PATLITE Global Network



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A CAUTION

To ensure correct use of these products, read the "Instruction Manual" prior to use. Failure to follow all safeguards can result in fire, electric shock, or other accidents.Specifications are subject to change without notice. 2018-2019

www.patlite.com

Network Catalog

IoT solution from the Factory

to the Office

Surveillance system monitoring

The LA6-POE and NHL-FV are able to detect network events and notify remote personnel over the network.





Mirroring display of production facility

A master LA6-POE located at the production site is able to mirror status of up to 8 LA6-POE devices, notifying personnel of production issues located in remote locations.





Network existing equipment

Improve response time by converting your existing equipment to network-enabled devices capable of notifying remote personnel via e-mail.





Manufacturing Facility





Remote tank level monitoring

Without warning, remotely located tanks run dry, leading to extended downtime. The LA6 is a visual level meter, able to notify remote personnel of level statuses in real-time.



Monitor nodes on network in real-time

The NHL monitors nodes on multiple call center networks. If ping responses fail from certain nodes, the NHL will notify an administrator by visual or voice alert indicating which call center has gone down and needs call rerouting.



Remote monitoring of server and network peripheral devices

The NHL-FV supports various protocols to communicate with network devices and is able to notify local personnel of issues on the network via visual and audible signals and remote personnel via email.



Programmable LED Signal Tower Series with PoE OFF

LA6-POE 60mm Smart Signal Towers

· Programmable, multi-color signal towers designed to replace standard stack lights

- Features 21 LED colors and 11 alarm types, all in a single part number
- Ethernet connection with PoE (Power over Ethernet) support, enabling single cable installations

What is PoE (Power over Ethernet)?

System that passes electric power along with data on twisted pair Ethernet cabling. This allows a single cable to provide both power and data to devices.

LA6-5DTNWB-POE Direct mount type LA6-5DSNWB-POE Desktop type

Product Features

- · Supports a range of communication protocols
- Built-in web interface for guick and easy configuration
- Mirroring function: Replicates signals on up to 8 slave devices in remote locations







Connects easily to an existing network

Alarm volume toggle switch





MODE CHANGE

0.2 - 1.5mm

AWG24 - 16

INPUT 7

INPUT 5

121







Select a Smart Mode Type

The EDITOR for LA Series software allows you to quickly configure your LA6 Signal Tower. Each smart mode uses different methods to trigger Animations* and Patterns* allowing you to customize unique indication solutions.

*Animations: Light color cycling resembling flashing, pulsing, running lights, etc.; can also include an audible alarm. *Patterns: Any combination of solid colors and/or audible alarm.

1. Time Trigger Mode

Display animations that transition at preset timings. Animations are triggered initially by an input or command and run based on set timings.

Common Applications: Production Cycle Time. Takt Time System, Run Light





elapsed timings.



Select method(s) for triggering LA6 alert functions

The LA6-POE supports a variety of communications protocols and can be triggered through the terminal block.

HTTP (Hypertext Transfer Protocol)

HTTP is an application-layer protocol designed within the framework of the Internet protocol suite.

The LA6-POE accepts HTTP commands sent through a web browser or PLC to trigger visual and audible alert functions.





SOCKET Communication

Socket(s) allows communication between PCs and is used in a client-server application framework.

The LA6-POE accepts an application-level protocol called PNS (developed by PATLITE) to establish connection between client and server and to control visual

Modbus TCP/UDP

Modbus TCP/UDP is a variant of the Modbus family of vendor-neutral communication protocols intended for control of automation devices.

Group 01 Group 02 Group 03

The LA6-POE accepts Modbus TCP/UDP commands from a PLC to control visual and audible alert functions.

PLC

Real-time remote monitoring and control

Network Monitor Signal Tower Series with MP3 Voice Alerts

NH-FV Smart Signal Towers

- Audible alarm and MP3 voice alert functions
- Built-in digital output and contact inputs
- Able to send email alerts
- Monitor network device status using SMNP protocol

LR6 Series LED Units



Easily Reconfigure LED Colors (Only NH-FV2/FB2)

No tools are required to reconfigure the LED units. Simply twist the LED units to lock or release the units from one another. Standard stack lights are generally glued together or require tools to reconfigure modules.

Monitor network device status using SMNP protocol

In addition to PING monitoring, the NH Signal Towers are equipped with an SNMP monitoring function. It actively obtains MIB information from supported SNMP network devices and is able to notify personnel with visual, audible, and/or email notifications when changes occur.

Control Interface (NH-FV2 Series)



Options

NH-WST2	Length / NHP-FV2 Main Un Main Unit Length				
Wall-mount Bracket	Number of Tiers	1	2	:	
NHL-TF (FOR NHL-FV2/FB2)	Main unit length (mm)	256	296	3	
	Mass (g)	945	980	10	
	Length / NHL-FV2 Main Uni Main Unit Length				
NHP-TF (FOR NHP-FV2/FB2)	Number of Tiers	1	2	[;	
Dimmer Film	Main unit length (mm)	256	296	3	
	Mass (g)	1030	1090	11	

Length / NH Ma	P-FV2 in Unit	Main Lengt	Unit n	hass	
Number of Tiers	1	2	3	4	5
Main unit length (mm)	256	296	336	376	416
Mass (g)	945	980	1015	1050	1085
Length / NH	-EV2	Main	Unit m	1855	-
Ma	in Unit	Lengt	ħ		
Number of Tiers	in Unit	Lengt	h 3	4	5
Number of Tiers Main unit length (mm)	In Unit	Lengt 2 296	h 3 336	4 376	5 416



NHL-3FV2-RYG

NHP-3FV2-RYG

OFF



Dimensions (Unit: mm)





C

Easily Reconfigure



"Irregularities detected on the network" Volume adjustable up to 88dB Settings and MP3s can be modified via web interface

Audible Alarm Functions

The NH Series comes pre-loaded with four audible alarm tones and three chime tones. The NH-FV comes also pre-loaded with three MP3 voice alerts and stores up to 60 MP3s.

Alarm tones	Chime tones	Voice alerts
Fast intermittent) Medium intermittent) Slow intermittent) Continuous sound)	Chime 1 Chime 2 Chime 3	"Problem was detected in the network" "A problem occurred" "Problem was solved"

MP3 Voice Alerts

Load the NH-FV with custom MP3 messages to give your network and/or machines a voice.

Loud Alarm

The audible alarm horn is designed with an unique structure that achieves a sound pressure of 88 dB.

Line Out

A digital output can be linked to the Line Out output so that another device, such as an amplifier or beacon, can be activated while the sound plays back. A delay can also be set to the sound trigger.



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Station of Contract	- Annoles	terter .	6002	-	
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Digital Input / Digital Output Contact Monitoring

The NH-FV is equipped with four digital contact inputs and one digital output.

Example:

An input from a switch relay can trigger a timer function. At preset time intervals, alert functions trigger and send an output to trigger an external device.



USB Flash Drive

A USB flash drive may be used for the following operations:

- Update Firmware
- Download Event Log
- Import/Export Operation Settings
- Edit MP3 Voice Alerts



Network Monitor Signal Tower Series with Audible Alarm OFF

NH-FB Smart Signal Towers

- · Designed to compliment office spaces
- Up to 5 LED units with 2 types of flashing patterns
- 4 audible alarm sound types

NHP-3FB2-RYG

NHL-3FB2-RYG

1 =1 tier: R/Y/G

2 =2 tiers: RY / RG

3 =3 tiers: RYG

4 =4 tiers: RYGB

5 =5 tiers: RYGBC

(4) FD1 Init Colors

How to Order



LR4 and LR6 Series LED Units

* LED units (LR*-E-*) of the same color cannot be

The LR Series supports up to 5 LED units on a single signal tower.



Installation image

Options



connected on the same unit.



Simple Control Interface



1) Clear Switch

- Clears visual or audible alerts and returns the
- NHL to the "normal status" 2) Reset Switch
- Reboots the NHL device
- 3) Test Switch
- Cycles thruogh all segments



Monitoring Functions for **NH-FV and NH-FB Series**



PING Monitoring

Ping up to 24 nodes simultaneously. While Ping is a basic diagnostic tool, the NH Signal Towers is able to notify you based on your priorities. For example, low priority ping response failures may trigger a flashing light, while higher priority failures will trigger an MP3 voice alert and send an email report, in addition to the flashing light.

Application Monitoring

Gain control over your applications and earlier problem detection. Evaluate the performance of standard software and web applications and if an error occurs, the NH Signal Towers promptly alerts you before problems become worse.

HTTP Command

HTTP (Hypertext Transfer Protocol) is an application-layer protocol designed within the framework of the Internet protocol suite.

The NH Series accepts HTTP commands sent through a web browser or PLC to trigger NH Series visual and audible alert functions.

NH-FB / NH-FV Series

Command execution (Red / Amber / Green Lights on Alarm sounds)

http://192.168.10.1/api/control?alert=111001 NH-FB / NH-FV Series

Command Execution (Perform clear operation) http://192.168.10.1/api/control?clear=1

Command Execution (Play the CH10 message) rsh 192.168.10.1- I patlite sound 10

Compatible with DHCP

Dynamic Host Configuration Protocol (DHCP) is a network management client/server protocol that automatically assigns an IP address to each device on a network so they can communicate with other IP networks.

RSH Command

Remote Shell (RSH), command line program that executes shell commands on remote hosts such as the NH Series.

RSH can be used to automatically run commands based on event information from network management software and various monitoring tools on the NH Series to trigger visual and audible alert functions.

NH-FB / NH-FV Series (Red / Amber / Green Lights on Alarm sounds) rsh 192.168.10.1 -l root alert 111001

NH-FV Series

Easy to Setup/Update

Accessing the NH Series settings or updating the firmware can easily be done through a web browser.

Compatible with various monitoring functions





Routers



Machinery Assembly lines



Date Storage Devices



Trap Monitoring

As one of the oldest standards for network equipment fault notification, most network devices support SNMP traps. The NH Signal Towers are able to send, receive and analyze trap information and responds and/or notifies you appropriately.

Email Transmission

Send email reports of various network events to up to 8 addresses. The subject and body can be customized and can be automated to be sent in a variety of situations.

SOCKET Communication

Socket(s) allows communication between PCs and is used in a client-server application framework.

The NH Series accepts an application-level protocol called PNS (developed by PATLITE) to establish connection between client and server and to control visual and audible alert functions.

NH-FB / NH-FV Series

Command execution (Red / Amber / Green Lights on Alarm sounds)

58H,58H,53H,00H,00H,06H,01H,01H,01H,00H,00H,01H (NHI -EV Series cannot play alarm sounds with PHN c

NH-FV Series Command Execution (Play the CH10 message) 58H,58H,56H,00H,00H,04H,01H,00H,00H,10H

Self-Test Function

With the test switch located on the front of NH Series devices, users can test various functions without having to login to the device through the network.

Interface Converter for Networking PATLITE signaling devices

NBM-D88NN Interface Converter

- 8 discrete input and output channels to add non-networking PATLITE signaling devices to an equipment network.
- Supports SNMP, HTTP, PNS (Developed by PATLITE). Socket Transmission command protocols.
- · Email Alerts Send emails to up to 8 addresses per alert notification.
- Use a web browser to send commands via the Hypertext Transfer Protocol (HTTP).
- Ping up to 24 nodes or devices on your network.
- Built-in "Clear" button for quickly reverting the NBM to its initial status once an alert is confirmed.

Easy to Setup/Update

Access the NBM setup interface by remotely logging into the device's IP address through a web browser.

Users can remotely setup a static IP address, automate digital outputs, update firmware, just to name a few.

Web Settings screen

Options

NBM-ANG Option Anale mounting bracket for server racks



1877.7 ------ IC Front view Call! 42 282 ADP-001 24V DC 1A OD5.5mm / ID2.1mm

and the set of the

Unit:

Rear view



Input and Output Setting Functions



DURATION An output is triggered based on the length of time an input is triagered.



NUMBER An output is triggered based on how many times an input is triggered within a time period.



An output is triggered based on a combination of preset inputs being triggered.





Compatible with PNS command Control digital output by using a PNS command

Compatible with HTTP command

Control digital output with HTTP commands. Execute command (port 1: ON, port 3: OFF, Other: no operation) http://192.168.10.1/api/control?/alert=19099999



Dimensions (Unit: mm)

3

NBM-D88NN

NBM-D88NN Interface Converter

- Equipped with one 24V DC output
- Contact diverse notification devices such as revolving warning lights and audio equipment
- Obtain logs with USB memory
- Obtain / reflect settings with USB memory

USB Powered and **Controlled LED Signal Tower Series**

LR6-USB 60mm USB Signal Towers

- PC or HMI controlled
- Powered over USB for single cord installation
- Open architecture for custom programming
- Compatible with Windows[®] and Linux

Product Features

Simple to Program

Use the included DLL software library to easily develop software to control the LR6-USB Series various signaling functions.

No dedicated driver required

Dedicated driver is not required as it is USB HID class compatible.

Compatible LED units

The LR6-USB Series supports solid color, clear globe, and multi-color LED units.





Specifications

Model	LR6-3USBW/K-RYG (Assembled Product)	LR6-USBW/K (Body Unit)
Protection Rating	IP65 (IEC60529)/NEMA TYPE 4X, 13	
LED Unit Control	Light on/Light off/4 types of flashing patters	
Audible Alarm Control	Select from play/stop 4 patterns/13-scale sound pattern	
Communication Method	USB2.0 Full Speed	
Software	Windows ^e 7, Windows ^e 8 (Excluding Windows ^e R1 Windows ^e 8.1 (Excluding Windows ^e 8.1 RT), Windows ^e 10, Linux	



How to Order



Dimensions (Unit: mm)





USB / RS-232C Controlled **Signal Tower**

PHE-3FB3-RYG 40mm Interface Converter Signal Tower

- · Signal tower features 3 LED colors and 2 flashing patterns
- · Send ASCII commands over USB or RS-232C to control built-in signal tower
- Receive power over USB or a 24V DC supply source
- 4 built-in alarm sounds with adjustable volume up to 80 dB
- · Built-in "Clear" button for quickly reverting the PHE to "default state" once an alert is confirmed

Dimensions (Unit: mm)



PHC-D08N Interface Converter

 Send ASCII commands over USB or RS-232C to control PATLITE signaling devices

• Built-in "Clear" button for quickly reverting the

Dimensions (Unit: mm)





D-sub 9 pin female

		Pin number	Signal name
	F	2	RXD
	-	3	TXD
_	-	5	GND
_	-	7	RTS
_	-	8	CTS

Options

NHP-TF (FOR PHE-3FB3) **Dimmer Film**

Production Site Terminals

Visualize production status by connecting PHE to PC-based terminals



Network Compatible Products

1	33	33	-
Ð	Voice / Audible Alarm	Audible Alarm Type	

			LA6-POE	NHP-3FV2	NHP-3FB2	LA6-USB	PHE-3FB3N
			Signal Tower	Network Monitor Signal Tower with MP3	Network Monitor Signal Tower	USB-Controlled	USB / RS-232C - Controlled Signal Tower
Input Interface		Ethernet (Compatible with PoE)	Ethernet	Ethernet	USB	RS-232C / USB	
		Monitoring Node #	-	24 Nodes	24 Nodes	dischol. Of	-
	PING	Abnormality Determination # Setting	-	0 - 30	0 - 30	Correction of the	-
	FING	Transmission # Setting	-	1-3	1 - 3 (*1)		
Monitor		Cvcle Setting	-	1 - 600 Seconds	1 - 600 Seconds	-	
morntor		TBAP Reception	-	64 (4 cases x 16 groups)	64 (4 cases x 16 groups)		
	SNMP	Variable-Bindings Judgement	-	0	0		-
	Monitoring	of SNMP-Compatible Device		0			
		SLMP		16 Devices	16 Devices		
		Send to		8 Cases	8 Cases		
	FMAII	POP Becognition	-	0	0	-	
	2.00/ 02	EMTR Recognition		0	0		
	ONIME			0	0 8 Caaaa		-
	Lum	inescence Pattern	-	o Cases	o Cases	-	-
	Light Or	n / Flashing / Fast Flash	0	Ū	0	0	0
		Playback Sound #	11	Maximum 70 Types	4	5	4
		Sound Line Output	-	0	-	-	-
Notify		Volume	Max.85 dB or more	Max.88 dB or more	Min. 70 dB or less / OFF	Max.80 dB Min. 70 dB	Max.80 dB or more
		Sound Type	Audible Alarm	Voice	Audible Alarm	Audible Alarm	Audible Alarm
	Sound Function	Playback Mode	-	Later input priority playback Memory playback		-	
	IN	Volume Adjustmet	Switching between Loud / Medium / Soft / OFF with SW by setting from Web Browser	Sound Volume Adjustment with analog Vol. Setting from Web Browser	Switching between Loud / Medium / Soft / OFF with SW	Switching between Loud / Soft with SW	Switching On / OFF with slid SW. Switching Loud / Soft with SW. Switching Loud / Soft with Sound Reduction Sheet
		BUSY Output	-	0			
	Н	TTP Command	0	0	0		-
		Modbus / TCP	0	-	-	-	-
	SN	MP SET Command	-	0	0	-	
		PHN Command	0	0	0	-	-
Control	SOCKET	PNS Command	0	0	0	-	
	F	SH Command	-	0	0	-	-
	F	PHU Command	-	-	-	-	0
	Soft	ware Library (DLL)	-	-	-	0	-
Contact		Digital Input	4 (*2)	4	_		
Input &		Digital Output	-	1		-	-
output		Digital Output		-		0	
		Stationary	0	0	0	0	0
Mounting	,	Wall Mounting	When using SZK-003 W (sold separately) or NH- WST2 (cold congrately)	When using NH-WST2 (sold separately)	When using NH-WST (sold separately)	When using SZP-004W, POLE-100/300/800A21, SZ-010 or SZ-016A	-
	P	Partition Mounting	-	-	When using NH-PST (sold separately)	-	-
		Pole Mounting	-	-	-	0	
	Configuration	Reading	0	0	0	-	- 10.5
Others	Setting	Writing	0	0	0		
,	WE	B Browser Setting	0	0	0	-	-
	1	Utility Software	EDITOR for LA Series	0	0	-	
		RoHS	0	0	0	0	0
	CF	Mark Compatible	0	0	0	0	0
		main compatible	EN 61000 6-4			EN 61000 6-3	
Conformity Standards		EMC	EN 61000-6-2 EN 55032 Class A EN 55024	EN 55032 EN 55024	EN 55032 EN 55024	EN 61000-6-2 EN55032 Class B EN 55024	EN 61000-6-4 EN 61000-6-2
	FCC	C Part 15 Subpart B	Class A	Class A	Class B	Class B	Class A
		UL	0	0	0	0	0
F		KC	0	0	0	0	0

48V DC (PoE) / 24V DC

428 x 145 x 145 (stationary) 405 x 60 (direct mounting)

0

Rated Voltage

Outer Dimension (mm) W x D x H

cUL or CSA

24V DC

NHP: 113 x 154 x 336 NHL: 113 x 154 x 336

0

24V DC

NHP: 69 x 126 x 324 NHL: 69 x 126 x 324

0

USB bus power 5V DC

60 x 60 x 199 (3 Tiers type)

0

PRILITY AND	

	Inj	out Interface	E
		Monitoring Node #	2
		Abnormality Determination # Setting	
	PING	Transmission # Setting	
Monitor		Cycle Setting	1 - 6
		TRAP Reception	64 (4 cas
	SNMP	Variable-Bindings Judgement	
	A		
	Send to		8
		POP Recognition	
Notify	1. 10.	SMTP Recognition	100
	RSH	Command Transmission	8
	SNMP	TRAP Transmission	8
		HTTP Command	
		RSH Command	
Control	SI		
		PHN Command	
	SOCKET	PNS Command	
Mounting	1	Rack Mounting	o (When [sold
		Digital Input	
	-		
Contact Input &		ON / OFF Operate Independently	
Output	Digital Input	Digital Output ON Control	
	Function	Digital Output OFF Control	
		Reading	
Others	Setting	Writing	
	W	/EB Browser Setting	
		BoHS	
	(CE Mark Compatible	o (witho
		EMC	o (EN 55
Conformity Standard	F	CC Part 15 Subpart B	
	-	KC 02	
	Rat	ed Voltage	Main AC Adaptor: 100V
	Outer Dimen	sion (mm) W x D x H	262 >
	cUL or	CSA	

*1 Only between 13 - 24 nodes.

Main Unit: 24V DC

USB bus power: 5V DC

100 x 117 x 281.5

0

*2 Contact input detection function can be used only when using command control method. Please see the web manual for details.





NBM-D88NN PHC-D08N Interface Converter Interface Converter Ethernet RS-232C / USB 24 Nodes -0 - 30 -1 - 3 -600 Seconds ses x 16 groups) -0 --0 8 Cases -0 -0 -8 Cases -8 Cases -0 -0 -0 -0 -0 -0 0 using NBM-ANG d separately]) 8 -8 8 0 -0 -0 -0 -0 -0 -0 0 out AC Adaptor) o (without AC Adaptor) 5032, EN 55024) o (EN 61000-6-4, EN 61000-6-2) Class A Class A 0 0 0 Main Unit: 24V DC Unit: 24V DC USB bus power: 5V DC / AC - 240V AC (ADP-001) AC Adaptor: 100V AC - 240V AC (ADP-001) x 124.5 x 42 117 x 100 x 28 0 0