ΣΣ Simplex

4100U Fire Control Panels

UL, ULC, CSFM Listed; FM Approved;
MEA (NYC) Acceptance*

*Info*Alarm™ Command Center
for the 4100U Fire Alarm Control Panel

Features

Multi-line expanded content display interface for Simplex® 4100U Series fire alarm control panels, available with the following products:

- Fire alarm control panels (stand-alone or networked) including Redundant CPU options (Software Revision 12 or higher is required)
- Network Display Units (NDU) (single language supports up to 12,000 points, bilingual operation supports up to 9000 points)
- Remote Annunciator panels and models that mount in a dedicated cabinet (4100U control panels support Remote InfoAlarm Command Centers independent of host panel display type)
- Upgrade kits are available for legacy 4100 (1000 pt, 4100+ systems) and 4100U control panels
- UL listed to Standard 864

InfoAlarm Command Centers provide customized operating convenience:

- "Activity in System" primary display choices include: First and Most Recent, First 5 and Most Recent, First 8, Site Plan with activity status icons, General Alarm, or Direct to List; selectable individually by event type
- System reports are easily viewed; logs can be read with minimal scrolling required
- Up to six "softkeys" per screen provide functions that vary with the particular screen information aiding operators to determine how to proceed
- Up to two languages are available per system, easily selected by programmable key press (systems with IMS/GCC/NPU or 2 x 40 LCD panels or annunciators require one language to be the default font)
- International models allow customized language legends for operator keys and status LEDs

Display properties:

- 320 x 240 dot matrix (QVGA) display provides an active area of 4.53" W x 3.4" H (115 mm x 86 mm) displaying up to 854 characters using standard ASCII character font
- Bright white LED backlighting provides efficient and long lasting illumination; operation is selectable as continuous or off with power fail or with no key presses
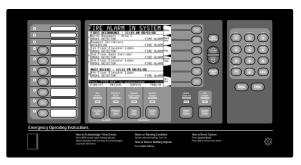
Introduction

Displaying more information. 4100U Controls using the InfoAlarm Command Center provide an expanded content, multi-line LCD interface that requires minimal key presses to access detailed information. Because it is system-powered, its detailed information is provided without requiring separate supplementary equipment.

InfoAlarm Command Center Control Panel. By using a larger area format instead of an individual text line display, the LCD provides text information for Alarm, Supervisory, or Trouble. The format is flexible and able to be customized per application allowing additional information to be presented to suit the specific application.

InfoAlarm Command Center for Control Panel Mounting

InfoAlarm Command Center in Remote Cabinet
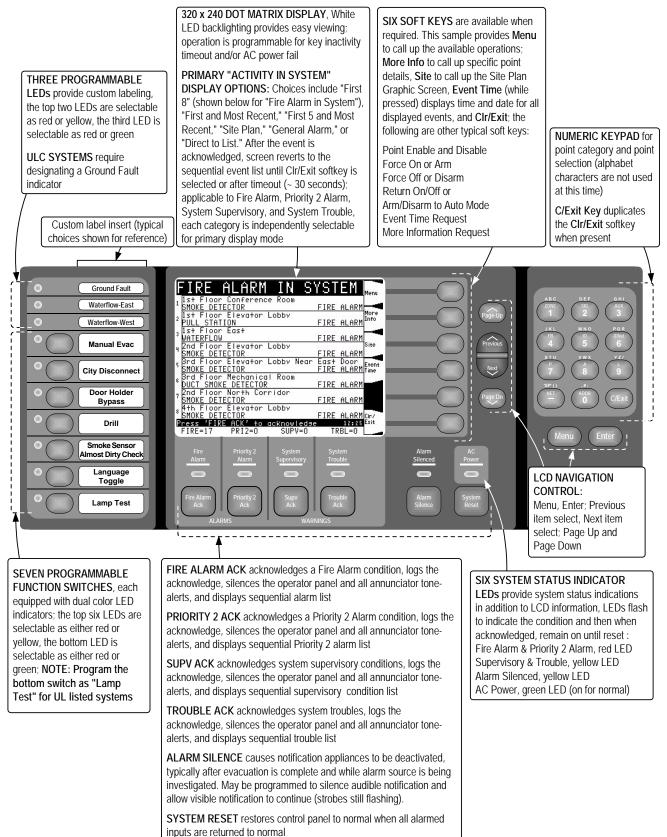
Description

InfoAlarm Command Centers for 4100U fire alarm systems provide a large display with extended information content, dual language support including 2 byte character languages, and an intuitive control key interface per the following:
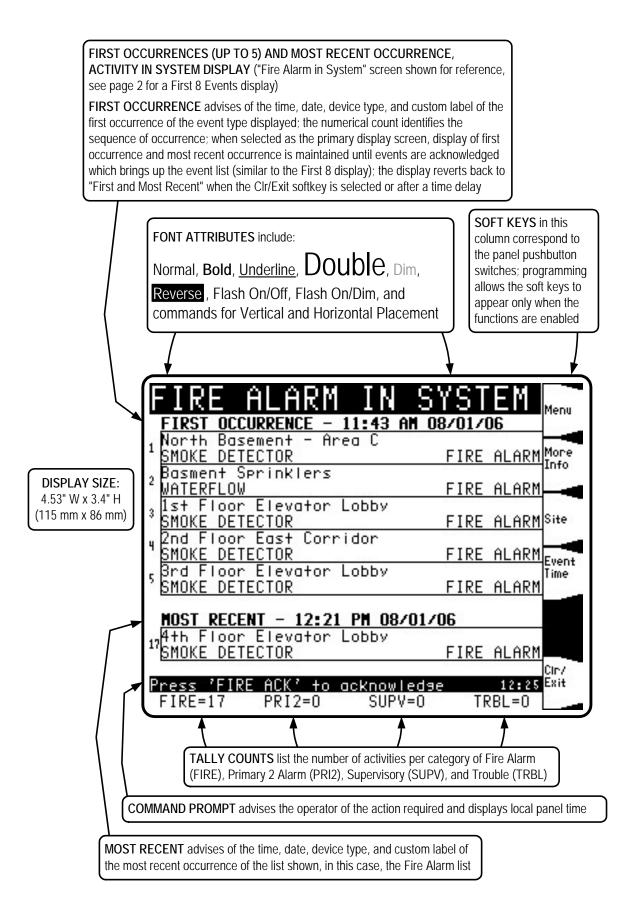
- Up to 10 InfoAlarm Command Centers are supported per 4100U control panel; able to allow one InfoAlarm Command Center to take-control and to designate access levels for interfaces not in-control; LEDs can be programmed for in-control status indications
- Menu-driven format conveniently prompts operators for the next action required
- Key controls are provided to select the highlighted entry, load next screen of information, or jump to top or bottom of activity lists
- Direct point callup displays individual points alphabetically and then homes in on the logical choice as more point information is entered
- A Site Plan bitmap can be displayed for reference; icons can be added to indicate system status
- Up to 50 custom point detail messages can be generated
- Date formats are either MM/DD/YY or DD/MM/YY
- Time formats are either 24 hour or 12 hour with AM/PM
- System Normal screen supports a gray scale bitmap (watermark) for location name, company logo, or site plan

Control Panel Operation Reference

NOTE: Refer to page 7 for international control panel reference information. Detailed operator instructions are on document 579-685.
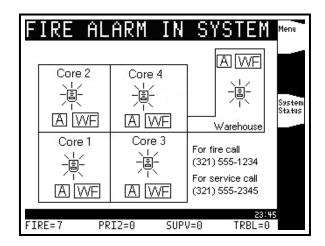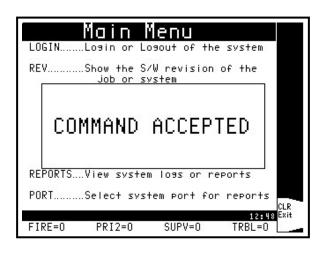
320 x 240 DOT MATRIX DISPLAY, White LED backlighting provides easy viewing; operation is programmable for key inactivity timeout and/or AC power fail

PRIMARY "ACTIVITY IN SYSTEM" DISPLAY OPTIONS: Choices include "First 8" (shown below for "Fire Alarm in System"), "First and Most Recent," "First 5 and Most Recent," "Site Plan," "General Alarm," or "Direct to List." After the event is acknowledged, screen reverts to the sequential event list until Clr/Exit softkey is selected or after timeout (~ 30 seconds); applicable to Fire Alarm, Priority 2 Alarm, System Supervisory, and System Trouble, each category is independently selectable for primary display mode

SIX SOFT KEYS are available when required. This sample provides **Menu** to call up the available operations; **More Info** to call up specific point details, **Site** to call up the Site Plan Graphic Screen, **Event Time** (while pressed) displays time and date for all displayed events, and **Clr/Exit**; the following are other typical soft keys:

Point Enable and Disable
Force On or Arm
Force Off or Disarm
Return On/Off or
Arm/Disarm to Auto Mode
Event Time Request
More Information Request

THREE PROGRAMMABLE LEDs provide custom labeling, the top two LEDs are selectable as red or yellow, the third LED is selectable as red or green

ULC SYSTEMS require designating a Ground Fault indicator

NUMERIC KEYPAD for point category and point selection (alphabet characters are not used at this time)

C/Exit Key duplicates the **Clr/Exit** softkey when present

Custom label insert (typical choices shown for reference)

LCD NAVIGATION CONTROL:
Menu, Enter; Previous item select, Next item select; Page Up and Page Down

SEVEN PROGRAMMABLE FUNCTION SWITCHES, each equipped with dual color LED indicators; the top six LEDs are selectable as either red or yellow, the bottom LED is selectable as either red or green; **NOTE: Program the bottom switch as "Lamp Test" for UL listed systems**

FIRE ALARM ACK acknowledges a Fire Alarm condition, logs the acknowledge, silences the operator panel and all annunciator tone-alerts, and displays sequential alarm list

PRIORITY 2 ACK acknowledges a Priority 2 Alarm condition, logs the acknowledge, silences the operator panel and all annunciator tone-alerts, and displays sequential Priority 2 alarm list

SUPV ACK acknowledges system supervisory conditions, logs the acknowledge, silences the operator panel and all annunciator tone-alerts, and displays sequential supervisory condition list

TROUBLE ACK acknowledges system troubles, logs the acknowledge, silences the operator panel and all annunciator tone-alerts, and displays sequential trouble list

ALARM SILENCE causes notification appliances to be deactivated, typically after evacuation is complete and while alarm source is being investigated. May be programmed to silence audible notification and allow visible notification to continue (strobes still flashing).

SYSTEM RESET restores control panel to normal when all alarmed inputs are returned to normal

SIX SYSTEM STATUS INDICATOR LEDs provide system status indications in addition to LCD information, LEDs flash to indicate the condition and then when acknowledged, remain on until reset :
Fire Alarm & Priority 2 Alarm, red LED
Supervisory & Trouble, yellow LED
Alarm Silenced, yellow LED
AC Power, green LED (on for normal)

FIRST OCCURRENCES (UP TO 5) AND MOST RECENT OCCURRENCE,
ACTIVITY IN SYSTEM DISPLAY ("Fire Alarm in System" screen shown for reference, see page 2 for a First 8 Events display)

FIRST OCCURRENCE advises of the time, date, device type, and custom label of the first occurrence of the event type displayed; the numerical count identifies the sequence of occurrence; when selected as the primary display screen, display of first occurrence and most recent occurrence is maintained until events are acknowledged which brings up the event list (similar to the First 8 display); the display reverts back to "First and Most Recent" when the Clr/Exit softkey is selected or after a time delay

FONT ATTRIBUTES include:

Normal, **Bold**, <u>Underline</u>, Double, Dim, Reverse , Flash On/Off, Flash On/Dim, and commands for Vertical and Horizontal Placement

SOFT KEYS in this column correspond to the panel pushbutton switches; programming allows the soft keys to appear only when the functions are enabled

DISPLAY SIZE:
4.53" W x 3.4" H
(115 mm x 86 mm)

```
FIRE ALARM IN SYSTEM          Menu
FIRST OCCURRENCE - 11:43 AM 08/01/06
  North Basement - Area C
1 SMOKE DETECTOR              FIRE ALARM   More
  Basment Sprinklers                       Info
2 WATERFLOW                   FIRE ALARM
  1st Floor Elevator Lobby
3 SMOKE DETECTOR              FIRE ALARM   Site
  2nd Floor East Corridor
4 SMOKE DETECTOR              FIRE ALARM
  3rd Floor Elevator Lobby                Event
5 SMOKE DETECTOR              FIRE ALARM   Time

MOST RECENT - 12:21 PM 08/01/06
   4th Floor Elevator Lobby
17 SMOKE DETECTOR             FIRE ALARM
                                          Clr/
Press 'FIRE ACK' to acknowledge    12:25  Exit
FIRE=17    PRI2=0    SUPV=0    TRBL=0
```

TALLY COUNTS list the number of activities per category of Fire Alarm (FIRE), Primary 2 Alarm (PRI2), Supervisory (SUPV), and Trouble (TRBL)

COMMAND PROMPT advises the operator of the action required and displays local panel time

MOST RECENT advises of the time, date, device type, and custom label of the most recent occurrence of the list shown, in this case, the Fire Alarm list

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Site Plan with Event Icons

Site Plan Bitmap. The InfoAlarm Command Center supports a site plan monochrome bitmap image (size is 281 pixels wide by 192 pixels high) that can also display icons indicating activity and location. Shown to the right is a sample site plan with icons shown in each building area. For this example, each area is showing an "A" for an initiating device in alarm, a "WF" for waterflow occurring, and an icon indicating notification appliances in alarm. (Icons can be created for site specific symbology, these are for example only.)

Site Plan Selection and Detail. If desired, the site plan can be the primary display screen for system activity or can be for reference, available by selecting the "Site" softkey. Depending on the facility layout, the site plan can also be a convenient location for common reference information such as primary call phone numbers, street address, etc. to assist operators in their assigned response.

System Normal Screen. The site plan (or another bitmap image) can be displayed on the System Normal screen as a grey image watermark behind the screen text. (Size and type are the same as that for a site plan bitmap). This can be used to identify the specific location of the 4100U or can display a site-specific logo or other information. (A sample is shown on page 6.)

Customized Emphasis

The Main Menu screen illustration to the left demonstrates how print/display statements appear for status information or for prompting of user input. Other examples of this format occur when setting time and date, entering a password, or identification of a status change such as point enabling or disabling. Use of this feature allows the display to clearly focus the user on required information or actions.

Information Review

The Trouble Log History screen shown to the right identifies the ability to view multiple event entries with minimal scrolling. For specific information access, pressing "Next" or "Previous" on the keypad highlights the selected next or previous item in the list as indicated by the arrow and the bolded first line of Entry 6.

For access to the next or previous full screen of information, use the Page Dn or Page Up keys located to the right of the soft keys, each to the right of the display.

Additional Primary Display Screens

Below are samples of a First and Most Recent primary display and of a General Alarm display.

```
FIRE ALARM IN SYSTEM    Menu


FIRST ALARM
11:43 AM 08/01/06
SMOKE DETECTOR              ABNORMAL   Site
North Basement



MOST RECENT ALARM
12:41 PM 08/01/06
SMOKE DETECTOR              ABNORMAL
6th Floor East Corridor


Press 'Fire Ack' to acknowledge   12:45
FIRE=12    PRI2=0    SUPV=0    TRBL=0
```

First and Most Recent Primary Display Option

```
System Status           Menu


   ┌─────────────────────────┐
   │                         │
   │     FIRE ALARM IN       │
   │                         │   Site
   │       SYSTEM            │
   │                         │
   └─────────────────────────┘



Press 'Fire Ack' to acknowledge   12:45
FIRE=2     PRI2=0    SUPV=0    TRBL=0
```

General Alarm Primary Display Option

International Display Details

CUSTOM LABEL INSERT for the three programmable LEDs and for the seven programmable switches

NOTE: Two sets of slide-in labels are provided, one blank, the other in English; areas shown with + + + + are blank for custom words/characters

UPPER LABEL INSERT allows custom labeling of the numeric keypad and of the LCD navigation controls

Generic site plan shown for reference

SWITCH PROGRAMMING EXAMPLES; for UL listed systems, designate the bottom switch for Lamp Test; for dual language systems, you can program a second switch to change the language display (text shown for reference only, slide-in labels are blank)

LOWER LABEL INSERT allows custom labeling of the six ACK/Silence/Reset switches and labeling of their associated LEDs

Additional 4100U Data Sheet Reference

Data Sheet	Subject	Data Sheet	Subject	Data Sheet	Subject
S4100-0031	Standard Panel Reference	S4100-0035	MINIPLEX® Transponders	S4100-0034	Audio/Phone Modules
S4100-0036	Network Display Unit	S4081-0002	Remote Battery Charger	S4100-0032	LED/Switch Modules
S4100-0038	Remote Annunciators	S4100-0046	IDNet+ Module w/Quad Isolator	S4100-0037	Enclosure Options

4100U Master Controller with InfoAlarm Command Center (see data sheet S4100-0031 for descriptions of the 4100U Basic Control Panel details, standard product features, options, and reference for related fire alarm control panel products)

Model	Model Type	UL	ULC	Voltage	InfoAlarm Command Center Type	Master Controller Features
4100-9114	English	✓	—		**Master Controller Assembly**; raised keys with fixed labels	9 A system power supply/battery charger (SPS), 250 point IDNet interface, 3 NACs, auxiliary relay, and external RUI communications interface
4100-9115	English	—	✓	120 VAC, 60 Hz		
4100-9116	French					
4100-9213	International	✓	—	120 VAC, 60 Hz	**Master Controller Assembly**; flat keys with inserts for custom key labels	
4100-9212	International	✓	—	220/240 VAC, 50/60 Hz		
4100-9122	English	✓	—	120 VAC, 60 Hz	**Redundant CPU** (Master Controller); raised keys with fixed labels	One Command Center, two CPU cards, and an SPS in a two bay assembly; **NOTE: For external RUI, use 4100-1291 RUI Expansion module(s)**
4100-9222	International	✓	—	220/240 VAC, 50/60 Hz	**Redundant CPU** (Master Controller); flat keys with inserts for custom key labels	

Upgrade Kits (see NOTE for NDU upgrades; Upgrade kit are UL and ULC listed)

Model	Model Type	Description	NOTE*
4100-7153	English	**Upgrade Kit for existing 4100U Series Fire Alarm Control Panels**; includes complete bay front assembly with InfoAlarm Command Center providing raised keys with fixed labels; uses existing power supply and Master Controller Board (CPU card)	**NDU upgrades** *require*: **4100-7157*** Extended Memory CPU **and 4100-0640*** Display Memory Expansion
4100-7154	English	**Upgrade Kit for existing 4100 (Legacy 1000 pt, 4100+ systems) Series Fire Alarm Control Panels (non-4100U);** includes complete bay front assembly with InfoAlarm Command Center; raised keys with fixed labels, and replacement Master Controller Board; uses existing power supply	
4100-7155	International	**Upgrade Kit for existing 4100U Series Fire Alarm Control Panels**; includes complete bay front assembly with InfoAlarm Command Center providing flat keys with inserts for custom key labels; use for non-English language applications including French for Canada; uses existing power supply and Master Controller Board (CPU card)	
4100-7156	International	**Upgrade Kit for existing 4100 (Legacy 1000 pt, 4100+ systems) Series Fire Alarm Control Panels (non-4100U);** includes complete bay front assembly with InfoAlarm Command Center; flat keys with inserts for custom key labels, and replacement Master Controller Board; use for Canadian French applications; uses existing power supply	
*4100-7157		**Extended Memory CPU, required to upgrade NDU to InfoAlarm Command Center;** included with InfoAlarm Command Center NDU models below; (single language NDU supports 12,000 points, bilingual NDU supports 9000 pts)	

Network Display Unit (NDU) Master Controller with InfoAlarm Command Center
(**NOTE:** See data sheet S4100-0036 for NDU feature details and for details on SPS NAC ratings for NDU with VCC)

Model	Model Type	UL	ULC	Voltage	NDU Type	Master Controller Features
4100-9151	English	✓	—		**NDU (Standard, Non-Voice)**; raised keys with fixed labels	**Includes:** 4100-7157 Ext. Memory CPU, 4100-0640 InfoAlarm Memory Expansion, Network Interface Module (select media cards separately), 9 A SPS power supply/batt. charger, and external RUI; (**NOTE:** SPS IDNet™ channel and NACs are disabled)
4100-9153	English	—	✓	120 VAC, 60 Hz		
4100-9154	French					
4100-9245	International	✓	—	120 VAC, 60 Hz	**NDU (Standard, Non-Voice)**; flat keys with inserts for custom key labels	
4100-9243	International	✓	—	220/240 VAC, 50/60 Hz		
4100-9152	English	✓	—		**NDU with Voice Interface and Control**; raised keys with fixed labels	**Includes above features and adds:** VCC Bay with Standard CPU Module, Network Interface Module (select media cards separately), 9 A SPS with 250 Point IDNet Interface, (3) 3 A NACs, and ext. RUI comm. interface
4100-9155	English	—	✓	120 VAC, 60 Hz		
4100-9156	French					
4100-9246	International	✓	—	120 VAC, 60 Hz	**NDU with Voice Interface and Control;** flat keys with inserts for custom key labels	
4100-9244	International	✓	—	220/240 VAC, 50/60 Hz		

Remote Annunciator with InfoAlarm Command Center (see data sheet S4100-0038 for Remote Annunciator features)

Model	Model Type	UL	ULC	InfoAlarm Command Center Type		Master Controller Features
4100-9612	English	✓	✓	With raised keys and fixed labels	**Basic Remote Annunciator**	Includes Expansion Bay with PDI, Remote TIC module; **power is supplied from host control panel**
4100-9613	French	—	✓			
4100-9614	International	✓	—	With flat keys & inserts for custom key labels		
4100-9607	English	✓	✓	With raised keys and fixed labels	**Remote Annunciator**	Includes Expansion Bay with PDI, Remote TIC module; **power supply is specified separately when configured**
4100-9608	French	—	✓			
4100-9609	International	✓	—	With flat keys & inserts for custom key labels		

InfoAlarm Command Center Memory Option (may be required to be ordered separately, see description details)

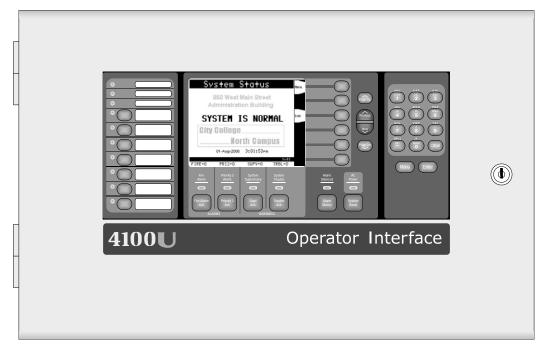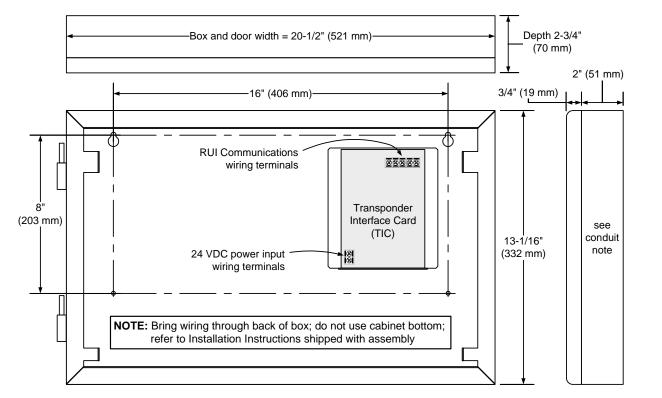| Model	Description
*4100-0640	**Display Memory Expansion Module**; included with NDU systems; **required for *all* InfoAlarm Command Centers connected to a panel *if any* are using 2 byte character fonts**; 6 Meg module mounts on rear of display board

(continued on next page)

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Product Selection *(Continued)*

Remote InfoAlarm Command Center Control Assembly with Cabinet for Surface Mounting

Model Number/Cabinet Color		Application Type	Listing	Description
Red	**Beige**			
4100-9401	4100-9402	English	UL & ULC	**Remote InfoAlarm Command Center with cabinet**; for surface mounting; includes mounting box and door assembly with glass insert; uses RUI communications; requires external 24 VDC system voltage; see illustrations below and Installation Instructions 579-687 for details
4100-9421	4100-9422	French/Canada	ULC	
4100-9441	4100-9442	International	UL	

Remote InfoAlarm Command Center Front View

Remote InfoAlarm Command Center Mounting Reference

NOTE: Bring wiring through back of box; do not use cabinet bottom; refer to Installation Instructions shipped with assembly

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Specifications

General Display Specifications

Size Reference	Dot Matrix Size	320 x 240
	Active Display Area	4.53" W x 3.4" H (115 mm x 86 mm), includes header, footer, and softkey area; 5.66" diagonal measurement (144 mm)
	Characters	Up to 854 characters total using standard ASCII character font
	Designation	QVGA; one quarter of standard VGA (Video Graphics Array) display
Display Polarizer Type		Transflective with rear backlight
Display Adjustment		Contrast adjustment is located on the controller module
Backlight		White LEDs with intensity adjustment and selectable AC power fail operation; intensity adjustment is located on the controller module
Backlighting Operation Options		On continuously; Off with AC power fail until a switch is pushed; selectable timeout without switch activity

Control Panel Mounted InfoAlarm Command Center Current Requirements

Master Controllers (4100-9114, -9115, -9116, -9212, -9213, -9222)	Supervisory	447 mA @ 24 VDC	Panel currents only are shown, add external device loading per system requirements
	Alarm	542 mA @ 24 VDC; backlight and tone-alert on	
Redundant CPUs (4100-9122, -9222)	Supervisory	782 mA @ 24 VDC	
	Alarm	964 mA @ 24 VDC; backlight and tone-alert on	
Network Display Units, Non-Voice (4100-9151, -9153, -9154, -9243, -9245)	Supervisory	492 mA @ 24 VDC	
	Alarm	547 mA @ 24 VDC; backlight and tone-alert on	
Network Display Units, Voice (4100-9152, -9155, -9156, -9244, -9246)	Supervisory	912 mA @ 24 VDC	
	Alarm	989 mA @ 24 VDC; backlight and tone-alert on	
Upgrade Kits	4100-7153 & -7155 for 4100U	add 82 mA supervisory; add 127 mA for alarm	
	4100-7154 & -7156 for Legacy 4100+	add 235 mA supervisory; add 280 mA for alarm	

Remote Annunciators with InfoAlarm Command Center, Powered from Control Panel

Voltage		19 to 33 VDC (24 VDC nominal), system supplied; requires separate wiring
Current	Supervisory	186 mA @ 24 VDC
	Alarm	214 mA @ 24 VDC; backlight and tone-alert on
Mounting Details; Stand-Alone Cabinet Models		See page 6 for reference illustration
4100U Capacity, RUI Output	Type	RUI (Remote Unit Interface) external annunciator communications line SLC (signaling line circuit)
	Capacity	Up to 31 total remote RUI devices, including up to 10 InfoAlarm Command Center devices
	RUI Device Reference List	4100U: InfoAlarm Command Center, Remote Annunciators, MINIPLEX Transponders; 4603-9101 LCD Annunciator, 4602-9101 Status Command Unit (SCU), and 4602-9102 Remote Command Unit (RCU); refer to data sheet S4100-0031 for additional 4100U RUI information
Wiring Requirements	Data	Single twisted, shielded pair, 18 AWG (0.82 mm^2)
	Power	18 to 12 AWG (0.82 mm^2 to 3.31 mm^2) wires for 24 VDC system power
	Earth	A dedicated earth ground connection to the electrical box is required for proper ESD and EMI protection; wire in accordance with NFPA 70 (*National Electrical Code*®) Article 250

Custom Point Detail Messages

Message Location Details		Select "more info" softkey when investigating point detail and scroll to the bottom of the information; typical messages might include contact details (phone numbers, pager numbers, etc.) and other contact or reference information
Number of Messages		Up to 50
Message Size	Character Details	120 characters; visible characters = 116; (lines 1 and 2 require one carriage return character and one line feed character)
	Line Details	3 lines total; 40 characters maximum per line; line 3 may be limited to 36 visible characters depending on characters in lines 1 and 2

Environmental	Operating Temperature	32° to 120°F (0° to 49° C)
	Operating Humidity	Up to 93% RH, non-condensing @ 90° F (32° C) maximum