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SPECIFICATIONS

Product Name: Network Monitor Signal Tower with MP3

Model: NH□-□FV2□-□□□□□

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Production end

PATLITE Corporation

1. General Specifications

Model	5 tiers	NHL-5FV2	NHP-5FV2
	4 tiers	NHL-4FV2	NHP-4FV2
	3 tiers	NHL-3FV2	NHP-3FV2
	2 tiers	NHL-2FV2	NHP-2FV2
	1 tier	NHL-1FV2	NHP-1FV2
Rated Voltage		24VDC (Main Unit)	
	AC Adaptor	Input: 100VAC - 240VAC (50/60Hz) Output: 24VDC	
Operating Voltage Range		Rated Voltage ±10%	
Rated Power Consumption	Main Unit	Standby: 2.2W Maximum: 3.5W (with AC Adaptor, 100VAC input)	
	LED Unit	1.0W (per Unit)	
Operating Ambient Temperature		0℃ - +40℃ (No Dew or Condensation)	
Operating Ambient Humidity		20% - +80% RH (No Dew or Condensation)	
Storage Ambient Temperature		-10℃ - +60℃ (No Dew or Condensation)	
Storage Ambient Humidity		20% - +80% RH (No Dew or Condensation)	
Mounting Location		Indoor Only	
Mounting Direction		Upright	
Protection Rating		IP 20	
Insulation Resistance		More than 10MΩ at 500VDC between live part and non-current carrying metallic part *1	
Withstand Voltage		1500VAC applied for 1min (10mA or less) between live part and non-current carrying metallic part without breaking insulation *1	
Mass (Tolerance ±10%) (AC Adaptor not include)	5 tiers	1270g	1085g
	4 tiers	1210g	1050g
	3 tiers	1150g	1015g
	2 tiers	1090g	980g
	1 tier	1030g	945g
Outer Dimensions		Refer to the Outer Dimension Drawing	
Sound Pressure Level		88dB or more	
	Environmental Condition	Front direction from the center, at 1m, (1kHz sine wave played back at -6dB) MP3 data of the content and use of the environment, the sound pressure level will change.	
Audio Line Output		600Ω 0dBv (Unbalanced, Monaural Mini-Jack)	
Communication Method (LAN)		Ethernet (Conforms to the IEEE 802.3) 10BASE-T / 100BASE-TX (Auto negotiation, Full Duplex / Half Duplex)	
Interface	USB Port	USB2.0 / 1.1 Type-A 1ch (For USB Memory)	
External Contact Output		Non-voltage contact output	
	Number of Contacts	1	
	Contact Capacity	(30VDC @ 3A) inrush current 5A or less (5VDC @ 1mA , Minimum, Reference)	
	Wire Diameter	Solid Wire / Stranded Wire: ϕ0.41 - 0.81mm (AWG26 - 20)	
	Wiring Method	Screwless terminal block	
External Contact Input		Non-voltage contact input NPN Transistor	
	Number of Contacts	4	
	Contact Capacity	"ON" output current @ 6mA or less per cannel Terminal OFF condition Voltage: 24VDC	
	Wire Diameter	Solid Wire / Stranded Wire: ϕ0.41 - 0.81mm (AWG26 - 20)	
	Wiring Method	Screwless terminal block	
Operating portion		"Volume", "Reset" Switch, "Clear" Switch, "Mode" Switch, "Test" Switch	
Accessories		AC Adaptor *1, Replacement plug (5 pcs.) *2, Installation Manual, Rubber feet (4pcs.)	
Option		Wall Bracket (NH-WST2), Tint Film (NHL-TF, NHP-TF)	
Remark		*1 : N type excluded *2 : Only W type	

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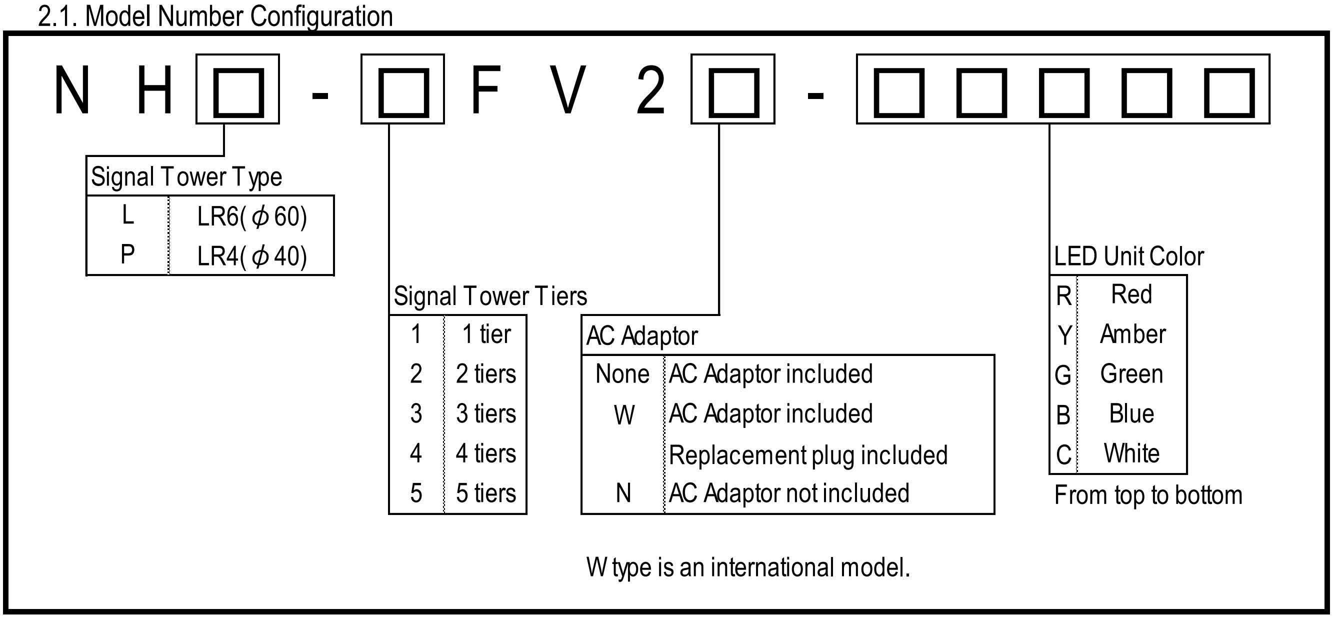
Conformity Standards	RoHS Directive (EN IEC 63000) EMC Directive (EN 55032 (Class A), EN 55024) FCC Part15 Subpart B Class A, ICES-003 Class A UL 1638, UL 464, CSA C22.2 No.205 KC (KN 61000-6-2, KN 61000-6-4) *3 PSE Compliant AC Adaptor
Remark	*3 : Only N type and W type CE Marking UL/cUL Listed W type is an international model.

2. Model

2.1. Model Number Configuration



N H □ - □ F V 2 □ - □ □ □ □ □

Signal Tower Type

L	LR6(ϕ60)
P	LR4(ϕ40)

Signal Tower Tiers

1	1 tier
2	2 tiers
3	3 tiers
4	4 tiers
5	5 tiers

AC Adaptor

None	AC Adaptor included
W	AC Adaptor included Replacement plug included
N	AC Adaptor not included

LED Unit Color

R	Red
Y	Amber
G	Green
B	Blue
C	White

From top to bottom

W type is an international model.

2.2. Model Number List

NHL-1FV2-R	NHL-3FV2-RYG	NHP-1FV2-R	NHP-3FV2-RYG
NHL-1FV2-Y	NHL-3FV2N-RYG	NHP-1FV2-Y	NHP-3FV2N-RYG
NHL-1FV2-G	NHL-3FV2W-RYG	NHP-1FV2-G	NHP-3FV2W-RYG
NHL-2FV2-RY	NHL-4FV2-RYGB	NHP-2FV2-RY	NHP-4FV2-RYGB
NHL-2FV2-RG	NHL-5FV2-RYGBC	NHP-2FV2-RG	NHP-5FV2-RYGBC

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3. Action Specification

3.1. Information (Main Unit)

Signal Tower			Lighting pattern for each color LED units, such as continuous lighting, flashing pattern 1, and flashing pattern 2
	Flashing pattern 1		ON(500ms), OFF(500ms) (repetition)
	Flashing pattern 2		ON(80ms), OFF(170ms), ON(80ms), OFF(670ms) (repetition)
Sound			Up to 70 types of messages can be played on the main unit speaker and line output.
	Number of messages		Playlist Package : 30 kinds MP3 File : 30 kinds Preset : 10 kinds
		MP3 Format	Bit Rate 32kbit/s, 64kbit/s (Standard Rate), 128kbit/s Constant Bit Rate (CBR) only
		Preset	Buzzer Sound : 4 kinds Chime Sound : 3 kinds Voice Sound : 3kinds
	Playback Pattern		One-shot Playback, Repeat Playback, Endless Playback
		One-shot Playback	It is played back once per playback event.
		Repeat Playback	It is played back when set up to play a certain number of times per playback event. Number of playback times : 1 - 254
		Endless Playback	It will play back repeatedly per playback event.
	Playback Mode		Input Priority Playback, Memory Playback
		Input Priority Playback	If a new playback event occurs, the channel being played back will be interrupted and a new channel will play.
		Memory Playback	When playback is ended, the next available channel stored in memory will play.
Buzzer Sound			Four kinds of buzzer sounds, such as buzzer pattern1, 2, 3, and 4
	Buzzer pattern 1		ON(250ms), OFF(250ms) (repetition)
	Buzzer pattern 2		ON(500ms), OFF(500ms) (repetition)
	Buzzer pattern 3		ON(200ms), OFF(50ms), ON(200ms), OFF(550ms) (repetition)
	Buzzer pattern 4		ON(continuity)

3.2. External control

External Contact Output			External contact output can be controlled when an event occurs or outputting sound.
	Contact Function		Digital Output, BUSY Output
		Digital Output	The digital “A Contact” or “B Contact” output for an automatic OFF function of the digital output port can be set up.
		BUSY Output	It controls the relay contact output in conjunction with the signal output from the line-out.

3.3. Information (Network)

Mail Transmission		When an event occurs, an e-mail message is transmitted to the registered address.
	Number of mail address	8
	Authentication protocol	POP before SMTP, SMTP_AUTH
	Security	SSL, TLS, none
SNMP TRAP Transmission		When an event occurs, TRAP transmission can be executed.
	Number of transmission	8
	Version	v2c
SLMP Write Command		When ”Clear operation" occurs, SLMP Write Command can be executed.
	Number of transmission	4
	Protocol	SLMP (The same format as the QnA compatible 3E and 4E frame of MC protocol) TCP / UDP

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4. Function Specification

4.1. Main Unit Control Function

RSH Command		Controllable with RSH Command
HTTP Command		Controllable with HTTP Command
Socket Communication		Controllable with PNS Command and PHN Command
SNMP Command		Controllable with SNMP "set" Command
	Version	v1 / v2c
"Clear" Switch		Clear operation is possible with "Clear" Switch of the main unit.

		Controllable Action						
Command		Signal Tower	Sound	Buzzer	Digi-Out	e-mail	TRAP	SLMP
RSH Command		✔	✔	✔	✔	✔ *1	✔ *1	-
HTTP Command		✔	✔	✔	✔	-	-	-
Socket	PNS	✔	✔	✔	✔	-	-	-
	PHN	△ *2	-	△ *3	-	-	-	-
SNMP Command		✔	✔	✔	✔	-	-	-
"Clear" Switch		✔	✔ *4	✔ *5	✔	✔	✔	✔

*1 : It can be used when e-mail or TRAP is set to "Active" in the RSH Command Configuration.

*2 : Signal Tower "Red", "Amber"and "Green",and Flashing pattern 1

*3 : Buzzer pattern1 and Buzzer pattern 2

*4 : In memory playback mode, you can proceed to the next message.

*5 : It is possible to stop only the buzzer while maintaining the state of Signal Tower.

4.2. External Monitoring Function

Ping Monitoring Function				Network abnormality detection by sending Ping network devices
	Number of Monitoring			24
	Monitoring Cycle			1 - 600 seconds
	Sending Count			The number of times to detect can be set from 1 to 30.
	Number of Sending			The number of sending Ping by one monitoring can be set from 1 to 3.
Application Monitoring Function				External devices abnormality detection by receiving the data from them
	Number of Monitoring			4
	Monitoring Cycle			1 - 600 seconds
SNMP TRAP Reception Function				TRAP Reception detection
	Version			v1 / v2c
	Number of Reception			64
	variable-bindings			2 OID per 1 TRAP Reception
			Detectable Type	INTEGER
				OCTET STRING (String data, Binary data)
SNMP Supported Equipment Monitor Function				For SNMP Supported equipment, with the SNMP command, their status can be acquisitioned periodically and monitored.
	Version			v1
	Monitoring Cycle			1 - 60 seconds
	Detection method			Condition Agreement Detection : 20 Change Detection : 5
		Condition Agreement		Detection that the acquired value meets the condition
			Detectable Type	INTEGER
				OCTET STRING (String data, Binary data)
		Change Detection		Detection that the acquired value has changed
			Detectable Type	INTEGER

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SLMP Read Command			Detects the state change of the device information of the PLC
	Number of Monitoring		16
	Transmission Interval		10ms / 50ms / 100ms
	Protocol		SLMP (The same format as the QnA compatible 3E and 4E frame of MC protocol) TCP / UDP
External Contact Input Monitor Function			It monitors the state change of external contact input.
	Digital Logic Setting		A Contact, B Contact
	Detection method		Status Change Detection, Status Agreement Detection
		Status Change	Detection of change from OFF to ON or change from ON to OFF
		Status Agreement	Detecting the input for a certain period of time Detection time : 1 - 3600 seconds Number of Detection : 4

	Executable action at detection						
Monitoring	Signal Tower	Sound	Buzzer	Digi-Out	e-mail	TRAP	SLMP
Ping Monitoring	✔	✔	✔	✔	✔	✔	-
Application Monitoring	✔	✔	✔	✔	✔	✔	-
TRAP Reception	✔	✔	✔	✔	✔	✔	-
SNMP Supported	✔	✔	✔	✔	✔	✔	-
SLMP Command	✔	✔	✔	✔	✔	✔	-
External Contact Input	✔	✔	✔	✔	✔	✔	-

4.3. Main Unit Status Acquisition Function

RSH Command		The state of the main body can be acquired by the status acquisition command.
Socket Communication		Status acquisition available with PNS Command and PHN Command
SNMP Command		Status acquisition available with SNMP "get" Command
	Version	v1 / v2c
HTTP Communication		By executing CGI, the state of the main body can be acquired in XML data format.
Web browser		Download main unit status and event log with web browser Main Unit Status : XML format file Event Log : text format file
USB Memory		Event log (text file) can be downloaded to USB memory

		Acquisition data				
Command		Signal Tower	Sound	Buzzer	Ex-Input	Ex-Output
RSH Command		✔	✔	✔	✔	✔
Socket	PNS	✔	-	✔	-	-
	PHN	✔ *1	-	✔ *2	-	-
SNMP Command		✔	✔	✔	✔	✔
XML format file		✔	✔	✔	✔	✔

*1 : Signal Tower "Red", "Amber"and "Green",and Flashing pattern 1

*2 : Buzzer pattern 1 and Buzzer pattern 2

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4.4. Main Unit Setting Function

Schedule Function		The time period for disabling the notification operation can be set.
	Suspended operations	"Signal Tower", "Sound and Buzzer", "Digital Output" ,"Trap Transmission"
	Time period of the schedule	"24 hours" or "Three time periods per day"
Time Correction Function		The internal clock in this product can communicate with an NTP server to automatically correct the time.
Automatic Network Setting		Network setting in this product can communicate with an DHCP server to automatically set.
Master Volume Setting		Mstar Volume of Buzzer and sound can be set
Standard Action Setting		This product can set lighting color of the Signal Tower after clear operation is executed.
Self-test Function		Self test of Signal Tower and buzzer is possible with test switch of the main body and RSH command.
Config Setting		Various settings of the main body can be read and written as setting file.
Main Unit Setting		Various settings of the main body can be done with a web browser.
USB memory support		By using the USB memory, the following items can be executed by the main body only.
	Config File	Various settings of the main unit can be read and written as a config file.
	Playlist Package	You can set the playlist package created with PATLITE Playlist Editor 2
	Event Log	It is possible to acquire an event log that records the operation history of the main unit.
	Firmware update	It is possible to update firmware.
Setting Supported languages		Japanese, English

4.5. Cloud Function

Supported Cloud Platform			Microsoft Azure *1
			Amazon Web Services (AWS) *2
	Azure	Connection Settings	Azure IoT Central/DPS,Azure IoT Hub
		Built-in features	Device Twin、Direct Method、Device-to-cloud Message、 Cloud-to-device Message
	AWS	Connection Settings	AWS IoT Core
		Built-in features	Device Shadow、MQTT client
Main Unit Control			Signal Tower,Sound,Buzzer,Digi-Out
Main Unit Status Acquisition			Signal Tower,Sound,Buzzer,Digi-Out
Main Unit Status Transmission			Signal Tower,Sound,Buzzer,"Clear" switch,External Contact Input,Digi-Out

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Production end

指定外公差 General tolerance

角度公差 Angular tolerance ±[°]

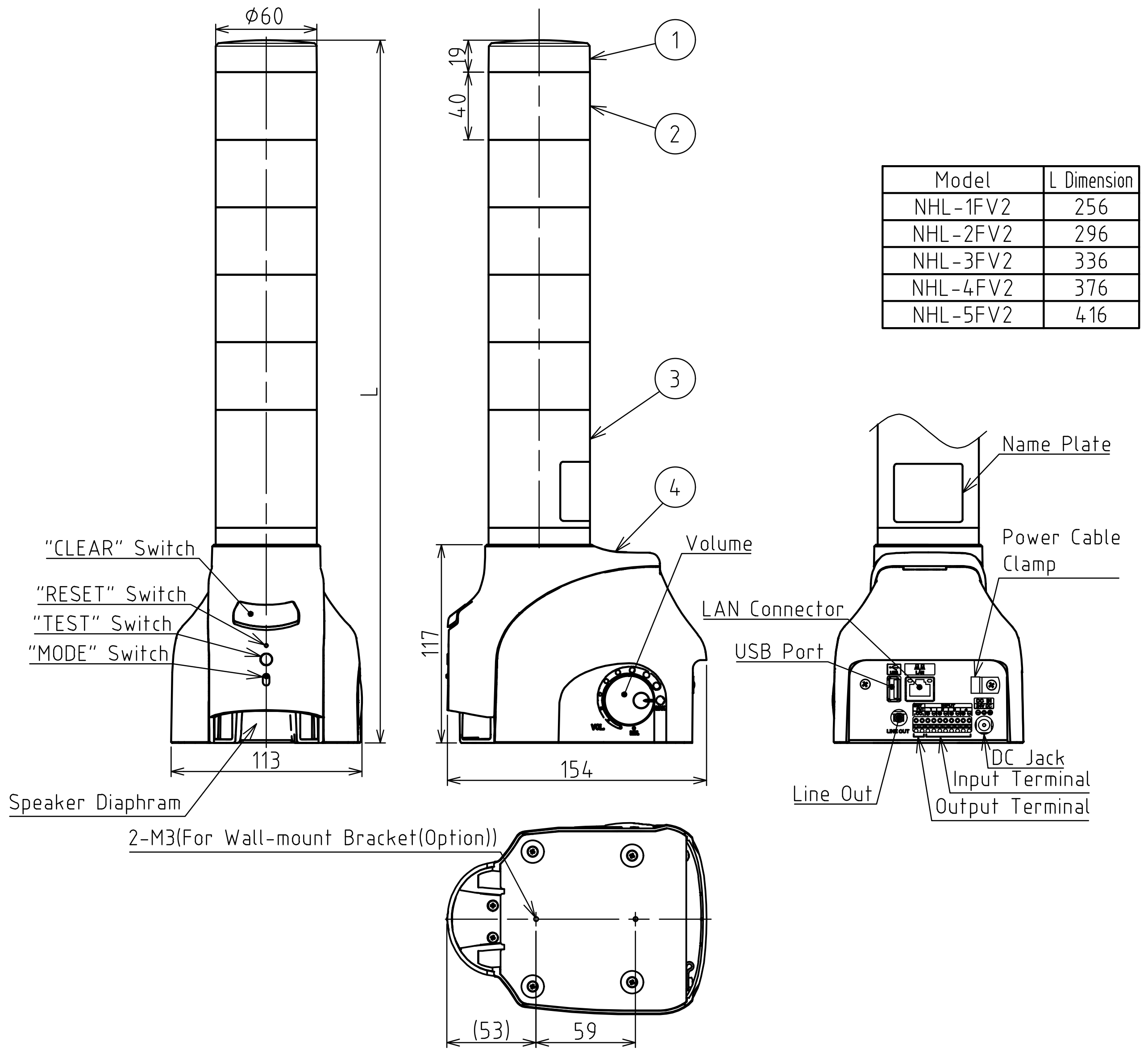
短辺長さ Length of short side		~10	~50	~100	100~
精	f	1	0.5	0.3	0.1
粗	v	3	1.5	1	0.5

寸法公差 Dimensional tolerance ±[mm]

		~6	~30	~120	~300	~1000
精	f	0.05	0.1	0.2	0.4	0.6
中	m	0.1	0.3	0.5	0.7	1
粗	c	0.3	0.5	1	1.2	2

図番 Drawing No.
NHL-5FV2-W18

改訂 Rev.	年 月 日 Date	改 訂 履 歴 Revisions
G		



ϕ60
L
"CLEAR" Switch
"RESET" Switch
"TEST" Switch
"MODE" Switch
113
Speaker Diaphram
19
40
1
2
3
4
117
Volume
154
2-M3(For Wall-mount Bracket(Option))
(53)
59
Name Plate
Power Cable Clamp
LAN Connector
USB Port
DC Jack
Input Terminal
Output Terminal
Line Out

Model	L Dimension
NHL-1FV2	256
NHL-2FV2	296
NHL-3FV2	336
NHL-4FV2	376
NHL-5FV2	416

No.	Names	Material	Color
1	Head Cover	PC	Off-white
2	LED Unit	PC	Clear
3	Tower Body	PC	Off-white
4	Main Body	ABS	Off-white/Medium Gray

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Production end

番号 No.	部品名 Part Name	数量 Qty.	記事 Remarks

機種 Model	NHL-5FV2	特注No. S.P.No.	-
図名 Name	Outer Dimensions Drawing		
品目コード Part No.		尺度 Scale	
三角法 3rd Angle P.	単位 Unit mm	株式会社パトライト PATLITE Corporation	

指定外公差 General tolerance	角度公差 Angular tolerance ±[°]					寸法公差 Dimensional tolerance ±[mm]					
	短辺長さ Length of short side	~10	~50	~100	100~		~6	~30	~120	~300	~1000
						精 f	0.05	0.1	0.2	0.4	0.6
	精 f	1	0.5	0.3	0.1	中 m	0.1	0.3	0.5	0.7	1
	粗 v	3	1.5	1	0.5	粗 c	0.3	0.5	1	1.2	2

図番 Drawing No. NHL-5FV2-W18

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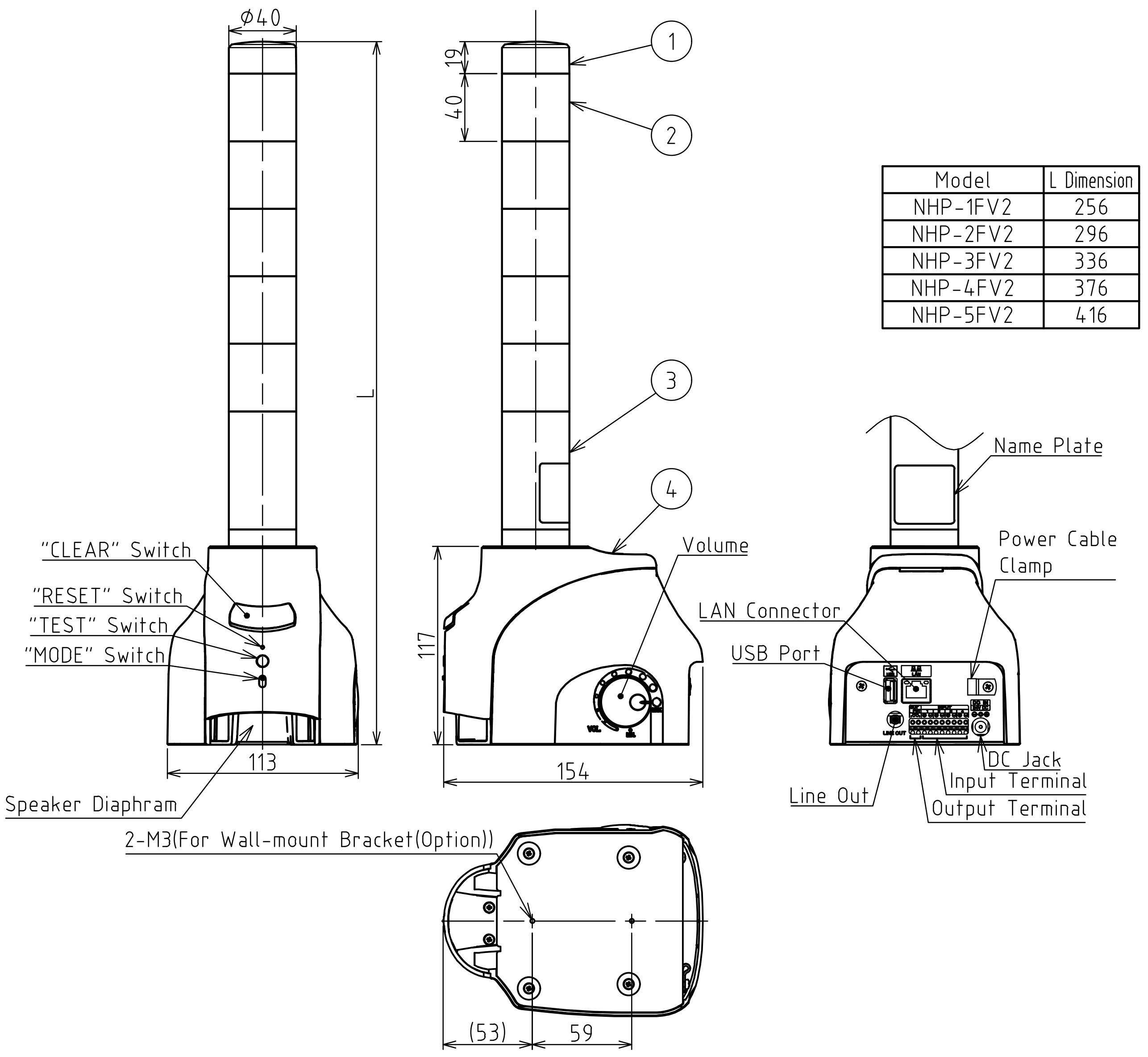

ϕ40
L
19
40
1
2
3
4
"CLEAR" Switch
"RESET" Switch
"TEST" Switch
"MODE" Switch
Speaker Diaphram
113
117
154
Volume
VOL
Name Plate
Power Cable Clamp
LAN Connector
USB Port
DC Jack
Input Terminal
Output Terminal
Line Out
2-M3(For Wall-mount Bracket(Option))
(53)
59

Model	L Dimension
NHP-1FV2	256
NHP-2FV2	296
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NHP-4FV2	376
NHP-5FV2	416

No.	Names	Material	Color
1	Head Cover	PC	Off-white
2	LED Unit	PC	Clear
3	Tower Body	PC	Off-white
4	Main Body	ABS	Off-white/Medium Gray

生産終了
Production end

番号 No.	部品名 Part Name	数量 Qty.	記事 Remarks

機種 Model	NHP-5FV2	特注No. S.P.No.	-
図名 Name	Outer Dimensions Drawing		
品目コード Part No.		尺度 Scale	
三角法 3rd Angle P.	単位 Unit mm	株式会社パトライト PATLITE Corporation	

指定外公差 General tolerance

角度公差 Angular tolerance ±[°]

短辺長さ Length of short side		～10	～50	～100	100～
精	f	1	0.5	0.3	0.1
粗	v	3	1.5	1	0.5

寸法公差 Dimensional tolerance ±[mm]

		～6	～30	～120	～300	～1000
精	f	0.05	0.1	0.2	0.4	0.6
中	m	0.1	0.3	0.5	0.7	1
粗	c	0.3	0.5	1	1.2	2

図番 Drawing No.

NHL-5FV2-W18

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改訂 Rev.	年月日 Date	改訂履歴 Revisions
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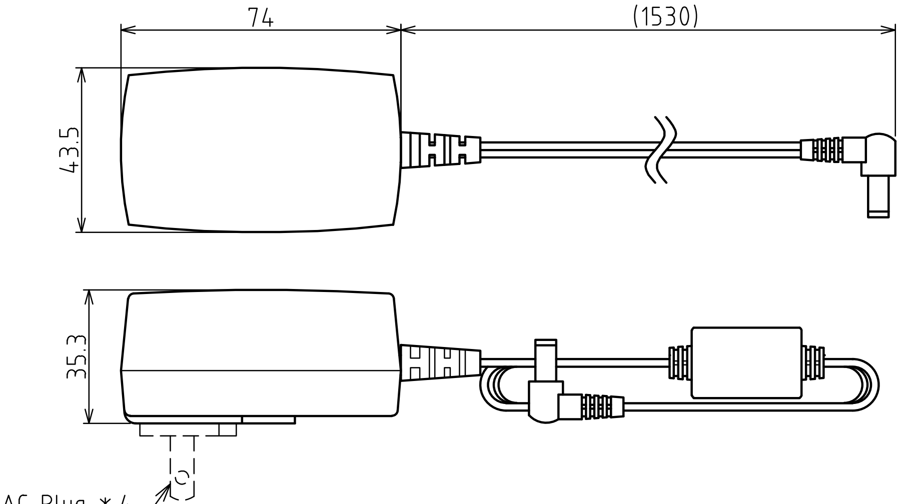
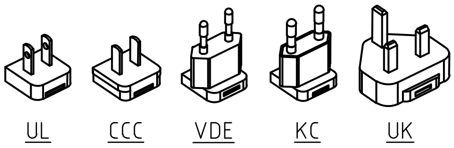


AC Adaptor(Dimensions)

＊4

Model(AC Adaptor)	AC Plug
None	Replacement Plug [UL] is attached
W	Replacement Plug [UL][VDE][UK][CCC][KC] included
N	AC Adaptor not included



Replacement Plug

生産終了
Production end

番号 No.	部品名 Part Name	数量 Qty.	記事 Remarks

機種 Model	特注No. S.P.No. –	図名 Name Outer Dimensions Drawing

品目コード Part No.	尺度 Scale	三角法 3rd Angle P.	単位 Unit mm	株式会社パトライト PATLITE Corporation