AUTOCALL
UL, ULC Approved*

4010ES Fire Control Panels
Panel Mounted LED/Switch and LED Modules, LED/Switch Controllers, and Panel Mounted Printer

Features

Panel mounted annunciation modules for use with 4100ES Fire Alarm Control Panels, Remote Annunciators, and Network Display Units (NDU):

- Modules mount on front of panel bay providing convenient access and high visibility
- Panel monitors switches for user input and controls LED indicators to annunciate function status
- Compact 64 LED/64 switch controller modules mount on back of LED/switch modules

LED/Switch Modules:

- Raised momentary switches provide tactile feedback
- Alternate action operation provides on/off functions
- High intensity LEDs provide clear status annunciation
- Slide-in labels provide custom on-site labeling (label kit is ordered separately)

8 LED, 8 Switch Modules:

- One status LED per switch
- Available as all red LEDs or all yellow LEDs

16 LED, 8 Switch Modules:

- Two status LEDs per switch
- Available with two LEDs per switch as: red/yellow, yellow/yellow, red/green, or green/yellow

16 LED, 16 Switch Modules:

- One status LED per switch in 2" (51 mm) module
- Available as all red LEDs, or 8 red and 8 yellow
- Two configurations are available, one with pluggable LEDs, refer to LED/Switch Module Detail Reference and LED/Switch Module Product Selection (panel mounted switches are momentary pushbutton)

24 LED, 24 Switch Modules:

- Double slot module with one red status LED per switch

HOA (Hand-Off-Auto) Switch Modules:

- Eight controls in a double slot module, each control has three switches for status selection and one LED per switch position
- Switch selection is On/Hand, Off, and Auto

Available with three HOA Module LED Options:

- On/Hand (green LED), Off (red LED) and Auto (green LED)
- On/Hand (green LED), Off (red LED) and Auto (white LED) to comply with International Building Code (IBC) requirements
- On/Hand (green LED), Off (yellow LED) and Auto (green LED) for applications requiring no red LEDs
- Available with or without switch buttons labels (On, Off, Auto)

LED Modules with 8 or 16 pluggable LEDs:

- 8 LED Module has red LEDs, 16 LED module has 8 red with 8 yellow
- Red, yellow, green, or blue LEDs are available in packages of eight (8) to change color on-site per application requirement (ordered separately)
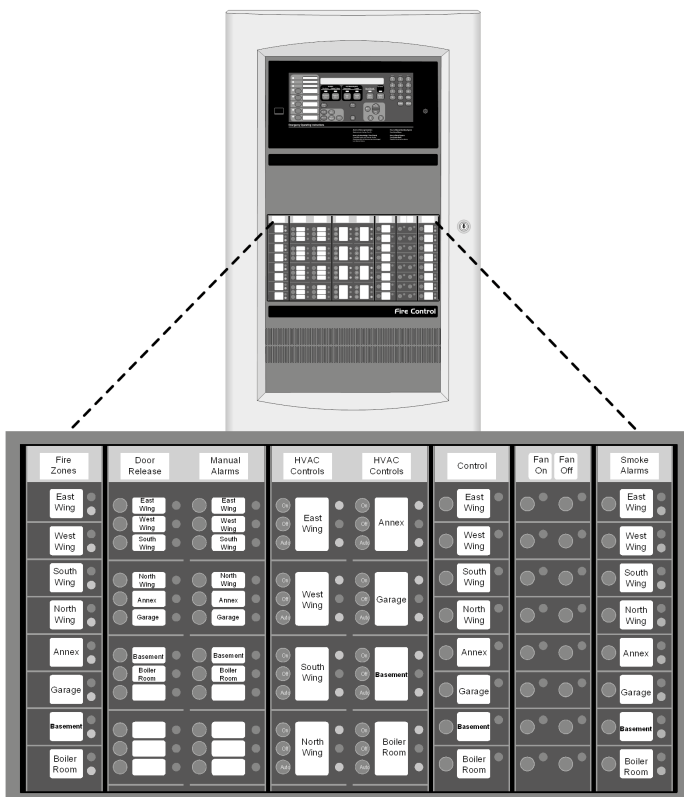

Figure 1: 4100ES 2-Bay Fire Alarm Control Panel with Sample of Available LED/Switch Modules

24 Point I/O Module for external connections:

- Each point is selectable as either a switch input (momentary or maintained) or lamp/relay driver output
- Multiple switch monitoring modes are available

Panel mounted printer (see SKU A100-1293 Panel Mount Printer Details and Printer Specifications for details):

- Records system events and provides 20 visible lines

Listed to:

- UL Std. 864, Fire Detection and Control (UOJZ), and Smoke Control Service (UUKL)
- UL Std. 2017, Process Management Equipment (QVAX)
- UL Std. 1076, Proprietary Alarm Units-Burglar (APOU)
- UL Std. 1730, Smoke Detector Monitor (UULH)
- ULC Std. S527-99

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

AC4100-0032 Rev. 11 7/2012

Description

Annunciation Options.

4100ES fire alarm panels support a variety of switch input and LED status indicators to complement the information and controls available at the operator interface. These modules provide a convenient interface efficiently packaged onto the front panel space of the cabinet bay. Additionally, the panel mounted printer can conveniently record system status without requiring a separately located printer.

Easy Interface.

Switches are alternate action ON/OFF (depending on programming selection) using a tactile feel, raised rubber button. High efficiency LEDs provide clear status annunciation readily visible through the glass door.

Selectable Functions.

Switch functions, LED status indications, and printer output is selected when the control panel CPU is customized for site specific requirements. Slide-in labels are locally printed to indicate the exact function of the LEDs and switches.

The 24 Point I/O Module

is selectable for input switch type and supervision type. Outputs are selectable for steady on or pulsing to drive remotely connected relays, incandescent lamps, or LEDs.
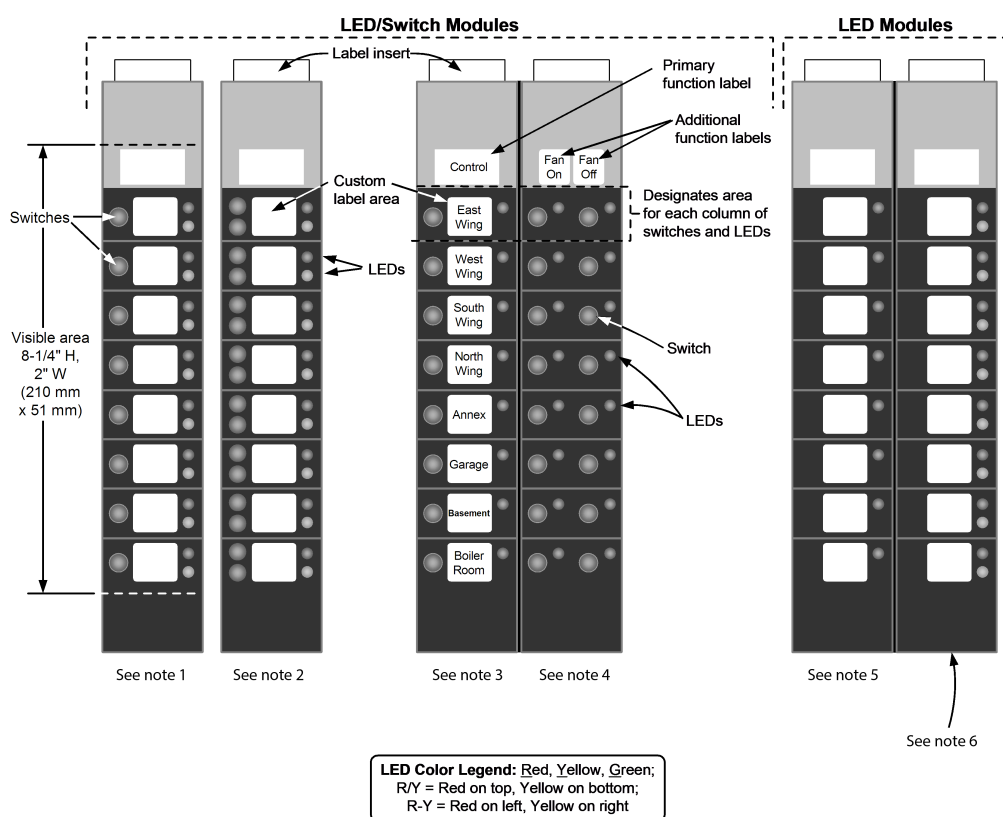
LED/Switch Module Detail Reference

Figure 2: LED/Switch Module

Note: 1. 8 switches with 16 LEDs:
· 4100-1282, R/Y
· 4100-1283, Y/Y
· 4100-1284, R/G

Note: 2. 16 switches with 16 LEDs:
   4100-1300, R/Y (pluggable LEDs)

Note: 3. 8 switches with 8 LEDs:
· 4100-1280, R
· 4100-1281, Y

Note: 4. 16 switches with 16 LEDs:
· 4100-1278, R/Y
· 4100-1285, R

Note: 5. 8 LEDs:

4100-1276, R (pluggable LEDs)

Note: 6. 16 LEDs:
4100-1277, R/Y (pluggable LEDs)

HOA and 24/24 LED/Switch Module Detail Reference

24 Switches, 24 LEDs

**HOA Modules, 8 Controls
(3 switches each), 24 LEDs**

Label insert

One switch per control, on/off

Primary function labels

Custom label area

LED (On)
LED (Off)
LED (Auto)

Red LEDs

LED Color Legend:
Green, Red, White, Yellow;
G/R/G = Green on, Red off, Green auto
G/R/W = Green on, Red off, White auto
G/Y/G = Green on, Yellow off, Green auto

Visible area
8-1/4" H, 2" W
(210 mm x 51 mm)
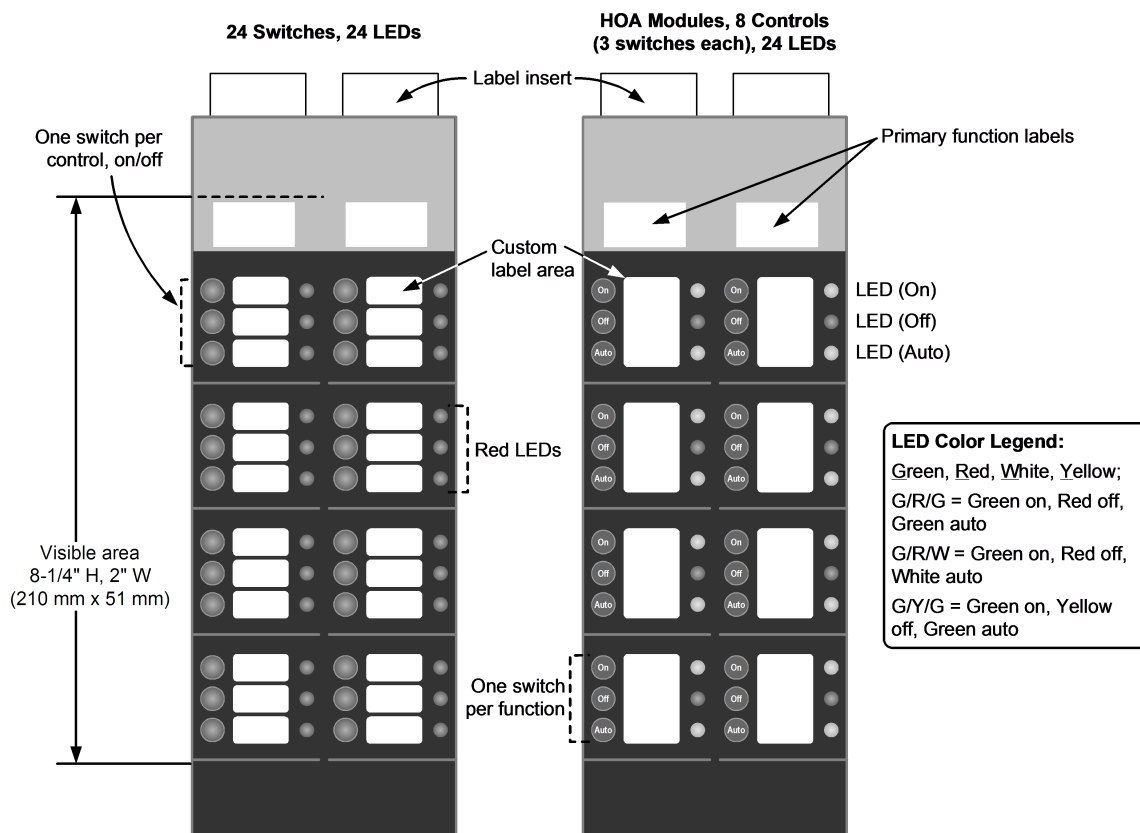
One switch per function

Figure 3: HOA and 24/24 LED/Switch Module

HOA Modules, G/R/G LEDs:
4100-1286, with labeled switches as shown
HOA Modules for IBC Applications, G/R/W LEDs:
4100-1275, with labeled switches as shown
HOA Modules, G/Y/G LEDs:
· 4100-1302, with labeled switches as shown
· 4100-1301 with unlabeled switches (not shown)

LED/Switch Module Product Selection (panel mounted switches are momentary pushbutton)

Table 1: LED/Switch Modules, General Purpose (LED/switch controller and label kit is ordered separately)

SKU	LEDs per Switch	LED Color(s)	Custom Label Area	LED Quantity	Switch Quantity
A100-1280	One	Red	Per module and per switch	8	8
A100-1281	One	Yellow	Per module and per switch	8	8
A100-1282	Two	Red on top, Yellow on bottom	Per module and per switch	16	8
A100-1283	Two	Yellow on top and bottom	Per module and per switch	16	8
A100-1284	Two	Red on top, Green on bottom	Per module and per switch	16	8
A100-1285	One	Red	One per column of 8 LED/switch pairs (seeLED/Switch Module Detail Reference)	16	16
A100-1278	One	8 Red on left, 8 Yellow on right	One per column of 8 LED/switch pairs (see LED/Switch Module Detail Reference)	16	16
A100-1300*	One	With pluggable LEDs; shipped Red on top, Yellow on bottom	Per module and per LED/switch pair	16	16
A100-1287	One	Red	Per module and per switch	24	24
* UL, ULC only.					

Table 2: LED Only Modules and LED Kits (LED/switch controller and label kit is ordered separately)

SKU	Description	
A100-1276	Eight (8) LED Module with Red LEDs; custom label area per module and per LED	LEDs are pluggable; select LED kits as required to change LED color
A100-1277	Sixteen (16) LED Module; Red LED on top and Yellow LED on bottom at each position; custom label area per module and per LED pair	LEDs are pluggable; select LED kits as required to change LED color
4100-9843	Yellow	Kits of 8 LEDs; order as required for modules with pluggable LEDs to change LED color on-site per application requirement; compatible with LED Modules A100-1276, A100-1277, and A100-1300 (Blue is typically used for Ancillary Device status indication per ULC S527)
4100-9844	Green	Kits of 8 LEDs; order as required for modules with pluggable LEDs to change LED color on-site per application requirement; compatible with LED Modules A100-1276, A100-1277, and A100-1300 (Blue is typically used for Ancillary Device status indication per ULC S527)
4100-9845	Red	Kits of 8 LEDs; order as required for modules with pluggable LEDs to change LED color on-site per application requirement; compatible with LED Modules A100-1276, A100-1277, and A100-1300 (Blue is typically used for Ancillary Device status indication per ULC S527)
4100-9855	Blue	Kits of 8 LEDs; order as required for modules with pluggable LEDs to change LED color on-site per application requirement; compatible with LED Modules A100-1276, A100-1277, and A100-1300 (Blue is typically used for Ancillary Device status indication per ULC S527)

Table 3: LED/Switch Modules, HOA (Hand-Off-Auto) with Green/Red/Green LEDs (LED/switch controller and label kit is ordered separately)

SKU	Operation	Switch Function (Location)	LED Description
A100-1286	Eight function HOA (On, Off, Auto) Control Module with labeled switches; custom label area per module and per LED/switch set	On (top)	Green LED
		Off (middle)	Red LED
		Auto (bottom)	Green LED

**Table 4: LED/Switch Modules, HOA (Hand-Off-Auto) with Green/Red/White LEDs
for IBC Applications (LED/switch controller and label kit is ordered separately)**

SKU	Operation	Switch Function (Location)	LED Description
4100-1286	Eight function HOA (On, Off, Auto) Control Module with labeled switches; LED colors meet International Building Code (IBC) requirements; custom label area per module and per LED/switch set	On (top)	Green LED
		Off (middle)	Red LED
		Auto (bottom)	White LED

Table 5: LED/Switch Modules, HOA (Hand-Off-Auto) with Green/Yellow/Green LEDs (LED/switch controller and label kit is ordered separately)

SKU	Operation	Switch Function (Location)	LED Description
4100-1302**	Eight function HOA (On, Off, Auto) Control Module with labeled switches; for applications requiring no red LEDs; custom label area per module and per LED/switch set	On (top)	Green LED
		Off (middle)	Yellow LED
		Auto (bottom)	Green LED
4100-1301**	Eight function HOA (On, Off, Auto) Control Module, same as A100-1302 except switches are unlabeled		
** UL, ULC listed only.			

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 modules must be 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	**Note:** LED/switch controllers and their connected modules must be in the same bay.
A100-0636	Harness Kit, Power and Communications	One of each is required per A100-1288 that is located in the same bay as two Flex-35/50 amplifiers and an SPS
A100-0641	Harness Kit, 26 Position Flex Cable, 14-1/2" (368 mm) long	One of each is required per A100-1288 that is located in the same bay as two Flex-35/50 amplifiers and an SPS
A100-1290	24 Point I/O Module for external connections, select each point as either input or output; 2" (51 mm) wide, 1 Slot	
4100-1294	LED/Switch Module Slide-in Labels, required when LED/switch or LED only modules are present; order one per cabinet	
A100-1279	Single blank 2" display cover; order as required (8 fill a bay front); two maximum in a row between LED/switch modules	

Table 7: Panel Mounted Printer

SKU	Description
A100-1293	Panel Mount Thermal Printhead Printer, supplied with one roll of paper
4190-9803	Replacement Paper for A100-1293 Printer, one roll

LED/ Switch Modules and Controllers Specifications

Table 8: 64 LED/64 Switch Controller Modules (A100-1288 and A100-1289*)

Specification	Rating
Input Voltage	19 to 33 VDC, from control panel
Current, No LEDs On	20 mA @ 24 VDC
Current, All 64 LEDs On	210 mA @ 24 VDC (approx. 3 mA/LED)
Mounting Reference	Bracket of A100-1288 attaches to the back of the LED/switch modules
Controllers per Bay	Maximum of two per bay; for control of LED/switch modules within that bay only
Bay Location Reference	Slots 1 & 2 or Slots 3 & 4; mounts onto the back of the LED/switch modules
Clearance Behind Controller Module	Space accepts low profile 4100ES modules only
* For additional LED/Switch Module information, refer to Installation Instructions 574-843AC	

Table 9: 24 Point I/O Module (A100-1290)

Specification	Rating
Module Current	Supervisory = 34 mA; Alarm = 75 mA (add output currents separately)
Switch Input Details	Momentary or maintained, 2 or 3 position; max. distance is 2500 ft (762 m) or 65 Ω
Output Current	150 mA @ 24 VDC per point; inrush current is limited for use with incandescent bulbs
Output Details	Diode suppress relay loads at the coil; max. distance is 600 ft (183 m) or 2 Ω

Table 10: General Specifications

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

Additional Data Sheet Reference

Table 11: Data Sheet Reference

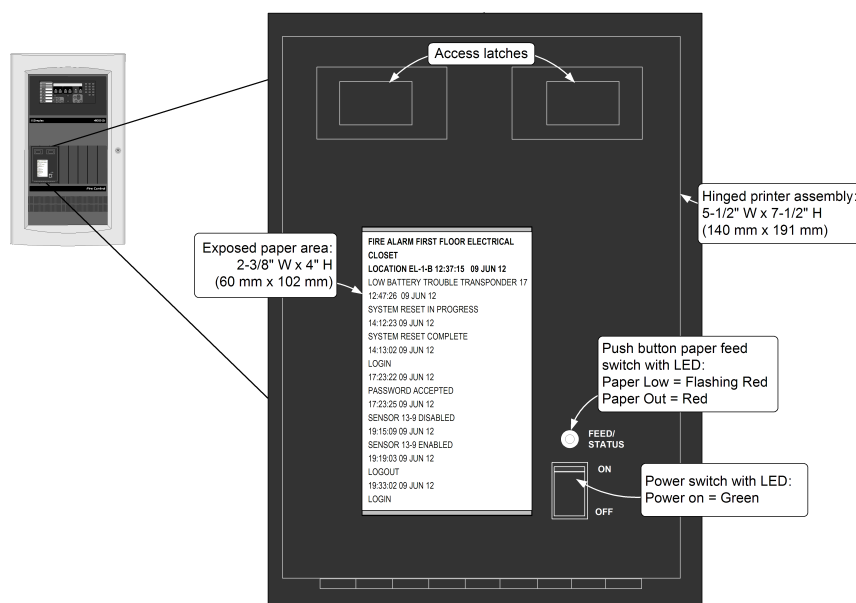| Subject	Data Sheet	Subject	Data Sheet
4100ES Basic Panel Modules and Accessories	AC4100-0031	Network Display Unit (NDU)	AC4100-0036
4100ES Audio/Phone Modules	AC4100-0034	Enclosure Reference	AC4100-0037
MINIPLEX Transponders	AC4100-0035	Remote Annunciators	AC4100-0038

SKU A100-1293 Panel Mount Printer Details

Figure 4: Panel Mount Printer

Printer Specifications

Table 12: Electrical and Communications

Specification		Rating
Input Voltage		19 to 33 VDC, from control panel
Current	Standby	125 mA @ 24 VDC
	Printing	800 mA @24 VDC
Commnications		RS-232, 9600 baud, from control panel RS-232 module

Table 13: Print Characteristics

Specifications	Rating
Print Format	Fixed thermal printhead producing black characters
Characters	11 x 28 dot matrix; alarm information printed in bold
Paper Format	40 columns; 6 lines per inch; 20 lines visible; paper is wound onto top take-up reel, paper can be manually unwound from take-up reel and rewound using Feed switch
Paper Speed	1.33 in/sec maximum
Print Speed	312 cps
Sound Output	55 dB maximum, with cabinet door open

Table 14: Paper (one roll included)

Specification	Rating
Type and Size	Thermal; 2.35" wide, 160 ft long (60 mm x 49 m)
Replacement Paper	4190-9803, 1 roll

Table 15: Mounting Specifications

Specification	Rating
Requires 3 expansion bay slots, can be located as required	Requires 3 expansion bay slots, can be located as required
Clearance Behind Printer	Space accepts low profile 4100ES modules only

Table 16: Environmental Specifications

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

Note: * For additional printer information, refer to Installation Instructions 579-249AC