



intrusion

PowerSeries Pro alarm controller

Architecture and Engineering Specifications

Models: HS3032, HS3128, and HS3248

3301 Langstaff Road,
Concord, Ontario,
Canada
L4K4L2
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Introduction and system overview

Introduction

The purpose of this document is to introduce you to the PowerSeries Pro alarm panel and to provide you with detailed information on its specifications and features. The following areas are covered in this document:

- Regulatory requirements
- Model features
- System performance
- Mechanical, electrical, and environmental specifications

Note: For detailed information about the PowerSeries Pro alarm panel wireless component, refer to the document: *PowerSeries Pro 1.0 Wireless Host Architecture and Engineering Specifications*.

System overview

The PowerSeries Pro alarm panel is a feature-rich, scalable system designed primarily for medium to large sized commercial installations. The alarm panel supports both hardwired and wireless devices.

The following alarm controller models are available:

- HS3032
- HS3128
- HS3248

Regulatory requirements

This chapter identifies all regulatory system requirements for the PowerSeries Pro alarm panel.

Regulatory compliance standards

US approvals

UL

UL1023 Standard for Household Burglar Alarm System Units (4 h Battery Standby required)

UL985 Standard for Household Fire Warning System Units (24 h Battery Standby required)

UL1635 Standard for Digital Alarm Communicator System Units

UL1610 Standard for Central Station Burglar Alarm Units

UL365 Standard for Police Station Connected Burglar Alarm Units and Systems

UL1637 Home Health Care Signaling Equipment

SIA

ANSI/SIA CP-01-2014 Control Panel Standard – Features for False Alarm Reduction

FCC

TIA-968-B Technical Requirements for Connection of Terminal Equipment to the Telephone Network (USA)

CISPR32 Class B Information Technology Equipment – Radio Disturbance Characteristics – Limits and Methods of Measurement

Canada approvals

ULC

ULC-S545-2002 Standard for Residential Fire Warning System Control Units

CAN/ULC-S304-2016 Standard for Central & Monitoring Station Burglar Alarm Systems

CAN/ULC-S559-2013 Standard for Equipment for Fire Signal Receiving Centers and Systems

IC

ICES-003 (CISPR22 Class B) Standard for Interference Causing Equipment, Digital Apparatus

IC-CS03 Issue 9, Industry Canada Terminal Equipment Technical Specifications

European approvals

CE

TS 203 021 Parts 1, 2, 3 European Telecommunication Specifications

EN61000-6-3 Class B Information Technology Equipment – Radio Disturbance Characteristics

EN50130-4:2011 Immunity Requirements for Components of Fire, Intruder, and Social Alarm Systems

EN62368-1:2014/A11:2017 ITE. Safety. General Requirements

EN

EN50131-1:2006+A1:2009+A2:2017 Intrusion Systems General Requirements, Grade 3, Class II

EN50131-3:2009 Control and Indicating Equipment , Grade 3, Class II

EN50131-6:2017 Power Supplies, Grade 3, Type A (30 h standby time with AC trouble transmitted)

EN50130-5:2011 Environmental Test Methods for Alarm Systems, Class II

EN50131-10:2014 Application specific requirements for Supervised Premises Transceiver (SPT)

EN50136-2-1:2012 General Requirements for alarm transmission equipment

EN50136-2:2013 Alarm Systems – Requirements for Supervised Premises Transceiver (SPT)

- Single Path PSTN: ATS category SP3
- Single Path Ethernet or Cell: ATS category SP4
- Dual Path PSTN with Ethernet: ATS category DP2
- Dual Path PSTN with Cell: ATS category DP2
- Dual Path Ethernet and Cell: ATS category DP3

NFA2P certification

NFA2P 3 Shields and Cybersecurity

Note: For HS3032 and HS3128 models only.

SBSC certification

SSF 1014 V5 Intrusion Alarm System Requirements LarmKlass 3

SSF 114 Transmission Systems

UK

BS6662:2017 Scheme for the application of European Standards for intruder and hold-up alarm systems

BS8243:2010+A1:2014 Installation and configuration of intruder alarm systems designed to generate confirmed alarm conditions

BS4737:1988 Part 1 for Remote Signaled Systems

South America

CNC

CNC-ST2-44.01 Telecom Requirements for Argentina

Africa

South Africa

TE 001 Issue 5 2006 South African Telecom Standard

Model feature overview

This chapter lists the features of each PowerSeries Pro alarm controller model.

HS3032

The HS3032 alarm controller has the following features:

- 8 on-board zones, expandable to 32 hardwired zones using 3 HSM2108 zone expander modules or 3 HSM3408 zone expander modules or a combination of them up to a maximum of 3 hardwired zone expanders
- 4 partitions
- 71 user codes and 1 master code
- 72 proximity tags
- 32 wireless keys or panic pendants*
- 500 standard event buffer
- 41 programmable zone types
- 50 programmable output options
- 4 holiday groups with 99 programmable schedules in each
- Expandable to 8 wired or wire-free* keypads
- Expandable to 32 wireless zones*
- Expandable to 8 wireless sirens*
- Expandable to 8 wireless repeaters*
- 4 on-board programmable outputs
- Expandable to 4 500 mA programmable outputs using 1 HSM2204 high current expander modules
- Expandable to 32 50 mA programmable outputs using 4 HSM2208 output expander modules
- Expandable to 3 HSM2300 or HSM3350 power supply modules
- Expandable to 1 HSM2955 2 way audio module
- Expandable to 1 HSM3204CX corbus repeater

Note: Features marked with an asterisk (*) require an HS2LCDRF keypad or an HSM2HOST.

HS3128

The HS3128 alarm controller has the following features:

- 8 on-board zones, expandable to 128 hardwired zones using 15 HSM2108 zone expander modules or 15 HSM3408 zone expander modules or a combination of them up to maximum 15 numbers hardwired zone expanders
- 8 partitions
- 999 user codes and 1 master code
- 1000 proximity tags

- 32 Wireless keys or panic pendants*
- 1000 standard event buffer
- 41 programmable zone types
- 50 programmable output options
- 4 holiday groups with 99 programmable schedules in each
- Expandable to 16 wired or wire-free* keypads
- Expandable to 128 wireless zones*
- Expandable to 16 wireless sirens*
- Expandable to 8 wireless repeaters*
- 4 on-board programmable outputs
- Expandable to 16 500 mA programmable outputs using 4 HSM2204 high current expander modules
- Expandable to 128 50 mA programmable outputs using 16 HSM2208 output expander modules
- Expandable to 4 HSM2300 or HSM3350 power supply modules
- Expandable to 1 HSM2955 2 way audio module
- Expandable to 8 HSM3204CX corbus repeater modules

Note: Features marked with an asterisk (*) require an HS2LCDRF keypad or an HSM2HOST.

HS3248

The HS3248 alarm controller has the following features:

- 8 on-board zones, expandable to 248 hardwired zones using 30 HSM2108 zone expander modules or 30 HSM3408 zone expander modules or a combination of them up to a maximum of 30 hardwired zone expander modules
- 8 partitions
- 999 user codes and 1 master code
- 1000 proximity tags
- 32 wireless keys*
- 1000 standard event buffer
- 41 programmable zone types
- 50 programmable output options
- 4 holiday groups with 99 programmable schedules in each
- Expandable to 16 wired or wire-free* keypads
- Expandable to 128 wireless zones
- Expandable to 16 wireless sirens*
- Expandable to 8 wireless repeaters*
- 4 on-board programmable outputs
- Expandable to 16 500 mA programmable outputs using 4 HSM2204 high current expander modules
- Expandable to 128 50 mA programmable outputs using 16 HSM2208 output expander modules
- Expandable to 4 HSM2300 or HSM3350 power supply modules

- Expandable to 1 HSM2955 2 way audio module
- Expandable to 8 HSM3204CX corbus repeater modules

Note: Features marked with an asterisk (*) Require an HS2LCDRF keypad or an HSM2HOST.

Corbus

The corbus uses an RS-485 serial cable, without requiring termination, and can support home run, star, and daisy chain wiring types. It is also capable of supporting the transmission of visual verification frames to the control panel.

System performance

This chapter identifies the system performance for each of the PowerSeries Pro alarm controller models.

Model

HS3032/HS3128/HS3248

These models support 8 onboard, fully supervised programmable zones. They have an integrated power supply and a supervised digital alarm communicator, and includes auxiliary power for powering security detection devices. A programmable switched auxiliary output is used for 2 and 4-wire smoke detectors. The controller supports 4 programmable outputs, which can be programmed as general purpose outputs.

Zone expansion

HS3032

This model supports 32 hardwired or wireless zones. The controller is expandable to a maximum of 32 zones, by adding 3 HSM2108 or HSM3408 hardwired 8 zone expansion modules, or an HSM2HOST wireless expansion module or an HS2LCDRF keypad. They are connected to the controller via a supervised 4-wire power/communication bus.

HS3128

This model supports 128 hardwired or wireless zones. The controller is expandable to a maximum of 128 zones, by adding 15 HSM2108 or HSM3408 hardwired 8 zone expansion modules, or an HSM2HOST wireless expansion module or an HS2LCDRF keypad. They are connected to the controller via a supervised 4-wire power/communication bus.

HS3248

This model supports 248 hardwired zones, of which 128 can be wireless zones. The controller is expandable to a maximum of 248 zones by adding 30 HSM2108 or HSM3408 hardwired 8 zone expansion modules, and/or an HSM2HOST wireless expansion module or an HS2LCDRF keypad. They are connected to the controller via a supervised 4-wire power/communication bus.

System keypads

The models support up to 8 (HS3032) or 16 (HS3128/HS3248) hardwired or wireless keypads. LCD and/or touchscreen keypads with proximity tag support can be added to the system in any

combination. The keypads include Armed, Ready, Trouble, and AC indication LEDs, as well as five programmable function keys and three keypad-activated alarm buttons. Keypads can operate in power save mode in the event of a power failure.

Commercial burglary

For ULC applications the communications paths can be used in single configurations (passive P1 or active A1 – A4) or dual/multiple paths configuration (passive P2, P3) with encrypted or non-encrypted line security (using AES128). System can be used in Security levels I-IV ULC certified applications.

For UL applications the communication line is standard or with line security or dual line communication (when using two or more paths)

ULC fire monitoring and reporting

The system can be expanded to provide remote reporting of fire alarm system status, simultaneously over two paths. It does this using either single communication paths (active system) or dual/multiple communication paths (passive system) consisting of any combination of the three available communication methods (integral dialer, integral IP or plug-in cellular. The alarm communicators are fully supervised and automatically report troubles and alarm signals to the signal receiving center.

Central station reporting

The system provides Contact ID and SIA reporting formats, and is capable of being programmed to call up to four telephone numbers. The system is programmable for split reporting, so that alarm-s/restorals, openings/closings, and miscellaneous events can be sent to different telephone numbers or communication paths. The system can report an account for each partition (for non-SIA reporting formats) and a separate account code for non-partition (system) events.

Alternate reporting methods

The system is capable of reporting all alarms, as well as trouble and system status information, using one of the following options: a cellular transmitter, or an internet (IP) communicator. The PowerSeries Pro communicates events using integral dialer, integral IP path or alternate (plug-in) cellular (3G or LTE variants available). The system communicates using a single path, or a combination of up to three paths mentioned previously based upon the needs of each protected premises.

Programmable outputs

HS3032

This model is capable of including up to 44 programmable outputs. Using 1 HSM2204 high current output module, 4 500 mA programmable outputs may be added. Using 4 HSM2208 low current output

System performance

modules, 32 50 mA programmable outputs can be added. Using 1 HSM3204CX 4 relay corbus repeater module, 4 30 V DC, 2 A relay outputs can be added. These modules can be located anywhere on the 4-wire communication bus. The high current output module includes an integrated power supply, battery charger and supply, and up to 1 A of auxiliary power at 12 V DC.

HS3128/HS3248

These models are capable of including up to 180 programmable outputs. Using 4 HSM2204 high current output modules, 16 500 mA programmable outputs can be added. Using 16 HSM2208 low current output modules, 128 50 mA programmable outputs can be added. Using 1 HSM3204CX 4 relay corbus repeater module, 32 30 V DC, 2 A programmable outputs can be added. These modules can be located anywhere on the 4-wire communication bus. The high current output module includes an integrated power supply, battery charger and supply, and up to 1 A of auxiliary power at 12 V DC. The 4 relay corbus repeater module includes an 18 V DC power supply input, 12 V battery charger.

System software

The base panel comes complete with all of the software to implement every system feature and to allow for the addition of every expansion or functional module without changes or additions to the basic software.

System programming

The system is fully programmable, using the keypads, and also allows event buffer viewing, using the same keypads.

Separate PC based upload/download software provides the ability to fully program the system and to read all current system programming, including the event buffer. The system provides a connector (PC-link 1) for Alarm.com integration, a micro USB port for local upload/download operations, and a telephone line or an IP network (Ethernet or cellular) for remote upload/download operations. Remote upload/download access is controllable by the user to prevent unauthorized access.

All system programming is maintained in non-volatile memory, so that program information is maintained, even if all AC and battery power is off.

User codes

HS3032

This model provides up to 71 user codes, plus a master code, which are selectable as either 4, 6, or 8 digits. User codes are assignable to one or multiple partitions.

HS3128/HS3248

These models provide up to 999 user codes, plus a master code, which are selectable as either 4, 6, or 8 digits. User codes are assignable to one or multiple partitions.

Partitions

HS3032

This model is programmable for up to 4 fully independent partitions, each of which can have its own account code. Keypads are assignable as partition keypads or as global keypads. Each zone in the system is assignable to one or more partitions.

HS3128/HS3248

These models are programmable for up to 8 fully independent partitions, each of which can have its own account code. Keypads are assignable as partition keypads or as global keypads. Each zone in the system is assignable to one or more partitions.

Supervision

Each zone in the system is supervised using normally closed or single EOL or DEOL or TEOL resistors of default value 5.6 k Ω . The resistance values are programmable to accommodate most sensor EOL values. For more information, see **Table 4-1**.

Table 4-1: Resistance values

Resistor type	Range (k Ω)
Single end of line	0.5 to 28
Double end of line	0.5 to 15
Triple end of line	Alarm: 0.5 to 7.5 (default 5.6)
	Tamper: 0.5 to 7.5 (default 5.6)
	Mask fault: 0.5 to 15 (default 10)

General system supervision includes loss of AC for the base panel and any remote module with its own AC input. Batteries for the base panel and all remote functional panels are supervised and short circuit protected. Each wireless input device is supervised, and the 4-wire communication bus is supervised for low voltage and the presence of each enrolled module and keypad. Digital alarm communicators are supervised for telephone line trouble and failures to communicate, and the system will report any cellular or IP network communication panel trouble.

Note: The bell output is fully supervised.

False alarm prevention

The system includes the following false alarm prevention features:

- Silent exit delay
- Audible exit delay
- Arm/disarm bell squawk
- Audible exit fault
- Urgency on entry delay
- Swinger shutdown - programmable by zone
- Transmission delay by zone
- Rotating key press buffer for disarming
- Recent closing report code transmission
- Police code (cross zone) transmission
- Opening after alarm transmission
- Visual alarm verification

Automatic arming and disarming

The system allows for the automatic arming and disarming of partitions according to a programmable schedule. The system includes a method to automatically arm a partition after there has been no activity for a predetermined period of time.

Temporary zone disabling/bypassing

The system includes the following temporary zone disabling/bypassing features:

- Force arm partition with zone violated and arm zone upon restore
- Manual bypass by user

Network communications

The system is capable of network (LAN/WAN) and Internet communications. This is according to UL standards and encrypted line security, ULC A1-A4 communication line security levels for active systems, or P1 - P3 for passive communication systems. The network communicator utilizes 128-bit AES encryption over 10/100 base-T networks and supports static or dynamic IP addressing. The IP communicator can be connected to a 10 MB, 100 MB, or 1 GB switch, and is capable of sending alarm events to a primary and backup IP receiver address. The Internet communicator performs full alarm reporting directly to the central monitoring station. It also performs full system configuration programming and the viewing of system statuses, using remote upload/download software, over an encrypted connection. For security purposes, the Internet communicator is capable of end-to-end supervision and hardwire substitution detection.

Mechanical, electrical, and environmental specifications

This chapter identifies all mechanical, electrical (base panel), and environmental specifications.

Mechanical specifications

The following table describes the specifications of the available PowerSeries Pro alarm enclosures.

Table 5-1: Alarm enclosures

Enclosures	Dimensions	Specifications
HSM3010C	L = 372 mm H = 412 mm D = 114 mm	• Hinged door • Made of 18 Ga steel • Painted white • Compatible with HS3032/HS3128/HS3248 panels • Supports up to 3 or 4 HS3408 or 4 HS2108 modules or 1 HSM3350 or HSM3204CX module • Supports 1 7 Ah, or 1 4 Ah, or 1 14 Ah, or 1 17 Ah battery
HSC3010CR	L = 372 mm H = 412 mm D = 114 mm	• Hinged door. • Made of 18 Ga steel • Painted red • Compatible with HS3032/HS3128/HS3248 panels • Supports 2 HSM3408 or 3 HSM2108 modules • Supports 1 14 Ah, or 1 17 Ah battery
HSC3030CAR	L = 375 mm H = 412 mm D = 114 mm	• Hinged door • Made of 18 Ga steel (base) and 16 Ga steel (door) • Painted white • Compatible with HS3032/HS3128/HS3248 panels • Supports 2 HSM3408 and/or 3 HSM2108 modules or 1 HSM3350 or HSM3204CX module • Supports 1 4 Ah, or 1 7 Ah, or 1 14 Ah, or 1 17 Ah battery
HSC3020C	L = 459 mm H = 414 mm D = 103 mm	• Removable door • Made of 18 Ga steel • Painted white • Compatible with HS3032/HS3128/HS3248 control panels, or HSM3350 / HSM3204CX modules • Supports 3 HSM3408 or 7 HSM2108 modules. Supports 1 18 Ah battery
HSC3020CP	L = 368 mm H = 489 mm D = 108 mm	• Removable door • Made of white PC-ABS • Compatible with HS3032/HS3128/HS3248 panels and up to 1 HSM2108 module or 2 HSM3408 modules • Supports 1 7 Ah or 1 17 Ah battery

Electrical operating voltages

Communicator

3.8 V DC to 4.2 V DC.

Hardwired keypads

9 V DC to 14 V DC.

Hardwired RF keypads

9 V DC to 14 V DC.

Zone expanders

9 V DC to 14 V DC.

Loop response timing as fast as 40 ms or as slow as 500 ms. By default, the loop response time for each zone is 250 ms.

Output module

UL/ULC applications: 10.8 V DC to 14.0 V DC.

EN applications: 10 V DC to 14 V DC.

Power supply/high current output expander

9 V DC to 14 V DC.

Electrical specifications (base panel)

Bell output

- 12 V DC 700 mA max. continuous rating (current limited at 2 A). Available only with standby battery connected.
- Electronic over current protected – self restoring
- Steady, pulsed, temporal 3 fire, CO alarm cadences
- Bell short detection (software + hardware)

AUX output

- 13.75 V DC, 2 A, shared with corbus, cellular, PC link, and USB (North American version), or 500 mA (International version)
- Communications bus and on-board PGM outputs

PGM output

- All PGM outputs are open collector type outputs, and the PGM terminal will switch to ground (-) upon activation.
 - HS3032/HS3128/HS3248
 - PGM 1 – 12 V DC 100 mA
 - PGM 2 – 12 V DC 300 mA
 - PGM 2 (when configured as 2 wire smoke detector) – 9.8 V DC to 13.8 V DC, 100 mA
 - PGM 3 – 12 V DC 300 mA (negative trigger) or 1 A, shared with bell output at 700 mA (positive trigger)
 - PGM 4 – 12 V DC 100 mA

Corbus

- 13.75 V DC, 2 A, shared with AUX, Cellular, PC link, and USB (depending on the version), provided from the HS3032, HS3128, or HS3248 main panel
- Additional power is provided by the HSM2204, HSM2300, HSM3204, and HSM3350 modules
- Minimum 22 AWG non-shielded wire can be used
- No wire run can exceed 1000 ft (305 m) from the panel
- No more than 3000 ft (915 m) of wire may be used in total
- The HSM3204CX may be used to extend the corbus an additional 1000 ft (305 m) when modules are connected to the HSM3204CX.
- Up to 4 HSM3204CX modules can be connected in series.
- A 4000 ft (1219 m) corbus wire run is possible when connecting two HSM3204CX modules in series with no modules in between.
- By placing 4 HSM3204CX modules in series with no modules connected in between, it is possible to achieve a corbus wire run of 14000 ft (4267 m).

Battery charger

- Selectable battery charging current (400 mA/700 mA) to charge 12 V lead-acid batteries up to 18 Ah capacity (compatible with 4 Ah, 7 Ah, 14 Ah, 18 Ah)
- Standby battery capacity able to cover 4 h, 12 h, 24 h, 36 h, 30 h, 60 h
- Battery charger is supervised for opens and is protected by an electronic over current device, which is self-restoring

Input power

- 18 V DC, 3.6 A supply.

Environmental specifications

Operating environment

- -10 °C to 55 °C.
- Max 93% relative humidity non-condensing.
- To be installed and used in non-hazardous locations only.

Execution

This chapter identifies the execution process, including installation, testing, and certification.

Installation

The system is installed according to the manufacturer's installation instructions and recommendations.

System testing

The system is tested in accordance with the manufacturer's recommendations and industry standard practices.

Certification

For UL residential fire applications (including CO) compliant with UL985 6th edition, the following guidelines shall be respected:

- In a combination fire and burglary application, fire alarm detection devices shall not be powered from the same AUX output (control panel, zone expander, power supply) as burglary alarm initiating devices.
 - Power supply wiring for fire alarm detection devices (smoke detectors, CO Detectors) shall be connected to the control panel AUX output (located on the main control panel board assembly).
 - Power supply wiring for burglary alarm initiating devices (motion detectors, magnetic contacts, glass break detectors, etc.) shall be connected to the compatible power supply modules AUX outputs (located on the power supply module board assembly, for example HSM3350, HSM3204CX) or expander module AUX output (located on the expander module board assembly, for example HSM3408).

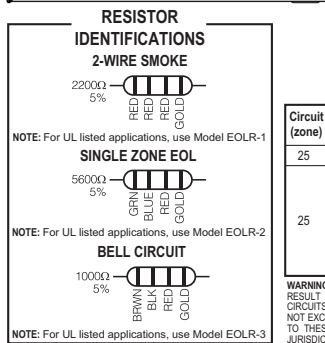
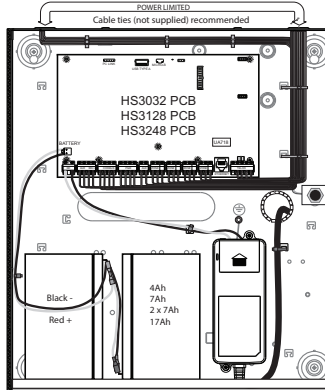
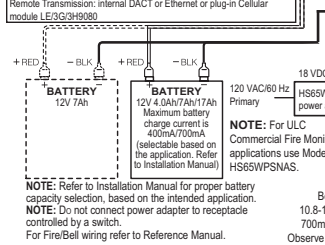
HS3032/HS3128/HS3248 wiring diagram

APPLICABLE UL STANDARDS UL File No. S4019

UL1610 Central Station Burglar Alarm Units
UL355 Police Station Connected Burglar Alarm Units & Systems
UL609 Local Burglar Alarm Units and Systems
UL985 Household Fire Warning System Units
UL1023 Household Burglar Alarm System Units
UL1535 Digital Alarm Communicator System Units
UL1637 Home Health Care Signaling Equipment
ANSI/SIA CP-01-2014
ULC-S304:16 Standard for Control Units, Accessories and Receiving Equipment for Intrusion Alarm Systems
ULC-S559-13 Equipment for Fire Signal Receiving Centers and Systems
ULC-S545-02 Residential Fire Warning System Control Units
NOTE: For UL listed applications, installation must be done only by a trained installer.
[SIA-FAR] Min System Requirements:
1. HS3032/3128/3248 Panel
2. Local announcement devices

Local Announcement Devices may be any combination of the keypads: HS2LCDPRO, HS2TCHPRO(BLK), HS2LCDPRF09, HS2LCDWF(V)PRO9

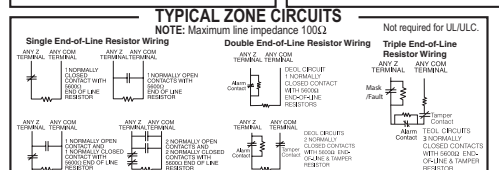
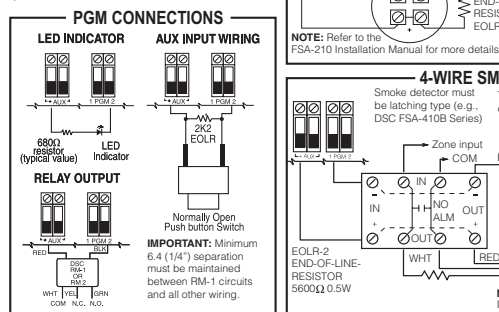
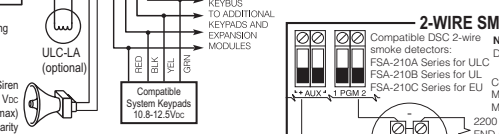
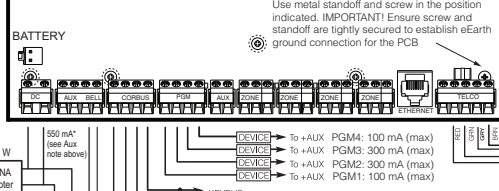
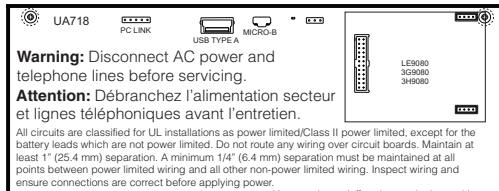
Alarm Bell: Internal BELL output circuit or wireless sirens PG9911 or PG9901
Remote Transmission: Internal DACT or Ethernet or plug-in Cellular module LE3G/3H9080



WARNING: Not to be removed by anyone except occupant. This equipment should be installed in accordance with Chapter 29 of the National Fire Alarm and Signaling Code, ANSI/NFPA 72, (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269). Printed information describing proper installation, operation, testing, maintenance, evacuation planning, and repair service is to be provided with this equipment. For compliance with UL985, at least one smoke detector is required. Test the system at least once per week. The system is intended to be checked by a qualified technician at least every 3 years. For UL1637 installations, the test must also be performed with the AC off, using the standby battery.

This device complies with Parts 15 and 68 of the FCC rules. Operation is subject to the following 2 conditions: [1] this device may not cause harmful interference and [2] this device must accept any interference received, including interference that may cause undesired operation.
Models: HS3032/HS3128/HS3248
US: F33AL01AH3256 REN = 0.1
Plug Type: RJ-31X
IC: 160A-HS3256

ULC Notes
• For ULC Listed Fire Monitoring Installations & module requirements, please refer to the ULC Installation Information Sheet, part number 29010346.
• All tamper circuits may be connected to the same zone.



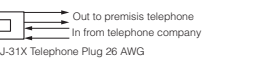
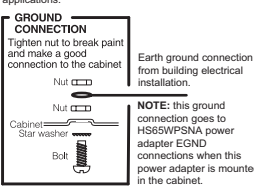
Circuit (zone)	Control Unit Delay - Sec	Smoke Detector	
		Models	Delay (seconds)
25	30	PG9926/PG9916	(a)
25	30	4-Wire UL Listed FSA-410B/FSA-410BT/ FSA-410BS/FSA-410BST/ FSA-410BLST/FSA-410BR/ FSA-410BRST/FSA-410BRS/ FSA-410BRST FSA-410BRST	(a)

WARNING: THIS UNIT INCLUDES AN ALARM VERIFICATION FEATURE THAT WILL RESULT IN A DELAY OF THE SYSTEM ALARM SIGNAL FROM THE INDICATED CIRCUITS. THE TOTAL DELAY (CONTROL UNIT PLUS SMOKE DETECTORS) SHALL NOT EXCEED 60 SECONDS. NO OTHER SMOKE DETECTOR SHALL BE CONNECTED TO THESE CIRCUITS UNLESS APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

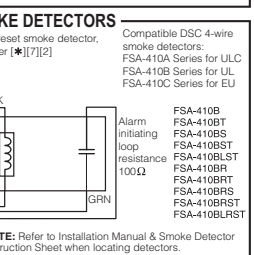
HS3032/3128/3248 PCB	ULC Resi Burg	ULC Com Burg	ULC Resi Fire	ULC HH, ULC Resi Fire	ULC Com Burg
current draw=125 mA alarm current=700mA					
Standby time + alarm time	4 hr + 4 min 4 hr + 5 min	4 hr + 15 min	24 hr + 4 min 24 hr + 5 min 24 hr + 4 min	24 h + 4 min + 12 hr CO Alarm	24 h + 30 min
Enclosure	HSC3010C	HSC3030CAR	HSC3010C	HSC3010C	HSC3010CR
Power supply adapter	HS65WPSNA	HS65WPSNA	HS65WPSNA	HS65WPSNA	HS65WPSNAS
Battery capacity/ max loading	4 Ah/700 mA 7 Ah/1200 mA 14 Ah/2000 mA 17 Ah/2000 mA	4 Ah/700 mA 7 Ah/1200 mA 14 Ah/2000 mA 17 Ah/2000 mA	7 Ah/250 mA 14 Ah/500 mA 17 Ah/600 mA	14 Ah/330 mA 17 Ah/400 mA	14 Ah/500 mA 17 Ah/600 mA
Recharging Current Setting	Low (400mA) High (700mA)	Low (400mA) High (700mA)	High (700mA)	High (700mA)	High (700mA)

Temperature Range: 0°C-49°C (32°F-120°F) / Maximum Humidity: 93% R.H.
For detailed installation and operating instructions, refer to the Installation Guide #29010135, and the User Manual #29010134.
The HS3032/HS3128/HS3248 is UL Listed for limited energy installations per NEC Article 760. Recognized limited energy cable should be used. Observe NEC wiring requirements and local codes defined by the authority having jurisdiction. Security detection devices that require power from the control panel must be UL Listed for the intended application and operate over the range of 10.5-12.5Vdc. The DSO Bravo Series are recommended UL Listed motion detectors. Compatible system keypads: HS2LCDPRO, HS2TCHPRO(BLK), HS2LCDPRF09, HS2LCDWF(V)PRO9.

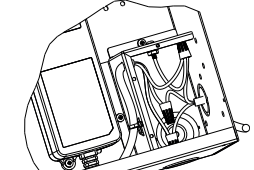
***AUX Wiring**
Use No.14-22 AWG conductor.
AUX+ and Carbus (RED) are internally connected.
Total current draw from keypads, PGM Outputs and AUX circuits must not exceed 2000 mA.
Note: Refer to the Installation Manual for maximum current loading levels associated with different applications.



NAME	MODEL	COMPATIBILITY ID	MAX #	BASE
DSC	FSA-210B FS200 Series	DSC	NONE	
	FSA-210B			FSA-210BT
	FSA-210BS			FSA-210BST
	FSA-210BST			FSA-210BLST
	FSA-210BR			FSA-210BRST
	FSA-210BRST			FSA-210BRS
	FSA-210BRS			FSA-210BRST



NOTE: Refer to Installation Manual & Smoke Detector Instruction Sheet when locating detectors.



Control panel is suitable for the following UL installations:
INSTALLATION TYPE
ULC Resi Fire and Burg
UL Local Mercantile
UL Central Station (Burglary)
UL Police Station Connected (Burglary)
UL Central Station (Burglary)
UL Central Station Fire Monitoring
SIGNALING MEANS
DACT (PSDN (IP/Cellular Data) NA
DACT (no line security), PSDN (Standard/Encrypted Line Security, use with Internal Ethernet communicator and/or plug-in cellular module, models LE3G/3H9080)
DACT (Passive Level P1), PSDN (Passive P1-3/Active A1-4) use with Internal Ethernet communicator and/or plug-in cellular module, models LE3G/3H9080
DACT+PSDN (Passive), PSDN (Active), use with Internal Ethernet communicator and/or plug-in cellular module, models LE3G/3H9080

This completes the architecture and engineering specification for the PowerSeries Pro alarm controller.

For detailed information about the PowerSeries Pro alarm controller wireless component, refer to the document: *PowerSeries Pro 1.0 Wireless Host Architecture and Engineering Specifications*.

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Telephone: +1.905.760.3000

Fax: +1.905.760.3004

www.dsc.com



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