

## Features

### 4100ES Series MINIPLEX transponders allow remotely located initiating and notification functions:

- Transponder operation is available as standard or with local mode operation
- Communications with the host fire alarm control panel use the Remote Unit Interface (RUI) format

### Initiating functions include:

- Conventional initiating device circuit (IDC) support
- Addressable device support including TrueAlarm analog sensor compatibility

### Notification functions include:

- Conventional DC notification appliance circuits including TrueAlert strobe and horn appliances
- Emergency voice/alarm communications

### Local mode operation provides:

- Default local initiating and notification operation in the event of a communications loss with the host control panel
- Enabling of an optional Local Mode Controller with a local alarm sounder, LED status indicators, and keyswitch enabled control switches
- Support for conventional Initiating Device Circuits (IDC's), conventional Notification Appliance Circuits (NAC's), addressable IDNet devices, addressable IDNAC notification appliances, and default output tones from local amplifiers

### Optional modules include:

- Digital or Analog audio riser modules for connection to system audio signals
- Digital or analog input audio amplifiers with integral on-board NACs
- Power supplies with or without battery chargers
- City Connect modules and RS-232 ports for printers or maintenance terminals
- Alarm relays, auxiliary relays, additional IDC modules, and NAC expansion modules

### NEMA 1/IP30 cabinets are equipped with solid doors (platinum or red) and in one, two, or three bay sizes

### Listed to:

- UL 864, Fire Detection and Control (UOJZ), Smoke Control Service (UUKL), Releasing Device Service (SYZV), Emergency Communication and Relocation Equipment (UOQY)
- UL 1076, Proprietary Alarm Units - Burglar (APOU)
- UL 2017, Process Management Equipment (QVAX), Emergency Alarm System Control Units (FSZI)
- UL 1730, Smoke Detector Monitor (UULH)
- UL 2572, Mass Notification Systems (PGWM)
- CAN/ULC-S527 Control Units for Fire Alarm Systems (UOJZ7), Releasing Device Service (SYZV7)
- CAN/ULC-S559 Central Station Fire Alarm System Units (DAYR7)
- ULC/ORD-C1076 Proprietary Burglar Alarm Units and Systems (APOU7)
- ULC/ORD-C100 Smoke Control System Equipment (UUKL7)

## Introduction

**4100ES MINIPLEX transponders** connect to a host 4100ES Fire Alarm Control Panel using Simplex remote unit interface (RUI) communications. At the transponder, RUI communications are received by the transponder interface module and translated into the same internal communications format that is used in the host control panel.

**Remotely located modules.** With RUI communications, the transponder can remotely provide the same initiating and notification functions that occur at the host control panel without requiring multiple long distance wiring runs. Connections to the host panel are low current communications and audio wiring with distances up to 2500 ft (762 m).

**4100U Series Products Note.** The system modules and features listed in this data sheet are both compatible with, and listed for use with 4100U series fire alarm control panels. Contact your local Simplex product supplier for details.

Please refer to document *S4100-1031* and the other documents listed in [Additional 4100ES Product Reference](#) for additional information concerning the extensive initiating and notification features of the 4100ES fire alarm control panels.

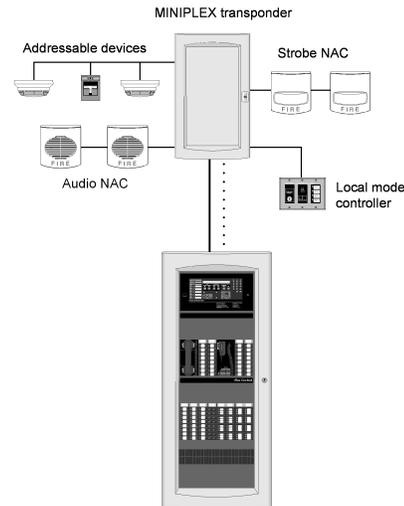


Figure 1: Typical 4100ES MINIPLEX System One-Line Drawing

## Module Bay Description

**Transponder model 4100-9600** includes a bay assembly, a power distribution interface module (PDI), a Basic Transponder Interface Module, and an interconnect harness. Communications with the host fire alarm control panel are via a Remote Unit Interface (RUI) connection that allows for up to 2500 ft (762 m) distance. RUI can communicate with up to a total of 31 remote devices and can be either Class B or Class X communications.

**Transponder model 4100-9601** substitutes a Local Mode Transponder Module for the Basic Transponder Module.

**Optional Expansion Bays** each include a PDI and accept a variety of optional modules (refer to tables from [MINIPLEX Transponder Product Selection](#) onwards).

**The Battery Compartment** (bottom) accepts two batteries, up to 50 Ah, that can be mounted within the cabinet. Battery mounting does not interfere with available module space. A power supply with battery charger is required for each battery set.

## Packaging Availability

- Modules are power-limited (except as noted, such as battery chargers, city circuits and relay modules)
- Enclosure are available for one, two, or three bay sizes or for cabinet rack mounting
- NEMA 1/IP30 boxes and solid doors are available in platinum or red (ordered separately)
- Up to eight close-nippled cabinets can be connected at one transponder location (close-nippled is mounted within 20 ft (6 m) and with interconnecting wiring enclosed in conduit)
- Refer to document *S4100-0037* for enclosure details.

## Local Mode Control Operation

**Default Stand-Alone Operation.** In the event of a communications loss with the host fire alarm control panel, model 4100-9601 MINIPLEX Local Mode Transponders provide fire alarm response default operation for its connected devices and appliances per the following:

**Input Operation.** During local mode operation, conventional initiating devices and addressable IDNet initiating devices shall be capable of reporting an alarm condition to the MINIPLEX transponder. TrueAlarm sensors will cause an alarm at their least sensitive alarm threshold:

- Photoelectric sensors will alarm at 3.7%/ft smoke obscuration
- Ionization sensors will alarm at 1.3%/ft obscuration
- Heat sensors will alarm at a fixed temperature of 135 °F (57 °C)
- TrueAlarm device LEDs will be activated to indicate a device in alarm

**Notification Operation.** Fire alarm conditions reported against a fire alarm point type within a transponder in local mode will cause all notification appliance circuits in that transponder to:

- Sound a general alarm temporal pattern horn tone
- Activate visible notification appliance circuits

**Local Mode Module Support.** Local mode operation provides support for the following MINIPLEX transponder circuits:

- Conventional NAC and addressable IDNAC notification appliance circuits, operated at a temporal pattern,
- IDNet, IDNet 2 and IDNet 2+2 addressable device circuits
- 4100ES amplifiers will provide their on-board horn tones (500 Hz) at a temporal pattern through their on-board amplifier NACs

**Local Mode Operation Module Exclusion.** Modules and circuits not listed above but that are listed as compatible with MINIPLEX transponders per this document, do not interfere with local mode operation but **are not supported** during local mode operation.

## Local Mode Controller

**Operation.** During local mode operation, an optional Local Mode Controller will indicate status (see Figure 2) and can be enabled using a keyswitch to perform local alarm silence or reset. If alarms occurring during local mode are reset using a Local Mode Controller, upon restoration of communications, **those alarms will not be sent to the master controller**. If alarms are still present upon restoration of communications, then the alarm condition will be reported and host fire alarm control panel programmed alarm functions will occur. When communications are re-established, the local mode transponder restores automatically.

**Mounting.** Local Mode Controllers are mounted on three-gang plates, are available in beige or red, and for either flush or semi-flush mounting. (See [Local Mode Controller](#) for details).

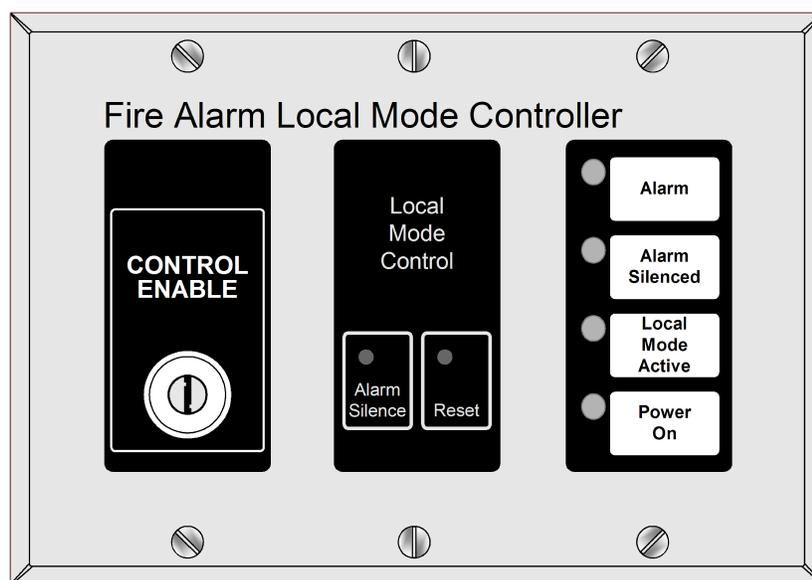
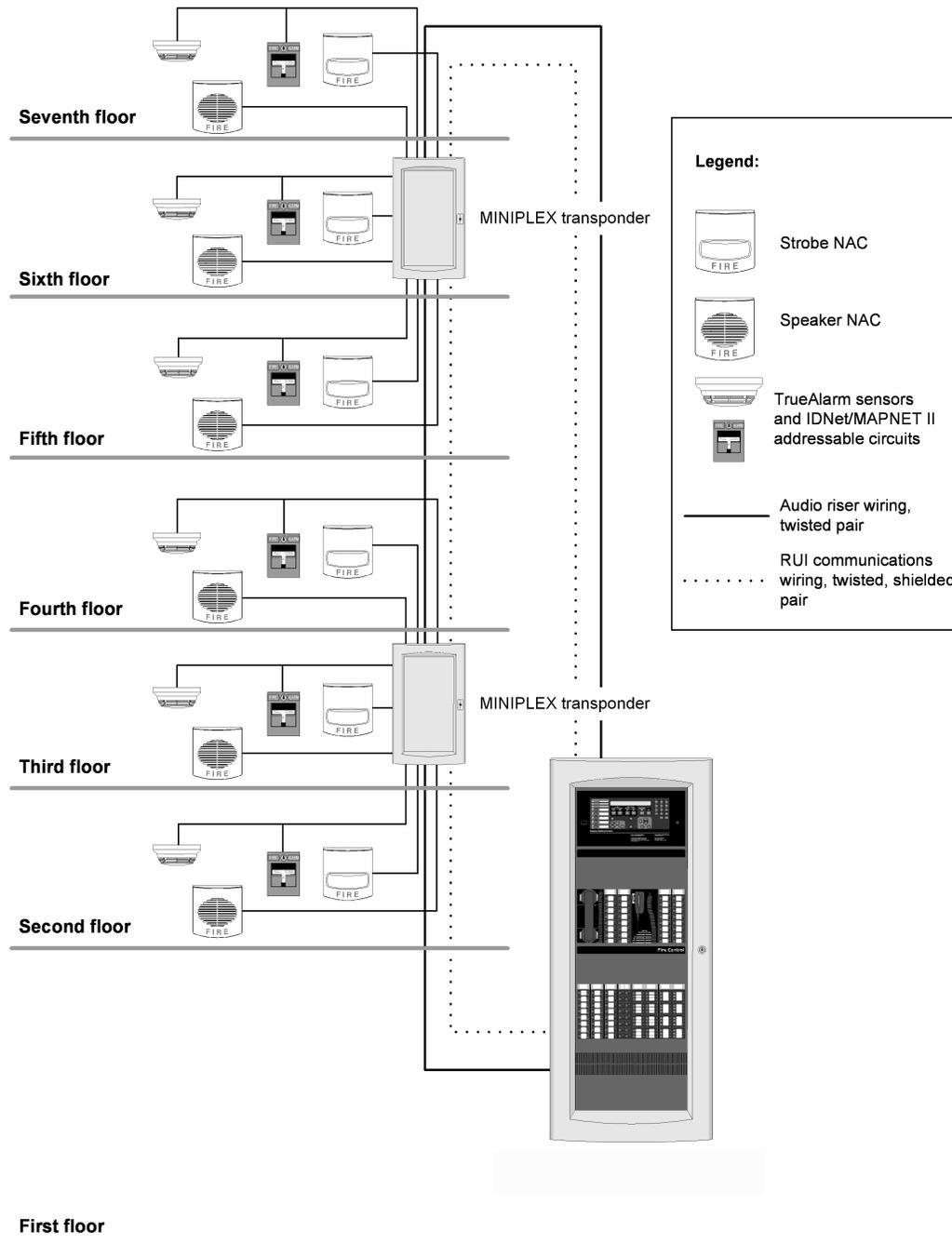
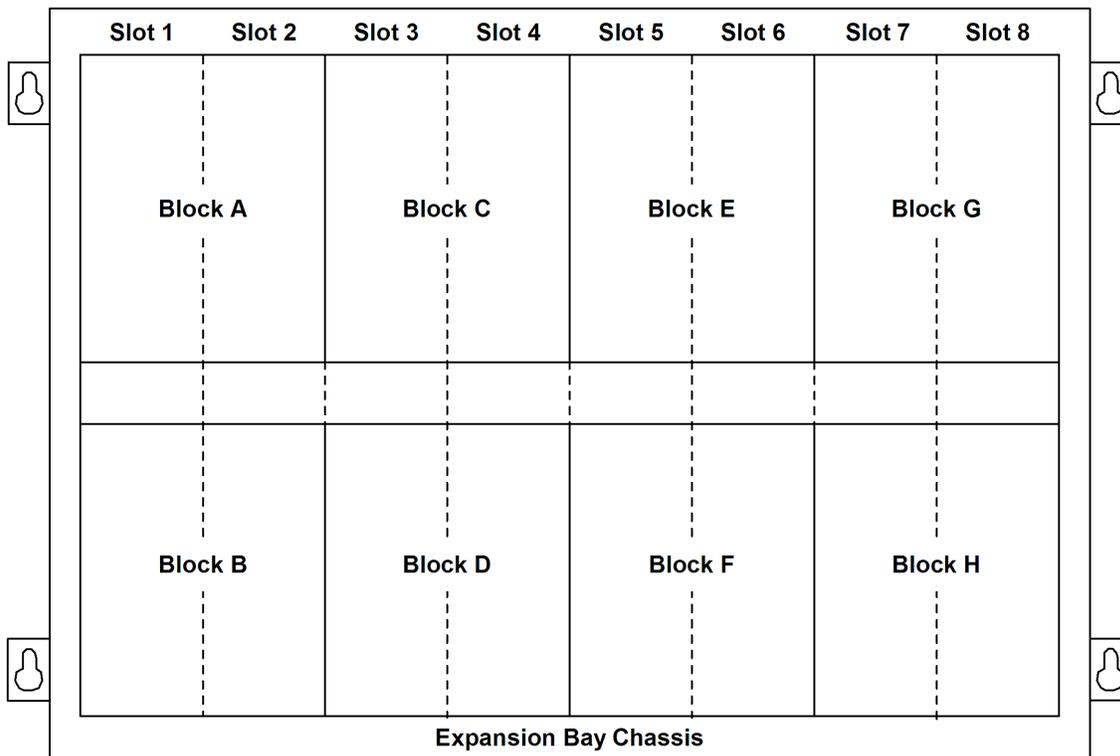


Figure 2: Local Mode Controller Module

**Typical Multi-Floor MINIPLEX Audio System**



**Expansion Bay Module Loading Reference**


**Size Definitions:** Block = 4" W x 5" H (102 mm x 127 mm) card area  
 Slot = 2" W x 8" H (51 mm x 203 mm) motherboard with daughter card

Description		Mounting
Transponder Interface Modules		Block A
Audio Riser Modules		Block B
Terminal Block Module		1 Block
IDNet 2 and IDNet 2+2 Modules		1 Block
4, 2 A Relays	<b>NON Power-limited</b>	1 Block
4, 10 A Relays		4", 2 Slots
8, 3 A Relays		1 Block
VESDA Interface		2", 1 Slot
8 Point Zone/Relay Card		1 Block
Class B IDC		2", 1 Slot
Class A IDC		2", 1 Slot
MAPNET II Module		4", 2 Slots
MAPNET II Isolator		2", 1 Slot
Decoder Module		6", 3 Slots
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
Telephone Expansion Module		1 Block
Expansion Signal Module		1 Block
NAC Card		1 Block
IDNAC Card		2 Blocks (on ES Power Supply only)
ES-PS		Blocks G & H ONLY
ES-PS Configured as backup		Blocks E & F ONLY
ES-XPS		2 Blocks

**Note:** \* When mounting dual Flex amplifiers on an expansion bay, special mounting rules apply.

## General Specifications

**Table 1: ES Power Supply Specifications (ES-PS and ES-XPS)**

Specifications	Rating
<b>AC Input Power</b>	120-240 VAC
120 VAC	4.2 A
220 - 240 VAC	2.375 A
<b>Total DC Output Power Capacity</b>	
Without Fan	9.5 A
With 4100-5131 Fan and 4100-5451 IDNAC Module(s)	9.7 A
With 4100-5131 Fan (without 4100-5451 IDNAC Module)	12.7 A
With Regulated 24V Appliance Loads (with or without 4100-5131 Fan)	5.0 A
<b>Special Application Appliance Loads:</b> supports full total DC output power capacity ratings above	Simplex horns, strobes, and combination horn/strobes and speaker/strobes (contact your Simplex product representative for compatible appliances)
<b>Regulated 24V Appliances:</b> reduces total DC output power capacity to 5.0 A	Power for other UL listed appliances; use associated external synchronization modules where required
<b>Auxiliary Power Tap</b>	2 A maximum (taken from total output power capacity)
<b>NACs Programmed for Auxiliary Power</b>	3 A maximum per NAC, 5 A maximum total (taken from total output power capacity)
<b>Battery Charger (ES-PS only)</b>	Sealed Lead-Acid Batteries
Battery Ah Capacity	UL/ULC listed for battery charging of up to 110 Ah (batteries larger than 50 Ah require a remote battery cabinet)
Charger characteristics and performance	Temperature compensated, dual rate, recharges depleted batteries within 48 hours
<b>Environmental</b>	
Operating Temperature	32 °F to 120 °F (0 °C to 49 °C)
Operating Humidity	Up to 93% RH, non-condensing @ 90 °F (32 °C) maximum
<b>Option Card Mounting</b>	2 vertical blocks are available for compatible modules (refer to 579-1288 installation instructions for additional details)

**Note:**

- Battery charger is only available on the ES-PS power supply.
- When an ES-PS is used to power Flex-35 or Flex-50 Amplifiers the ES-PS battery charger is not available.

**Table 2: ES Power Supplies**

Model	Voltage	Description	Includes	Provides Power to Bay	Size	Supv.	Alarm
4100-5401	120-240 V 50/60 Hz	ES-PS	24 V Aux. Relay, 24 V Aux. Power 2 A Tap/ Simple NAC, 110 Ah Battery Charger, 2 PDI Blocks for compatible option cards.	Yes	2 Blocks	68 mA	77 mA
4100-5402	120-240 V 50/60 Hz	ES-XPS	Same as ES-PS above except without battery charger	No			

**Table 3: Power supply accessories**

Model	Description	Size	Current
4100-5152	12 VDC Power Option, 2 A maximum	1 Block	1.5 A maximum
4100-0156	8 VDC Converter, required for multiple Physical Bridge Modules, 3 A maximum	1 Block	included w/loads
4100-5130	Voltage Regulator Module, 22.8 to 26.4 VDC (25VDC nominal); isolated and resettable output; includes earth detection circuit and trouble relay for status monitoring.	1 Block	3 A maximum with 2.5 A load, 4.9 A maximum with 4 A load
4100-5131	ES-PS Fan Module, allows more than one power supply to be installed in a single bay and may increase total DC output power capacity per power supply. See Table 1 for specifications.	N/A	0 mA Supv. 200 mA Alarm
4100-0636	Box Interconnection Harness Kit (non-audio); order one for each close-nipped cabinet		
4100-0638	Slot Module Additional 24 VDC Harness; needed when Slot module requirements exceed 2 A from ES-PS		
4100-5403	Harness for ES-PS Backup Power Supply		
4100-0644	120 VAC PDM Harness	1 PDM harness is required per power supply, select as required for appropriate input voltage	
4100-0645	220 VAC PDM Harness		
4100-0646	230 VAC PDM Harness		
4100-0647	240 VAC PDM Harness		

**MINIPLEX Transponder Product Selection**
**Table 4: Transponder Type**

SKU	Description	Supv.	Alarm
4100-9600	Basic Transponder, includes bay equipment with power distribution interface, and 4100-0620 Basic Transponder Interface Module mounted in Block A	36 mA	36 mA
4100-9601	Local Mode Transponder, includes bay equipment with power distribution interface, and 4100-0625 Local Mode Transponder Interface Module mounted in Block A	normal	38 mA
		in local mode	23 mA

**Table 5: Local Mode Controller Selection**

SKU	Description	Supv.	Alarm
4601-9108	Flush mount	normal	44 mA
4601-9109	Surface mount		
4601-9110	Flush mount	in local mode	44 mA
4601-9111	Surface mount		

**Table 6: Communication Modules**

SKU	Description	Size	Supv.	Alarm	
4100-6031	<b>Select one per ES Power Supply (non power-limited)</b> City Circuit, with disconnect switches	For use with ES-PS only (not for backup ES-PS or ES-XPS)	1 Block	20 mA	
4100-6032				City Circuit, without disconnect switches	20 mA
4100-6033				Alarm Relay, 3 Form C relays, 2 A @ 32 VDC; for ES-PS	15 mA
4100-6038	Dual RS-232 Interface	1 Slot	132 mA	132 mA	
4100-6045	Decoder Module	3 Slots	85 mA	163 mA	
4100-6048	VESDA Aspiration System Interface	1 Slot	132 mA	132 mA	
4100-9816	Master Clock Interface Module with one standard RS-232 port (see <i>S4100-0033</i> )	1 Slot	132 mA	132 mA	

**Table 7: Miscellaneous Options and Accessories**

Model	Description
4100-1290	24 Point I/O Module for external connections, select each point as either a switch input (momentary or maintained) or an output (for lamp/LED/relay); requires 1 Slot (refer to data sheet <i>S4100-0032</i> for additional information)
4100-0632	Terminal Block Utility Module with 2, 16 position terminal blocks on 4" x 5" single block, for of up to 12 AWG wire (3.31 mm <sup>2</sup> )
4100-0633	Door Tamper Switch, connects into Transponder Interface Module, one per cabinet assembly if required
4100-0634	120 VAC
4100-0635	220/230/240 VAC
4100-9837	Green LED Power-on Indicator Kit, required for ULC listing of MINIPLEX transponder; mounts on solid door knockout
2081-9031	Series resistor for WSO, IDCs (N.O. water flow and tamper on same circuit, wires after water flow and before tamper) 470 Ω, 1 W, encapsulated, two 18 AWG leads (0.82 mm <sup>2</sup> ), 2 ½" L x 1 ⅝" W x 1" H (64 mm x 35 mm x 25 mm)

**Table 8: Audio Riser Modules**

SKU	Description	Size	Supv.	Alarm
4100-0621	Dual Channel <i>Analog</i> Audio Riser Module; accepts one or two separate audio signals from host control panel; mounts in Block B, is controlled by Transponder Interface Module	1 Block	0 mA	15 mA
4100-0622	3-8 Channel <i>Digital</i> Audio Riser Module; similar to analog module, except receives and decodes a digital input signal with up to eight audio channels; with Non-Alarm Audio input	1 Block	70 mA	70 mA

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

SKU	Description	Details
4100-1361	25 VRMS output	Includes three on-board Class B audio NACs; power is supplied from an ES-PS
4100-1362	70.07 VRMS output	
4100-1312	25 VRMS output	Includes three on-board Class B audio NACs; power is supplied from an ES-PS
4100-1313	70.7 VRMS output	

\* Refer to document S4100-1034 for additional audio information.

**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				
4100-1314	4100-1315	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
4100-1316	4100-1317	120 VAC, 60 Hz	ULC	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

**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				
4100-1318	4100-1319	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
4100-1320	4100-1321	120 VAC, 60 Hz	UL	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier
4100-1322	4100-1323	120 VAC, 60 Hz	ULC	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier ULC models have low battery dropout circuit
4100-1324	4100-1325	220/230/240 VAC, 50/60 Hz	UL	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier

**Table 11: Digital Emergency Voice/Alarm Communications Equipment\***

Model	Description	Details			
4100-1363	25 VRMS output	Flex-35, 35 W Amplifier, constant supervision compatible	Includes three on-board Class B audio NACs; power is supplied from an ES-PS	NAC rating = 1.4 A	35 W, or 100 speakers
4100-1364	70.07 VRMS output			NAC rating = 0.5 A	
4100-1326	25 VRMS output	Flex-50, 50 W Amplifier, constant supervision compatible		NAC rating = 2 A	50 W, or 100 speakers
4100-1327	70.7 VRMS output			NAC rating = 0.707 A	

\* Refer to document S4100-1034 for additional audio information.

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

SKU/Output Voltage		Power Supply Input/Listing		Description	Details
25 VRMS	70.7 VRMS				
4100-1328	4100-1329	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
4100-1330	4100-1331	120 VAC, 60 Hz	ULC	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
4100-1332	4100-1333	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
4100-1334	4100-1335	120 VAC, 60 Hz	UL	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier
4100-1336	4100-1337	120 VAC, 60 Hz	ULC	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier ULC models have low battery dropout circuit
4100-1338	4100-1339	220/230/240 VAC, 50/60 Hz	UL	Backup 100 W Amplifier	Uses the six Class B NACs of primary amplifier

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

Model	Description	Details and Mounting Reference	
4100-1245	Flex-35/50 Expansion NAC Module; adds three Class B audio NACs	Choose one per amplifier	Mounts on Flex-35/50 assembly; NAC ratings = 1.5 A, 35/50 W, or 100 speakers maximum; <b>Supv = 8 mA, Alarm = 60 mA</b>
4100-1246	Flex-35/50 Class A Adapter Module; converts three on-board NACs to Class A operation		Mounts on Flex-35/50 assembly; NAC ratings = 2 A, 50 W, or 100 speakers maximum; <b>Supv = 10 mA, Alarm = 30 mA</b>
4100-1248	100 W Amplifier Expansion NAC Module; NAC ratings = 1.5 A, 50 W, or 100 speakers max.		Provides six additional Class B audio NACs, mounts on 100 W amplifier assembly; <b>Supv = 17 mA, Alarm = 60 mA</b>
4100-1249	100 W Class A Adapter Module; NAC ratings = 2 A, 50 W, or 100 speakers max.		Converts six on-board NACs to Class A operation, mounts on 100 W amplifier assembly; Supv = 1 mA, Alarm = 60 mA
4100-1259	25 VRMS Output; NAC rating = 2 A, 50 W, or 100 speakers max.	Constant Supervision Adapter for three NACs; select per amplifier output; not compatible with amplifier NAC expansion modules; deactivated when on batteries	<b>Supv = 10 mA on batteries;</b> <b>Alarm = 35 mA</b>
4100-1260	70.7 VRMS Output; NAC rating = 0.707 A, 50 W, or 100 speakers max.		<b>Supv = 38 mA on batteries;</b> <b>Alarm = 70 mA</b>
			Converts three Class B audio NACs to Class A or Class B Constant Supervision NACs; mounts on Flex-35/50 or 100 W amplifier assembly; use two for the six NACs on 100 W amplifiers

**Table 14: Firefighters Telephone Options**

SKU	Description	Size	Supv.	In Use
4100-1272	Expansion Telephone Control Module with three Class B telephone NACs; required when telephone circuits are mounted in transponder;	1 Block	80 mA	130 mA
4100-1273	Telephone Class A Adapter Module; mounts on 4100-1272; no additional current required			

**Table 15: General Audio Options**

Model	Description
4081-9018	End-of-line resistor harness for 70.7 VRMS NACs; 10 kΩ, 1 W
4100-2320	Audio Bay-to-Bay Interconnection Harness Kit; <b>order one for each audio bay addition</b>
4100-0637	Audio Box Interconnection Harness Kit; <b>order one for each close-nippled audio cabinet</b>

**Table 16: Audio Expansion Signal Module and Options**

Model	Description	Details and Mounting Reference	
4100-5116	Expansion Signal Module; three, 1.5 A Class B NACs for Audio applications; up to five maximum per amplifier; NAC rating = 1.5 A, 50 W, or 100 speakers maximum	Converts one NAC input to three NAC outputs; selects between two inputs; for Flex-35/50 amplifiers only, two input NACs are required; Single Block module mounts in expansion bay; <i>Supv = 20 mA; Alarm = 80 mA</i>	These modules mount on the 4100-5116; select one max. per 4100-5116 as required
4100-1266	Expansion Signal Module NAC Expander; NAC rating = 1.5 A, 50 W, or 100 speakers max.	Expands module capacity to six, Class B NACs; <i>Supv = 0.84 mA; Alarm = 60 mA</i>	
4100-1267	Expansion Signal Module Class A Adapter; NAC rating = 1.5 A, 50 W, or 100 speakers maximum	Converts 3 Class B, NACs to Class A; <i>Supv = 0 mA; Alarm = 30 mA</i>	
4100-1268	Expansion Signal Module Constant Supervision Adapter; Converts 3 Class B NACs to Constant Supervision Class B or Class A NACs; for 25 VRMS or 70.7 VRMS audio	NAC rating = 1.4 A, 50 W, or 100 speakers max.; <i>Supv = 38 mA on batteries (constant supervision deactivated); Alarm = 70 mA</i>	

**Table 17: Initiating Device Circuits (IDCs)**

Model	Description	Size	Supv.	Alarm
4100-5005	Eight zones, Class B	1 Slot	75 mA	195 mA
4100-5015	Eight zones, Class A	1 Slot	75 mA	195 mA

**Note:** Modules listed in Table 15 are for use with all 4100ES systems version 3.05 or earlier. IDC Modules are 1 slot size.

**Table 18: 8-Point Zone/Relay Card**

Model	Description	Size	Supv.	Alarm
4100-5013	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
4100-6305	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

**Note:** Modules in Table 18 requires 4100ES Version 3.06 or later.

**Table 19: Addressable Interface Modules**

Model	Description	Devices	Supv.	Alarm
4100-3109*	<b>IDNet 2 Module</b> , 250 point capacity; electrically isolated output with <b>two</b> short circuit isolating Class B or Class A output loops, 1 block; standard on EPS with IDNet 2 Module	no devices	50 mA	60 mA
		50 devices	90 mA	150 mA
		125 devices	150 mA	225 mA
		250 devices	250 mA	350 mA
4100-3110*	<b>IDNet 2+2 Module</b> , 250 point capacity; electrically isolated output with <b>four</b> short circuit isolating Class B or Class A output loops, 1 block; mounts in expansion bay or available master controller bay module locations only, not applicable for EPS mounting	no devices	50 mA	60 mA
		50 devices	90 mA	150 mA
		125 devices	150 mA	225 mA
4100-3111*	<b>IDNet Short Circuit Isolating Loop Output Module; for Aftermarket Field Installation Only</b> ; mount up to two on a 4100-3109 module; for use with 4100-3109 modules only	250 devices	250 mA	350 mA
4100-3102	MAPNET II Module, 127 point capacity, add devices separately; Module size = 2 Slots; Loading per MAPNET II device = 1.7 mA	Module without devices	255 mA	275 mA

**Table 19: Addressable Interface Modules**

Model	Description	Devices	Supv.	Alarm
4100-3103	Isolator Module for MAPNET II communications; converts a single connected SLC into four isolated outputs selectable as Class A or Class B; up to two Isolator Modules can be connected to one SLC; Module size = 1 Slot; <b>Note:</b> Compatible with MAPNET II Remote Isolators only		50 mA	50 mA

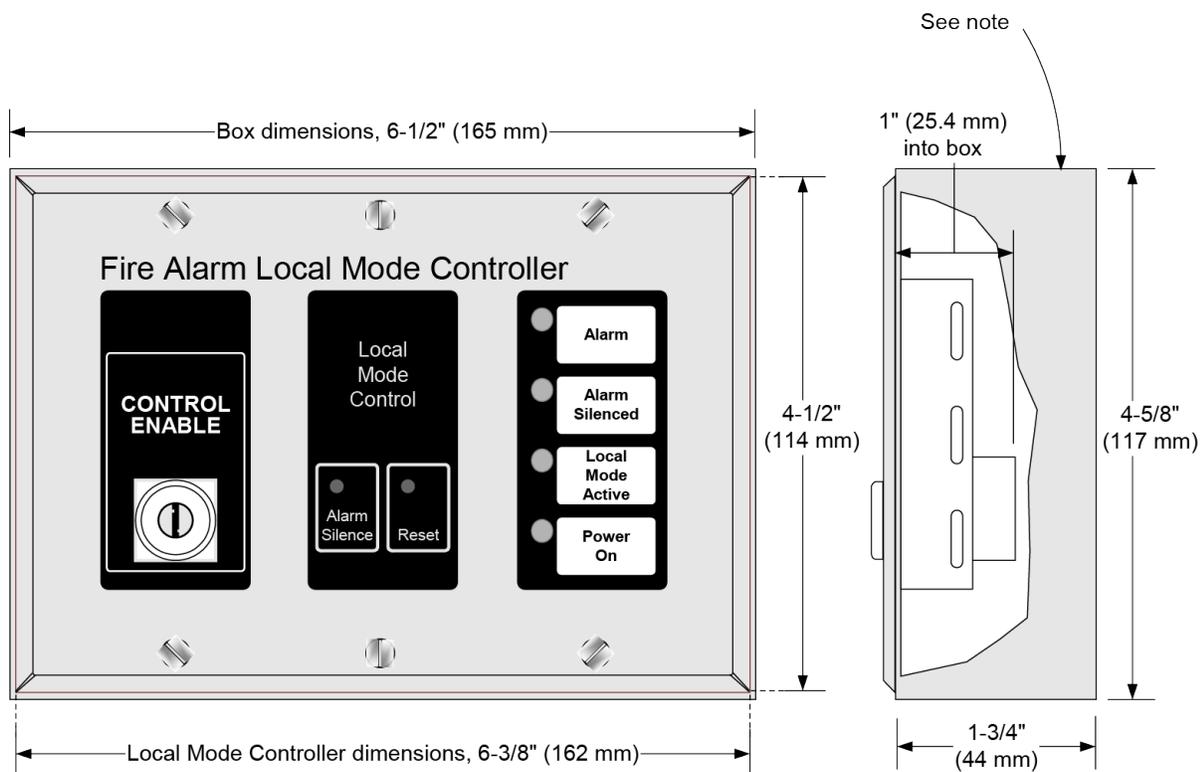
**\*Note:** Loading per IDNet device (no LEDs on) = 0.8 mA supervisory and 1 m A alarm.

**Table 20: Relay Modules; Non-power-limited**

Model	Description	Resistive Ratings		Inductive Ratings		Size	Supv.	Alarm
4100-3202	4 DPDT w/ feedback	10 A	250 VAC	10 A	250 VAC	2 Slots	15 mA	175 mA
4100-3204	4 DPDT w/ feedback	2 A	30 VDC/VAC	½ A	30 VDC/120 VAC	1 Block	15 mA	60 mA
4100-3206	8 SPDT	3 A	30 VDC/120 VAC	1 ½ A	30 VDC/120 VAC	1 Block	15 mA	190 mA

**Current Calculation Notes:**

1. For total supervisory current, add panel module currents to base system **and** add all external loads panel-powered loads.
2. For total alarm current, add panel module currents to base system alarm current **and** add all panel NAC loads **and** all external loads powered from panel power supplies.

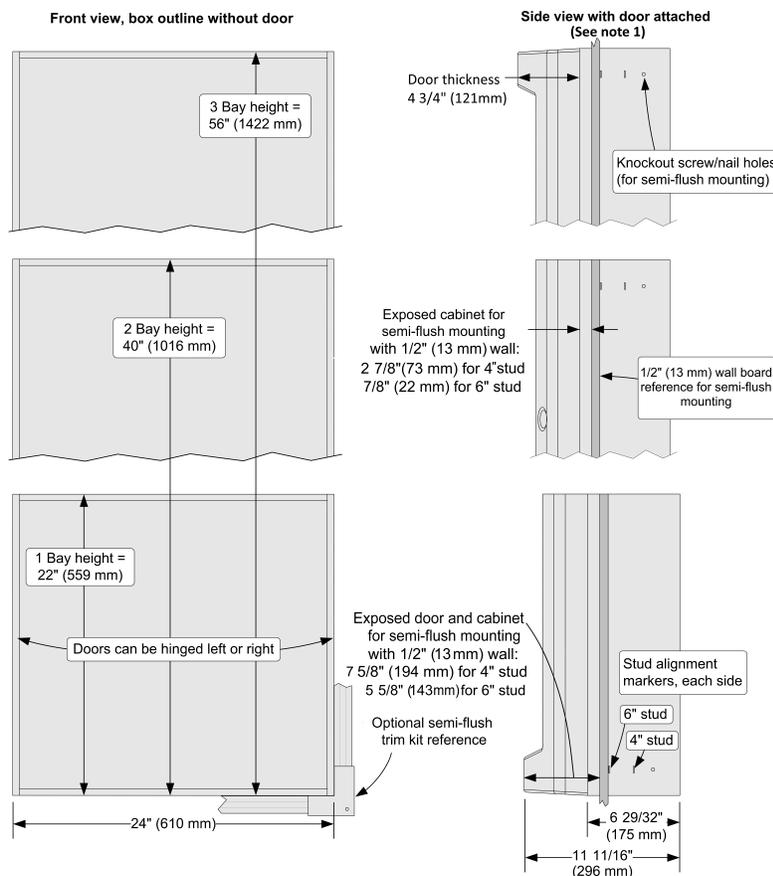
**Local Mode Controller Detail**

**Figure 3: Local Mode Controller Detail**

**Note:** Matching box is supplied with surface mount models 4601-9109 (red) and 4601-9111 (beige); for semi-flush models 4601-9108 (red) and 4601-9110 (beige), use a 1-1/2" (38 mm) minimum depth, 3-gang box.

**Local Mode Controller to Transponder Wiring:**

1. Wire close-nippled to transponder, maximum distance = 20 ft (6.1 m).
2. Nine wires required: 24 VDC (2), one per LED indicator (4), and one per switch (3).
3. Wire size, 18 AWG (0.82 mm<sup>2</sup>).

## Enclosure Installation Reference



### Note:

1. Side View dimensions are shown with minimal cabinet and door protrusion from the exterior wall. For 6 inch stud construction with minimum protrusion shown, the door will open 90 degrees. To allow the door to open 180 degrees, the exposed cabinet dimension from the exterior wall must be a minimum of 3 inches (76 mm) for both 4 inch and 6 inch stud construction.

2. 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.

## Additional 4100ES Product Reference

Table 21: Additional 4100ES Product Reference

Subject	Datasheet
Battery and Battery Cabinet Reference for 4100ES	S2081-0006
110 Ah Batteries and Cabinets for 4100ES	S2081-0012
4100ES LED/Switch Modules & Printer	S4100-0032
4100ES Enclosures	S4100-0037
4100ES Basic Panels with ES-PS Power Supplies	S4100-1031
NDU with ES-PS Power Supplies for 4120 Network	S4100-1036
InfoAlarm Command Center with ES-PS Power Supplies	S4100-1045
NDU with ES-PS Power Supplies for ES Net	S4100-1077