

Signal Tower **LA6 Series**

Sleek Design. Fully Customizable.
Endless Possibilities.



Cycle Time



**Level Meter
Monitoring**



**Status
Condition**



LA6-POE

**Remote
Monitoring**

(for Power over Ethernet)

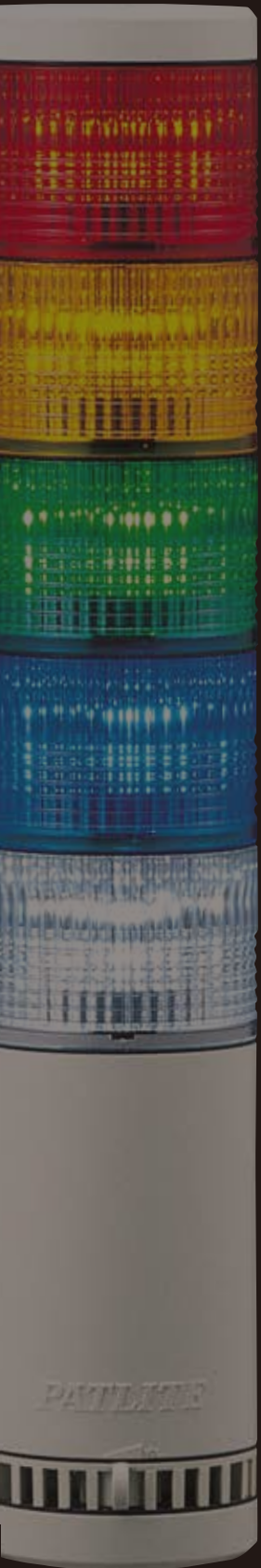


LA6-POE

Ethernet PoE

(Power over Ethernet)
for single cable installation

A SIGNAL TOWER DESIGNED TO SHOW MORE SO YOU CAN DO MORE



COMMON ON-SITE OCCURRENCES

OUR PROCESSES HAVE CHANGED.

We now need to reconfigure the color modules on our Signal Towers.

OUR MACHINE LINE IS EXPERIENCING TOO MANY STOPPAGES.

We need to make our workers better aware of machine status, so they can take quicker corrective measures.

WE ARE EXPERIENCING DOWN TIME DUE TO MATERIAL MANAGEMENT.

We need earlier notifications prior to materials completely depleting to avoid delays.

PRODUCTION STOPPAGES ARE OCCURRING AS A RESULT OF UNEVEN WORKFLOW.

Variations in work output is creating bottlenecks that can be smoothed out with a Takt system.

WE NEED TO IMPLEMENT REMOTE MONITORING TO MINIMIZE OUR LABOR COSTS.

We need to monitor the operating status of equipment with long processing time, as well as abnormal stoppages or delays as they occur.

LA6 SOLUTION



Color Change

The LA6 doesn't require any hardware or wiring changes to reconfigure colors. The LA6 can be easily programmed anywhere without tools.



Cycle Time

The LA6 is able to create better, more dynamic visual signals to elicit a quicker response by workers.



Level Meter Monitoring

The LA6 can be programmed to act as a visual level meter to help manage materials and material levels.



Status Condition

The LA6 has an internal timer function, allowing you to create visual timers for a streamlined Takt system.



Remote Monitoring

The LA6 is able to send information to other LA6 devices in remote locations via its mirroring function.

ADVANCED OPTIONS TO SOLVE ANY APPLICATION



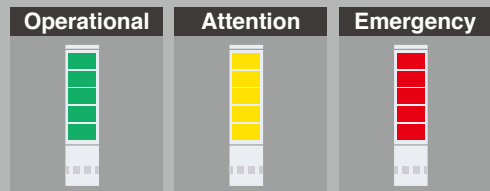
Color Change

IMPROVE VISIBILITY WITHOUT RECONFIGURING HARDWARE



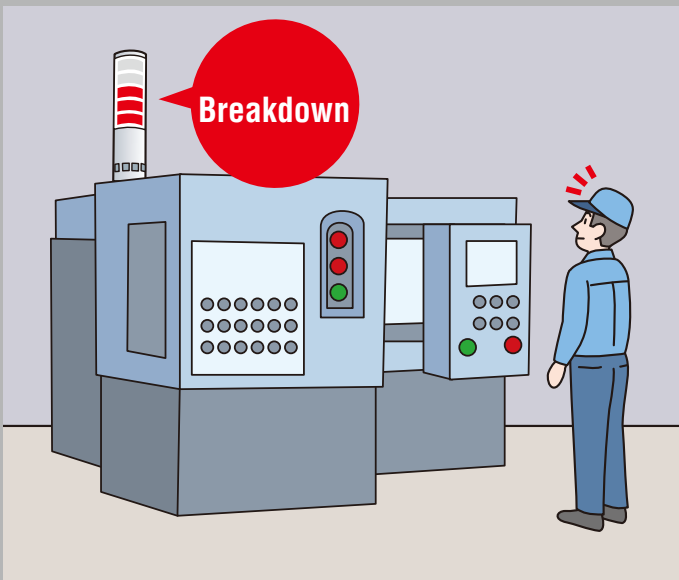
By programming the LA6 to a single, all-tier color arrangement, the equipment status can now be seen at a greater distance, improving awareness and response time.

■ Display up to 21 different colors for different equipment statuses



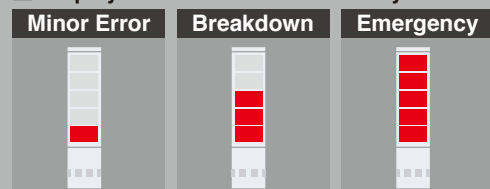
Status Condition

INCREASE EFFICIENCY WITH MORE DYNAMIC VISUAL WARNINGS



The LA6 is able to display more detailed information, such as the status severity level, or specific abnormality conditions, that workers normally would have to look for on an equipment panel or HMI.

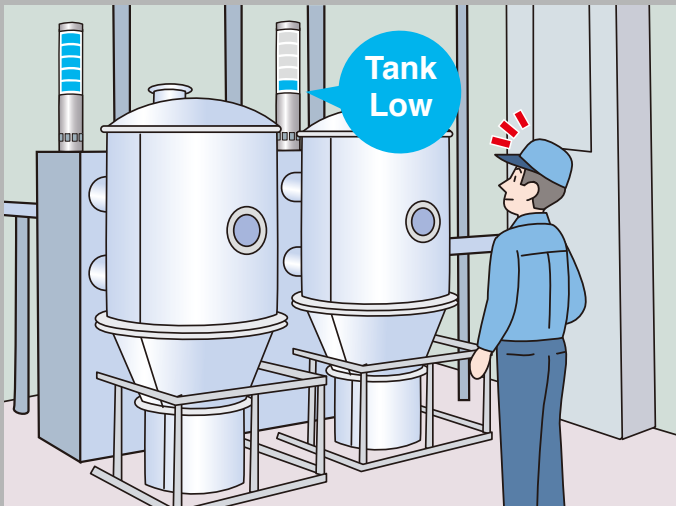
■ Display the level of status severity



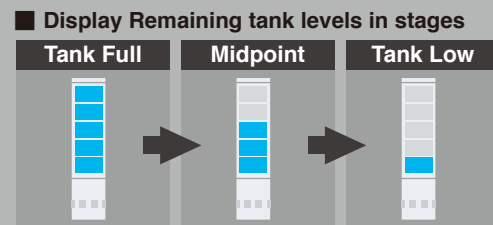


Level Meter Monitoring

REDUCE DOWNTIME WITH LEVEL MONITORING



By displaying current material levels, workers can more accurately respond to changes, reducing downtime. As material levels reach certain thresholds, the LA6 can provide earlier visual and audible notifications.

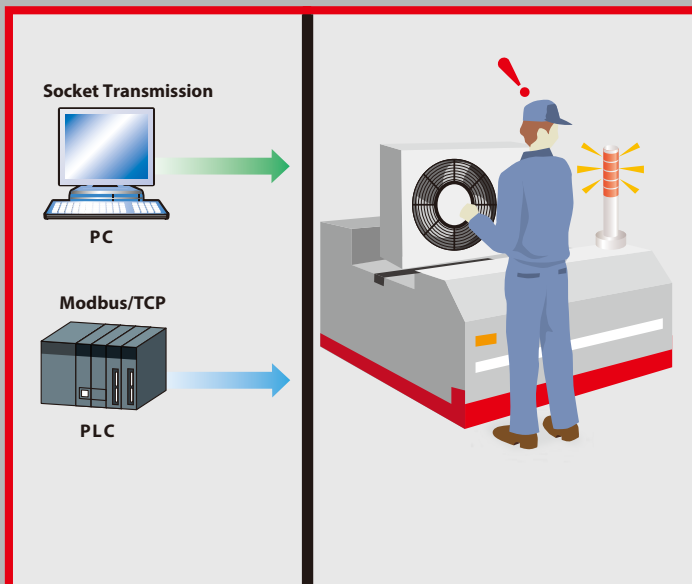


Remote Monitoring

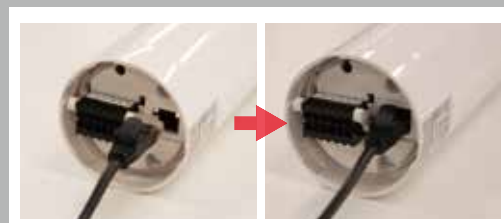
WIRING MADE EASY WITH LAN CONNECTIVITY



Ethernet PoE



The LA6 conveniently integrates into your facilities' existing LAN infrastructure. By connecting to a PoE (Power over Internet) compliant HUB, the LA6 can be controlled and powered through a single cable.



REDUCE BOTTLENECKS WITH A VISUAL TAKT SYSTEM

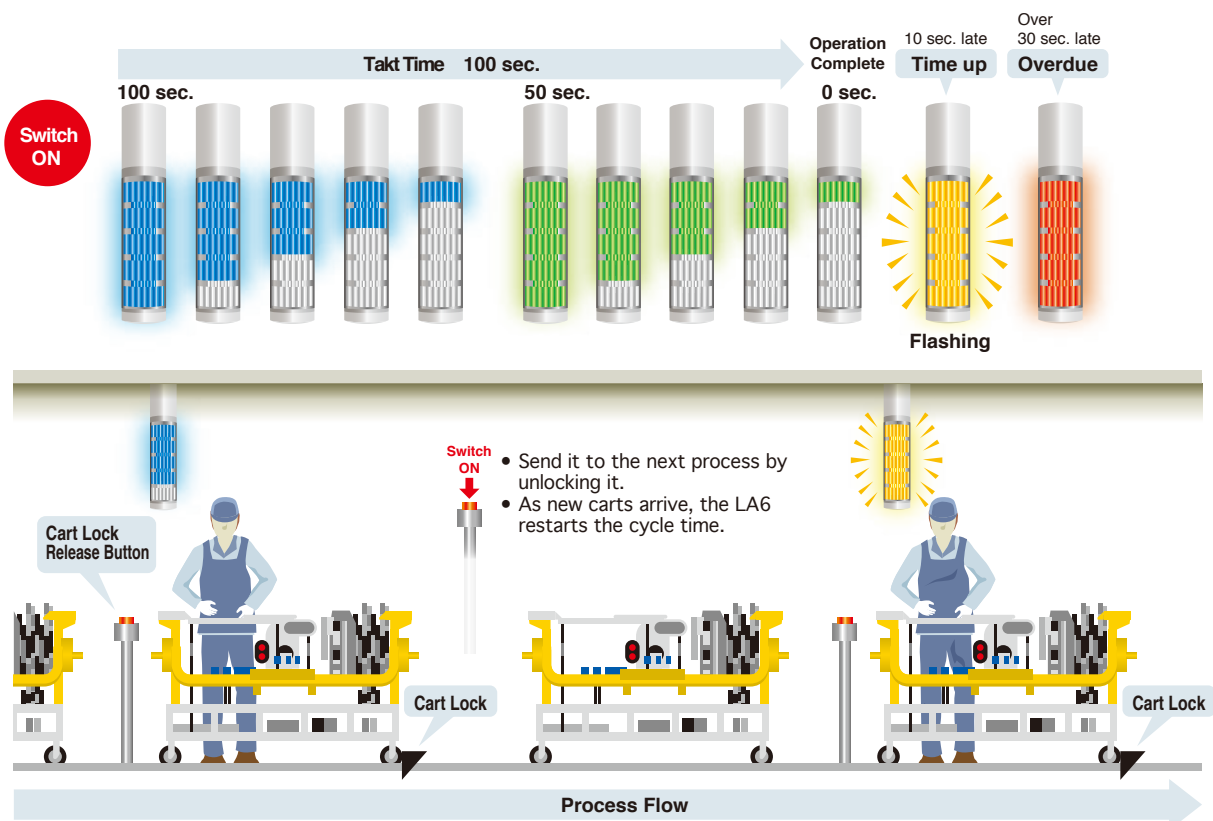


PROBLEM

Idle time or delays on the production assembly line is sometimes caused by variations in the rate of worker output.

IMPLEMENTATION MERIT

With the LA6 visual Takt system, workers will be more aware of the progress of the entire line, minimizing delays, and resulting in a smoother work flow.



Balance the assembly line with a Takt system



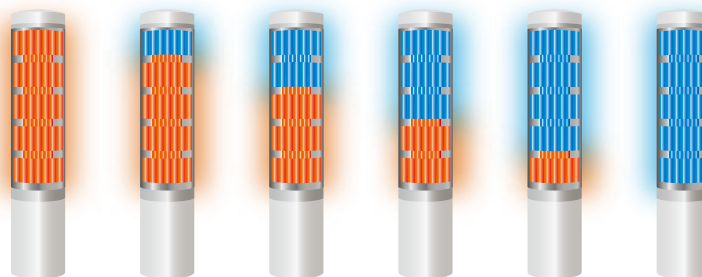
Cycle Time

PROBLEM

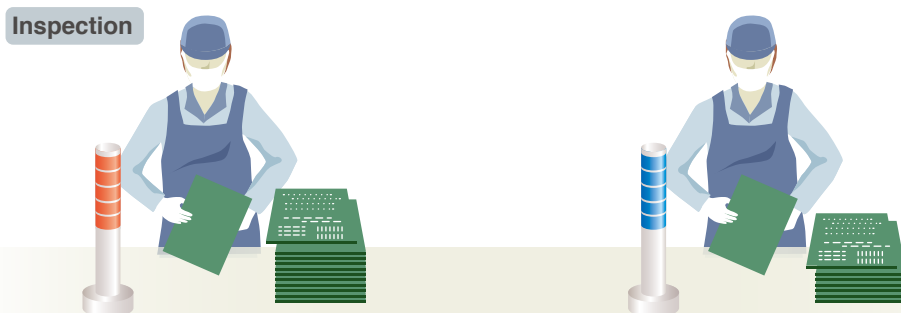
Due to high volumes of products to inspect, some defective products may be overlooked and pass inspection.

IMPLEMENTATION MERIT

With the LA6 internal timer function, inspectors are allotted proper time for each inspection, resulting in an improved yield rate by accurately detecting inferior goods.



Start **Counting by the minute** → Finish
Inspection Time = 5 minutes



Sensors detect inspectors as they enter the process line, triggering the LA6 to begin the count and the inspectors carry out inspection until the LA6 turns all blue.

Prevent defective product outflow during inspection

OBTAIN EQUIPMENT INFORMATION FROM REMOTE LOCATIONS

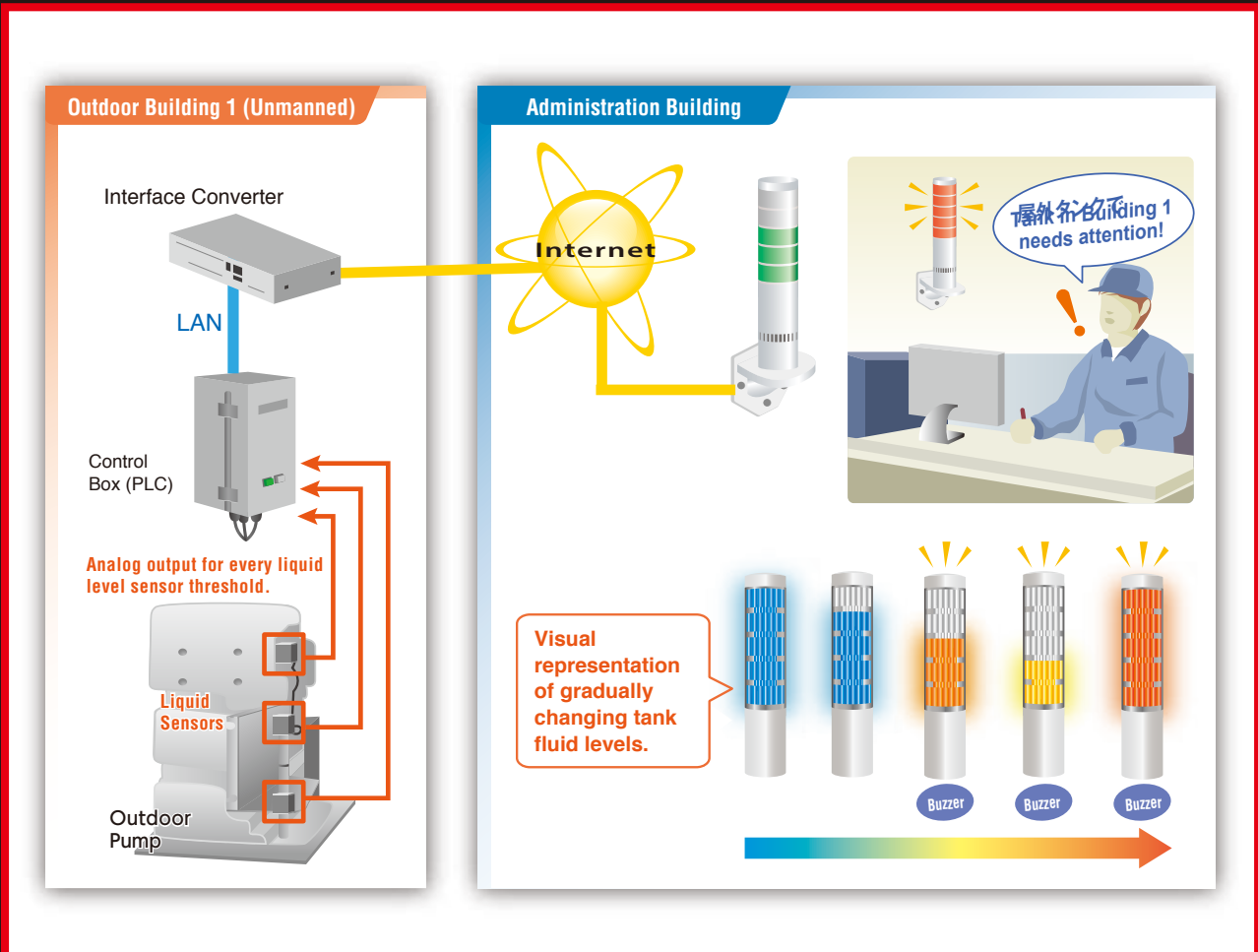


PROBLEM

Tanks located in remote buildings tend to be overlooked until the tanks are completely depleted.

IMPLEMENTATION MERIT

The LA6 can be used as an economical level meter system, capable of alerting remote personnel of equipment changes in real-time.



Quicker response with remote monitoring



**Remote
Monitoring**



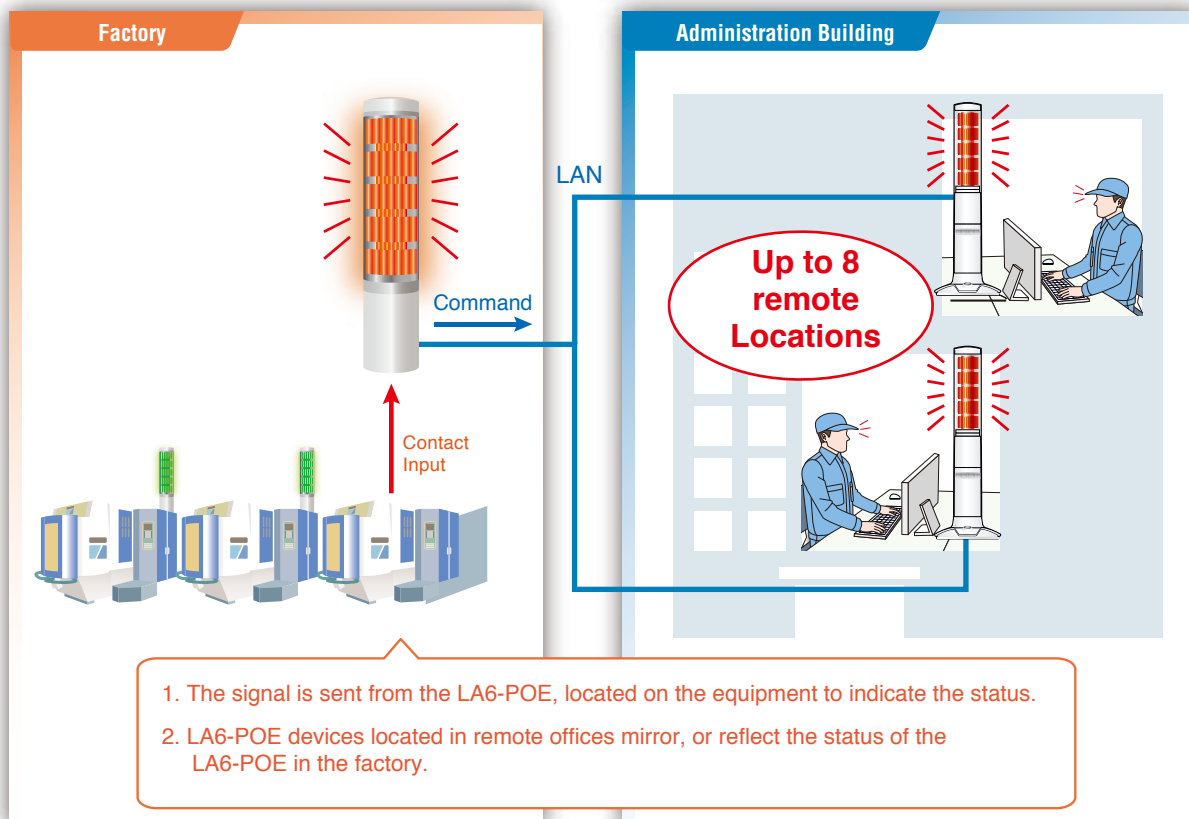
**Ethernet
PoE**

PROBLEM

Managers in remote offices need to monitor machinery statuses on the factory floor in real-time.

IMPLEMENTATION MERIT

With the LA6-POE's built-in mirroring function, equipment status, Takt time, etc., can be communicated to other LA6-POE devices in remote locations via a LAN connection. This data can also be sent to a third-party software through the LAN connection for data analysis or Andon monitoring.



See equipment status from multiple locations

LA6 SIGNAL TOWER



Multi-function Switch for various setups

BUZZER SOUND SETUP

The built-in switch has four selectable settings for "Loud" (about 85dB) -> "Middle" (about 80dB) -> "Low" (about 75dB) -> "Off".

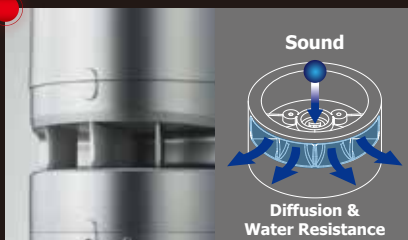
COLOR SETUP

The built-in switch can also allow a manual selection of 9 colors to be set for each tier.



A new lens design optimizes visibility.

The newly developed lens design efficiently diffuses LED light so that it is unmistakably visible, even from great distances.



The alarm has a total of 11 sounds to match various applications.

A newly developed compact loudspeaker not only can transmit a clear sound of 85 dB (at 1m), but also has added water resistance. A different alarm sound can be set up with each display pattern when in the Smart mode. (Only three of the 11 alarm patterns are selectable in the Signal Tower mode)



Use the free editing software to freely change the LA6 colors and patterns.

Upload colors and patterns to the signal tower via a USB cable.*
* The USB cable is sold separately (USB microB type with **Charging/ Data Transfer** capability).



Detachable Terminal Block

Has eight inputs available for connecting a PLC, or discrete I/O. Data through these inputs can be transferred to a server over the Ethernet. DC power can also be wired if a PoE supporting LAN is not available.



Conveniently connects to an existing network with PoE support.

PoE (Power over Ethernet) is a technology which lets network cables carry electrical power. PoE can bring many advantages, such as reducing costs of installing electrical cabling, by connecting it with a HUB supporting PoE, or have the flexibility of not having to be tethered to an electrical outlet.

LA6 24V DC / 3 and 5 Tier Types

LA6 100 - 240V AC 5 Tier Types

The LA6 alarm features a total of 11 sounds to match various applications.

Voltage: 24V DC
Direct Mount/Terminal (TN)
Steel Pole with L-bracket/Cable (LJ)

Voltage: 100-240V AC
Direct Mount/Cable (LJ)

24V DC 100 - 240V AC

85dB (at 1m) Buzzer 11 Sound

IP65* $\Phi 60$ RoHS

* Alarm Type: IP54

Off-white Flashing/Buzzer Silver Lighting Steel Pole Type (LJ) Off-white Flashing/Buzzer

LA6-POE Direct Mount / Stationary type

NEW

PoE 85dB (at 1m) Buzzer 11 Sounds Ethernet Modbus /TCP EASY WEB Setup

24V DC 48V DC (PoE) HTTP INPUTS IP54* $\Phi 60$ RoHS

* Direct Mount Type

PNS Command
 By using a PNS Command, the LED unit colors for tiers 1-5 can be controlled.

HTTP Command
 Access and control all LA6-POE functions remotely in various network environments with this flexible protocol.

Modbus / TCP

3rd Party Software: LA6-POE can send machine status data over Ethernet to centralized software for remote Andon monitoring or data analysis.

Direct Mount type Stationary Type with "Clear" switch

LA6 / LA6-POE Optional Parts

For LA6/LA6-POE



□ Stationary Bracket: SZK-003W Direct Mount type

For LA6



□ Mounting Pole with L-Bracket: SZ-70L



□ Circular Bracket: SZ-010



□ Circular Bracket: SZ-016A

For LA6-POE



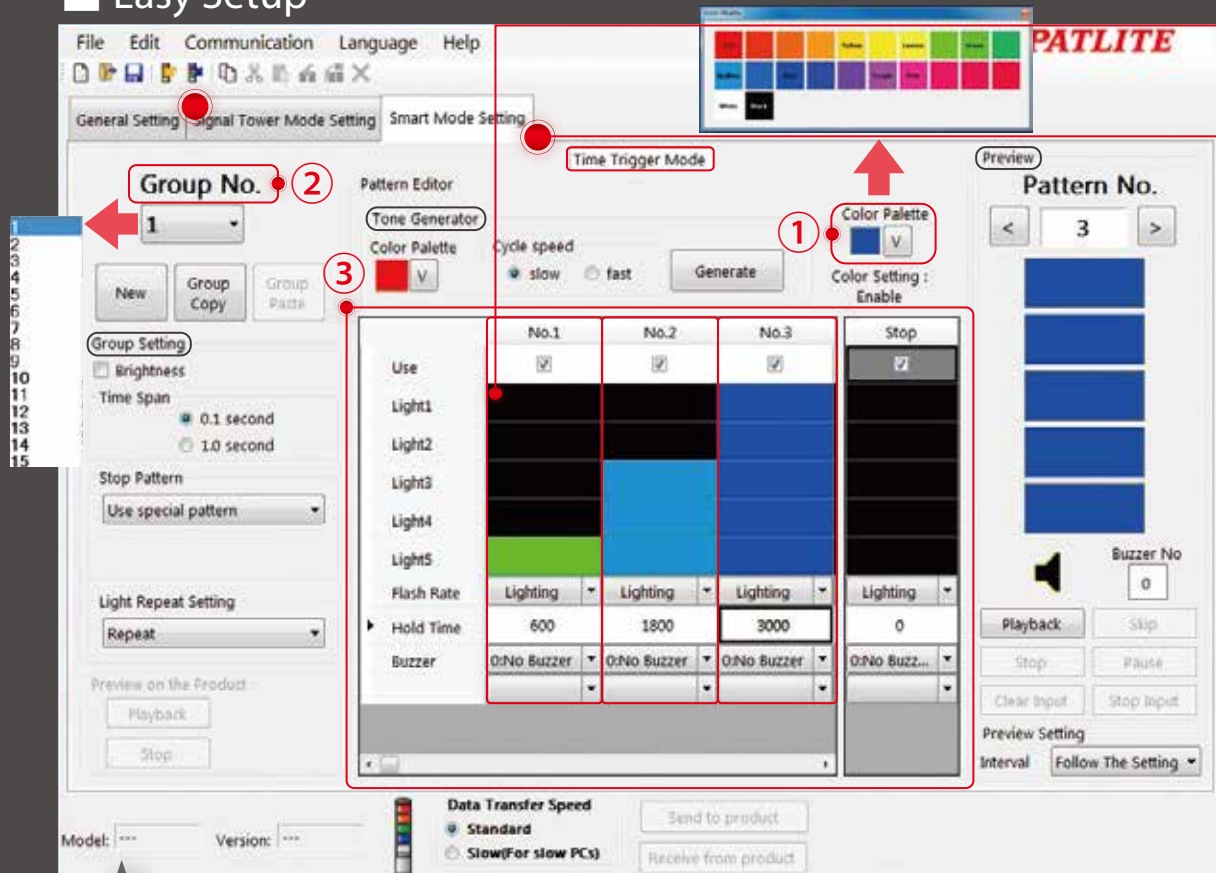
□ Stationary Bracket: (Magnetic Mount) Model: SZW-060W Direct Mount type



□ Wall Mount Bracket: Model: NH-WST2 Stationary type

Simple program software! Download and easily set up PATLITE's exclusive editing software.

Easy Setup



* The screen above is only an image (conditions may vary with setup parameters).

① Color Setup (Maximum of 21)

21 different colors can be selected as part of a program.

② Signal Tower Setup Features

With a maximum of 15 groups*, 63 series of operations can be registered to perform an operation setup as one group.

* A single display type can register a maximum of 31 groups.

③ Operations (Maximum of 63)

Select the desired color, flashing period and the active duration of the light and alarm* (maximum of 3,600 seconds, and 11 sounds).

* Limited to Time Trigger and Pulse Trigger modes

● Various Setups

- Group setup (Detailed Settings)
 - Flash Reduction Setup
 - Time Span (0.1 sec./1.0 sec.)
 - Repetitive Lighting Setup
- Sign pattern generation (9 colors)
 - Generate colors as gradations or chaser lights.
 - Color select: Cycle Speed (Low/High)
- Simulation
 - Check the light pattern by previewing it before transmitting data into the unit.
- System Transmit and Receive*
 - Data can be written into the unit and also read from it, so that patterns can be easily copied into other units.

* Data transfer is also possible when the main unit is OFF and the system's power source is the USB bus power.

<http://www.patlite.com>

patlite Search

Editing software and pre-set data patterns are downloadable for free from our website.

Smart Mode



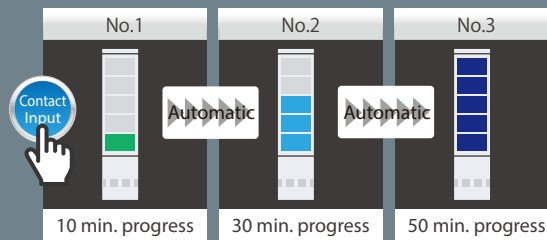
Elapsed Time / Countdown / Cycle Time

1. Time-trigger Type

Setups for the individual group operation can be executed. Pattern change timing can be setup with the editing software.

Maximum pattern display	63 Patterns
Maximum group number	15 Groups

Setup timing in pattern changes with the editing software.



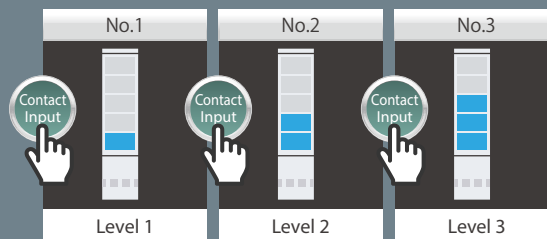
Determine thresholds for pressure / temperature, etc.

2. Pulse-trigger Type

Transitions from one pattern to another can be triggered by setting elapsed time or by individual discrete inputs.

Maximum pattern display	63 Patterns
Maximum group number	15 Groups

Pattern transition timing can be controlled by individual discrete inputs.



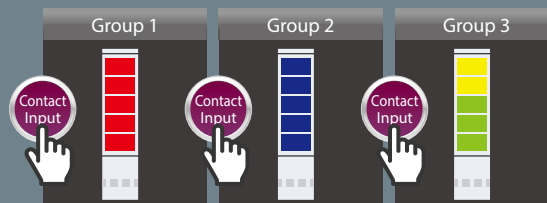
Error level / Request Priority / Status Display, etc.

3. Single-display Type

The product memory operates for the individual group functions.

Maximum pattern display	—
Maximum group number	31 Groups

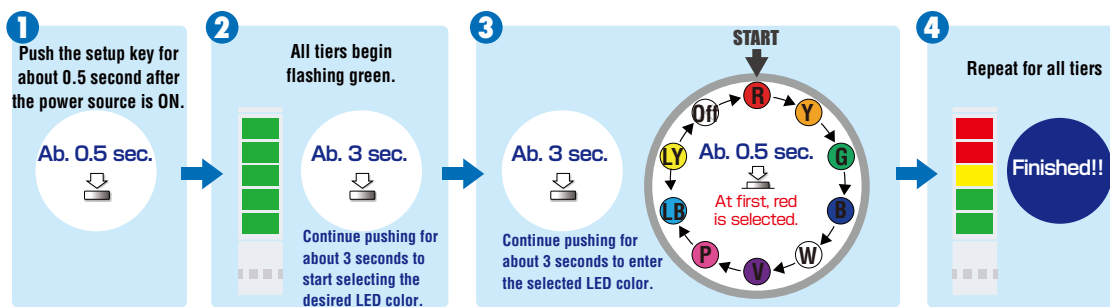
Inputs 1-5, with ON/OFF signal combinations, is made to operate.



Signal Tower Mode



Colors can be configured manually with the push button, without the need to edit the software.

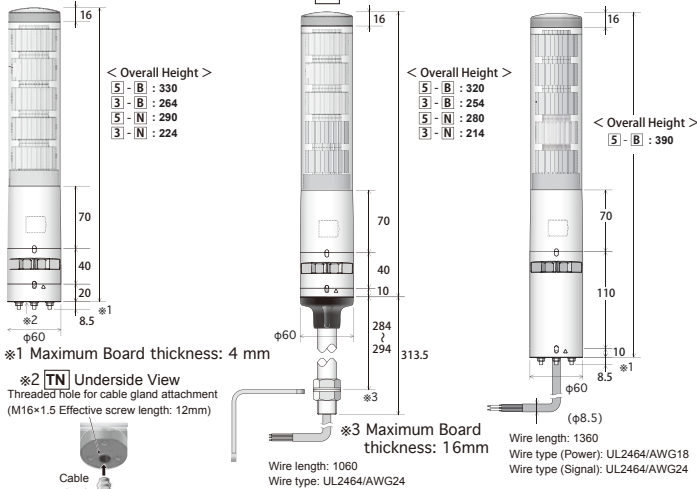


DIMENSIONS AND WIRING

Outer Dimensional Drawings

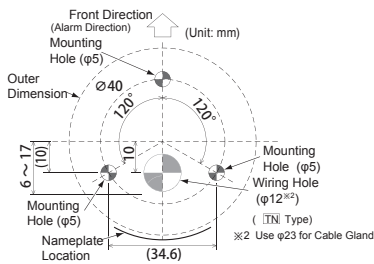
LA6

- **TN** Direct mount/Terminal
D 24V DC
- **LJ** Steel Pole
with L-bracket/Cable
D 24V DC
- **WJ** Direct mount/Cable
A 100-240V AC

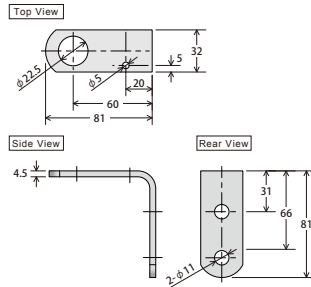


<Note> The cable gland is not included with this product.

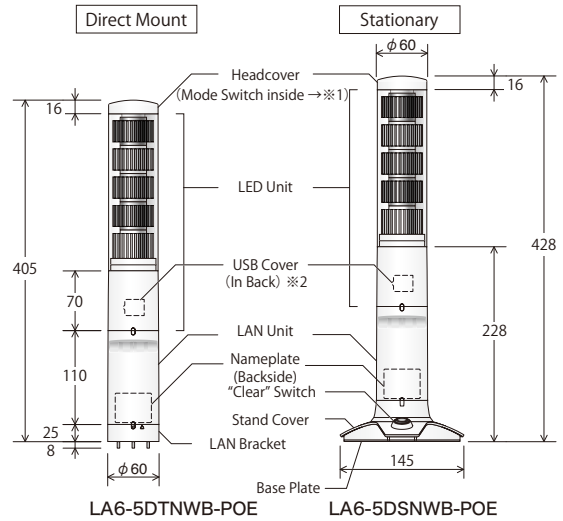
Mounting Dimensional Drawing



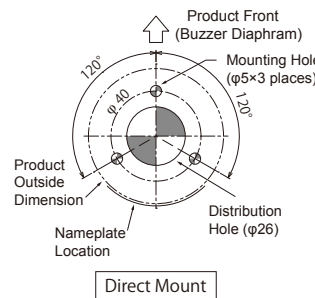
Dimensional Drawing for Steel Pole with L-bracket



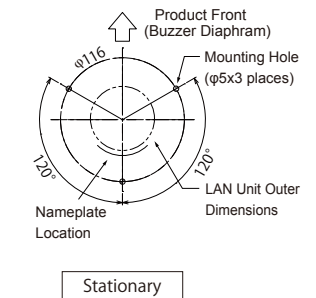
LA6-POE



Mounting Dimensional Drawing



Mounting Dimensional Drawing



Connector Inputs

LA6 (Terminal Type)

11	Purple	Mode Change
10	Black	Power Line (Signal-line Side)
9	Gray	Flashing/Pulse Enable Common
8	Yellow	Power Wire
7	Black	Alarm 2/Input 7
6	Gray	Alarm 1/Input 6
5	White	LED 5/Input 5
4	Blue	LED 4/Input 4
3	Green	LED 3/Input 3
2	Orange	LED 2/Input 2
1	Red	LED 1/Input 1

LA6-POE

Power Line (Signal-line Side)	6	12	COM
Power Wire	5	11	Flashing/Pulse Enable Common
Input 4	4	10	Mode Change
Input 3	3	9	Input 7
Input 2	2	8	Input 6
Input 1	1	7	Input 5

Smart Mode Inputs (for Mode Change)

	① Time-trigger Type	② Pulse-trigger Type	③ Single-display Type
Input1 Red			
Input2 Amber	Display Input (Binary Input Maximum 15)	Display Input (Binary Input Maximum 15)	Display Input (Binary Input Maximum 31)
Input3 Green			
Input4 Blue			
Input5 White	STOP	Trigger	
Input6 Purple	Mute	Mute	Mute
Input7 Sky Blue	Clear	Clear	Clear
Mode Change Pink	At Input		

It can be used for the smart mode when a signal is applied to the **mode change line**.

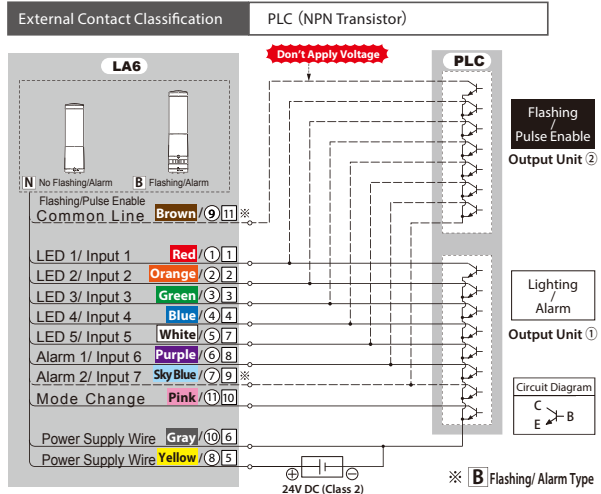
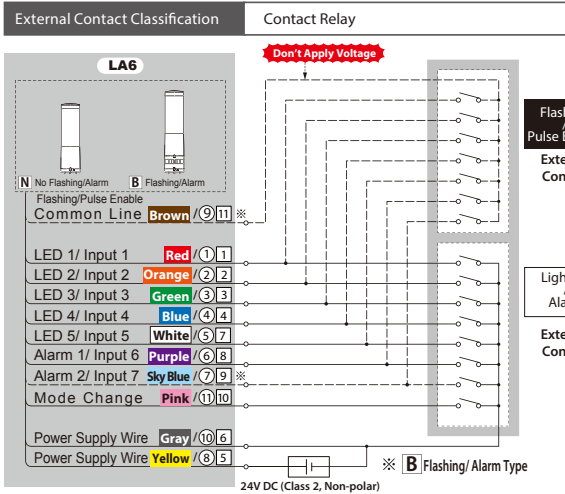
* For connector inputs, mode change is terminal 11 **purple**; and terminal 10 for the PoE type.

Wiring

Red indicates the lead wire color (for Cable type models) * The lead wire color does not indicate the LED luminescence color.

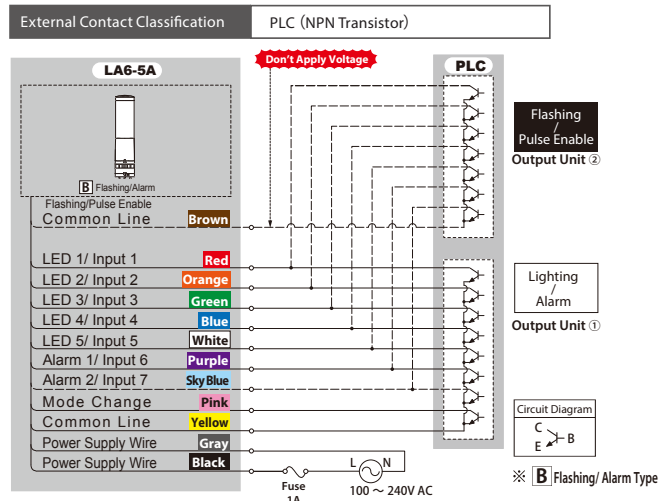
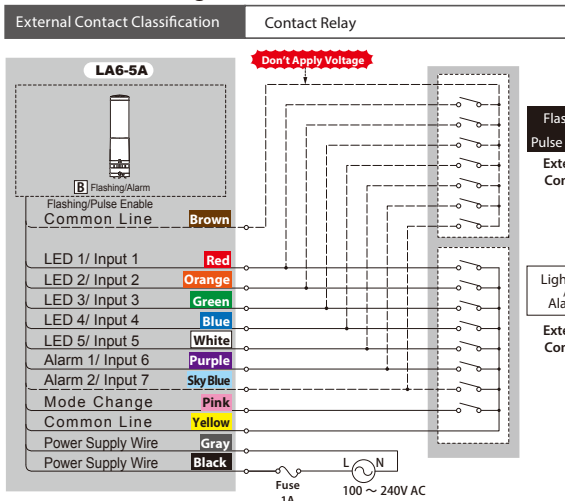
24V DC Wiring (LA6/LA6-POE)

* Be sure to check the wiring diagram of the PNP type transistor by visiting our website and viewing the comprehensive operation manual, etc.

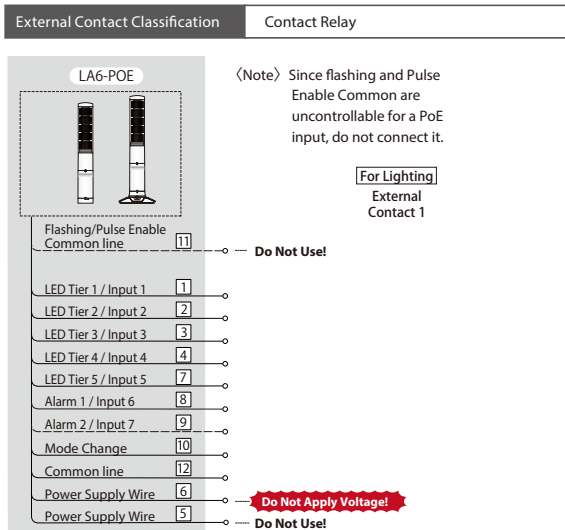


100 - 240V AC Wiring (LA6)

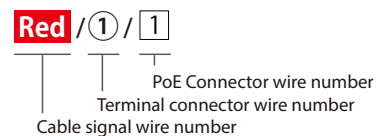
* Be sure to visit our website and viewing the comprehensive operation manual, etc. for further details.



PoE Wiring (LA6-POE)



Wiring Diagram color and number indication



LAN Cable Connection

The LAN cable should be rated for category 5e or higher. A straight or cross cable can be used.

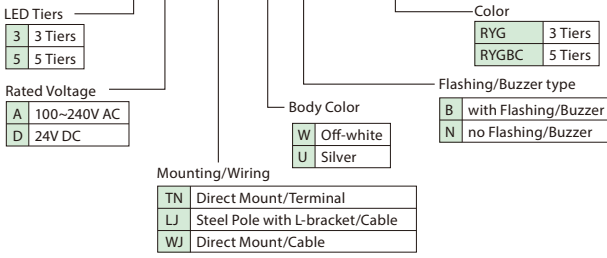
MEMO

- Be sure to use the IEEE802.3af compliant products for the PoE power feeder systems.
- Priority is given to the 24V DC power supply when both the 24V DC power source and PoE power feeder systems are connected simultaneously.
- If both power sources are simultaneously connected, when disconnecting the 24V DC source, this product may reboot.

LA6

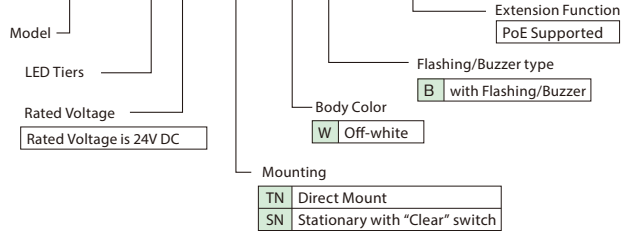
* There is no Silver (U) body color selection for the LJ type.
 * 100V - 240V AC type is only available for LA6-5AWJWB-RYGBC.

LA6-5DLJWB-RYGBC



LA6-POE

LA6-5DTNWB-POE



Specifications

Model	LA6				LA6-POE	
Rated Voltage	24V DC/100-240V AC (50Hz/60Hz)				24V DC/48V DC (PoE)	
Operating Voltage Range	24V DC ±10%/90-250V AC (50Hz/60Hz)				24V DC ±10%/36-57V DC (PoE)	
Rated Power Consumption	Standard	LA6-5D□□□N-RYGBC	5W	LA6-5D□□□B-RYGBC	6.5W	7.2W (24V DC)/8.6W (PoE)
		LA6-3D□□□N-RYG	3.5W	LA6-3D□□□B-RYG	4.5W	
		LA6-5AWJWB-RYGBC	6.5W			
	Maximum	LA6-5D□□□N-YYYY	7W	LA6-5D□□□B-YYYY	8W	12.9W (26.4V DC)/12.5W (PoE)
		LA6-3D□□□N-YYY	4.5W	LA6-3D□□□B-YYY	5.5W	
Signal Line Current	Max.70mA (at 24V DC)/Max.20mA (at AC100-240V)				Max. 420mA (at 26.4V DC)/10mA (for PoE)	
Operating Temperature Range	-25°C to +60°C				-10°C to +50°C	
Operating Humidity Range	Less than 90% RH, no condensation				Less than 90% RH, no freezing or condensation	
Mounting Direction	Upright/Inverted				Upright	
Protection Rating	IP65 (with Buzzer: IP54) (IEC 60529)				IP54 (Stationary type: IP20) (IEC 60529)	
Environmental Conditions	Tested while mounted in the upright position					
Mounting Location	Indoors Only					
Insulation Resistance	More than 1MΩ at 500V DC between the power input lead and chassis.					
Withstand Voltage	(500V AC at 24V DC/1500V AC at 100 - 240V AC) for 1 minute between terminals and chassis without breaking insulation.					
Display Color Variations	Signal Mode: 9 colors/Smart Mode: 21 colors					
Buzzer Sounds	11 Sounds					
Sound Level	Maximum 85dB					
Environmental Conditions	Buzzer Sound No.1, in an upright position with a distance from Buzzer opening at 1 meter					
Operation Method	Signal Control				Signal/Command Control	
Standard Compliances	<ul style="list-style-type: none"> 24V DC EMC Directive (EN 61000-6-4, EN 61000-6-2), RoHS Directive (EN 50581), UL508, CSA-C22.2 No. 14, FCC Part 15, Subpart B Class A, KC (KN 61000-6-4, KN 61000-6-2) 100-240V AC EMC Directive (EN 61000-6-4, EN 61000-6-3), RoHS Directive (EN 50581), Low-voltage Directive (IEC/EN 60947-5-1, EN 62471) 				EMC Directive (EN 61000-6-4, EN 61000-6-2, EN55032 Class A, EN 55024, RoHS Directive (EN 50581), FCC Part 15, Subpart B Class A, KC (KN 61000-6-4, KN 61000-6-2), UL 60950-1, CAN/CSA-C22.2 No. UL 60950-1-07, Recognized Component (File No. E480103), *The 24V DC Direct Mount type conforms to the following conformities: UL508, CAN/CSA C22.2 No. 14 Recognized Component (File No. E215660)	

Lineup

Model	Tiers	Voltage	Body Color	Type		
LA6-3DTNWB-RYG	3 Tiers	24V DC	Off-white	Direct Mount/Terminal/Buzzer		
LA6-3DTNWN-RYG				Direct Mount/Terminal/No Buzzer		
LA6-3DWJWB-RYG				Direct Mount/Cable/Buzzer		
LA6-3DWJWN-RYG				Direct Mount/Cable/No Buzzer		
LA6-3DTNWB-RYG				Direct Mount/Terminal/Buzzer		
LA6-3DTNUN-RYG				Direct Mount/Terminal/No Buzzer		
LA6-3DLJWB-RYG			Silver	Direct Mount/Cable/Buzzer		
				Direct Mount/Cable/No Buzzer		
				L-Bracket with Pole/Cable/Buzzer		
				L-Bracket with Pole/Cable/No Buzzer		
				LA6-3DLJWN-RYG	Off-white	L-Bracket with Pole/Cable/Buzzer
						L-Bracket with Pole/Cable/No Buzzer

Model	Tiers	Voltage	Body Color	Type		
LA6-5DTNWB-RYGBC	5 Tiers	24V DC	Off-white	Direct Mount/Cable/Buzzer		
LA6-5DTNWN-RYGBC				Direct Mount/Cable/No Buzzer		
LA6-5DWJWB-RYGBC				Direct Mount/Terminal/Buzzer		
LA6-5DWJWN-RYGBC				Direct Mount/Terminal/No Buzzer		
LA6-5DTNWB-RYGBC				Direct Mount/Cable/Buzzer		
LA6-5DTNUN-RYGBC				Direct Mount/Cable/No Buzzer		
LA6-5DLJWB-RYGBC			Silver	Direct Mount/Cable/Buzzer		
				Direct Mount/Cable/No Buzzer		
				L-Bracket with Pole/Cable/Buzzer		
				L-Bracket with Pole/Cable/No Buzzer		
				LA6-5AWJWB-RYGBC	Off-white	Direct Mount/Cable/Buzzer
						Direct Mount/Terminal/Ethernet/Buzzer
LA6-5DTNWB-POE		24V DC or PoE (48V DC)	Stationary/Terminal/Ethernet/Buzzer			
LA6-5DSNWB-POE		100 - 240V AC	Stationary/Terminal/Ethernet/Buzzer			