
Ukraine	IEC 60839-1-3-2001, IEC 60839-2-2-2001, IEC 60839-2-6-2001, GOST 26342-84, GOST 27990-88
Europe	Complies with EN50131-2-4 Grade 2

Installation/Configuration Notes

Application Information

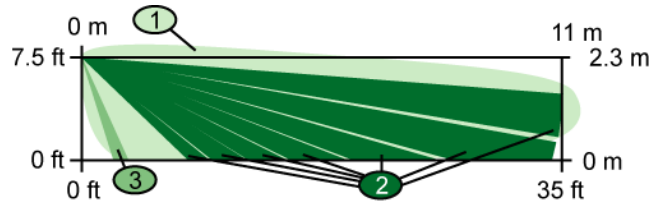
Coverage Patterns

Note An alarm occurs only when an intruder is detected in areas in which the PIR and microwave patterns overlap.



Top View Broad: 11 m x 11 m (35 ft x 35 ft)

- 1 Microwave coverage area
- 2 PIR coverage pattern



Side View Broad: 11 m x 11 m (35 ft x 35 ft)

- 1 Microwave coverage area
- 2 PIR coverage pattern
- 3 Look-down zone

Mounting

The recommended mounting height is 2.3 m to 2.7 m (7.5 ft to 9 ft).

The detector can be mounted:

- On a flat wall (surface, semi-flush) with the optional B335 Swivel-mount Bracket, or with the optional B328 Gimbal-mount Bracket,
- In the junction of two perpendicular walls, or
- On the ceiling with the optional B338 Ceiling-mount Bracket.

Standby Power

This detector has no internal standby battery. For UL Listed product installations, 4 hr (60 mAh) of standby power must be supplied by the control unit or by a UL Listed burglary power supply.

Parts Included

Quant.	Component
1	Detector
1	Hardware pack
1	Literature pack

Technical Specifications

Environmental Considerations

Complies with EN50131-2-4 Environmental Class II, Security Grade 2

Relative Humidity: 0 to 85%, non-condensing

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

Mechanical Properties

Color: White

Dimensions: 13.2 cm x 6.1 cm x 4.8 cm (5.2 in. x 2.4 in. x 1.9 in.)

Material: High-impact ABS plastic

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

Outputs

Digital Alarm:	5 V normally, ground for 4 sec during alarm.
Relay:	Solid state, supervised Form A normally-closed (NC) contacts rated for 125 mA, 28 VDC, 3 W.
Tamper:	Normally-closed (NC) contacts (with cover on) rated at 28 VDC, 125 mA maximum. Connect tamper circuit to 24-hour protection circuit.

Power Requirements

Current (Alarm):	22 mA
Current (Standby):	15 mA maximum at 12 VDC
Voltage (Operating):	10 VDC to 14 VDC

Trademarks

Pet Friendly® and TriTech® are registered trademarks of Bosch Security Systems in the United States.

Ordering Information**Accessories**

ISM-BLA1-CC Blue Line Color Camera Module (NTSC format) NTSC format	ISM-BLA1-CC-N
ISM-BLA1-CC Blue Line Color Camera Module (PAL format) PAL format	ISM-BLA1-CC-P
ISM-BLA1-LM Blue Line Nightlight Module Fits all Blue Line detectors	ISM-BLA1-LM
ISM-BLA1-SM Blue Line Sounder Module Fits all Blue Line detectors	ISM-BLA1-SM
B328 Gimbal-mount Bracket Mounts on a single-gang box and allows rotation of a detector. Wires are hidden inside.	B328
Swiveling B335-3 low-profile mount 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.	B335-3

OD850 Series Outdoor TriTech Detectors



Features

- ▶ **Motion Analyzer II PIR signal processing**
- ▶ **Linear travel distance (LTD) microwave signal processing**
- ▶ **Two sensitivity levels**
- ▶ **Timed relay output adjustable from two sec to 10 min**
- ▶ **AND/OR mode**
- ▶ **Draft and insect immunity**

The OD850 Series TriTech detectors are for use outdoors and in other harsh environments. They use a combination of passive-infrared (PIR) and microwave detection with advanced signal processing.

The OD850 Series is intended for use in the following countries:

Model	Countries
OD850-F1	Belgium, Czech Republic, Denmark, Greece, Hungary, Italy, Netherlands, Norway, Poland, Romania, Spain, Sweden, Ukraine, the Americas and the Asia/Pacific Region
OD850-F2	France, UK

System Overview

The detectors process PIR signals with Motion Analyzer II signal processing and microwave signals with Linear Travel Distance (LTD) signal processing.

The detectors can distinguish between small, repetitive motions such as tree limbs moving in the wind and the more purposeful motions of intruders. These advanced processing techniques and the detectors' mechanical design combine to provide superior performance in a wide range of weather conditions.

Functions

Motion Analyzer II Processing

This PIR signal processor uses multiple thresholds and timing windows to analyze timing, amplitude, duration, and polarity of signals to make an alarm decision. Extreme levels of thermal and illumination disturbances caused by hot and cold drafts, sunlight, or lightning do not cause an alarm.

LTD Microwave Signal Processing

This microwave signal processor measures the linear travel distance of a target to make an alarm decision. It eliminates alarms for objects that move but do not travel, such as tree limbs and hanging signs.

Two Sensitivity Levels

The detectors have two user-selectable PIR sensitivity settings:

Standard sensitivity is the recommended setting for a minimum of false alarms. The detector tolerates environment extremes on this setting.

Intermediate sensitivity is the recommended setting for any location where an intruder is expected to cover only a small portion of the protected area. The detector tolerates normal environments on this setting. This setting identifies intruders more quickly, but may produce more false alarms.

Adjustable Timed Relay Output

In addition to an alarm relay, there is a Form C, unsupervised, timed relay contact that alternates state 1 sec after an alarm and follows a user-selectable timer. The time expires at the set time after the last alarm (it resets on each new alarm).

AND/OR Mode

This DIP-switch setting specifies whether the detector reports alarm situations in the AND mode (when both technologies simultaneously sense an alarm condition) or in the OR mode (when either the PIR or microwave technology senses an alarm state). OR mode provides faster detection in some conditions as the detector activates the alarm relay based on a single technology input.

LEDs

The high-efficiency LEDs (one red and one green) use the same technology as traffic lights to make them visible in sunlight. A DIP-switch setting allows the user to disable these LEDs during standard operation to save power.

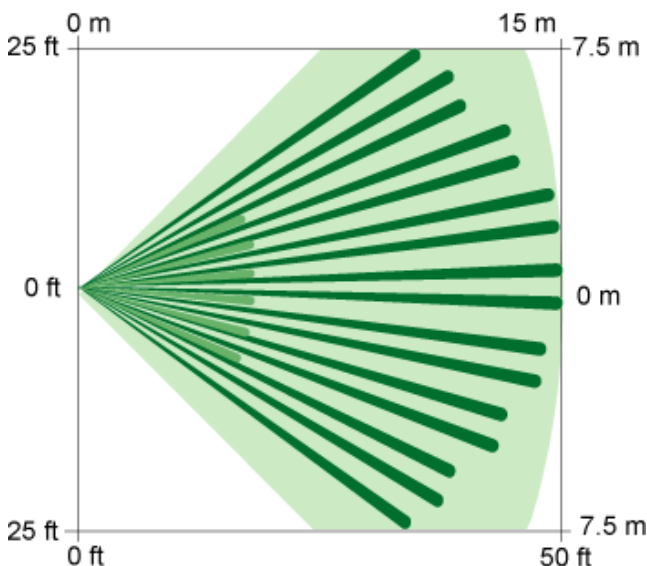
Draft and Insect Immunity

The sealed optical chamber prevents drafts and insects from affecting the detector.

Certifications and Approvals

Region	Certification	
Europe	CE	89/336/EEC, EN55022: 1998 +A1:2000 +A2:2003, EN50130-4: 1996 +A1:1998 +A2:2003, EN61000-3-3: 1995 +A1:2001, EN61000-4-2: 1995 +A1:1998 +A2:2001, EN61000-4-3: 2002 +A1:2002, EN61000-4-4: 1995 +A1:2000 +A2:2001, EN61000-4-5: 1995 +A1:2001, EN61000-4-6: 1996 +A1:2001, EN61000-4-11" 1994 +A1:2001, EN300 440-1 V1.3.1: 2001-09, EN300 440-2 V1.1.1: 2001-09
Belgium	INCERT	B-509-0038
Poland	CNBOP	58/03
Russia	GOST	OD850-F1 only: DE.AE63.B03457
USA	UL	OD850-F1 only: ANSR: Intrusion Detection Units (UL639), ANSR7: Intrusion Detection Units Certified for Canada (ULC-S306)
	FCC	OD850-F1 only: ESVOD850-F1
China	CCC	OD850-F1-CHI only: 2004031901000039
Brazil	ANATEL	OD850-F1 only: 0873-03-1855
Singapore	iDA	OD850-F1 only: #LPREQ-S0155-2004
Australia	C-tick	
Europe	IEC	IP=54 per IEC 60529 OD850-F2 only: Complies with EN50131-1 grade 2

Installation/Configuration Notes



Top View

Standard Broad Coverage: 15 m x 15 m (50 ft x 50 ft)



Side View

Standard Broad Coverage: 15 m x 15 m (50 ft x 50 ft)

Mounting Considerations

- **Wall Mounting:** The OD850 detectors can be mounted directly on a wall or on the supplied B335 Swivel Mount Bracket. Alternatively, they can be mounted directly on a standard rectangular electrical box.
- **Ceiling Mounting:** The detectors can be mounted on a ceiling using the optional B338 Ceiling-Mount Bracket.

Power Considerations

- **Power Limits:** Input power must be provided by an Approved Limited Power Source. All outputs must be connected to SELV (safety extra-low voltage) circuits only.
- **Standby Power:** This detector has no internal standby battery. For UL Listed product installations, 4 hr (248 mAh) of standby power must be supplied by the control unit or by a UL Listed burglary power supply.

Technical Specifications

Enclosure Design

Dimensions: 16.5 cm x 8.25 cm x 6.35 cm
(6.5 in. x 3.25 in. x 2.5 in.)

Material: Polycarbonate

Properties: Weather and vandal resistant

Weight: 1.4 oz (40 g)

Environmental Considerations

IP Rating: 54

Relative Humidity: 0% to 95% non-condensing

Temperature (Operating): -40°C to +54°C (-40°F to +130°F)

OD850-F2: Complies with Environmental Class III
(EN50130-5)

Outputs

Alarm: Do not use with capacitive or inductive loads.

Form A: Normally-closed contact opens on alarm.

Form C: Timed relay contact alternates state on alarm and follows an installer programmable timer.

Contact Rating: 3 W, 125 mA maximum, 25 VDC maximum for DC resistive loads; and protected by a 4.7 Ω, ½ W resistor in the common C leg of the relay.

Tamper: Normally-closed (with cover on) contacts rated 125 mA maximum, 25 VDC maximum

Power Requirements

Current: 62 mA maximum

Input Power: 10 VDC to 15 VDC at 22 mA standby.

Ordering Information**OD850-F1 Outdoor TriTech Detector (10.525 GHz) OD850-F1**

For use in Belgium, Czech Republic, Denmark, Greece, Hungary, Italy, Netherlands, Norway, Poland, Romania, Spain, Sweden, Ukraine, the Americas and the Asia/Pacific Region. Operates at 10.525 GHz. For use outdoors or in harsh environments. Provides Motion Analyzer II PIR signal processing, two sensitivity levels, draft and insect immunity, and 15 m x 15 m (50 ft x 50 ft) coverage.

OD850-F2 Outdoor TriTech Detector (10.588 GHz) OD850-F2

For use in France and the United Kingdom. Operates at 10.588 GHz. For use outdoors or in harsh environments. Provides Motion Analyzer II PIR signal processing, two sensitivity levels, draft and insect immunity, and 15 m x 15 m (50 ft x 50 ft) coverage.

DS1100i Series Glassbreak Detectors



5

Features

- ▶ **Microprocessor-based SAT**
- ▶ **Automatic environmental test circuitry**
- ▶ **Sound check**
- ▶ **Multiple enclosure designs**

The DS1100i Detector Series uses microprocessor-based sound analysis technology (SAT) to listen for the specific frequencies associated with breaking glass. The DS1101i, DS1108i, DS1102i, and DS1103i can be used to detect breakage of plate, tempered, laminated and wired glass types. A built-in environmental test feature alerts the installer to false alarm hazards in harsh environments. Several cover designs are available.

Functions

Signal Processing

Audio signals are analyzed using microprocessor-based SAT and must produce specific frequency, signature, and timing relationships to cause an alarm. The sophistication of this processing technique insures proper catch performance while eliminating false alarms.

Test Features

The magnet operated test mode provides a location verification and operational test when using the optional DS1110i glassbreak tester. The test mode also includes an environmental test that alerts the installer to possible false alarm sources caused by ambient noise. Automatic sound check feature allows the end user to verify that the detector

is powered and functioning by clapping his hands. Externally visible alarm LED indicates an alarm or test condition and can be programmed to latch if desired.

Certifications and Approvals

Region	Certification	
Europe	CE	DS1103i: 89/336/EEC, EN55022: 1998 +A1:2000 +A2:2003, EN50130-4: 1996 +A1: 1998 +A2: 2003, EN61000-4-2: 1995 +A1: 1998 +A2: 2001, EN61000-4-3: 2002 +A1: 2003, EN61000-4-4: 1995 +A1: 2000 +A2: 2001, EN61000-4-5: 1995 +A1: 2001, EN61000-4-6: 1996 +A1: 2001 +A2: 2001, EN61000-4-11: 1994 +A1: 2001, EN60950-1: 2001 +A11: 2004 DS1101i, DS1102i, DS1108i: 89/336/EEC, EN55022: 1998 +A1: 2000 +A2: 2003, EN50130-4: 1996 +A1: 1998 +A2: 2003, EN61000-4-2: 1995 +A1: 1998 +A2: 2001, EN61000-4-3: 2002 +A1: 2003, EN61000-4-4: 1995 +A1: 2000 +A2: 2001, EN61000-4-5: 1995 +A1: 2001, EN61000-4-6: 1996 +A1: 2001 +A2: 2001, EN61000-4-11: 1994 +A1: 2001, EN60950-1: 2001 +A11: 2004
USA	UL	DS1101i, DS1102i, DS1103i: ANSR: Intrusion Detection Units (UL639), ANSR7: Intrusion Detection Units Certified for Canada (cULus) DS1108i: ANSR: Intrusion Detection Units (UL639)
China	CCC	DS1101i-CHI and DS1102i-CHI: 2005013901000139

Installation/Configuration Notes

Note Glassbreak detectors are intended only as a component of a perimeter protection system. They should always be used in conjunction with motion sensors.

Mounting

Mount the DS1100i detector on the ceiling, or on the wall opposite or adjacent to the window. Coverage depends on room acoustics and window size.

Standard Coverage

7.6 m (25 ft) for glass sizes over 30.5 cm x 30.5 cm (12 in. x 12 in.).

Technical Specifications

Mechanical

Tamper Output: Normally-closed cover activated tamper switch with separate terminals. Contacts rated at 28 VDC, 125 mA maximum.

Environmental

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

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

Ordering Information

DS1101i Glassbreak Detector Features a round enclosure.	DS1101i
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DS1101i-FRA Glassbreak Detector Features a round enclosure. For use in France.	DS1101i-FRA
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DS1108i Glassbreak Detector Features a round enclosure.	DS1108i
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DS1102i Glassbreak Detector Features a square enclosure.	DS1102i
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DS1103i Glassbreak Detector Features a rectangle flush mount enclosure.	DS1103i
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Accessories

DS1110i Glassbreak Tester Used to test DS1101i, DS1102i, DS1103i, and DS1108i Glass Break Detectors. Powered by a 9 V alkaline battery (supplied).	DS1110i
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DS1109i Glassbreak Detector



5

Features

- ▶ **Microprocessor-based SAT**
- ▶ **Automatic environmental test circuitry**
- ▶ **Built-in door or window contact**

The DS1109i Detector uses microprocessor-based sound analysis technology (SAT) to listen for the specific frequencies associated with breaking glass. It can be used to detect breakage of plate, tempered, laminated and wired glass types. A built-in environmental test feature alerts the installer of false alarm hazards in harsh environments. It is specially designed to mount on door or window frames. A built-in magnetic contact allows monitoring of a door or window opening.

Functions

Signal Processing

Audio signals are analyzed using microprocessor-based SAT and must produce specific frequency, signature, and timing relationships to cause an alarm. The sophistication of this processing technique insures proper catch performance while eliminating false alarms.

Test Features

The push button operated test mode provides a location verification and operational test when using the optional DS1110i glassbreak tester. Test mode also includes an environmental test that alerts the installer to possible false alarm sources caused by ambient noise. Automatic sound check feature allows the end user to verify that the detector is powered and functioning by clapping his hands. Externally visible alarm LED indicates an alarm or test condition and can be programmed to latch if desired.

Certifications and Approvals

Region	Certification
Europe	CE 89/336/EEC, EN55022: 1998 +A1: 2000 +A2: 2003, EN50130-4: 1996 +A1: 1998 +A2: 2003, EN61000-4-2: 1995 +A1: 1998 +A2: 2001, EN61000-4-3: 2002 +A1: 2003, EN61000-4-4: 1995 +A1: 2000 +A2: 2001, EN61000-4-5: 1995 +A1: 2001, EN61000-4-6: 1996 +A1: 2001 +A2: 2001, EN61000-4-11: 1994 +A1: 2001, EN60950-1: 2001 +A11: 2004
USA	UL ANSR: Intrusion Detection Units (UL639)

Installation/Configuration Notes

Note Glassbreak detectors are intended only as a component of a perimeter protection system. They should always be used in conjunction with motion sensors.

Mounting

Mount the DS1109i on the ceiling, or on the wall opposite or, adjacent to the window. Coverage depends on room acoustics and window size.

Standard Coverage

3 m (10 ft) for glass sizes over 30.5 cm x 30.5 cm (12 in. x 12 in.).

Technical Specifications

Electrical

Current: 21 mA nominal at 12 VDC

Voltage: 9 VDC to 15 VDC

Mechanical

Dimensions: 3.2 cm x 9.5 cm x 2.3 cm (1.25 in. x 3.75 in. x 0.88 in.)

Material: High impact ABS plastic enclosure

Alarm Output: Normally-closed reed relay rated at 3.5 W, 125 mA at 28 VDC for resistive loads.

Tamper Output: Normally-closed cover activated tamper switch with separate terminals. Contacts rated at 28 VDC, 125 mA maximum

Environmental

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

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

Ordering Information

DS1109i Glassbreak Detector **DS1109i**
Mounts to door or window frames. Includes an internal magnetic contact.

Accessories

DS1110i Glassbreak Tester **DS1110i**
Used to test DS1101i, DS1102i, DS1103i, and DS1108i Glass Break Detectors. Powered by a 9 V alkaline battery (supplied).

ISN-SM Seismic Detectors



5

Features

- ▶ **24-hour surveillance of vault walls and doors, safes, night safes, and automatic teller machines**
- ▶ **Sensitivity settings using DIP switches**
- ▶ **SENSTEC® sensor and signal processing system based on microcontrollers**
- ▶ **Low-profile design**

The following models belong to the ISN-SM series seismic detectors:

Model	Features
ISN-SM-50	<ul style="list-style-type: none"> • 4 m operating radius on concrete • 50 m² monitoring area
ISN-SM-80	<ul style="list-style-type: none"> • 5 m operating radius on concrete • 80 m² monitoring area

Each seismic detector monitors objects and surfaces, has a low-profile design, and can be installed effortlessly, even in tight spaces. ISN-SM seismic detectors are designed to monitor safes, night safes, and automatic teller machines.

System Overview

When cutting and drilling through materials such as concrete, steel, or synthetic reinforcements, deviations from the structures' normal vibration pattern ensue. The SENSTEC sensor converts vibration deviations into electrical signals. The digital processing in the seismic detector analyzes the signals and compares them to a frequency range typical of tools used to break into safes, night safes etc. If the signals fall within this frequency range, the seismic detector transmits an alarm via a relay contact.

Functions

Detection

The seismic detector recognizes vibrations caused by explosives and tools such as diamond-tipped drills, mechanical and hydraulic rams, flame cutters, thermal lances, or water jet cutters.

The SENSTEC sensor and the digital signal processing monitor a narrow frequency range, thus offering reliable detection. The seismic detector tolerates environmental conditions such as air movement and noise.

Sensitivity settings using DIP switches

The sensitivity settings are selected using DIP switch settings. Select the appropriate sensitivity setting for the application, the material, and the object, as well as any interference present. The following settings are available:

- Steel, 2.0 m
- Steel, 2.5 m
- Concrete, 4.0 m
- User mode, with SensTool

SensTool software

SensTool software for PCs provides the following options:

- Changing factory default settings
- Monitoring detector performance
- Storing information such as integrator signals
- Selecting additional settings for detector and shock sensitivity

Fixing device

A fixing device is available as an optional hardware accessory for ISN-SM seismic detectors. When the system is armed, the fixing device monitors safes and strong rooms for attacks using thermal and mechanical tools, as well as unauthorized opening. The fixing device components consist of a detector plate, a door plate, and a standby plate.

The detector plate has a monitoring microswitch and a magnetic contact. When the system is armed, the monitoring switch in the detector plate is closed. If the detector is removed from the door plate, the monitoring switch opens and triggers an alarm.

The detector can be hung on the standby plate during working hours.

Swivel plate

A swivel plate is available as an optional hardware accessory for the ISN-SM seismic detector. A swivel plate is used for monitoring safes and strong rooms with exposed keyholes. A microswitch in the swivel plate monitors movement. Any unauthorized swivel movement immediately triggers an alarm. When the system is armed, the swivel plate fully covers the keyhole. When the system is disarmed, the swivel plate swivels so it is at a 90° angle to the keyhole.

Certifications and Approvals

Region	Certification	
Europe	CE	89/336/EEC, EN50130-4: 2002 (including A1 and A2), EN61000-6-3: 2001, EN61000-6-4: 2001
Germany	VdS	ISN-SM-50 ISN-SM-80
USA	UL	ANSR: Intrusion Detection Units (UL639)
the Netherlands	NCP	ISN-SM-50: 06229520/AA/00

CE

Installation/Configuration Notes

Installation notes

Seismic detectors can be mounted directly onto steel plates with smooth surfaces. The surface must not be painted and must be level with a maximum deviation of 0.1 mm. If these conditions cannot be met, the MXPO mounting plate must be used.

The seismic detector cannot be mounted directly onto plastered or unplastered concrete.

Parts Included

Number	Components
1	Seismic detector (ISN-SM-50 or ISN-SM-80)
1	Installation manual
1	Installation template
3	Cable ties

Technical Specifications

Electromagnetic sensitivity

Compatibility:	Better than EN 50130-4
HF interference tolerance (EN 61000-4-3):	No alarm or setup at critical frequencies within a range of 1 MHz to 1000 MHz at > 30 V/m.

Housing

Dimensions: 8.9 cm x 8.9 cm x 2.2 cm

Weight: 0.320 kg

Environmental conditions

Humidity (EN60721):	Up to 95% relative humidity, not condensing
Housing protection class (EN 60529, EN 50102):	IP435
Temperature (operating):	-40 °C to +70 °C
Temperature (storage):	-50 °C to +70 °C

Function test

For the test:	Low < 1.5 VDC High > 3.5 VDC
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Test duration (including test transmitter ISN-GMX-S1): ≤ 3 sec

Operating radius according to monitoring area on concrete and steel for all tools, including thermal tools

ISN-SM-50: 4 m radius = 50 m² monitoring area

ISN-SM-80: 5 m radius = 80 m² monitoring area

Outputs

Alarm relay (changeover contact): Contact closed in standby mode (opened in the event of an alarm) designed for 30 VDC, 100 mA, resistance < 20 Ohm

Alarm holding time: Approx. 2.5 sec

Tamper switch/wall tamper: Tamper contact closed in standby mode (opened in the event of tampering) designed for 30 VDC, 100 mA, resistance < 45 Ohm

Test connection: Analog integration signal

Power requirements

Power consumption at 12 VDC: Alarm: 6 mA
Standby: 3 mA

Power supply monitoring: 8 VDC to 16 VDC (12 V nominal)
Alarm: < 7 VDC

Input for remote controlled reduction of sensitivity

For reduction: Low < 1.5 VDC
High > 3.5 VDC

Reduction to: 1/8 of current setting

Trademarks

SENSTEC® is a registered trademark of Siemens Building Technologies.

Ordering Information

ISN-SM-50 Seismic Detector **ISN-SM-50**
4 m operating radius on concrete and 50 m² monitoring area.

ISN-SM-80 Seismic Detector **ISN-SM-80**
5 m operating radius on concrete and 80 m² monitoring area.

Accessories

ISN-GMX-D7 anti-drill foil **ISN-GMX-D7**
For use with seismic detectors to provide drill protection. Insert foil in the detector's cover to provide extra tamper protection.

ISN-GMA-S6 fixing device **ISN-GMA-S6**
For use with seismic detectors to monitor safes and strong rooms. Consists of a detector plate, a door plate, and a standby plate.

ISN-GMX-B0 floor socket **ISN-GMX-B0**
For floor mounting a seismic detector. Weight: 2.08 kg. A surface at least 30 cm x 30 cm and at least 80 cm deep is required.

Ordering Information
ISN-GMX-P0 mounting plate **ISN-GMX-P0**

Mounting plate for seismic detectors. Weight: 0.27 kg. Suitable for mounting seismic detectors to steel or concrete surfaces. Screw or weld the mounting plate directly onto the surface.

ISN-GMX-P3S swivel plate **ISN-GMX-P3S**

For use with ISN-SM-50 seismic detectors. Monitors safes and strong rooms with exposed keyholes.

ISN-GMX-PZ swivel plate **ISN-GMX-PZ**

For use with ISN-SM-80 seismic detectors. Monitors safes and strong rooms with exposed keyholes.

ISN-GMX-S1 test transmitter **ISN-GMX-S1**

For installation under a seismic detector. Checks the detector and the physical contact between the detector and the protected object.

ISN-GMX-W0 wall mounting kit, surface and flush mount **ISN-GMX-W0**

For surface or flush mounting a seismic detector to the wall. Weight: 1.16 kg.

ISN-GMXW-G0 watertight housing **ISN-GMXW-G0**

Protects seismic detectors from water and dust.

ISN-GMX-P3S2 spacer (2 mm) **ISN-GMX-P3S2**

Thickness: 2 mm.

ISN-GMX-P3S4 spacer (4 mm) **ISN-GMX-P3S4**

Thickness: 4 mm.

Software Options
ISN-SMS-W7 SensTool PC software **ISN-SMS-W7**

Programming software for seismic detectors.

DS422i and DS426i Dual-Beam Photoelectric Detectors



Features

- ▶ **Dual beam detection**
- ▶ **Range up to 60 m (200 ft) outdoors, 180 m (600 ft) indoors**
- ▶ **Selectable response time**
- ▶ **Small unobtrusive design**

The DS422i and DS426i are dual-beam photoelectric detectors designed for indoor and outdoor applications. Consisting of a separate transmitter and receiver, they are designed to activate an alarm when an intruder passes within the direct line of sight between the transmitter and receiver.

The D422i has a range of 30 m (100 ft) outdoors or 90 m (300 ft) indoors. The D426i has a range of 60 m (200 ft) outdoors or 180 m (600 ft) indoors.

Certifications and Approvals

Region	Certification	
Europe	CE	
Poland	CNBOP	DS422i DS426i
USA	UL	ANSR: Intrusion Detection Units (UL639)
China	CCC	2003031901000009

Installation/Configuration Notes

Mounting Considerations

Can be surface or pole mounted.

Technical Specifications

Photobeam

DS422i Range Indoor: 90 m (300 ft), Outdoor: 30 m (100 ft)

DS426i Range Indoor: 180 m (600 ft), Outdoor: 60 m (200 ft)

Response Time: Selectable from 50 ms to 700 ms

Enclosure Design

Dimensions: 17.1 cm x 8.2 cm x 8.7 cm
(6.75 in. x 3.25 in. x 3.5 in.)

Material: Smoked Lexan®

Environmental Considerations

Temperature (Operating): -25°C to 55°C (-13°F to 130°F)

Mounting Considerations

Pointability: Adjustable ±90° horizontally, ±24° vertically

Outputs

Relay: Alarm activated Form C with dry contacts rated at 0.5 A maximum at 30 VAC/VDC

Tamper: Normally-closed with cover in place

Power Requirements

DS422i Receiver Current Draw: 31 mA

DS426i Receiver Current Draw: 31 mA

DS422i Transmitter Current Draw: 10 mA

DS426i Transmitter Current Draw: 27 mA

Voltage (Input): 12 VDC to 28 VDC, non-polarized

Trademarks

Lexan® is either a trademark or registered trademark of General Electric Company in the United States and other countries.

Ordering Information

DS422i Photoelectric Detector **DS422i**
Provides an indoor range 90 m (300 ft), and an outdoor range of 30 m (100 ft).

DS426i Photoelectric Detector **DS426i**
Provides an indoor range of 180 m (600 ft), and an outdoor range of 60 m (200 ft).

ISN-CRB32 Roller Ball Contacts



5

Features

- ▶ Closed loop
- ▶ Includes spacer and screws
- ▶ Thin end for easy installation
- ▶ Includes deactivated rhodium reed switch

The contacts are available in brown or white. Both models have a special compressed plastic ball to resist accumulated dirt or paint. The contact design also includes a flange.

Certifications and Approvals

UL and CE

Region	Certification
Europe	CE 73/23/EEC and 93/68/EEC, EN50131: 1997, EN50131-6: 1997, EN60950: 2000, EN60335-1: 1994 +A1: 1996 Annex B

Installation/Configuration Notes

Compatibility Information

All contact models are compatible with control panel models that accept contact inputs.

Parts Included

Quantity Per Package	Component
10	Assemblies (contacts, spacers, screws, and reed switches)

Technical Specifications

Specifications for All Models

Contact Dimensions without Screws:	19 mm x 41.27 mm (0.75 in. x 1.625 in.)
Wire Lead Type:	0.8mm (0.029 in.) 22AWG, 7 strand-ed
Wire Lead Length:	46 cm (18 in.)
Switch Configuration Type:	Single pole single throw (SPST)
Maximum Contact Resistance:	150 $\mu\Omega$ (micro-ohm)
Minimum Breakdown Voltage:	250 VDC
Insulation Resistance:	$10^{10} \Omega$
Electrostatic Cap:	0.3 PF
Contact Capacity:	10 VAC
Maximum Conductive Current:	1.0 A
Maximum Voltage:	100 V
Operating Temperature Range:	7.2°C to -95.56°C (-45°F to -140°F)

Package Information

ATTENTION! Each package contains ten assemblies with contacts, spacers, screws, and reed switches.

Ordering Information

Brown Roller Ball Contact Brown recessed contact. Package contains ten assemblies with contacts, spacers, screws, and reed switches.	ISN-CRB32-B
White Roller Ball Contact White recessed contact. Package contains ten assemblies with contacts, spacers, screws, and reed switches.	ISN-CRB32-W

ISN-CSD70 and ISN-CSD80 Compact Contacts



Features

- ▶ Closed loop
- ▶ Sensitive non-stick rhodium reed
- ▶ Bent long leads keep solder off the glass of the reed
- ▶ Two solder points on the wire
- ▶ Thick plastic shell resists crushing

The contacts are available in brown or white. All models have a rugged, one-piece construction that eliminates the need for extra donut adapters. The compact (stubby) design allows you to use the contact in smaller spaces, without paying for a miniature design. Use on steel doors in standard or tight-fitting applications.

Note The photograph shows model ISN-CSD80-W.

Certifications and Approvals

UL and CE

Region	Certification
Europe	CE 73/23/EEC and 93/68/EEC, EN50131: 1997, EN50131-6: 1997, EN60950: 2000, EN60335-1: 1994 +A1: 1996 Annex B

Installation/Configuration Notes

Compatibility Information

All contact models are compatible with control panel models that accept contact inputs.

Parts Included

Quantity Per Package	Component
10	Contacts
10	Magnets

Technical Specifications

Specifications for All Models

Gap Width:	38 mm (1.5 in.)
Wire Lead Type:	0.8 mm (0.029 in.) 22 AWG, 7 stranded
Wire Lead Length:	46 cm (18 in.) standard leads
Switch Configuration Type:	Single pole single throw (SPST)
Operating Temperature Range:	7.2°C to -95.56°C (-45°F to -140°F)

Specifications for ISN-CSD70-B/W Models

Contact Dimensions:	19 mm x 20.3 mm (0.75 in. x 0.80 in.)
Maximum Contact Resistance:	150 $\mu\Omega$ (micro-ohm)
Minimum Breakdown Voltage:	250 VDC
Insulation Resistance:	$10^{10} \Omega$
Electrostatic Cap:	0.3 PF
Contact Capacity:	10 VAC
Maximum Conductive Current:	1.0 A
Maximum Voltage:	100 V

Specifications for ISN-CSD80-B/W Models

Contact Dimensions:	25 mm x 20 mm (1 in. x 0.80 in.)
Maximum Contact Resistance:	150 $\mu\Omega$ (micro-ohm)
Minimum Breakdown Voltage:	250 VDC
Insulation Resistance:	$10^{10} \Omega$
Electrostatic Cap:	0.3 PF
Contact Capacity:	10 VAC
Maximum Conductive Current:	1.0 A
Maximum Voltage:	100 V

Package Information

ATTENTION! Each package contains ten contacts and ten magnets.

Ordering Information**Brown Compact Contact with Standard Magnet (19 mm) ISN-CSD70-B**

Brown recessed contact with 19 mm (0.75 in.) diameter. Includes a standard magnet. **Package contains ten contacts and ten magnets.**

White Compact Contact with Standard Magnet (19 mm) ISN-CSD70-W

White recessed contact with 19 mm (0.75 in.) diameter. Includes a standard magnet. **Package contains ten contacts and ten magnets.**

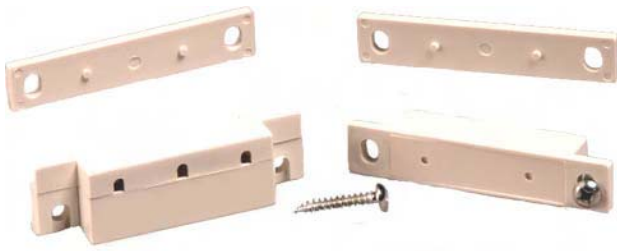
Brown Compact Contact with Standard Magnet (25 mm) ISN-CSD80-B

Brown recessed contact with 25 mm (1 in.) diameter. Includes a standard magnet. **Package contains ten contacts and ten magnets.**

White Compact Contact with Standard Magnet (25 mm) ISN-CSD80-W

White recessed contact with 25 mm (1 in.) diameter. Includes standard magnet. **Package contains ten contacts and ten magnets.**

ISN-CSM35 Standard and Wide Gap Contacts



Features

- ▶ Closed loop
- ▶ Standard industry size
- ▶ Spacers, screws, and cover included

The contacts are available in brown or white.

Note The photograph shows model ISN-CSM35-W.

Certifications and Approvals

UL and CE

Region	Certification	
Europe	CE	73/23/EEC and 93/68/EEC, EN50131: 1997, EN50131-6: 1997, EN60950: 2000, EN60335-1: 1994 +A1: 1996 Annex B

Installation/Configuration Notes

Compatibility Information

All contact models are compatible with control panel models that accept contact inputs.

Parts Included

Quantity Per Package	Component
10	Assemblies (contacts, spacers, screws, and covers)
10	Magnets

Technical Specifications

Specifications for All Models

Contact Dimensions:	63 mm x 18.6 mm x 13 mm (2.48 in. x 0.73 in x 0.51 in.)
Magnetic Assembly Dimensions:	63 mm x 12.2 mm x 13 mm (2.48 x 0.48 in x 0.51 in.)
Switch Configuration Type:	Single pole single throw (SPST)
Maximum Contact Resistance:	150 $\mu\Omega$ (micro-ohm)
Minimum Breakdown Voltage:	250 VDC
Insulation Resistance:	$10^{10} \Omega$
Electrostatic Cap:	0.3 PF
Contact Capacity:	10 VAC
Maximum Conductive Current:	1.0 A
Maximum Voltage:	100 V
Operating Temperature Range:	7.2°C to -95.56°C (-45°F to -140°F)

Specifications for ISN-CSM35-B/W Models

Gap Width: 25 mm (1 in.)

Specifications for ISN-CSM35-WGB/W Models

Gap Width: 44.45 mm (1.75 in.)

Package Information

ATTENTION! Each package contains ten assemblies with contacts, spacers, screws, covers, and ten magnets.

Ordering Information

Brown Standard Contact Brown surface mount contact for standard applications. Package contains ten assemblies with contacts, spacers, screws, covers, and ten magnets.	ISN-CSM35-B
White Standard Contact White surface mount contact for standard applications. Package contains ten assemblies with contacts, spacers, screws, covers, and ten magnets.	ISN-CSM35-W
Brown Wide Gap Contact Brown surface mount contact for heavy steel doors and commercial wide gap applications. Package contains ten assemblies with contacts, spacers, screws, covers, and ten magnets.	ISN-CSM35-WGB
White Wide Gap Contact White surface mount contact for heavy steel doors and commercial wide gap applications. Package contains ten assemblies with contacts, spacers, screws, covers, and ten magnets.	ISN-CSM35-WGW

ISN-CMET-4418 Overhead Door Contact



Features

- ▶ Closed loop
- ▶ Pin holds armored cable firmly in place
- ▶ Includes adjustable magnetic assembly bracket
- ▶ Ten installation options for the magnet

The contact is available in a metal finish. It uses epoxy and a special push-pin to hold the armored cable firmly in place.

Certifications and Approvals

UL and CE

Region	Certification
Europe	CE 73/23/EEC and 93/68/EEC, EN50131: 1997, EN50131-6: 1997, EN60950: 2000, EN60335-1: 1994 +A1: 1996 Annex B

Installation/Configuration Notes

Compatibility Information

All contact models are compatible with control panel models that accept contact inputs.

Parts Included

Quantity Per Package	Component
1	Assembly (contact, epoxy, push-pin, and bracket)
1	Magnet

Technical Specifications

Gap Width:	50.8 mm (2 in.)
Contact Dimensions:	107 mm x 50.8 mm x 12 mm (4 in. x 2 in. x 0.47 in.)
Cable Length:	46 cm (18 in.)
Switch Configuration Type:	Single pole single throw (SPST)
Maximum Contact Resistance:	150 $\mu\Omega$ (micro-ohm)
Minimum Breakdown Voltage:	250 VDC
Insulation Resistance:	$10^{10} \Omega$
Electrostatic Cap:	0.3 PF
Contact Capacity:	10 VAC
Maximum Conductive Current:	1.0 A
Maximum Voltage:	100 V
Operating Temperature Range:	7.2°C to -95.56°C (-45°F to -140°F)

Package Information

ATTENTION! Each package contains one assembly with contact, epoxy, push-pin, bracket, and one magnet.

Ordering Information

ISN-CMET-4418 Overhead Door Contact

ISN-CMET-4418

Package contains one assembly with contact, epoxy, push-pin, bracket, and one magnet.