AUTOCALL

UL, ULC Listed

4100ES Network Annunciator Panels

Network Display Units with Voice Command Center and EPS Power Supplies

Features

Network Display Unit (NDU) provides annunciation for up to 12,000 network points:

- The basic NDU is a special purpose master controller that includes a network interface module
- An NDU with a Voice Command Center (VCC) mounted in the same cabinet provides an additional separate Network node within the same cabinet for control of Network level Emergency Voice/Alarm Communications Equipment

NDU master controller equipment (top bay):

- Master controller assembly with operator interface
- 4100ES CPU with dual configuration programs, convenient service port access, and capacity for up to 12,000 points
- System power supply (SPS) and charger (9 A total) with on-board programmable auxiliary output
- Operator interface that is conveniently color coded with raised switches providing high confidence feedback
- Available with InfoAlarm Command Center expanded content user interface (refer to data sheet *AC4100-0101*)

Standard addressable interfaces include:

- Remote annunciator module support via RUI (remote unit interface) communications port

NDU field installed option modules include:

- DACT and City Connection
- Service modems for remote panel status inquiry
- RS-232 ports for printers or maintenance terminals
- Alarm relays and expansion power supplies
- SafeLINC Internet Interface
- Battery brackets for seismic area protection.
- 8-point zone/relay module, each point is selectable as an IDC input or relay output. Class A IDCs require 2 points (one out and one return). Relays rated for 2 A @ 30 VDC (resistive). Configurable as normally open or closed.

VCC equipment (second expansion bay):

- VCC includes Enhanced Power Supply (EPS) and battery charger (9 A total) with on-board IDNAC SLCs (signaling line circuit) for addressable appliance control, electrically isolated IDNet 2 addressable device control module with dual short circuit isolating output loops, and programmable function auxiliary output
- For additional information concerning EPS power supplies and their enhanced features, and on IDNet 2 communications modules, refer to 4100ES data sheet *AC4100-0100* and refer to additional related product data sheet list.
- Voice control options are similar to a networked fire alarm control panel with an extensive list of modules available for initiating, notification, and user interface

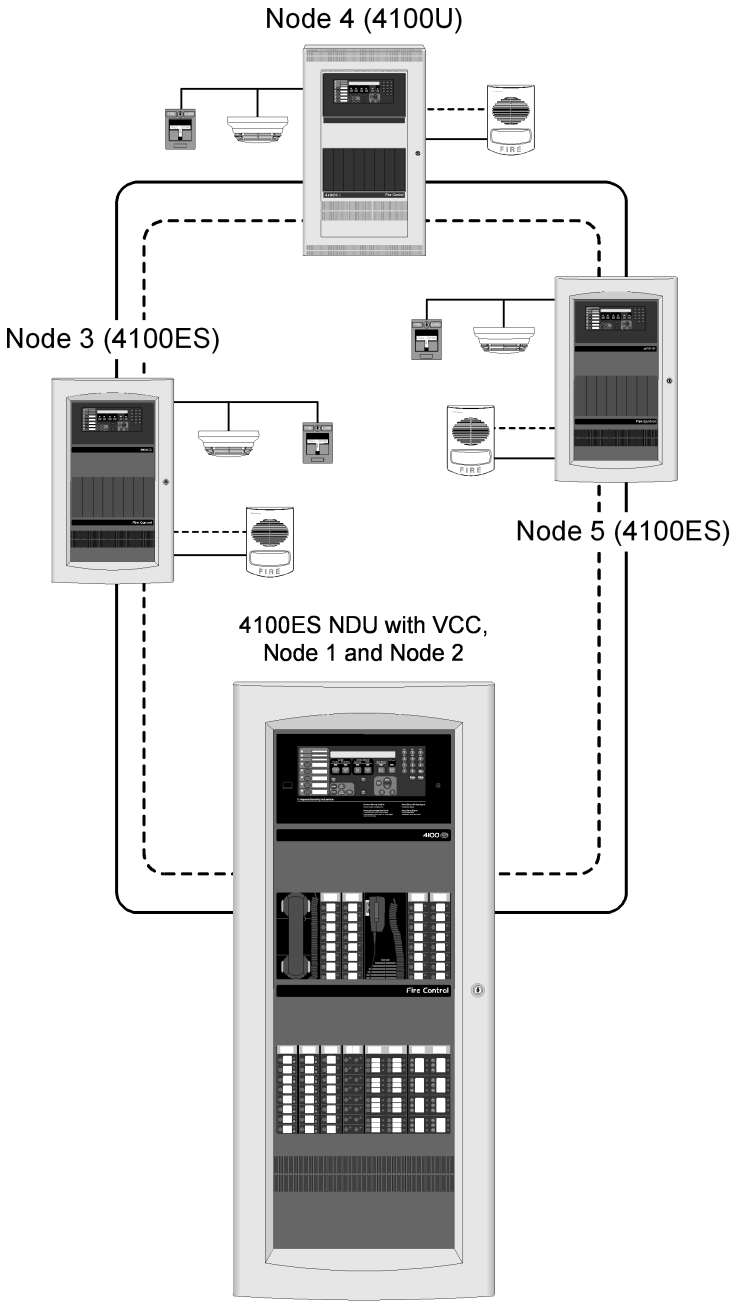


Figure 1: Network One-Line Diagram Showing an NDU with VCC

Listed to:

- UL 864, Fire Detection and Control (UOJZ), and Smoke Control Service (UUKL)
- UL 2017, Process Management Equipment (QVAX)
- UL 1076, Proprietary Alarm Units-Burglar (APOU)
- UL 1730, Smoke Detector Monitor (UULH)
- UL 2572, Mass Notification Systems (PGWM)
- ULC S527 Control Units for Fire Alarm Systems

* Additional listings may be applicable, contact your local Autocall product supplier for the latest status.

Introduction

The 4100ES NDU with VCC is a network level annunciator and manual system/point controller with Network voice control equipment. It provides alphanumeric annunciation for up to 12,000 Network points and/or point lists and can be programmed to function as the network master controller for Alarm Silence, Trouble Acknowledge, and System Reset.

Network Overview. When connected to other Network nodes, individual fire alarm control panels become components of a distributed intelligence system. Each panel that directly connects to the network is called a network "node" and is capable of performing individual supervision and control on its locally connected devices but has the ability to inform the 4100ES NDU (as well as other network control panels) of point status and panel condition. This allows system information to reach the proper location for appropriate system response.

Multiple 4100ES NDUs (separately packaged) can be connected to a Network to duplicate common information at separate locations, or direct selected information by type such as troubles, alarms, control, etc.

NDU Module Bay Description

The NDU Master Controller Bay (top) includes a special purpose system power supply with battery charger (SPS), the master controller board, a Network Interface Module, and operator interface equipment similar to that used on the standard fire alarm control modules. Slots 1 and 2 are available for single slot panel mounted modules.

The VCC includes an expansion bay with separate: master controller board, Network Interface Module, and an EPS power supply with IDNet 2 module. This results in two separate Network nodes residing within the same cabinet.

In the VCC bay, a dual PDI connection is available for either a dual slot module, or one or two block modules. Optional LED/switch modules can also be mounted. For 2-bay cabinets, the VCC mounts in bay 2. For 3-bay cabinets as shown to the right, the VCC mounts in the second expansion bay, bay 3.

The Battery Compartment (bottom) accepts two batteries, up to 50 Ah, to be mounted within the cabinet without interfering with module space.

Refer to the NDU with VCC internal module bay reference illustration for typical three bay cabinet module location.

Packaging Availability

- Modules are power-limited (unless specifically noted otherwise)
- Enclosure are available for one, two, or three bay sizes or for cabinet rack mounting
- Additional cabinets can be mounted close-nippled for module expansion
- NEMA 1/IP30 boxes, doors with tempered glass inserts, and dress panels are available in platinum or red, (ordered separately)
- Cabinet assembly design has been seismic tested and is certified to IBC and CBC standards as well as to ASCE 7 categories A through F, requires A100-7912 option for additional legacy card stabilizer brackets and battery brackets as detailed on data sheet *AC2081-0019*
- Refer to data sheet *AC4100-0037* for enclosure details

Software Feature Summary

- Selectable service override allows authorized operators to clear alarm conditions during System Reset even if status has gone to trouble before reset occurred
- Duplicate address error detection
- Convenient PC programming using a Microsoft Windows user interface based program

NDU with VCC Internal Module Bay Reference

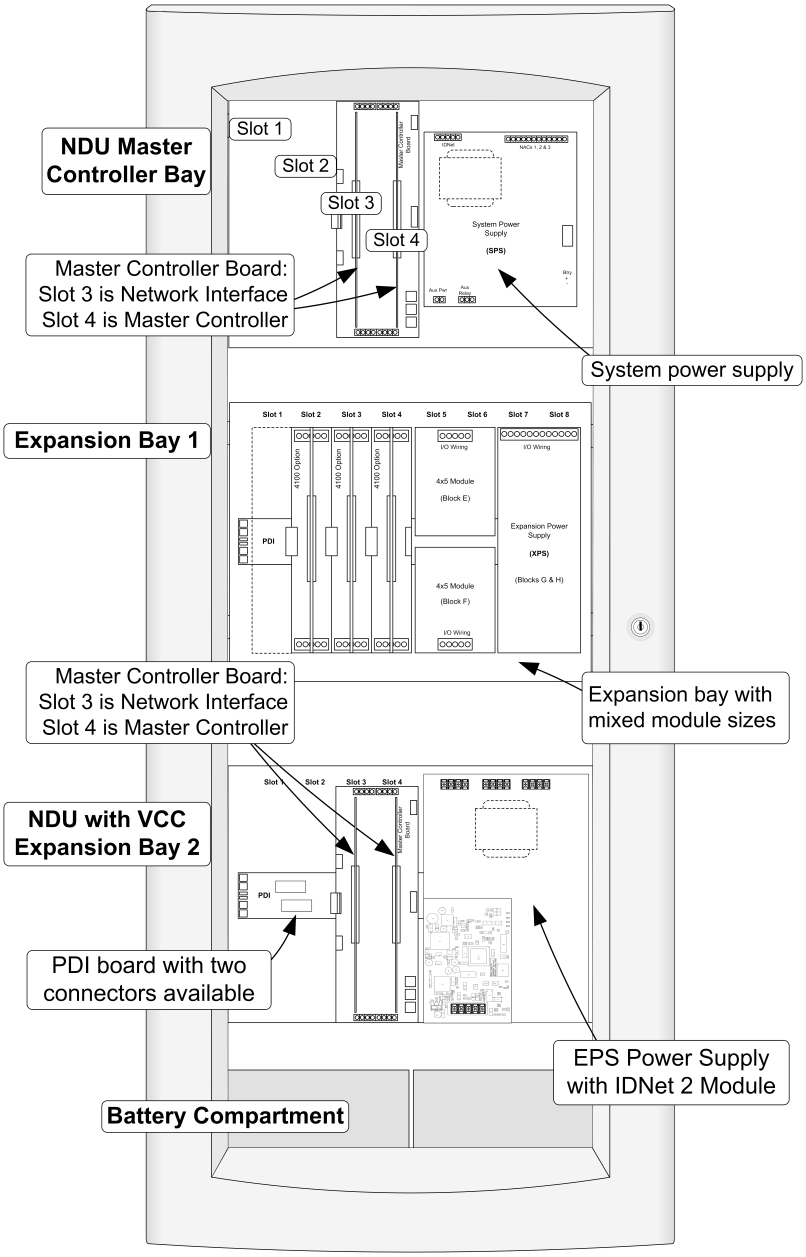


Figure 2: NDU with VCC Internal Module Bay Reference (exact layout is determined by specific system requirements)

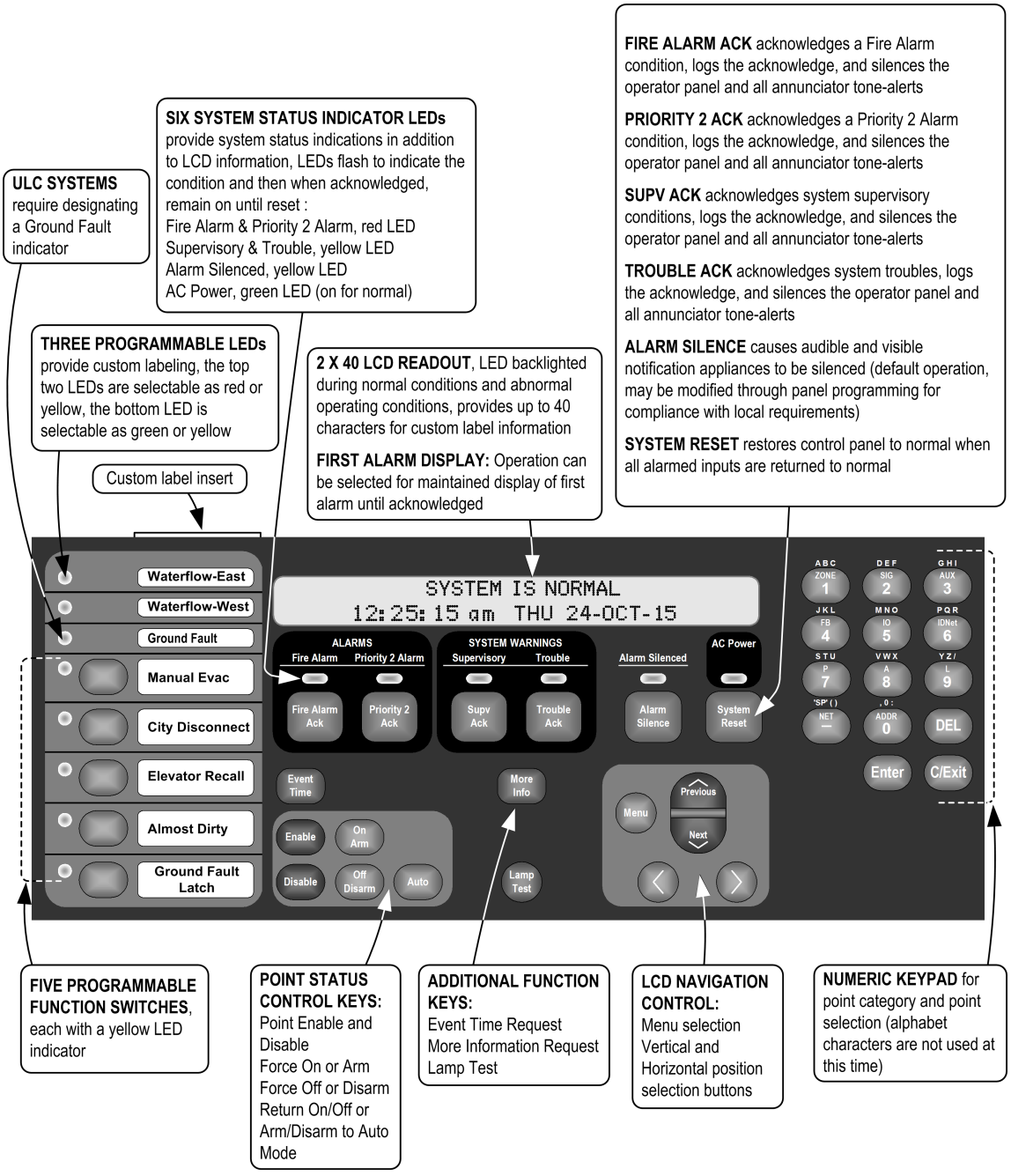
Operator Interface

Convenient Status Information. With the locking door closed, the glass window allows viewing of the display, status LEDs, and available operator switches. Features include a two-line by 40-character, wide viewing angle (super-twist) LCD with status LEDs and switches as shown in the illustration below.

LED indicators describe the general category of activity being displayed with the LCD providing more detail. For the authorized user, unlocking the door provides access to the control switches and allows further inquiry by scrolling the display for additional detail.

Operator Interface Features

- Convenient and extensive operator information is provided using a logical, menu-driven display
- Multiple automatic and manual diagnostics for maintenance reduction
- Alarm and Trouble History Logs (up to 1250 entries for each, 2500 total events) are available for viewing from the LCD, or capable of being printed to a connected printer, or downloaded to a service computer
- Convenient PC programmer label editing
- Password access control



Standard Module Details

NDU (top bay) Master Controller & Motherboard:

- Mounts in Slot 4 of a two slot motherboard (Slots 3 and 4 of the Master Controller Bay) and provides one Class B or Class A, RUI communications channel, available at Slot 4
- RUI communications controls up to 31 devices per master controller at up to 2500 ft (762 m) for single run, or 10,000 ft (3048 m) total if wiring is Class B and T-tapped; if more distance is required, up to four total RUI channels are supported; add up to three A100-1291 RUI expansion modules (A100-1291 provides unisolated RUI communications)
- Compatible RUI remote equipment includes: MINIPLEX transponders, A4603-9101 LCD Annunciators, and 4100 Series 24 I/O and LED/Switch modules
- RUI Expansion Module A100-1291 is also compatible with the RUI+ remote equipment listed above; **and is required** for control of A602 Series LED/Switch and I/O Annunciator modules, including A602-9101 Status Command Units (SCU), and A602-9102 Remote Command Units (RCU); (refer to data sheet *AC4602-0001*)
- A Network Interface Module is mounted in Slot 3
- System Power Supply (SPS) is rated for 9 A total; includes battery charger, one 2 A Aux Power output and expansion slot for City Circuit or Alarm/Supv/Tbl Relay option (NOTE: SPS IDNet channel, NACs and Aux Relay are disabled in NDU bay).

VCC (second expansion bay) includes an EPS Power Supply with IDNet 2 Module:

- Enhanced Power Supply (EPS) is rated for 9 A total; includes battery charger, on-board electrically isolated 250 Point IDNet 2 communications module, three Class B IDNAC SLCs, one 2 A output configurable for Auxiliary Power or Simple NAC operation and expansion slot for City Circuit or Alarm/Supv/Tbl Relay option
- Outputs are power-limited, except for the battery charger
- VCC CPU provides RUI+ communications with isolated output
- **IDNet 2 Module SLC Output** provides Class B or Class A communications for up to 250 addressable devices with dual short circuit isolating loop outputs.
- **Battery Charger** is dual rate, temperature compensated, and charges up to 50 Ah sealed lead-acid batteries mounted in the battery compartment (33 Ah for single bay cabinets); also is UL listed for charging up to 115 Ah batteries mounted in an external cabinet (see data sheet *AC2081-0012* for details)
- **Battery and Charger Monitoring** includes battery charger status and low or depleted battery conditions; status information provided to the master controller includes analog values for: battery voltage, charger voltage and current, actual system voltage and current, and individual IDNAC SLC currents
- **Low Battery Cutout** is selectable for each EPS power supply, Canadian models are shipped selected, other models are shipped unselected

2 A Programmable Output:

- Select for conventional NAC operation to provide supervised reverse polarity for sounder base power, Suppression Release Peripheral (SRP) power, and other coded NAC operation requirements
- Select for Auxiliary (AUX) operation for sounder base power, 4-wire detector power, or door holder; supervised AUX operation does not require an end-of-line relay to provide Power-Limited operation

EPS Power Supply Mounted Optional Modules (select one):

- **City Connect Module** (A100-6031, with disconnect switches, or A100-6032, without disconnect switches) can be selected for conventional dual circuit city connections
- **Alarm Relay Module** (A100-6033) provides three Form C relays that are used for Alarm, Trouble, and Supervisory, rated 2 A resistive @ 32 VDC

8-Point Zone/Relay Module Details

- **Select as IDC or Relay;** configure up to 8, Class B IDCs, or up to 4, Class A IDCs; or up to 8, Relay outputs rated 2 A resistive @ 30 VDC (N.O. or N.C.); or combinations of IDCs and Relays; each zone is separately configurable as an IDC or Relay output
- **IDC Support.** Each IDC supports up to 30, two-wire devices. Zone relay modules may be powered directly from the control unit power supply or through the optional 25 VDC regulator module where required for 2-wire detector compatibility (refer to 2-Wire Detector Compatibility document 579-832 for additional details).
- **ICD EOL resistor values are selectable as:** 3.3 kΩ, 2 kΩ, 2.2 kΩ, 3.4 kΩ, 3.9 kΩ, 4.7 kΩ, 5.1 kΩ, 5.6 kΩ, 6.34/6.8 kΩ, and 3.6 kΩ + 1.1 kΩ; see instructions for more details

Network Display Unit with Voice Command Center (VCC) Main Equipment Selection

Table 1: Main Equipment Selection

SKU	Voltage	Description	Supv.	Alarm
A100-9342	120 VAC, 50/60 Hz	**Top Bay Equipment**: LCD display and operator interface; Network Interface Module (select media cards separately), Standard CPU Module with RUI output communications interface; 9 A System Power Supply (SPS) with battery charger, one 2 A Auxiliary Power output and expansion slot for City Circuit or Alarm/Supv/Tbl Relay option (NOTE: SPS IDNet channel, NACs and Aux Relay are disabled). **Second Bay Equipment:** Voice Command Center (VCC) Bay includes Standard CPU Module with RUI+ isolated output communications interface; Network Interface Module (select media cards separately); 9 A Enhanced Power Supply (EPS) with battery charger, electrically isolated 250 Point IDNet 2 Module, three Class B IDNAC SLCs, one 2 A output configurable for Auxiliary Power or Simple NAC operation and expansion slot for City Circuit or Alarm/Supv/Tbl Relay option.	880 mA	1.212 A
A100-9542	220-240 VAC, 50/60 Hz		With 250 IDNet devices and 20 device LEDs in alarm; calculate other external loads separately	

Table 2: System Option for Seismic Compliance

SKU	Description
A100-7912	System option for Seismic compliance, provides additional stabilizer brackets required for legacy style cards
Note: For InfoAlarm Command Center expanded content display products, refer to data sheet *AC4100-0101* .	

Table 3: Four Loop IDNet Voice Command Center (VCC) Option

Model	Description
A100-3112	**Four Loop IDNet Voice Command Center**; for the VCC Assemblies listed above, this option moves the standard IDNet 2 Module from the VCC EPS to an available block space in the VCC bay and adds 2, A100-3111 IDNet Loop Output Modules; ; current requirements remain the same (refer to data sheet *AC4100-0100* for IDNet module details)

Communication Modules

SKU	Description			Size	Supv.	Alarm
A100-6056	Wired Network Media Card	Select per network connection requirements; mounts on the supplied modular network interface card(s); up to two media cards are required per network interface card; supports Class B or X operation		N.A.	55 mA	55 mA
A100-6301	Left port, single-mode 4120 duplex fiber media card	Select per network connection requirements; mounts on the supplied modular network interface card(s); up to two media cards are required per network interface card; supports Class B or X operation. Maximum of 1 left port and 1 right port duplex fiber media card per modular network interface card; field connections require left port to right port pairing. Order fiber media service kits for retrofit jobs where ST connectors are already installed (refer to data sheet for full fiber media module specifications and retrofit information)		N.A.	55 mA	55 mA
A100-6302	Right port, single-mode 4120 duplex fiber media card			N.A.	55 mA	55 mA
A100-6303	Left port, multi-mode 4120 duplex fiber media card			N.A.	55 mA	55 mA
A100-6304	Right port, multi-mode 4120 duplex fiber media card			N.A.	55 mA	55 mA
A100-1291	Remote Unit Interface Module (RUI); up to three maximum per control panel			1 Slot	85 mA	85 mA
A100-6031	Select one per EPS or RPS (Note: one city circuit module per panel max)	City Circuit, with disconnect switches	For use with EPS only, not RPS	N.A.	20 mA	36 mA
A100-6032		City Circuit, without disconnect switches		N.A.	20 mA	36 mA
A100-6033		Alarm/Supv/Tbl Relay, 3 Form C relays, 2 A @ 32 VDC; for EPS or RPS		N.A.	15 mA	37 mA
A100-6046	Dual Port RS-232 standard interface (single block)		3 maximum RS-232 modules per panel	1 Block	60 mA	60 mA
A100-6038	Dual RS-232 with 2120 Interface (slot module)			1 Slot	132 mA	132 mA
A100-6080	DACT, Point or Event Reporting; 1 shipped unless is selected; 2 max. per system; includes 2, cables, 14 ft (4.3 m) long, RJ45 plug and spade lugs			Side Mt.	30 mA	40 mA
A100-6101	Physical Bridge, Class B, includes 1 modem module and 2 wired modules			1 Slot	210 mA	210 mA
A100-6102	Physical Bridge, Class A, includes 2 modem and 2 wired modules			2 Slots	300 mA	300 mA
A100-0156	8 VDC Converter, required for multiple Physical Bridge Modules; 3 A @ 8 VDC maximum			1 Block	included with loads	
A100-9816	Master Clock Interface Module with one standard RS-232 port (see *AC4100-0033*)			1 Slot	132 mA	132 mA
A100-6079	SafeLINC Internet Interface module			2 Blocks	145 mA	145 mA

NDU with VCC, LED/Switch Modules

Refer to *AC4100-0032* for additional detail.

Table 4: LED/Switch Modules, General Purpose (LED/switch controller and label kit is ordered separately)

SKU	LEDs per Switch	LED Color(s)	LED Quantity	Switch Quantity
A100-1276	LEDs only	Red; pluggable	8	LEDs only
A100-1277		Red on top, Yellow on bottom, pluggable	16	
A100-1280	One	Red	8	8
A100-1281	One	Yellow		
A100-1282	Two	Red on top, Yellow on bottom	16	8
A100-1283	Two	Yellow, top and bottom		8
A100-1284	Two	Red on top, Green on bottom	16	8
A100-1285	One	Red	16	16
A100-1278	One	8 Red on left, 8 Yellow on right		
A100-1287	One	Red	24	24

Table 5: LED/Switch Modules, Special Purpose (LED/switch controller and label kit is ordered separately)

SKU	Operation
A100-1286	Eight function HOA (On, Off, Auto) Control Module with labeled switches; ON/OFF/Auto; Green/Red/Green LEDs

Table 6: LED/Switch Controller Modules and Accessories

SKU	Description						
A100-1288	64 LED/64 Switch Controller Module with mounting plate; controls up to 64 LEDs and interfaces to up to 64 switches; mounts behind the LED/switch modules and has provisions for one A100-1289 Controller Module						**Note:** LED/switch controllers and their connected LED/switch modules must be in the same bay; refer to data sheet *AC4100-0032* for additional LED/Switch module details when Flex-35/50 amplifiers are in the same bay
A100-1289	64 LED/64 Switch Controller Module without mounting plate; mounts on extra space of A100-1288; controls an additional 64 LEDs and 64 switches						
4100-1294	LED/Switch Module Slide-in Labels, **required when LED/switch modules are present**; order one per cabinet						
SKU	**Color**	**SKU**	**Color**	**SKU**	**Color**	**Description**	
4100-9843	Yellow	4100-9844	Green	4100-9845	Red	Kits of 8 LEDs; order as required for A100-1276/1277 modules	

VCC, Emergency Voice/Alarm Communications Selection

Refer to document *AC4100-0034* for additional audio module information.

Table 7: VCC, Emergency Voice/Alarm Communications Selection

SKU	Description		Details and Mounting Reference
A100-1243	Master Microphone Module; one maximum per audio system; mounts on front panel		Requires 2 Slots (4" [102 mm]), locate on expansion bay only; space behind for 4100ES flat modules only Supv. current = 2.4 mA; Active current = 6 mA
A100-1252	1 Channel (audio or mike)	Operator Interface Modules	Single slot modules requiring connection to an LED/switch controller (see data sheet *AC4100-0032* for LED/Switch Module details); space behind controller accepts 4100ES flat modules only Additional adjacent LED/switch module(s) are required for specific speaker circuit selection
A100-1253	1.5 Channel (audio + mike)		
A100-1254	2 Channel (full audio)		
A100-1255	3-8 Channel		

Table 8: Firefighter Telephone System Products

SKU	Description	Details and Mounting Reference
A100-1270	Master Telephone with Telephone Control Module and 3 Class B telephone NACs; for Fire Alarm Control Panels	One max. per audio system; front panel module; space behind for 4100ES flat modules only; telephone control module mounts on bay module mounting plate; use LED/switch modules for circuit control
A100-1272	Telephone Module with 3 phone NACs	Class B NACs, single Block module, mounts to bay mounting plate
A100-1273	Telephone Class A Adapter Module	Mounts to A100-1272, no additional space required

Table 9: Analog Emergency Voice/Alarm Communications Equipment, Constant Supervision Compatible

SKU	Description	Details
A100-9620	Basic Analog Audio Operation with microphone, requires dedicated expansion bay	Includes: Expansion Bay, A100-1210 Analog Controller Board, Microphone Module, and Audio Expansion Bay Kit
A100-1210	Analog Controller Board only; order expansion bay and audio expansion bay kit separately	Controller board mounts in Blocks A and B

Table 9: Analog Emergency Voice/Alarm Communications Equipment, Constant Supervision Compatible

SKU	Description		Details		
A100-1361	25 VRMS output	Flex-35, 35 W Amplifier, constant supervision compatible	Includes three on-board Class B audio NACs; power is supplied from an XPS, SPS, or RPS	NAC rating = 1.4 A	35 W, or 100 speakers
A100-1362	70.07 VRMS output			NAC rating = 0.5 A	
A100-1312	25 VRMS output	Flex-50, 50 W Amplifier, constant supervision compatible		NAC rating = 2 A	50 W, or 100 speakers
A100-1313	70.7 VRMS output			NAC rating = 0.707 A	

Table 10: 100 W Analog Amplifiers with Power Supply, Constant Supervision Compatible*

SKU/Output Voltage		Power Supply Input/Listing		Description	Details	
25 VRMS	70.7 VRMS					
A100-1314	A100-1315	120 VAC, 60 Hz	UL	Primary 100 W Amplifier	Includes six, Class B audio NACs; NAC rating = 50 W or 100 speakers maximum; 2 A @ 25 VRMS; 1.4 A @ 70.7 VRMS	ULC models have low battery dropout circuit
A100-1318	A100-1319	220/230/240 VAC, 50/60 Hz	UL	Primary 100 W Amplifier	Includes six, Class B audio NACs; NAC rating = 50 W or 100 speakers maximum; 2 A @ 25 VRMS; 1.4 A @ 70.7 VRMS	ULC models have low battery dropout circuit
A100-1320	A100-1321	120 VAC, 60 Hz	UL	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier	ULC models have low battery dropout circuit
A100-1324	A100-1325	220/230/240 VAC, 50/60 Hz	UL	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier	ULC models have low battery dropout circuit

Table 11: Digital Emergency Voice/Alarm Communications Equipment

SKU	Description		Details		
A100-9621	Basic Digital Audio Operation with microphone, requires dedicated expansion bay		Includes: Expansion Bay, A100-1311 Digital Controller Board, Microphone Module, and Audio Expansion Bay Kit		
A100-1311	Eight Channel Digital Controller Board only; order expansion bay and audio expansion bay kit separately		Controller board mounts in Blocks A and B	NAC rating = 1.4 A	35W, or 100 speakers
				NAC rating = 0.5 A	
A100-1363	25VRMS output	Flex-35, 35 W Amplifier, constant supervision compatible	Includes three on-board Class B audio NACs; power is supplied from an XPS, SPS, or RPS	NAC rating = 2 ANAC rating = 0.707 A	50W, or 100 speakers
A100-1364	70.07VRMS output				
A100-1326	25VRMS output	Flex-50, 50 W Amplifier, constant supervision compatible		NAC rating = 2 ANAC rating = 0.707 A	
A100-1327	70.7VRMS output				

Table 12: 100W Digital Amplifiers with Power Supply, Constant Supervision Compatible*

SKU/OutputVoltage		Power Supply Input/Listing		Description	Details	
25VRMS	70.7VRMS					
A100-1328	A100-1329	120VAC, 60 Hz	UL	Primary100 W Amplifier	Includes six, Class B audio NACs; NAC rating = 50 W or 100 speakers maximum; 2 A @ 25 VRMS; 1.4 A @ 70.7 VRMS	ULC models have low battery dropout circuit
A100-1332	A100-1333	220/230/240VAC, 50/60 Hz	UL	Primary100 W Amplifier	Includes six, Class B audio NACs; NAC rating = 50 W or 100 speakers maximum; 2 A @ 25 VRMS; 1.4 A @ 70.7 VRMS	ULC models have low battery dropout circuit
A100-1334	A100-1335	120VAC, 60 Hz	UL	Backup100 W Amplifier	Uses the six Class B NACs of primary amplifier	ULC models have low battery dropout circuit
A100-1338	A100-1339	220/230/240VAC, 50/60 Hz	UL	Backup100 W Amplifier	Uses the six Class B NACs of primary amplifier	ULC models have low battery dropout circuit

Table 13: Options for use with either Analog or Digital Amplifiers*

SKU	Description	SKU	Description
A100-1245	Flex-35/50 NAC Expansion Module; (Adds 3 Class B, 1.5 ANACs)	A100-1248	100W Amplifier NAC Expansion Module; (Adds six Class B, 2 A NACs)
A100-1246	Flex-35/50 Class A Adapter for 3 NACs	A100-1249	100W Amplifier Class A Adapter Module for 6 NACs

Table 14: Options for either Analog or Digital Systems

SKU	Description	SKU	Description	
A100-1259	Constant Supervision Adapter for 25 VRMS Amplifiers	A100-5116	Expansion Signal Module; three, 1.5 A NACs	
A100-1260	Constant Supervision Adapter for 70.7 VRMS Amplifiers	A100-1266	NAC Extender	Options for use with Expansion Signal Module
A100-1240	Auxiliary Audio Input Module; four additional inputs	A100-1267	Class A Adapter	
A100-1241	8 Minute Message Expansion Module	A100-1268	Constant Supervision Adapter	
A100-1242	32 Minute Message Expansion Module	A4081-9018	End-of-line resistor for 70.7 VRMS NACs; 10 kΩ, 1 W	
A100-0623	Network Audio Riser Controller Module for control of analog (-0621) or digital (-0622) riser module, see *AC4100-0034* for details			

VCC, Additional Options

Table 15: VCC, Additional Options

SKU	Description						
A100-5152	12 VDC Power Option, 2 A maximum; 1 Block, 1.5 A maximum Supervisory or Alarm						
A100-0156	8 VDC Converter, required for multiple Physical Bridge Modules, 3 A maximum, 1 Block, current included with loads						
A100-0634	120 VAC	Power Distribution Module (PDM); select per system voltage; **one required per box or cabinet rack**					
A100-0635	220/230/240 VAC						
A100-6034	Door Tamper Switch with built-in addressable IDNet IAM, one per cabinet assembly if required						
A100-2320	Audio Bay-to-Bay Interconnection Harness Kit; **order one for each audio bay addition**						
A100-0637	Audio Box Interconnection Harness Kit; **order one for each close-nippled audio cabinet**						
4100-9835	Termination and Address Label Kit (for module marking); provides additional labels for field installed modules						
A100-1290	24 Point I/O Module; I Slot (see data sheet *AC4100-0032* for details)						
A100-1293	Panel Mount Thermal Printhead Printer, supplied with one roll of paper; requires 3 Slots; see *S4100 -0032* for details						
4190-9803	Replacement Paper for A100-1293 Printer, one roll						
A100-6048	VESDA Air Aspiration Interface; 1 Slot module; 132 mA supervisory or alarm, see *AC4100-0026* for details						
A100-1279	Single blank 2" display cover; order as required (8 fill a bay front); two max. in a row between LED/switch modules						
A100-2300	Expansion Bay Hardware, **order for each expansion bay** (unless included with selected option)						
A100-0636	Box Interconnection Harness Kit; **order one for each close-nippled cabinet**						
A100-0632	Terminal Block Module; 2, 16 position terminal blocks mounted on 4" x 5" single block size, for up to 12 AWG wire (3.31 mm2)						
A100-5128	Battery Distribution Terminal Block; mounts to side of box; required for close-nippled cabinets that interconnect battery wiring						
SKU	**Description**		**Resistive Ratings**	**Inductive Ratings**	**Size**	**Supv.**	**Alarm**
A100-3202	4 DPDT Relay w/feedback		10 A @ 250 VAC	10 A @ 250 VAC	2 Slots	15 mA	175 mA
A100-3204	4 DPDT Relay w/feedback		2 A @ 30 VDC/VAC	1/2 A @ 30 VDC/120 VAC	1 Block	15 mA	60 mA
A100-3206	8 SPDT Relay		3 A @ 30 VDC/120 VAC	1-1/2 A @ 30 VDC/120 VAC	1 Block	15 mA	190 mA

Additional Enhanced Expansion and Remote Power Supplies, and Accessories

Table 16: Additional Enhanced Expansion and Remote Power Supplies, and Accessories

SKU	Voltage/Listing		Description	Size	Supv.	Alarm
A100-5311	120 VAC	UL & ULC	**Expansion EPS with IDNet 2 Module**; 9 A Expansion Power Supply (EPS) with electrically isolated 250 point IDNet 2 Module, three Class B IDNAC SLCs, one 2 A output configurable for Auxiliary Power or Simple NAC operation and expansion slot for City Circuit or Alarm/Supv/Tbl Relay option; 120 VAC model has selectable low battery cutout	4 Blocks Right Side	225 mA	490 mA
A100-5313	220-240 VAC	UL			add IDNet device currents separately	
A100-5325	120 VAC	UL & ULC	**Enhanced Power Supply (EPS)**; 9 A EPS, functionally identical to the Expansion EPS except without the IDNet 2 Module	4 Blocks Right Side	125 mA	220 mA
A100-5327	220-240 VAC	UL				
A100-6103	**Dual Class A IDNAC Isolator (DCAI)**, converts a single Class B IDNAC SLC input to two Class A or two Class B SLC outputs; provides short circuit isolation between each Class A or B output circuit; connect up to two DCAI modules per IDNAC SLC input up to a maximum of 6 DCAI modules per EPS; each isolated output SLC used requires one IDNAC address; the total current remains controlled by the Class B input source SLC at 3 A maximum			1 Block	6.5 mA	6.5 mA
SKU	**Voltage/Listing**		**Description**	**Size**	**Supv.**	**Alarm**
A100-5101	120 VAC	UL	Expansion Power Supply (XPS); 9 A output, 3 built-in Class A/B NACs, rated 3 A for Special Application appliances (2 A for Regulated DC); NACs can be selected as auxiliary power outputs, derated to 2 A for continuous duty, total per XPS is 5 A	2 Blocks	50 mA	50 mA
A100-5102	220-240 VAC	UL	Expansion Power Supply (XPS); 9 A output, 3 built-in Class A/B NACs, rated 3 A for Special Application appliances (2 A for Regulated DC); NACs can be selected as auxiliary power outputs, derated to 2 A for continuous duty, total per XPS is 5 A	2 Blocks	50 mA	50 mA
A100-5115	**NAC Expansion Module**, 3 NACs, Class A/B, **mounts on XPS only**			N.A.	25 mA	25 mA
SKU	**Voltage/Listing**		**Description**	**Size**	**Supv.**	**Alarm**
A100-5125	120 VAC	UL	Remote Power Supply (RPS); 9 A power supply/charger similar to XPS except with battery charger; will accept one A100-6033; Canadian model has low battery cutout; use to power Flex series amplifiers.	4 Blocks	150 mA	185 mA

Table 16: Additional Enhanced Expansion and Remote Power Supplies, and Accessories

SKU	Voltage/Listing		Description	Size	Supv.	Alarm
A100-5127	220-240 VAC	UL	Remote Power Supply (RPS); 9 A power supply/charger similar to XPS except with battery charger; will accept one A100-6033; Canadian model has low battery cutout; use to power Flex series amplifiers.	4 Blocks	150 mA	185 mA

8-Point Zone/Relay Card

Table 17: 8-Point Zone/Relay Card

SKU	Description	Size	Supv.	Alarm
A100-5013	8 point zone/relay 4x5" flat module. Mounts in any open block in a master controller or expansion bay. Alarm current shown is for 8 Class B IDCs using 3.3K end-of-line-resistors with 4 in alarm and 4 in standby. Standby current shown is for all 8 IDCs in standby. Refer to 579-1236 Zone/Relay Module Installation Instructions for additional information.	1 block	83 mA	351 mA
A100-6305	25V regulator harness for 8 point zone/relay module. One required for each 8 point zone/relay module to be powered by the 4100-5130 25V regulator module. A maximum of (5) 8 point zone/relay modules may be powered from the 4100-5130 per bay.	N/A	N/A	N/A

General Specifications

Table 18: Input Power, Power Supply Output Ratings, Compatible Special Application Appliances, Battery Charger Ratings

	Specification		Rating		
Input Power	Enhanced Power Supplies, EPS		120 VAC Models	4.6 A maximum @ 102 to 132 VAC, 50/60 Hz	
			220-240 VAC Models	2.3 A maximum @ 204 to 264 VAC, 50/60 Hz; separate taps for 220/230/240 VAC	
	System Power Supply (SPS) Expansion Power Supply (XPS) Remote Power Supply (RPS) 100 W Amplifiers		120 VAC Models	4 A maximum @ 102 to 132 VAC, 50/60 Hz	
			220-240 VAC Models	2 A maximum @ 204 to 264 VAC, 50/60 Hz; separate taps for 220/230/240 VAC	
Power Supply Output Ratings for EPS		Total Power Supply Output Rating	Including module currents and auxiliary power outputs; 9 A total for "Special Application" appliances		Output switches to battery backup during mains AC failure or brownout conditions
		IDNAC Output Voltage	Regulated 29 VRMS		
		Auxiliary Power Tap	2 A maximum		
Power Supply Output Ratings for SPS, RPS, and XPS (nominal 28 VDC on AC; 24 VDC on battery backup)		Total Power Supply Output Rating	9 A total including module currents and auxiliary power outputs		
		Auxiliary Power Tap	2 A maximum	Rated 19.1 to 31.1 VDC	
		NACs Programmed for Auxiliary Power	2 A maximum per NAC; 5 A maximum total		
Compatible Special Application Appliances			Autocall TrueAlert ES and TrueAlert addressable notification appliances; contact your Autocall product representative for compatible appliances		
Battery Charger Ratings for EPS, SPS, and RPS (sealed lead-acid batteries)		Battery capacity range	UL listed for battery charging of 6.2 Ah up to 115 Ah, 110 Ah with RPS (batteries larger than 50 Ah require a remote battery cabinet); ULC listed for charging up to 50 Ah batteries		
		Charger characteristics and performance	Temperature compensated, dual rate, recharges depleted batteries within 48 hours per UL Standard 864; to 70% capacity in 12 hours per ULC Standard S527		

Table 19: IDNet 2 Communications Wiring Specifications (refer to installation instructions for more information)

Specification		Rating	
Maximum Distance from Control Panel per Device Load	0 to 125	4000 ft (1219 m); 50 ohms	
	126-250	2500 feet (762 m); 35 ohms	
Total Wire Length Allowed With "T" Taps for Class B Wiring		Up to 12,500 ft (3.8 km); 0.60 µF	
Maximum Capacitance Between IDNet 2 Channels		1 µF	
Wire Type and Connections		Shielded or unshielded, twisted or untwisted wire	Some applications may require shielded wiring. Review your system with your local Autocall product supplier.
Connections		Terminal blocks for 18 to 12 AWG	
Total of initiating SLCs per CPU		30, including VESDA Interface	

Table 19: IDNet 2 Communications Wiring Specifications (refer to installation instructions for more information)

Specification	Rating
Compatibility	IDNet communicating devices and TrueAlarm sensors including QuickConnect and QuickConnect2 sensors

Table 20: IDNAC SLC Wiring Specifications (refer to installation instructions for more information)

Specification		Rating	
Recommended wire type		UTP, unshielded twisted pair	
IDNAC SLC Capacity		Up to 127 addresses and up to 139 unit loads	Appliances are typically one unit load, devices such as Isolators may require more than one load, refer to individual device data sheet for specific information.
Maximum wire length allowed with "T-Taps" for Class B wiring, per SLC		10,000 ft (3048 m)	
Maximum wire length per SLC to any appliance		4000 ft (1219 m)	
Maximum wiring resistance between appliances		26 Ω	
Wiring connections		Terminal blocks for 18 to 12 AWG	
Environmental	Operating Temperature	32° to 120°F (0° to 49° C)	
	Operating Humidity	Up to 93% RH, non-condensing @ 90° F (32° C) maximum	

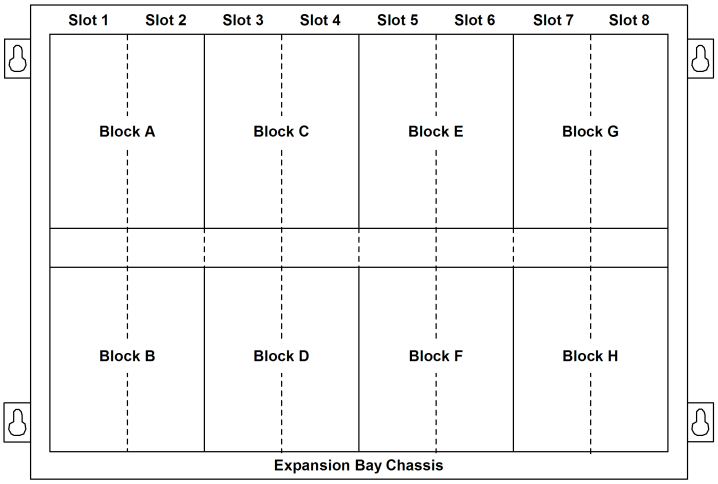
Table 21: Additional Technical Reference

Description	Document
Network Display Unit Installation Instructions	579-269AC
ES Installation Instructions	574-848AC
ES Operating Instructions	579-197AC
EPS Installation Instructions	579-1015AC
DCAI Module Installation Instructions	579-1029AC

Additional 4100ES Data Sheet Reference

Subject	Data Sheet	Subject	Data Sheet
4100ES NDU for conventional (non-addressable) notification applications)	*AC4100-0036*	4100ES Audio/Phone Modules	*AC4100-0034*
		SafeLINC Fire Panel Internet Interface	*AC4100-0062*
4100ES with EPS Power Supplies, Basic Panel Modules and Accessories	*AC4100-0100*	Remote Annunciators	*AC4100-0038*
		Remote Battery Charger	*AC4081-0002*
InfoAlarm Command Center for 4100ES Panels with EPS Power Supplies	*AC4100-0101*	Network Physical Bridge	*AC4100-0057*
MINIPLEX Transponders with EPS Power Supplies	*AC4100-0103*	TrueSite Workstation	*AC4190-0016*
4100ES Enclosures	*AC4100-0037*	Master Clock Interface Module	*AC4100-0033*
LED/Switch Modules	*AC4100-0032*	TCP/IP Physical Bridge	*AC4100-0029*

Expansion Bay Module Loading Reference (exact locations are provided with shipped product)



Size Definitions

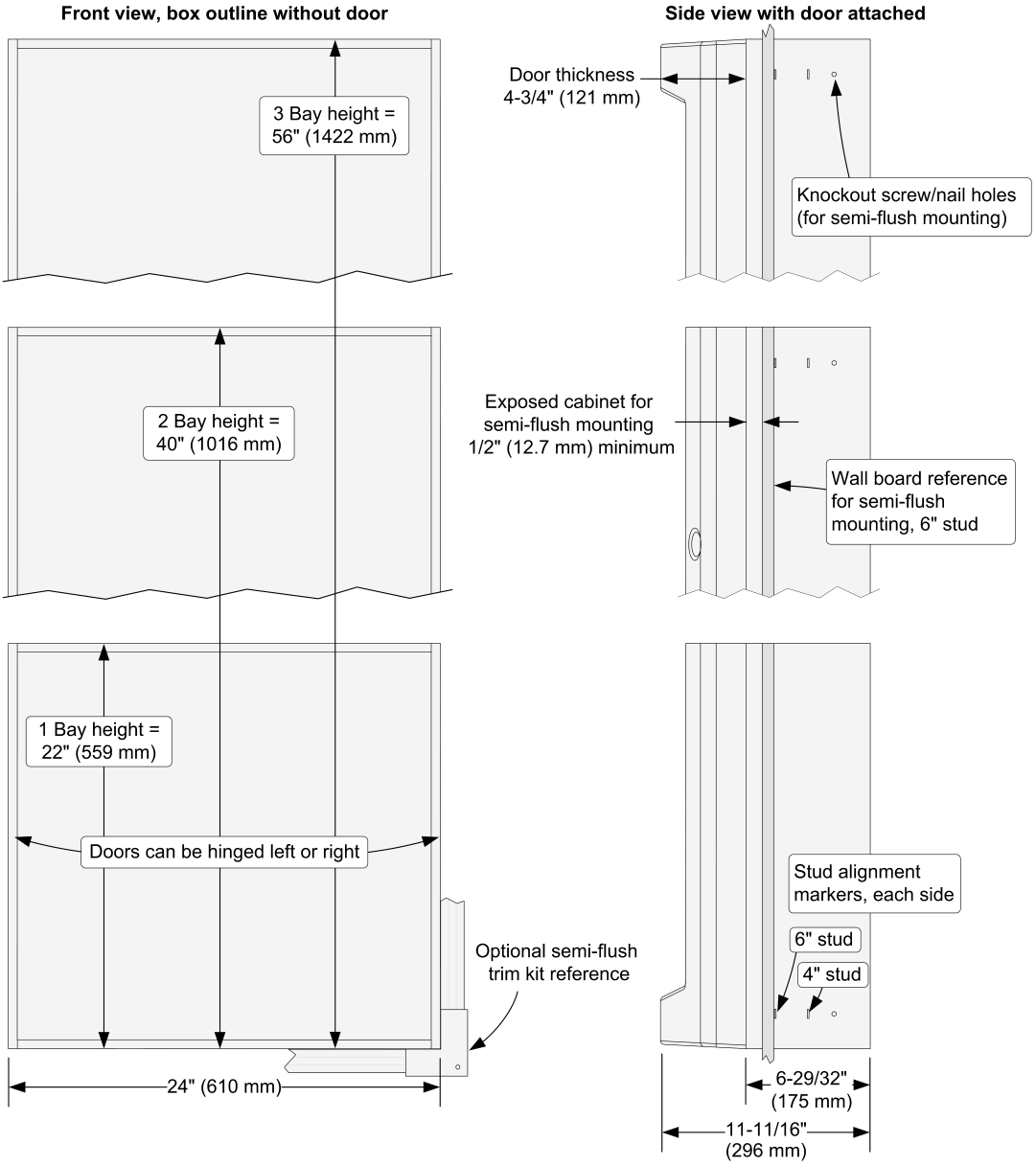
1 Block = 4" W x 5.65" H (102 mm x 144 mm); (often called 4 x 5 modules)

Slot = 2" W x 8" H (51 mm x 203 mm) motherboard with daughter card

Table 22: Module Loading Reference

Description	Mounting
Terminal Block Module	1 block
Class B Physical Bridge	2", 1 slot
Class X Physical Bridge	4", 2 slots
System, Remote, or EPS Power Supply	Blocks E, F, G & H ONLY
Expansion Power Supply	Blocks G & H ONLY
Audio Controller Modules	Blocks A & B
Flex-35 Amplifiers, 2 max/bay*	Blocks E & F; C & D; or A & B
Flex-50 Amplifiers, 2 max/bay*	Blocks E & F or C & D
100 W Amplifiers, 1 max/bay	Blocks E, F, G & H
100 W Backup Amplifiers, 1 max. per bay with primary amplifier	Blocks A, B, C & D
Master Telephone Module	Blocks A & B
Master Microphone Module (do not mount next to telephone)	Two vertical Blocks, any location
Telephone Module	1 Block
Operator LED/Switch Modules	1 Slot
Note: When mounting dual Flex amplifiers on an expansion bay, special mounting rules apply.	

Wall Mounted Enclosure Installation Reference



Note:
A system ground must be provided for Earth Detection and transient protection devices. This connection shall be made to an approved, dedicated Earth connection per NFPA 70, Article 250, and NFPA 780.