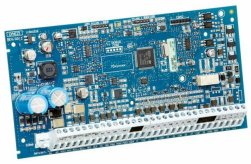
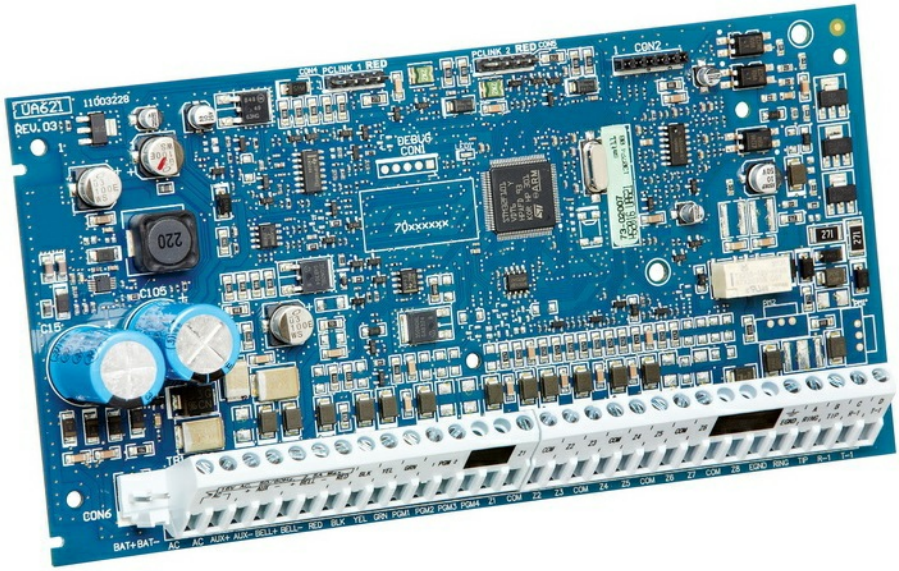


DSC HS2016 Power Supply Four High Current Output Modules Instruction Manual

Contents

DSC

DSC HS2016 Power Supply Four High Current Output Modules



HSM2300/2204 v1.1 Installation Instructions
The HSM2300 and HSM2204 are power supply modules that provide additional current to compatible PowerSeries Neo alarm controllers. The HSM2300 can provide up to 1.0A of additional current, while the HSM2204 can provide up to 1.0A of additional current and add up to four high-current programmable outputs. This product meets the requirements of Class II, Grade 2 equipment as per EN501311:2006+A1:2009, EN50131-3:2009 Type B, and EN50131-6:2008 Type A.

Product Usage Instructions

Before installing the HSM2300 or HSM2204, refer to the Installation Manual of the DSC equipment to which it will be connected or powered from (e.g., alarm controller, power supply, etc.).

Power Requirements

The board shall be powered by a transformer. For installations using the transformer mounted inside the cabinet, replace the fuse only with the same type (20mm) rated 250V/315mA. For EU installations, a transformer is required, mounted in the same enclosure and permanently connected. For UL/ULC installations, use the plug-in adaptor model PTD1640U(UL) /PTD1640(ULC) or hardwired model FTC3716. Note that the main control panel and power supply shall be powered from the same AC mains circuit.

Battery Requirements

For EN50131-6:2008 compliant installations, use only one 12V/7Ah battery for 12 hours of required standby time (500mA output current). Recharge time to 80% is 72 hours. Supervised 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 12V/7Ah batteries for 24 hours of required standby time (500mA output current) and the enclosure model PowerUC1 (INCERT certified). The charging current shall be high.

Product Terminal Descriptions

Refer to Table 1 for terminal descriptions and ratings.

Current Draw	Max. Aux Current	UL Resi Fire	UL Home	UL Resi Burg	UL Com Burg	Health Care	ULC Resi	ULC Fire Monitoring	ULC Resi Burg	Fire	ULC Com Burg	EN50131 Grade 2/Class II
HOLISME/2204	1A	1A	0.5A	0.5A	0.5A	N/A	0.5A	N/A	0.5A	N/A	N/A	N/A

Note that the HSM2204 is not suitable for fire alarm annunciation.

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 (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 and 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 by a transformer.

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

1. 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 the transformer to the receptacle controlled by a switch.

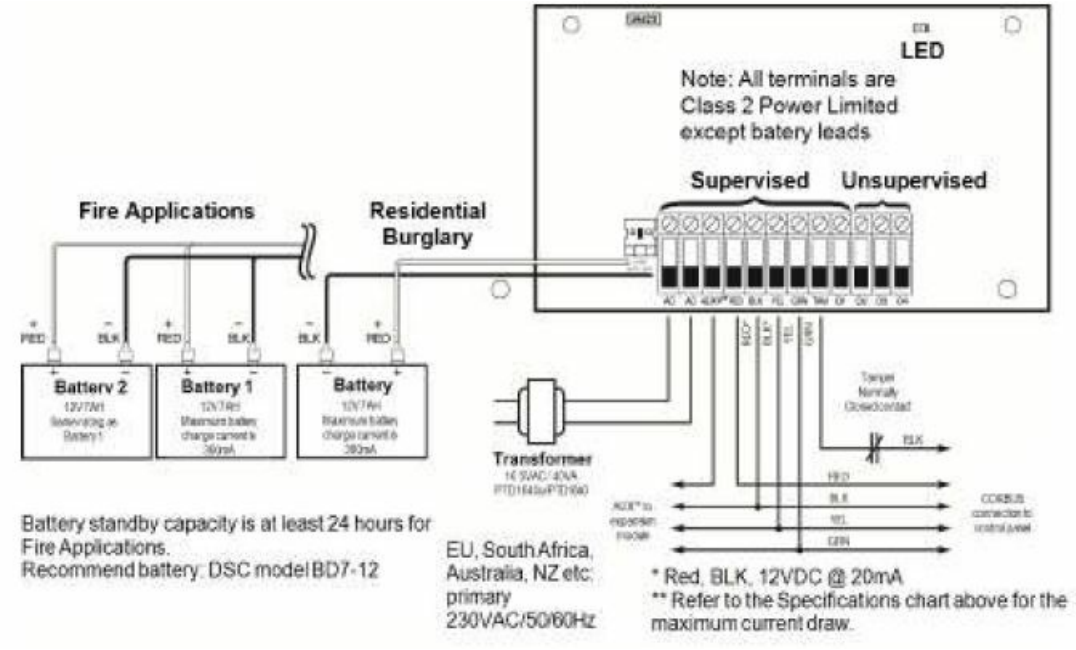
- **Transformer secondary ratings:** 16.5Vac, 40VA
- **Board current draw:** 40mA (set and unset state/alarm and non-alarm state)
- **Board dimensions:** 145mm x 83mm
- **AUX output ratings:** 10.8 to 12.5VDC
- Resettable fuse (PTC) used on circuit board instead of replaceable fuses
- **Output ripple voltage:** 600mVp-p max.
- No overvoltage protection devices are required on the outputs
- **Storage device:** rechargeable battery, rated 12Vdc. Replace the 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:

- **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



Ratings

HOLISME/2204 Current Draw 40mA	UL Resi Burg ULC Resi Burg	UL Com Burg	UL Resi Fire UL Home Health Care ULC Resi Fire ULC Com Burg	ULC Fire Monitoring	EN50131 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 (Hard wired type, mounted inside the enclosure or outside using the electrical box)	16.5V/40VA (hard-wired 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 Trans- mission only)	N/A
Recharging current setting	low (480mA)	low (480mA)	high (700mA)	high (700mA)	low/high (480/700 mA)

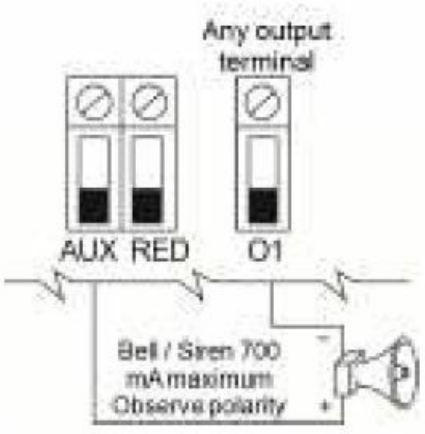
- **AC** – Supervised, the HSM2300/HSM2204 requires a 16.5V/40VA transformer. Connect the primary of the transformer to an unswitched AC source (maximum current draw is 0.5A) and connect the secondary of the transformer (US market only) to these terminals.
- **TAM-** Used to tamper the cabinet in which 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, 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 a 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 is made of 18Ga steel, and painted. 376mm(L) x 305mm(W) x 125mm (H)
- Model PC4050CR is made of 18Ga steel, and painted. 376mm(L) x 305mm(W) x 128mm(H)
- Model Power UC1 is made of 18Ga steel, painted. 356mm(L) x 319mm(W) x 115mm(H)
    - **Weight:** 6.15Kg (PCB, Battery, XFRM)
- Model PC5003C is made of 22Ga steel, and 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 present as outlined in 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

1. Enter Installer Programming [*] [8][Installer Code] [*].
2. Enter section [902] to enroll in 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 is displayed on the keypad.

1. After entering subsection [000], press the [*] key to begin the 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.
2. Use the < > keys to view the enrolled modules.

001 Manual Enroll

1. After entering Installer Programming and section [902], enter subsection 001. Then enter [003] for HSM2204 or subsection [009] for HSM2300.
2. 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.
3. To cancel the enrollment of a module, press [#].

Deleting Modules

1. Enter Installer Programming [*] [8][Installer Code] [*].
2. Enter section [902] then subsection [109] for HSM2300 and subsection [110] for HSM2204.
3. Scroll to the specific module you want to delete.
4. 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:

1. 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].
2. Press [*] to select the module type then scroll to the specific module you want to confirm.
3. 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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FCC COMPLIANCE STATEMENT

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 typing tested and found to comply with the limits for ClassBdevice in accordance with these certifications in Subpart "B" of Part 15 of FCCRules, which are designed to provide reasonable protection against such interference in any 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:

- Re-orient thereceiving antenna
- Relocate the alarm control with respect to the receiver
- Move the alarm control away from thereceiver

- Connect the alarm control to a different outlet so that the 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 prepared by the

FCCuseful:
“How to Identify and Resolve Radio/Television Interference Problems”. This booklet is available from the U.S. Government Printing Office, Washington D.C.20402, Stock# 004-000-00345- 4.

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

EN CERTIFICATION
The TheModels HSM2204 and HSM2300 Power supplies have been certified by Telefication according to EN50131- 1:2006 +A1:2009 andEN50131- 6:2008, for Grade 2, Class II, TypeA when installed inPC5003C enclosure.

Documents / Resources

	DSC HS2016 Power Supply Four High Current Output Modules [pdf] Instruction Manual HS2016, HS2032, HS2064, HS2128, HSM2300, HSM2204, HS2016 Power Supply Four High Current Output Modules, Power Supply Four High Current Output Modules, Four High Current Output Modules, High Current Output Modules, Output Modules, Modules