PATLITE®

LA6 SERIES

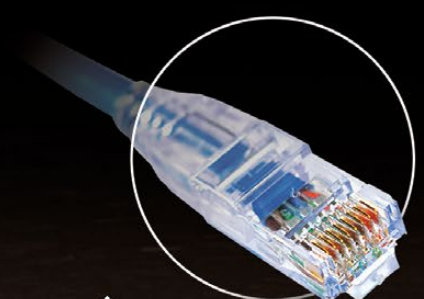
Sleek Design. Fully Customizable. Endless Possibilities.

Cycle Time

Level Meter Monitoring

Status Condition

Remote Monitoring



Ethernet PoE

(Power over Ethernet)
for single cable installation

www.patlite.com

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.

Status Condition
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 to help manage materials and material levels.

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

NETWORK 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

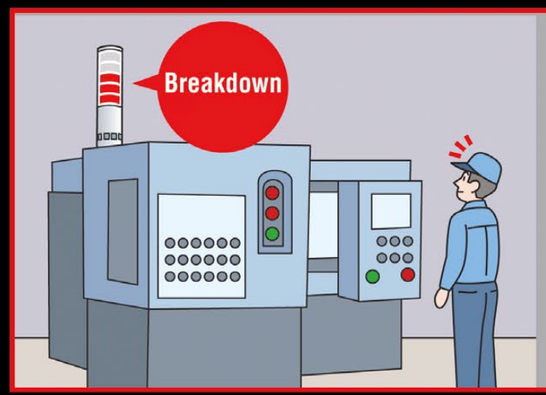
IMPROVE VISIBILITY
WITHOUT RECONFIGURING HARDWARE

By programming the LA6 to single, all-tier colors, equipment status can now be seen at a greater distance improving awareness and response time. Reprogramming the LA6 can be performed without adjusting any of the hardware.

■ Display up to 21 different colors for different equipment statuses

Status Condition

INCREASE EFFICIENCY WITH
MORE DYNAMIC VISUAL WARNINGS

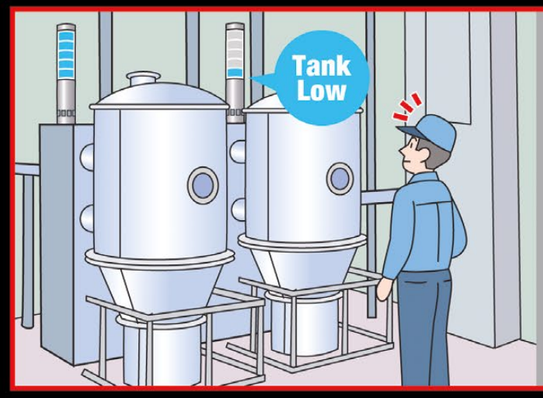


The LA6 is able to display more detailed information such as the status severity level or specific abnormality conditions that workers normally would have to look for on a equipment panel or HMI.

■ Display the level of status severity

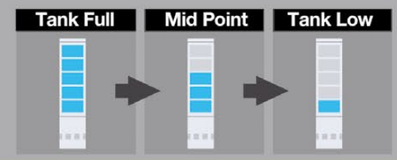
Level Meter Monitoring

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.

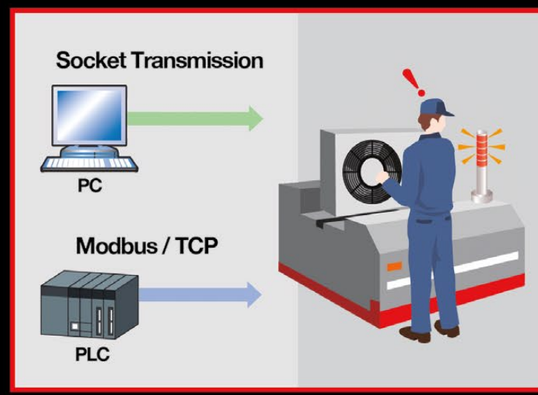
■ Display remaining tank levels in stages



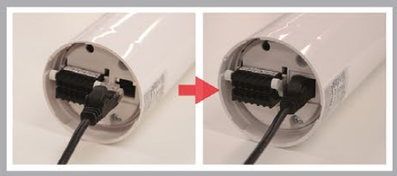
Remote Monitoring

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 Ethernet) compliant HUB, the LA6 can be controlled and powered through a single cable.



REDUCE BOTTLENECKS WITH A VISUAL TAKT SYSTEM

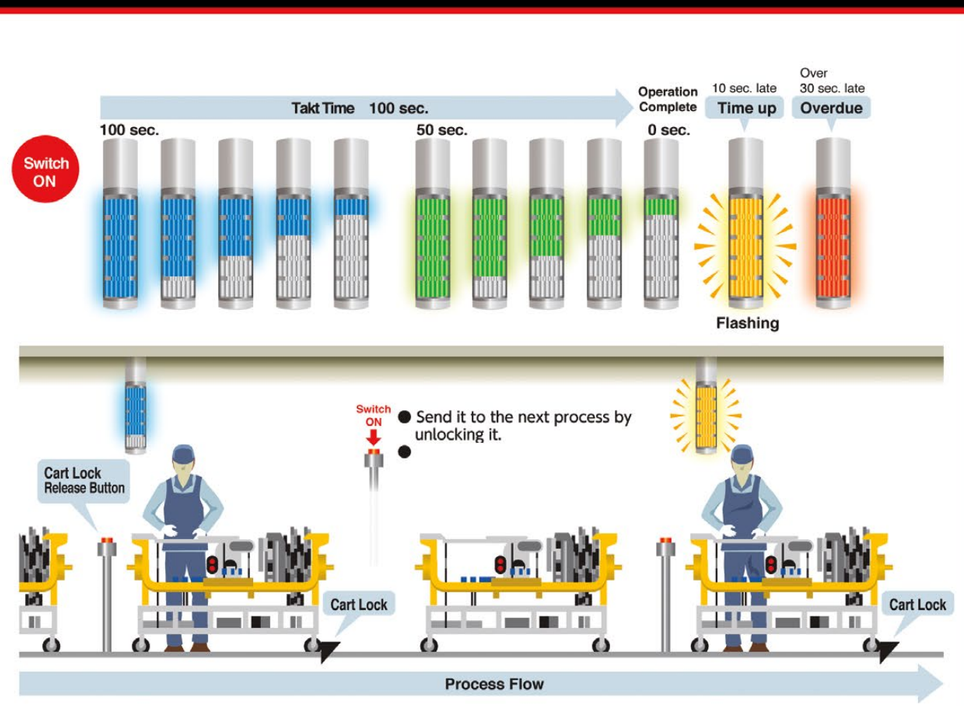
Cycle Time

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

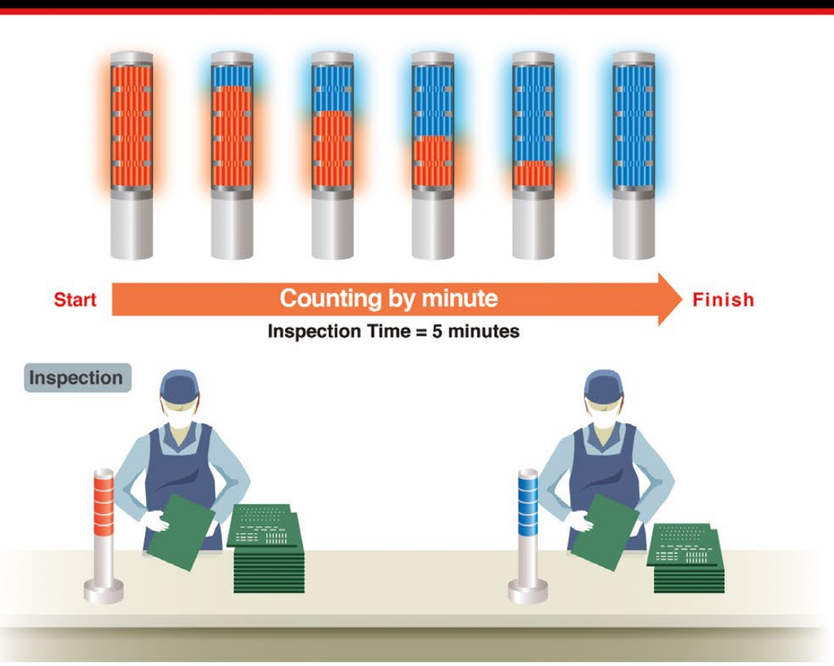
Cycle Time

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.



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

Prevent defective product outflow during inspection

OBTAIN EQUIPMENT INOFRMATION FROM REMOTE LOCATIONS

Ethernet PoE

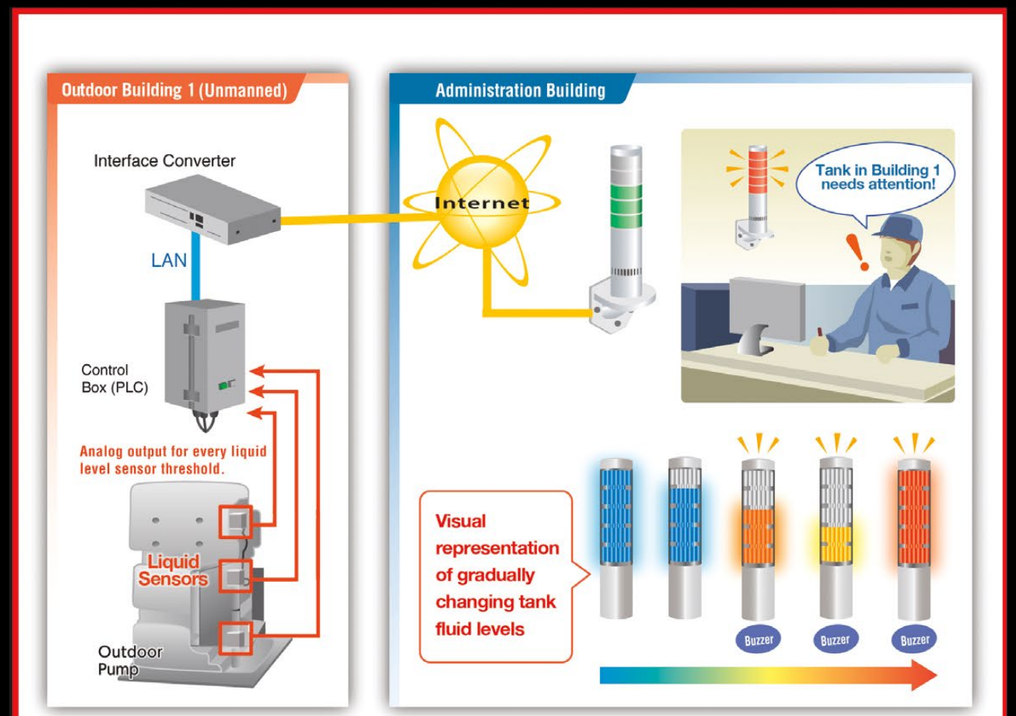
NETWORK Remote Monitoring

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

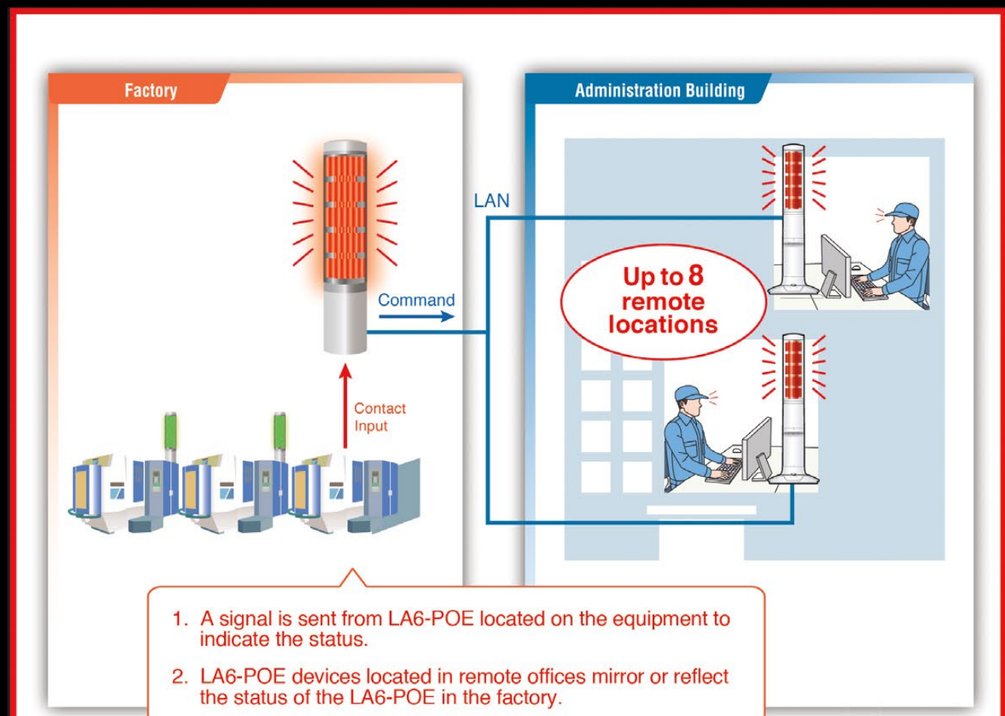
NETWORK Remote Monitoring

PROBLEM

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

IMPLEMENTATION MERIT

With 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 3rd party software through the LAN connection for data analysis or Andon monitoring.



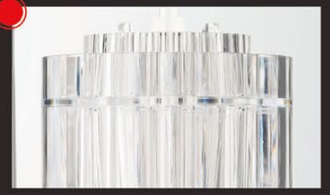
See equipment status from multiple locations

LA6 SIGNAL TOWER

Multi-function Switch for various setups

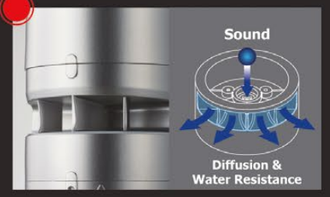
BUZZER SOUND SETUP
The built-in volume adjustment switch has 4 selectable settings.
High (approx. 85dB) -> Mid (approx. 80dB) -> Low (approx. 75dB) -> Off

COLOR SETUP
The built-in switch also allows you to select up to 9 colors for each tier manually.



Efficient lens design optimizes visibility

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



11 selectable alarm sounds to match various applications

A newly developed compact loudspeaker not only transmits clear sound (85dB at 1m) but is also water resistant. A different alarm sound can be set to each display pattern.

Free editing software to freely change the LA6 colors and patterns

Detachable Terminal Block

Has 8 inputs for connecting PLC or discrete I/O. Data through these inputs can be transferred to a server over Ethernet.
DC power can also be wired if a LAN connection is not available.

Ethernet
PoE

Conveniently connects to an existing network with PoE support

PoE (Power over Ethernet) is a technology that lets network cables carry electrical power. PoE can bring many advantages such as reducing costs of installing electrical cabling and/or the flexibility of not having to be tethered to an electrical outlet.

LA6 DC24V / 3 and 5 Tier Types

LA6 High Voltage / 5 Tier Types

The LA6 alarm feature has a total of 11 sounds to match various applications

Off White
Flashing / Buzzer

Silver
Lighting

Steel Pole Type (LJ)

Off White
Flashing / Buzzer

Voltage: DC24V
Direct Mount/Terminal (TN)
Steel Pole with L-Bracket/Cable (LJ)

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

DC24V | AC100~240V | 85dB (at 1m) | Buzzer 11 Sound | IP65* | Φ60 | RoHS

* Alarm Type: IP54

LA6-POE Direct Mount / Stationery type

Direct
Mount Type

Stationary Type
with "Clear" switch

PoE | 85dB (at 1m) | Buzzer 11 Sounds | Ethernet | Modbus /TCP | EASY WEB Setup | DC24V | DC48V | HTTP | Inputs | IP54* | Φ60 | RoHS

* Direct Mount Type

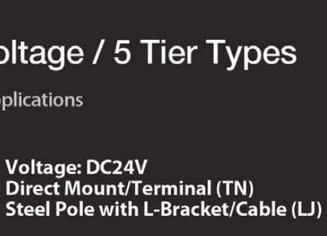
PNS Command

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 types 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.

Optional Parts

For LA6/LA6-POE

Stationary Bracket
SZK-003W
For Direct Mount type

Upper Pole Bracket
SZP-004W (white)
SZP-004U (silver)
For Direct Mount type

Wall Mount Bracket
SZK-001U
Compatible with:
POLE-100A21+O0109
POLE-300A21+O0109
POLE-800A21+O0109

Circular Bracket
SZ-016A
Compatible with:
POLE-100A21+O0109
POLE-300A21+O0109
POLE-800A21+O0109

L-Bracket
SZL-001
Compatible with:
22POLE-300
22POLE-500
22POLE-1000

For LA6-POE

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

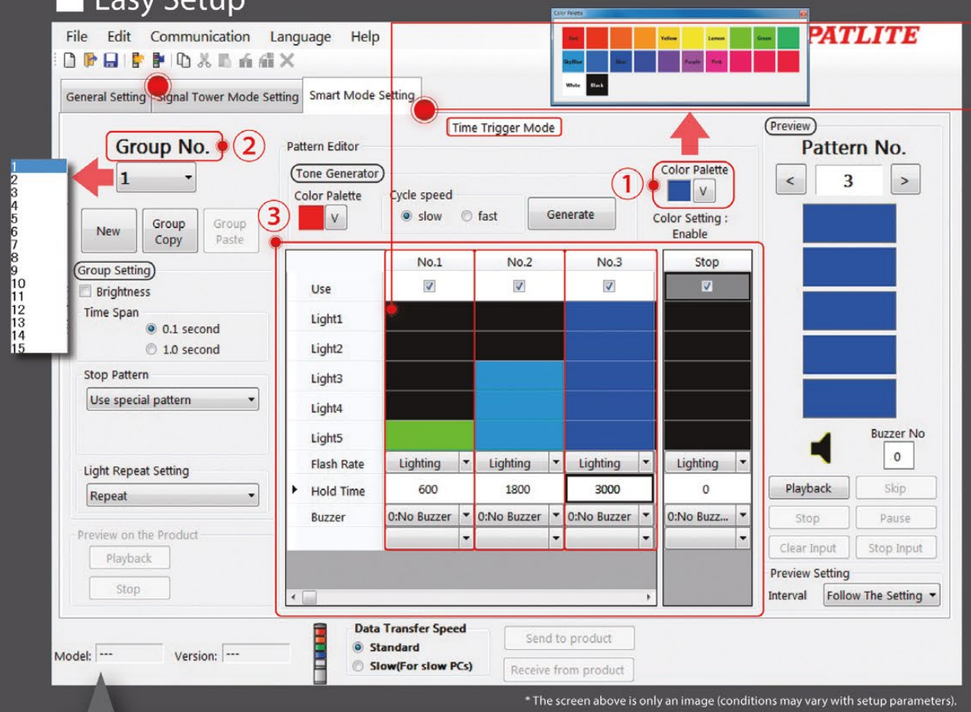
Wall Mount Bracket
NH-WST2
For Stationary type

Editing Software **Free**

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

LA6 SERIES

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

● 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)
  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 21 Color

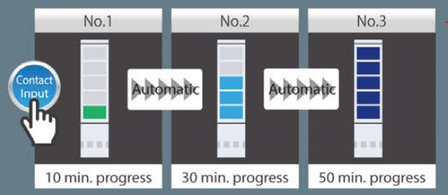
Elapsed Time / Countdown / Cycle Time

1. Time-trigger Type

Setups for 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.



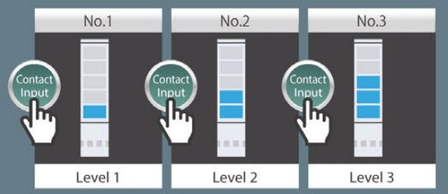
Determine thresholds for pressure/temperature, etc.

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.



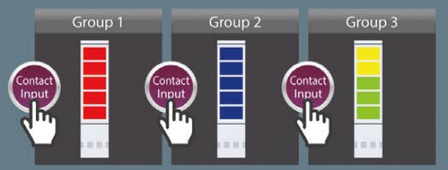
Error level/Request Priority/Status Display, etc.

3. Single-display Type

The product memory operates for "individual group" functions.

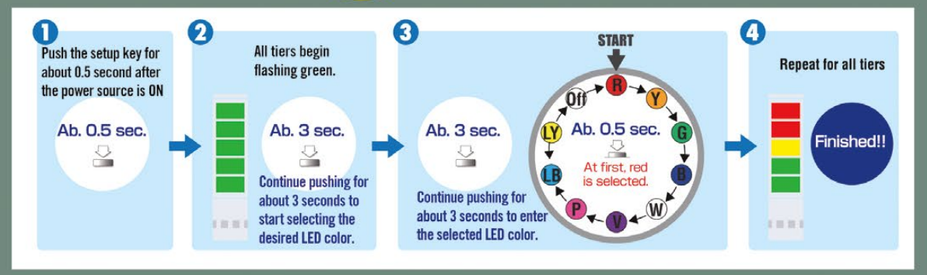
Maximum pattern display	———
Maximum group number	31 Groups

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



Signal Tower Mode 9 Color

Color can be manually configured with the push button without having to edit with the software

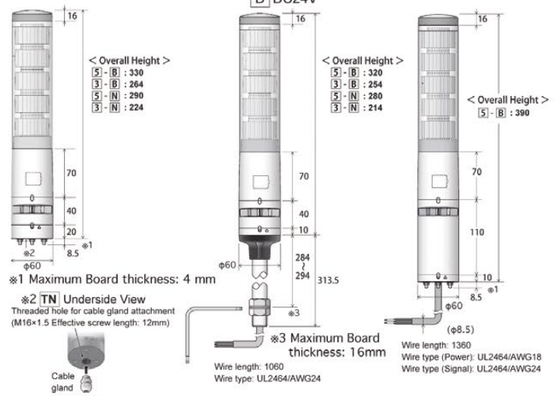


DIMENSIONS AND WIRING

Outer Dimensional Drawings

LA6

■ TN Direct mount/Terminal
D DC24V



※1 Maximum Board thickness: 4 mm

※2 TN Underside View
Threaded hole for cable gland attachment
(M16×1.5 Effective screw length: 12mm)

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

■ LJ Steel Pole with L-bracket/Cable
D DC24V

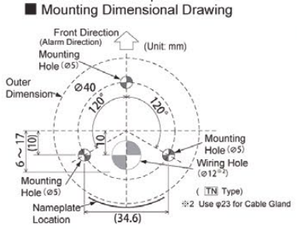
※3 Maximum Board thickness: 16mm

Wire length: 1060
Wire type: UL2464/AWG24

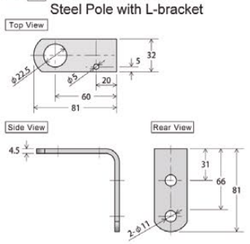
■ WJ Direct mount/Cable
A AC 100-240V

Wire length: 1360
Wire type (Power): UL2464/AWG18
Wire type (Signal): UL2464/AWG24

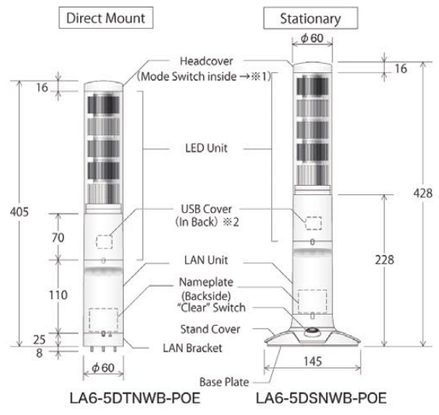
■ Mounting Dimensional Drawing



■ L Dimensional Drawing for Steel Pole with L-bracket

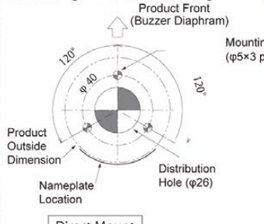


LA6-POE



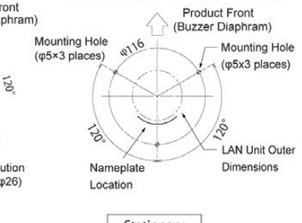
LA6-5DTNWB-POE LA6-5DSNWB-POE

■ Mounting Dimensional Drawing



Direct Mount

■ Mounting Dimensional Drawing



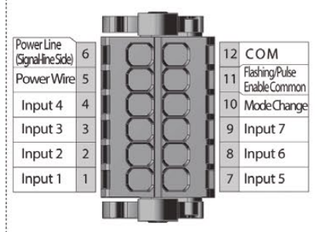
Stationary

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)

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

TO USE SMART MODE, APPLY A SIGNAL INPUT TO THE MODE CHANGE (PINK) WIRE.

※ In mode switchover, mode switchover is 10 in the case of 11 purple and PoE specifications in the case of terminal bus specifications.

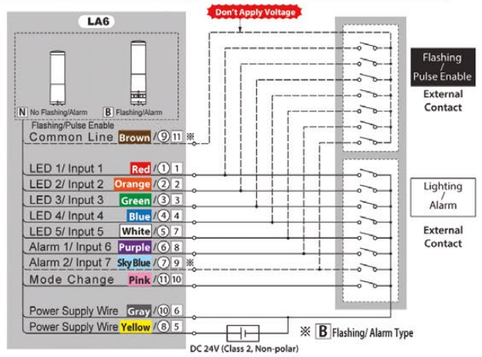
Wiring

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

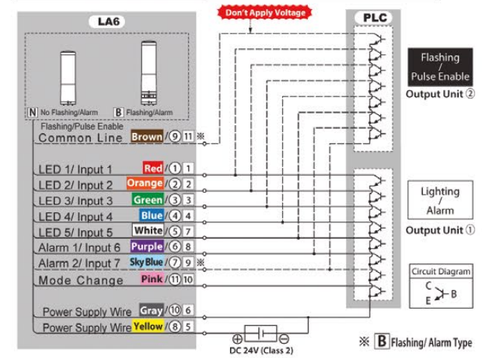
DC 24V Wiring (LA6/LA6-POE)

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

External Contact Classification: Contact Relay



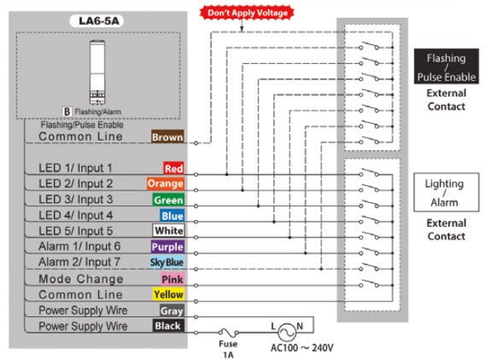
External Contact Classification: PLC (NPN Transistor)



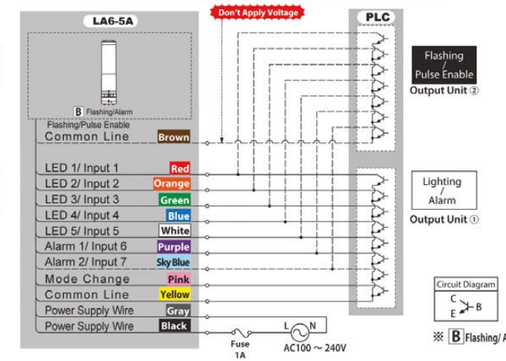
AC 100 - 240V Wiring (LA6)

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

External Contact Classification: Contact Relay

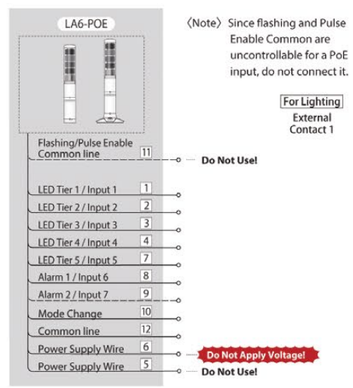


External Contact Classification: PLC (NPN Transistor)



POE Wiring (LA6-POE)

External Contact Classification: Contact Relay



〈Note〉 Since flashing and Pulse Enable Common are uncontrollable for a PoE input, do not connect it.

For Lighting
External Contact 1

■ Wiring Diagram color and number indication

Red / ① / 1

- 1: Cable signal wire number
- ①: Terminal connector wire number
- Red: PoE Connector wire number

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 DC24V power supply when both the DC24V power source and PoE power feeder systems are connected simultaneously.
- If both power sources are simultaneously connected, when disconnecting the DC24V 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

LED Tiers
3	3 Tiers
5	5 Tiers

Rated Voltage
A	100~240V AC
D	24V DC

Mounting/Wiring
TN	Direct Mount/Terminal
LJ	Steel Pole with L-bracket/Cable
WJ	Direct Mount/Cable

Body Color
W	Off-white
U	Silver

Flashing/Buzzer type
B	with Flashing/Buzzer
N	no Flashing/Buzzer

Color
RYG	3 Tiers
RYGBC	5 Tiers

LA6-POE

LA6-5DTNWB-POE

Model

LED Tiers
5 Tiers

Rated Voltage
Rated Voltage is 24V DC

Mounting
TN	Direct Mount
SN	Stationary with "Clear" switch

Body Color
W	Off-white

Flashing/Buzzer type
B	with Flashing/Buzzer

Extension Function
PoE Supported

■ 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-YYYYY	7W	LA6-5D□□B-YYYYY	8W	12.9W (26.4V DC)/12.5W (PoE)
		LA6-3D□□N-YYY	4.5W	LA6-3D□□B-YYY	5.5W	
		LA6-5AWJWB-YYYYY	7.5W			
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℃ to +60℃				-10℃ to +50℃
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 1meter				
Operation Method		Signal Control				Signal/Command Control
Standard Compliances		■ 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
LA6-3DTNUB-RYG			Silver	Direct Mount/Terminal/Buzzer
LA6-3DTNUN-RYG				Direct Mount/Terminal/No Buzzer
LA6-3DWJUB-RYG				Direct Mount/Cable/Buzzer
LA6-3DWJUN-RYG				Direct Mount/Cable/No Buzzer
LA6-3DLJWB-RYG			Off-white	L-Bracket with Pole/Cable/Buzzer
LA6-3DLJWN-RYG				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
LA6-5DTNUB-RYGBC			Silver	Direct Mount/Terminal/Buzzer
LA6-5DTNUN-RYGBC				Direct Mount/Terminal/No Buzzer
LA6-5DWJUB-RYGBC				Direct Mount/Cable/Buzzer
LA6-5DWJUN-RYGBC				Direct Mount/Cable/No Buzzer
LA6-5DLJWB-RYGBC			Off-white	L-Bracket with Pole/Cable/Buzzer
LA6-5DLJWN-RYGBC				L-Bracket with Pole/Cable/No Buzzer
LA6-5AWJWB-RYGBC		100 - 240V AC		Direct Mount/Cable/Buzzer
LA6-5DTNWB-POE		24V DC or PoE (48V DC)		Direct Mount/Terminal/Ethernet/Buzzer
LA6-5DSNWB-POE				Stationary/Terminal/Ethernet/Buzzer

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