

HSM2300/2204 v1.1 Installation Instructions						
Power Supply/Four High-Current Output Modules						
The HSM2300 can provide up to 1 A of additional current to the compatible PowerSeries alarm controllers. This module is compatible with PowerSeries Neo (HS2016, HS2032, HS2064, HS2128) and PowerSeries Pro (HS3032, HS3128, HS3248) panels. The HSM2204 can provide up to 1 A of additional current and add up to four high-current programmable outputs. This installation sheet can 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°C to + 49°C (32°F to 122°F). - Relative Humidity: 5% to 93% R.H. non-condensing. - Input rating: EU: 220 V - 240 Vac, 50 Hz, 200 mA; NA: 120 V, 60 Hz, 500 mA. Only one board must be powered from a transformer.						
Note: For installations using the transformer mounted inside the cabinet, replace the fuse only with the same type (20 mm) rated 250 V / 315 mA.						
Transformer required, mounted in the same enclosure and permanently connected (EU); for UL/ULC installations, use the plug-in adaptor model PTD1640U (UL) /PTD1640 (ULC) or hardwired model FTC3716.						
Note: For UL/ULC listed installations, do not connect transformer to receptacle controlled by a switch.						
- Transformer secondary ratings: 16.5 Vac, 40 VA. - Board current draw: 40 mA (set and unset state/alarm and non-alarm state). - Board dimensions: 145 mm x 83 mm. - AUX output ratings: 10.8 VDC to 12.5 VDC. - Resettable fuse (PTC) used on circuit board instead of replaceable fuses. - Output ripple voltage: 600 mVp-p max. - No overvoltage protection devices required on the outputs. - Storage device: rechargeable battery, rated 12 Vdc. Replace battery every 3 - 5 yrs. - Battery capacity: 4 Ah, 7 Ah, or 14 Ah (2 x 7 Ah) max. - Maximum standby time 24 h (when using 14 Ah battery capacity and AUX current limited to 500 mA max.) Refer to Table 1. - Recharging time: up to 85% in 24 hours (use high charging current setting). - Low battery trouble indication threshold 11.5 VDC, restoral level 12.5 VDC. - Corbus (RED terminal) low voltage trouble threshold 9 VDC. - Battery deep discharge protection (cut-off at 9.6 VDC).						
Warning : Main control panel and power supply must be powered from the same AC mains circuit.						
Note:						
- For EN50131-6:2008 compliant installations, use only one 12 V / 7 Ah battery for 12h of required standby time (500 mA output current). Recharge time to 80% is 72 h. Supervision for loss of primary power source (AC Fail), battery fail, or battery low voltage (Battery Trouble) with indication provided on the keypad. - For T014 (INCERT) compliant installations, use two 12 V / 7 Ah batteries for 24 H of required standby time (500 mA output current) and the enclosure model Power UC1 (INCERT certified). The charging current must be high.						

Table 1: Ratings						
HSM2300/2204	UL Resi Burg	ULC Resi Burg	UL Com Burg	UL Resi Fire UL Home Health Care	ULC Fire Monitoring	EN50131 Grade 2/Class II
Current Draw 40 mA						
Max. Aux Current Loading	1 A	1 A	0.5 A *	0.5 A	0.5 A	0.5 A
UL/ULC Listed Enclosure	PC500C HSC3010C	CMC-1 PC4050CAR HSC3010C HSC3030CAR	PC5003C HSC3010C	PC5003C PC4050CR (red/transformer mounted inside) HSC3010CR	PC5003C Power UCI HSC3020C	
Transformer Requirements	16.5 V, 40 VA (plug-in type) PTC1640U (USA) PTC1640CG (CND)			FTC3716 (cUL listed)16.5 V/37 VA (Hardwired type, mounted inside the enclosure or outside using electrical box)	16.5 V/4 0VA (hardwired type, mounted inside the cabinet)	
Battery capacity Requirements	7 Ah	7 Ah	14 Ah (2 x 7 Ah in parallel)	14 Ah (2 x 7 Ah in parallel)	7 Ah	
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 (480 mA)	low (480 mA)	high (700 mA)	high (700 mA)	low/high (480/700 mA)	

* For UL Residential Fire installations, also using hardwired CO alarm detectors, the maximum discharge current shall be limited to 250 mA in order to ensure 24 h standby operation followed by 4 minute CO alarm notification and followed by an additional 12 h of CO alarm notification.

AC - Supervised, the HSM2300/HSM2204 require a 16.5 V/40 VA transformer. Connect the primary of the transformer to an unswitched AC source (maximum current draw is 0.5 A) and connect the secondary of the transformer (US market only) to these terminals.

TAM- Used to tamper the cabinet in which the HSM2300/HSM2204 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. Tamper protection is required for UL/ULC commercial/residential burglary installations.

AUX+ - Used to provide power for devices. Maximum current draw is not to exceed 1000 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, HS2128, HS3032, HS3128, and HS3248 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 1000 Ω 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 is installed in the metal enclosures listed in table 1. Tamper protection switches can be installed on all enclosures, including door opening protection and/or removal from the mounting position. Secure the doors with screws or a keylock. For EN50131-1 Grade 2 compliant installations, all holes on the side of the cabinets can be covered (plugged) if no accessories are installed in the cabinet that uses these mounting holes.

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 480 mA max, but when this option is

enabled the module can charge the battery with up to 700 mA 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 flashes briefly every 10 seconds. When a trouble condition is present, the status LED displays a series of flashes then remain blank for 2 seconds. The number of flashes between blank periods indicates the trouble condition present as outlined in Table 2.

Table: 2 Trouble Conditions

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.
- Devices are assigned to the next available slot.

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 and 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 using the [#] key.

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CAUTION: Changes or modifications not expressly approved by Digital Security Controls could void your authority to use this equipment.

This equipment generates and uses radio frequency energy and if not installed and used properly, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for Class B equipment in accordance with the specifications in Subpart "B" of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to television or radio 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 the receiving antenna
- Relocate the item control with respect to the receiver
- Move the item control away from the receiver
- Connect the item control to a different outlet so that alarm control and receiver are on different circuits

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet helpful: The FCC's booklet, "How to Identify and Reduce Radio/Television Interference Problems". This booklet is available from The U.S. Government Printing Office, Washington, D.C. 20402, Stock #704-000-00345.

Industry Canada

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

EN CERTIFICATION

The Models HSM2204 and HSM2300 Power supplies have been certified by Telecommunication according to EN50131-1:2006+A1:2009 and EN50131-6:2008, for Grade 2, Class II, Type A when installed in PC500C enclosure.

HSM2300/2204 v1.1 - Instructions d'installation

Alimentation électrique/Quatre modules de sortie haute tension

Le HSM2300 peut fournir jusqu'à 1 A de courant supplémentaire aux contrôleurs d'alarme compatibles PowerSeries. Ce module est compatible avec les centrales PowerSeries Neo (HS2016, HS2032, HS2064, HS2128) et PowerSeries Pro (HS3032, HS3128, HS3248). Le boîtier HSM2300/2204 peut fournir jusqu'à 1 A de courant supplémentaire et ajouter quatre sorties programmables haute tension. La fiche d'installation doit être utilisée en association avec le manuel d'installation de l'équipement DSC sur lequel le boîtier HSM2300 ou HSM2204 est branché ou qui l'alimente (par exemple le contrôleur d'alarme, l'alimentation électrique, etc.).

Généralités

Ce produit satisfait aux exigences des équipements de classe II, grade 2 selon les normes EN50131-1:2006+A1:2009, EN50131-3:2009 Type B, EN50131-6:2008 Type A.

Spécifications

- Norme d'alimentation électrique EN50131-6 de type A.
- Plage de température : de -10 °C à + 55 °C (de 14 °F à 131 °F) ; pour les installations homologuées UL/ULC : de 0 °C à 49 °C (de +32 °F à 122 °F).
- Taux d'humidité relative : de 5 % à 93 % sans condensation.
- Tension d'entrée : UE : 220 V - 240 Vac, 50 Hz, 200 mA ; AN : 120 V, 60 Hz, 500 mA. Une seule carte doit être alimentée par un transformateur.

Remarque: Pour les installations qui utilisent un transformateur monté à l'intérieur de le boîtier, remplacez le fusible uniquement avec un fusible du même type (20 mm) de valeur nominale 250 V/315 mA.

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