



IQ Pro Alarm Controller Reference Manual



Contents

Safety.....	7
User information.....	7
Introduction.....	8
IQ Pro features.....	8
IQ Pro specifications.....	9
IQ Pro specifications Europe and UK.....	10
IQ Pro specifications Latin America.....	12
IQ Pro compatible devices.....	14
Installing and mounting the IQ Pro.....	19
Before mounting the equipment.....	19
Overview of the installation process.....	20
Mounting the enclosures.....	20
Mounting the IQ Pro.....	21
Mounting the IQ Pro P.....	23
IQ Pro terminal descriptions.....	25
Wiring programmable outputs.....	26
Wiring the corbus.....	31
Wiring auxiliary power.....	33
Wiring the bell output.....	33
Wiring the zones.....	34
Normally open and normally closed wiring.....	34
Single end-of-line resistors.....	35
Double end-of-line resistors.....	36
Mounting and wiring the modules.....	38
Mounting the HSM2108 module in the IQ Pro.....	38
Mounting the HSM3105 module in the IQ Pro.....	39
Installing modules in the IQ Pro P.....	40
Wiring the modules.....	40
Wiring a keypad.....	46
Assigning keypad zones.....	47
Connecting power.....	47
Mounting the power adapter.....	48
Wiring the power adapter.....	49
Wiring the power supply for the IQ Pro (EU installations only).....	49
Installing and wiring the battery.....	51
IQ Pro / IQ Pro P system wiring diagrams.....	58
IQ Pro system wiring.....	58
IQ Pro P system wiring.....	60
Attaching the cover for the IQ Pro P.....	62
Installing extension antennas.....	62
Installer app programming.....	64
Connecting to the IQ Pro panel.....	64

Connecting installer app using local Wi-Fi router.....	65
Dashboard.....	65
Wizard.....	66
Configuration.....	66
User Management.....	66
Installation settings.....	69
Rebooting your system.....	92
Partitions.....	92
Power down.....	93
Wi-Fi connection.....	93
Sound.....	94
About.....	96
Dealer branding.....	97
Tests.....	97
System tests.....	97
Events.....	99
Application settings.....	99
System operation.....	100
Using the keypad.....	100
Using the LCD keypad.....	100
Using the IQ Remote keypad.....	100
Global keypad mode.....	100
Loaning a keypad.....	101
[*] Commands.....	101
[*][1] Bypass zones.....	101
[*][2] View troubles.....	102
[*][3] Alarm memory.....	103
[*][4] Door chime enable/disable.....	103
[*][6] User functions.....	103
[*][7] Command outputs 1-4.....	104
[*][9] No-entry arming.....	104
[*][0] Quick arm/exit.....	104
Working with partitions.....	105
Setting up partitions.....	105
Keypad partition setup.....	105
Bell/siren operation.....	105
Single siren output operation.....	105
Multiple siren output operation.....	105
Interconnected smoke detector operation.....	105
Performing a hardware default.....	106
Troubleshooting.....	107
Locating detectors and escape plan.....	108
Smoke Detectors.....	108

Fire Escape Planning.....	109
Carbon Monoxide Detectors.....	110
Regulatory Approvals.....	112
UL/ULC Residential Fire, Burglary and Home Health Care.....	112
UL/ULC Commercial Burglary.....	113
FCC-ISED Canada Compliance Statement.....	115
Recycling and Disposal.....	116
CE declaration of conformity.....	116
EN compliance statement.....	117
UK compliance statement.....	119
Legal information.....	120
Limited warranty.....	120
End-user license agreement (EULA).....	123
Copyright and trademark.....	127

Safety

This manual contains information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer, read the manual carefully.

► **Important:** Read this safety information before you install the equipment.

Read this safety information before you install the equipment.

This equipment must be installed by a skilled person only. Skilled persons are expected to use their training and experience to recognize energy sources capable of causing pain or injury and to take action for protection from injury. Skilled persons are persons who have training or experience in the equipment technology, particularly the various energies and energy magnitudes used in the equipment.

- Before installing this equipment, disconnect all power sources connected to the alarm panel.
- Install the equipment indoors in a non-hazardous environment where the following conditions are met
 - Pollution degree - Maximum 2
 - Over voltages - Category II
- Internal wiring must be routed to prevent strain on wire and terminal connections, loose terminal connections, and damage to conductor insulation.
- Instruct the user that there are no user serviceable parts in this equipment. All equipment must be serviced by a skilled person.

The connection to the mains supply must be made according to the local authorities' rules and regulations. The power supply shall be fixed on the wall before powering the system. The socket-outlet to which the power supply will be connected shall be installed near the equipment and shall be easily accessible. The installer shall instruct the end-user to never obstruct the access to the socket-outlet where the IQ Pro is powered from. The plug on the power supply cord is intended to serve as the disconnect device from the mains.

User information

The installer should advise the user and note in the User Manual:

- Service organization name and telephone number
- Programmed exit and entry time
- Instructions to test the system weekly
- Note that the installer code cannot arm or disarm the system
- Conditions that could result in false alarms or impaired operation of the product(s) are as follows: arming the system and not respecting the exit delay, entering the protected premises, and not respecting the entry delay for disarming the system can cause false alarms.

The installer should also caution the user not to give system information to casual users and only to give out codes set to expire within 24 hours.

Introduction

This manual covers the installation and configuration of the IQ Pro security system, including both the metal and plastic enclosures.

Table 1: IQ Pro models

Model	Description
IQ Pro	IQ Pro with metal cabinet
IQ Pro P	IQ Pro with plastic cabinet

① **Note:** References to the IQ Pro include models IQ Pro and IQ Pro P unless stated differently.

IQ Pro features

Refer to the following table for a feature list of the IQ Pro and IQ Pro P.

Table 2: IQ Pro feature list

Feature	Description
Access codes (4- or 6-digit codes)	Supports up to 1000 access codes (master, installer, dealer, guest, duress, and user codes)
Communicator support	Dual communication technology (cellular, plus Wi-Fi or Ethernet)
Zone configuration	128 hardwired and wireless devices
① Note: A maximum of 128 devices can be enrolled on the IQ Pro system (including devices such as keypads and zone expanders).	41 sensor groups
	Normally closed, SEOL, DEOL resistors
	Fully supervised hardwired zone expansion using the HSM2108
	Fully supervised wireless zone expansion using PowerG and one-way RF protocols
Remote services	Alarm.com integration, cloud connectivity
Event history	Captures, stores and reports up to 200 events
Keypad support	Supports up to 16 keypads
Wireless key support	Supports up to 32 wireless remote keys
Panic pendant support	Supports up to 120 panic pendants
Partitions	Supports up to 8 partitions
Central station reporting	Central station reporting using cloud connectivity
Local installer app	Local installer app using Wi-Fi
Remote installer app	Remote installer app using Cloud
Wireless sensors	PowerG sensors
	SRF sensors
MX modules	Addressable hardwired sensors
Wi-Fi access point	Connects with local installer app and Wi-Fi devices
System supervision	AC, zone, fire, communication, low battery, RF jam, Aux, module, system overcurrent troubles/faults

IQ Pro specifications

Table 3: Specifications (UL/ULC)

Item	Description
DC input voltage and current	Use the provided external power adapter with the following ratings: <ul style="list-style-type: none"> • Input for UL and ULC applications: 120 VAC, 60 Hz, 1.2A • Output: 18 VDC, 2.22 A • Manufacturer: ShenZhen SOY Technology Co. Ltd. • DSC UL and ULC models: HS40WPSA, HS40WPSNA
Current draw (control panel)	120 mA (nominal)
Battery type	Sealed, rechargeable lead acid
Battery charge current	350 mA (min) / 700 mA (max) to charge 12 VDC lead-acid batteries
Low battery threshold	11.4 VDC
Battery cutoff level	9.6 VDC \pm 2%
Standby battery	Only use the battery rated 12 VDC 17 Ah / 14 Ah / 7 Ah / 4 Ah The energy level of the battery when it is charged is 100% 24-hour standby time and 5-minute alarm time for UL Home Health Care applications and ULC Security Level II applications.
Bell output ① Note: For UL Commercial Burglary applications, the bell output is for supplementary use only.	11.3 VDC to 12.5 VDC. Maximum current 700 mA continuous (supervised 1 k Ω), current limited at 2 A. ① Note: The bell output supports continuous burglary alarms, T3 fire alarms, and T4 CO alarms. Alarms sound in the following priority: fire alarm, CO alarm, burglary alarm, and other alarms.
AUX 1 AUX 2	11.3 VDC to 12.5 VDC. Maximum current 700 mA shared between the AUX1 and AUX2. 700 mA current (shared with Corbus and PGM outputs). 600 mVp-p max. output ripple voltage. Onboard programmable outputs.
PGM 1, 3, and 4 voltage and current	11.3 VDC to 12.5 VDC, 50 mA
PGM 2 voltage and current	11.3 VDC to 12.5 VDC, 300 mA
RED, BLK, YEL, GRN terminals	Corbus terminals, used to provide power and communication between the control panel and connected compatible modules. Each compatible module (keypad, expander, power supply) has four Corbus terminals that must be connected to the Corbus. 11.3 VDC to 12.5 VDC, maximum current 700 mA shared between the AUX1 and AUX2 and PGM outputs. Ripple: 50 mVpp.

Table 3: Specifications (UL/ULC)

Item	Description
Operating temperature	-10°C to 55°C (14°F to 131°F) ⓘ Note: UL and ULC verified operation for the range 0°C to 49°C (32°F to 120°F). ⓘ Note: The control panel and power supply are suitable for use in dry, indoor, ordinary locations, inside the supervised premises.
Humidity	5% to 93% RH non-condensing. ⓘ Note: UL and ULC verified operation for a maximum of 93% RH.
PowerG wireless	PowerG radio modem operates in 912-919 MHz band (long range, secure encrypted two-way wireless)
SRF wireless	SRFxxx radio cards operate in 319 MHz, 345 MHz or 433.92 MHz bands.
Platform	Android OS
Processor	Qualcomm Snapdragon 8 Core SOM (System on a Module) with 16 GB of NAND Flash
Network	Wi-Fi 802.11 a/b/g/n/ac dual band 2.4/5ghz including built-in router capability Ethernet 10/100Mb Cellular LTE CAT4 (Bands 2/25, 4/66, 5/26, 7, 12/17, 13, 14 (non-First Net))
Dimension (LxWxH)	IQ Pro (metal): 482.5 mm x 305 mm x 124 mm (19 in x 12 in x 4.9 in) IQ Pro P (plastic): 397.5 mm x 304 mm x 92 mm (15.7 in x 11.9 in x 3.6 in)
Weight	IQ Pro (metal): 4.45 kg (without battery) IQ Pro P (plastic): 1.70 kg (without battery)

IQ Pro specifications Europe and UK

Table 4: Specifications (CE/EN Grade 2)

Feature	Description
Android OS	Android 9
8 Core processor	Qualcomm Snapdragon 8 Core SOM (System On a Module) with 16 GB of NAND Flash

Table 4: Specifications (CE/EN Grade 2)

Feature		Description
AC/DC Power supply: Internal adapter (IQ Pro) HS40WPS External Plug-in (IQ Pro P) SOY-1800222EU ① Note: For installations using the transformer mounted inside the cabinet (IQ Pro), replace the fuse with the same type only (20mm, rated 250V/315mA).		Input: 230VAC -10%/+15%, 0.68A, 50Hz (for CE/EN Certified Systems). Output: 18 VDC, 2200mA Current consumption during set and unset procedure: 120 mA Idle/quiescent current: 120 mA Maximum current in alarm mode: 670mA Maximum current in alarm mode with Aux and Bell (fully loaded): 1250mA. Control panel and power supply are suitable for installation in the protected premises only.
Battery charge current		350 mA (min) / 700 mA (max.) to charge 12 VDC lead-acid batteries. The energy level of the battery when it is charged is 100%.
Sealed lead-acid battery		12V/7Ah (use with IQ Pro or IQ Pro P) 12V/17Ah (used with model IQ Pro only) Low battery threshold: 11.4V. Deep discharge protection operates at 9.6V.
Supports 1000 user codes		Role based (dealer, installer, master, user, guest, duress). For EN50131 certified installations six-digit codes must be used. Up to 999,998 combinations of codes available. Codes disallowed 000000 and 000001.
Event history (mandatory events)		Captures, stores and reports up to 250 events
Wi-Fi		Wi-Fi 802.11 a/b/g/n/ac dual band 2.4/5ghz - including built-in router capability
Ethernet		10BaseT
Cellular		LTE CAT4 (Bands 1, 3, 7, 20, 28A, 28B)
Z-Wave Plus 800		Supports up to 137 devices (80 lights, 20 Locks, 10 Thermostats, 21 Misc, 6 Garage Doors)
PowerG	Up to 128 devices	868 MHz, long range, secure encrypted two-way wireless. Use only this radio card for EN Grade 2 systems
Security RF (SRF433)		DSC 1-way RF protocol, 433MHz band (not used in EN50131 Grade 2 installations)
Flash memory		Internal Storage 16GB NAND Flash
Tamper switch		Dual panel cover and wall tamper switch with spring release
Bell output		9.6 VDC to 13.75 VDC. Maximum current 700 mA continuous (supervised 1 kΩ), current limited at 2 A. ① Note: The bell output supports continuous burglary alarms, T3 fire alarms, and T4 CO alarms. Alarms sound in the following priority, fire alarm, CO alarm, burglary alarm, then other alarms.

Table 4: Specifications (CE/EN Grade 2)

Feature	Description
AUX1 AUX2	9.6 VDC to 13.75 VDC. Maximum current 700 mA shared between the AUX1 and AUX2. 700 mA current (shared with Corbus and PGM outputs). 1100 mVp-p max. output ripple voltage. Onboard programmable outputs.
PGM 1, 3, and 4 voltage and current	9.6 VDC to 13.75 VDC, 50 mA
PGM 2 voltage and current	9.6 VDC to 13.75 VDC, 300 mA
RED, BLK, YEL, GRN terminals	Corbus terminals, used to provide power and communication between the control panel and connected compatible modules. Each compatible module (keypad, expander, power supply) has four Corbus terminals that must be connected to the Corbus. 9.6 VDC to 13.75 VDC. Maximum current 700 mA shared between the AUX1 and AUX2 and PGM outputs.
Dimensions (LxWxH)	IQ Pro: 484mm x 306mm x 127mm IQ Pro P: 396mm x 305mm x 86mm
Weight	IQ Pro: 5 kg (no battery) IQ Pro P: 1.7 kg (no battery)
Standby time	UK/Belgium/EN50131 Grade 2 applications: 24h with 24h Battery recharge time (up to 80% of capacity), using 12V/17Ah battery. EN50131 Grade 2: 12 h with 24h battery recharge time (up to 80% of capacity), using 12V/7Ah battery (model IQ Pro P) or 12V/17Ah (model IQ Pro). Energy level of battery in its charged state is 100 %. Quiescent current when operating from the battery, refer to battery capacity details in the manual. The low battery trouble indication is removed upon AC mains power restoral and battery has reached 12.4 VDC.
Wall-mounted	For EN 50131 systems wall mount is required. Secure the wall tamper mechanism for wall-removal detection.
EU/Great Britain certifications	EU: CE DoC, CertAlarm (EN50131 Grade 2/Class II); Denmark: FP; Finland: FFFH; Norway: FG; Sweden: SBSC, Belgium: Incert, The Netherlands: NCP, Austria: VSO Great Britain: UKCA, PD 6662 & BS 8243
Environmental	Altitude: 0m (minimum) to 2000m (maximum) Humidity range: 20% RH to 93% RH (non-condensing) Operating Ambient Temperature: -10°C to 55°C Storage Ambient Temperature: -20°C to 55°C EN50130-5 Class II - Indoor ordinary location

IQ Pro specifications Latin America

Table 5: Specifications - Latin America

Feature		Description
Android Platform		Android 9
Processor		Qualcomm SnapDragon 8 Core SOM (System On a Module) with 16GB of NAND Flash
Power supply adapters		HS40WPSNA (Mexico, Peru, Costa Rica) SOY-1800222EU (Chile, Brazil, Uruguay) SOY-1800222AU (Argentina)
User codes		1000 user codes, role based (Dealer, Installer, Master, User, Guest, Duress)
Network	Wi-Fi	Wi-Fi 802.11 a/b/g/n/ac dual band 2.4/5ghz including built-in router capability
	Ethernet	10BaseT
	Cellular	LTE CAT4 (Bands 2/25, 4/66, 5/26, 12/17, 13), WCDMA (Bands 2,4,5) (Argentina, Mexico, Chile, Peru, Uruguay)
	Cellular	LTE CAT4 (Bands 1, 3, 7, 20, 28A, 28B), WCDMA (Bands 1, 3) (Brazil, Costa Rica)
Z-Wave plus 800		Up to 137 total devices (80 lights, 20 Locks, 10 Thermostats, 21 Misc, 6 Garage Doors), 908.4MHz/921.4MHz
PowerG	Up to 128 devices	915 MHz, long range, secure encrypted two-way wireless (Argentina, Mexico, Chile, Costa Rica)
PowerG		433 MHz, long range, secure encrypted two-way wireless (Brazil, Peru, Uruguay)
Flash memory		Internal storage, 16GB NAND Flash
Tamper switch		Dual panel cover and wall-tamper switch with spring release
Battery		Type sealed lead-acid, 12V/7Ah, 12V/14Ah (used with model IQ Pro only). Low battery threshold: 10.5V. Deep discharge protection will operate at 9.7 V
Mechanical (h x w x d)		Dimensions: 6.1 in x 7.5 in x 1 in (155 mm x 191 mm x 26 mm)
Power supply		AC/DC external plug-in adapter, output 18 VDC, 2200 mA CC, input 100-240 VAC 50/60 Hz
Mount		Wall-mounted
Temperature	Operational	-10°C to +55°C, up to 95% relative humidity, indoor, dry ordinary locations use only
	Storage	-20°C to 50°C

IQ Pro compatible devices

The IQ Pro security system is compatible with the following keypads, devices and modules.

The x next to the model name refers to the operating frequency, 4 refers to 433MHz, 8 refers to 868MHz and 9 refers to 912-919MHz.

Table 6: Keypads

Keypad type	Model
Touchscreen keypad	IQ Remote
Touchscreen keypad PG	IQ Remote PG
Touchscreen keypad (hardwired)	HS2TCH
LCD keypad	HS2LCD ^{UL}
LCD keypad with prox	HS2LCDP ^{UL}
LCD keypad with PowerG transceiver	HS2LCDRF ^{xUL}
LCD keypad with PowerG transceiver and prox	HS2LCDRFP ^{xUL}
LCD wire free keypad	HS2LCDWF ^{xUL}
LCD wire free keypad with prox	HS2LCDWFP ^{xUL}
LCD wire free keypad with prox/voice	HS2LCDWFPV ^{xUL}
Power G keypads	IQ Keypad Prox-PG, IQ Keypad-PG

- ① **Note:** UL indicates that the device is certified to UL/ULC standards. Only models operating in 912-919 MHz are UL/ULC listed (x=9 in the model name).
- ① **Note:** The HS2TCH keypad must be upgraded using the SD card. The firmware is available on DSC website.
- ① **Note:** The IQ Pro can support maximum of 16 hardwired LCD keypads, one keypad with a PowerG receiver, and also a maximum of five IQ Remote and wire-free keypads combined.

Table 7: PG Devices

Detector type	Description
Door/window contact	PG9945 ^{UL RF/CB} , PGP9945E These PowerG devices are compatible when a PowerG 915MHz radio card is installed in IQ Pro or IQ Pro P security systems. ^{UL RF/CB} , PG9307 ^{UL RB} , PG9309 ^{UL RF/CB} , PG9312 ^{UL CB}
Door/window shock sensor	PG9935 ^{UL CB}
Dual Tech (PIR+microwave) motion detector	PG9984(P) ^{UL CB}
Glassbreak Detector	PG9922 ^{UL CB} , PGP9922
Heat detector	PG9936H ^{UL RF}
Remote keys (keyfobs)	PG9929, PG9939, PG9949, PG9938 ^{UL CB}
Outdoor motion detectors	PG9902, PG9994(P) ^{UL CB}
PIR motion detector	PG9904(P), PG9914, PG9924, PG9862, PG9872 ^{UL CB}
PIR motion detectors with camera	PG9934(P), PG9974(P), PG9944 ^{UL CB}
Sirens	PG9901 ^{UL RF/RB} , PG9911 ^{UL RF/RB}
Smoke/heat detector	PG9936 ^{UL RF}

Table 7: PG Devices

Detector type	Description
Wireless CO detector	PG9933 ^{UL RF}
Wireless repeater	PG9920 ^{UL CB}
Vanishing door/window contacts	PG9303 ^{UL CB} These PowerG devices are compatible when a PowerG, PGP9303, PG9975 ^{UL RB}
Temperature sensor	PG9905 (indoor use)
Flood detector	PG9985
PowerG wired to wireless converter	PG9HRDW8, PG8WLSHW8, PG9WLSHW8 ^{UL RF/RB CB}
① Note: The supervisory window must be set to 200 seconds when used with fire and/or CO devices.	
Outdoor beam detectors	PG9200AX ^{UL} , PG9350S ^{UL}

- ① **Note:** Only HS2LCD keypad models must be used for UL/ULC listed Residential Fire applications.
- ① **Note:** Only the PowerG sensors marked with ^{UL CB} shall be used in UL/ULC Residential and Commercial Burg (UL2610/ULC-S304 Security Level I-II) listed installations. Devices marked with ^{UL RB} in the table above shall be used only in UL/ULC Residential Burg (UL1023/ULC-S304 Security Level I) listed installations. Devices marked with ^{UL RF} in the table above can be used in UL/ULC Residential Fire (UL985/ULC-S545) listed installations.
- ① **Note:** The PGxWLSHW8/PGxHRDW8, IQ Remote PG and PowerG automation are supported only when using the onboard PowerG daughter card or PGPHOSTx, they are not supported on the HS2LCDRF or HSM2HOST modules.

Table 8: 319 MHz S-Line sensors

Detector type	Model
IQ Door/Window-S	QS1133-840 ^{UL} , (UL Listed M/N: 60-362N-10-319.5), QS1135-840, QS1136-840, QS1137-840
IQ Motion-S	QS1230-840 ^{UL} , (UL Listed M/N: 60-639-95R), QS1231-840
IQ Glass-S	QS1431-840 ^{UL} , (UL Listed M/N: IQ Glass-S)
IQ Glass Mini-S	IQSM ^{UL}
IQ Smoke	QS5110-840 ^{UL}
IQ CO	QS5210-840 ^{UL}
IQ Heat 135/200	QS5519-840 ^{UL}
Wireless Key	QS1331-840
Tilt Sensor	QS1131-840
Flood Detector	QS5536-840
Temperature Sensor	QS5535-840
IQ Hardwire 16-F	QS7133-840 ^{UL}

Table 9: 345 MHz sensors

Detector type	Model
Door/window contact	5816WMWH ^{UL RB (NO ULC)}
Door/window contact	5815 ^{UL RB}
Motion detectors	5800PIR-COM ^{UL RB} , 5898 ^{UL RB} , 5800PIR ^{UL RB}
Glassbreak detector	5853 ^{UL RB}
Smoke detectors	5806W3 ^{UL RF (NO ULC)}
Smoke/CO detectors	5800COMBO ^{UL RF}
CO Detectors	5800CO ^{UL RF} , GG-CO8345 (2GIG-CO8-345) ^{UL RF (NO ULC)}

① **Note:** Only use UL/ULC listed devices for UL/ULC certified installations.

Table 10: Supported 433 MHz sensors

Detector type	Model (North America)	Model (EU/ROW)
Door/window sensor	WS4945NA ^{UL RB}	WS4945EU
Motion detectors	WS4904P ^{UL RB} , WLS914-433 ^{UL RB}	WS4904PW
Glass break sensor	WLS912L-433 ^{UL RB}	WLS912L-433W
Shock sensor	EV-DW4927SS ^{UL RB}	EV-DW4927
Smoke detector	WS4936 ^{ULRF}	WS4936EU
CO detector	WS4933UL RF	Not available
2-button remote key	WS4949 ^{UL RB}	WS4938-2W
4-button remote key	WS4939 ^{UL RB}	WS4939EU
Wireless panic button	WS4938 ^{UL RB}	WS4938W
Wireless repeater	WS4920 ^{UL RF/RB}	WS4920AUS

Table 11: Corbus modules

Module type	Model	Supported modules
PowerG transceiver	HSM2HOSTx ^{UL}	1
PowerG+ transceiver	PGPHOSTx	1
8 low-current output module	HSM2208 ^{UL}	16
4 high-current output module	HSM2204 ^{UL}	4
Power supply module (1A)	HSM2300 ^{UL}	4
8-zone expansion module	HSM2108 ^{UL}	14
MX expander module	HSM3105 ^{UL}	1

Table 12: PowerG sensors (EU/UK)

Detector type	Model
Door/window	PG8945
Door/window - shock sensor	PG8935
Dual Tech (PIR+Microwave) Motion Detector	PG8984(P)
Glassbreak detector	PG8922

Table 12: PowerG sensors (EU/UK)

Detector type	Model
Heat detector	PG8936H
Wireless key	PG8929, PG8938, PG8939, PG8949 AES128 encryption used. Over 1,000,000 combinations of unique identification codes available.
Outdoor motion detector	PG8944, PG8974(P), PG8994(P)
PIR motion detector	PG8904(P), PG8914, PG8924, PG8934(P)
PIR motion detector with camera	PG8934(P), PG8944
Sirens	PG8901, PG8911
Smoke detector	PG8936
Wireless CO detector	PG8913
Wireless repeater	PG8920
Vanishing door/window contact	PG8975
PowerG wired to wireless converter	PG8HRDW8, PG8WLSHW8

ⓘ **Note:** These PowerG devices are compatible when a PowerG 868MHz radio card is installed in IQ Pro or IQ Pro P security systems.

ⓘ **Note:** There are no optic or acoustic sensing devices in the control panel or the provided compatible devices used with the system.

No telemetry data is being collected by the control panel. There is no personal data collected by the control panel nor any personal data being sent to any other third-party service providers.

Table 13: PowerG Sensors (Latin America)

Detector type	Model
Door/window	PG9945 , PG9307, PG9309, PG9312
Door/window - shock sensor	PG9935
Dual Tech (PIR+Microwave) Motion Detector	PG9984(P)
Glassbreak detector	PG9922
Heat detector	PG9936H
Wireless key	PG9929, PG9939, PG9949, PG9938
Outdoor motion detector	PG9902, PG9974(P), PG9994(P)
PIR motion detector	PG9904(P), PG9914, PG9924, PG9862, PG9872
PIR motion detector with camera	PG9934(P), PG9944
Sirens	PG9901, PG9911
Smoke detector	PG9936
Wireless CO detector	PG9933
Wireless repeater	PG9920
Vanishing door/window contact	PG9303, PG9975
PowerG wired to wireless converter	PG9HRDW8, PG9WLSHW8

- ① **Note:** These PowerG devices are compatible when a PowerG 915MHz radio card is installed in IQ Pro or IQ Pro P security systems.

Table 14: PowerG Sensors (433MHz)

Detector type	Model
Door/window	PG4945 , PG4307, PG4309, PG4312
Door/window - shock sensor	PG4935
Dual Tech (PIR+Microwave) Motion Detector	PG4984(P)
Glassbreak detector	PG4922
Heat detector	PG4936H
Wireless key	PG4929, PG4939, PG4949, PG4938
Outdoor motion detector	PG4902, PG4974(P), PG4994(P)
PIR motion detector	PG4904(P), PG4914, PG4924, PG4862, PG4872
PIR motion detector with camera	PG4934(P), PG4944
Sirens	PG4901, PG4911
Smoke detector	PG4936
Wireless CO detector	PG4933
Wireless repeater	PG4920
Vanishing door/window contact	PG4303, PG4975
PowerG wired to wireless converter	PG4HRDW8, PG4WLSHW8

- ① **Note:** These PowerG devices are compatible when a PowerG 433 MHz radio card is installed in IQ Pro or IQ Pro P security systems.

Table 15: PowerG automation devices

Product name	Model	Frequency (MHz)
IQ Dimmer-PowerG	IQDMR-PG	915
IQ Lock-PowerG	IQDLK-PGK (-MB, -SN, -ORB)	915
IQ Socket-PowerG	IQSKT-PG	915
IQ Switch-PowerG	IQSWH-PG	915
IQ Indoor Plug - PowerG	IQIDP-PG	915/868
IQ Outdoor Plug - PowerG	IQODP-PG	915

- ① **Note:** PowerG automation devices are only compatible with on-board PowerG daughter card or PGPHost.

Installing and mounting the IQ Pro

About this task:

This section describes how to mount the enclosures, wire keypads, modules and install and wire the battery.

Before mounting the equipment

Ensure your package includes the following items.

- Enclosure with the IQ Pro alarm controller
- Power supply
- Transformer
- Hardware pack

Refer to the following when selecting a mounting location.

- Environment that provides a pollution degree max 2, over voltages category II
- Indoor and non-hazardous location
- Near a power outlet
- Free from vibration and shock
- Away from exposure to direct sunlight, excessive heat, moisture, chemicals, and dust
- Flat and stable surface, that allows adequate working room for external wiring

Avoid the following.

- Connecting the alarm controller to the same circuit as large appliances
- Installing this equipment near water such as bathtubs, sinks, or pools
- Installing this equipment and accessories in areas where risk of explosion exists
- Connecting this equipment to electrical outlets controlled by wall switches or automatic timers
- Sources of interference
- Installing equipment near heaters, air conditioners, vents, and refrigerators
- Installing equipment close to or on top of large metal objects

Overview of the installation process

Step	Description
Create a layout	Draw a rough sketch of the site and include all alarm detection devices, zone expanders, keypads and other required modules.
Mount the panel	Decide on a location for the alarm panel and secure it to the wall using suitable mounting hardware. See Installing and mounting the IQ Pro .
Wire zones	Complete all zone wiring. Follow the guidelines provided in Wiring the zones to connect zones.
Complete wiring	Complete all other wiring including bells or sirens, telephone line connections, ground connections, Ethernet connection or any other wiring necessary. Follow the guidelines provided in IQ Pro terminal descriptions .
Power up the control panel	When all zone and alarm controller wiring is complete, connect the battery before applying AC, and power up the system. The alarm controller will not power up if only the battery is connected.
Enroll keypads and modules	All keypads must be enrolled in order to operate on the system.
Enroll wireless devices	Wireless keypads and devices are enrolled using the IQ Installer App. Refer to Installer app programming for more information.
Program the system	All programming is completed using the IQ Installer App.
Test the system	Test the panel completely to ensure that all features and functions operate as programmed. Test the system using the IQ Installer App.

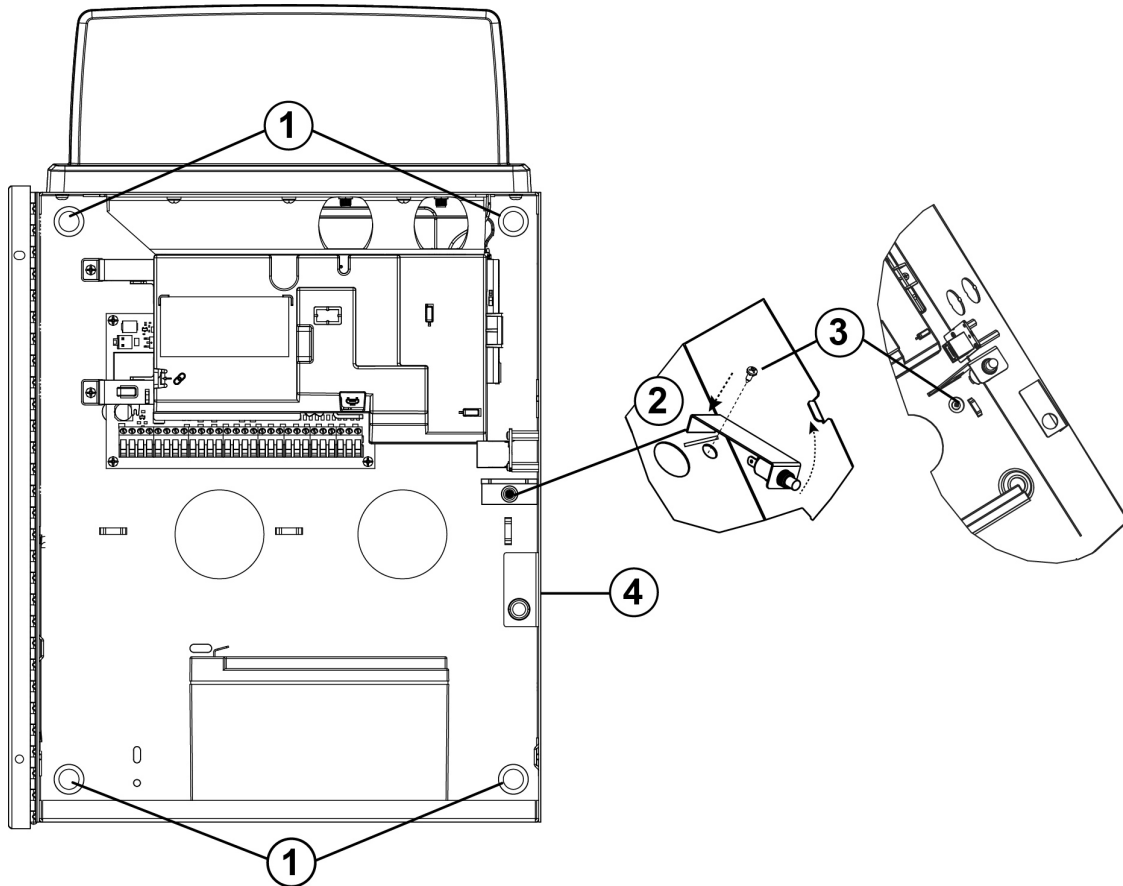
Mounting the enclosures

The equipment enclosure must be secured to the building structure before operation.

- ① **Note:** The weight of the enclosure and contents cannot be supported by drywall only. Use mounting hardware sufficient to support up to three times the panel weight, including equipment, cables, conduit and hardware (approximately 210 lbs/ 95 kg). Select hardware suitable for the mounting surface. The minimum screw size is M4 (#8) x 4, 25.4 mm (1 inch) long, pan head. Select hardware suitable for the mounting surface.

Mounting the IQ Pro

Figure 1: Mounting the IQ Pro (metal enclosure)



Callout	Description
1	Mounting holes
2	Wall tamper bracket. Use this tamper location for EN50131 Grade 2 applications where cover and removal from location protection is required.
3	Wall tamper bracket screw. Secure the tamper bracket to the mounting surface using screw specified in the previous section.
4	Cover tamper. Use this tamper location for UL/ULC applications when only cover protection is required.

To mount the IQ Pro metal enclosure, complete the following steps.

1. Position the enclosure vertically in the mounting location and mark the two top mounting holes (refer to [Mounting the enclosures](#)).
2. Remove the enclosure from the wall, then partially install the two top screws (use anchors if needed).

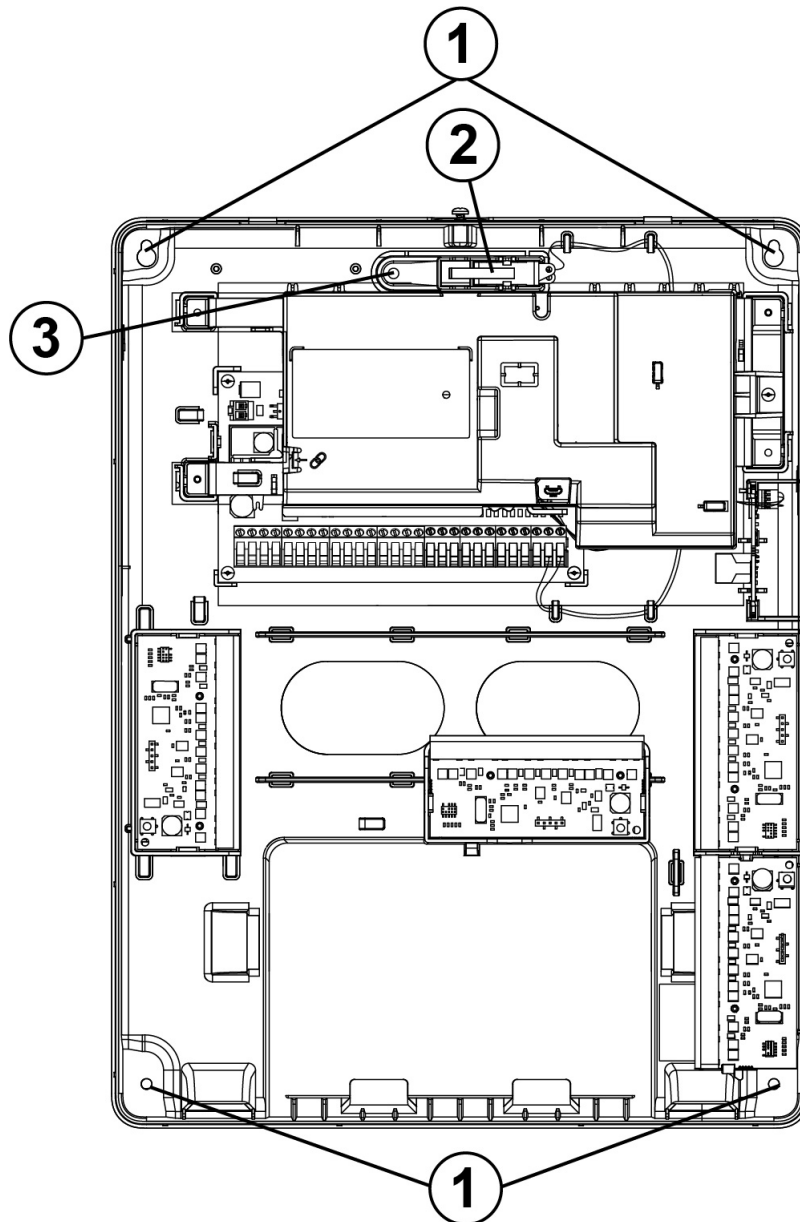
Note: Use four screws appropriate for the mounting surface. Ensure they are inserted through the four mounting holes provided on the back of the enclosure. Use plastic wall plugs if the cabinet is being mounted on a brick, cinder block, drywall or plaster wall.

- ① **Note:** The minimum screw size is #6, 3.5 mm pan head, with a minimum length of 1 in (25 mm).
- 3. Hang the enclosure on the installed two screws then mark the two bottom mounting holes.
- 4. Remove the enclosure from the wall then install optional modules and wire according to the associates module instructions.
- 5. Secure the tamper bracket to the mounting surface using screw specified in the previous section.
- 6. Wire the tamper switch into Zone 8. The default setting for Zone 8 is tamper input. **Note:** Changes to Zone 8 programming could removed the tamper protection.
- 7. Drill the two bottom mounting holes (use anchors if needed).
- 8. Hang the enclosure on the top two screws again, install and fasten the two bottom screws then fasten the top two, making sure all four screws are securely tightened.
- 9. Secure the enclosure door by inserting screws through the top and bottom door mounting holes provided on the right side of the enclosure, or use a key lock.
- ① **Note:** Only install the batteries after the enclosure has been permanently secured to the wall.

Mounting the IQ Pro P

- ① **Note:** Install the control panel in the protected area of the protected premises. The wiring methods shall be in accordance with ULC-S302, NFPA72, the National Electrical Code, ANSI/NFPA 70, the Standard for Installation and Classification of Burglar and Holdup Alarm Systems, UL 681, and the Standard for Central Station Alarm Services, UL 827. This control panel 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).

Figure 2: IQ Pro P (plastic enclosure)



Callout	Description
1	Mounting holes
2	Enclosure tamper
3	Wall tamper hole

To mount the IQ Pro P (plastic) enclosure complete the following steps.

- ① **Note:** Use four screws appropriate for the mounting surface. Ensure they are inserted through the four mounting holes provided on the back of the enclosure. Use plastic wall plugs if the cabinet is being mounted on a brick, cinder block, drywall or plaster wall.
- ① **Note:** The minimum screw size is #6 (3.5 mm) pan head, with a minimum length of 1 in (25 mm).
- ① **Note:** Only remove the breakaway tabs if required.
 1. Position the enclosure vertically in the mounting location and mark the two top screw holes.
 2. Remove the enclosure, then partially install the two top screws (use anchors if needed).
 3. Hang the enclosure on the installed two screws then mark the two bottom mounting holes.
 4. Remove the enclosure from the wall and install optional modules and wires according to the instructions provided with the module.
 5. Drill the two bottom mounting holes (insert anchors if needed).
 6. Hang the enclosure on the top two screws again, then install and fasten the two bottom screws.
 7. Fasten the tamper bracket to the wall, then ensure that all other four screws are securely tightened.
 - ① **Note:** Zone 8 is pre-wired as a tamper input,
- 8. Only install the battery and battery wire provided, after the enclosure has been permanently secured to the wall.
- 9. Secure the enclosure cover at the top using the short screw provided.

IQ Pro terminal descriptions

Figure 3: IQ Pro terminal block

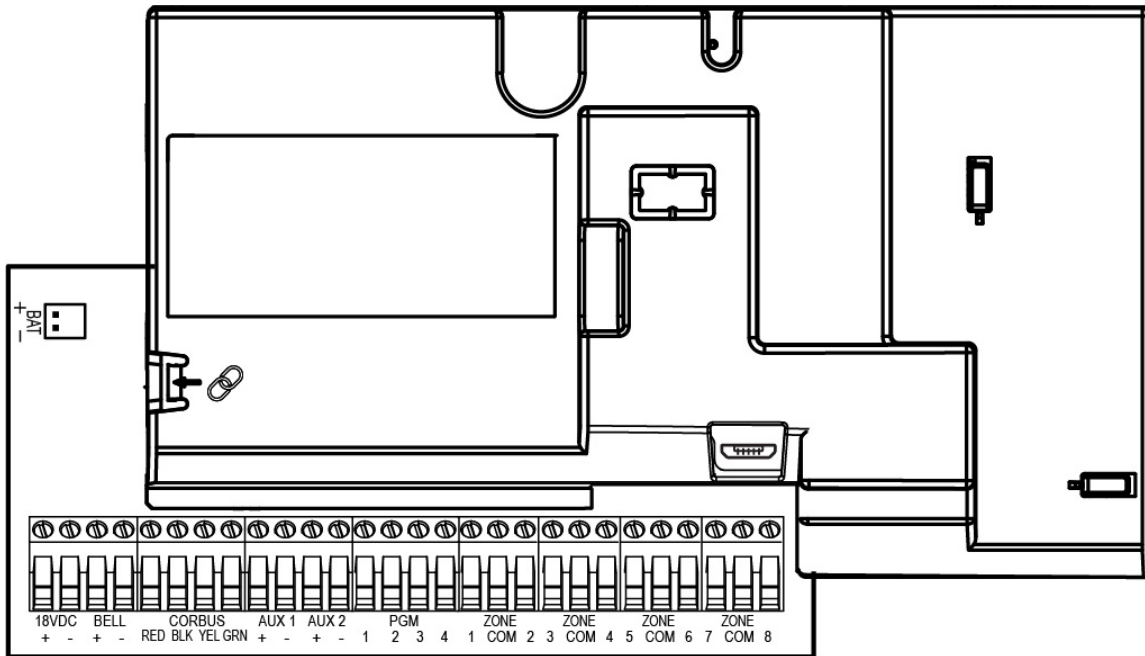


Table 16: Terminal descriptions

Terminal	Description
BAT+, BAT-	Battery terminals. Use to provide backup power during a power outage. Do not connect the battery until all other wiring is complete.
18 VDC +/-	The HS40WPSA and HS40WPSNA power adapters supply 18 VDC power input to the alarm controller. ⓘ Note: ULC Commercial Fire Listed applications and ULC Commercial Burg Security Level 4 applications use power adapter HS65WPSNA.
BELL+, BELL-	Bell/Siren power (700 mA continuous, 2A max short term). Connect the positive side of any alarm warning device to BELL+, the negative side to BELL-. ⓘ Note: For UL/ULC listed applications, use maximum 700 mA load on the BELL output.
CORBUS RED, BLK, YEL, GRN	Corbus terminals. Use to provide power and communication between the alarm controller and connected modules. Each module has four Corbus terminals that must be connected to the Corbus.
AUX1+, AUX1- AUX2+, AUX2-	Use to power intrusion detectors, relays, LEDs, etc. (700mA). Connect the positive side of device to one of the AUX+ terminals and the negative side to AUX- or COM. AUX1 - power for intrusion detectors. AUX2 - power for smoke, heat, CO detectors. ⓘ Note: For UL household fire warning systems, the fire alarm detection devices should not be powered from the same AUX output (control panel, zone expander, power supply) as burglary alarm initiating devices.

Table 16: Terminal descriptions

Terminal	Description
PGM1 to PGM4	Programmable output terminals. Use to activate devices such as LEDs, relays and buzzers. (PGM1, PGM4: 50 mA, PGM2: 300 mA or can be configured for use as a 2-wire smoke detector interface, max loop current 100 mA, PGM3: 50 mA (negative trigger) or 1 A (positive trigger)).
Z1 to Z8 COM	Zone input terminals. Each zone must have one detection device, however, multiple detection devices can be wired to the same zone. <i>ⓘ</i> Note: Zone 8 is configured as a tamper input at default.

Wiring programmable outputs

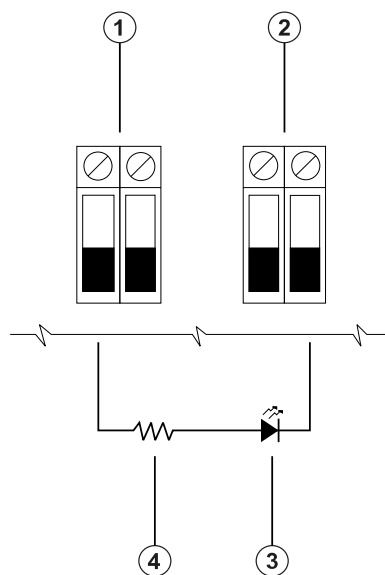
You can use the programmable (PGM) outputs to activate devices such as LEDs and buzzers. To wire an output to the PGM, complete the following steps.

1. Connect the positive (+) wire from the device to the AUX + terminal.
2. Connect the negative (-) wire from the device to the PGM terminal.

ⓘ **Note:** If the device requires a current greater than the rated value of the PGM output, a relay and approved power supply are required.

To wire the LED indicator, see [Figure 4](#).

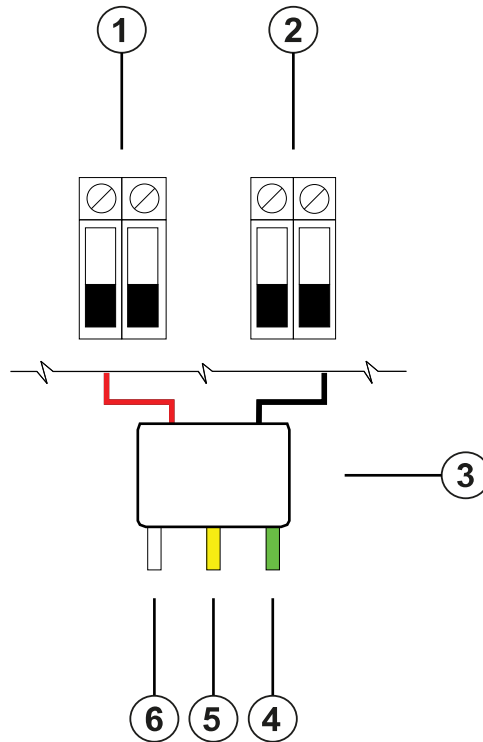
Figure 4: LED indicator wiring



Callout	Description
1	AUX terminals
2	PGM terminals
3	LED indicator
4	680 Ω resistor (typical value)

To wire the relay output, see [Figure 5](#).

Figure 5: Relay output wiring



Callout	Description
1	AUX terminals
2	PGM terminals
3	Relay (RM-1 and RM-2)
4	To normally open connection
5	To normally closed connection
6	To COM terminal

Wiring a 2-wire smoke detector

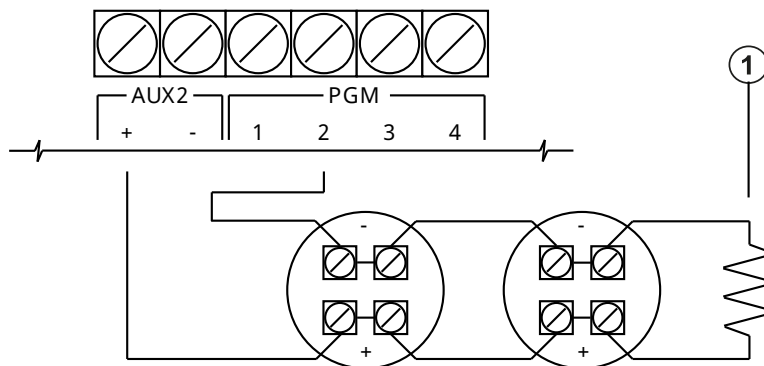
When you wire a 2-wire smoke detector configured as a 2-wire loop, observe the following guidelines.

- You must connect 2-wire smoke detectors in parallel.
- You can wire a maximum of 18 smoke detectors on a 2-wire loop.
- Do not exceed a wire resistance of 24 ohms across the entire loop.
- Do not use smoke detectors from different manufacturers on the same circuit. Refer to the smoke detector installation sheet when you position detectors.

Note: For UL residential fire applications, only use the AUX2 output to provide power to smoke and CO detectors.

If you program PGM2 for use with a 2-wire smoke detector, you must wire it according to the following figure.

Figure 6: 2-wire smoke detector wiring



Callout	Description
1	2200 Ω end-of-line resistor. Use model EOLR-3 for UL/ULC listed applications.

The following table lists compatible 2-wire smoke detectors.

Table 17: 2-wire smoke detectors

2-wire smoke detector models	
C2W-BA (ULC)	2W-B (UL)
C2WT-BA (ULC)	2WT-B (UL)
C2WTA-BA (ULC)	2WTA-B (UL)

- ① **Note:** If you use System Sensor detectors on a 2-wire loop, do not combine UL detectors. For more information, refer to the System Sensor installation manual. The UL compatibility ID for the System Sensor models is A.
- ① **Note:** Do not connect accessories, such as a PRM-2W or any other polarity reversal module, to 2-wire smoke detectors.
- ① **Note:** You must calculate and test the current draw.

Table 18: 2-wire smoke detector initiation circuit

Item	Specification
Class, supervised, power limited	Class B IDC. 2-wire smoke detector interface
Compatibility identifier	PG9WLSHW8-1
DC output voltage	10.0 VDC to 13.8 VDC
Detector load	2 mA maximum
SEOL (use model EOLR-3 for UL/ULC listed applications)	2200 Ω
Maximum capacitance	10 μ F
Maximum number of detectors per loop	18 without sounders
Maximum ripple	45 mV
Resting voltage and time	0.2 VDC/ 5 seconds
Loop resistance	24 Ω maximum
Minimum standby impedance	1250 Ω nominal

Table 18: 2-wire smoke detector initiation circuit

Item	Specification
Maximum alarm impedance	707 Ω maximum
Alarm current	102 mA maximum

Wiring a 4-wire smoke, heat or CO detector

The following table lists the maximum current rating at 12 VDC of the hardwired CO detectors that are compatible with the IQ Pro.

Table 19: CO detector ratings

Device	Manufacturer	UL file number	Rating
CO1224, CO1224T, CO1224TR, CO1224A	System Sensor	E307195 E304075	40 mA
CM-E1	Macurco	E354878	40 mA

ⓘ **Note:** If you wire multiple CO detectors on the same loop, you must break the leads between each CO detector. You must power the supervision relay from the last detector in the loop.

If you use a non-powered heat detector, such as a fixed temperature or rate of rise type, no supervision relay is required and do not wire the detector to AUX2 or PGM2.

To wire a 4-wire smoke, heat, or CO detector, see the following figures.

ⓘ **Note:** Do not exceed a wire resistance of 100 Ω .

Figure 7: 4-wire CO detector wiring

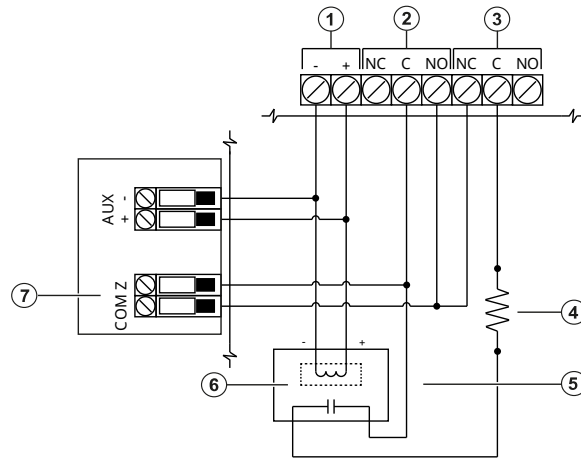
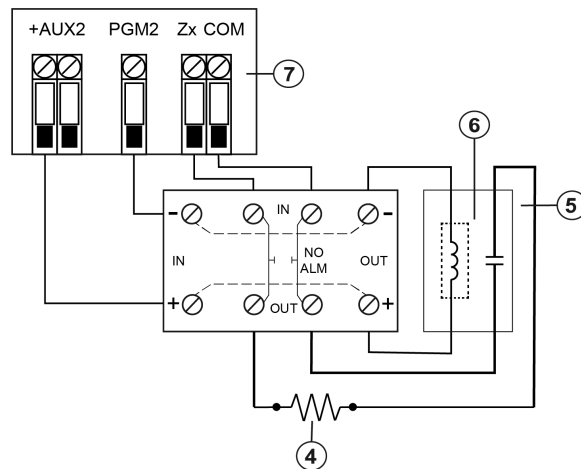


Figure 8: 4-wire smoke and heat detector wiring



Callout	Description
1	4-wire smoke, heat, or CO detector power terminals
2	4-wire smoke, heat, or CO detector alarm terminals
3	4-wire smoke, heat, or CO trouble terminals, if provided
4	5600 Ω single end-of-line resistor
5	100 Ω alarm initiating loop
6	RM-1 or RM-2 power loop supervisory relay, 12 VDC, 35 mA.
7	Module zone input

Table 20: System Sensor 4-wire smoke detectors, File S911

Model	Description
4W-B (UL) / C4W-BA (ULC)	4-wire Standard i3 Detector
4WT-B (UL)/C4WT-BA(ULC)	4-wire Standard i3 Detector, Fixed 135° Thermal Sensor
4WTA-B(UL)	4-wire i3 Detector with Fixed 135° Thermal Sensor and Sounder
4WTR-B(UL)	4-wire i3 Detector with Fixed 135° Thermal Sensor and Form C Relay
4WTAR-B(UL)	4-wire i3 Detector, Fixed 135° Thermal Sensor, Sounder, Form C Relay

- ① **Note:** Other compatible 4-wire smoke and heat detectors can be used as long as these devices are compatible with electrical ratings of the AUX2 output.
- ① **Note:** You can manually configure PGM2 as a 2-wire smoke loop in panel programming. If you configure any zone input as a fire zone, PGM2 is automatically set as a 4-wire smoke detector, and acts as a power reset. You cannot combine 2-wire detectors and 4-wire smoke or heat detectors at the same time.

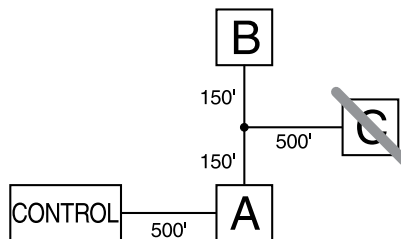
Wiring the corbus

The RED and BLK Corbus terminals are used to provide power while YEL and GRN are used for data communications. The 4 Corbus terminals of the IQ Pro alarm controller must be connected to the 4 Corbus terminals or wires of each module.

The following conditions apply:

- Corbus should be run with 18 to 22 AWG quad, two pair twisted preferred.
 - The modules can be home run to the panel, connected in series or can be T-tapped.
 - Do not use shielded wire for Corbus wiring.
- ① **Note:** Any module can be connected anywhere along the Corbus. Separate wire runs for keypads and devices are not necessary.
 - ① **Note:** No module can be more than 1000 ft / 305 m (in wire length) from the panel. **Do not use shielded wire for Corbus wiring.**

Figure 9: Corbus wiring



Module (A) is wired correctly as it is within 1000 ft / 305 m of the panel, in wire distance. Module (B) is wired correctly as it is within 1000 ft / 305 m of the panel, in wire distance. Module (C) is NOT wired correctly as it is farther than 1000 ft / 305 m from the panel. For models that require more than 1000 ft / 305 m from the main panel, a power supply/Corbus extender can be used.

Current ratings

The power output of the alarm controller and power supply modules cannot be exceeded.

Table 21: System output ratings

Device	Output	Rating (12 VDC)
IQ Pro IQ Pro P	AUX 1: AUX 2:	700 mA. Subtract the listed rating for each keypad, expansion module and accessory connected to AUX or Corbus.
	BELL:	700 mA continuous rating. Do not exceed the 700 mA load for UL/ULC certified applications.
HSM2300	AUX:	1 A. Subtract the listed rating for each keypad, expansion module and accessory connected to AUX.
HSM2208	AUX:	250 mA. Continuous rating. Subtract for each device connected. Subtract the total load on this terminal from the alarm panel AUX/Corbus output.
HSM2204	AUX:	1 A. Continuous rating. Subtract for each device connected. Subtract the total load on this terminal from the alarm panel AUX/Corbus output.
HSM2108	AUX:	100 mA. Subtract for each device connected. Subtract the total load on this terminal from the panel AUX/Corbus output.

IQ Pro current calculation

Maximum (standby or alarm). Use in conjunction with [Table 29](#) and [Table 31](#). Use the following table to calculate total current draw.

Table 22: IQ Pro (P) current calculation chart

Terminal	Current
Power supply	
AUX 1/ 2 (700 mA including PGMs 1, 2, 3, 4)	
Corbus (700 mA maximum)	
Bell output (700 mA)	
Battery charge current (350 mA)	
Total	

*For UL, ULC listed applications, the total standby and alarm current cannot exceed the values specified in [Table 29](#) and [Table 31](#).

Line loss

Voltage loss through wire resistance must be considered for all installations. To ensure correct operation, at least 12.5 VDC must be applied to all modules on the system (when power is connected and the battery is fully charged). If less than 12.5 VDC is applied, the system might not work correctly.

To correct the problem, try any or all of the following:

1. Connect a power supply between the alarm controller and the module to provide additional power to the Corbus.
2. Reduce the length of the Corbus run to the module.
3. Increase the gauge of wire.

Capacitance limits

An increase in capacitance on the Corbus affects data transmission and causes the system to slow down. Capacitance increases for every foot of wire added to the Corbus. The capacitance rating of the wire used determines the maximum length of the Corbus.

For example, 22 gauge, non-shielded, 4-conductor wire has a typical capacitance rating of 20 pF / foot (which is 20 nF/1000 ft). For every 1000 feet of wire added, regardless of where it is run, the capacitance of the Corbus increases by 20 nF.

Refer to the table for the total wire distance allowed, depending on the capacitance rating of the wire used.

Table 23: Wire capacitance

Wire capacitance (for 1000 ft (300 m))	Total corbus wired length
15nF	5300 ft / 1616 m
20nF	4000 ft / 1220 m
25nF	3200 ft / 976 m
30nF	2666 ft / 810 m
35nF	2280 ft / 693 m
40nF	2000 ft / 608 m

Wiring auxiliary power

You can use the auxiliary power terminals to power devices such as motion detectors and glass break detectors. The AUX1 and AUX2 terminals provide a combined current of 700 mA.

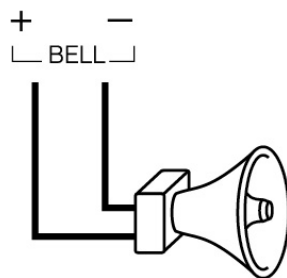
- ⓘ **Note:** For UL combination fire and CO and burglary applications, the fire and CO initiating devices, such as smoke detectors, heat detectors, and CO detectors, must be powered from a separate output (AUX2) than the burglary initiating devices (AUX1).
- ⓘ **Note:** For UL installations that require 24-hour backup capacity, the maximum AUX power load cannot exceed a current of 180 mA when using a 7 Ah battery.

Wiring the bell output

Use the BELL terminals to power a bell, siren, or other device which requires a steady output voltage when the system is in alarm. The panel provides a current of up to 700 mA.

- ⓘ **Note:** A 1 k Ω resistor is required across the BELL+ and BELL- terminals, or the system detects a trouble condition.

Figure 10: Bell wiring



Observe polarity when connecting polarized sirens or bells.

11.3 VDC to 12.5 VDC, maximum current 700 mA continuous, current limited at 2 A. Supervised by 1 k Ω , use SEOL resistor model EOLR-1.

Wiring the zones

You can wire zones to supervise normally open devices, for example smoke detectors or heat detectors, or normally closed devices, for example door contacts. You can program the IQ Pro for single end-of-line (SEOL) resistors, or double end-of-line (DEOL) resistors.

- ⚠ **CAUTION:** Ensure the alarm controller is turned off before you wire the equipment.
- ① **Note:** For UL installations, only use UL listed initiating devices that are compatible with the auxiliary output power range provided by the converter.

When you wire zones, observe the following guidelines:

- For UL listed installations, only use SEOL or DEOL connections.
- Use a minimum wire size of 22 AWG and a maximum wire size of 18 AWG.
- Do not use shielded wires.
- Do not exceed a wire resistance of 100 Ω . For more information, see the following table.

Table 24: Wiring chart

Wire gauge (AWG)	Maximum distance to EOL resistor (m/ ft)
22	914/ 3000
20	1493/ 4900
19	1889/ 6200
18	2377/ 7800

- ① **Note:** Distances are based on a maximum wiring resistance of 100 Ω .

Normally open and normally closed wiring

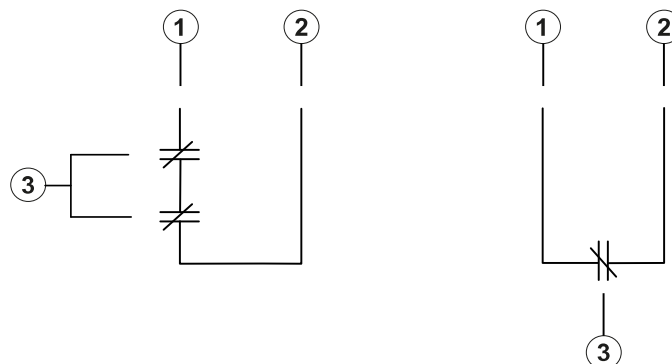
Wire normally closed devices in series and normally open devices in parallel. To wire hardwired devices, complete the following steps.

1. Wire the device to any Zone terminal.
2. Wire the device to any COM terminal.

- ① **Note:** For UL, do not use normally open or normally closed loops.

The following figure shows you how to wire normally closed loops. The image on the left shows two normally closed contacts with no end-of-line resistor, and the image on the right shows one normally closed contact with no end-of-line resistor.

Figure 11: Normally closed loops



Callout	Description
1	Zone terminal
2	COM terminal
3	Normally closed contact

Note: Do not exceed a wire resistance of 100 Ω.

The following table shows the zone status for a given resistance value.

Table 25: Normally closed zone status

Resistance	Description	Zone status
0 Ω	Shorted wire, loop shorted	Secure
Infinite	Broken wire, loop open	Alarm

Single end-of-line resistors

You can use SEOL resistors to detect if a circuit is secure, open, or shorted. Use this option if you use either normally closed or normally open devices.

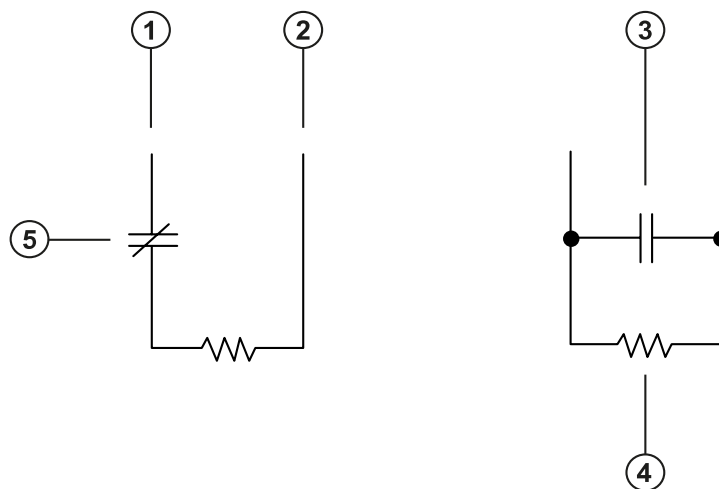
You can configure SEOL supervision through zone programming on the control panel.

The following figure shows the different wiring configurations for SEOL resistors. The image on the left shows one normally closed contact with an SEOL resistor, and the image on the right shows one normally open contact with an SEOL resistor.

Note: SEOL resistors can have a resistance between 1 kΩ and 10 kΩ. You must install the SEOL resistor at the end of the loop. UL only verified functionality with a 5.6 kΩ SEOL resistor, SEOL resistor model EOLR-2.

For ULC Security Level I burglary installations, use the wiring configurations in [Figure 12](#). For fire detection installations that use smoke detectors, powered or non-powered heat detectors, or CO detectors, use the wiring configuration on the right hand side of [Figure 12](#). These devices use separate AUX2 output for power. Make sure that the voltage range of the AUX2 output is compatible with the input voltage range of the detector you are using.

Figure 12: SEOL wiring



Callout	Description
1	Zone terminal
2	COM terminal
3	Normally open contact
4	End-of-line resistor. For UL/ULC listed applications use model EOLR-2.
5	Normally closed contact

① **Note:** Do not exceed a wire resistance of 100 Ω .

The following table shows the zone status for a given resistance value.

Table 26: SEOL zone status

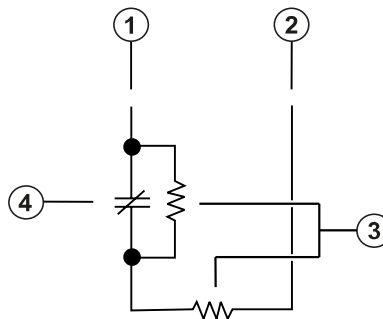
Resistance	Description	Status
0 Ω	Shorted wire, loop shorted	Alarm
1 k Ω to 10 k Ω	Contact closed	Secure
Infinite	Broken wire, loop open	Alarm for burglary zones and Trouble for fire zones

Double end-of-line resistors

If you use DEOL resistors at the end of a zone loop, the second resistor detects if a zone is in alarm, tampered, or faulted. Only select DEOL supervision if using normally closed devices or contacts.

- ① **Note:** Only use one normally closed contact in each zone.
- ① **Note:** Any zone configured for fire or 24 hour supervisory must be wired with a SEOL resistor regardless of the type of zone wiring supervision selected for the panel. If you change the zone supervision from DEOL to SEOL, or from NC to DEOL, turn off the system completely and then turn on the system for correct operation. For ULC Security Level II installations, use the wiring configuration in the following figure.

Figure 13: DEOL wiring



Callout	Description
1	Zone terminal
2	COM terminal
3	5600 Ω end-of-line resistor. For UL/ULC listed applications use model EOLR-2.
4	Normally closed contact

① **Note:** Do not exceed a wire resistance of 100 Ω . Refer to [Table 27](#).

Note: DEOL wiring is for burglary use only.

The following table shows the zone status for a given resistance value.

Table 27: DEOL zone status

Resistance	Description	Status
0 Ω	Shorted wire, loop shorted	Trouble
5600 Ω	Contact closed	Secure
Infinite	Broken wire, loop open	Tamper
11200 Ω	Contact open	Alarm

Mounting and wiring the modules

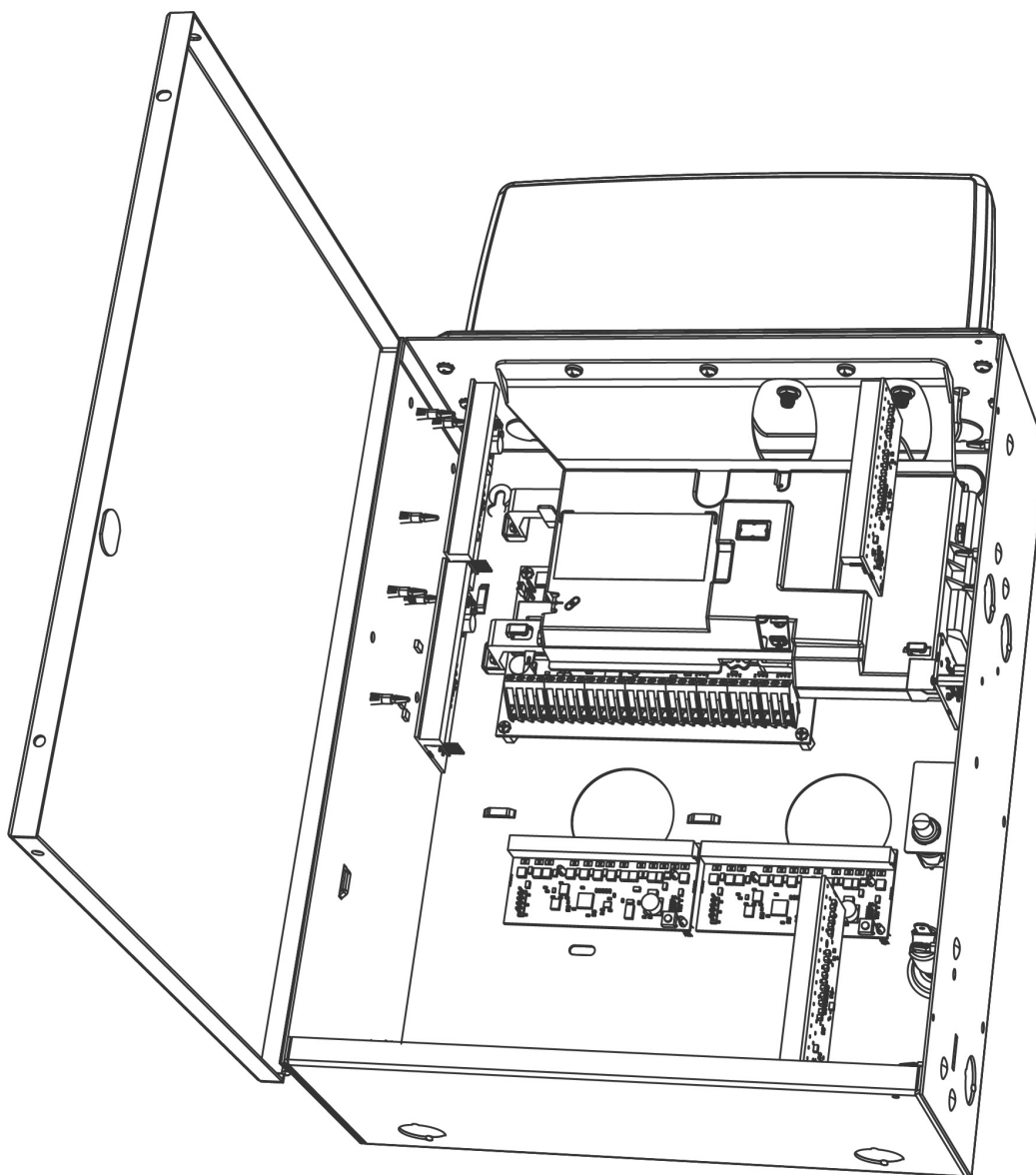
You can install up to 1A in power supply or expansion modules on the IQ Pro security system.

- ① **Note:** Remove all power from the system before connecting modules to the alarm control panel.
- ① **Note:** After installing all modules and expanders on the sides of the metal enclosure the empty mounting holes must be covered with the provided plugs.

Mounting the HSM2108 module in the IQ Pro

The HSM2108 modules can be mounted in various locations in the IQ Pro metal enclosure using plastic stand-offs.

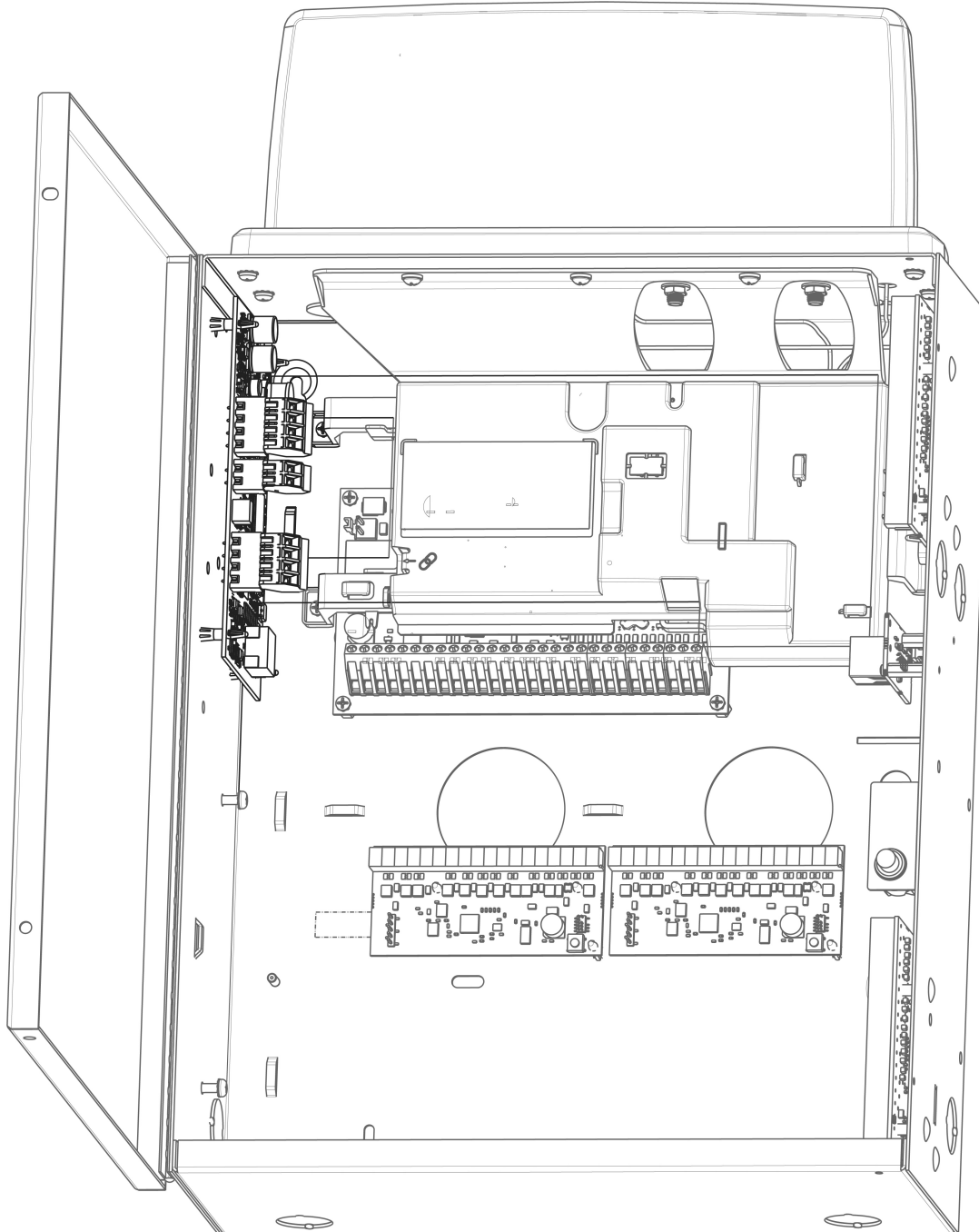
Figure 14: Mounting HSM2108 modules in the IQ Pro



Mounting the HSM3105 module in the IQ Pro

- Mount the HSM3105 module on left side of the metal enclosure using plastic stand-offs. Refer to the following diagram for placement.

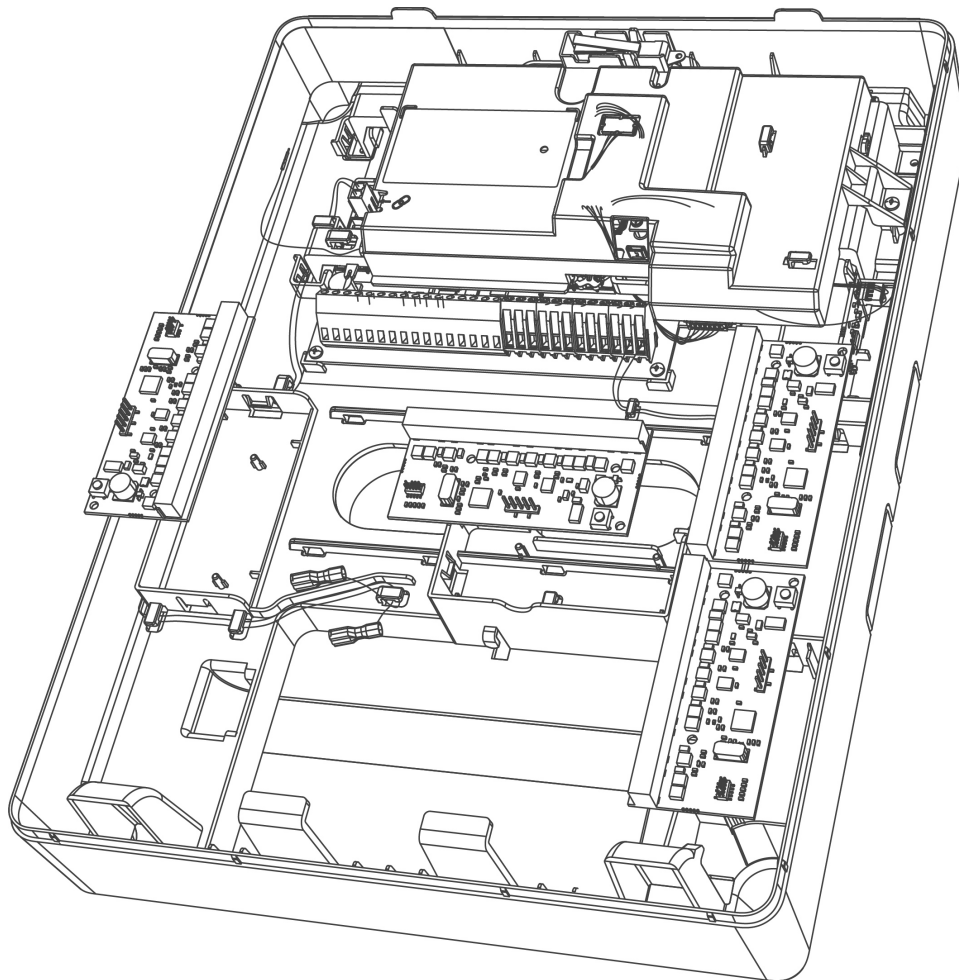
Figure 15: Mounting the HSM3105 module in the IQ Pro



Installing modules in the IQ Pro P

Refer to the following diagram for the various mounting locations for modules.

Figure 16: Mounting modules in the IQ Pro P



Wiring the modules

Remove all power from the system before connecting modules to the IQ Pro P.

Zone expanders

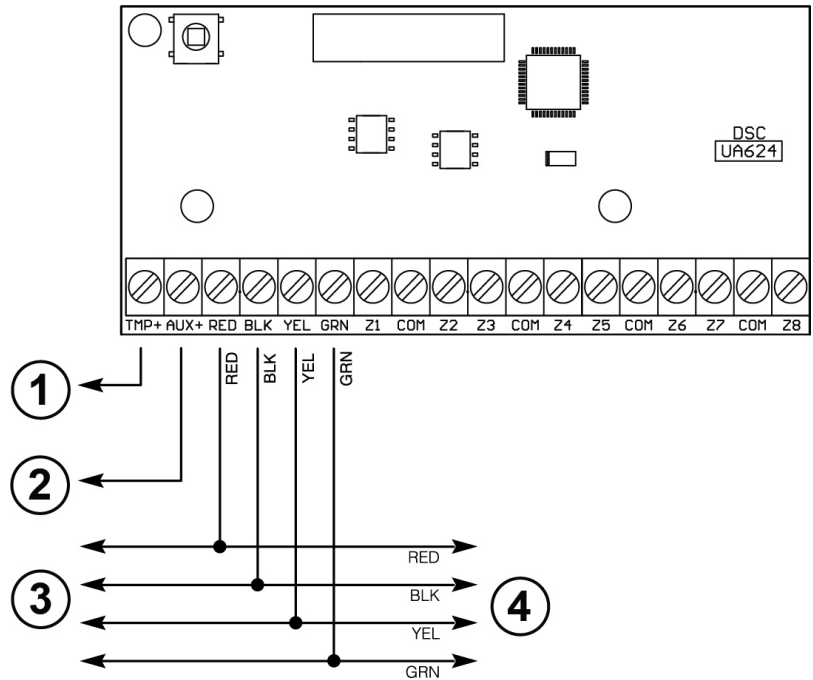
The IQ Pro alarm controller board has connection terminals for Zone 1 to 8. Additional zone expanders can be added to increase the number of zones on the system. Each zone expander consists of one group of 8 zones. At enrollment, the zone expander is automatically assigned to the next available 8-zone expander slot/corbus expander slot. Connect the RED, BLK, YEL and GRN terminals to the Corbus terminals on the alarm panel. Refer to the module installation sheets for more information.

- ① **Note:** For UL residential fire applications, ensure you do not combine fire and burglary devices on a zone expander AUX output or power supply AUX output. Only burglary devices or only fire devices can be powered from the same AUX output on these modules.

Installing the HSM2108 zone expander

Refer to the HSM2108 Installation Instructions for detailed information.

Figure 17: HSM2108 zone expander



Callout	Description
1	To tamper switch if used. Connect to BLK terminal if tamper is not used. VAUX 12 VDC, 100mA Power Limited.
2	To devices requiring power.
3	Corbus to preceding expansion module or to alarm panel.
4	Corbus to additional expansion modules.

Installing the HSM3105 zone expander

Refer to the HSM3105 Installation Instructions for detailed information.

Low power mode

The corbus wire runs between the control panel and the HSM3105 and shall not exceed 3 ft (91.4cm) using 22AWG wire.

The MX loop is powered from the Corbus supply power, and allows for a maximum MX loop current draw of 67mA @ 40V (equivalent to 360mA @11.3V or 325mA @ 12.5V).

Figure 18: Low power mode - internal mount

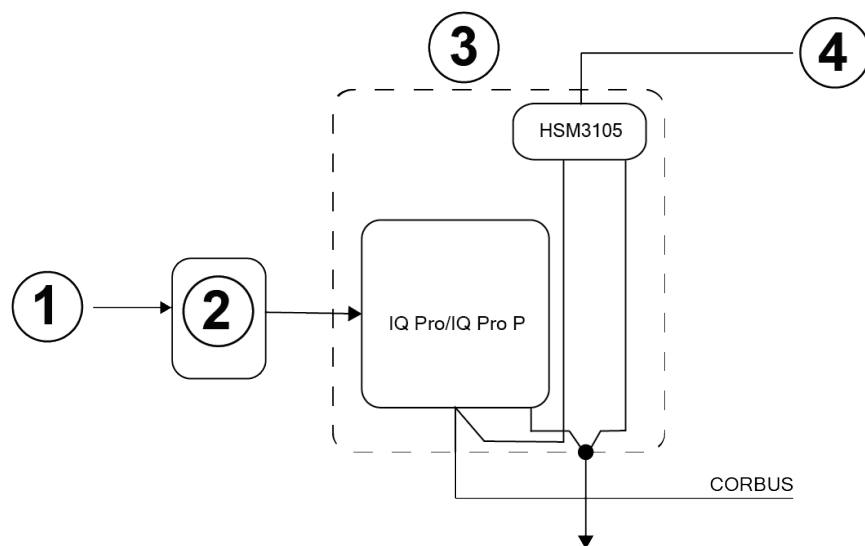
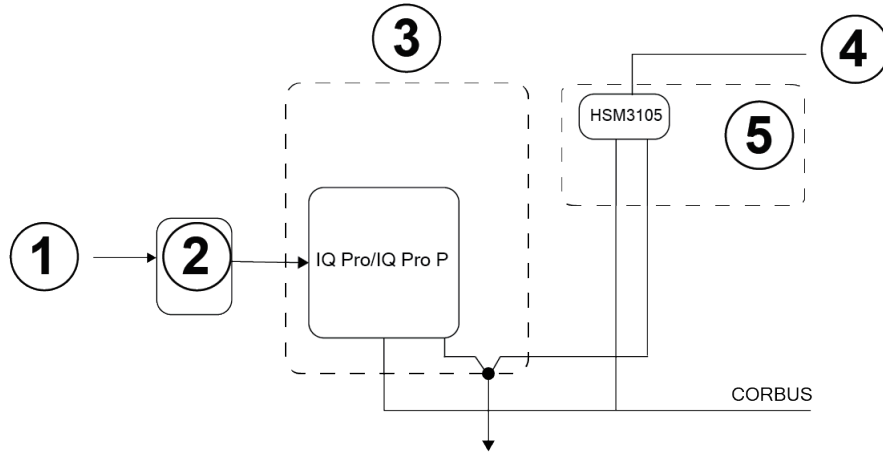


Figure 19: Low power mode – external mount



Callout	Description
1	AC mains
2	Power adapter
3	IQ Pro (P) enclosure
4	MX loop
5	HSM3105 enclosure

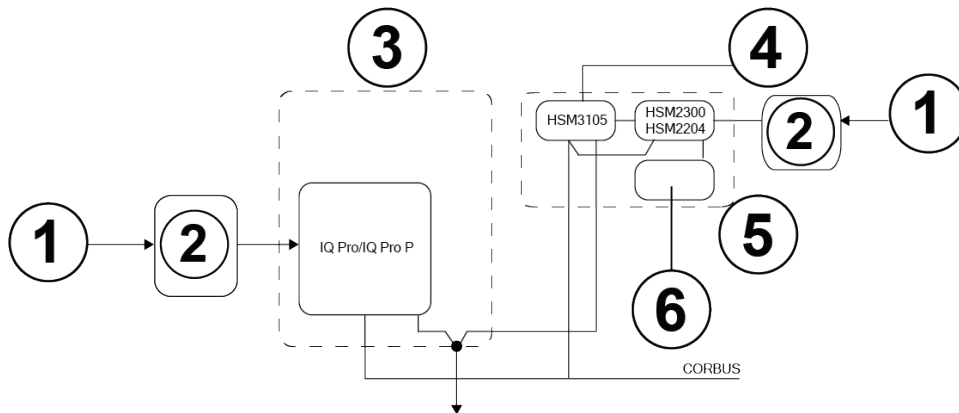
High power mode – external mount

The HSM3105 module can only be mounted in an external enclosure along with one of the following approved auxiliary power supply units: HSM2204, HSM2300. The power supply unit provides power to the HSM3105 module and the MX loop. The Corbus wire runs between the alarm control panel and the HSM3105 will not exceed 3ft (91.4cm) using 22AWG wire.

The HSM3105 is designed to handle a maximum allowable MX loop current draw of 400mA @ 40V (equivalent to 1600mA @11.3V or 1500mA @ 12.5V). Check the manual for the chosen power supply unit to understand how much current would be available for the MX loop.

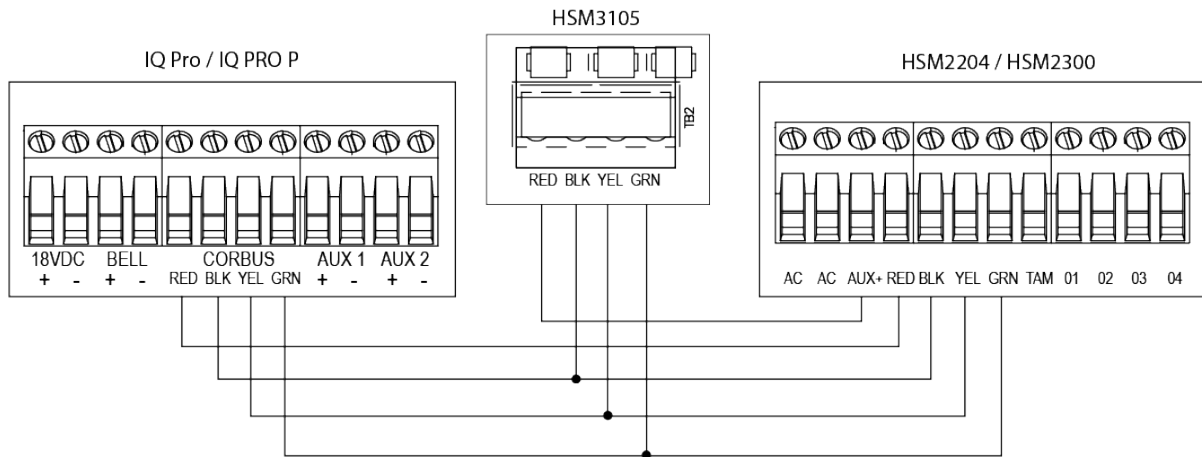
Note: HSM2300 and HSM2204 are only able to provide up to 228mA @ 40V (1000mA @ 12.5V) or 260mA @ 40V (1000mA @ 11.3V).

Figure 20: High power mode – external mount



Callout	Description
1	AC mains
2	Power adapter
3	IQ Pro (P) enclosure
4	MX loop
5	HSM3105 enclosure
6	Battery

Figure 21: HSM3105 high power mode wiring



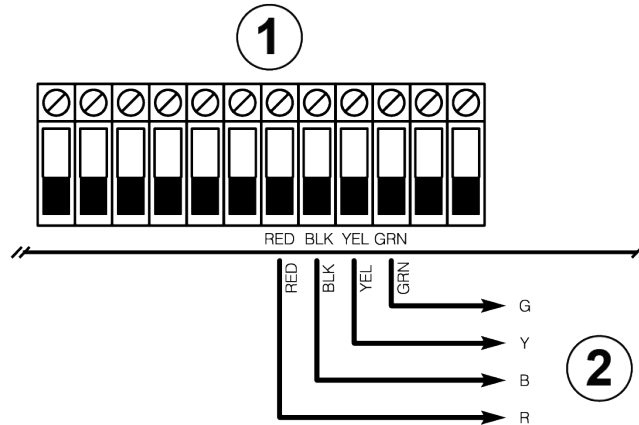
Wiring the HSM2HOST/PGPHOSTx

The HSM2HOST/PGPHOSTx 2-way wireless transceiver module provides communication between wireless devices and the alarm controller. The HSM2HOST/PGPHOST must be used with the IQ Pro metal enclosure only.

Connect the HSM2HOST/PGPHOSTx to the 4-wire Corbus of the alarm controller according to the following diagram. After the wiring is completed, reconnect power to the security system. Board current draw: 35 mA.

- ① **Note:** The x next to the model name refers to the operating frequency, 4 refers to 433MHz, 8 refers to 868MHz and 9 refers to 912-919MHz.

Figure 22: HSM2HOST/PGPHOSTx wiring



Callout	Description
1	Control panel
2	Corbus to the HSM2HOST/PGPHOST

Note: When an external HSM2HOST or PGPHOST is used, the on-board PowerG card must be disabled. If a PowerG Host is connected, set the PowerG configurations to default to avoid any problems with PowerG device communication.

Power supply module wiring

The power supply modules provide up to 1 A of additional current and can be used to add up to four programmable outputs to the alarm system.

The 4-wire corbus connection provides communication between the module and alarm control panel.

To wire the power supply module, complete the following steps.

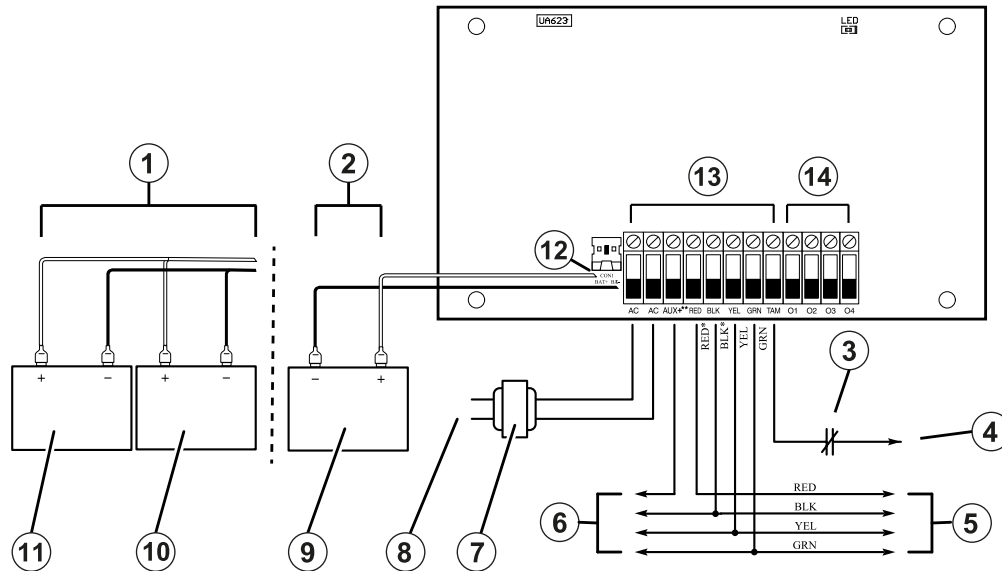
1. Connect the RED, BLK, YEL and GRN terminals to the corbus terminals on the alarm controller.
2. If O1 is not used, connect to Aux+ with a 1 K resistor.

The current draw is 35 mA. Battery standby capacity is at least 24 hours for fire applications.

Note: All terminals are Class 2 power limited, except battery leads.

Note: For UL residential fire applications, ensure you do not combine fire and burglary devices on a zone expander AUX output or power supply AUX output. Only burglary devices or only fire devices are allowed to be powered from the same AUX output on these modules.

Figure 23: Power supply module wiring



Callout	Description
1	UL/ULC residential fire applications, ULC Security Level II
2	UL commercial burglary, UL/ULC residential burglary applications
3	Tamper contact (normally closed)
4	To BLK
5	Corbus connection to control panel. RED, BLK 12 VDC at 20 mA.
6	AUX connection to expansion module. Refer to the Specifications Chart for maximum current draw.
7	AC adapter models HS40WPSNA or HS40WPSA. Input: 120 VAC, 60 Hz, 1.2 A. Secondary: 18 VDC, 2.22 A, Class 2.
8	Power adapter (120 VAC / 60 Hz)
9	Battery (12 v, 7 Ah. Maximum battery charge current is 360 mA)
10	Battery 1 (12 v, 7 Ah. Maximum battery charge current is 360 mA)
11	Battery 2 (same rating as battery 1)
12	Red (+) to BAT+ ; Blk (-) to BAT-
13	Supervised
14	Unsupervised

Wiring a keypad

You can connect up to 16 keypads to the IQ Pro system.

Hardwired devices can be connected to hardwired keypads that have input zone circuitry. This saves from running wires back to the control panel for every device.

To connect a zone device to HS2LCD(P) keypads, run one wire to the P/Z terminal and the other to B. For powered devices, use red and black to supply power to the device. Run the red wire to the R (positive) terminal and the black wire to the B (negative) terminal.

Keypad zones support Normally Closed Loops, Single End of Line and Double End of Line resistors.

Only use for UL/ULC burglary type applications.

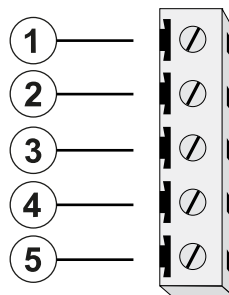
Note: For UL compliant installations, make sure that the maximum current draw for the AUX outputs, CORBUS, RED and BLK, and any PGM outputs do not exceed the limits in the technical specifications. For information on how to use the keypad, refer to the keypad user manual.

To wire a keypad, complete the following steps.

1. Remove the keypad backplate. For information on how to remove the keypad backplate, refer to the keypad installation manual.
2. Connect the RED, BLK, YEL, and GRN terminals to the Corbus terminals on the IQ Pro alarm controller.

Note: The Corbus should be run with minimum 22 wire gauge quad. two pair twisted preferred. Devices can be home run to the panel, connected in series, or T-tapped. Devices cannot be more than 1000 ft (305 m) in wire length from the panel. Do not use shielded wire for Corbus wiring.

Figure 24: Keypad terminals



Callout	Description
1	R terminal
2	B terminal
3	Y terminal
4	G terminal
5	Zone input terminal

When you install multiple keypads and modules, wire keypads using the same partition on the same module to improve keypad performance. Wire keypads on partition one into module one, and keypads on partition two into module two.

Note: When using end-of-line supervision, connect the zone according to one of the configurations outlined in Zone Wiring. End-of-line resistors must be placed on the device end of loop, not at the keypad.

Assigning keypad zones

To assign a keypad to a zone, complete the following.

1. In **Installation > Devices > Security Sensors** select an enrolled keypad.
2. Select **Edit > Keypad Input** then select **Enable** or **Disable**.

Connecting power

i Note

Caution

Do not connect the battery or power adapter until all other wiring is complete.

Mounting the power adapter

You must mount the power adapter outside the IQ Pro and IQ Pro P enclosures.

To mount the HS40WPSNA power adapter, complete the following steps.

1. Insert two screws into the mounting holes on the power adapter.
2. Secure the screws to the wall.

i Note: Mount the power adapter close to an AC power outlet so there is no strain on the power cable. Do not connect the power adapter to a receptacle controlled by a switch.

To mount the HS40WPSA power adapter, complete the following steps.

1. Mount the supplied mounting bracket to the wall outlet, using the screw provided.
2. Plug in the power adapter, securing it in the bracket.
3. Secure by inserting a plastic cable tie through the bracket slots.

Use the following table to determine the distance and gauge for the secondary wiring.

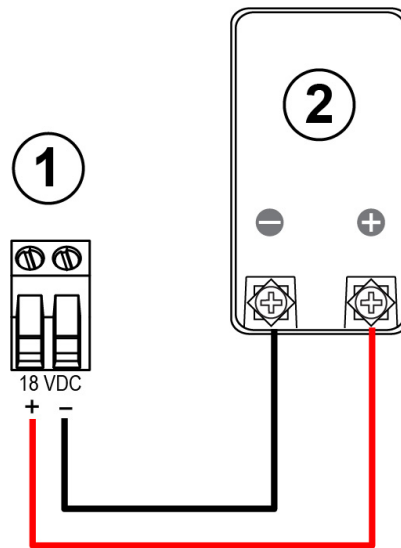
Table 28: Wiring distance and gauge

Distance (m/ft)	Gauge (AWG)
2 / 6.5	22
3 / 10	20
4 / 13	18

Wiring the power adapter

To wire the external power adapter, complete the following steps.

Figure 25: Wiring the power adapter



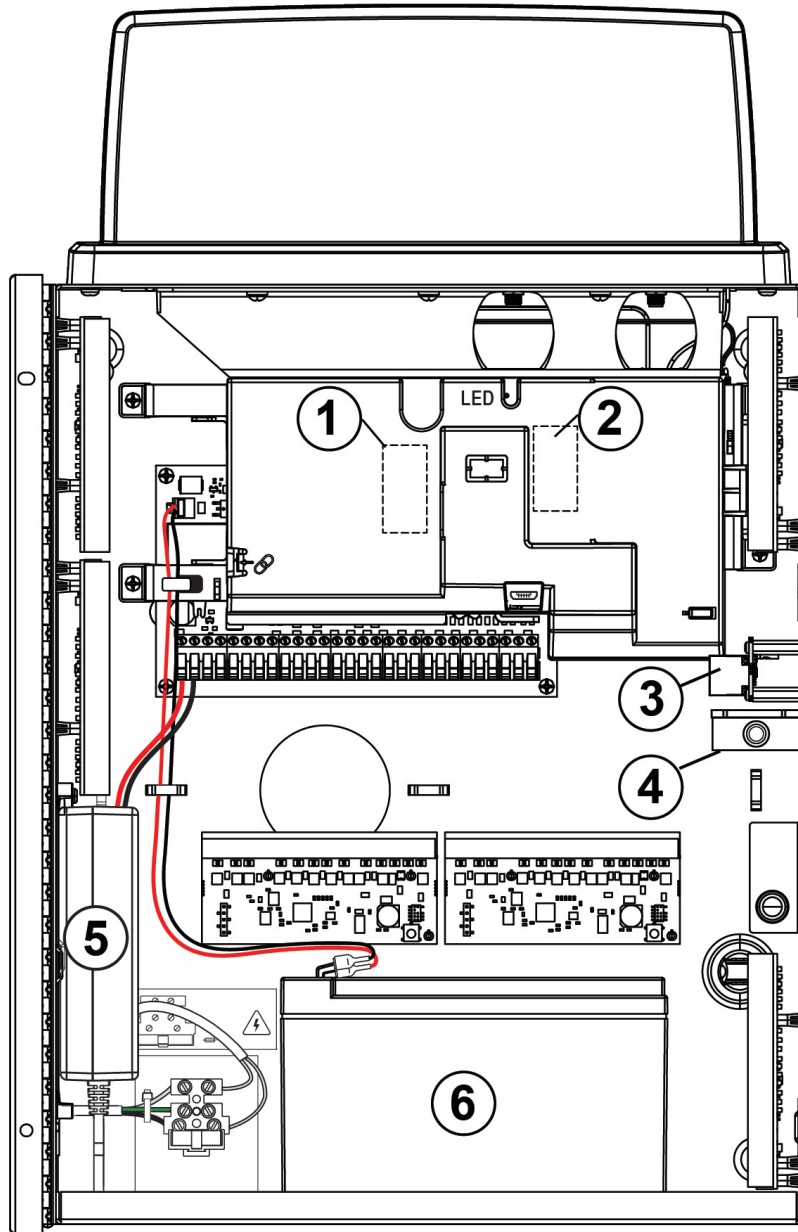
Callout	Description
1	IQ Pro (P) 18 VDC terminals
2	Power adapter (HS40WPSA or HS40WPSNA)

ⓘ **Note:** If the knockout is used for power wiring, use grommets to relieve stress on the wiring.

1. On the power adapter, connect the red wire to the positive + terminal, the black wire to the negative - terminal.
2. Insert the cable through the back of the enclosure.
3. Connect the wires to the 18 VDC terminals on the PCB, the red wire to the + terminal, the black wire to the negative - terminal. Refer to [Figure 26](#).

Wiring the power supply for the IQ Pro (EU installations only)

Figure 26: Wiring the power supply



Callout	Description
1	SRF radio card (SRF433 not used for EN50131 Grade 2)
2	PowerG radio card (only use 868MHz for EN50131 Grade 2, 433MHz for Australia/New Zealand)
3	RJ-45 Ethernet communication port
4	Tamper switch. Attach the tamper bracket to the mounting surface when enclosure is installed on the wall.
5	Power supply (EU model shown) Note: For Australia/New Zealand, use model SOY-1800222AU.
6	Sealed, lead-acid battery (12V/7 Ah or 12V/17Ah maximum)

Note: For Australia/New Zealand installations the adapter is mounted outside the enclosure.

Installing and wiring the battery

This section describes how to install and wire the battery for the IQ Pro and IQ Pro P.

Installing the battery for the IQ Pro

To install the 12 VDC, 4 Ah, 7Ah or 14Ah (2 x 7Ah) or 17 Ah battery in the IQ Pro metal enclosure, complete the following step.

- Place the battery on the bottom of the metal enclosure.

Wiring the battery for the IQ Pro

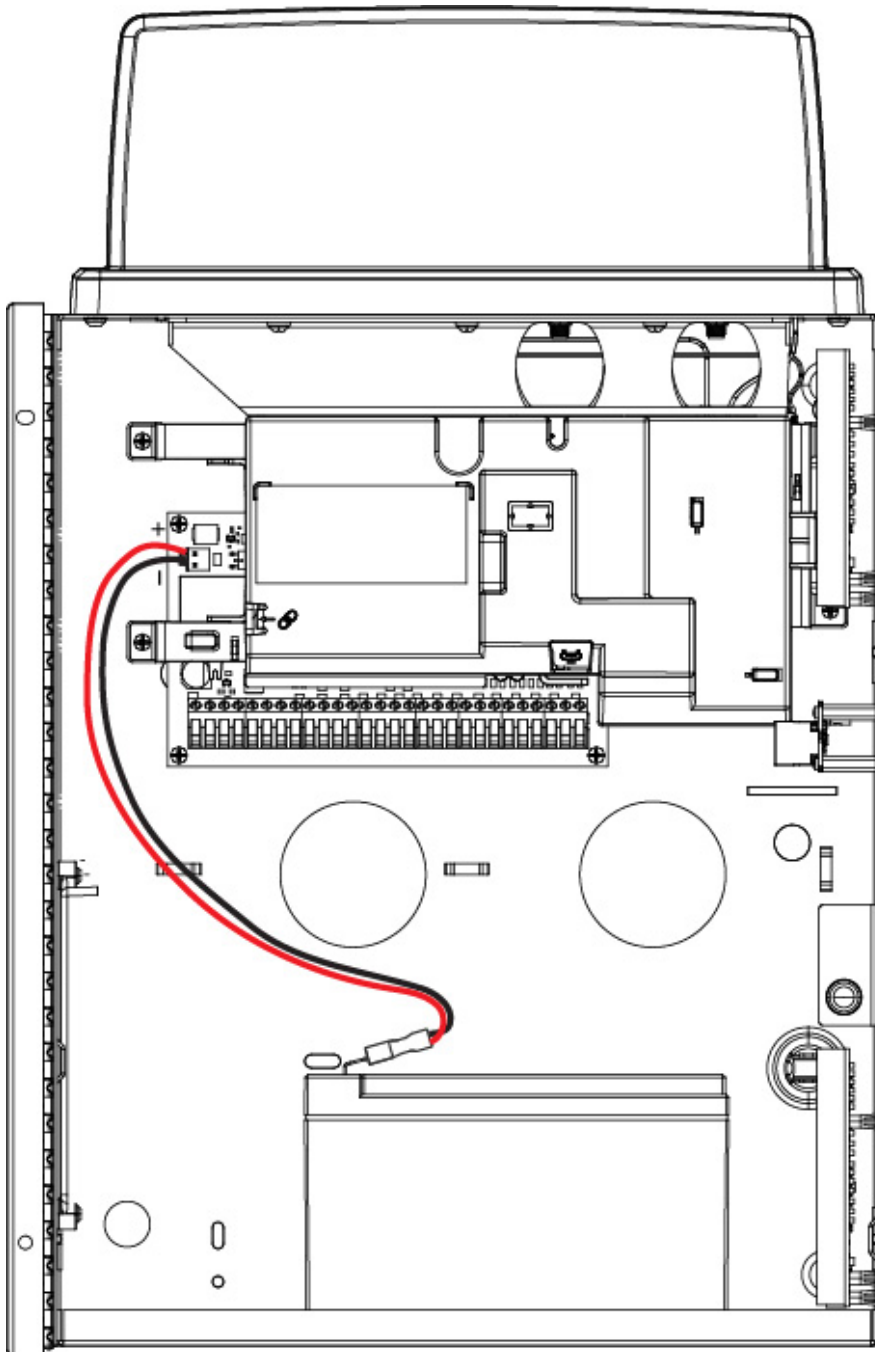
Note: Do not connect the battery until all other wiring is complete.

Note: A sealed, rechargeable, lead acid battery or gel type is required to meet UL requirements for power standby times. Replace the battery every 3 to 5 years.

To wire the battery for the IQ Pro, complete the following steps.

1. Connect the red battery lead to the positive + terminals on the PCB and the battery.
2. Connect the black battery lead to the negative - terminals on the PCB and the battery.

Figure 27: IQ Pro battery wiring



- ① **Note:** You must maintain a minimum separation of 6.4 mm (0.25 in.) at all points between non-power limited battery wiring and all other power limited wiring connections. Do not route any wiring over circuit boards. You must maintain a minimum separation of 25.4 mm (1 in.) between all wiring and the PCB.

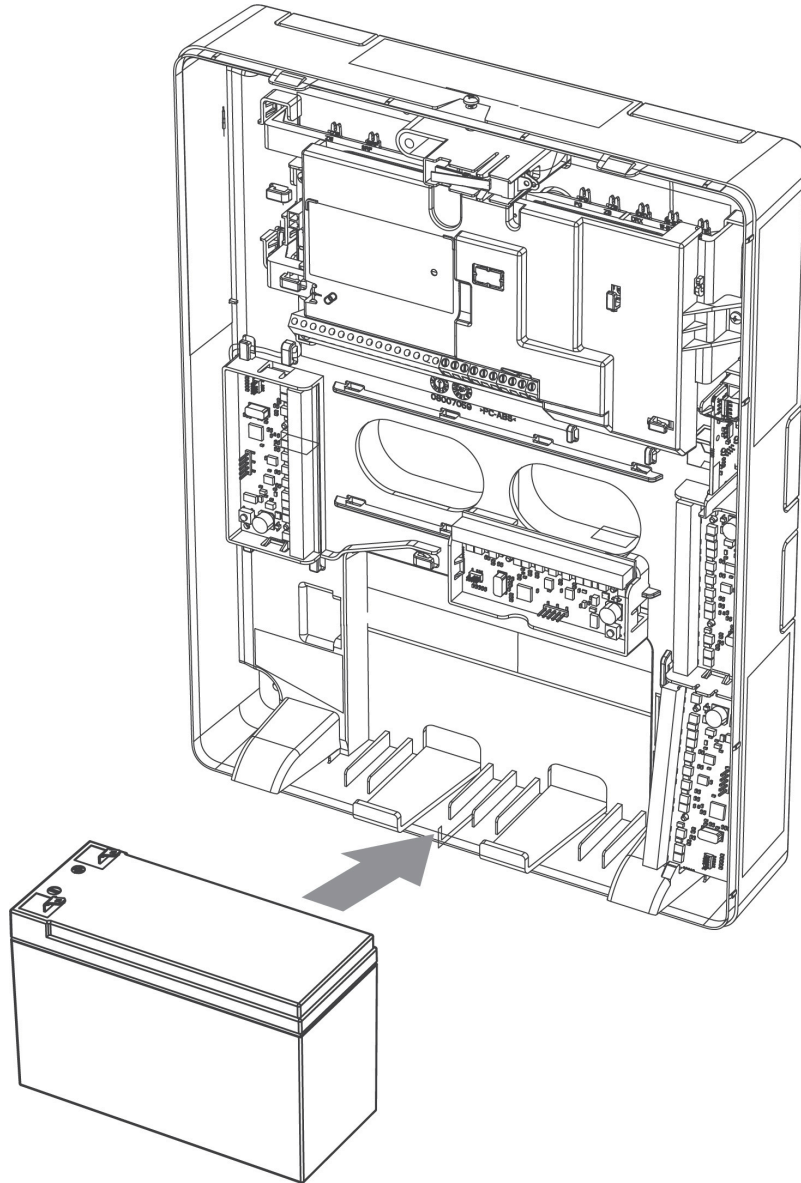
Installing the battery for the IQ Pro P

To install the 12 VDC, 4 Ah or 7 Ah battery in the enclosure, complete the following steps.

① **Note:** The battery is sold separately.

1. Place the battery on the two plastic supports on the bottom of the enclosure.
2. Clip the battery in place.

Figure 28: Installing the IQ Pro P battery



3. **Optional:** The battery can also be secured in place using a battery strap. To secure the battery using the battery strap, complete the following steps:

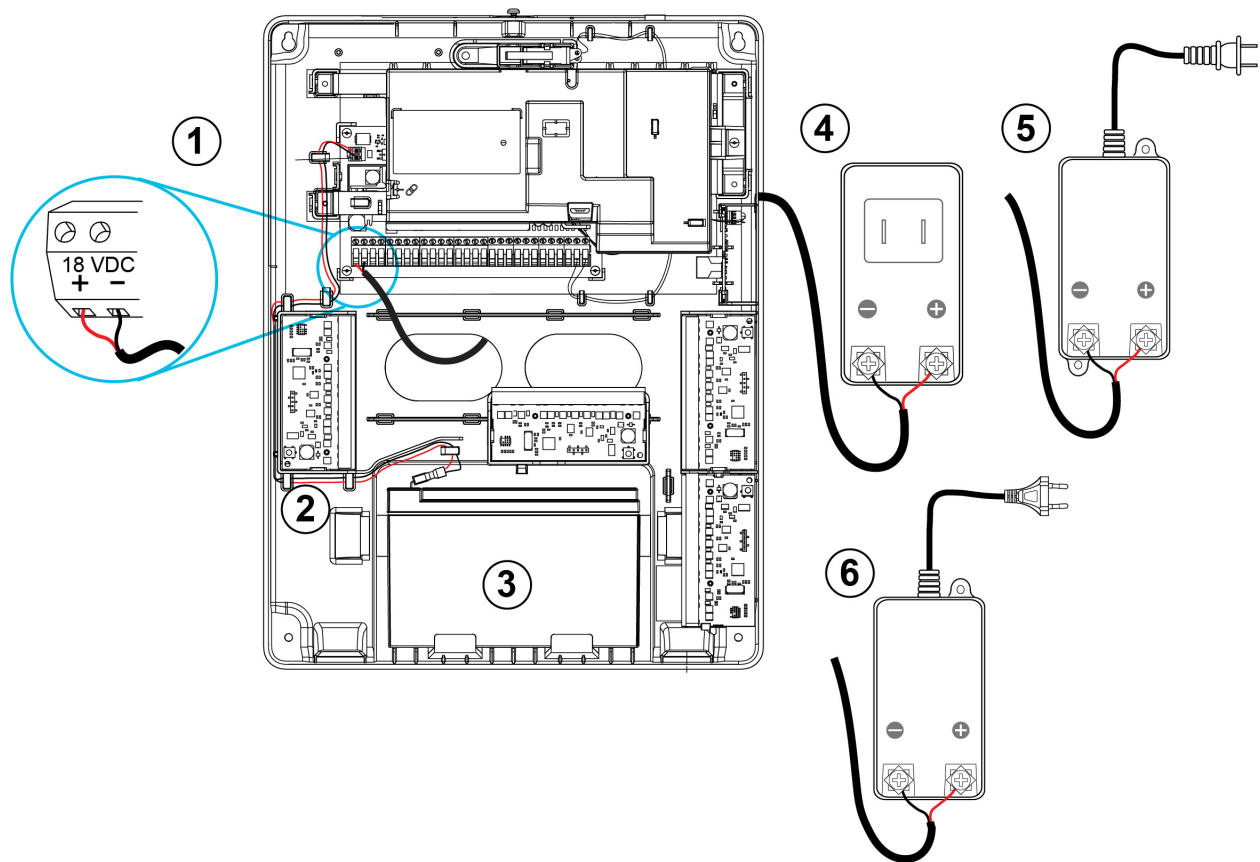
① **Note:** The battery strap is sold separately.

- a. Place the battery on the two plastic supports on the bottom of the enclosure.
- b. Insert the battery strap through one of the slots.
- c. Wrap the strap around the front of the battery.
- d. Insert the strap through the second slot.

Wiring the battery for the IQ Pro P

1. Connect the red battery lead to the positive + terminals on the PCB and the battery.
 2. Connect the black battery lead to the negative - terminals on the PCB and the battery.
- **Important:** You must maintain a minimum separation of 6.4 mm (0.25 in.) at all points between non-power limited battery wiring and all other power limited wiring connections. Do not route any wiring over circuit boards. You must maintain a minimum separation of 25.4 mm (1 in.) between all wiring and the PCB.

Figure 29: Connecting power to the IQ Pro P



Callout	Description
1	Connect power adapter to the 18 VDC.
2	Battery wiring
3	4 Ah, 14 Ah, or 17 Ah battery
4	HS40WPSA power adapter, plug-in type (N.A. only)
5	HS40WPSNA power adapter, with cord and AC plug (N.A. only)
6	SOY-1800222EU power adapter (EU only). Use model SOY-1800222AU for Australia and New Zealand.

Aux loading and battery selection

Table 29: IQ Pro (North America)

PCB current draw 120 mA alarm current 700 mA	UL Resi Burg ULC Resi Burg (ULC Security Level I)	UL Com Burg	UL Resi Fire UL Home Health Care ULC Resi Fire ULC Com Burg (ULC Security Level II)	UL Resi Fire with Wired CO Det. UL985 6th Ed (*)
Standby Time and Alarm Time	4 h + 4 min 4 h + 5 min	4 h + 15 min	24 h + 4 min 24 h + 5 min 24 h + 4 min	24 h + 4 min + 12 h CO alarm
Enclosure	IQ Pro metal enclosure			
Power supply adapter	HS40WPSNA or HS40WPSA			
Battery capacity /max loading Note: 14Ah (2x 7Ah batteries in parallel)	4 Ah/430 mA 7 Ah/700 mA 14 Ah/700 mA 17 Ah/700 mA	4 Ah/430 mA 7 Ah/700 mA 14 Ah/700 mA 17 Ah/700 mA	7 Ah/130 mA 14 Ah/430 mA 17 Ah/530 mA	14 Ah/250 mA 17 Ah/310 mA
Recharging current setting Low setting (350mA) (for 4Ah and 7Ah batteries) High setting (700mA) (for 14Ah/17Ah batteries)	Low or High	Low or High	Low or High	High

Table 30: IQ Pro (Europe, Australia, New Zealand)

PCB current draw 120mA (140 mA with Ethernet connected) Alarm current 700 mA	EN50131 Grade 2	EN50131 Grade 2	EN50131 Grade 2/ T031 (Incert)
Battery capacity/Aux loading	7 Ah / 400 mA	17 Ah / 560 mA	17 Ah / 500 mA
Power supply adapter*	HS40WPS	HS40WPS	HS40WPS
Standby time	12 hours	12 hours	24 hours
Recharging current setting	Low (350 mA)	High (700 mA)	High (700 mA)
Enclosure	IQ Pro metal enclosure		

ⓘ **Note:** For Australia / New Zealand use model SOY-1800222AU.

* IQ Pro can be used in conjunction with compatible 4-wire CO detectors or wireless CO Detectors.

Table 31: IQ Pro P (North America)

PCB current draw 120 mA (140 mA with Ethernet connected) Alarm current 700 mA	UL Resi Burg ULC Resi Burg (ULC Security Level I)	UL Com Burg	UL Resi Fire UL Home Health Care ULC Resi Fire ULC Com Burg (ULC Security Level II)	UL Resi Fire with Wireless CO Det. UL985 6th Ed (*)
Standby time and alarm time	4 h + 4 min 4 h + 5 min	4 h + 15 min	24 h + 4 min 24 h + 5 min 24 h + 4 min	24 h + 4 min + 12 h CO alarm
Enclosure	IQ Pro P plastic enclosure			
Power supply adapter	HS40WPSNA or HS40WPSA			
Battery capacity /max loading	4 Ah/430 mA 7 Ah/700 mA	4 Ah/430 mA 7 Ah/700 mA	7 Ah/130 mA	7 Ah/130 mA
Recharging current setting Low setting (350mA) (for 4Ah and 7Ah batteries)	Low	Low	Low	Low

*Only use IQ Pro P in conjunction with compatible wireless CO Detectors.

Table 32: IQ Pro P (Europe)

PCB current draw 120 mA (140 mA with Ethernet) Alarm current 700 mA	EN50131 Grade 2
Battery capacity/AUX loading	7 Ah / 400 mA
Power supply adapter	SOY-18000222EU
Standby time	12 hours
Recharging current setting	Low (350 mA)
Enclosure	IQ Pro P plastic enclosure

Standby battery guide

After calculating the battery capacity for each specific installation, use the Standby battery guide table to determine the battery required to support the main control panel in standby mode for:

- 4 hours (UL/ULC residential burglary, ULC commercial burglary)
- 24 hours (UL/ULC residential fire, UL home health care, ULC commercial burglary, ULC residential fire with wired CO detectors UL985 6th Ed, ULC, fire commercial monitoring- no bell load allowed.
- The current values in the table denote the maximum current draw to achieve the preferred standby time with the listed battery types. The battery size is measured in amp hours (Ah).

Table 33: Standby battery guide

Battery size (Ah)	Preferred standby time (hours)		
	4 h	24 h	24 h + 12 h CO
4 Ah	430 mA	N/A	N/A
7 Ah	700 mA	130 mA	130 mA
14 Ah (2x7)*	700 mA	430 mA	250 mA
17 Ah	700 mA	530 mA	310 mA

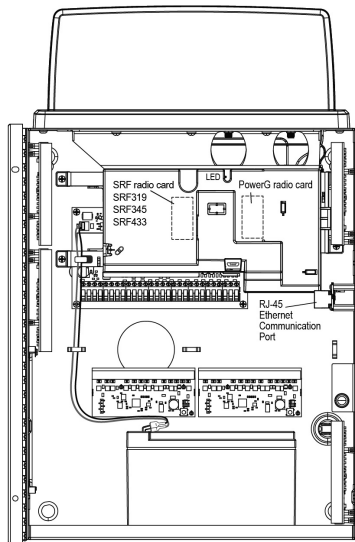
* Use 2 x 7 Ah batteries connected in parallel, UL/ULC installations only.

IQ Pro / IQ Pro P system wiring diagrams

IQ Pro system wiring

Figure 30: IQ Pro system wiring (North America)

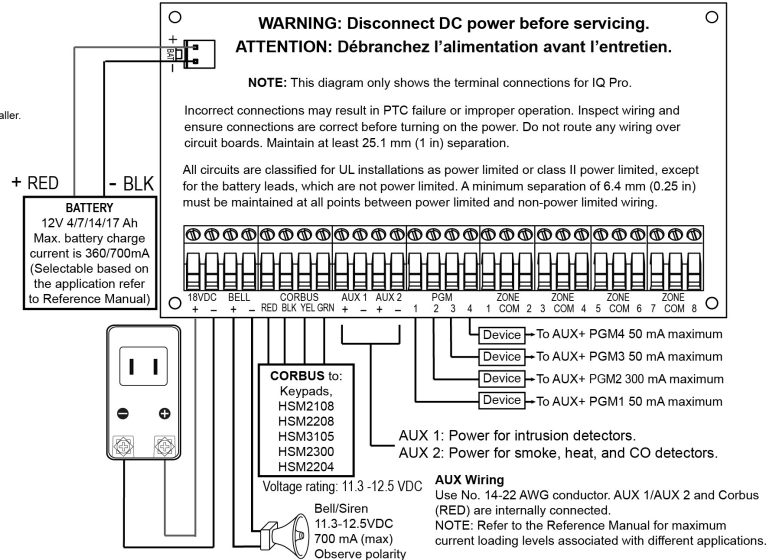
Applicable UL/ULC Standards UL File No. S4019
 UL985 Household Fire Warning System Units
 UL1023 Household Burglar Alarm System Units
 UL2610 Commercial Premises Security Alarm Units and Systems
 UL1637 Home Health Care Signaling Equipment
 ULC-S545 Standard for Residential Fire Warning System Control Units
 CAN/ULC-S304 Standard for Control Units, Accessories and Receiving Equipment for Intrusion Alarm Systems, Security Level I - II
NOTE: For UL1637 applications, installation must only be done by a trained installer. Install the equipment in the protected area of the protected premises. The wiring methods shall be in accordance with NFPA72, the National Electrical Code, ANSINFPFA 70, the Standard for Installation and Classification of Burglar and Holdup Alarm Systems, UL 681, ULC-S302, and the Standard for Central Station Alarm Services, UL 827. This equipment should be installed in accordance with Chapter 29 of the National Fire Alarm and Signaling Code, ANSINFPFA 72, (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269). This device complies with Part 15 of the FCC Rules and ISED Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.



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, ANSINFPFA 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 UL985 compliance, at least one smoke detector is required. Test the system at least once a week. The system is intended to be checked by a qualified technician at least every 3 years. For UL 1637 installations, the test must also be performed without AC, using the standby battery.
 Temperature range: 0°C-49°C (32°F-120°F) / Maximum Humidity: 93% R.H.
 The IQ Pro/IQ Pro P are 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 11.3-12.5VDC. The DSC Bravo series are recommended UL listed motion detectors.
 Compatible system keypads: HS2LCD(P), HS2LCDRF(P)9, HS2LCDWF(V)(P)9.

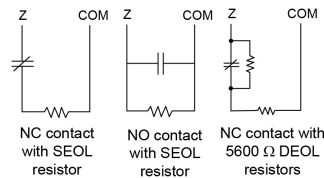
This control panel is suitable for the following UL installations:
 UL/ULC Residential Fire and Burglary
 UL Home Health Care Control Unit
 UL Central Station, Police Station, Mercantile Safe and Vaults Control Unit
 ULC Security Level I, II

Signaling Means
 PSDN (UL Standard/Encrypted Line Security and ULC Passive P1/Active A1-3), use with Internal Ethernet/Wi-Fi/Cellular communicator.

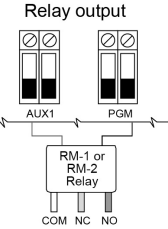


UL and ULC installations:
 Primary: 120 VAC/40VA/60Hz
 Secondary: 18 VDC, 2.2 A.
 Power Adapter DSC part: HS40WPSA (plug-in), HS40WPSNA.
NOTE: Do not connect the power adapter to a receptacle controlled by a switch.

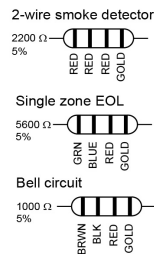
Typical zone circuits



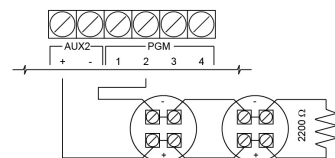
PGM connections



Resistor identification



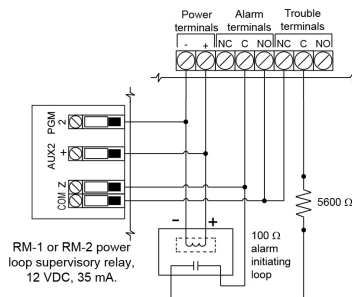
2-wire smoke detectors



Compatibility identifier: PG9WLSHW8-1
 Maximum operating voltage: 13.8 VDC
 Maximum circuit resistance: 24 Ω
 Maximum number of detectors: 18
Note: Do not use smoke detectors from different manufacturers on the same circuit as their operation may be impaired.

Compatible 2-wire smoke detectors:
 C2W-BA (ULC) 2W-B (UL)
 C2WT-BA (ULC) 2WT-B (UL)
 C2WTA-BA (ULC) 2WTA-B (UL)

4-wire smoke/heat/CO detectors

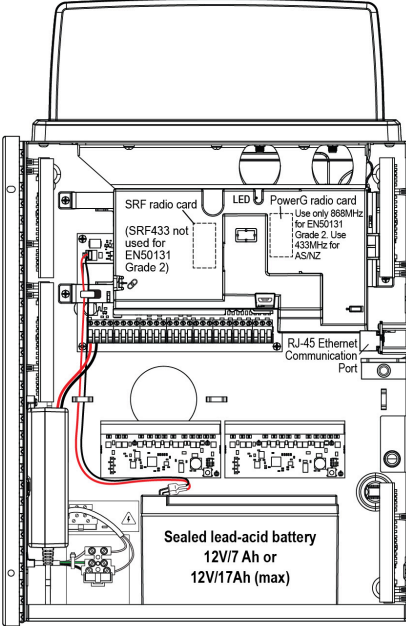


The type of smoke detector must be latching. To reset the smoke detector, refer to the panel installation manual.
Note: To locate smoke detectors, refer to the system installation manual and smoke detector installation manual.

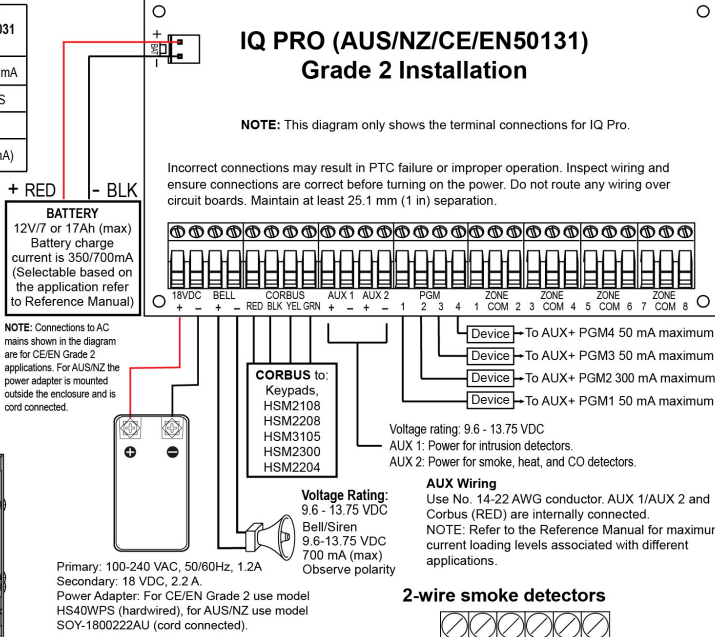
Figure 31: IQ Pro system wiring (EU)

IQ PRO PCB current draw=120 mA* alarm current=700mA	EN50131 Grade 2	EN50131 Grade 2	EN50131 Grade 2/T031 (Incert)
Battery capacity/aux loading	7 Ah / 400 mA	17 Ah / 560 mA	17 Ah / 500 mA
Power supply adapter	HS40WPS	HS40WPS	HS40WPS
Standby time	12 hours	12 hours	24 hours
Recharging current setting	Low (350mA)	High (700mA)	High (700mA)

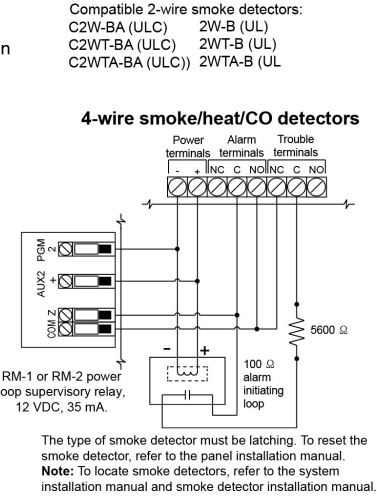
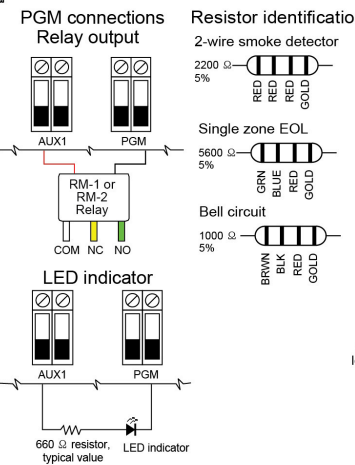
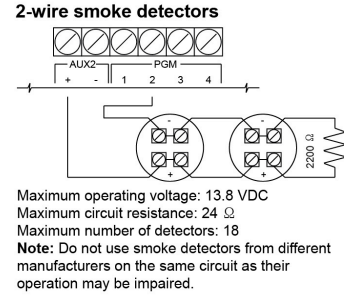
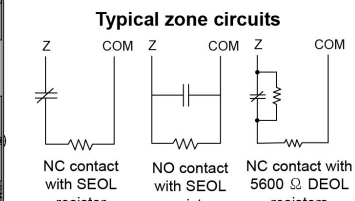
(140mA with Ethernet connected)
Temp. Range: -10°C to +55°C/Max. Humidity: 95% R.H. (non-condensing).
For detailed installation and operating instructions, see Installation Guide p/n 29011132. Security detection devices that require power from the control panel must be certified for the intended application and operate over the range of 9.8-14VDC. Compatible keypads: IQ Remote, IQ Remote PG, HS2LCD, HS2LCDP, HS2LCDR(x), HS2LCDRFP(x), HS2LCDWF(x), HS2LCDWFP(x), HS2LCDWFPV(x). Notification method: Bell output and/or Integral Ethernet/Wi-Fi/Cellular communicator.



- WARNING: Not to be removed by anyone except occupant.**
Printed information describing proper installation, operation, testing, maintenance, evacuation planning and repair service is to be provided with this equipment. Test the system at least once a week. The system is intended to be checked by a qualified technician at least every 3 years.
- This equipment, IQ PRO, shall be installed and used within an environment that provides the pollution degree Max 2 and overvoltages Category II non-hazardous indoor locations only. The equipment is fixed, permanently connected and is designed to be installed by skilled persons only. Skilled person is a term applied to persons who have training or experience in the equipment technology, particularly in knowing the various energies and energy magnitudes used in the equipment. Skilled persons are expected to use their training and experience to recognize energy sources capable of causing pain or injury and to take action for protection from injury from those energies.
 - The connection to the mains supply must be made as per the local authorities' rules and regulations; in the U.K. as per BS6701. An appropriate disconnect device must be provided as part of the building installation. Where it is not possible to rely on the identification of the neutral in the AC mains supply, the disconnecting device must disconnect both poles simultaneously (line and neutral). The device shall disconnect the power supply during service.
 - For AUS/NZ the connection to the mains supply is made using the cord and plug provided with the power adapter. Use the plug on the supply cord as a means of disconnection from the mains.
 - The equipment enclosure must be secured to the building structure before operation.
 - Internal wiring must be routed in a manner that prevents excessive strain on wire and on terminal connections, loosening of terminal connections and damage of conductor insulation.
 - Disposal of the used batteries shall be made according to the waste recovery and recycling regulations applicable to the intended market.
 - All unused mounting holes on the left and right side of the metallic enclosure shall be covered with plastic plugs provided with the product (P/N 12000931).



Install bracket with Tamper switch for cover and removal from wall protection

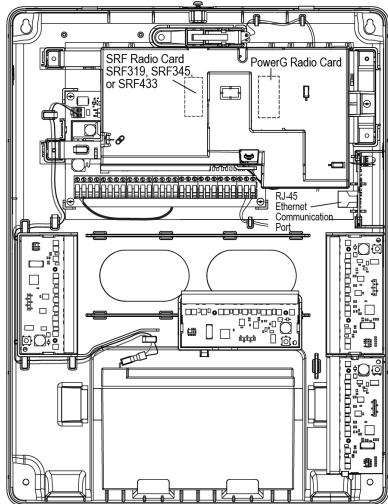


IQ Pro P system wiring

Figure 32: IQ Pro P system wiring (North America)

Applicable UL/ULC Standards UL File No. S4019
 UL985 Household Fire Warning System Units
 UL1023 Household Burglar Alarm System Units
 UL2610 Commercial Premises Security Alarm Units and Systems
 UL1637 Home Health Care Signaling Equipment
 ULC-S545 Standard for Residential Fire Warning System Control Units
 CAN/ULC-S304 Standard for Control Units, Accessories and Receiving Equipment for Intrusion Alarm Systems, Security Level I - II
NOTE: For UL1637 applications, installation must only be done by a trained installer.

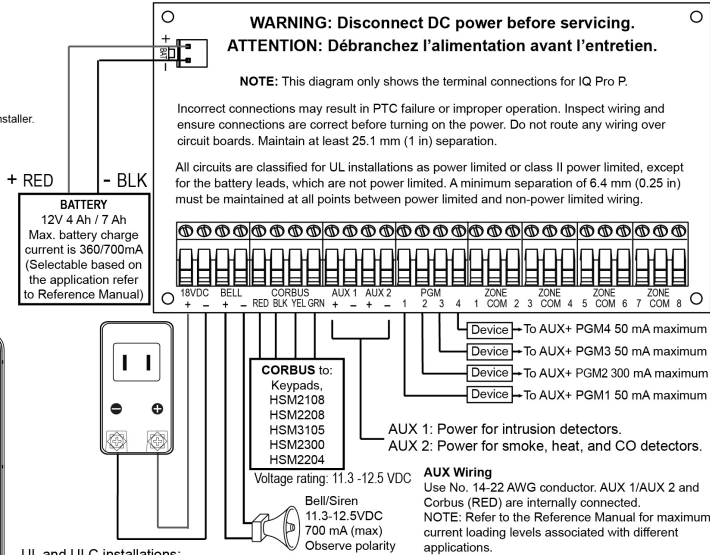
Install the equipment in the protected area of the protected premises. The wiring methods shall be in accordance with NFPA72, the National Electrical Code, ANSI/NFPA 70, the Standard for Installation and Classification of Burglar and Holdup Alarm Systems, UL 681, ULC-S302, and the Standard for Central Station Alarm Services, UL 627. 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). This device complies with Part 15 of the FCC Rules and ICSED Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.



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 UL985 compliance, at least one smoke detector is required. Test the system at least once a week. The system is intended to be checked by a qualified technician at least every 3 years. For UL 1637 installations, the test must also be performed without AC, using the standby battery.
 Temperature range: 0°C-49°C [32°F-120°F] / Maximum Humidity: 93% R.H.
 The IQ Pro/IQ Pro P are 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 11.3-12.5VDC. The DSC Bravo series are recommended UL listed motion detectors. Compatible system keypads: HS2LCD(P), HS2LCDRF(P)9, HS2LCDWF(V)(P)9.

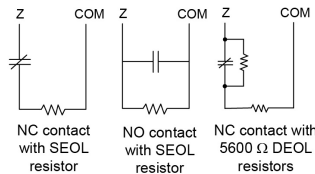
This control panel is suitable for the following UL installations:
 UL/ULC Residential Fire and Burglary
 UL Home Health Care Control Unit
 UL Central Station, Police Station, Mercantile Safe and Vaults Control Unit
 ULC Security Level I, II

Signaling Means
 PSDN (UL Standard/Encrypted Line Security and ULC Passive P1/Active A1-3), use with Internal Ethernet/Wi-Fi/Cellular communicator.

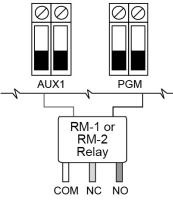


UL and ULC installations:
 Primary: 120 VAC/40VA/60Hz
 Secondary: 18 VDC, 2.2 A.
 Power Adapter DSC part: HS40WPSA (plug-in), HS40WPSNA.
Note: Do not connect the power adapter to a receptacle controlled by a switch.

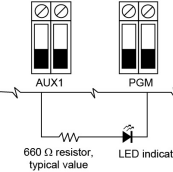
Typical zone circuits



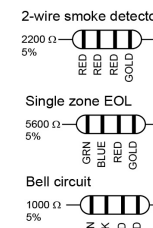
PGM connections Relay output



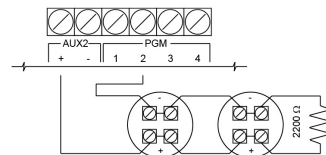
LED indicator



Resistor identification



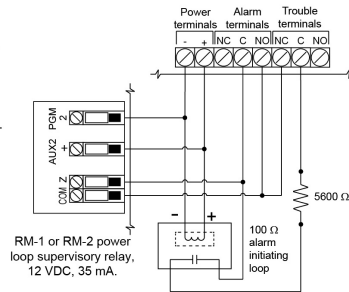
2-wire smoke detectors



Compatibility identifier: PG9WLSHW8-1
 Maximum operating voltage: 13.8 VDC
 Maximum circuit resistance: 24 Ω
 Maximum number of detectors: 18
Note: Do not use smoke detectors from different manufacturers on the same circuit as their operation may be impaired.

Compatible 2-wire smoke detectors:
 C2W-BA (ULC) 2W-B (UL)
 C2WT-BA (ULC) 2WT-B (UL)
 C2WTA-BA (ULC) 2WTA-B (UL)

4-wire smoke/heat/CO detectors



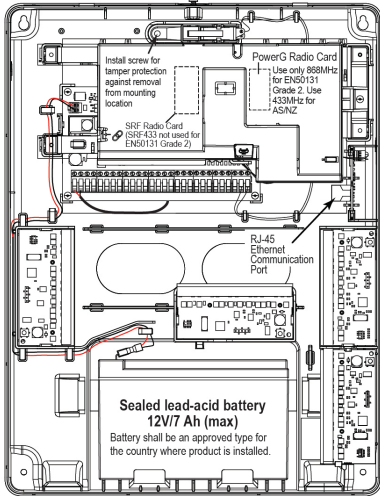
The type of smoke detector must be latching. To reset the smoke detector, refer to the panel installation manual.
Note: To locate smoke detectors, refer to the system installation manual and smoke detector installation manual.

Figure 33: IQ Pro P system wiring (EU)

IQ PRO P PCB Current draw = 120 mA* Alarm current = 700mA	EN50131 Grade 2
Battery capacity/max loading	7 Ah / 400 mA
Power supply adapter	SOY-1800222EU
Standby time	12 hours
Recharging Current Setting	Low (350mA)

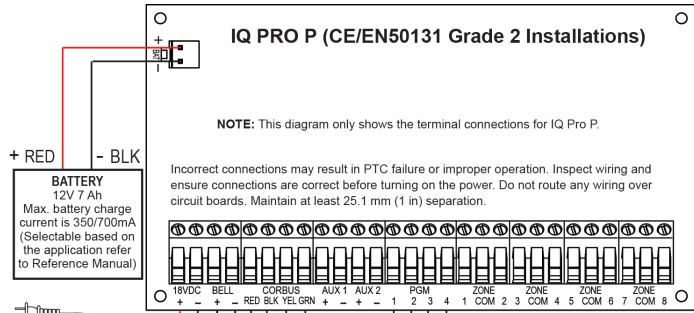
*140 mA with Ethernet.

Temperature Range: -10°C to +55°C / Maximum Humidity: 95% R.H. (non-condensing). CAUTION: For detailed installation and operating instructions, refer to the Installation Guide pin 29011132. Security detection devices that require power from the control panel must be certified for the intended application and operate over the range of 9.8-14VDC. Compatible keypads: IQ Remote, IQ Remote PG, HS2LCD, HS2LCDP, HS2LCDRF(x), HS2LCDRFP(x), HS2LCDWF(x), HS2LCDWFP(x), HS2LCDWFPV(x). Notification method: Bell output and/or Integral Ethernet/Wi-Fi/Cellular communicator.



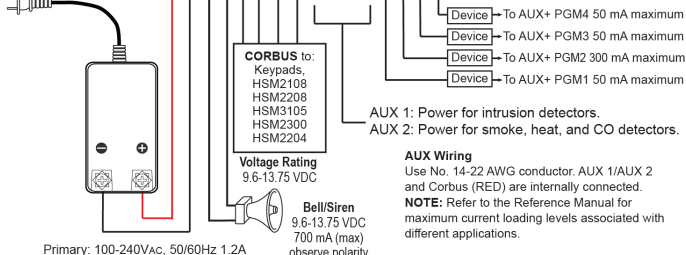
WARNING: Not to be removed by anyone except occupant. Printed information describing proper installation, operation, testing, maintenance, evacuation planning and repair service is to be provided with this equipment. Test the system at least once a week. The system is intended to be checked by a qualified technician at least every 3 years.

- This equipment, IQ Pro P, shall be installed and used within an environment that provides the pollution degree Max 2 and overvoltages Category II non-hazardous indoor locations only. The equipment is designed to be installed by skilled persons only. Skilled person is a term applied to persons who have training or experience in the equipment technology, particularly in knowing the various energies and energy magnitudes used in the equipment. Skilled persons are expected to use their training and experience to recognize energy sources capable of causing pain or injury and to take action for protection from injury from those energies.
- Regarding the IQ Pro P model, the connection to the mains supply must be made as per the local authorities' rules and regulations. The power supply is installed external to the IQ Pro P enclosure and shall be fixed on the wall before powering the system. The socket-outlet to which the power supply is connected, shall be installed near the equipment and shall be easily accessible. The installer shall instruct the end-user to never obstruct the access to the socket-outlet where the IQ Pro P is powered from. The plug on the power supply cord is intended to serve as the disconnect device from the mains.
- The equipment enclosure must be secured to the building structure before operation.
- Internal wiring must be routed in a manner that prevents:
 - Excessive strain on wire and on terminal connections
 - Loosening of terminal connections
 - Damage of conductor insulation
- Disposal of the used batteries shall be made according to the waste recovery and recycling regulations applicable to the intended market.



NOTE: This diagram only shows the terminal connections for IQ Pro P.

Incorrect connections may result in PTC failure or improper operation. Inspect wiring and ensure connections are correct before turning on the power. Do not route any wiring over circuit boards. Maintain at least 25.1 mm (1 in) separation.

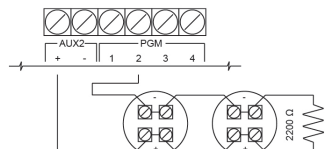


Primary: 100-240VAC, 50/60Hz 1.2A
Secondary: 18 VDC, 2.2 A
Power Adapter DSC part: SOY-1800222EU
Note: Use appropriate power adapter with proper plug, certified for country where product is installed.

- Device → To AUX+ PGM4 50 mA maximum
 - Device → To AUX+ PGM3 50 mA maximum
 - Device → To AUX+ PGM2 300 mA maximum
 - Device → To AUX+ PGM1 50 mA maximum
- AUX 1: Power for intrusion detectors.
AUX 2: Power for smoke, heat, and CO detectors.

AUX Wiring
Use No. 14-22 AWG conductor. AUX 1/AUX 2 and Corbus (RED) are internally connected.
NOTE: Refer to the Reference Manual for maximum current loading levels associated with different applications.

2-wire smoke detectors

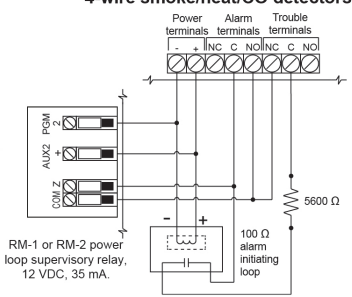


Maximum operating voltage: 13.8 VDC
Maximum circuit resistance: 24 Ω
Maximum number of detectors: 18

Note: Do not use smoke detectors from different manufacturers on the same circuit as their operation may be impaired.

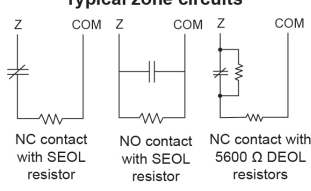
- Compatible 2-wire smoke detectors:
C2W-BA (ULC) 2W-B (UL)
C2WT-BA (ULC) 2WT-B (UL)
C2WTA-BA (ULC) 2WTA-B (UL)

4-wire smoke/heat/CO detectors

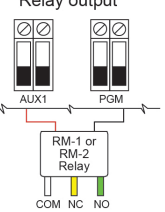


RM-1 or RM-2 power loop supervisory relay, 12 VDC, 35 mA.
The type of smoke detector must be latching. To reset the smoke detector, refer to the panel installation manual.
Note: To locate smoke detectors, refer to the system installation manual and smoke detector installation manual.

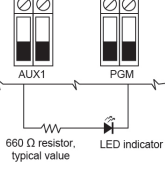
Typical zone circuits



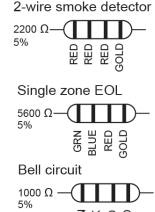
PGM connections



LED indicator



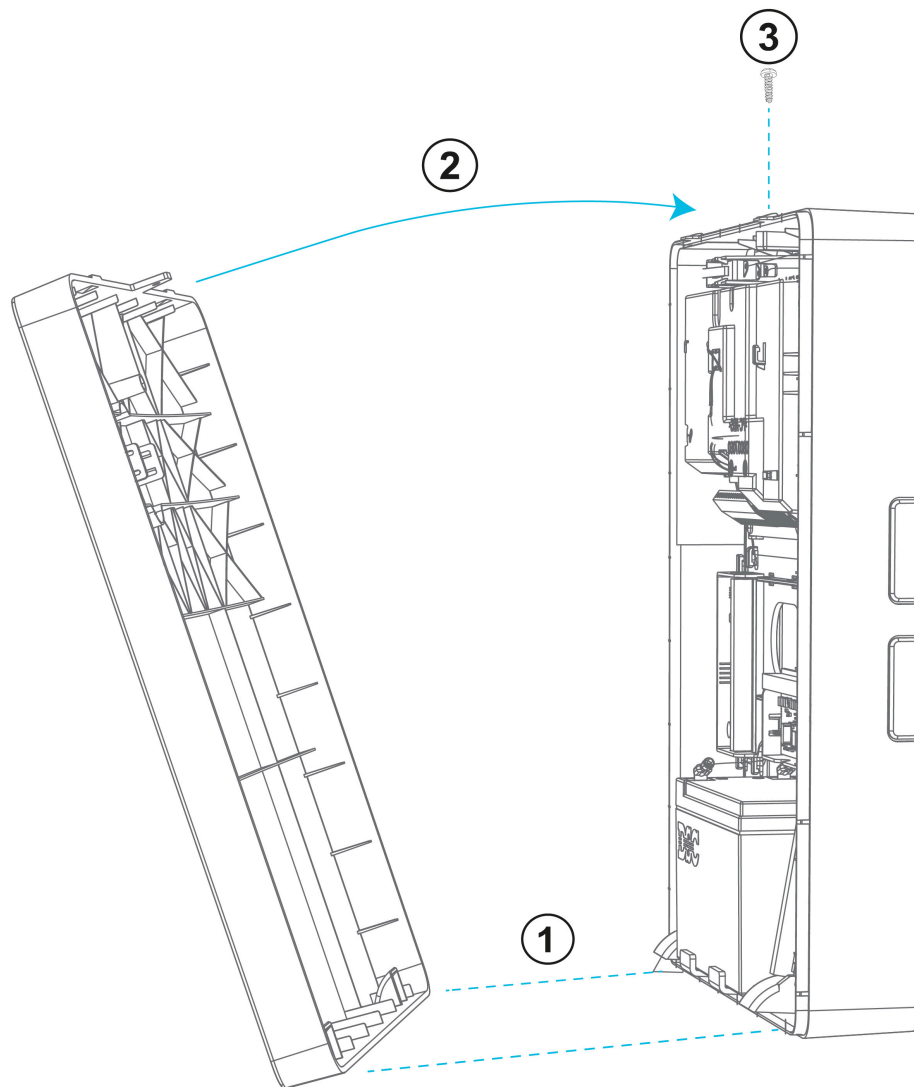
Resistor identification



Attaching the cover for the IQ Pro P

To attach the front cover to the enclosure, follow the numbered steps.

Figure 34: Attaching the cover



Installing extension antennas

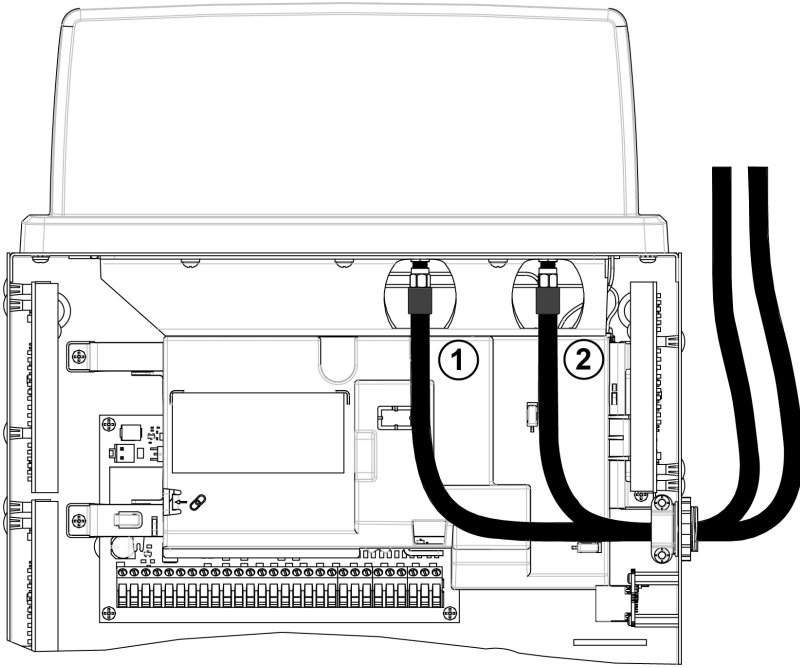
Extension antennas can be installed to increase the signal strength received by the communicator modules.

To install the extension antennas complete the following steps.

1. Insert extension antenna cables through the knockout on the side of the enclosure.
2. Connect the cable SMA to the appropriate SMA connector on the antenna board.

① **Note:** The internal LTE primary and diversity antenna automatically switches to the extension antenna.


① **Note:** Refer to the associated antenna instruction sheet for more details.



Callout	Description
1	Diversity antenna
2	Main antenna

Installer app programming

All system configuration can be performed using the IQ Installer App. To download the app, scan the appropriate bar code.

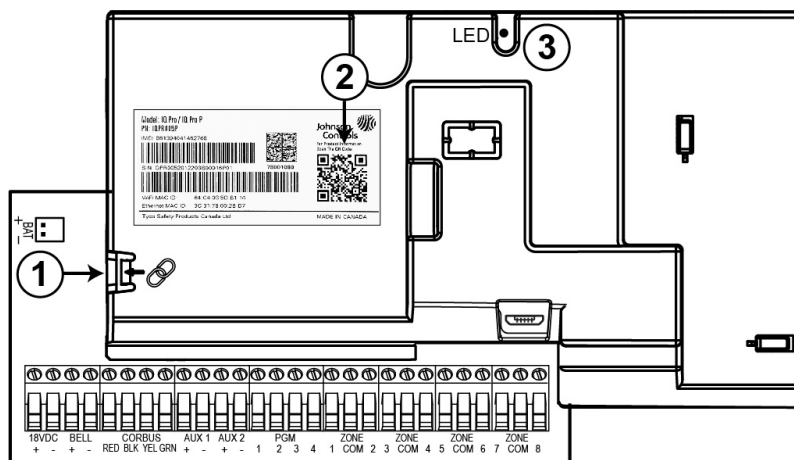
Use the IQ Local Installer interface to program your IQ Pro. Available for download on iOS and Android, compatible with IQ Pro version 4.2.1 and above.	
	
IQ Local Installer interface or (full launch) QR Codes	
Apple App Store	Android Play Store
	

Connecting to the IQ Pro panel

Before you begin:

Download the Android or IOs version of the IQ Installer app onto your phone, ensure Wi-Fi is turned on.

Figure 35: Pairing tab



Callout	Description
1	Pairing tab. Press for 1 to 2 seconds when prompted on IQ Installer App.
2	Scan QR code indicated.
3	Green LED. When pairing tab is pressed the LED flashes red, then flashes blue.

Note: Active IQ Installer connection will inhibit arming during Local Programming.

Use the IQ installer app to connect to the IQ Pro panel and complete panel setup. To connect complete the following steps.

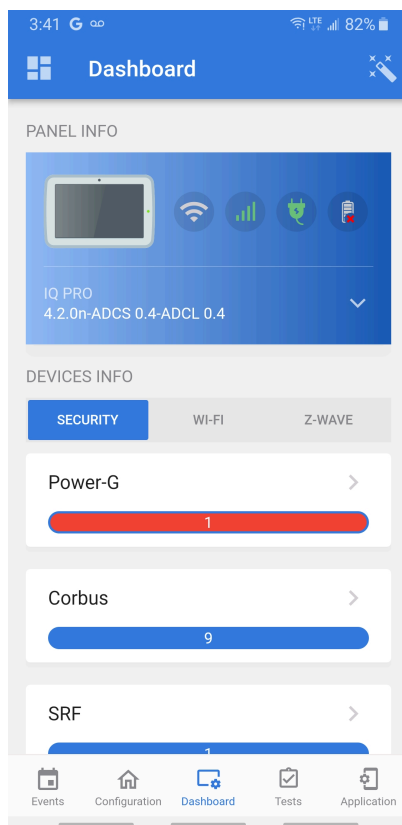
1. Open the IQ installer app, tap **Start** on the screen to begin.
2. Tap **Scan QR Code**, then position your phone to scan the product information QR code inside the enclosure.
3. Tap **Continue**.
4. Press and hold the pairing tab on the PCB cover for one second, or until the green LED flashes red.
5. When the LED flashes blue, tap **Next** on the screen.
6. Enter the default installer code to connect.
7. When prompted, change the default code to a new installer code.
8. Select **Dashboard** at the bottom of the screen, then tap the **Launch Wizard** icon in the top right corner to initiate a step-by-step guide to configuring the IQ Pro system.

Connecting installer app using local Wi-Fi router

Installer can connect their installer app to the panel using the home owner's local router. Manually select the correct SSID and enter password with home owner's permission.

Dashboard

Use **Dashboard** for easy access to system information and configuration screens.












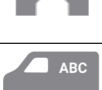
Wizard

Select the **Launch Wizard** icon in the top right corner to initiate a step-by-step guide to configuring the IQ Pro system.

Configuration

The following settings can be configured on the IQ Pro Security System.

Table 34: Configuration settings

Icon	Setting	Description
	User Management	The IQ Pro can save up to 1000 user access codes. Only Dealer, Installer and Master codes can create or edit user access codes.
	Installation	Enroll devices, program and configure IQ Pro settings.
	About	View information about the IQ Pro system including battery status, software, hardware, Wi-Fi and more.
	Reboot	Resets the system if the panel is experiencing difficulties.
	Power Down	Turns off the system.
	Wi-Fi	Select to view if the system is connected to the Wi-Fi network.
	Sound	Enable/disable chime, trouble beeps and customize sounds.
	Upgrade Software	Upgrade the software version using Wi-Fi.
	Partitions	Create and edit partitions, view a list of users and sensors assigned to a partition. Note: Partitions must be enabled under Dealer Settings.
	Dealer Branding	Customize your dealer contact information here.

User Management

The IQ Pro can hold up to 1000 user codes. Only Dealer, Installer and Admin codes can create or edit user codes. When a code is created, information can be edited in User Management. To view or edit an access code complete the following.

1. Select **Configuration > User Management**.

2. Select a user type from the list.
3. Configure the fields on the screen.
4. Tap **Save** at the top-right corner of the screen.

User types

Table 35: User types

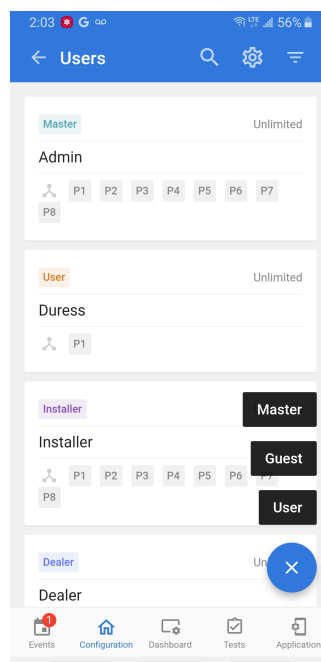
User type	Access level	Partition access
Dealer	All settings, including Master Reset and access to change Dealer Contact information	All partitions
Installer	All settings	All partitions
Master	All user-related features and settings, including connecting to Wi-Fi, User Management, Sound App and Sensors customization	All partitions
User	Arming/disarming	Only assigned partitions
Guest	Arming/disarming	Only assigned partitions
Duress	Disarming (sends duress signal to the monitoring station)	Each partition gets a unique duress code

Adding users

To add a user to the system, complete the following steps.

1. In the **Configuration > User Management** screen, tap the + icon on the bottom right of the screen.
2. Select one of the options **Master**, **Guest** or **User**. Inform user to change the default master code after the first use.
3. Configure the fields provided.
4. Tap **Save** at the top-right corner of the screen.

Example:



Deleting users

To delete a user complete the following steps.






1. Select **Configuration > User Management**.
2. Swipe left on the user you want to delete.
3. Tap the **Remove** icon to remove the user from the system.

Proximity tags

From the User Management page **Add Prox Tag** can be selected to add, assign users and delete a proximity tag if there is a proximity tag supporting keypad enrolled on system.

Installation settings

Table 36: IQ Installer installation settings

Icon	Setting	Description
	Devices	Add, edit or delete up to 128 devices.
	Dealer Settings	Change panel, zone or partitions settings.
	System Logs	Upload system logs or program auto-upload.
	Sirens and Alarms	Change siren and alarm settings for alarm events.
	Security and Arming	Change arming settings, entry/exit delays, bypass features and more.

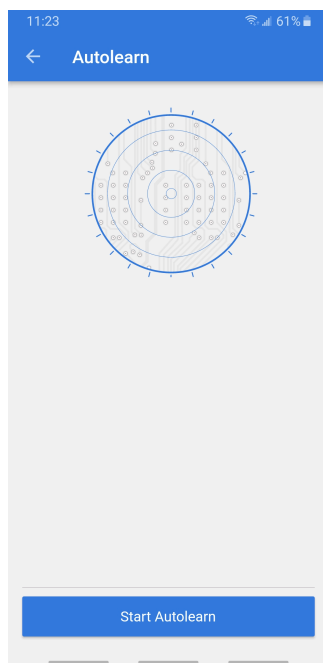
Devices

Configure sensors, Wi-Fi and Z-wave devices and programmable outputs. Access devices in **Configuration > Installation > Devices**.

Security sensors

Enroll and configure security devices in **Configuration > Installation > Security Sensors**.

Autolearn



Select **Autolearn** to automatically enroll a sensor.

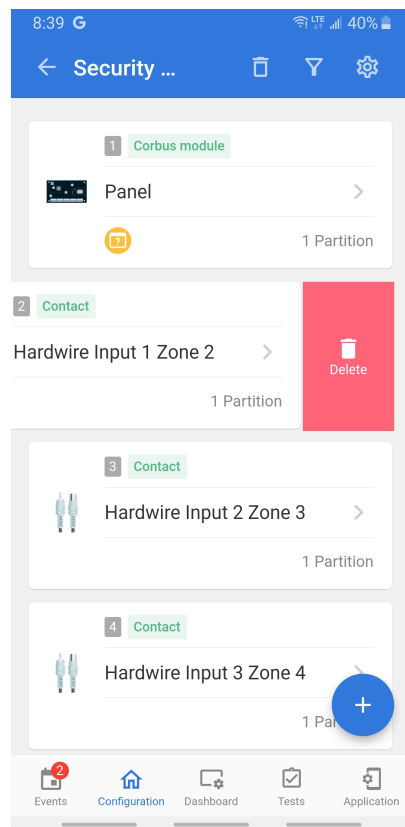
1. Tap the + symbol then select **Autolearn**.
2. Select **Start Autolearn**.
3. Open/close or tamper a sensor to enroll, or hold the enroll button until the LED flashes.
4. When the sensor is displayed, select to configure options.
5. Configure **Sensor Type, Sensor Group, Sensor Name, Partition, Chime Type, Sensor Input** and **Activation LED**.
6. Select **Save**.

Enrolling a sensor manually

To manually enroll a sensor, complete the following steps.

1. Select **Installation > Devices > Security Sensors**.
2. Tap the + key then select one of the manual options.
3. Enter the sensor ID and select **Save**.
4. Select sensor to configure options.

Deleting a sensor



To delete a sensor complete the following steps.

1. Select **Configuration > Installation > Devices > Security Sensors**.
2. Select the device you want to delete and swipe left.
3. Tap on the delete icon to remove the sensor from the system.

Configuring sensors

Table 37: Configuration options

Option	Description
Partition	When partitions are enabled you can assign a sensor to a specific partition. This allows independent control and arming of that partition.
Sensor Type	Select to choose a sensor type from the list.
Sensor Group	Change the behavior of the sensor by selecting the preferred option. Refer to Sensor groups to view descriptions of the available Sensor Groups .
Sensor Name	Tap to enter a custom description.
Chime Type	Configure each sensor to have a unique chime or select None to turn chime off.
Voice Prompts	Voice prompts announce the Sensor Name when it is opened. Default is on, select to turn off.
Cross Zone	When a zone with the Cross Zoning option enabled is activated, the Cross Zoning Timer commences. If another zone with the cross-zoning option enabled is activated before the timer expires, the panel reports the first alarm signal, a second alarm signal and then a Burglary Verified event begins the appropriate local alarm sequence. If no other zones are activated before the timer expires, no alarm sequence occurs and a Burglary Not Verified event is reported.
Anti-masking Options	Anti-masking enabled/disabled, available to PowerG device type 107, 123, 130, 142, 150.
Anti-masking Sensitivity	Disabled/low/high settings available to PowerG device type 123, 150.
Bypass	If enabled, the zone can be manually or auto-bypassed while arming. If disabled, the zone cannot be bypassed from local or remote user interface and a Failed to Arm message is displayed.
Sensor Input	Select Disabled, Normally Closed, Normally Open, End of Line, Double End of Line and Global if available for that sensor.
Source	View the sensor's incoming frequency when pairing to the IQ Pro. The IQ Pro is pre-installed with one or more of the following RF cards. <ul style="list-style-type: none"> • PowerG • SecurityRF • SecurityRF-319 • S-Line • SecurityRF-345 • 345RF 2G • SecurityRF-433 <p>① Note: PowerG modem radio cards are used also in UL/ULC listed Commercial burglary applications. SRF319, SRF433 (DSC Protocol), PowerG modem and SRF345 radio cards are used in UL/ULC listed Residential fire and burglary applications.</p>

Sensor groups

The IQ Pro system supports PowerG along with one legacy frequency (319.5 MHz, 345 MHz, or 433 MHz) depending which RF card is pre-installed. Sensor Group numbers and behaviors remain the same across all frequencies.

Assign a sensor group in **Configuration > Installation > Devices > Security Sensors**. Complete the following steps.

1. Select the device from the list or add new device. Refer to [Security sensors](#) for details.
2. Tap the **Edit** button.
3. Select **Sensor Group** from the list.
4. Select preferred sensor group.
5. Select the return arrow to save and exit.

Table 38: Door/Window

Group	Name	Supervised	Description
8	Reporting Safety Sensor	Y	This sensor reports to the central station and triggers an alarm when Activity Monitoring is active, regardless of system status.
9	Delayed Reporting Safety Sensor	Y	This sensor reports to the central station and triggers an alarm when Activity Monitoring is active, regardless of system status. This sensor has an entry delay.
10	Entry-Exit-Normal Delay	Y	Gives a period of time to exit the home or to disarm the system when returning before the alarm sounds.
11	Day Zone	Y	Commonly used in areas where immediate notification of entry is preferred. When disarmed, triggering this sensor activates the keypad buzzer but does not log or report the event. When armed, triggering this sensor activates the siren then logs and reports the event.
12	Entry-Exit-Long Delay	Y	Gives a period of time to exit the home or to disarm the system when returning before the alarm sounds. This can be a separate delay from the normal delay.
13	Instant Perimeter D/W	Y	Door or window that triggers an alarm instantly if system is armed.
14	Instant Interior Door	Y	An interior sensor that triggers an alarm instantly while armed in stay or away mode.
16	Away Instant Follower Delay	Y	Interior door that triggers alarm instantly when system is armed in away mode only.
25	Local Safety Sensor	Y	This sensor does not report or trigger an alarm. This is a chime-only sensor when Activity Monitoring is active, regardless of system status. For example, use for medicine cabinets or chemical storage.

① **Note:** 345 MHz door/window sensors have the option to change the loop number to 1 or 2. This enables the sensor to be programmed twice as 2 different zones.

Table 39: Motion

Group	Name	Supervised	Description
17	Away-Instant Motion	Y	Only active when armed in Away mode, triggers instantly when motion is detected.
15	Stay-Instant Motion	Y	Active in Stay or Away mode, triggers instantly when motion is detected.
20	Away-Delay Motion	Y	Active when armed in Away mode. Triggers an entry delay when motion is detected.
21	Night Motion	Y	Sensors programmed in Night Arm mode are bypassed. All other arming modes (Stay, Away, Disarmed) are active only when armed in Away mode, triggers instantly when motion is detected.
25	Safety Motion	Y	This sensor does not report or trigger an alarm. This is a chime-only sensor when Activity Monitoring is active, regardless of panel status. Use for medicine cabinets, storage or activity tracking.
35	Stay-Delay Motion	Y	Active in Stay or Away mode. Triggers an entry delay when motion is detected.
43	Away-Instant, Stay-Delay Motion	Y	Active in Stay or Away modes. During Away mode, triggers instantly when motion is detected. During Stay mode, triggers an entry delay when motion is detected.
44	Away- Instant Interior Motion	Y	Only active when armed in Away mode. Triggers instantly when motion is detected. Does not follow entry/exit delay rules and is always instant.
45	Away- Stay- Instant Interior Motion	Y	Active in Stay or Away mode. Triggers instantly when motion is detected. Does not follow entry/exit delay rules and is always instant.

Note: 345 MHz motion sensors have the option to change the Loop number to 1, 2 or 3. This enables the sensor to be programmed twice as 2 different zones where supported by the device.

Table 40: Glass Break

Group	Name	Supervised	Description
13	Glass Break	Y	Active in both Stay and Away mode.
17	Glass Break Away Only	Y	Active in Away mode only.

Table 41: Remote key (keyfob)

Group	Name	Supervised	Description
1	Mobile Intrusion	N	Worn or carried, the button(s) are programmed to trigger a police panic.
3	Mobile Silent	N	Worn or carried, the button(s) are programmed to trigger a silent police panic.

Table 41: Remote key (keyfob)

Group	Name	Supervised	Description
4	Fixed Auxiliary	Y	Installed in a fixed location such as night stand, the button(s) are programmed to trigger an Auxiliary panic. ⓘ Note: Medical functionality has not been evaluated for UL/ULC.
5	Fixed Silent Auxiliary	Y	Installed in a fixed location such as night stand, the button(s) are programmed to trigger a silent Auxiliary panic. ⓘ Note: Medical functionality has not been evaluated for UL/ULC.
6	Mobile Auxiliary	N	Worn as a wrist watch or pendant, the button(s) are programmed to trigger an Auxiliary panic. ⓘ Note: Medical functionality has not been evaluated for UL/ULC.
7	Mobile Silent Auxiliary	N	Worn as a wrist watch or pendant, the button(s) are programmed to trigger a silent Auxiliary panic. ⓘ Note: Medical functionality has not been evaluated for UL/ULC.

Table 42: Keypads

Group	Name	Supervised	Description
0	Fixed Intrusion	Y	Installed in a fixed location such as under a desk, the button(s) are programmed to trigger a police panic.
1	Mobile Intrusion	N	Worn or carried, the button(s) are programmed to trigger a police panic.
2	Fixed Silent	Y	Installed in a fixed location such as under a desk, the button(s) are programmed to trigger a silent police panic.
3	Mobile Silent	N	Worn or carried, the button(s) are programmed to trigger a silent police panic.
4	Fixed Auxiliary	Y	Installed in a fixed location such as night stand, the button(s) are programmed to trigger an Auxiliary panic. ⓘ Note: Medical functionality has not been evaluated for UL/ULC.
5	Fixed Silent Auxiliary	Y	Installed in a fixed location such as night stand, the button(s) are programmed to trigger a silent Auxiliary panic. ⓘ Note: Medical functionality has not been evaluated for UL/ULC.

Table 42: Keypads

Group	Name	Supervised	Description
6	Mobile Auxiliary	N	Keypad can be mobile and is programmed to trigger an Auxiliary panic. ① Note: Medical functionality has not been evaluated for UL/ULC.
7	Mobile Silent Auxiliary	N	Keypad can be mobile and programmed to trigger an Auxiliary panic. ① Note: Medical functionality has not been evaluated for UL/ULC.

Table 43: Auxiliary pendant

Group	Name	Supervised	Description
0	Fixed Intrusion	Y	Installed in a fixed location such as under a desk, the button(s) are programmed to trigger a police panic.
1	Mobile Intrusion	N	Worn or carried, the button(s) are programmed to trigger a police panic.
2	Fixed Silent	Y	Installed in a fixed location such as under a desk, the button(s) are programmed to trigger a silent police panic.
3	Mobile Silent	N	Worn or carried, the button(s) are programmed to trigger a silent police panic.
4	Fixed Auxiliary	Y	Installed in a fixed location such as night stand, the button(s) are programmed to trigger an Auxiliary panic. ① Note: Medical functionality has not been evaluated for UL/ULC.
5	Fixed Silent Auxiliary	Y	Installed in a fixed location such as night stand, the button(s) are programmed to trigger a silent Auxiliary panic. ① Note: Medical functionality has not been evaluated for UL/ULC.
6	Mobile Auxiliary	N	Worn as a wrist watch or pendant, the button(s) are programmed to trigger an Auxiliary panic. ① Note: Medical functionality has not been evaluated for UL/ULC.
7	Mobile Silent Auxiliary	N	Worn as a wrist watch or pendant, the button(s) are programmed to trigger a silent Auxiliary panic. ① Note: Medical functionality has not been evaluated for UL/ULC.
25	Safety Auxiliary Pendant	N	Used for local alerts like a nurse call button. This does not report an alarm to the Central Station. ① Note: Medical functionality has not been evaluated for UL/ULC.

Table 44: Smoke/Heat Detector

Group	Name	Supervised	Description
26	Smoke-Heat	Y	Triggers an alarm when sensor detects smoke or rapid rise in heat.

Table 45: CO Detector

Group	Name	Supervised	Description
34	CO	Y	Triggers an alarm when sensor detects carbon monoxide.

Table 46: Hardwire Translator and Wireless Translator

Group	Name	Supervised	Description
13	Takeover	Y	Triggers an alarm when sensor is tampered in stay or away mode.

Table 47: Water

Group	Name	Supervised	Description
38	Water Sensor	Y	Triggers an alarm when sensor detects water.
25	Water Non-Reporting	Y	Used for local alerts, it does not report an alarm to the central station.

Table 48: Shock Sensor

Group	Name	Supervised	Description
13	Shock Glass Break	Y	Arms and triggers shock sensors immediately system is armed in Stay or Away mode.
17	Shock Glass Break Away Only	Y	Arms and triggers shock sensors immediately system is armed in Away mode.

Table 49: Freeze

Group	Name	Supervised	Description
52	Freeze	Y	Triggers an alarm when sensor detects low temperature. ① Note: Temperature sensor functionality has not been evaluated by UL/ULC.
25	Freeze Non-Reporting	Y	Used for local alerts, it does not report an alarm to the central station.

Table 50: High Temperature

Group	Name	Supervised	Description
53	Temp Reporting	Y	Triggers an alarm when sensor detects high temperature. ① Note: Temperature sensor functionality has not been evaluated by UL/ULC.
25	Temp Non-Reporting	Y	Used for local alerts, it does not report an alarm to the central station.

Table 51: Temperature

Group	Name	Supervised	Description
51	Temp Non-Reporting	Y	Only for use with the PowerG Temp Sensor (PGx905). This sensor group does not report to the central station. Allows for actual temperature monitoring (thermometer) with customizable high and low threshold settings.
52	Freeze	Y	Triggers an alarm when sensor detects low temperature. ① Note: Temperature sensor functionality has not been evaluated by UL/ULC.
53	Temp Reporting	Y	Triggers an alarm when sensor detects high temperature. ① Note: Temperature sensor functionality has not been evaluated by UL/ULC.

Table 52: Tamper

Group	Name	Supervised	Description
60	24-hr Non-Latching Tamper	Y	This sensor group is always active and reports a tamper condition with no audible alarm when opened or tampered/faulted. Commonly used for case or wall tamper sensors. Not applicable to wireless sensors.

Table 53: Door Bell

Group	Name	Supervised	Description
25	Local Safety Sensor	Y	This sensor does not report or trigger an alarm. This is a chime-only sensor when Activity Monitoring is active, regardless of panel status.

Table 54: Occupancy sensor

Group	Name	Supervised	Description
25	Local Safety Sensor	Y	This sensor group is used for monitoring activity in the home. This group does not report.

Keyswitch zones

A remote key sensor can be programmed as Keyswitch Zone, that supports the following arm/disarm methods.

Keyswitch zones can be hardwired and support standard NC/NO/EOL/DEOL (corbus and MX), or can be wireless (PowerG and SRF)

Table 55: Keyswitch zones

Zone setting	Description
Maintained Instant Arm/Disarm	This zone setting provides the ability to arm when activated and disarm when restored. Arming occurs immediately with no exit delay. Follows Auto Stay option, if enabled.
Maintained Delay Arm/Disarm	This zone setting provides the ability to arm when activated and disarm when restored. Arming occurs after the standard exit delay timer. Follows Auto Stay option, if enabled.
Momentary Instant Arm/Disarm	This zone setting provides the ability to alternate between arm Away and disarm when this zone is activated. Arming occurs immediately with no exit delay.
Momentary Delay Arm/Disarm	This zone setting provides the ability to alternate between arm Away and disarm when this zone is activated. Arming occurs after the standard exit delay timer.
Momentary Instant Arm Only	Key switch zone that only provides the ability to arm away whenever this zone is activated. Arming occurs immediately with no exit delay.
Momentary Delay Arm Only	Key switch zone that provides the ability to arm away whenever this zone is activated. Arming occurs after the standard exit delay timer. Follows Auto Stay option, if enabled.
Momentary Disarm Only	Key switch zone that provides the ability to only disarm whenever this zone is activated.

- ① **Note:** Tamper or faults on the sensor do not arm/disarm the system (partition), they initiate their respective trouble sequence only.
- ① **Note:** Disarming using a key switch during an alarm disarms the system as if an access code is used.
- ① **Note:** Disarming using a keyswitch during a fire alarm only silences the fire alarm, a second disarm action (from any source including keyswitch) is needed to disarm and clear the fire alarm state.
- ① **Note:** Key switches can be assigned to single partitions (no common zone) and can arm/disarm their assigned partition.

Wi-Fi devices

View and remove Wi-Fi devices connected to your system, also configure Access Point options.

Table 56: Wi-Fi settings

Setting	Description
Access Point Options	Configure the IQ Pro built-in router, enable/disable the router, broadcast or change the SSID.
Connected Devices	View connected device information such as IP, MAC address and how long the device has been connected.
IQ Remotes	Pair an IQ Remote touch screen to the system whether it is connected to the customer's network or the built in Access Point.

Z-Wave devices

Add, edit, clear and remove Z-Wave devices. You can also view and edit Z-Wave options.

Table 57: Z-Wave options

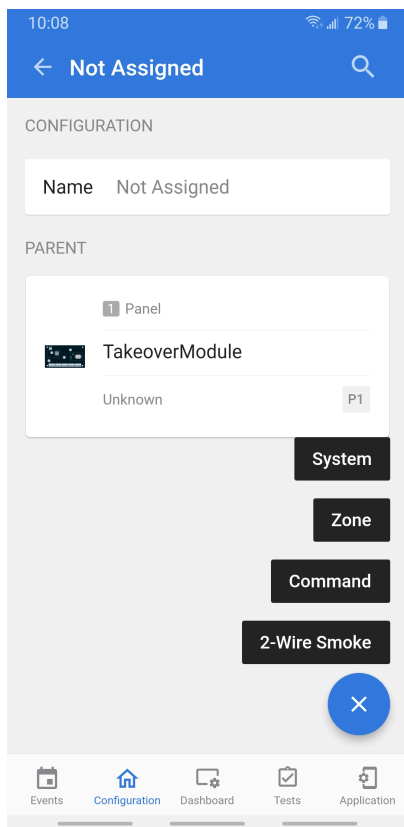
Options	Default	Description
Z-Wave Radio	On	Turn Z-Wave on/off
Z-Wave Frequency Region	Auto-set	Set Z-Wave frequency
Z-Wave Loss of Supervisory	4 hours	Supervisory window
Device Limit Thermostat	40	Maximum number of thermostats
Device Limit Door Lock	20	Maximum number of door locks
Device Limit Other Devices	21	Maximum number of other devices
Device Limit Garage Door	6	Maximum number of garage doors
Device Limit Dimmer	80	Maximum number of dimmers

Programmable (PGM) outputs

Configure programmable outputs (PGMs) to control external devices such as lights, garage doors and sirens.

To program PGMs complete the following steps.

1. Select **Configuration > Installation > Devices > PGM Outputs**.
2. Select PGM 1 to 4.
3. Tap the + icon and select **System, Zone, Command** or **2-wire Smoke**.
4. Configure preferred settings and tap **Save**.



System event follower

Configure PGM name, view system state, assigned partition, output type and action.

Zone follower

Configure zone name, select zone, view zone status, configure output type and action.

Command output

Configure command output name, assign partition, output type and action.

2-wire smoke

Configure 2-wire smoke name, chime type, voice, and assign partition.

Automation devices

Add, edit, clear and remove PowerG and Z-Wave automation devices.

Dealer settings

Communication test

To enable **Communication test** complete the following.

1. In the **Configuration** screen select **Installation > Dealer Settings > Communication Test**.
2. Tap **Daily, Weekly or Monthly** from the list. Select **Never** to disable this option.

Tap **Installation > Dealer Settings > Communication Test Start Time** to select the time of day the system sends the communication test.

① **Note:** If no time is selected, a random time is automatically selected.

Page configuration

Configure the following options in **Configuration > Installation > Dealer Settings > Page Configuration**.

Table 58: Page configuration settings

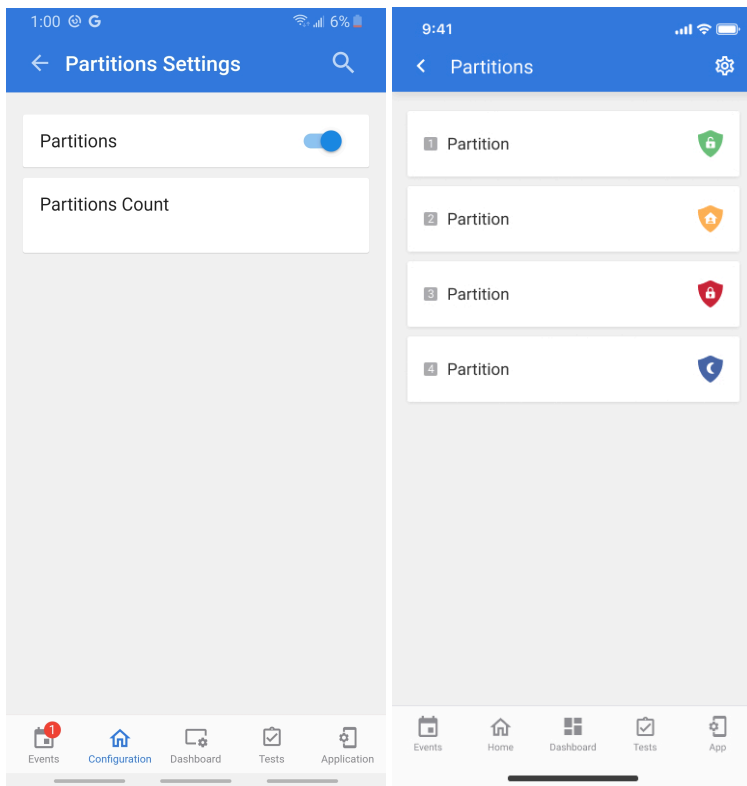
Setting	Default	Description
Home control page	Disabled	Select to display home control page as part of primary user interface. ① Note: There must be at least two different types of automation devices added to the system (lights, locks or thermostats) to enable this option. This feature can not be enabled if partitions are enabled.
Door lock page	Enabled	Select to display the door lock page as part of the primary user interface when a door lock is added as a device.
Thermostat page	Enabled	Select to display the thermostat page as part of primary user interface when a thermostat is added as a device.
Scenes support	Enabled	When enabled, a new icon appears enabling the use of Scenes that have been created on Alarm.com. ① Note: This feature can not be enabled if Partitions are enabled.

Enabling partitions

Create up to four partitions by first enabling the **Partitions** feature. View and edit partitions under **Configuration > Partitions** (refer to [Partitions](#)).

To turn on Partitions complete the following steps.

1. Select **Configuration > Installation > Dealer Settings**.
2. Slide the **Partitions** button to the on position.



① **Note:** There must be at least one sensor assigned to a partition before it can be viewed or edited.

Users settings

Configure the following options in **Configuration > Dealer Settings > Users Settings**.

Table 59: Users settings

Option	Description
Customer account	Enter customer account number.
Six-digit user code	Select six-digit user code option.
Installer access requires user permission	Enter Installer Programming using the local installer app requires that the user enter a valid master code to grant permission to the installer for six hours.
IQ Remote reset authentication	If enabled, the IQ Remote requires a dealer or installer code to reset. Default is disabled.
Duress authentication	Enable to view duress user in User Management.

Upgrade software

Upgrade the IQ Pro system software using Wi-Fi.

Patch tag

Perform an **Automatic Patch Check** for specific software updates or check manually by selecting **Patch Tag** and entering a valid code corresponding to a specific software update on the server.

A local copy can also be saved on a mobile device to perform software upgrades using the panel access point connection.

Upgrade software using access point

To perform a software update using the Panel Access Point complete the following steps.

1. Download the needed software update files from the Dealer Portal to your device.
2. Go to **Configuration, Wi-Fi** then **Manual Upgrade**.
3. Press **Choose** for the .txt, .zip and signature files and load them from your device to the IQ Installer App.
4. Press **Upload Files and Start Upgrade** to begin the update using the local files from your device.
5. When files are uploaded the system panel annunciates, "*Firmware update started, do not power down panel. Panel will reboot during update.*"
6. The status LED changes to red during the update and then flashes blue when restarting.

Auto upgrade

Search the network for updates and install new software.

Note: For UL/ULC/EN50131Grade 2 installations remote software upgrades are not permitted.

Table 60: Auto upgrade settings

Setting	Description
Background Download for Updates	IQ Pro checks for new software in the background and download it to local storage so that it can be applied at a later date. Default: Enabled .
Automatic Check Interval	Determines the interval the IQ Pro checks for software updates. Available options are Every Night, Once a Week, Once a Month . Default Once a Week .

Zone settings

The following zone settings are available in **Configuration > Installation > Dealer Settings > Zones Settings**.

Table 61: Zones settings

Setting	Default	Description
Commercial sensor and device names	Disabled	Enabling this features changes the sensor name vocabulary from residential naming to commercial naming.
Zone count	10	Number of zone slots occupied or enrolled on the system.
PowerG camera alarm images upload count	1	Determines the number of images that are uploaded by any PowerG PIR CAM when triggered during an alarm. Choose from 1-10 images.
Open/close reports allowed for autolearn	Enabled	Rather than sending a tamper to autolearn a sensor, enabling this feature allows an open/close of the sensor to trigger autolearn.
ULC commercial power restoration	Disabled	If enabled, all sensor activity is ignored for 120 seconds after power is restored.
Global input mode	End of Line	Sets the end-of-line supervision type for all hardwired zones on the system that have Input Mode set to Global.

Table 62: Security RF Jam

Setting	Default	Description
PowerG RF Jam Detection	Disabled	If enabled, the system can detect when an unusual amount of RF signals are transmitted in the PowerG spectrum leading to a potential loss of connectivity. This event reports to the central station when enabled. Select from Disabled, UL20/20 or EN 30/60.
SRF Radio Jam Detection	Disabled	If enabled, the system can detect when an unusual amount of RF signals are being transmitted on the frequency of the legacy daughter card installed in the panel (319.5MHz, 345MHz or 433MHz) leading to a potential loss of connectivity. This event reports to the central station when enabled.
Jam Detection Local Alarm	Disabled	If enabled, the system sounds a local alarm. Jam Detection must be active for this to function correctly.
SRF Jam Sensitivity Level	Normal	Select High or Normal sensitivity levels.

Table 63: Loss of supervisory signals

Setting	Default	Description
Loss of supervisory signals for emergency sensors	4 hours	Select the length in hours (4, 12 or 24) before reporting a loss of supervision on life safety devices. ① Note: For UL/cUL Resi Fire and UL Commercial Burg (UL2610) the wireless supervision window for Emergency sensors (Smoke, Heat & CO Detectors) shall be set to 4h.
Loss of supervisory signals for PowerG emergency sensors	4 hours	Select the length of time (20, 30 min, 1, 2, 4, 12, 18 hours) before reporting a loss of supervision on PowerG life safety devices. ① Note: For UL/cUL Resi Fire and UL Commercial Burg (UL2610) the wireless supervision window for emergency sensors (Smoke, Heat & CO Detectors) shall be set to 2h.
Loss of supervisory signals for non-emergency sensors	24 hours	Select the length in hours (4, 12 or 24) before reporting a loss of supervision on security devices. ① Note: For UL/cUL Resi Fire and UL Commercial Burg (UL2610) the wireless supervision window for non-emergency sensors (all intrusion sensors) shall be set to 4h.
Loss of supervisory signals for PowerG non-emergency sensors	24 hours	Select the length of time (20, 30 min, 1, 2, 4, 12, 24 hours) before reporting a loss of supervision on PowerG security devices. ① Note: For UL/cUL Resi Fire and UL Commercial Burg (UL2610) the wireless supervision window for non-emergency sensors (all intrusion sensors) shall be set to 4h.
Loss of cell timeout	30 minutes	Select the length in minutes (10-120) before reporting a loss in cellular signal. ① Note: For UL Commercial Burg (UL2610) the cell supervision is hard coded to 200s.

Table 63: Loss of supervisory signals

Setting	Default	Description
Temperature reporting	Off	Enable temperature reporting for PowerG+ devices.
Light reporting	Off	Enable light reporting for PowerG+ devices.

General internal

Table 64: General settings

Settings	Default	Description
SIA limits	On	When enabled, the range for entry and exit delays is as follows: Entry delay: 30-240 seconds Exit delay: 45-254 seconds When disabled, the range for entry and exit delays are as follows: Entry delay: 5 to 240 seconds Exit delay: 5 to 254 seconds When enabled the range for Dialer Delay is: 15 to 45 seconds When disabled the range for Dialer Delay is: 0 to 254 seconds
<p>① Note: For UL residential burg set entry delay to 45 seconds and exit delay to max 120 seconds. For UL Commercial Burg (UL2610) maximum entry and exit delay should not exceed 60 seconds.</p> <p>For ULC Security Level I (residential burg) set entry delay to 180 seconds. For ULC Security Level II (commercial burg) set entry delay to 60 seconds and exit delay to 45 seconds max.</p> <p>For EN Grade 2 installations set entry delay to 45 seconds and exit delay to 30 seconds</p>		
Power management	On	ON - Power save mode is ON when system is running off battery only. OFF - Power save mode is OFF.

Table 64: General settings

Settings	Default	Description
EN Grade 2	Off	<p>The setting enables EN Grade 2 compliance on the alarm system. When enabled, the following behaviors and settings are changed automatically.</p> <ul style="list-style-type: none"> • Entry Procedure (EU) - follows entry procedures and alarm transmission delays specified by EN 50131 • Disables Auto Bypass so that the alarm system protests arming when sensor and panel trouble conditions are present (i.e. Open, Tamper, Low Battery) • Trouble condition alerts cannot be acknowledged until the condition is resolved. • Trouble beeps are expanded to include fault indications required by EN 50131 • Screen Lock setting is enabled automatically. Screen locks 30 seconds after disarming • A new icon called EU Events is added to the settings page which records mandatory history events specified by EN 50131. • Loss of Supervisory Signals for PowerG Non-Emergency Sensors is set to two hours by default • LED Indicator" setting is Disabled automatically. • Dealer or Installer Access Requires User Permission setting is Enabled automatically.
EU swinger shutdown count	3	<p>Determines the number of times a particular event records to the EU Events log before shutdown. The count (3-10) resets after an arm or disarm event.</p> <p>① Note: This setting is disabled and not selectable unless EN Grade 2 is enabled.</p>
Language	English (US)	Set the alarm control system language to your two preferred languages.
Second preferred language	Español	
LED indicator	On	<p>Enable/disable the LED status light on the panel manually.</p> <p>① Note: This setting is automatically disabled when EN Grade 2 is enabled.</p>
Location	n/a	Displays the location where the panel installed.
Temperature scale	Celsius	Set temperature display scale Celsius or Fahrenheit.

Table 64: General settings

Settings	Default	Description
Unpair IQ Wi-Fi	n/a	To forget IQ Wi-Fi network and clear all stored devices and configurations
Power down event communication		When enabled a Power Down event is sent to the central station when the panel is powered down

Master reset

This action results in a reset to factory settings and erases all content.

① **Note:** When a **Master Reset** has been performed, it cannot be reverted.

To reset all settings, navigate to **Configuration > Installation > Dealer Settings** then complete the following steps.

1. Tap the **Master Reset** icon.
2. Select **Yes, I want to reset to factory settings**.
3. Tap the **Master Reset** button.

This action returns you to the IQ Installer Start screen.

To revert to factory settings, refer to [Performing a hardware default](#) for details.

System logs

The IQ Pro can send system logs to the server for troubleshooting purposes. No information identifying the customer is sent.

Select **Auto Upload Logs** to automatically upload system logs every 24 hours.

Log level allows you to configure the information recorded in the log files.

Refer to the following log level options.

- No log output
- Fatal
- Error
- Warn
- Info
- Debug
- Verbose

Sirens and alarms

Access siren and alarm settings in **Configuration > Installation > Sirens and Alarms**. Edit settings for the following alarm events.

Table 65: Siren and alarm settings

Setting	Default	Description
Panel sirens	All sirens on	<p>All Sirens Off: This disables the siren for all alarm types, except for life safety devices, including any hardwired or wireless external sirens.</p> <p>All Sirens On: This enables the siren for all alarms.</p> <p>Installer/Test Mode:This disables the siren for all alarm types including any paired or hardwired external sirens for 30 minutes, then all sirens are re-enabled.</p> <p>① Note: Self-contained sirens on life safety devices are not disabled.</p>
Fire verification	Disabled	<p>When enabled, the panel requires two fire events from smoke detectors (one detector twice or two detectors once each).</p> <p>NOTE:Must be disabled for UL/cUL installations.</p>
Burglary alarm confirmation	Disabled	<p>When enabled, a confirmed alarm requires two sequential burglary alarms within the Burglary Alarm Confirmation Timer window. NOTE: This setting is only available when EN Grade 2 is enabled.</p>
Burglary alarm confirmation timer	60	<p>Amount of time (in minutes) used for Burglary Alarm Confirmation.</p>
Severe weather siren warning	Enabled	<p>When enabled, the siren sounds when the system receives a severe weather alert. When disabled, the system uses a severe weather chime.</p>
Dialer delay	30	<p>Amount of time (in seconds) before the alarm system attempts call to the central station after an alarm event is triggered.</p> <p>When SIA Limits enabled: 15 to 45 seconds.</p> <p>When SIA Limits disabled: 0 to 254 seconds</p>
Siren timeout	4	<p>Program the amount of time before the siren stops sounding during an alarm event (4 minutes to 15 minutes).</p> <p>NOTE: For UL/cUL residential fire/burglary applications the minimum bell timeout shall be set to 5 min. For UL commercial burglary installations, minimum bell time out shall be set to 15 minutes.</p>
Water/Freeze/ Temperature	Enabled	<p>When enabled, the siren sounds when a water or freeze detector is triggered. When disabled, the system emits a water tone.</p>
PowerG smoke detector siren	Fire Alarms Only	<p>When set to Fire Alarms Only, enrolled PowerG smoke detectors sound only during fire alarm events. When set to All Alarms, PowerG smoke detectors act as additional wireless sirens and sound during all alarm events.</p>
Police panic	Enabled	<p>Allows Police Panic to be enabled.</p>
Fire panic	Enabled	<p>Allows Fire Panic to be enabled.</p>

Table 65: Siren and alarm settings

Setting	Default	Description
Auxiliary panic	Enabled	Allows Auxiliary Panic to be enabled.
Audible siren for wireless supervisory failures	Disabled	When enabled and the system is armed, supervisory failures for non-emergency sensors are treated the same as a tamper and cause an alarm to be generated.

Security and arming

Configure the following security and arming features in **Configuration > Installation > Security and Arming**.

Table 66: Security settings

Setting	Default	Description
Installer Code	1111	Allows access to installer options only.
Swinger Shutdown	Enabled	Determines whether the system enables the same sensor to trigger the alarm more than one time (enabled), or not (disabled).
Swinger Shutdown Count	1	Program the number of times the same sensor triggers the alarm during the same arming period (1-6). Swinger Shutdown must be enabled in order for this setting to work.
Screen Lock	Disabled	When enabled, a screen lock page appears, restricting access to the panel unless a valid user code is entered. NOTE: This setting is automatically enabled when Partitions are enabled.

Table 67: Arming

Setting	Default	Description
Secure Arming	Disabled	Requires a user code for arming the system and [*] menu functions from LCD keypads. NOTE: This setting must be enabled for UL/cUL.
Refuse Arming when Battery Low	Disabled	When enabled, the alarm system cannot be armed with low battery (below 8%).
Auto Bypass	Enabled	When enabled, open or tampered sensors are automatically bypassed. NOTE: This setting must be disabled for UL/cUL installations.
Final Exit Door Arming	Disabled	When enabled, and the system is armed Away then there is no timed exit delay. Instead, the system is not fully armed until an Entry/Exit door is opened. ⓘ Note: This setting is unavailable unless EN Grade 2 is enabled.
Auto Stay	Enabled	If the alarm system is armed Away but an exit delay door is not opened, the system changes to Stay arm.
Arm Stay No Delay	Enabled	Stay arms the system immediately with no timer.
Auto Exit Time Extension	Enabled	Automatically extend the countdown timer if the exit delay door is opened during a countdown process a second time.
Keyfob Instant Arming	Enabled	When enabled, turns off the exit delay if a remote key is used to arm the system.

Table 67: Arming

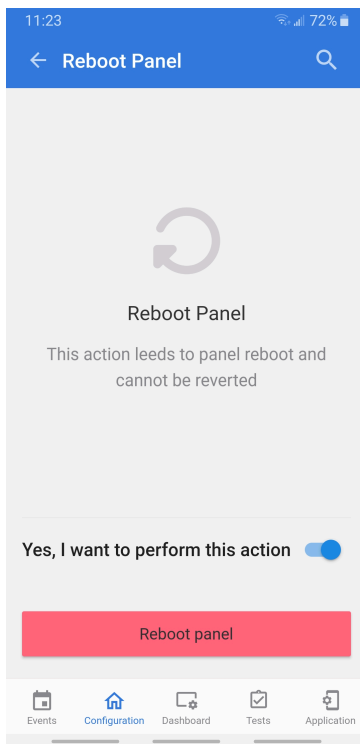
Setting	Default	Description
Keyfob Alarm Disarm	Disabled	When enabled, a remote key can disarm alarm events except panic alarms originating from the same remote key.
Keyfob Disarming	Enabled	When enabled, a remote key can disarm the system.
Engineer's Reset	Disabled	If a confirmed alarm occurs on a burglary zone, the system is locked out after disarming until a reset by the installer/dealer.
Engineer's Reset Tamper	Disabled	If a tamper trouble occurs, the system is locked until an installer or dealer reset.
Force Arm	Disabled	When enabled, the partitions can be armed with zone(s) open but be temporarily bypassed at time of arming. When the zone(s) are then closed or tampered during the armed period bypass mode is automatically removed and become monitored by the system again.

Table 68: Delay timers

Setting	Default	Description
Normal Entry Delay	30	The amount of time users have to enter their code after opening a door (30-240 secs). NOTE: For UL Commercial Burglary (UL2610) maximum entry delay must not exceed 60s.
Normal Exit Delay	60	The amount time users have to exit the location before the system arms itself (45-254 secs). Door/Window group 10 follows the Normal Exit Delay . For UL Commercial Burg (UL2610) maximum exit delay must not exceed 60s.
Long Entry Delay	100	A second separate entry delay that can be used on a sensor needing more time when triggered (30-240 seconds).
Long Exit Delay	120	A second separate exit delay that can be used on a sensor needing more time when triggered (45-254secs). Door/Window group 12 follows the Long Exit Delay .

Rebooting your system

If the system is experiencing problems, you can often resolve it by resetting the operating system. Failure to follow these steps correctly could result in data corruption and panel failure.

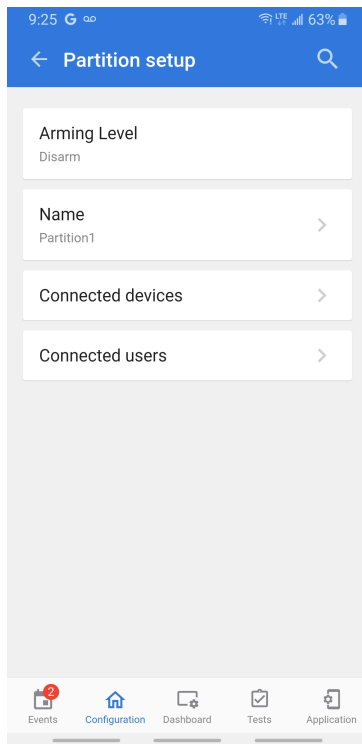


1. Select **Configuration > Reboot**.
2. Select **Yes, I want to perform this action**.
3. Tap the **Reboot panel** button and wait for the system to restart.

Partitions

Access **Configuration > Partitions** to edit users and user names, rename partitions, and view a list of users or sensors currently assigned to a specific partition.

- ① **Note:** Partitions 1, 2, 3 and 4 appear when partitions are enabled under **Configuration > Dealer Settings > Partitions**.



To edit partitions complete the following steps.

1. Select **Configuration > Partitions**.
2. Select a partition from the list for **Partition setup**.
3. Tap an option on the list to configure or edit.

Note: There must be at least one sensor assigned to a partition before it can be viewed or edited.

Table 69: Partition setup options

Partition option	Description
Arming level	Displays arming status
Name	Enter partition name
Connected devices	View list of connected devices, select device to edit
Connected users	View list of users, select a user to edit

Power down

To turn off power to the system complete the following steps.

1. Go to **About > Power Down**.
2. Slide the button next to **Yes, I want to perform this action** to the on position.
3. Tap the **Power Down** button.

Note: This action powers down the system and cannot be reverted.

Wi-Fi connection

To connect to a Wi-Fi network, complete the following steps.

1. Enable Wi-Fi if not already active.
2. Available networks appear in a list.

3. Select the appropriate network and enter a valid password (if required).

Sound

Configure system and partition sounds, enable/disable voice, chimes, trouble and exit beeps. Access the sound settings in **Configuration > Sound**.

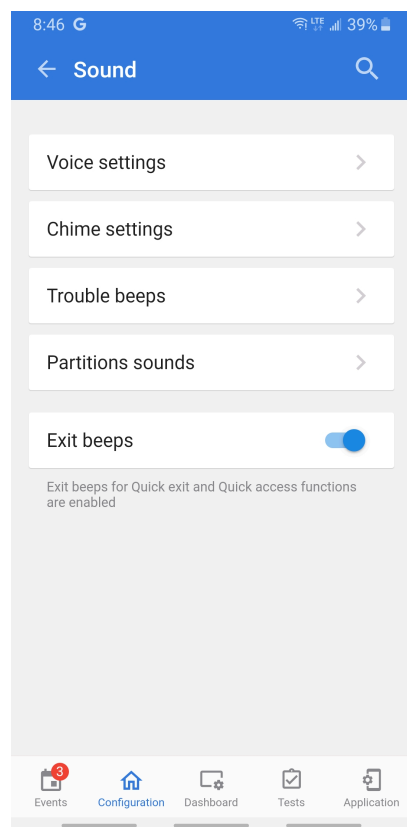


Table 70: Sound settings


Setting	Default	Description
Voice	Enabled	Configure voice prompt settings for sensors, devices, activity and system messages.
Chime	Enabled	Enable sensor, system and activity sensor chimes. Indicates whether the system emits beeps.
Trouble beeps	Disabled	Configure trouble beeps on or off.
Partition Sounds	Disabled	When partitions are enabled, access this setting to turn chime and voice on or off in all partitions or in the partition they are assigned.
Exit Beeps	Enabled	Turn exit beeps on or off for Quick exit and Quick access.

Voice settings

This is a global system setting and configures voice prompts for sensors, devices and the system panel. Access voice settings in **Configuration > Sound > Voice settings**.

Table 71: Voice settings

Setting	Default	Description
Voices	Enabled	This is a global setting for sensors, panel messages, and Z-Wave devices. Indicates whether the system emits voice prompts.
Sensor	Enabled	Turns sensor voice prompts on or off.
Panel	Enabled	Turns system voice prompts on or off.
Activity monitoring	Enabled	Turns activity monitoring voice prompts on or off.

 **Note:** The Voice settings are available only when an IQ Remote Keypad is enrolled.

Chime settings

Configures whether the system or sensors emit a beep. Access voice settings in **Configuration > Sound > Chime settings**.

Table 72: Chime settings

Setting	Default	Description
All chimes	Enabled	This is a global setting for sensors, panel messages, and Z-wave devices. Indicates whether the system emits beeps.
Sensor chime	Enabled	Turns sensor chime on or off for all sensors.
Panel	Enabled	Turns system chimes on or off.
Activity sensor monitoring	Enabled	Turns activity monitoring sensor chimes on or off.

Trouble beeps

Turn system trouble beeps on or off. Access the trouble beep settings in **Configuration > Sound > Trouble beeps**.

Table 73: Trouble beeps settings

Setting	Default	Description
Trouble beeps	Disabled	Turns trouble beeps on or off for all sensor and system troubles.
Sensor low battery	Disabled	Turn sensor low battery beeps on or off.
Sensor tamper beeps	Disabled	Turn sensor tamper beeps on or off.
Trouble beep timeout	30	Set the amount of time between each trouble beep. Length can be set between 3-60 minutes.
Fire and life safety devices	Disabled	System emits a trouble beep if a fire safety device is tampered, failed or has a low battery.

Partition sounds

Turn global partition sounds on or off. Access the partition sounds setting in **Configuration > Sound > Partition sounds**.

Table 74: Partition sounds settings

Setting	Default	Description
Global chimes and voices	Disabled	Configure whether alarms sound in all partitions or only in the partition they are assigned.

Exit beeps

Turn exit beeps on or off for the Quick access and Quick exit features on the system. The default setting is enabled.

EN Grade 2 Features

This setting enables EN Grade 2 compliance on the system. When enabled, the following behaviors and settings are changed automatically.

Table 75: EN Grade 2 settings

Setting/Behavior	Description
EU entry procedure	Follows entry procedures and alarm transmission delays specified by EN50131.
Auto bypass	Auto Bypass is disabled so the system does not arm when sensor and panel trouble conditions are present (open, tamper, low battery, etc).
Trouble conditions	Trouble condition alerts cannot be acknowledged until the condition is resolved.
Trouble beeps	Trouble beeps are expanded to include fault indications required by EN 50131.
Screen lock blanking	This setting is enabled automatically. The screen on an LCD or IQ Remote touch screen keypad is turned off 30 seconds after disarming.
EU event icon	A new EU events icon is added to the Settings page, EU events records mandatory history events specified by EN 50131.
Loss of supervisory signals for PowerG non-emergency sensors	EN setting is preset to 2 hours.
LED setting	This setting is disabled automatically.
Dealer or Installer Access Requires User Permission	This setting is enabled automatically.

Bell output option

Configuration > Installation > Devices > Security Sensors > Corbus Module > Edit > Bell Output

EU External - Bell output provides constant 13.5 VDC to charge the external siren battery in non-alarm conditions, and drops the voltage to 0 VDC in alarm conditions so the external siren sounds the alarm.

Normal - Bell circuit follows normal bell cadences in alarm and no voltage state when not in alarm.

Table 76: About information

Item	Description
Battery	Displays battery status and battery level in %.
Software	Displays software version, build number, Linux and Android OS version.
Hardware	Displays hardware version, manufacturer, PCA serial number, part number, system configuration, system serial number, RF PIC version, EEPROM format and image sensor version.
Patches	Details of previous patches applied and last upgrade date.
Panel	Displays Mac address and panel up time.
Cellular	Displays carrier name, cellular connection, cellular strength, IMEI, IMSI, ICCID and baseband version.
Power G	Displays modem firmware version and build number, radio firmware version and software ID, and Power G RF band
Ethernet	Displays connection name and IP address
Wi-Fi	Connection, IP address, SSID, Speed and Internet
Corbus	Displays hub type and software version

Dealer branding

Customize the dealer contact information under **Configuration > Dealer Branding > Contact Info**. Edit dealer name and ID, telephone number, email, web address and tag line content.

Dealer settings

Dealer settings can also be accessed from **Installation Settings**. Refer to [Dealer settings](#) for details.

Tests

System tests

The following system tests can be performed to ensure the IQ Pro or IQ Pro P security system is functioning correctly. To run a specific test, tap the **Test** icon at the bottom of the screen then select from the available tests.

If you have questions, or if a test results in a **Fail** contact Technical Support.

Wi-Fi test

The Wi-Fi test checks the IQ Pro connection to your network router.

Ensure to connect the panel to the network before running this test.

- Select **Start Test** to begin testing.

A successful test results in a pass and indicates the connection speed, SSID, IP and connection status.

If the test fails, check the Wi-Fi connection.

SRF sensors test

This test displays the dBm signal strength of each sensor and graphs sensor events against the ambient noise floor of the environment. This test also displays the traditional packet count method.

The Advanced Sensor Test shows a summary page of each sensor paired to the panel along with the average dBm level, the last event's dBm level and how many packets were received from the

sensor. Select the graph icon to the right of each sensor to view an individual sensor's graphed signal strength in real time.

- ① **Note:** For UL/ULC, perform a placement test for all wireless devices first. The acceptable result shall be **Good**.

Cellular test

Test the system's built-in cellular radio connection. You must first activate the radio through Alarm.com before running this test.

- ① **Note:** Cell signal strength is only available after the test has been successfully performed.

To perform a cellular test

- Select **Start** and observe results on the screen.

A successful test indicates the carrier, connection status, IMEI and signal strength.

Power G test

Run a PowerG test to receive the signal strength of your Power G sensor. You can view the average signal strength over 24 hours.

Strength can be **Strong, Good, Poor** or **No Signal**.

- ① **Note:** For UL/ULC installations, the signal strength shall be **Strong**.

- ① **Note:** The Power G radio card must be installed to access this option.

Dual-path Wi-Fi test

Dual path connectivity provides you with the option to enable both the cellular and Wi-Fi radios simultaneously. **Dual-path control** is enabled by default. Slide the control button to the off position to disable.

You can also perform a Dual-Path Wi- Fi test to ensure that the Dual Path is connecting properly. Different from the standard Wi-Fi test (which only checks connection to the router), the Dual-path Wi-Fi test also checks the broadband connection to Alarm.com.

Select **Start** to perform a dual path Wi-Fi test to ensure a proper broadband connection to Alarm.com.

- ① **Note:** The IQ Pro must be connected to a Wi-Fi network to enable the Dual-path option.

- ① **Note:** The IQ Pro is compatible with UL/ULC listed monitoring station receivers SG-System I/II/ III/ IV/5. Wi-Fi is for supplemental use only for UL/cUL

Panel test

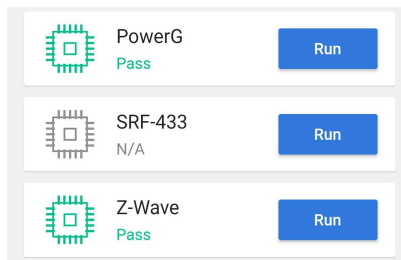
Perform a panel test to run tests for all panel processes, either simultaneously or one at a time.

Select **Run** to perform an individual test or **Run All** to test all processes.

- ① **Note:** Running all tests at the same time sounds the siren.

Daughter cards test

To test the integrity of the installed daughter cards, tap **Run** and observe results.



If you do not observe a **Pass** result, contact Technical support.

Events

The **Events** page contains logs of events that have occurred on the alarm system beginning with the most recent.

The **Events** function can record up to 1000 events.

To view **Events** tap the icon at the bottom of the screen to view.

Application settings

To configure settings for your IQ Installer app, access the **Help** menu and view the Privacy Policy, select the **Application** icon found at the bottom of the screen.

Table 77: Application settings

Setting	Description
Language	Select your preferred language from the drop-down list
Theme	Choose from light or dark theme
Privacy Policy	View the Johnson Controls privacy policy
EULA	View the Johnson Controls end-user license agreement
Help	Access the help menu
Live Events	View the list of events

System operation

Using the keypad

The IQ Pro and IQ Pro P system is compatible with several different keypad types ([IQ Pro compatible devices](#)).

Using the LCD keypad

Special keys

The scroll symbols < > on the LCD displays indicate that options can be viewed by pressing the scroll keys.

These scroll keys can also be used to position the cursor.





The *key is similar in function to the **Enter** key on a keyboard. It is generally used to accept the existing programming option.

The #key is similar in function to the **Escape** key on a keyboard. It is generally used to exit the current programming section or to return to the previous one.

LED Indicators

Keypads have the following status lights that provide visual indication of basic system status.

Table 78: LED indicators

LED symbol	Name	Description
	Ready	Panel is ready to be armed
	Armed	Panel is armed
	Trouble	System trouble. Enter [*][2] to view troubles.
	Power	ON indicates AC is present. OFF indicates AC is absent.

Fire alarm or CO alarm bells silenced

Fire alarms or CO Alarms can be silenced by entering a valid access code.

The message **Fire Alarm/Bells Silenced** or **CO Alarm/Bells Silenced** is displayed on the LCD keypad that is connected to the corbus.

The message is not cleared until all the fire zones have been restored on system.

Using the IQ Remote keypad

Refer to the IQ Pro User Manual for operating details.

Global keypad mode

In **Global Keypad** mode, a user can operate up to eight partitions using one keypad. If more than one partition is enabled then keypad can be assigned to multiple partitions. An LCD keypad assigned to multiple partitions displays a Global Screen that indicates assigned partition statuses like ready, armed, alarm and trouble conditions.

Select a partition from 1 to 8 to arm, disarm or view troubles on that partition.

① **Note:** In Global Keypad mode, the keypad buzzer or LED does not follow any of the partitions.

Loaning a keypad

If a keypad is assigned to one partition, a user can still access other partitions by loaning the keypad.

Press and hold the # button for 2 seconds to display the status of all eight partitions.

The user can select a partition and enter the correct code to access it. If no partition is selected from the Global screen, the keypad reverts to its assigned partition in several seconds.

Table 79:
Partitions display

1 2 3 4 5 6 7 8
R X A ! E - - A

Table 80: Indicators and descriptions

Indicator	Description
1 - 8	Partition number
R	Partition is ready to be armed
X	Partition is in exit delay
N	Partition is not ready to be armed
!	Partition is in alarm
E	Partition is in entry delay
-	Partition is not configured
A	Partition is armed

[*] Commands

[*] commands provide convenient access to alarm system features. Refer to the [Table 81](#) table for available options.

Table 81: [*] Commands

Command	Description
[*][1]	Bypass zones
[*][2]	View troubles
[*][3]	View alarms in memory
[*][4]	Door chime on/off
[*][6]	User functions
[*][7]	Command outputs
[*][9]	No-entry arming
[*][0]	Quick arm/exit

[*][1] Bypass zones

The [*][1] command functions differently depending on whether the system is armed or disarmed.

 **Note:** For UL/ULC listed installations, group bypass is not allowed.

When the alarm system is disarmed

Users can bypass individual zones/sensors or a programmed group of zones using the [*][1] keypad command. Zones are commonly bypassed if users want to have access to an area while the

partition is armed, or to bypass a defective sensor (bad contact, damaged wiring) until service can be provided. A bypassed zone does not cause an alarm.

When the partition is disarmed, all zones/sensors that were bypassed using [*][1] are no longer bypassed, except for 24-hr zones.

Bypassing zones with an LCD keypad

To bypass a zone/sensor with an LCD keypad complete the following steps.

1. When the system is disarmed, press [*] to enter the function menu.
2. Press [1] or [*], then enter a valid access code.
3. Scroll to a zone or key in the three-digit zone number. Only zones enabled for zone bypassing are displayed. Enter the 3-digit zone number or scroll to the preferred zone and press [*] to bypass the zone.
4. To clear a bypassed zone, repeat steps 1 to 4.
5. To exit Bypass mode, and return to the ready state, press #.

① **Note:** The letter **O** indicates an open zone/sensor. The letter **B** is displayed when a sensor is bypassed.

[*][2] View troubles

This feature is used to view system troubles. If a trouble is present on an LCD keypad, the trouble indicator illuminates and an audible indication is emitted (two short beeps every 10 seconds, except while in AC failure). Silence the audible indicator by pressing #. Troubles can be viewed when the system is armed or disarmed.

The system can be configured to require a user code to view [*][2] system troubles.

To view system troubles press [*][2].

LCD keypads - scroll to a trouble type then press [*] to view details.

IQ Remote/Installer app - refer to [Troubleshooting](#) for more information.

Table 82: LCD keypad [*][2] trouble menu

Trouble	Trouble Description		
01	Service Required	02 - Bell Trouble	
02	Battery Trouble	01 - Low Battery	
04	AC Troubles	01 - Device 07 - System/Panel AC Trouble	Device Label
05	Device Faults*	01 - Device	Device Label
06	Device Battery	01 - Device	Device Label
07	Device Tamper	01 - Device	Device Label
11	Communications	02 - FTC Trouble 04 - Cellular Trouble 05 - Ethernet Trouble	
12	Not Networked	01 - Device	Device Label

① **Note:** Device fault is a generic trouble and is used for Aux, RF/corbus, supervisory and low voltage troubles.

[*][3] Alarm memory

The memory light flashes if an alarm, tamper or fault event occurred during the last armed period or while the panel was disarmed (24 hour zones).

To view alarms in memory on an LCD keypad, complete the following steps.

1. Press [*][3].
2. Press [#] to exit.
3. To clear the memory, arm and disarm the system.

When viewing alarms in memory, LCD keypads indicate the last zone that went into alarm first, followed by other alarms in numerical order.

[*][4] Door chime enable/disable

When this feature is enabled, the keypad emits a tone whenever an exit/entry is programmed as a Chime type is opened or closed.

Press [*][4] to enable or disable this feature.

[*][6] User functions

Control sound and brightness of your LCD keypad using the [*][6] commands.

Brightness control

This function is used to change the brightness level of keypad display back lighting. To change the brightness, complete the following steps.


1. Enter [*][6].
2. Enter a valid access code.
3. Navigate to **Brightness Control**, press [*].
4. Use the arrow keys to select the preferred brightness level or enter a value from 00 to 15. Selecting 00 turns off keypad back lighting.
5. Press [#].

Contrast control

To change the LCD contrast, complete the following steps.

1. Press [*][6] on the keypad.
2. Enter a valid access code.
3. Navigate to **Contrast Control** and press [*].
4. Select the preferred contrast level.
5. Press [#].

Buzzer control

 **Note:** The keypad buzzer sound level must not be set to 0 for UL/ULC installations.

To control the buzzer volume, complete the following steps.

1. Press [*][6] on the keypad.
2. Enter a valid access code.
3. Navigate to **Buzzer Control** and press [*].
4. Select the preferred volume level.
5. Press [#].

[*][7] Command outputs 1-4

This option is used to activate or deactivate command outputs 1 to 4 for each partition.

To activate command outputs on an LCD keypad complete the following steps.

1. Press [*][7] to enter Output Control mode.
2. Using the arrow keys, navigate to an output and press [*] to select it, or enter a command output number.
3. Press [#] to exit.

[*][9] No-entry arming

This function is used to arm the alarm system while occupants are on the premises. To activate no-entry arming complete the following steps.

1. Press [*][9].
2. Enter a valid access code.

The systems arms without an entry delay on delay type zones and bypasses stay/away and night type zones.

- ① **Note:** Following an exit delay, delay 1 and delay 2 type zones function the same as instant zones. Stay/away zones remain bypassed. The entry delay can be activated or deactivated at any time while the system is armed using [*][9].
- ① **Note:** If the alarm system is armed using [*][9], disarming is only possible from a keypad inside the premises unless a wireless key is used.
- ① **Note:** Entry of a valid access code is required following [*][9] only when the system is disarmed.

[*][0] Quick arm/exit

This feature functions differently depending on whether or not the alarm system is armed or disarmed.

When disarmed

Pressing [*][0] arms the alarm system without having to enter an access code.

This provides a fast method of arming for regular users and allows users without an access code to arm the system.

When armed:

This feature provides a means to exit the premises while the alarm system is armed without having to disarm then rearm it.

Pressing [*][0] starts a 2-minute timer that enables any door programmed as a delay zone to be opened and closed one time without triggering an alarm.

If the door is not closed at the end of the 2-minute timer, the entry delay sequence begins. Any additional activity on another zone triggers the associated alarm or delay sequence.

Working with partitions

A partition is a limited area of the premises that operates independently from the other areas. Partitioning a system can be beneficial if the property has outbuildings that need to be secured independently of a main area.

Each partition can have its own keypad or a keypad can have access to all partitions (only if all partitions belong to the same user code). User access to partitions is controlled with access codes. A master code can access the entire system and all partitions, while a user code is limited to assigned partitions.

Setting up a partition requires the following actions.

- Create the partition
- Define the bell/siren operation
- Assign keypads
- Assign zones
- Assign users

Setting up partitions

Partitions are added or removed using the IQ Installer App.

Keypad partition setup

Keypads can be configured to control an individual partition or all partitions. A partition keypad only controls the partition to which it is assigned.

Bell/siren operation

Each partition must have a siren. The system siren connected to the bell output of the alarm controller can be mounted in a central location within hearing range of all partitions. Only assigned partitions can also have wireless sirens activated.

Single siren output operation

With a siren shared across all partitions, control over activation/deactivation of the output depends on the partition that initiated the alarm sequence. Only the partition that originated the alarm can deactivate the bell output.

Global zones, such as smoke detectors shared by multiple partitions, can deactivate the siren on all partitions to which the zone is assigned.

Multiple siren output operation

When multiple sirens are used in the installation, they can be programmed to sound alarm conditions for all partitions, or for individual partitions by using a partition enable mask. If hardwired sirens are used, this is accomplished with a corbus power supply module with a supervised high-current output. The output is then programmed as a Fire and Burglary PGM output type.

Note: Only the first output of the HSM2204 output module has bell supervision. Some conditions, such as an installer system test, may override the partition assignment and cause all sirens to activate. User system tests only activate the sirens/outputs assigned to that partition.

Interconnected smoke detector operation

When the Fire Alarm toggle is enabled on a zone with a PowerG smoke detector, any fire alarm on a partition assigned to the detector activates the sounder. Global fire alarms activate the sounder on all smoke detectors. The sounder on interconnected smoke detectors follows the panel bell for

duration of activation. If this option is disabled, interconnected smoke detectors continue to sound the alarm until the bell is deactivated on the panel.

The following alarm types cause interconnected smoke alarms to sound:

- Fire zones
- [F] key alarms
- Wire smoke input

Performing a hardware default

To perform a hardware default, complete the following steps.

1. Turn the IQ Pro system off by removing AC and battery power.
2. Remove all wiring between Zone 1 and PGM 1 on the alarm controller.
3. Connect a short between Zone 1 and PGM 1.
4. Turn on the system, a solid green LED lights and the system automatically resets.
5. Wait until the system is back on fully, and the solid green LED is on for a minimum 10 seconds.
6. Turn the system off by removing the AC and battery.
7. Remove the short.
8. Turn the system on again, with AC and battery connected. Factory settings are restored.

Troubleshooting

To perform a local update of the firmware, refer to the IQ Installer app.

The following table describes the trouble states that the module can detect. Refer to [\[*\]\[2\] View troubles](#) for additional trouble associated with LED/LCD keypads.

Table 83: IQ Installer Troubleshooting

Trouble	Trouble Description
Loss of AC	Ensure that there is power to the module, and that the voltage is between the 16 VDC to 20 VDC range at the transformer output.
Module tamper	Ensure that the back tamper plastic is in place and that the front cover of the enclosure is correctly secured.
Zone fault	Ensure that the zone is correctly wired and ensure that the zone EOL is correctly programmed.
Aux	Short or overload: There is a short or overload on the AUX terminals. Low voltage: The output voltage is below 9.8 VDC.
Low battery	The battery voltage is below the low battery threshold of 11.5 VDC.
No battery	There is no current detected on the battery terminals.
Fail to Enroll	Press and hold the Enroll push button for 10 seconds to reset the module, then attempt to enroll again.
Bell circuit	The bell circuit is open. The load is less than 1 k Ω .

Locating detectors and escape plan

The following information is for general guidance only, consult local fire codes and regulations when locating and installing smoke and CO alarms.

Smoke Detectors

Research has shown that all hostile fires in homes generate smoke to a greater or lesser extent. Experiments with typical fires in homes indicate that detectable quantities of smoke precede detectable levels of heat in most cases. For these reasons, smoke alarms should be installed outside of each sleeping area and on each story of the home. Additional smoke alarms beyond those required for minimum protection should be installed.

Additional areas that require protection are the basement, bedrooms, especially where smokers sleep, dining rooms, furnace and utility rooms, also any hallways not protected by the required units. On smooth ceilings, detectors may be spaced 9.1 m (30 feet) apart as a guide. Other spacing may be required depending on ceiling height, air movement, the presence of joists, uninsulated ceilings, etc. Consult National Fire Alarm Code NFPA 72, CAN/ULC-S553-02 or other appropriate national standards for installation recommendations.

- Do not locate smoke detectors at the top of peaked or gabled ceilings; the dead air space in these locations may prevent the unit from detecting smoke.
- Avoid areas with turbulent air flow, such as near doors, fans or windows. Rapid air movement around the detector may prevent smoke from entering the unit.
- Do not locate detectors in areas of high humidity.
- Do not locate detectors in areas where the temperature rises above 38°C (100°F) or falls below 5°C (41°F).

Smoke detectors should always be installed in USA in accordance with Chapter 29 of NFPA 72, the National Fire Alarm Code.

Where required by applicable laws, codes, or standards for a specific type of occupancy, approved single- and multiple-station smoke alarms shall be installed as follows:

1. In all sleeping rooms and guest rooms.
2. Outside of each separate dwelling unit sleeping area, within 6.4 m (21 ft) of any door to a sleeping room, the distance measured along a path of travel.
3. On every level of a dwelling unit, including basements.
4. On every level of a residential board and care occupancy (small facility), including basements and excluding crawl spaces and unfinished attics.
5. In the living area(s) of a guest suite.
6. In the living area(s) of a residential board and care occupancy (small facility).

Figure 1

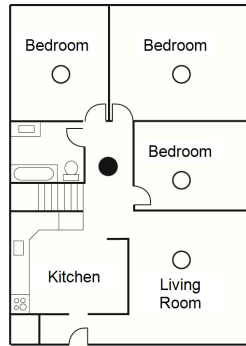


Figure 2

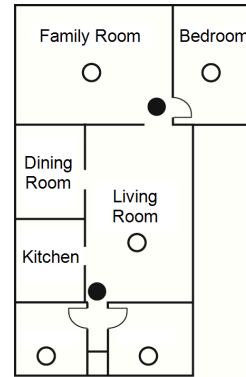


Figure 3

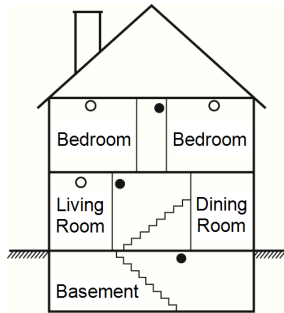


Figure 3a

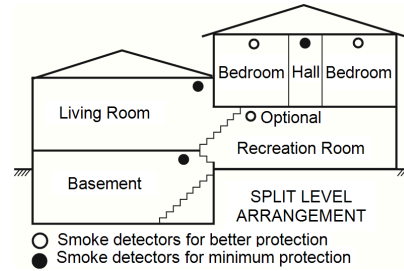
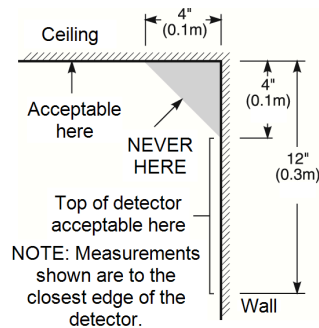


Figure 4



Fire Escape Planning

There is often very little time between the detection of a fire and the time it becomes deadly. It is thus very important that a family escape plan be developed and rehearsed.

1. Every family member should participate in developing the escape plan.
2. Study the possible escape routes from each location within the house. Since many fires occur at night, special attention should be given to the escape routes from sleeping quarters.
3. Escape from a bedroom must be possible without opening the interior door.

Consider the following when making your escape plans:

- Make sure that all border doors and windows are easily opened. Ensure that they are not painted shut, and that their locking mechanisms operate smoothly.
- If opening or using the exit is too difficult for children, the elderly or handicapped, plans for rescue should be developed. This includes making sure that those who are to perform the rescue can promptly hear the fire warning signal.
- If the exit is above the ground level, an approved fire ladder or rope should be provided as well as training in its use.
- Exits on the ground level should be kept clear. Be sure to remove snow from exterior patio doors in winter; outdoor furniture or equipment should not block exits.
- Each person should know the predetermined assembly point where everyone can be accounted for (e.g., across the street or at a neighbor's house). Once everyone is out of the building, call the fire department.
- A good plan emphasizes quick escape. Do not investigate or attempt to fight the fire, and do not gather belongings as this can waste valuable time. Once outside, do not re-enter the house. Wait for the fire department.
- Write the fire escape plan down and rehearse it frequently so that should an emergency arise, everyone will know what to do. Revise the plan as conditions change, such as the number of people in the home, or if there are changes to the building's construction.
- Make sure your fire warning system is operational by conducting weekly tests. If you are unsure about system operation, contact your installer.
- We recommend that you contact your local fire department and request further information on fire safety and escape planning. If available, have your local fire prevention officer conduct an in-house fire safety inspection.

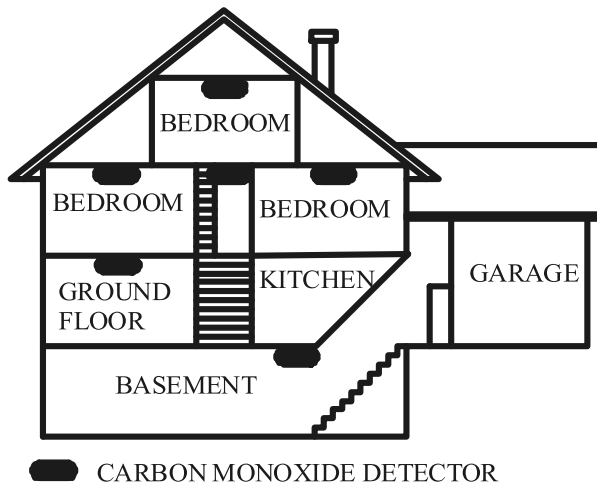
Carbon Monoxide Detectors

Carbon monoxide is colorless, odorless, tasteless, and very toxic, it also moves freely in the air. CO detectors can measure the concentration and sound a loud alarm before a potentially harmful level is reached. The human body is most vulnerable to the effects of CO gas during sleeping hours; therefore, CO detectors should be located in or as near as possible to sleeping areas of the home. For maximum protection, a CO alarm should be located outside primary sleeping areas or on each level of your home. Figure 5 indicates the suggested locations in the home.

Do not place the CO alarm in the following areas.

- Where the temperature may drop below -10°C or exceed 40°C
- Near paint thinner fumes
- Within 5 feet (1.5 m) of open flame appliances such as furnaces, stoves and fireplaces
- In exhaust streams from gas engines, vents, flues or chimneys
- In close proximity to an automobile exhaust pipe; this will damage the detector

Figure 5



ⓘ **Note:** Please refer to the CO detector installation manual for safety instructions and emergency information..

Regulatory Approvals

This product is UL/ULC listed under the following categories: AM QE/AMCX7 Central Stations Alarm Units, UTOU/UTOU7 Control Units and Accessories, Household System Type, NBSX/NBSX7 Household Burglar Alarm System Units and MULQ Home Health Care Signaling Equipment. For further information on this product's listings, also refer to the official listing guides published at the UL website (www.ul.com) under UL Product IQ.

This control panel is suitable for the following UL installations: UL/ULC Residential Fire and Burglary, UL Home Health Care Control Unit, UL Central Station, Police Station, Mercantile Safe and Vaults Control Unit, ULC Security Level I, II. Signaling Means PSDN (UL Standard/Encrypted Line Security and ULC Passive P1/Active A1-3), use with Internal Ethernet/Wi-Fi/Cellular communicator.

UL/ULC Residential Fire, Burglary and Home Health Care

The models IQ Pro and IQ Pro P have been tested and found in compliance with the following standards: UL1023 Household Burglar-Alarm System Units, UL985 Household Fire Warning System Units, UL1637 Home Health Care Signaling Equipment, ULC-S545 Residential Fire Warning Systems Control Units and ULC-S304 Security Level I Control Units, Accessories and Receiving Equipment for Intrusion Alarm Systems.

For ULC Residential Fire Installations refer to the Standard for the Installation of Residential Fire Warning Systems, CAN/ULC-S540:

- All input zones shall be configured with SEOL or DEOL configuration. Use model EOLR-2
- Use only the compatible power supply referenced in this Installation Manual. 24 h standby power must be provided for fire and home health care applications and 4h for burglary only applications (AC trouble must be transmitted to SRC within 60 minutes).
- Priority of signals on the Panel is set as Fire, CO, Burg, Panic, Aux and then Flood.
- Use at least one compatible listed Smoke Detector for Fire Installations.
- The entry delay shall not exceed 45 seconds (UL) and 180 seconds (ULC Security Level 1).
- The exit delay shall not exceed 120 seconds (UL).
- The control panel supports the Temporal 3 pattern for fire alarm and Temporal 4 for CO alarm notification.
- The minimum Bell Time-out is 4 minutes for UL/ULC residential burglary installations. For ULC Residential Fire installations, minimum bell time-out is 5 min. For UL Home Health Care installations, minimum bell time-out is 5 min.
- A code shall be required for bypassing zones
- Audible trouble indication shall be enabled
- AC trouble indication LED shall be enabled
- For UL residential fire installations, a code shall be required to view the [*][2] trouble menu
- For UL Residential Fire applications, latching troubles shall be enabled
- For fire and CO applications, RM-1(C) or RM-2 power loop supervision relay shall be connected to AUX2 Power Output to report wiring faults if it is used for powering fire/CO detection devices
- Test transmission cycle shall be set for 7 days transmission for UL Residential Fire applications, or 30 days for UL Residential Burglary only applications.
- For UL residential fire and home health care applications, there must be at least two UL listed compatible keypads (one of either one of the models HS2LCDWF(P)(V)9 or HS2LCD(P), or HS2LCDRFP9 shall be used). Hardwired models shall have communication bus wiring directly connected to the RED/BLK/YEL/GRN located on the main control panel board assembly.
- If a Wireless Repeater is required to be employed with RF Smoke Detectors or CO Detectors, two repeaters must be installed to cover each Smoke Detector and/or each CO detector.

- ① **Note:** For ULC Residential Fire and Burglary (ULC-S304 Level I) installations set for daily test transmission. Wireless Supervision window shall be set to 4 hours for UL/ULC Residential Fire Installations. Wireless Supervision window shall be set to 24 hours for Residential Burglary Installations only. RF Jam detection shall be enabled. For UL 985 6th Ed. Compliant installations using also the Wi-Fi connection or Ethernet, ensure Power for network equipment such as hubs, switches, routers, servers, modems, etc., is backed up or powered by an uninterruptible power supply (UPS), standby battery or the control unit, capable of facilitating 24 h standby.

For UL Residential Fire applications the following guidelines shall be respected when the equipment is used as a combination alarm system for fire and burglary protection:

- 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 AUX2 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 AUX 1 or to the compatible power supply modules AUX outputs (located on the power supply module board assembly e.g. HSM2300, HSM2204) or Expander Modules AUX outputs (located on the expander module board assembly e.g. HSM2108, HSM2208) when these are not used for powering fire alarm initiating devices.

IQ Pro shall use only combinations of maximum two daughter radio cards in the available slots. The available radio cards for UL residential fire (UL985) and residential burglary applications (UL1023) are: PowerG, SRF319, SRF345, SRF433 (DSC protocol). The PowerG, SRF319, SRF345, SRF433 cards along with the compatible devices are ULC listed for use in residential fire applications as per ULC-S545 and residential burglary applications as per ULC-S304 Security Level I.

UL/ULC Commercial Burglary

The models IQ Pro and IQ Pro P have been tested and found in compliance with the following standards: UL2610 Central Station Burglar-Alarm Units and ULC-S304 Control Units, Accessories and Receiving Equipment for Intrusion Alarm Systems, Security Levels I-II.

The subscriber control unit shall provide for the connection of protective wiring, conductors, and attachments in accordance with the Standard for Installation and Classification of Burglar and Holdup Alarm Systems, UL 681 in USA and in accordance with ULC-S301, CSA C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations and ULC-S302 Standard for the Installation, Inspection and Testing of Intrusion Alarm Systems, in Canada. Recommended testing shall be at least once a year.

- ① **Note:** This product is not intended for installation outdoors, or outside the protected premises.

This product is UL/ULC listed under the following categories, AMCE/AMCX7 Central Stations Alarm Units, UTOU/UTOU7 Control Units and Accessories, Household System Type NBSX/NBSX7 Household Burglar Alarm System Units. For further information on this product's listings also refer to the official listing guides published at the UL website (www.ul.com) under Online Directory Section.

Programming

The notes in the Installation Manual describing the system configurations for UL/ULC listed installations shall be implemented. RF Jam detection shall be enabled. Use of the Bell/Siren is for supplementary use. When used, the bell timeout shall be programmed for 15 minutes minimum.

- ① **Note:** The communication medium between protected property and communications service provider shall be for the exclusive use of the protected property and is not to be shared with other communications service provider subscribers.

Use only PowerG for UL/ULC Commercial Burglary installations. Require valid user code to arm this system must be enabled.

UL2610 Central Station with Standard or Encrypted Line Security Service and ULC-S304 Security Level I-II/A3 Active communication channel:

- The installation must use the integral cellular communicator, which sends events over Cellular Data Network to the compatible Sur-Gard System I/II/III/IV/5 receiver.
 - The communication path supervision window is set to 180 seconds with a 90-second heartbeat and the compromise detection takes place within 3 minutes. The panel is using encrypted line security AES256. NIST certificate A2354.
 - Wireless Supervision window shall be enabled and set to 4 hours.
 - Open/Closing acknowledgment shall be enabled.
 - For ULC-S304 compliant installations also using the Wi-Fi connection, ensure Power for network equipment such as hubs, switches, routers, servers, modems, etc., is backed up or powered by an uninterruptible power supply (UPS), standby battery or the control unit, capable of facilitating 24 h standby.
 - The entry delay shall not exceed 60 seconds (UL) and 60 seconds (ULC Security Level II).
 - The exit delay shall not exceed 60 seconds (UL) and 45 seconds (ULC Security Level II).
- ① **Note:** For UL certified Commercial Burglary Central Station applications the IQ Pro provides an acknowledgment signal to the user interface to confirm that a normal closing signal has been received when the system has been armed. The device causes an audible indication at the keypad (8 rapid beeps), when it receives the acknowledgment signal transmitted from the monitoring station compatible receiver.

Protection of the Control Unit

The local control unit and the local power supply must be protected in one of the following ways:

- The control unit and audible alarm device must be in a protected area which is armed 24 hours a day.
- Each partition must arm the area protecting the control unit and the audible alarm device power supply. This may require duplicate protection armed by each partition. Access to this protected area, without causing an alarm, will require that all partitions be disarmed.
- In all cases described above, the protected area for the control unit must be programmed as not-bypassable.

For installations employing packet switched (network) communications such as Cellular/Wi-Fi the following recommendations shall be followed:

- Select the Internet Service Providers that have redundant servers/systems and back-up power.
- Routers shall have firewalls enabled and methods to identify and protect against Denial of Service attacks (i.e. through spoofing).
- For UL Commercial Burglary applications the loss of communication with the monitoring station shall be treated as an alarm condition by monitoring station personnel when the burglar alarm system is in the armed state, and as a trouble condition while the system is disarmed. Packet switched data network (PSDN) interface equipment, manufactured by other than the burglar alarm equipment manufacturer, that is not provided with the burglar alarm system and/or not required for the processing of the signals shall be evaluated to the applicable requirements of the Standard for Information Technology Equipment - Safety

- Part 1: General Requirements, UL 60950-1, or the Standard for Audio/Video, Information and Communication Technology Equipment - Part 1: Safety Requirements, UL 62368-1, as communication equipment. Any network interface device which adds value or manipulates the original data packet such as changing transmission formats, adding encryption, and the like, shall comply with the applicable requirements noted in this standard.

User information

The installer should advise the user and note in the User's Manual the following information.

- Service organization name and telephone number.
- The programmed exit and entry time
- Instructions to test system weekly
- The user must not give out system information (for example, codes or bypass methods) to casual users (service people) and only give out codes set to expire within 24 hours

Identification of the conditions that might be expected to result in false alarms or impaired operation of the product(s): arming the system and not respecting the exit delay, entering the protected premises, and not respecting the entry delay for disarming the system can cause false alarms.

Note that the installer code cannot arm or disarm the system.

FCC-ISED Canada Compliance Statement

CAN ICES-3 (B) / NMB-3 (B)

IMPORTANT: Changes or modifications not expressly approved by Tyco Security Products Canada Ltd.. could void the user's authority to operate the equipment.

CAUTION! This equipment complies with radiation exposure limits set forth for uncontrolled environment. The antenna(s) used for these transmitters must be installed to provide a separation distance of at least 20 cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two 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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED Canada établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. l'appareil ne doit pas produire de brouillage, et
2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet appareil et son antenne ne doivent pas être situés ou fonctionner en conjonction avec une autre antenne ou un autre émetteur, exception faites des radios intégrées qui ont été testées.

Recycling and Disposal



Dispose in accordance with applicable legislation. This product must be disposed of separately from general household waste. Take it to a designated waste collection point in your area for safe disposal or recycling in accordance with National (i.e. US, Canada, European, Mexico, etc), Regional, State and Local Regulations and Laws. By doing this conservation of natural resources, protection of the environment and human health occurs.

CE declaration of conformity

This product is in conformity with the Electromagnetic Compatibility Directive 2014/30/EU, the Low Voltage Directive

2014/35/EU, and the RoHS3 Directive (EU) 2015/863.

The product is labelled with the CE mark as proof of compliance with the mentioned European Directives. Also, a CE declaration of conformity (DoC) for this product can be found at www.dsc.com.

Simplified EU Declaration of Conformity - Hereby, Tyco Safety Products Canada Ltd. declares that the radio equipment type is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: IQ Pro: <http://dsc.com/2302001>, IQ Prp P: <http://dsc.com/2302002>.

Frequency Bands	Maximum Power	Frequency Bands	Maximum Power
PowerG 868MHz 868.0 MHz to 868.6 MHz 868.7 MHz to 869.2 MHz	18.4 mW	Zwave 868 MHz 868.4 - 869.85	24.2 mW
Wi-Fi 2.4GHz band 802.11 b/g/n (HT20) 2412 - 2472 MHz	45.3 mW	Wi-Fi 2.4GHz band 802.11 n(HT40) 2422 - 2462 MHz	30.3 mW
Wi-Fi 5GHz band 802.11 a/n/ac 5150 - 5250 MHz 5250 - 5350 MHz 5470 - 5725 MHz 5725 - 5850 MHz	68.6 mW 47 mW 54.2 mW 22.7 mW	LTE B1/B3/ B7/B20/B28	0.25W
PowerG 433MHz 433.22 to 434.64	10 mW		

European single point of contact: Tyco Safety Products, Voltaweg 20,6101 XK Echt, Netherlands.

UK single point of contact: Tyco Security Products, Unit 1, 3 & 4, Letchworth Industrial Estate, Works Road, Letchworth Garden City, Hertfordshire SG6 1FF



EN compliance statement

EUROPEAN EN50131 COMPLIANCE STATEMENT (Only for those products labeled EN50131 Compliant)

This product, IQ Pro, IQ Pro P (with PowerG radio modem card operating in 868MHz band), has been certified by Kiwa Nederland B.V. for installations in accordance with EN50131 up to Grade 2, Class II and meets the requirements of Grade 2, Class II equipment per Standards: EN50131-1:2006+A1:2009+ A2:2017+A3:2020, EN50131-3:2009, EN50131-4: 2019, EN50131-10: 2014, EN50131-6:2017+A1:2021 Type A, EN50136-1:2012, EN50136-2:2013 ATS category SP2, SP4, DP1, DP3, Notification options A, B, C, D, F.

For EN50131 compliant installations, with alarm control panel IQ Pro, IQ Pro P, only the intrusion portion of the alarm system can be activated.

For EN50131 compliant installations, the following functions must be disabled.

- Fire alarm
- CO alarm
- Auxiliary (medical) alarm

The PowerG peripheral devices have two-way communication functionality, providing additional benefits as described in the technical brochure. This functionality has not been tested to comply with the respective technical requirements and should therefore be considered outside the scope of the product's certification.

Enable **EN Grade 2** Setting

By enabling the **EN Grade 2** setting, the following parameters will be changed automatically for IQ Pro and IQ Pro P.

- Entry Procedure (EU) - Follows entry procedures and alarm transmission delays specified by EN 50131-1 standards section 8.38
- Enables arming protest feature when trouble conditions are present. The user must override any troubles in order to arm the system.
- Trouble conditions remain present until a user has acknowledged them.
- Trouble beeps are expanded to include fault indications required by EN 50131-1 section 8.5.2
- Screen automatically locks 30 seconds after disarming the system.
- EU Event history buffer - Found in the basic settings menus, EU Events records mandatory history events specified by EN 50131-1 section 8.10.
- Events are stored in non-volatile memory with data retention of minimum 5 years
- Enables **EU Event Swinger Shutdown Count** setting to change the count to three events allowed for any individual event during an arming cycle
- **Auto Bypass** setting is not available
- Five incorrect user code attempts and then access locks for 90 seconds
- No priority of signal or message processing and indication is supported
- No automatic inhibit function is supported

The installer must be responsible for setting the rest of the following parameters to be EN 50131-1 compliant.

- Enable **Screen Lock** settings

- Set **Loss of Supervisory Signals for PowerG non-emergency sensors** to 20 minutes
- Set **Normal Entry Delay** to 45 seconds (maximum)
- Set **Trouble Beeps Timeout** to three minutes
- Enable **PowerG RF Jam EN 30/60**
- **Dialer Delay** must remain at 30 seconds
- Disable **Fire Panic** and **Auxiliary Panic**
- Enable 6-digit access codes

User must enable **Dealer or Installer Access Requires User Permission** .

Notes for EN50136-1:2012+A2:2018 Compliant Installations:

The Model IQ Pro, IQ Pro P has an integral communicator using the Tyco proprietary serial interface. The communicator circuitry operates in pass-through mode and it does acknowledge the alarm to the compatible controls panel after an acknowledgment has been received from the compatible alarm receiver.

The IQ Pro, IQ Pro P integral communicator is compatible with the following receivers: Sur-Gard System I-IP Receiver, version 1.41+. Sur-Gard System II Receiver, version 2.14+, Sur-Gard SG-DRL3-IP, version 2.36+ (for Sur-Gard System III Receiver), Sur-Gard SG-DRL4-IP version 1.29+ (for Sur-Gard System IV Receiver), and Sur-Gard SG-DRL5-IP version 1.04+ (for Sur-Gard System 5)

1. IQ Pro and IQ Pro P integral communicator is monitored by the control panel, and it is programmed via the programming menu available

from the website portal or Installer App.

2. The LTE Cellular path is immune to conducted and radiated RF fields with levels up to 10V/m as tested per EN50130-4

Standard.

3. The IQ Pro, IQ Pro P integral communicator conforms with radiated emissions levels for Class B equipment as per standards

EN61000-6-3/EN55032/CISPR32.

4. The IQ Pro, IQ Pro P integral communicator has one communication path using several technologies: cellular communication path using 900/1800/2100 MHz Public Cellular Network, one Wi-Fi 2.4/5GHz communication path and one 10BaseT Ethernet path. It can use one, the cellular path (SP2 or SP4) or cellular and Wi-Fi/Ethernet in a backup configuration (DP1 or DP3) using cellular as primary path and Wi-Fi/Ethernet as back-up). When Ethernet cable is connected the Wi-Fi path is disabled automatically

5. The IQ Pro, IQ Pro P integral communicator uses AES128 encryption algorithm for communication with compatible receivers.

The AES 128 encryption of data communication ensures substitution and information security.

6. The IQ Pro, IQ Pro P integral communicator has been tested for compliance in conjunctions with the following applicable standards: EN50136-1:2012+A2:2018, EN50136-2:2013, EN50131-10:2014, ATS configuration: SP2, SP4 and DP1, DP3.

For EN50131-1:2006/A1:2009/A2:2017/A3:2020 compliant installations, the following programming options shall be set as described: Test transmission interval set to 24h for SP2 and DP1 configuration. Supervision shall be set to 180s for SP4 and DP3 configurations. IQ Pro, IQ Pro P integral communicator has been certified by Kiwa Nederland B.V. in accordance with EN50131-1:2006/ A1:2009/A2:2017/A3:2020, EN50131-10:2014 requirements for Grade 2, Class II and EN50136-2:2013 Configuration: SP2, SP4, DP1 and DP3, Notification Options: A,B,C,D,F

UK compliance statement

PD6662 COMPLIANCE STATEMENT (Only for products used in UK installations)

The IQ Pro, IQ Pro P is suitable for use in systems installed to conform to PD6662:2017 (with notification options: A, B, C, D, or F) at Security Grade 2 and environmental Class II. BS8243:2010 + A1:2014, where Option:

A. denotes use of 2 remotely powered sirens and single path rated SP2 communicator.

B. denotes use of a self-powered siren (ex. PG8901/PG8911) and a single path rated SP2 (24h supervision, use Cell only)

communicator

C. denotes use of a dual path rated DP1 (24h supervision, use Cell and Wi-Fi) communicator, use of sirens is optional.

D. denotes use of single path rated SP4 (180s supervision, use Cell only) communicator, use of sirens is optional.

F. denotes use of a dual path rated DP3 (180s supervision, use Cell and Wi-Fi) communicator, use of sirens is optional.



Legal information

Limited warranty

Digital Security Controls (“DSC”), a division of Tyco Safety Products Canada Ltd, a part of the Johnson Controls group of companies (“JCI”), warrants the original purchaser that for a period of twelve months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use. During the warranty period, JCI shall, at its option, repair or replace any defective product upon return of the product to its factory, at no charge for labor and materials. Any replacement and/or repaired parts are warranted for the remainder of the original warranty or ninety (90) days, whichever is longer. The original purchaser must promptly notify JCI in writing that there is defect in material or workmanship, such written notice to be received in all events prior to expiration of the warranty period. There is absolutely no warranty on software and all software products are sold as a user license under the terms of the software license agreement included with the product. The Customer assumes all responsibility for the proper selection, installation, operation and maintenance of any products purchased from JCI . Custom products are only warranted to the extent that they do not function upon delivery. In such cases, JCI can replace or credit at its option.

International Warranty

The warranty for international customers is the same as for any customer within Canada and the United States, with the exception that JCI shall not be responsible for any customs fees, taxes, or VAT that may be due.

Warranty Procedure

To obtain service under this warranty, please return the item(s) in question to the point of purchase. All authorized distributors and dealers have a warranty program. Anyone returning goods to JCI must first obtain an authorization number. JCI will not accept any shipment whatsoever for which prior authorization has not been obtained.

Conditions to Void Warranty

This warranty applies only to defects in parts and workmanship relating to normal use. It does not cover:

- damage incurred in shipping or handling;
- damage caused by disaster such as fire, flood, wind, earthquake or lightning;
- damage due to causes beyond the control of JCI such as excessive voltage, mechanical shock or water damage;
- damage caused by unauthorized attachment, alterations, modifications or foreign objects;
- damage caused by peripherals (unless such peripherals were supplied by JCI.);
- defects caused by failure to provide a suitable installation environment for the products;
- damage caused by use of the products for purposes other than those for which it was designed;
- damage from improper maintenance;
- damage arising out of any other abuse, mishandling or improper application of the products.

Items Not Covered by Warranty

In addition to the items which void the Warranty, the following items shall not be covered by Warranty: (i) freight cost to the repair centre; (ii) products which are not identified with JCI's product label and lot number or serial number; (iii) products disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection or testing to verify any warranty claim. Access cards or tags returned for replacement under warranty will be credited or replaced at JCI's option. Products not covered by this warranty, or otherwise out of warranty due to age, misuse, or damage shall be evaluated, and a repair estimate shall be provided. No repair

work and will be performed until a valid purchase order is received from the Customer a Return Merchandise Authorization number (RMA) is issued by JCI's Customer Service.

JCI's liability for failure to repair the product under this warranty after a reasonable number of attempts will be limited to a replacement of the product, as the exclusive remedy for breach of warranty. Under no circumstances shall JCI be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages include, but are not limited to, loss of profits, loss of the product or any associated equipment, cost of capital, cost of substitute or replacement equipment, facilities or services, down time, purchaser's time, the claims of third parties, including customers, and injury to property. The laws of some jurisdictions limit or do not allow the disclaimer of consequential damages. If the laws of such a jurisdiction apply to any claim by or against JCI, the limitations and disclaimers contained here shall be to the greatest extent permitted by law. Some states do not allow the exclusion or limitation of incidental or consequential damages, so that the above may not apply to you.

Disclaimer of Warranties

This warranty contains the entire warranty and shall be in lieu of any and all other warranties, whether expressed or implied (including all implied warranties of merchantability or fitness for a particular purpose) and of all other obligations or liabilities on the part of JCI. JCI neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product. This disclaimer of warranties and limited warranty are governed by the laws of the province of Ontario, Canada.

▲ WARNING: JCI recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

Out of Warranty Repairs

JCI will at its option repair or replace out-of-warranty products which are returned to its factory according to the following conditions. Anyone returning goods to JCI must first obtain an authorization number. JCI will not accept any shipment whatsoever for which prior authorization has not been obtained. Products which JCI determines to be repairable will be repaired and returned. A set fee which JCI has pre-determined and which may be revised from time to time, will be charged for each unit repaired.

Products which JCI determines not to be repairable will be replaced by the nearest equivalent product available at that time. The current market price of the replacement product will be charged for each replacement unit.

WARNING - READ CAREFULLY

Note to Installers

This warning contains vital information. As the only individual in contact with system users, it is your responsibility to bring each item in this warning to the attention of the users of this system.

System Failures

This system has been carefully designed to be as effective as possible. There are circumstances, however, involving fire, burglary, or other types of emergencies where it may not provide protection. Any alarm system of any type may be compromised deliberately or may fail to operate as expected for a variety of reasons. Some but not all of these reasons may be:

Inadequate Installation

A security system must be installed properly in order to provide adequate protection. Every installation should be evaluated by a security professional to ensure that all access points and areas are covered. Locks and latches on windows and doors must be secure and operate as intended. Windows, doors, walls, ceilings and other building materials must be of sufficient strength and

construction to provide the level of protection expected. A reevaluation must be done during and after any construction activity. An evaluation by the fire and/or police department is highly recommended if this service is available.

Criminal Knowledge

This system contains security features which were known to be effective at the time of manufacture. It is possible for persons with criminal intent to develop techniques which reduce the effectiveness of these features. It is important that a security system be reviewed periodically to ensure that its features remain effective and that it be updated or replaced if it is found that it does not provide the protection expected.

Access by Intruders

Intruders may enter through an unprotected access point, circumvent a sensing device, evade detection by moving through an area of insufficient coverage, disconnect a warning device, or interfere with or prevent the proper operation of the system.

Power Failure

Control units, intrusion detectors, smoke detectors and many other security devices require an adequate power supply for proper operation. If a device operates from batteries, it is possible for the batteries to fail. Even if the batteries have not failed, they must be charged, in good condition and installed correctly. If a device operates only by AC power, any interruption, however brief, will render that device inoperative while it does not have power. Power interruptions of any length are often accompanied by voltage fluctuations which may damage electronic equipment such as a security system. After a power interruption has occurred, immediately conduct a complete system test to ensure that the system operates as intended.

Failure of Replaceable Batteries

This system's wireless transmitters have been designed to provide several years of battery life under normal conditions. The expected battery life is a function of the device environment, usage and type. Ambient conditions such as high humidity, high or low temperatures, or large temperature fluctuations may reduce the expected battery life. While each transmitting device has a low battery monitor which identifies when the batteries need to be replaced, this monitor may fail to operate as expected. Regular testing and maintenance will keep the system in good operating condition.

Compromise of Radio Frequency (Wireless) Devices

Signals may not reach the receiver under all circumstances which could include metal objects placed on or near the radio path or deliberate jamming or other inadvertent radio signal interference.

System Users

A user may not be able to operate a panic or emergency switch possibly due to permanent or temporary physical disability, inability to reach the device in time, or unfamiliarity with the correct operation. It is important that all system users be trained in the correct operation of the alarm system and that they know how to respond when the system indicates an alarm.

Smoke Detectors

Smoke detectors that are a part of this system may not properly alert occupants of a fire for a number of reasons, some of which follow. The smoke detectors may have been improperly installed or positioned. Smoke may not be able to reach the smoke detectors, such as when the fire is in a chimney, walls or roofs, or on the other side of closed doors. Smoke detectors may not detect smoke from fires on another level of the residence or building. Every fire is different in the amount of smoke produced and the rate of burning. Smoke detectors cannot sense all types of fires equally well. Smoke detectors may not provide timely warning of fires caused by carelessness or safety hazards such as smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits, children playing with matches or arson. Even if the smoke

detector operates as intended, there may be circumstances when there is insufficient warning to allow all occupants to escape in time to avoid injury or death.

Motion Detectors

Motion detectors can only detect motion within the designated areas as shown in their respective installation instructions. They cannot discriminate between intruders and intended occupants. Motion detectors do not provide volumetric area protection. They have multiple beams of detection and motion can only be detected in unobstructed areas covered by these beams. They cannot detect motion which occurs behind walls, ceilings, floor, closed doors, glass partitions, glass doors or windows. Any type of tampering whether intentional or unintentional such as masking, painting, or spraying of any material on the lenses, mirrors, windows or any other part of the detection system will impair its proper operation. Passive infrared motion detectors operate by sensing changes in temperature. However, their effectiveness can be reduced when the ambient temperature rises near or above body temperature or if there are intentional or unintentional sources of heat in or near the detection area. Some of these heat sources could be heaters, radiators, stoves, barbeques, fireplaces, sunlight, steam vents, lighting and so on.

Warning Devices

Warning devices such as sirens, bells, horns, or strobes may not warn people or waken someone sleeping if there is an intervening wall or door. If warning devices are located on a different level of the residence or premise, then it is less likely that the occupants will be alerted or awakened. Audible warning devices may be interfered with by other noise sources such as stereos, radios, televisions, air conditioners or other appliances, or passing traffic. Audible warning devices, however loud, may not be heard by a hearing-impaired person.

Telephone Lines

If telephone lines are used to transmit alarms, they may be out of service or busy for certain periods of time. Also, an intruder may cut the telephone line or defeat its operation by more sophisticated means which may be difficult to detect.

Insufficient Time

There may be circumstances when the system will operate as intended, yet the occupants will not be protected from the emergency due to their inability to respond to the warnings in a timely manner. If the system is monitored, the response may not occur in time to protect the occupants or their belongings.

Component Failure

Although every effort has been made to make this system as reliable as possible, the system may fail to function as intended due to the failure of a component.

Inadequate Testing

Most problems that would prevent an alarm system from operating as intended can be found by regular testing and maintenance. The complete system should be tested weekly and immediately after a break-in, an attempted break-in, a fire, a storm, an earthquake, an accident, or any kind of construction activity inside or outside the premises. The testing should include all sensing devices, keypads, consoles, alarm indicating devices and any other operational devices that are part of the system.

Security and Insurance

Regardless of its capabilities, an alarm system is not a substitute for property or life insurance. An alarm system also is not a substitute for property owners, renters, or other occupants to act prudently to prevent or minimize the harmful effects of an emergency situation.

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