

## HSM2300/2204 v1.1 Installation Instructions

### Power Supply/Four High-Current Output Modules

The HSM2300 can provide up to 1.0A of additional current to the compatible PowerSeries Neo alarm controllers, models HS2016, HS2032, HS2064 and HS2128. The HSM2204 can provide up to 1.0A of additional current and add up to four high-current programmable outputs.

This installation sheet shall be used in conjunction with the Installation Manual of the DSC equipment to which the HSM2300 or HSM2204 is connected or powered from (e.g. alarm controller, power supply, etc.).

### General

This product meets the requirements of Class II, Grade 2 equipment as per EN50131-1:2006+A1:2009, EN50131-3:2009 Type B, EN50131-6:2008 Type A.

### Specifications

- Power supply Type A as per EN50131-6 Standard
- Temperature range: -10°C to +55°C (14°F to 131°F); for UL/ULC listed installation: 0 to +49°C (32°F to 122°F)
- Relative Humidity: 5% to 93% R.H. non-condensing
- Input rating: EU: 220V-240Vac, 50Hz, 200mA; NA: 120V, 60Hz, 500mA. Only one board shall be powered from a transformer.

**NOTE:** For installations using the transformer mounted inside the cabinet, replace the fuse only with the same type (20mm) rated 250V/315mA.

- Transformer required, mounted in the same enclosure and permanently connected (EU); for UL/ULC installations, use the plug-in adaptor model PTD1640U(UL)/PTD1640(UL) or hardwired model FTC3716.

**NOTE:** For UL/ULC listed installations, do not connect transformer to receptacle controlled by a switch.

- Transformer secondary ratings: 16.5Vac, 40VA
- Board current draw: 40mA (set and unset state/alarm and non-alarm state)
- Board dimensions: 145mm x 83mm
- AUX output ratings: 10.8 to 12.5VDC
- Resettable fuse (PTC) used on circuit board instead of replaceable fuses
- Output ripple voltage: 600mVp-p max.
- No overvoltage protection devices required on the outputs
- Storage device: rechargeable battery, rated 12Vdc. Replace battery every 3-5 yrs.
- Battery capacity: 4Ah, 7Ah, or 14Ah (2 x 7Ah) max.
- Maximum standby time 24h (when using 14Ah battery capacity and AUX current limited to 500mA max.) Refer to Table 1.
- Recharging time: up to 85% in 24 hours (use high charging current setting)
- Low battery trouble indication threshold 11.5VDC, restoral level 12.5VDC
- Corbus (RED terminal) low voltage trouble threshold 9VDC
- Battery deep discharge protection (cut-off at 9.6 VDC)

**NOTE:** Main control panel and power supply shall be powered from the same AC mains circuit.

**NOTE:** For EN50131-6:2008 compliant installations, use only one 12V/7Ah battery for 12h of required standby time (500mA output current). Recharge time to 80% is 72h supervision for loss of primary power source (AC Fail), battery fail, or battery low voltage (Battery Trouble) with indication provided on the keypad.

**NOTE:** For T014 (INCERT) compliant installations, use two 12V/7Ah batteries for 24H of required standby time (500mA output current) and the enclosure model PowerUC1 (INCERT certified). The charging current shall be high

### Terminal Descriptions

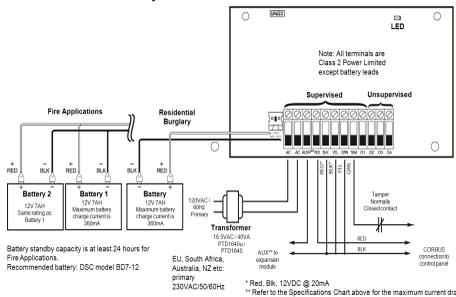


Table: 1 Ratings

HSM2300/2204	UL Resi Burg	UL Com Burg	UL Resi Fire UL Home Health	ULC Fire Monitoring	EN50131
Current Draw 40mA	ULC Resi Burg		Care ULC Resi Fire ULC Com Burg		Grade 2/Class II
Max. Aux Current Loading	1A	1A	0.5A	0.5A	0.5A
UL/ULC Listed Enclosure	PC500C	CMC-1 PC4050CAR	PC5003C	PC5003C (when used with a hardwired transformer in an electrical box) PC4050CR (red/transformer mounted inside)	PC5003C Power UC1
Transformer Requirements	16.5V, 40VA (plug-in type) PTC1640U(USA) PTC1640CG(CND)			FTC3716 (cUL listed) 16.5V/37VA (Hardwired type, mounted inside the enclosure or outside using electrical box)	16.5V/40VA (hardwired type, mounted inside the cabinet)
Battery capacity Requirements	7Ah	7Ah	14Ah (2x7Ah in parallel)	14Ah (2x7Ah in parallel)	7Ah
Standby Time	4 hours	4 hours	24 hours	24 hours	12 hours
Alarm Time	4 minutes	15 minutes	4 min (UL resi fire) 5 min (Home Health Care and ULC Resi Fire)	5 minutes (Alarm Transmission only)	N/A
Recharging current setting	low (480mA)	low (480mA)	high (700mA)	high (700mA)	low/high (480/700mA)

AC - Supervised, the HSM2300 and HSM2204 require a 16.5V/40VA transformer. Connect the primary of the transformer to an unswitched AC source (maximum current draw is 0.5A) and connect the secondary of the transformer (US market only) to these terminals. **TMP** - Used to tamper the cabinet in which the HSM2108 is mounted. Connect a normally closed (NC) switch across TAM and BLK. If the tamper is not being used connect a piece of wire across TAM and BLK to remove the trouble condition. There is a built-in tamper switch on the expander module located in the top left corner of the circuit board. If the cabinet in which the HSM2108 is mounted has the hardware required to depress this tamper switch, do not connect anything to the TAM terminal.

**NOTE:** Tamper protect is required for UL/ULC residential/residential burglary installations.

**AUX+** - Used to provide power for devices. Maximum current draw is not to exceed 100 mA. Connect the positive lead of powered devices to VAUX and the negative to BLK or any COM terminal (01 to 04 for switched output or to BLK for not switched output).

**CORBUS** - The 4-wire Corbus connection is used by the panel to communicate with the module. Connect the RED, BLK, YEL and GRN terminals to the Corbus terminals on the HS2016, HS2032, HS2064, or HS2128 main control.

O1 to O4 (HSM2204) - Wire the positive lead of the device to the AUX terminal and the negative lead to the required output terminal O1 to O4.

**IMPORTANT NOTE:** Output O1 is supervised in the same manner as the Bell Output of the compatible control panel. If O1 is not used, if no continuous load is connected, or if a siren is connected, a 1000Ω resistor, DSC model EOLR-1 must be connected in order to prevent the indication of a trouble condition. This diagram is an example of how to wire various devices to the outputs.

**NOTE:** The HSM2204 is not suitable for fire alarm annunciation.

### Enclosures

The HSM2300 or HSM2204 shall be installed in the metal enclosures listed below. Tamper protection switches can be installed on all enclosures, including door opening protection and/or removal from the mounting position. Doors shall be secured using screws or

keylock. For EN50131-1 Grade 2 compliant installations, all holes on the side of the cabinets shall be covered (plugged) if no accessories are installed in the cabinet that will use these mounting holes

- Model PC500C made of 22Ga steel, painted. 213mm(L) x 235mm(W) x 78 mm(H)
- Model CMC-1 made of 18Ga steel, painted. 287mm(L) x 298mm(W) x 80mm(H)
- Model PC4050CAR made of 18Ga steel, painted. 376mm(L) x 305mm(W) x 125mm(H)
- Model PC4050CR made of 18Ga steel, painted. 376mm(L) x 305mm(W) x 128mm(H)
- Model Power UC1 made of 18Ga steel, painted. 356mm(L) x 319mm(W) x 115mm(H) Weight: 6.15Kg (PCB, Battery, XFRM)
- Model PC5003C made of 22Ga steel, painted. 288mm(L) x 298mm(W) x 78mm(H), Weight: 4.5Kg (PCB, Battery, XFRM)

### Battery Setting

A battery charge current setting in the panel is used to enable high charge current for the battery. Normally the battery charge current can be 240mA max, but when this option is enabled the module can charge the battery with up to 480mA of current. Section [982] [010] Options 1-4 can enable/disable the high current battery charge option for HSM2204 modules 1-4 and [982][020] Options 1-4 for the HSM2300.

### Status LED

The HSM2300 and HSM2204 are equipped with status LEDs to indicate the current status of the module. If the HSM2300/2204 is operating correctly, the status LED will flash briefly every 10 seconds. When a trouble condition is present, the status LED will display a series of flashes then remain blank for 2 seconds. The number of flashes between blank periods indicates the trouble condition presents as outlined in Table 2

Table: 2

Number of Flashes	Trouble Condition
1	Module not enrolled
2	Panel supervision trouble
3	Corbus low voltage
4	Battery trouble
5	AC trouble
6	AUX trouble
7	Output 1 Trouble - HSM2204 only

### Enroll Modules

- Enter Installer Programming [\*][8][Installer Code][\*].
- Enter section [902] to enroll the module. Modules can be enrolled automatically or manually. In either case, the serial number of the device is used as an identifier. Select one of the enrollment options described below:

#### 000 Auto Enroll

When this mode is selected, the total number of modules currently enrolled are displayed on the keypad.

- After entering subsection [000], press the [\*] key to begin auto enrollment of all new modules. As each device is enrolled, the keypad displays the model type, serial number and slot assignment. Devices are assigned to the next available slot.
- Use the <> keys to view the enrolled modules.

#### 001 Manual Enroll

- After entering Installer Programming and section [902], enter subsection 001. Then enter [003] for HSM2204 or subsection [009] for HSM2300.
- When prompted, key in the serial number of the module, which is found on the back of the device. An error tone is sounded if an invalid serial number is received. Modules are enrolled into the next available slot for the device.
- To cancel enrollment of a module, press [#].

### Deleting Modules

- Enter Installer Programming [\*][8][Installer Code][\*].
- Enter section [902] then subsection [109] for HSM2300 and subsection [110] for HSM2204.
- Scroll to the specific module you want to delete.
- Press [\*] to select the module then, when prompted, press [\*] again to delete.

### Confirming Modules

To confirm enrollment of individual modules and to locate them physically:

- After entering section [903], scroll to the module type you want to confirm (109 for HSM2300, 110 for HSM2204). To view all modules, enter [000] after entering section [903].
- Press [\*] to select the module type then scroll to the specific module you want to confirm.

- Press [\*] to enter confirmation mode. The module's serial number and slot number are displayed on the keypad and the status LEDs on the device flash. This continues until confirmation mode for the device is exited via the [#] key.

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### Industry Canada

CAN 1 (EN-3) (By NMB-38)

### EN CERTIFICATION

The Models HSM2204 and HSM2300 Power supplies have been certified by Telecommunication according to EN 50131-1:2006 + A1:2009 and EN 50131-6:2008, For Grade 2, Class II, Type A, when installed in PC5003C enclosure.







