

Small, Yet Powerful Gigabit Smart Switch Packed with Advanced Features



Joining NETGEAR's ProSafe® family of Smart Switches with high performance and cost efficiency, this 10-port Gigabit Smart Switch is packed with powerful features capable of enhancing any type of business network. The GS110TP is designed for customers who need a low port density solution with the combination of Gigabit speed and PoE capability. The GS110TP comes with 8 dedicated 10/100/1000 Mbps copper ports to connect to your end devices and two additional Gigabit Fiber ports for uplinks with greater distance. With PoE capability on all 8 copper ports, the GS110TP can automatically detect PoE on the end devices and dynamically manage power assignments and priority. It is capable of delivering up to 15.4W of power to devices such as wireless access points, IP phones and IP cameras, providing flexibility and ease of deployment to your network.

The GS110TP comes with a comprehensive set of features, such as enhanced VLAN and QoS, access control lists (ACL), 802.1x port authentication, rate limiting and IGMP snooping and many more, to provide businesses with networks that are geared for growth while ensuring performance and reliability.

With the fanless design and compact form factor, the GS110TP offers quiet operation and is suitable for deployments in any type of environment, especially the ones which are sensitive to noise.

Like all NETGEAR ProSafe Smart Switches, the GS110TP is backed by the NETGEAR ProSafe Lifetime Warranty†, and 1-Year ProSupport 24x7 Advanced Technical Support\*.

**PoE Power Management**

GS110TP offers useful PoE power management features to help you better control and monitor your power resource. The PoE timer can help turn off the PoE ports during certain times of the day so that your network can be more secure as well as energy efficient. It can also set prioritization on power usage so that specified ports are always guaranteed to get the power first if total power required exceeds the total power budget. The power will be assigned to the PoE ports dynamically depending on the actual power need of the individual network devices so that you don't need to do any calculation. The PoE LED on the front panel will light up if the PoE usage is reaching the threshold, meaning that insufficient PoE resource is left for powering up additional ports.

**NETGEAR Green**

- Up to 70% power savings compared to the non-Green version
- Auto power-down mode saves energy when port is not in use
- Cable length detection reduces power usage when network cable is shorter than 10 meters



**Advanced Quality of Service (QoS)**

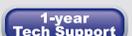
Priority queuing ensures high-priority traffic gets delivered efficiently, even during congestion from high-traffic bursts. Companies implementing network telephony or video conferencing, for example, need to be able to prioritize such voice and video traffic and other real-time applications over less latency-sensitive traffic to ensure reliability and quality. The ability to prioritize traffic ensures quality of latency-sensitive services and applications despite increasing traffic loads. The GS110TP provides an extensive set of QoS features:

- 802.1p-based prioritization
- Layer 3-based prioritization
- Rate limiting

**Advanced Security**

The GS110TP provides more robust security. This includes:

- 802.1x for authentication
- ACL filtering to permit or deny traffic based on MAC or IP addresses

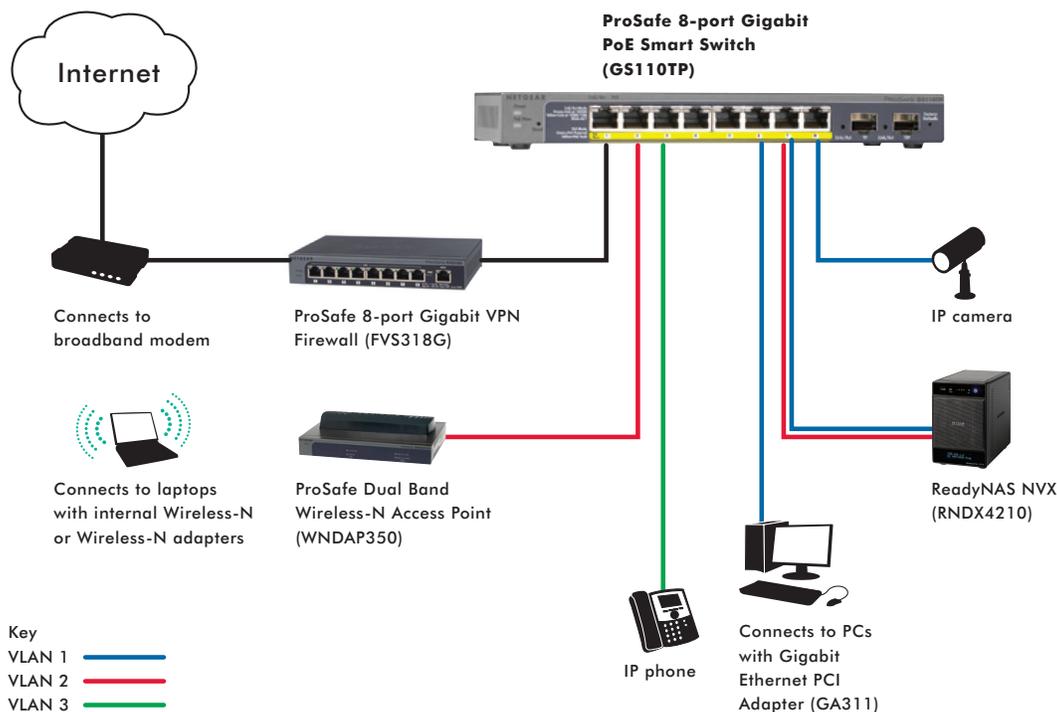


### Usability Enhancements

The GS110TP is a powerful switch, yet very ease to manage. It comes with many usability enhancements to help customers fully utilize the features for a more optimized and secure network. For example, the Auto Voice VLAN and Auto Video features will assist customers to easily set up VoIP or IP surveillance networks with a couple of simple steps. You don't need to be an IT professional to set up VoIP or IP surveillance. Security is critical for business networks. However, not everyone knows how to set up a secure network. The ACL Wizards on the GS110TP will guide even naïve users through the setup of access control and address filtering.

### Centralized Management via the New Smart Control Center

With multiple switches in the network, managing configurations on each switch and upgrading firmware becomes a big challenge. NETGEAR's Smart Control Center that comes with the GS110TP and many other Smart switch models can help make this task much easier and simpler. It can perform discovery of the switches on your network, push configuration and firmware updates to multiple selected switches at once, and can even schedule when the tasks should be performed.



### Technical Specifications

#### • Network Protocol and Standards Compatibility

- IEEE 802.3i 10BASE-T
- IEEE 802.3u 100BASE-TX
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3z 1000BASE-X
- IEEE 802.3x full-duplex flow control
- IEEE 802.3af (DTE Power Via MDI)

#### • Power Supply

- Power consumption: 59.3W maximum

#### • Network Ports

- Eight (8) 10/100/1000 Mbps auto-sensing + 2 Gigabit SFP uplinks

#### • Physical Specifications

- Dimensions: (W x D x H):  
236 x 101.6 x 27 mm (9.3 x 4 x 1.07 in)
- Weight: 0.7 kg (1.55 lb)

#### • Performance Specifications

- Forwarding modes: Store-and-forward
- Bandwidth: 20 Gbps full duplex
- Network latency: Less than 4  $\mu$ s for 64-byte frames in store-and-forward mode for 1000 Mbps to 1000 Mbps transmission
- Buffer memory: 512 KB embedded memory per unit
- Address database size: 4k media access control (MAC) addresses per system
- Mean time between failures (MTBF): 157,004 hours (~18 years)
- Acoustic noise: 0 dB

#### • Electromagnetic Emissions

- CE mark, commercial
- FCC Part 15 Class B
- VCCI Class B
- C-Tick

#### • Environmental Specifications

- Operating temperature: 32° to 122° F (0° to 50° C)
- Storage temperature: -4° to 158° F (-20° to 70° C)
- Operating humidity: 90% maximum relative humidity, non-condensing
- Storage humidity: 95% maximum relative humidity, non-condensing
- Operating altitude: 10,000 ft (3,000 m) maximum
- Storage altitude: 10,000 ft (3,000 m) maximum

#### • Status LEDs

- Per RJ45 port: Link/activity, speed, PoE status
- Per SFP port: Link/speed
- Per device: Power, PoE Max

#### • Power Adapter

- 48V, 1.25A external power adapter, localized to country of sale

- **Electromagnetic Immunity**

- EN 55024

- **Safety**

- CE mark, commercial
- cUL IEC 950/EN 60950
- CB

- **Administrative Switch Management**

- IEEE 802.1Q static VLAN (64 groups, static)
- Protected ports
- IEEE 802.1p Class of Service (CoS)
- Port-based QoS
- DSCP-based QoS
- DiffServ
- IEEE 802.3ad Link Aggregation (manual or LACP)
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1s Multiple Spanning Trees Protocol (MSTP)
- IEEE 802.1ab Link Layer Discovery Protocol (LLDP)
- LLDP-MED
- SNMP v1, v2c, v3
- RFC 1213 MIB II
- RFC 1643 Ethernet Interface MIB
- RFC 1493 Bridge MIB
- RMON group 1, 2, 3, 9
- Auto voice VLAN
- DHCP Filtering
- Auto denial-of-service (DoS) protection
- HTTP and HTTPS
- Ping and traceroute

- Green features: Power saving by cable length (<10 m)
- Power saving when link down
- RFC 2131 DHCP client
- DHCP filtering
- IEEE 802.1x with Guest VLAN
- Jumbo frame support
- Port-based security by locked MAC addresses
- MAC and IP-based ACL
- Storm control for broadcast, multicast and unknown unicast packets
- IGMP snooping v1/v2
- Port-based egress rate limiting
- SNTP
- Port mirroring support (many-to-one)
- Web-based configuration
- Configuration backup/restore
- Password access control
- TACACS+ and RADIUS support
- Syslog
- Firmware upgradeable
- PoE (46 Watts of power budget)

#### NETGEAR Related Products

##### Network

- ProSafe® 802.11g Wireless Access Point (WG302)
- ProSafe® 802.11g Wireless Access Point (WG103)
- ProSafe® 802.11n Dual Band Wireless Access Point (WNDAP330)

##### Desktops

- Gigabit Ethernet PCI Adapter (GA311)

#### System Requirements

- Category 5 network cables
- Network card for each PC
- Network software (e.g., Microsoft Windows®)
- Web browser (e.g., Internet Explorer® 5.0 or higher, Netscape® 6.0 or higher)

#### Warranty and Support

- ProSafe Lifetime Warranty†
- ProSupport 24x7 Advanced Technical Support, 1 year (included)\*

#### ProSupport™ Service Packs Available

- XPressHW, Category 1: PRR0331 (3-year next-business day hardware replacement contract)
- OnCall 24x7, Category 1: PMB0331 (3-year Advanced Technical Support contract, including Remote Diagnostics performed by our technical experts for prompt resolution of technical issues, and next-business day hardware replacement)

#### Package Contents

- ProSafe® 8-port Gigabit PoE Smart Switch with 2 Gigabit Fiber SFP (GS110TP)
- AC adapter
- Rubber footpads
- Wall-mount kit
- Resource CD
- Installation guide

#### Ordering Information

- Australia & Japan: GS110TP-100AJS
- Europe General: GS110TP-100EUS
- North America: GS110TP-100NAS

# NETGEAR®

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\* 1-year 24x7 Advanced Technical Support includes Remote Diagnostics performed by our technical experts for prompt resolution of technical issues.

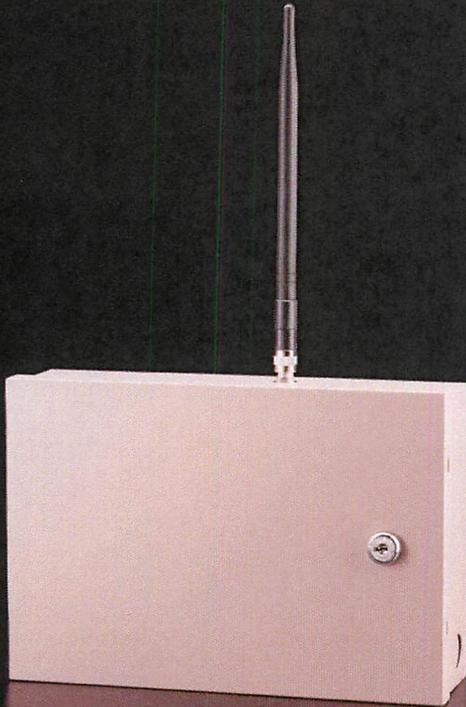
† Lifetime warranty for product purchased after 05/01/2007. For product purchased before 05/01/2007, warranty is 3 years.



TELGUARD

TG-7

CELLULAR ALARM  
COMMUNICATOR  
FOR 3G/4G NETWORKS



#### COMMERCIAL

#### PRODUCT FEATURES

- Delivers full data reporting.
- Provides RMR protection by leveraging technology that operates on 3G/4G networks.
- Supports listen-in, two-way voice verification over cellular.
- Provides security supervision with automatic self-test and system trouble outputs.
- Supports multiple alarm formats.
- Utilizes advanced encryption technology for secure communications.
- Falls back to 2G (GSM) if a 3G/4G network isn't available.

The Telguard model TG-7 provides backup cellular alarm communication solutions for commercial, retail, financial and fire system markets. Alarm signals are transmitted over the digital cellular network when the telephone line or data network has been disrupted or compromised. This ensures critical data will reach the designated monitoring station.

Telguard uses advanced encryption technology for secure communications. Superior building penetration is achieved through maximum transmitting power.

#### Telguard Online

Telguard makes adopting cellular easy with a secure Internet portal. The straightforward web interface allows security dealers and central stations to quickly and efficiently access Telguard based services 24/7. This advanced tool has multi-level user authorization and provides total account management of UL Listed Telguard cellular alarm communicators.

#### Telguard Cellular Service

Telguard Cellular Service provides nationwide digital cellular network coverage for all Telguard units. Telguard's Communication Center is UL compliant and provides seamless connectivity between the alarm panel, the Telguard family of products and the central station. Telguard Technical Support provides a single point of contact for both cellular service and Telguard product questions.

#### Advanced Reliability

- Two programmable supervisory trip outputs.
- Automatic Self-Tests with central station notification ensure the cellular system is operating.
- Diagnostic LEDs display unit functionality, operational mode or signal strength.
- 128 bit AES (Advanced Encryption Standard) alarm signals ensure authentication and security.



# TELGUARD

## TG-7

# CELLULAR ALARM COMMUNICATOR FOR 3G/4G NETWORKS

### Power

- Transmit power: 1.0W-2.0W (maximum allowable).
- Power Consumption: 32mA (Standby) 300mA (Transmission).
- Transformer Supplied: 12VAC, 800mA UL listed plug-in.

### Radio Transceiver

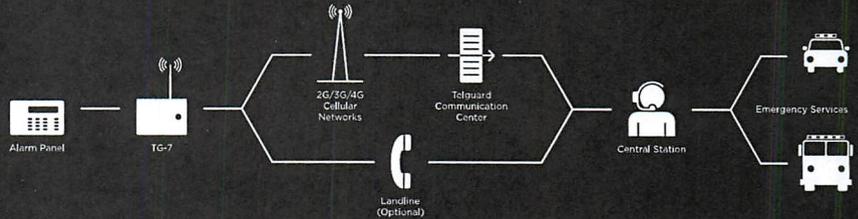
- 3G Cellular Radio.
- GSM 850MHz: Class 4 (2 watts).
- GSM 1900MHz: Class 1 (1 watt).
- UMTS WCDMA FDD 850/1900MHz
- Antenna: 9" dipole with 2dBi gain, 12 ft cable & universal mounting bracket.
- FCC part 15, 22, 24 and 68 compliant.

### Physical Details

- TG-7: 7.5" H x 11.5" W x 3.5" D Shipping Weight: 8lbs (with transformer).
- TG-7A: TG-7A: 12"H x 12"W x 4"D Shipping Weight: 18lbs.
- Attack chassis on TG-7A for bank safe & vault application.
- Operating Environment: 0°C to +50°C; up to 95% humidity (non-condensing).

### Standard Features

- Full data reporting.
- Automatic self-test (daily, weekly or monthly).
- Locking metal enclosure.
- One available trip input.
- Alarm format support for SIA2, contact ID, pulse (3x1, 4x2), modem IIe & IIIa<sup>2</sup>, DMP.
- Telephone line monitor built-in.



### Accessories

- ACD 12, ACD 35, ACD 50, ACD 100: 12/35/50/100 feet of low loss, high performance cable.
- HGD-0: High gain directional antenna.
- EXD-0: External antenna.

SECURITY SIGNALING



### UL Listings

#### Commercial Fire

TG-7FS

- 864 • Control units & accessories for fire alarm systems

#### Residential

- S545 • Residential fire
- 985 • Household fire warning systems
- C1023 • Residential burglar alarm systems

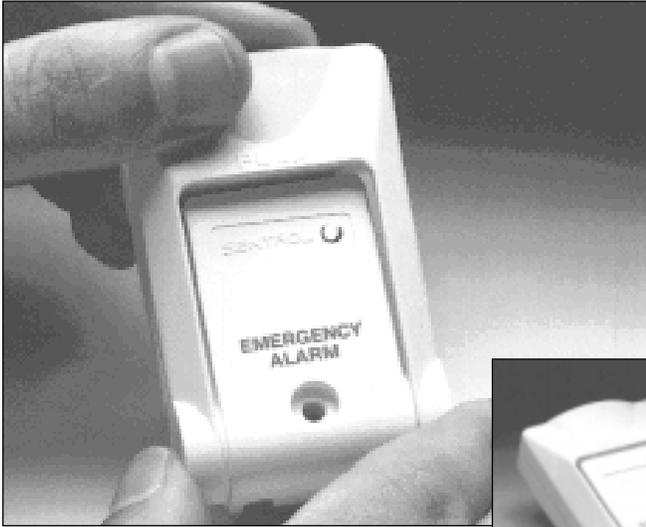
#### Commercial Burglary

- 365 • Police Station connected burglar alarm units & systems
- 1610 • Central station burglar alarm units; Line security services

\* For the most current product specifications and UL Listings visit [www.Telguard.com](http://www.Telguard.com).



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Model 3040 shown above;  
Model 3045 shown on right.



## 3040 SERIES PANIC SWITCH

Model numbers:  
3040, 3045, 3050, 3055

- **Easy installation**
- **Latching LED and non-LED models available**
- **3050 and 3055 feature glowing LED for low light visibility**

The **Sentrol 3040 Series Panic Switch** activates the SPDT switch (SPST on the 3045 model) when the user pulls the actuating lever. On the 3040 model, an external LED lights and latches, indicating that the alarm circuit has been activated. The lever is closed first to rearm the alarm switch, then the latching LED circuit is reset externally at the host panel. The 3045 model has no LED or latching circuit.

The 3050 and 3055 feature a glowing LED for low light visibility. The LED glows green when powered up, turns red upon activation. The 3050 contains a latching LED, the 3055 is non-latching.

### Applications

Mounted out of sight but within easy reach for manual activation, such as under desks or counters in banks, jewelry stores and other facilities where people or property are at risk. The 3045 and 3055 models can be used in residential installations when a panic switch is needed. Models with the LED and latching circuit, can be used as a panic switch in medical care facilities. All models provide low-profile and reliable alarm protection.

# Sentrol 3040 Series Panic Switch

## Architect and Engineering Specifications

The unit consists of a housing that contains the electrical circuitry and magnetic reed contacts, a cover plate to protect the internal electronics and an actuating lever with an Alnico V magnet installed in a cradle in the lever. When the lever is fully closed, the magnet — in proximity to the reed — triggers the circuit. The alarm occurs when the actuating lever is moved 20° to 45° past the fully closed position (approximately 1" from the fully closed position). On the latching models, an LED on the unit flashes and latches when the lever is opened. It can be reset only at the alarm panel.

The actuating lever, housing and cover plate are made of ABS fire-retardant plastic. Dimensions of the unit are 1.77" W x 2.90" L x 0.76" H (4.50 cm W x 7.37 cm L x 1.93 cm H). The unit has 12 feet of jacket lead. The device mounts to the surface with two No. 6 combo-head screws, 5/8" and 1 1/4". Available in white.

## Specifications:

### Model 3040, 3050, 3055

Nominal Voltage ..... 12 V DC @ 6 mA  
 Current ..... Max 8 mA  
 Operational Voltage ..... 7 V DC to 15 V DC  
 Temperature Range ..... 0° to 110°F (-17.8°C to 43.3°C)  
 Dimensions ..... 1.77" W x 2.90" L x 0.76" H  
 (4.50 cm W x 7.37 cm L x 1.93 cm H)  
 Weight ..... 1.5 oz.  
 Housing Material ..... ABS plastic

### Form C: 3040 only

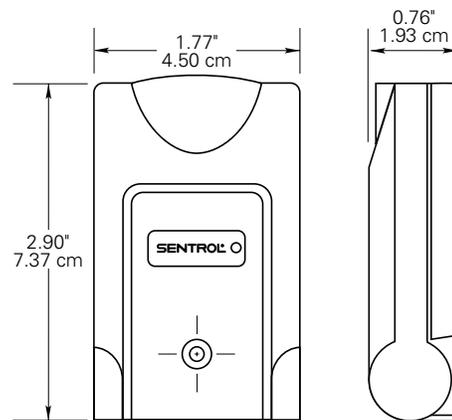
Voltage: ..... 30 V  
 DC max. Current: ..... 0.25 A max.  
 Power: ..... 3 W max.

## Model 3045

Temperature Range ..... -40° to 150°F (-40°C to 65.6°C)  
 Dimensions ..... 1.77" W x 2.90" L x 0.76" H  
 (4.50 cm W x 7.37 cm L x 1.93 cm H)  
 Weight ..... 1.5 oz.  
 Housing Material ..... ABS plastic

## Form A: 3045 only

Voltage: ..... 100 V DC max.  
 Current: ..... 0.5 A max.  
 Power: ..... 7.5 W max.

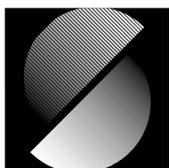


3040, 3050, 3055  
 (No LED on 3045)

## Ordering Information

Model Number	LED	Latching Circuit	Electrical Loop Type	Configuration	Color
3040	Red	Yes	Open or Closed	SPDT	White
3045	None	No	Closed	SPST	White
3050	Bi-color	Yes	Open or Closed	SPDT	White
3055	Bi-color	No	Open or Closed	SPDT	White

©1999 Sentrol Certain of the items in the Product Information Bulletin are protected under one or more of the following patents: 4,210,888; 4,210,889; 4,213,110; 4,371,856; 4,325,270; 4,336,518; 4,392,707; 4,456,897; 4,536,754; 4,525,018; 4,553,134; 4,943,791; 5,004,879; 5,155,460; D253,106; D255,030; D,262,618; D268,669; D273,783. Other patents pending.



**SENTROL**

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C-3813-FG5k-0599



### Surface Mount

With Screw Terminals

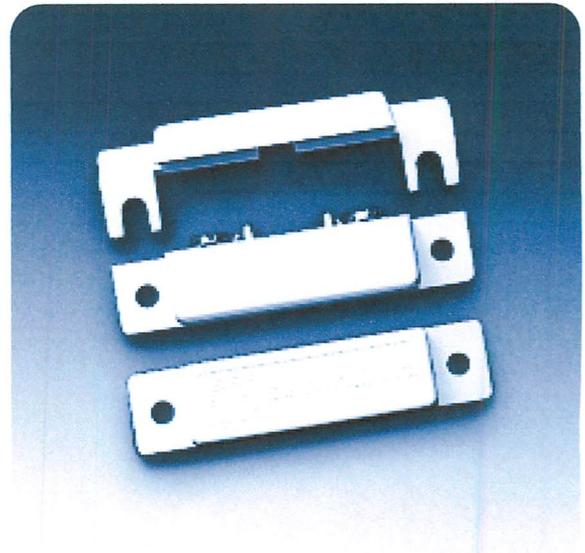
1085T

#### Overview

The 1085T is ideal for residential and commercial applications where terminal connections are preferred. The unit features positive clamping terminals with anti-rotation lugs and captured screws with combination heads. These features allow for easy, quick installations. The positive terminals do not require washers that can corrode or increase resistance. Wire will not back out from under the screw heads when the screws are tightened down. The captured screws cannot be accidentally removed and lost, and they incorporate combination heads that will accept both Phillips and flat-bladed screwdrivers. Combine this with seven available models including wide gap and SPDT, and this is one of the most popular contacts available in the industry today.

#### Architectural and Engineering Specifications

The contact and magnet are hermetically sealed reed switches nominally 2.5" (6.35cm) L x .50" (1.27cm) W x .56" (1.43cm) D. The connection to the contact is made through #6 screw terminals. Mounting holes are on 2.09" (5.33cm) centers. Color is specified as white, gray, or mahogany brown. Contact and magnet are specified as part number 1085T (or other part number, depending on gap requirements).



#### Standard Features

- Positive terminals with captured screws and combination heads for easy installation
- Cover, spacers, and mounting hardware included
- Seven models available
- Ideal for residential and commercial applications where terminal connections are preferred

#### Model numbers

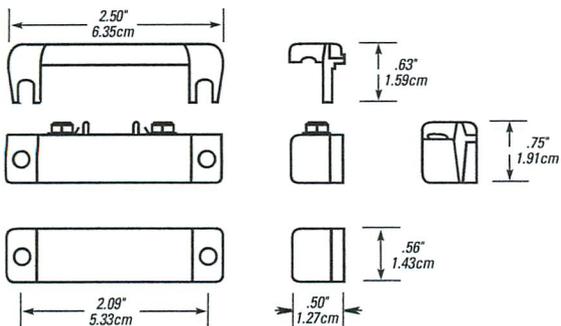
1082TW, 1084TW, 1085T, 1085TW, 1086T, 1087T, 1087TW, 1087TH

# Surface Mount

With Screw Terminals

1085T

## Dimensions



## Specifications

### Switching voltage

1082TW, 1085T, 1085TW 100V max.  
1086T, 1084TW, 1087T, 1087TW, 1087TH 30V max.

### Switching current

1082TW, 1085T, 1085TW 0.5A max.  
1086T, 1084TW, 1087T, 1087TW, 1087TH 0.25A max.

### Power

1082TW, 1085T, 1085TW 7.5W max.  
1086T, 1084TW, 1087T, 1087TW, 1087TH 3.0W max.

### Dimensions

2.5 L x .50 W x .56" D  
(6.35 x 1.27 x 1.43cm)

### Form

1082TW, 1085T, 1085TW A  
1086T B  
1084TW, 1087T, 1087TW, 1087TH C



## Ordering Information

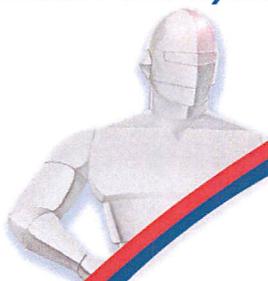
Model	Loop Type	Electrical Configuration	Color Choices	Gap Distance (Make*)	Lead Type
1082TW	Closed	N/O	Mahogany brown	Up to 2"	#6 screw terminal
1084TW	Open or Closed	SPDT	White, gray, or mahogany brown	Up to 2"	#6 screw terminal
1085T	Closed	N/O	White, gray, or mahogany brown	Up to 3/4"	#6 screw terminal
1085TW	Closed	N/O	White or mahogany brown	Up to 1 1/2"	#6 screw terminal
1086T	Open	N/C	White	Up to 3/4"	#6 screw terminal
1087T	Open or Closed	SPDT	White, gray, or mahogany brown	Up to 3/4"	#6 screw terminal
1087TW	Open or Closed	SPDT	White or mahogany brown	Up to 1 1/2"	#6 screw terminal
1087TH	Biased for high security	SPDT	Natural	3/8" to 1 1/4" 1/4" to 1 1/2" (minimum)	#6 screw terminal

\*Hole in lead type is for use in applications where the lead is used to secure the switch to a surface. The hole is not intended for use in applications where the lead is used to secure the switch to a surface.

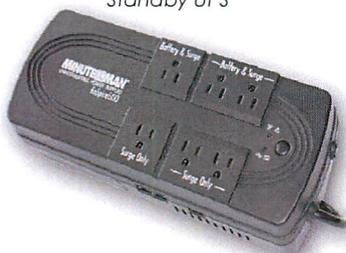


HF1.buf sphjy

EN400 - 400VA/200W | EN750 - 750VA/400W  
 EN600 - 600VA/300W | EN900 - 900VA/500W



EnSpire EN600 - 600VA/300W  
 Standby UPS



EnSpire EN900 - 900VA/500W  
 Standby UPS



The Minuteman® EnSpire™ Series UPS is a low-cost high performance UPS line that provides the features needed to protect your valuable equipment.

The EN400 and EN600 units each have six outlets, three provide battery support along with spike and surge protection and three with spike and surge protection only. The EN750 and EN900 have four each of the outlets described above for total protection of up to eight connected devices. In addition, all units have outlets which are specifically spaced to support transformer blocks.

The EnSpire UPS has a small footprint and is uniquely designed with outlets on the top for placement on or under a desk or table and all models can be wall mounted.

For over 25 years, Para Systems, Inc. has provided quality power products and excellent personalized service with direct human response to all service and support calls. EnSpire products pass extensive quality testing before being shipped to our end users.

### Applications

- Small capacity equipment loads
- Desktop/laptop workstations
- Small phone systems
- VoIP handsets
- Home entertainment/theater systems
- Security systems (cameras, DVRs, access control devices)
- Low-power network devices

### EnSpire Features

- **Minuteman SentryPlus Software** – SentryPlus auto-shutdown and monitoring software is included with every unit. No special downloads or coupons are required.
- **USB Communications** – EnSpire UPS USB connections are automatically recognized by Microsoft Windows® software. No special USB drivers are required. The EnSpire Series automatically recognizes USB connections with its HID-compliant USB communications.
- **Telephone/Fax/Modem Line Protection** - The EnSpire UPS provides a low-cost means of protecting telephone/fax/modem lines.
- **RoHS Compliant** – All EnSpire products are manufactured using non-hazardous\* materials making them safer for the environment.
- **Warranty** - The UPS is covered by a three-year parts and labor warranty and \$50,000 Minuteman Platinum Protection Plan® (U.S.A. and Canada only). The battery is covered by a two-year warranty.

#### Additional features on EN750/EN900 models:

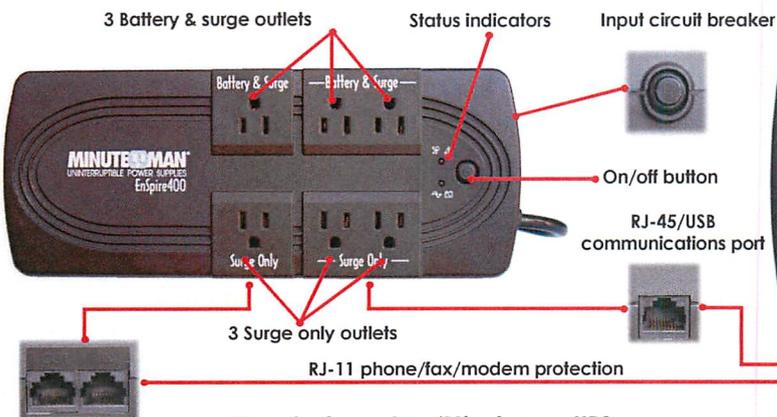
- **Coax Cable Protection** - Surge and spike protection for a coax cable line.
- **Backlit LCD Display** - LCD display that shows UPS information including *estimated runtime*, *battery status* and more.

\* Excludes batteries

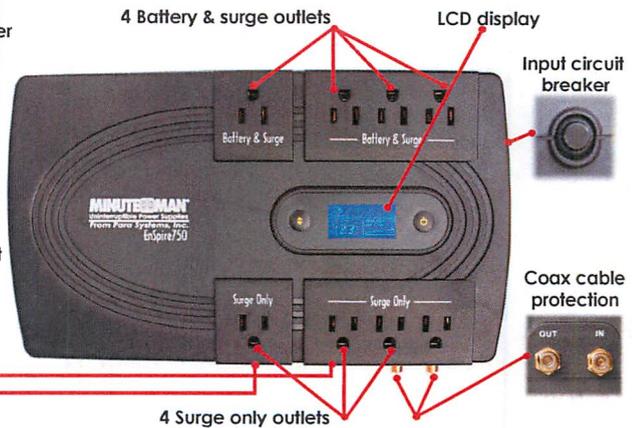
# Minuteman® EnSpire™ Series Standby UPS Specifications

System Specifications				
Model Number	EN400	EN600	EN750	EN900
Maximum Power Capacity	400VA / 200W	600VA / 300W	750VA / 400W	900VA / 500W
Topology	Standby UPS			
Input				
Nominal Frequency	50 or 60Hz, $\pm 5$ Hz, autosensing			
Voltage Range	100 - 140VAC			
Low Voltage Transfer Point	96V ( $\pm 3\%$ ) resets to utility power at 101V ( $\pm 3\%$ ) or higher			
High Voltage Transfer Point	146V ( $\pm 3\%$ ) resets to utility power at 140V ( $\pm 3\%$ ) or lower			
Surge Energy Rating	320 J			
Input Protection	Resettable circuit breaker			
Output Non-Battery Operation				
Voltage Range	120VAC: 100 - 140VAC			
Frequency Range	60Hz: 55 - 65Hz or 50Hz: 45 - 55Hz			
Output Battery Operation				
Waveform Type	Simulated sine wave			
Nominal Voltage	120VAC			
Voltage Regulation	Nominal $\pm 5\%$ (until Low Battery Warning)		Nominal $+2\%/-9\%$ (until Low Battery Warning)	
Frequency	50/60Hz, $\pm 0.5$ Hz (unless synchronized to utility)			
Transfer Time	6-8 ms Typical			
Overload Capacity	105% for 10-seconds, 115% Shutdown Immediately		105% for 10-seconds, 120% Shutdown Immediately	
Protection	Over-Current, Short-Circuit Protected and Latching Shutdown			
Physical				
Size - Net L x W x H	11.97 x 4.84 x 3.35 in (304 x 123 x 85 mm)		12.40 x 7.20 x 3.30 in (314 x 183 x 83 mm)	
Weight - Net	6.44 lb (2.92 kg)		9.70 lb (4.40 kg)	
Size - Shipping L x W x H	15.00 x 8.20 x 5.43 in (380 x 208 x 138 mm)		14.40 x 10.20 x 5.60 in (367 x 260 x 143 mm)	
Weight - Shipping	7.30 lb (3.30 kg)		11.02 lb (5.00 kg)	
Regulatory Compliance				
Safety Approvals, EMC	UL1778, cUL (CSA 22.2 no. 107.1), FCC Class B		cTUVus (Conforms to UL1778, CSA 22.2 standards), FCC Class B	

## ENSPIRE EN400/EN600 TOP VIEW



## ENSPIRE EN750/EN900 TOP VIEW



Para Systems, Inc./Minuteman UPS  
 1455 LeMay Drive, Carrollton, TX 75007 U.S.A.  
 Phone 800.238.7272 +1 972.446.7363 Fax +1 972.446.9011

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Conforms to UL STD. 1778

# ISC-PDL1-W18x Professional Series TriTech Detectors

www.boschsecurity.com



**BOSCH**  
Invented for life



- ▶ 18 m x 25 m (60 ft x 80 ft) coverage, field selectable to 8 m x 10 m (25 ft x 33 ft)
- ▶ EN50131-2-4 Grade 2 compliant
- ▶ Sensor data fusion technology
- ▶ Tri-focus optics technology
- ▶ Range adaptive radar

The ISC-PDL1-W18x Professional Series TriTech Detectors are exceptionally suited for commercial indoor applications. Sensor data fusion technology ensures that the detectors send alarm conditions based on precise information. Tri-focus optics eliminate coverage gaps and respond efficiently to intruders. The powerful combination of unique features in the Professional Series delivers superior catch performance and virtually eliminates false alarms.

The self-locking two-piece enclosure, built-in bubble level, flexible mounting height, and three optional mounting brackets simplify installation and reduce service time.

## Functions

### Sensor Data Fusion Technology

Sensor data fusion technology is a unique feature that uses a sophisticated software algorithm to gather signals from five sensors: two pyroelectric sensors, range adaptive radar, a room temperature sensor, and

a white light level sensor. The microcontroller analyzes and compares the sensor data to make the most intelligent alarm decisions in the security industry.

### Tri-focus Optics Technology

Tri-focus optics technology uses optics with three specific focal lengths: long-range coverage, middle-range coverage, and short-range coverage. The detector applies the three focal lengths to 86 detection zones, which combine to make 11 solid curtains of detection. Tri-focus optics technology also includes two pyroelectric sensors, which deliver twice the standard optical gain. The sensors process multiple signals to deliver precise performance virtually free of false alarms.

### Range Adaptive Radar

The microwave transceiver automatically adjusts its detection thresholds based on input from the PIR sensors. Integrating the target audience distance information from the PIR significantly reduces false alarms from the microwave Doppler radar.

**Microwave Anti-mask**

The detector sends a supervision-trouble signal if microwave reflective material is placed within 30.5 cm (1 ft) of the detector.

**Supervised Microwave and PIR**

The detector provides single technology coverage if the microwave subsystem fails.

**Active White Light Suppression**

An internal light sensor measures the level of light intensity directed at the face of the detector. Sensor data fusion technology uses this information to eliminate false alarms from bright light sources.

**Field Selectable Coverage (18 m x 25 m or 8 m x 10 m)**

Installers can use a DIP switch to select 18 m x 25 m or 8 m x 10 m (60 ft x 80 ft or 25 ft x 33 ft) coverage.

**Dynamic Temperature Compensation**

The detector automatically adjusts PIR sensitivity to identify human intruders at critical temperatures. Dynamic temperature compensation detects human body heat accurately, avoids false alarms, and delivers consistent catch performance at all operating temperatures.

**Cover and Wall Tamper Switch**

When an intruder removes the cover or attempts to separate the detector from the wall, a normally-closed contact opens to alert the control panel.

**Self-adjusting LED**

The LED brightness adjusts automatically to the surrounding light level. A blue light-emitting diode (LED) indicates dual alarms and activates during a walk test. A yellow LED indicates microwave alarms, and a red LED indicates PIR alarms.

**Remote Walk Test LED**

Users can type a command through a keypad, a control center, or programming software to remotely enable or disable the walk test LED. Users can locally enable or disable the walk test LED through the DIP switch.

**Alarm Memory**

Alarm memory flashes the alarm LED to indicate stored alarms for use in multiple unit applications. A switched voltage from the control panel controls the alarm memory.

**Solid State Relays**

Solid state relays send silent alarm output signals to provide a higher level of security and reliability. An external magnet does not activate the relay. The solid state relay uses less current than a mechanical relay, providing longer standby capacity during a power loss.

**Draft, Insect, and Small Animal Immunity**

The sealed optic chamber provides immunity to drafts and insects, reducing false alarms. Small animal immunity reduces false alarms caused by animals less than 4.5 kg (10 lb), such as rodents.

**Remote Self Test**

A remote self test initiates when the walk test input switches to its true state. The alarm relay and alarm LED activate for four seconds following a successful test. The trouble relay activates, and the alarm LED flashes following a failed test.

**Input Power Supervision**

When the power is lower than 8 V, a low input power trouble condition activates the trouble relay and causes the LED to flash. The trouble condition clears automatically when power reaches or exceeds 8 V.

**Trouble Memory**

When the walk test input switches to its true state for less than two seconds, LED flashes to indicate the most recent trouble condition. If there is no trouble in memory, the LED does not flash. After twelve hours, or after the detector receives a second walk test pulse for two seconds or less, the LED stops flashing and the trouble memory clears.

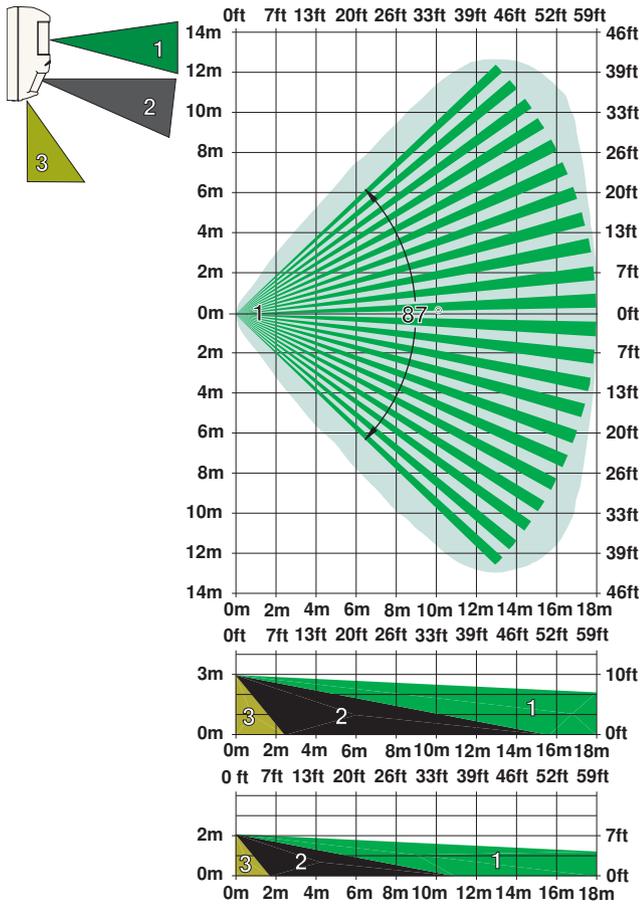
**Certifications and Approvals**

The detectors are designed to also comply with the requirements of:

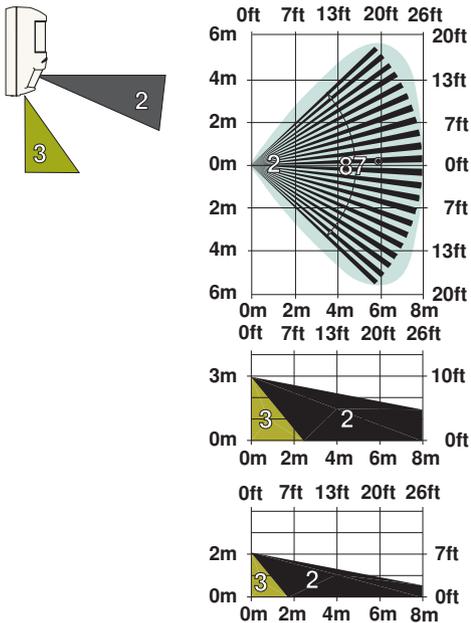
Australia C-Tick

Region	Certification	
Europe	CE	2004/108EC EMC Directive (EMC), 2006/95/EC Low-Voltage Directive (LVD), 1999/5/EC Radio equipment and Telecommunications Terminal Equipment (R&TTE) [-W18G, -W18H]
USA	UL	ANSR: Intrusion Detection Units (UL639), ANSR7: Intrusion Detection Units Certified for Canada (cULus) [-W18G]
	FCC	(T3XISC-PDL1-W18G)
Canada	IC	(1249A-W18G)
Italy	IMQ	(CA12.00833) [-G]
Brazil	ANATEL	1282-06-1855 [-W18G]
Belgium	INCERT	B-509-0052 [-W18G]
	INCERT	B-509-0052/a
China	CCC	2009031901000559 [-W18G]
the Netherlands	REQ	07223002/AA/00 [-W18G]
Sweden	INTYG	Nr11-850 [-W18G]
France	AFNOR	2830390400A1 [-W18H]
Belgium	INCERT	B-509-0052/c [-W18G]
France	AFNOR	2830390400B0 [-W18G]

**Installation/Configuration Notes**



Long-range Coverage 18 m x 25 m (60 ft x 80 ft)



Selectable Short-range Coverage 8 m x 10 m (25 ft x 33 ft)

**Mounting Considerations**

The recommended mounting height is 2 m to 3 m (7 ft to 10 ft).

Use an optional B328 Gimbal-mount Bracket or B335-3 Low-profile Swivel-mount Bracket to surface-mount the detector on a flat wall or in a corner.

Use an optional B338 Universal Ceiling Bracket to mount the detector on the ceiling.

**Wiring Considerations**

Recommended wire size is 0.2 mm<sup>2</sup> to 1 mm<sup>2</sup> (26 AWG to 16 AWG).

**Parts Included**

Quantity	Component
1	Detector
2	Flat-head screws
2	Screw anchors
1	Nylon cable tie
1	Pattern Mask
1	Installation Guide

**Technical Specifications**

**Electrical**

**Power Requirements**

Voltage (Operating):	9 VDC to 15 VDC
Current (Maximum):	< 25 mA
Current (Standby):	13 mA

**Outputs**

Relay:	Solid state relay, normally-closed (NC) contacts power supervised. 3 W, 125 mA, 25 VDC, resistance < 10 Ω.
Tamper:	Normally-closed (NC) contacts (with cover on) rated at 25 VDC, 125 mA maximum. Connect tamper circuit to 24-hour protection circuit.
Trouble:	Solid-state relay normally-closed (NC) contacts.

**Mechanical**

**Enclosure Design**

Color:	White
Dimensions:	136 mm x 69 mm x 58 mm (5.25 in. x 2.75 in. x 2.25 in.)
Material:	High-impact ABS plastic

**Indicators**

Alarm Indicator:	<ul style="list-style-type: none"> <li>• Blue LED for TriTech alarms</li> <li>• Yellow LED for microwave alarms</li> <li>• Red LED for PIR alarms</li> </ul>
------------------	--

### Zones

Zones:	86
--------	----

### Frequency Information

Radio Frequency Interference (RFI) immunity:	No alarm or setup on critical frequencies in the range from 26 MHz to 1 GHz at 50 V/m.
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### Environmental

Relative Humidity:	0 to 95%, non-condensing
Temperature (Operating and Storage):	-29°C to +55°C (-20°F to +130°F) <i>For UL Certificated installations, 0°C to +49°C (+32°F to +120°F)</i>
Environmental Class II	EN 50130-5
Protection Rating:	IP41, IK04 (EN 60529, EN 50102)

### Ordering Information

#### ISC-PDL1-W18G Professional Series TriTech Detector

10.525 GHz frequency.

Order number **ISC-PDL1-W18G**

#### ISC-PDL1-W18H Professional Series TriTech Detector

10.588 GHz frequency. For use in France and the United Kingdom.

Order number **ISC-PDL1-W18H**

### Accessories

#### B328 Gimbal-mount Bracket

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

Order number **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.

Order number **B335-3**

#### B338 Universal Ceiling-mount Bracket

Swiveling plastic mount for ceiling mounting. The vertical swivel range is +7° to -16°, while the horizontal swivel range is ±45°.

Order number **B338**

**Represented by:**

**Americas:**

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Fax: +1 585 223 9180  
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www.boschsecurity.us

**Europe, Middle East, Africa:**

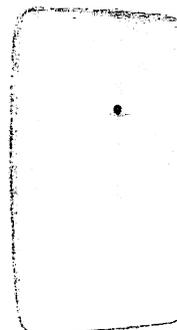
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www.boschsecurity.asia

## FG-1625F

### GLASSBREAK DETECTOR



The new FG-1625F Glassbreak Detector uses the latest technology to provide faster response and increased false alarm immunity. The FG-1625F is specifically designed to allow fast, easy installation, while the adjustable sensitivity settings can compensate for the acoustics of any room. Optimum operation can be quickly verified using the FG-701 Glassbreak Simulator. The FG-1625F was designed to adequately cover all sizes of single gang electrical boxes. Flush mount installations are now easier and better looking than ever.

## FEATURES

- **FlexCore™ Signal Processor**

The FlexCore™ Signal Processor is an Application-Specific Integrated Circuit (ASIC), which processes sound data in parallel rather than sequentially; for faster, more accurate detection decisions. The combination of proven FlexGuard® performance with the speed of FlexCore processing provides unmatched false alarm immunity without compromising detection.

- **Easy Installation and Setup**

Honeywell's patented technology allows remote activation of Test Mode (with simulator). The FG-1625F has 45° terminal blocks for easier wiring. A hand-clap feature verifies that the detector is functioning.

- **Selectable Sensitivity**

Two DIP switches on the FG-1625F make it easy to set the sensitivity to match the acoustics of the room. Four different sensitivity levels are available, ranging from very low to high. The range can then be verified remotely with the FlexGuard FG-701 Glassbreak Simulator.

- **Mount the Detector Anywhere**

Mounts on any wall or on the ceiling, with no minimum range and a maximum range of 25' (7.6m) to the glass. The FG-1625F fits a standard single gang electrical box; while the FG-1525FD version is specifically designed for double gang boxes.

- **Covers All Glass Types**

The FG-1625F works on all glass types, including plate, tempered, laminated, wired, film-coated and sealed insulating.

- **Multiple Domain Signal Analysis**

The FG-1625F performs Multiple Domain Signal Analysis in which time, frequency and amplitude characteristics are evaluated for signal qualification. This enables the detector to accurately discriminate false alarms from true glassbreak events.

- **Enclosed PC Board**

The PCB is protected from potential damage during installation.

- **Patented Remote Test Mode**

The Patented Remote Test Mode can enable or disable the indicator LEDs using the FG-701 Glassbreak Simulator. The unit automatically resets from Test Mode in five minutes.

- **Mounting Locations**

The FG-1625F can be mounted on the ceiling, opposite wall, adjoining wall, or the same wall as the glass.

# FG-1625F

## GLASSBREAK DETECTOR

### SPECIFICATIONS

#### • Physical Dimensions

- White high impact ABS plastic housing
- Faceplate:  
4.50" x 2.76" (114mm x 70mm)
- Rear cover:  
2.65" H x 1.80" W x 1.20" D  
(67.4mm x 45mm x 30mm)  
FG-1525FD (for doublegang)
- Faceplate  
4.49" x 4.49" (114mm x 114mm)
- Rear cover:  
2.65" H x 1.80" W x 1.20" D  
(67.4mm x 45mm x 30mm)

#### • Weight

- Product only:  
FG-1625F 3.1 oz (87g)  
FG-1525FD 3.8 oz (107g)
- Packaged Product:  
FG-1625F 4.7 oz (133g)  
FG-1525FD 6.5 oz (184g)

#### • Range

- 25' (7.6m) maximum, omnidirectional.  
Range is adjustable; no minimum range

#### • Alarm Relay

- Form A, 125mA max, 25VDC max

#### • Tamper Switch

- Cover removal tamper 25mA max, 24VDC max

#### • Alarm Duration

- Form A, 125mA max, 25VDC max

#### • ESD Immunity

- 10kV discharges of either polarity to exposed surfaces

#### • Power Requirements

- 6-18VDC; 12mA typical at 12VDC, 22mA max. AC Ripple: 4V peak to peak at nominal 12VDC

#### • RFI Immunity

- 30 V/m, 10 MHz - 1000 MHz

#### • Operating Temperature

- 14° F to 120° F (-10° C to 50° C)  
Storage: -4° F to 122° F  
(-20° C to 50° C)

#### • Approvals and Listings

- FCC/IC verified
- UL Listed
- ULC Listed

Type	Minimum	Maximum
Plate <sup>3a</sup>	2.4mm (3/32")	10mm (3/8")
Tempered	3mm (1/8")	10mm (3/8")
Laminated <sup>1</sup>	3mm (1/8")	14mm (9/16")
Wired	6mm (1/4")	6mm (1/4")
Coated <sup>2,3b</sup>	3mm (1/8")	6.4mm (1/4")
Sealed	3mm (1/8")	6mm (1/4")
Insulating <sup>1,3b</sup>	(Maximum overall 7/16")	

#### • Glass Type/Thickness

Minimum size for all types is 28cm (11") square; glass must be framed in the wall or mounted in a barrier at least 0.9m (36") wide.

1. Protected only if both plates of the unit are broken.
2. Coated glass with security films, including films for solar protection, up to 12 mil. thick may be used. Film Technologies International, Inc.'s GLASS-GARD® GGLL 1200 has been evaluated with this product by Underwriters Laboratories, Inc. at the request of Honeywell.
3. In compliance with Underwriters Laboratories of Canada's Standard for Intrusion Detection Units (CAN/ULC-S306-M89):
  - a. Plate glass 3mm to 10mm can be used.
  - b. ULC recognizes a maximum range for protecting sealed insulated glass and coated glass of 12.5 ft. (3.8m).

Note: The FG-1625F detects shattering of framed glass by direct impact. It may not consistently detect breakage by blows that only crack the glass, by high velocity projectiles such as bullets, or glass broken without an impact.

#### Accessories Description

FG-701 P/N 0-000-701-01  
Glassbreak Simulator

#### FlexGuard® Glassbreak Simulator/Tester

The sound of breaking glass is digitally simulated by the FG-701. The FG-701 is compatible for testing all Honeywell glassbreak detectors. Honeywell highly recommends testing glassbreak detectors before final installation.

### ORDERING

FG-1625F	Glassbreak Detector/Flushmount
FG-1525FD	Glassbreak Detector/Doublegang

#### Automation and Control Solutions

Honeywell Security & Communications  
2 Corporate Center Dr. Suite 100  
P.O. Box 9040  
Melville, NY 11747

www.honeywell.com

L/FG1625F/D  
November 2008  
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# Honeywell



# exacqVision®

## A Series Desktop Hybrid Camera Servers

### exacqVision A-Series Desktop Hybrid Camera Servers

*Compact, Reliable, Energy Efficient Hybrid Servers*

#### Key Features & Benefits:

- **True Hybrid** — Seamlessly integrate your existing analog and IP cameras from all of the leading camera vendors onto one server for centralized management. Includes up to 64 IP cameras per server and 64 analog inputs with 8 IP channels.
- **8 IP Camera Licenses Included** — Cost-effective solution providing complete control for multiple servers simultaneously. Add additional IP licenses for a low cost.
- **Pre-Configured with Intuitive exacqVision Software** — Powerful yet easy-to-use exacqVision VMS client interface operates on Windows, Linux and Macintosh
- **Windows or Ubuntu Linux Operating Systems on Solid-State Drive** — Pre-installed to operate on a separate, highly reliable solid-state drive for immediate plug-and-play operation
- **Intel Core Family Processor on Board** — Provides the highest performance with little power consumption and heat generation
- **3-Year Hardware Warranty, 3-Year Software Subscription Agreement** — Receive quarterly software updates for all the latest advancements as they are released along with access to technical support. IP Camera licenses never expire.
- **Included Mobile App** — Manage and monitor video remotely at any time by downloading the exacq mobile app for iPhone, iPad and Android devices
- **Space-Saving Chassis** — Compact, sturdy chassis easily fits on top of a desk.



Camera, Alarm & Audio Settings	Desktop
IP Cameras	4 or 8 IP licenses included. Expandable to 64 cameras per server (data rate dependent)
IP Compression Format	Camera dependent
Analog Inputs	8/16/32
Analog Outputs	1 mux , BNC
Analog Compression	H.264/MPEG-4/MJPEG
Analog Frame Rate (NTSC)	240/480/960
Analog Frame Rate (PAL)	200/400/800
Serial Connections	RS-485 (PTZ) & RS-232 port
Alarm Inputs	8 TTL
Alarm Outputs	3TTL + 1 relay output
Audio Inputs	8/16/32
Audio Outputs	1
Storage & Memory	
RAM	2 GB (standard), 4 GB (optional)
Drive Bays	2
Storage Maximum (Internal)	Up to 4 TB
Features	
NIC	2
USB2 Ports	6 x USB 2.0
Monitor Output	1 VGA + 1 HDMI 1.4 + 1 DVI-D, maximum 2 simultaneous monitors
Processor	Intel® i3 (standard), Intel® i5 (optional)
Keyboard & Mouse	Included
DVD/CD RW	Included
Watchdog Timer	Included
Server Operating System	Windows 7 Pro on 30 GB HDD Partition or Linux Ubuntu 10.04 (kernel 3.0) embedded on 4GB flash drive
VMS Software Included	exacqVision Professional (standard), exacqVision Enterprise Server (optional)
Compatible Client Operating System	Windows 7, Vista, XP, Server 2003/2008 32-bit or 64-bit Linux (Ubuntu) Mac OS X 
Regulatory	CE (Class A), FCC (Class A)
Warranty	3 years, parts & labor plus 3 years SSA included 
Size	
Dimensions (l x w x h)	15.675 x 13 x 5.375 in 39.7 x 33.1 x 14.6 cm
Weight	18.5 – 22 lbs. 8.4 – 10 kg
Requirements	
Operating Temperature	40° – 95°F (4.5° – 35°C)
Relative Humidity	5 – 95% RH (non-condensing)
Input Voltage	120/240 VAC auto-sensing
Power Consumption	<250 Watts (150 watts typical)
Power Cables	North America (standard), UK & EU (optional)

Part Numbers	
16 Analog Inputs – 480 FPS Models	
Model #	Hard Drive
1608-48-0500-DT	500 GB
1608-48-1000-DT	1 TB
1608-48-2000-DT	2 TB
1608-48-4000-DT	4 TB

Specifications subject to change. Visit [www.exacq.com](http://www.exacq.com) for the most current product specifications.



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Technologies  
[www.exacq.com](http://www.exacq.com)

## D116, D117, D118, D119 Sirens & Speakers

### Features:

#### D116 Siren

- 15 watt, 105 db
- Indoor use
- Built-in siren driver
- Constructed from ABS plastic with dimensions of 5.25" x 5.25" x 2"
- Provides either Yelp or Steady outputs, on 6 to 13.5V drawing up to 350mA.

#### D118 Speaker

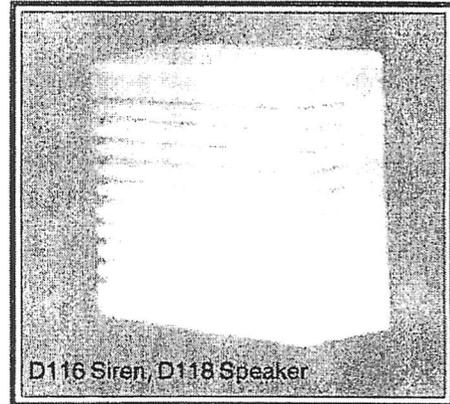
- Can be used with panels or multi-speaker siren drivers offered by other manufacturers.
- Outdoor use
- Speaker only version of the D116
- Provides 15W of power at 4 or 8 ohms in the 400-7K frequency range

#### D117 Siren

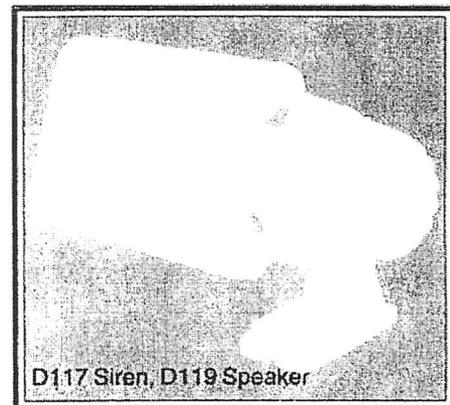
- 30 watt, 120 db two tone siren with 12V
- Can be installed in sheltered outdoor environments
- Built-in siren driver
- Constructed from ABS plastic with dimensions of 8" x 4.75" x 9 1/8"
- Provides either Yelp or Steady outputs, on 6 to 13.5V drawing up to 1,100mA.

#### D119 Speaker

- Can be used with panels or multi-speaker siren drivers offered by other manufacturers.
- Speaker only version of the D117
- Provides 30W of power at 4 or 8 ohms in the 450-10K frequency range.



D116 Siren, D118 Speaker



D117 Siren, D119 Speaker



# D1255 Series VFD Keypads



- ▶ **Easy to read vacuum fluorescent display (VFD)**
- ▶ **Easy system control with menu keys**
- ▶ **User controlled brightness and volume**
- ▶ **Installer configured menus, text, and custom functions**
- ▶ **Multiple or single area configurations**

Each D1255 Series VFD Keypad model is an SDI bus compatible device that works with the G Series Control Panels and the D9124 Addressable Fire Alarm Panel. Each keypad model has an illuminated keypad, 16-character English language vacuum fluorescent display (VFD), and a sounder that emits eight tones.

## System Overview

Use D1255 Series Keypad models in applications for system controllers and annunciators:

- For commercial use, install the keypad in building entrances and areas with unrestricted access. Mounting a keypad near exterior doors in hotel or business lobbies allows people to identify the type and location of the emergency.
- For residential use, install the keypad near the front and rear entrances to the home. Install additional keypads in a kitchen or in a bedroom.
- Use multiple keypads in a large building with many separate areas of security. Program multiple keypads to control multiple areas.
- Install the keypad in locations that are hidden from view. Audible tones from the keypad sounder alert personnel to fire events and assist fire fighters in locating the keypad.

## Functions

### Display

Every D1255 Series Keypad model uses words, numbers, and symbols to show the status of the security system. When several events occur, each model shows each event in order of priority.

### Keys

Each D1255 Series Keypad model has 10 numeric keys and five function keys. Use the [COMMAND] key with the numeric keys to perform a function. Use the [ENT] key or [YES] key to enter your passcode. When pressed, each key emits light and a muted beep.

### Audible Tones

The sounder emits eight distinct warning tones. You can adjust the volume or use a passcode to silence the tone. The tones include:

- **Burglary Signal:** Steady high-pitched bell tone during alarm.
- **Fire Signal:** Pulsed high-pitched bell tone during fire alarm.
- **Entrance Warning:** Intermittent beep tones during entry delay periods.
- **Exit Warning:** Intermittent beep tones during exit delay periods.
- **Invalid Key Buzz:** Buzz tone when an invalid key is pressed.
- **Keypad Encoding Tone:** Muted beep tone as each key is pressed.

- Trouble Buzzer: Two-tone warble during a trouble event.
- Watch Tone: Intermittent beep tone when a watch point is faulted.

**Certifications and Approvals**

Region	Certification
USA	<p>UL</p> <p>D1255: AMCX: Central Station Alarm Units (UL1610, UL1635), AMCX7: Central Station Alarm Units Certified for Canada (cULus), AMTB: Control Panels, SIA False Alarm Reduction, AOTX: Local Alarm Units (UL464, UL609), AOTX7: Local Alarm Units Certified for Canada (cULus), APAW: Police Station Alarm Units (UL365, UL464), APAW7: Police Station Alarm Units Certified for Canada (cULus), APOU: Proprietary Alarm Units (UL1076), APOU7: Proprietary Alarm Units Certified for Canada (cULus), NBSX: Household Burglar Alarm System Units (UL1023), NBSX7: Household Burglar Alarm System Units Certified for Canada (cULus), UTOU: Control Units and Accessories - Household System Type (UL985), UTOU7: Control Units and Accessories - Household System Type Certified for Canada (cULus)</p> <p>D1255B: AMCX7: Central Station Alarm Units Certified for Canada (cUL), AOTX7: Local Alarm Units Certified for Canada (cUL), APAW7: Police Station Alarm Units Certified for Canada (cUL), APOU7: Proprietary Alarm Units Certified for Canada (cUL), NBSX7: Household Burglar Alarm System Units Certified for Canada (cUL), UTOU7: Control Units and Accessories - Household System Type Certified for Canada (cUL)</p> <p>D1255W: AMCX: Central Station Alarm Units (UL1610, UL1635), AMTB: Control Panels, SIA False Alarm Reduction, AOTX: Local Alarm Units (UL464, UL609), APAW: Police Station Alarm Units (UL365, UL464), APOU: Proprietary Alarm Units (UL1076), NBSX: Household Burglar Alarm System Units (UL1023), UTOU: Control Units and Accessories - Household System Type (UL985)</p>
	<p>FM</p> <p>D1255</p>
	<p>CSFM</p> <p>D1255 and D1255W: 7167-1615:0113 FIRE ALARM CONTROL UNIT (COMMERCIAL)</p> <p>D1255 and D1255W: 7165-1615:0119 FIRE ALARM CONTROL UNIT (COMMERCIAL)</p> <p>D1255 and D1255W: 7167-1615:0100 CONTROL UNIT (HOUSEHOLD)</p>
	<p>NYC-MEA</p> <p>D1255: 12-92-E, Vol. IV</p> <p>D1255: 12-92-E, Vol. 12</p> <p>D1255: 12-92-E, Vol. 15</p>

## Installation/Configuration Notes

### Compatibility Information

**Control Panels with SDI Bus** All G Series control panels D9412, D7412, D7212, D9112, and D9124

### Mounting Considerations

- Do not mount any of the D1255 Series Keypad models in a location exposed to direct sunlight. Direct sunlight can interfere with screen visibility and damage internal components.
- Do not mount any of the D1255 Series Keypad models in damp locations.

### Power Supplies

A compatible control panel supplies the power and data requirements to a D1255 Series Keypad model through a four-wire connection.

### Wiring Considerations

Use 0.8 mm (22 AWG) or 1.2 mm (18 AWG) wire. Resistance cannot exceed 25  $\Omega$ . Each D1255 Series Keypad model includes a wiring assembly of four color-coded flying leads and one female four-pin connector.

## Parts Included

Quant.	Component
1	Keypad
1	Hardware pack (3 screws and 3 anchors)
1	Literature pack <ul style="list-style-type: none"> <li>Pull-up Reference Card</li> <li>Users Guide</li> <li>Installation Guide</li> </ul>

## Technical Specifications

### Connections

Connections:	4-wire flying lead for data and power
Resistance:	25 $\Omega$ maximum

### Environmental Considerations

Temperature (Operating):	0°C to +50°C (+32°F to +122°F)
Relative Humidity:	5% to 85% at +30°C (+86°F)

### Keypad

Dimensions for D1255, D1255W, and D1255R:	11.7 cm x 21 cm x 2 cm (4.6 in. x 8.2 in. x 0.8 in.)
Dimensions for D1255B:	12.6 cm x 20 cm x 3.2 cm (5 in. x 7.9 in. x 1.3 in.)
Weight for All Models:	439 g (15.5 oz)
Material for All Models:	CHI MEI POLYLAC PA757 ABS with UV Stabilizer. UL94-HB Fire Rated
Display Window:	16-character vacuum fluorescent display Each character is a 14-segment unit
Indicators:	Illuminated keys Warning and indicating tones

### Number of...

D1255 Series Keypad Models Eight supervised 32 unsupervised per Control Panel:

### Power Requirements

Voltage:	Nominal 12 VDC
Current:	Idle 104 mA, armed or disarmed; Maximum 206 mA, with keypad lit and warning tone on

### Trademarks

Trademark names are used throughout this document. In most cases, these designations are claimed as trademarks or registered trademarks in one or more countries by their respective owners. Rather than placing a trademark symbol in every occurrence of a trademark name, Bosch Security Systems, Inc. uses the names only in an editorial fashion and to the benefit of the trademark owner with no intention of infringing the trademark.

POLYLAC is a registered trademark of CHI MEI Industrial Corporation, LTD.

Plexiglas is a registered trademark of Arkema.

## Ordering Information

<b>D1255 VFD Keypad</b> Off-white classic case.	<b>D1255</b>
<b>D1255B VFD Keypad</b> White and gray modern case.	<b>D1255B</b>
<b>D1255W VFD Keypad</b> White classic case.	<b>D1255W</b>
<b>Accessories</b>	
<b>D54B Brass Flush-mount Kit</b> Back box and polished brass faceplate.	<b>D54B</b>
<b>D54C Stainless Steel Flush-mount Kit</b> Back box and stainless steel faceplate.	<b>D54C</b>
<b>D55 Keypad Desk Stand</b> Portable desk stand in smoke colored Plexiglas.	<b>D55</b>

**Ordering Information**

**D56 Surface Mount Conduit Box**                      **D56**  
White surface mount box.

**D56R Red Surface Mount Conduit Box**                      **D56R**  
Red surface mount box.

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www.boschsecurity.com

# TCM-3111

H.264 Megapixel IP PoE  
Fixed Dome



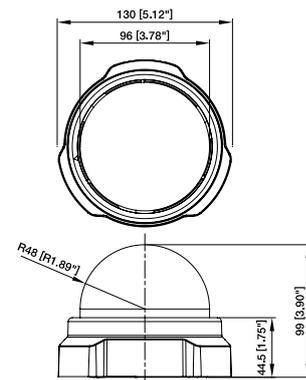
- 1/3" Progressive Scan CMOS
- Minimum illumination 0.5 Lux at F1.0
- Built-in f4.2mm / F1.8 Megapixel fixed lens  
(It is possible to replace the bundled lens with the optional lens)
- 18 fps at 1280 x 1024 resolution
- Selectable H.264, MPEG-4 SP, MJPEG compressions with dual streaming
- Powered by PoE Class 2

## PHOTO INDICATION



- 1 Power LED
- 2 Ethernet Port
- 3 Reset Button

## DIMENSION DIAGRAM



Unit: mm [inch]

## ACCESSORY OPTIONS

Lens		
PLEN-0121		IR Compatible, Fixed Iris, F2.0, 2.8 mm, 92.5°
Dome Cover		
PDCX-0101		3-inch, smoke, non-vandal proof

Popular Mounting Solutions		
Surface	Accessories not required	
Wall	PMAX-0308 	
Pendant	PMAX-0101 + PMAX-0103 	
Corner	PMAX-0101 + PMAX-0303 + PMAX-0402 	
Pole	PMAX-0101 + PMAX-0303 + PMAX-0502 	
Flush	PMAX-1006 	

\* For more mounting solutions, please refer to Mounting Accessory section of Buyer's Guide or Project Planner on [www.acti.com](http://www.acti.com)

# TCM-3111

## PRODUCT SPECIFICATION

### TCM-3111

#### • Device

Device Type	Fixed Dome Camera
Image Sensor	Progressive Scan CMOS
Sensor Size	1/3" (4.8 x 3.6 mm)
Day / Night	Yes (electronic)
Minimum Illumination	Color: 0.5 lux at F1.0 (30 IRE, 2400°K); B/W: 0.5 lux
Color to B/W switch	DSP based switch, configurable
Mechanical IR Cut Filter	No
IR Sensitivity Range	No
IR LED	No
Electronic Shutter	1/30 - 1/1,000 sec (60Hz); 1/25 - 1/1,000 sec (50Hz) (manual mode) 1/5 - 1/15,000 sec (auto mode)

#### • Lens\*

Focal Length / Aperture	Fixed focal, f4.2 mm / F1.8
Iris	Fixed iris
Focus	Fixed focus
Horizontal Viewing Angle	68.15°
Viewing Angle Adjustment	Pan: 0° - 170°; Tilt: 0° - 180°

#### • Video

Compression	H.264, MPEG-4 SP, MJPEG
Maximum Frame Rate vs. Resolution	18 fps at 1280 x 1024 (SXGA); 26 fps at 1280 x 720 (HD 720p); 30 fps at 640 x 480 (VGA); 30 fps at 320 x 240 (QVGA); 30 fps at 160 x 112 (QQVGA)
Multi-Streaming	Simultaneous dual streams based on two configurations
Bit Rate	28 Kbps - 6 Mbps (per stream)
Bit Rate Mode	Constant, Variable
S/N Ratio	More than 44 dB
Image Enhancement	White balance: automatic, hold, predefined and manual; Brightness; Saturation; Contrast; Sharpness; Auto exposure: automatic, predefined and manual; Flickerless
Privacy Mask	4 configurable regions
Text Overlay	User defined text on video
Image Orientation	Image flip and mirror

#### • Network

Protocol & Service	TCP, UDP, HTTP, HTTPS, DHCP, PPPoE, RTP, RTSP, IPv6, DNS, DDNS, NTP, ICMP, ARP, IGMP, SMTP, FTP, UPnP, SNMP, Bonjour
Ethernet Port	1, Ethernet (10/100 Base-T), RJ-45 connector
Security	IP address filtering; HTTPS encryption; Password protected user levels; IEEE 802.1X network access control

#### • Alarm

Alarm Trigger	Video motion detection (3 regions)
Alarm Response	Notify control Center; Change camera settings; Command other devices; E-mail notification with snapshots; Upload video, snapshot to FTP server

#### • General

Power Source / Consumption	PoE Class 2 (IEEE802.3af) / 4.368 W
Weight	270 g (0.6 lb)
Dimensions (Ø x H)	130 mm x 99 mm (5.12" x 3.90")
Mount Type	Surface, Pendant, Wall, Corner, Pole, Flush
Operating Temperature	-10 °C ~ 50 °C (14 °F ~ 122 °F)
Operating Humidity	10% ~ 85% RH
Approvals	CE, FCC

#### • Integration

Unified Solution	Fully compatible with ACTi software
ISV Integration	Software Development Kit (SDK) available ; ONVIF compliant
Firmware Access Browser	Microsoft Internet Explorer 6.0 or newer

\* It is possible to replace the bundled lens with the optional lens.



## D7212G Control Panel



- ▶ **Digital communicator with phone line monitor (loop or ground start)**
- ▶ **Multiple telephone numbers, primary and duplicate paths with main and alternate destinations**
- ▶ **All reports within each of four route groups are programmable**
- ▶ **Optional network interface module for two-way communication over Ethernet networks**
- ▶ **Automatic test and status reports**
- ▶ **Time windows for arming and open/close report suppression**
- ▶ **Programmable answering machine work-around for remote programming on shared phone lines**

The D7212G Control Panel provides an integrated solution for Security (commercial and residential) and Fire Alarm system (residential only) applications. The control panel is capable of monitoring alarm points for intruder or fire alarms while operating user command centers and other outputs. Each control panel includes a communicator that reports events to selected PSTN or IP network destinations through four programmable route groups. Programming and accessory modules offer flexibility and beneficial features rarely found in other security control systems. The D7212G provides eight on-board and up to 32 off-board points and 24 relays.

**Note** The D7212G Control Panel is available exclusively to Bosch Certified Security Dealers (BCSD).

### Functions

#### Programmable Outputs

- 2 A alarm power at 12 VDC
- 1.4 A auxiliary power at 12 VDC
- Four alarm output patterns
- Automatic bell test
- Programmable bell shut-off timer
- Three on-board outputs; 24 off-board programmable outputs

The D7212G Control Panel provides up to 40 individually identified points. Each point accommodates normally open and or normally closed devices with end-of-line (EOL) resistor supervision. Each point is programmable for fire, fire supervisory, or burglary applications. Point output can be silent or audible. Audible output can be steady, pulsed, CA standard, or temporal code three.

#### System Response

- 31 custom point indexes, including fire supervisory
- Selectable point response time
- Cross point compatibility
- Fire alarm verification
- Watch mode
- Scheduled events (skeds) arm, disarm, bypass and unbypass points, control relays, control authority levels, control door access and more

#### Area Configurations

Area programming offers a wide selection of different system configurations. Each area is assigned an account number to define annunciation, control, and reporting functions. Multiple areas can be linked to a shared area which is automatically controlled (hallway or lobby). Area arming can be conditional on other areas (master/associate).

## User Interface

- Supervises up to eight command centers (up to 32 non-supervised command centers can be used)
- Custom command center text
- Four custom functions
- Full function command menu including custom functions
- Each user has authority by area and 16-character name
- 14 custom authority levels control user's authority to change, add, delete passcodes or access control cards or key fobs, disarm, bypass points, initiate system tests, and more
- Up to 64 programmable, scheduled event functions are available for controlling relays, enabling passcodes and windows, and automatically arming and disarming areas
- Adjustable brightness or volume for command center display or sounder
- One parallel printer

The D7212G provides on-premises point and system status annunciation. The fully selectable user interface customizes command center displays and allows users to create appropriate menu items and functions.

Function lists can help a user become familiar with the operation of the control panel and Custom Functions allow users to perform complex functions with a few keystrokes. Each function can be programmed and identified by sixteen characters of custom text and can contain up to 32 keystrokes.

**Note** At least one command center per system is recommended.

## User Passcodes

User passcodes contain three to six digits. Each user is assigned one of 14 customized authority levels in each area. Passcodes can be restricted to operate only during certain times. User names can contain up to 16 characters. The user name can be viewed, printed, reported to a central station in Modem IIIa<sup>2</sup> Communications format or retrieved with Remote Programming (RPS) software.

## Security and Fire Detection

The D7212G Control Panel provides eight on-board points, and up to 32 additional off-board points (depending on model and expansion interfaces). Points can be individually programmed and used to monitor all types of burglar alarm, fire alarm, and supervision devices.

## Communications

The D7212G has four route groups. It can sort reports by priority and transmit reports to four route groups each of which has a programmable primary and backup destination. The D7212G is compatible with the D6600 NetCom Communications System using a DX4020 Network Interface Module. It has programmable anti-replay anti-substitution when using a DX4020.

The Modem IIIa<sup>2</sup> Communications Format, available with Bosch receivers, adds reporting capabilities such as:

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

## Event log storage, viewing and printing

All local and transmitted events (up to 1,000 total events) are stored in a log. The event log includes time, date and event, with area, point and user number. You can view the event log from select keypads or remotely retrieve event information using RPS. With the printer interface module installed, the D7212G Control Panel allows the use of one on-site parallel printer. The event log and a local printer can provide a record of openings and closings without extra communications costs. RPS operators can retrieve events periodically using one phone call, rather than receiving several calls each day. When the panel's event log reaches its programmed threshold of stored events, it can send a report to a receiver.

## Scheduled Events (Skeds)

The D7212G Control Panel's internal clock and calendar operate individually scheduled events (skeds). Skeds perform specific functions such as arm and disarm, relay control, or point bypassing.

- 40 scheduled events with up to 26 different functions
- 16 open or closing windows
- Eight user windows
- Day-of-week, date-of-year, or holiday only schedules
- Four holiday schedules of 366 days each (leap year)

## Fire Test

When a user activates Fire Test Mode, the control panel suppresses all reports to the central station. Use a passcode at the keypad to activate Fire Test Mode. The keypad and annunciator show all testing data. An automatic sensor reset feature saves time; you do not need to reset the sensors manually. At the end of test, the keypad shows the number of untested points.

## Programming, Diagnostics and Controls

Users can program all system functions on-site via a D5200 Programmer, or remotely through RPS. A programmable system passcode prevents unauthorized remote programming.

The panels accommodate up to four separate telephone numbers for primary, alternate and backup receivers for automatic test reports.

When resetting alarms, arming or disarming a combination fire and burglary and/or access control system, the user is identified by name and number.

## Certifications and Approvals

UL Standards	UL365, Police Station Burglar Alarm Units and Systems UL464, Audible Signal Appliances UL609, Local Burglar Alarm Units and Systems UL985, Household Fire Warning System Units UL1023, Household Burglar-alarm System Units UL1076, Proprietary Burglar Alarm Units and Systems UL1610, Central-station Burglar-alarm Units UL1635, Digital Alarm Communicator System Units
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## Installation/Configuration Notes

### Compatible Products

<b>Keypads</b>	D1260 Series Keypads (D1260, D1260W, D1260R, D1260BLK, D1260B) D720 Series Keypads (D720, D720W, D720R, D720B) D1255 Series Keypads (D1255, D1255W, D1255R, D1255B) D1256 and D1256RB Fire Keypads D1257 and D1257RB Remote Fire Alarm Annunciators D279A Independent Zone Control
<b>Detectors</b>	MX250 Series Smoke Detectors MX775i Addressable PIR Detector MX794i Long Range Multiplex PIR Detector MX934i Addressable PIR Detector MX938i Addressable PIR Detector ZX776Z PIR Detector ZX794Z Long Range PIR Detector ZX835 TriTech Microwave/PIR Detector ZX935Z PIR Detector ZX938Z PIR Detector ZX970 PIR/Microwave Detector Bosch conventional detectors include Blue Line, seismic, PIR, TriTech PIR Microwave, photoelectric, heat, and smoke.
<b>Enclosures</b>	D8103 Universal Enclosure
<b>Magnetic Contacts</b>	Bosch magnetic contacts include recessed, terminal connection, miniature, overhead door, and surface mount.
<b>Bells</b>	D440 Bell 12 V, 15 cm (6 in.) D441 Bell 24 V, 15 cm (6 in.) MB-G10-12-R Bell 12 V, 25.4 cm (10 in.) MB-G10-24-R Bell 24 V, 25.4 cm (10 in.)
<b>Modules</b>	C900V2 Dialer Capture Module D125B Dual Class B Initiating Module D127 Reversing Relay Module D129 Class A Initiating Module D130 Auxiliary Relay Module D185 Reverse Polarity Signaling Module

### Keypads

D1260 Series Keypads (D1260, D1260W, D1260R, D1260BLK, D1260B)  
D192C Notification Appliance Circuit Module  
D192G Notification Appliance Circuit Module  
D5060 MUX Programmer  
D8125 POPEX Point Expander  
D8128D OctoPOPIT Eight Point Expander  
D8125MUX Point Expander  
D8129 Octo-relay Module  
D9127 Series POPIT Modules  
D9131A Parallel Printer Interface Module  
DS7432 Eight-input Remote Module  
DS7457i Series Single Zone Multiplex Input Modules  
DS7460i Two-input Module  
DS7461i Single-input Multiplex Module  
DS7465i Input and Output Module  
DX4010i RS-232 Serial Interface Module  
DX4020 Network Interface Module

### Peripheral Hardware

#### Communications Formats

rvm4c Remote Video Module  
Modem IIIa<sup>2</sup>  
BFSK

#### Programming

D5200 Series Programmers  
RPS and RPS-Lite Remote Programming Software

#### SAFECOM Radio Communicators

SC2104 Series Slave Communicators  
SC3100 Series Data Transfer Radio Communicators  
SC4000 Series Full Data Transfer Radio Communicator

#### Wireless Products

D8125INV Wireless Interface  
FA113 Keychain Remote Control  
FA116 Executive Programmer  
FA202 Wireless Smoke Detector and Transmitter  
FA203S Necklace Pendant Transmitter (Single-button)  
FA203D Necklace Pendant Transmitter (Double-button)  
FA204 Necklace Pendant Transmitter  
FA205S Belt Clip/Loop Transmitter (Single-button)  
FA205D Belt Clip/Loop Transmitter (Double-button)  
FA206DS PIR Transmitter  
FA206i PIR Transmitter  
FA207 Glass Break Detector  
FA209 Billtrap Transmitter  
FA210 Universal Transmitter (Off-white)

**Keypads**

D1260 Series Keypads (D1260, D1260W, D1260R, D1260BLK, D1260B)

FA210W Universal Wide Gap Transmitter with Internal Reed Switch (Off-white)

FA216L Low Temperature Transmitter

FA216H High Temperature Transmitter

FA223S Water-resistant Pendant (White Single-button)

FA223D Water-resistant Pendant (Black Double-button)

FA250 High-power Universal Transmitter

FA400 Remote Receiver

FA404R Transmitter Receiver

FA416R Transmitter Receiver

FA570 High Power Indoor Repeater

FA575 High Power Indoor/Outdoor Repeater

**Parts Included**

D7212G Components	Quantity
D7212G Board	1
Mounting Skirt	1
Faceplate with D7212G Label	1

**Technical Specifications****Communications**

SDI Bus A (+): 9 VDC  
4572 m (15,000 ft)

SDI Bus B (-): 9 VDC  
4572 m (15,000 ft)

Telephone Connection: RJ31X or RJ38X

**Environmental Considerations**

Relative Humidity: 5% to 85% at +30°C (+86°F), non-condensing

Temperature (Operating): 0°C to +50°C (+32°F to +122°F)

**Number of...**

Areas: 4

Custom Functions: 4

Events: Store up to 1,000

Hardware Addresses: 40

Parallel Printers: 1

Passcode Users: 99, plus 1 service passcode

Points: 40 (eight on-board, up to 32 off-board)

Programmable Relay Outputs: 27

RF Points: 32

**Power Requirements**

Current Draw (Minimum): 200 mA

Current Draw (Maximum): 500 mA

Output (Alarm): 2 A at 12 VDC

Output (Auxiliary, Continuous Power, and Switched Auxiliary combined): 1.4 A at 10.2 VDC to 13.9 VDC

Voltage (Operating): 12 VDC

Voltage (AC): 16.5 VAC 40 VA plug-in transformer (D1640)

Voltage (DC):

- Up to two 12 VDC, 7 Ah sealed lead acid rechargeable batteries
- Up to two 12 VDC, 18 Ah sealed lead acid rechargeable batteries

**Note** The D7212G Control Panel is available exclusively to Bosch Certified Security Dealers (BCSD).

## D7212G Kit Ordering Information

Components	Kits				
	D7212GK1	D7212GK1W	D7212GK2	D7212GK3	D7212GK3W
D7212G Board	1	1	1	1	1
D1640 Transformer	1	1	1	1	1
D8103 Enclosure with D101 Lock and Key Set	1	1	1	1	1
D1255 Keypad	1			1	
D1255W Keypad (White)		1			1
D1260 Keypad			1		
DS835i PIR Detector	2	2	2		
D8125 Addressable Expansion Module				1	1
D9127U POPIT Module without Tamper				10	10

Components	Kits			
	D7212GK4	D7212GK5-DX4020	D7212GK5WDX4020	D7212GK6-DX4020
D7212G Board	1	1	1	1
D1640 Transformer	1	1	1	1
D8103 Enclosure with D101 Lock and Key Set	1	1	1	1
D1255 Keypad		1		
D1255W Keypad (White)			1	
D1260 Keypad	1			1
D8125 Addressable Expansion Module	1			
D9127U POPIT Module without Tamper	10			
DX4020 Network Interface Module		1	1	1

## Ordering Information

D7212G Control Panel Includes one printed circuit board (PCB).	D7212G
D7212G Kit with Keypad and PIR Detectors (2) Includes one PCB, one D1255 Keypad, and two DS835i PIR Detectors.	D7212GK1
D7212G Kit with Keypad and PIR Detectors (2) Includes one PCB, one D1255W Keypad, and two DS835i PIR Detectors.	D7212GK1W
D7212G Kit with Keypad and PIR Detectors (2) Includes one PCB, one D1260 Keypad, and two DS835i PIR Detectors.	D7212GK2
D7212G Kit with Keypad and Expansion Module Includes one PCB, one D1255 Keypad, one D8125 Expansion Module, and ten D9127U POPIT Modules.	D7212GK3
D7212G Kit with Keypad and Expansion Module Includes one PCB, one D1255W Keypad, one D8125 Expansion Module, and ten D9127U POPIT Modules.	D7212GK3W
D7212G Kit with Keypad and Expansion Module Includes one PCB, one D1260 Keypad, one D8125 Expansion Module, and ten D9127U POPIT Modules.	D7212GK4
D7212G Kit with Keypad and Network Interface Module Includes one PCB, one D1255 Keypad, and one DX4020 Network Interface Module.	D7212GK5-DX4020
D7212G Kit with Keypad and Network Interface Module Includes one PCB, one D1255W Keypad, and one DX4020 Network Interface Module.	D7212GK5WDX4020

## Ordering Information

D7212G Kit with Keypad and Network Interface Module D7212GK6-DX4020

Includes one PCB, one D1260 Keypad, and one DX4020 Network Interface Module.

## Accessories

ICP-EZTS Dual Tamper Switch Combination tamper switch with a wire loop for additional tamper outputs.	ICP-EZTS
D101 Lock and Key Set Standard lock set with one key supplied. Uses the D102 (1358) replacement key.	D101
D122 Dual Battery Harness Harness with circuit breaker. Connects two batteries to a compatible control panel.	D122
D122L Dual Battery Harness with Long Leads Color-coded harness with circuit breaker and leads measuring 89 cm (35 in.). Connects 12 V batteries to compatible control panels.	D122L
D126 Standby Battery (12 V, 7 Ah) Sealed lead-acid standby and auxiliary rechargeable power supply.	D126
D137 Mounting Bracket Used to mount accessory modules in D8103, D8108A, and D8109 enclosures.	D137
D138 Mounting Bracket, Right Angle Used to mount accessory modules in D8103, D8108A, and D8109 enclosures.	D138
D168A Telephone Remote Arming Module A remote control module that arms or disarms a security system remotely or locally through a telephone.	D168A

**Ordering Information**

D1218 Battery (12 V, 18 Ah) A 12 V sealed lead-acid battery for standby and auxiliary power with two bolt-fastened terminals. Includes hardware for attaching battery leads or spade connectors	D1218
D1224 Battery (12 V, 24 Ah) A 12 V sealed lead-acid battery for standby and auxiliary power with two bolt-fastened terminals. Includes hardware for attaching battery leads or spade connectors.	D1224
D1238 Battery (12 V, 38 Ah) A 12 V sealed lead-acid battery for standby and auxiliary power with two bolt-fastened terminals. Includes hardware for attaching battery leads or spade connectors.	D1238
D1640 Transformer System transformer rated at 16.5 VAC, 40 VA.	D1640
D8103 Enclosure Grey steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.).	D8103
D8108A Attack Resistant Enclosure Grey steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.). UL Listed. Includes lock and key set. Requires the D2402 Mounting Plate.	D8108A
D9002-5 Mounting Skirt Mounts inside D8103, D8108A, and D8109 enclosures. Can accept up to six standard 7.62 cm x 12.7 cm (3 in. x 5 in.) cards.	D9002-5
D136 Plug-In Relay Maximum rating is 1 A at 24 VDC or 2 A at 12 VDC. Available individually (D136) or in a package of 25 (D136-25).	D136
<b>Software Options</b>	
RPS Kit (LPT) Account management and control panel-programming software with LPT connection.	D5500C-LPT
RPS Kit (USB) Account management and control panel-programming software with USB connection.	D5500C-USB

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