







Hybrid Signal Lights & Towers

Page number	Page 157					
Model Name	MP3 Voice Annunciator with LED Signal Tower			Audible Alarm with LED Signal Tower		
Model	LKEH-FV			LKEH-F□		
Product image						
Rated Voltage	24V DC	100V AC	220V AC	24V DC	100V AC	220V AC
Size (mm)	∅ 100			∅ 100		
IP	53			53		
Sound pressure dB (at 1m)	105			105		
Body	AES			AES		
Globe	Polycarbonate			Polycarbonate		
Light Source	LED			LED		
Unit Structure	○			○		
Terminal Block						
Synthetic Sound	MP3					
Electronic sound				○		
Message	Bit input 5/binary input 31					
Tone				Bit input 8/binary input 32		
Sound Reduction	○			○		
Open collector	NPN			NPN		
CE Marking	○			○		
RoHS	○			○		
UL standards	○ (LKEH-FVUL) 24V DC only			○ (LKEH-F□UL) 24V DC		
Other characteristics	Enabled for SDV-2GP			only		

Page number	Page 164			Page 166			Page 168		
Model Name	Audible Cube Tower			Audible Alarm with LED Revolving Warning Light			MP3 Voice Annunciator with LED Revolving Warning Light		
Model	KJT			RFT			RFV		
Product image									
Rated Voltage	24V DC	100V AC	200V AC	24V DC	100V AC	220V AC	24V DC	100V AC	220V AC
Size (mm)	□116			□115			□115		
IP	23			54			54		
Sound pressure dB (at 1m)	90 *1			90			95		
Body	ABS			ABS			ABS		
Globe	Acrylic			Polycarbonate			Polycarbonate		
Light Source	Bulb			LED			LED		
Unit Structure									
Terminal Block									
Synthetic Sound							MP3		
Electronic sound	○			○					
Message							Bit input 4/binary input 15		
Tone	Bit input 8/binary input 32			Bit input 8/binary input 32					
Sound Reduction				○ *2			○		
Open collector	NPN			NPN			NPN		
CE Marking				○			○		
RoHS				○			○		
UL standards									
Other characteristics							Enabled for SDV-2GP		

*1 24V specifications 90dB (at 1m) 100V, 200V specifications 85dB (at 1m) *2 When using binary input

Page number	Page 160			Page 162		
Model Name	Horn Speaker Audible Alarm with Revolving Warning Light			Horn Speaker Audible Alarm with Revolving Warning Light		
Model	RT-A/C/D/E			RT-VF		
Product image						
Rated Voltage	24V DC	100V AC	200V AC	24V DC	100V AC	200V AC
Size (mm)	ϕ 162			ϕ 162		
IP	23			23		
Sound pressure dB (at 1m)	105			105		
Body	ABS			ABS		
Globe	AS			AS		
Light Source	Bulb			Bulb		
Unit Structure						
Terminal Block						
Synthetic Sound				MP3		
Electronic sound	○					
Message				Bit input 4/binary input 15		
Tone	Bit input 8/binary input 32					
Sound Reduction						
Open collector	NPN			NPN		
CE Marking						
RoHS						
UL standards				○ (RT-VFUL)		
Other characteristics				Enabled for SDV-2GP		

Network

Signal Tower

Signal Light

Revolving Warning Light

Cube Tower

Audibles

Hybrid Signaling Devices

LED Illumination

Options

LKEH



Voice type LKEH-FV



- 63-second (at 64kbits/s) playback capacity with 5 channels with bit input or 31 channels with binary
- Field programmable with an SD card (SDV-2GP recommended, sold separately)
- SD card can be used to freely arrange messages in groups
- Easily accessible DIP switch to select binary or bit input and testing recorded messages

Table of tones (sound type LKEH-F□)

Type A			
Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter & Bell	Synthesized Melody	Chime	Call Sign
Fur Elise	A Maiden's Prayer	Minuet in Gmjr	Annie Laurie
London bridge is falling down	Holdiridia	Mary had a little Lamb	Camptown Races
Cuckoo Song	Village Blacksmith	On the Avignon Bridge	Daydream Believer
Amaryllis	Mozart Symphony No.40	Quiet Lakeside	Mountain Musician
Spanish Romance	Katyusha	Grandfather's Clock	Ave Maria

Type D			
Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Runner	Mamotte Agetai	Chime	Call Sign
While listening to Olivia	September	Douyobi no Koibito	Aki no Kihai
Surf Tengoku, Ski Tengoku	Iro, White Blend	Happy Birthday	Hi Ho
I've been working on the Railroad	The Bear Song	Toys Go Cha-Cha-Cha	Konnako Irukana
Shubert's Lullaby	Rudolph the Red-nosed Reindeer	She Wore a Yellow Ribbon	My Darling Clementine
Yellow Rose of Texas	Yankee Doodle	When the Saints Go Marching In	Londonderry Aire

- Colors Red, Amber, Green, Blue, White
- Globe Uses shock-resistant polycarbonate resin.

The LKEH Series features a 100mm diameter signal tower, programmable voice signaling, with a 105dB horn for highly effective signaling.

- Ultra-bright, maintenance-free LEDs
- Up to 105dB sound output at 1m
- Vibration resistant up to 2G
- Message capacity up to 64 seconds with 5 channel bit input or 31 channel binary input
- IP53 protection rating
- Built-in sound reduction feature for quieter environments
- NPN/PNP compatible



Sound type LKEH-F□



- 32 built-in sounds where 8 can be accessed with bit input and 32 with binary
- SD card can be used to freely arrange sounds into groups (SDV-2GP recommended, sold separately)
- Easily accessible DIP switch to select binary or bit input and testing built-in sounds

Type C			
Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter & Bell	Synthesized Melody	Chime	Call Sign
Can't take my eyes off of You	Top of the World	The Entertainer	Amazing Grace
Maiden with the flaxen hair	Aux Champs-Elysees	Canon	La-la Sunshine
Space Battleship Yamato	Oshiete	Makenai de	Theme Song
I Don't Want to Miss a Thing	Yozora no Mukou	Ai wa Katsu	Truth
Guts Daze!!	Odoru Ponpokorin	Ima sugu Kiss Me	Haru yo, Koi

Type E			
Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter & Bell	Synthesized Melody	Chime	Call Sign
Bee-boh sound	Galloping Hi-Lo	Alien Chatter	Falling Crystals
Inverted Reveille x3	Galactic Motor	Ringin Phone	Two Tone
Alarm Clock	Ringin Hi-Lo	Fur Elise	Minuet in Gmjr
Annie Laurie	London bridge is falling down	Mary had a little Lamb	Camptown Races
Amaryllis	Mozart Symphony No.40	Ave Maria	Grandfather's Clock

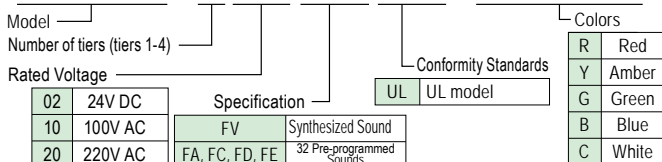


- Bit input → plays 8 sounds (see instruction manual for 8 sound grouping) Binary input → plays 32 sounds
- Alarm tones are denoted in characters for convenience' sake. Please inquire about actual tones or check our website for more details.

Use of Copyrighted Material
 PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded for Type-A, Type-C and Type-D melody charts outside of Japan. Therefore, contact the local copyright association for permission before using the product outside Japan.

Model Code

LKEH-402FVUL-RYGB



Optional Parts

For details, see pages 182 to 187.

Optional Parts	Model
Wallmount Bracket	SZ-023
Wallmount Bracket	SZ-008
SD card (2GB)	SDV-2GP

- The following custom specifications are available.
- PNP open corrector specifications

Specifications

Colors not listed in stock products, and any products other than stock products are made-to-order.

LKEH-FV specifications

(Number of flashes...about 60/min)											
	Model	Rated Voltage	Operating Voltage Range	Number of tiers	Power Consumption	Sound Pressure Level	Audio File	Operating temperature range	Maximum Seconds of Playback	Number of messages	Mass
Voice type	LKEH-102FV	24V DC	24V DC±10%	1	10.6W	Maximum 105 dB (at 1m)	MPEG1-AudioLayer III (MP3)Standard bitrate : 64kbit/s, Fs=44.1kHz	-10°C to +50°C (humidity 85% or less)	63 s	5 (bit input) 31(binary input)	1.4kg
	LKEH-202FV			2	12.4W						1.6kg
	LKEH-302FV			3	14.2W						1.8kg
	LKEH-402FV			4	16.0W						2.0kg
	LKEH-110FV	100V AC	100V AC±10%	1	17W						2.1kg
	LKEH-210FV			2	20W						2.3kg
	LKEH-310FV			3	23W						2.5kg
	LKEH-410FV			4	26W						2.7kg
	LKEH-120FV	220V AC	220V AC±10%	1	17W						2.1kg
	LKEH-220FV			2	20W						2.3kg
	LKEH-320FV			3	23W						2.5kg
	LKEH-420FV			4	26W						2.7kg

(Note) The indicated sound pressure level is the maximum volume (synthetic sound type: sine wave (1KHz)) and the actual level may be lower than the indicated sound pressure level due to message content, tone, and voltage fluctuations.*When using multiple units, there may be variation in the playback sound even when started simultaneously with the tone and voice. This product is not for mounting on a vehicle.

LKEH-FVUL specifications (UL certified model)

(Number of flashes...about 60/min)											
	Model	Rated Voltage	Operating Voltage Range	Number of tiers	Power Consumption	Sound Pressure Level	Audio File	Operating temperature range	Maximum Seconds of Playback	Number of messages	Mass
Voice type	LKEH-102FVUL	24V DC	24V DC±10%	1	10.6W	Maximum 105 dB (at 1m)	MPEG1-AudioLayer III (MP3)Standard bitrate : 64kbit/s, Fs=44.1kHz	-10°C to +50°C (humidity 85% or less)	63 s	5 (bit input) 31 (binary input)	1.4kg
	LKEH-202FVUL			2	12.4W						1.6kg
	LKEH-302FVUL			3	14.2W						1.8kg
	LKEH-402FVUL			4	16.0W						2.0kg

(Note) The indicated sound pressure level is the maximum volume (synthetic sound type: sine wave (1KHz)) and the actual level may be lower than the indicated sound pressure level due to message content, tone, and voltage fluctuations.*When using multiple units, there may be variation in the playback sound even when started simultaneously with the tone and voice. This product is not for mounting on a vehicle.

LKEH-F□ specifications

(Number of flashes...about 60/min)									
	Model	Rated Voltage	Operating Voltage Range	Number of tiers	Power Consumption	Sound Pressure Level	Operating temperature range	Playback Channel	Mass
Sound type	LKEH-102FA	24V DC	24V DC±10%	1	10.6W	Maximum 105 dB (at 1m)	-10°C to +50°C (humidity 85% or less)	8 (bit input) 32 (binary input)	1.4kg
	LKEH-202FA			2	12.4W				1.6kg
	LKEH-302FA			3	14.2W				1.8kg
	LKEH-402FA			4	16W				2.0kg
	LKEH-110FA	100V AC	100V AC±10%	1	17W				2.1kg
	LKEH-210FA			2	20W				2.3kg
	LKEH-310FA			3	23W				2.5kg
	LKEH-410FA			4	26W				2.7kg
	LKEH-120FA	220V AC	220V AC±10%	1	17W				2.1kg
	LKEH-220FA			2	20W				2.3kg
	LKEH-320FA			3	23W				2.5kg
	LKEH-420FA			4	26W				2.7kg

*Changes the sound pressure level based on tones, use environment, and working voltage.

*When using multiple units, there may be variation in the playback sound even when started simultaneously with the tone. This product is not for mounting on a vehicle.

LKEH-FVUL specifications (UL certified model)

(Number of flashes...about 60/min)									
	Model	Rated Voltage	Operating Voltage Range	Number of tiers	Power Consumption	Sound Pressure Level	Operating temperature range	Playback Channel	Mass
Sound type	LKEH-102FAUL/FCUL/FDUL/FEUL	24V DC	24V DC±10%	1	10.6W	Maximum 105 dB (at 1m)	-10°C to +50°C (humidity 85% or less)	8 (bit input) 32 (binary input)	1.4kg
	LKEH-202FAUL/FCUL/FDUL/FEUL			2	12.4W				1.6kg
	LKEH-302FAUL/FCUL/FDUL/FEUL			3	14.2W				1.8kg
	LKEH-402FAUL/FCUL/FDUL/FEUL			4	16W				2.0kg

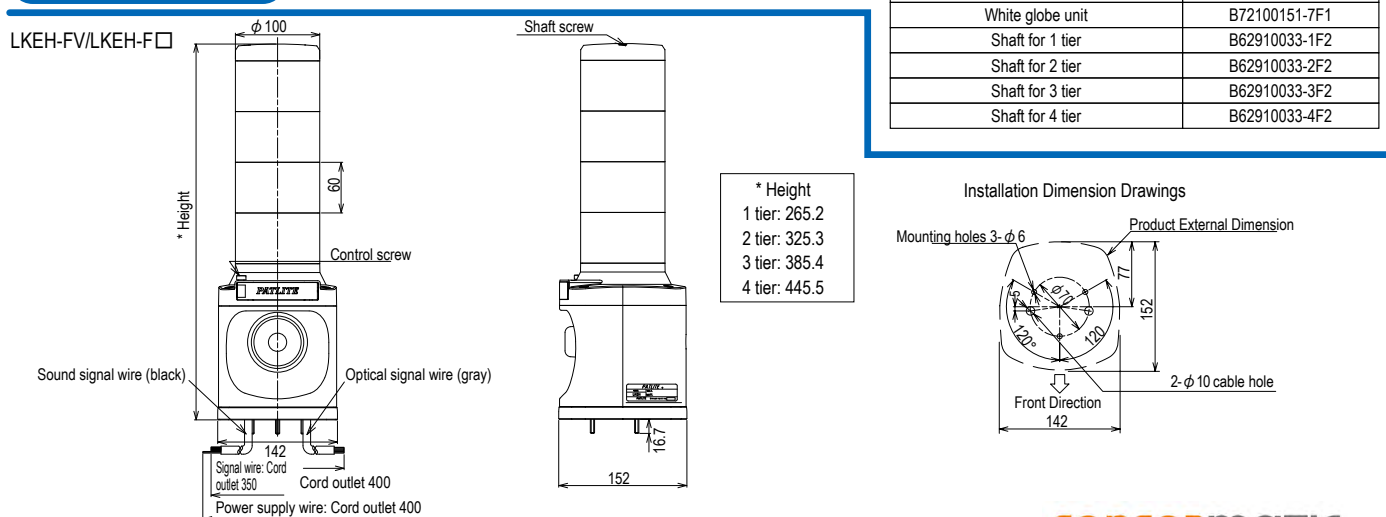
*Changes the sound pressure level based on tones, use environment, and working voltage.

*When using multiple units, there may be variation in the playback sound even when started simultaneously with the tone. This product is not for mounting on a vehicle.

Replacement Parts for Changing Colors

Replacement Parts	Part Number
Red globe unit	B72100151-1F1
Amber globe unit	B72100151-2F1
Green globe unit	B72100151-3F1
Blue globe unit	B72100151-4F1
White globe unit	B72100151-7F1
Shaft for 1 tier	B62910033-1F2
Shaft for 2 tier	B62910033-2F2
Shaft for 3 tier	B62910033-3F2
Shaft for 4 tier	B62910033-4F2

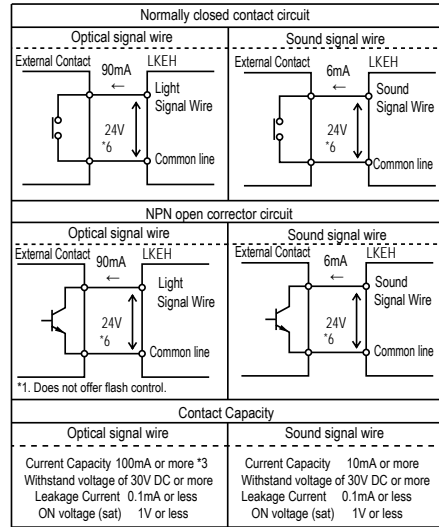
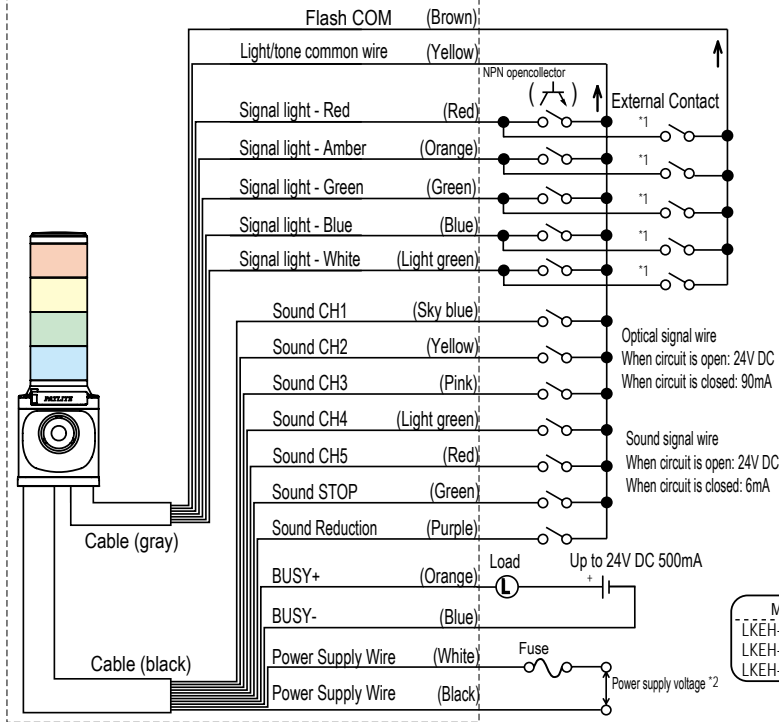
Dimensions (mm)



Wiring Diagram

LKEH-FV type

• Use a normally closed contact circuit such as a relay switch, or an open collector circuit (NPN type) for the external contact on the signal wire. See the table below for circuit and contact capacity.



Model	Rated Voltage	Inrush current *4	Fuse capacity *5
LKEH-□02FV	24V DC	10A	2A (normal)
LKEH-□10FV	100V AC	12A	0.5A (time lag)
LKEH-□20FV	220V AC	6A	0.5A (normal)

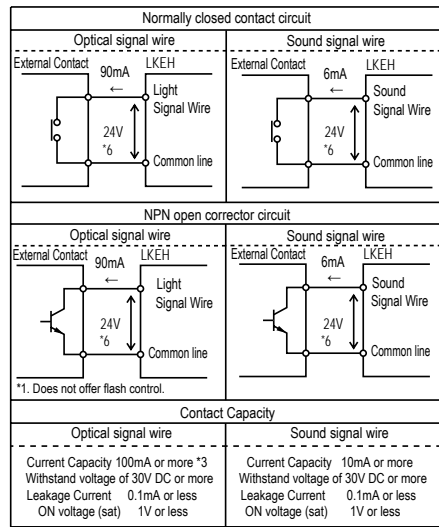
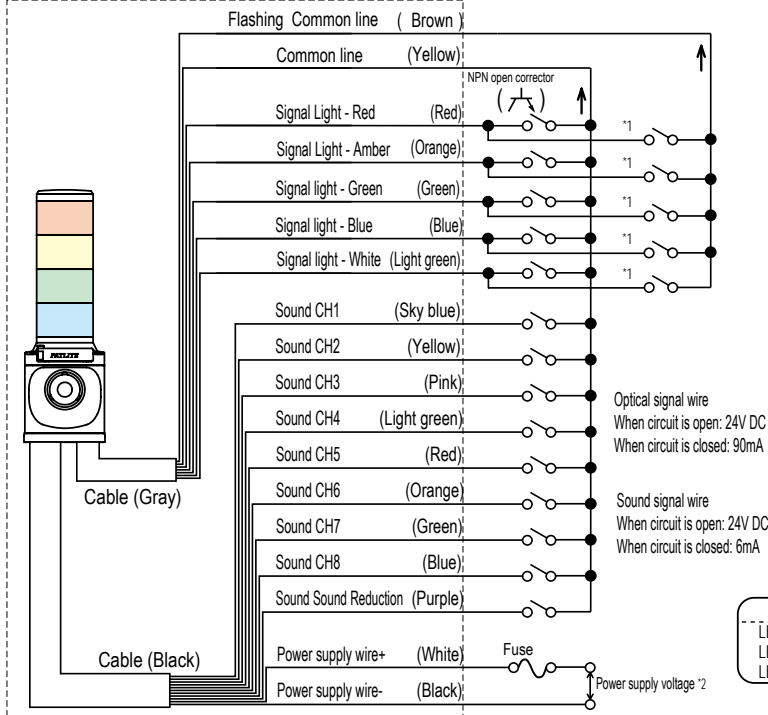
*Do not apply voltage to each wire. This may damage the product.

- *1. Flashing control is for non-voltage contact circuit applications only.
- *2. For the LKEH- □ 02FV, connect the Power Supply (Black) to the negative terminal. For the LKEH- □ 02UL (UL Standard), connect to a Class 2 power supply.
- *3. Indicates the rated contact capacity per LED light unit.
- *4. Rated at maximum operating voltage when power is first switched on.
- *5. Use a slow-blow fuse for the LKEH- □ 10FV. If a fast-blow type is used, there is a risk of blowing the fuse from the inrush current.
- *6. Indicates the supply voltage of the LKEH-□02FV.

- When using multiple units, there may be variation in voice playback and flash cycle even when the power supply or signal wire is entered simultaneously.
- Do not short circuit the sound and signal light wire together to the flash common wire. Sound and voice will not play properly.
- Do not connect the common wire to the flash common wire. The signal light unit will stop flashing normally.

LKEH-F□type

• Use a normally closed contact circuit such as a relay switch, or an open collector circuit (NPN type) for the external contact on the signal wire. See the table below for circuit and contact capacity.



Model	Rated Voltage	Inrush current *4	Fuse capacity *5
LKEH-□02	24V DC	10A	2A (normal)
LKEH-□10	100V AC	12A	0.5A (time lag)
LKEH-□20	220V AC	6A	0.5A (normal)

*Do not apply voltage to each wire. This may damage the product.

- *1. Flashing control is for non-voltage contact circuit applications only.
- *2. For the LKEH- □ 02, connect the Power Supply (Black) to the negative terminal. For the LKEH- □ 02UL (UL Standard), connect to a Class 2 power supply.
- *3. Indicates the rated contact capacity per LED light unit.
- *4. Rated at maximum operating voltage when power is first switched on.
- *5. Use a slow-blow fuse for the LKEH- □ 10. If a fast-blow type is used, there is a risk of blowing the fuse from the inrush current.
- *6. Indicates the supply voltage of the LKEH-□02.

- When using multiple units, there may be variation in toneplayback and flash cycle even when the power supply or signal wire is entered simultaneously.
- Do not short circuit the sound and signal light wire together to the flash common wire. Sound and voice will not play properly.
- Do not connect the common wire to the flash common wire. The signal light unit will stop flashing normally.

RT-A/C/D/E



Sound pressure 105dB
IP23
162φ

Colors Red, Amber, Green, Blue

Globe Acrylic resin with superior weather resistance and translucency.

The RT Series features a 162mm diameter rotating incandescent light, pre-loaded alarm sounds, with a 105dB horn for highly effective signaling.

- Comes pre-loaded with 32 tone and alarm sounds
- High weather resistance for outdoor use
- Up to 105dB sound output at 1m
- IP65 rating for dust and water resistance (Available by special order)
- Easily accessible volume control
- Comes in multiple voltages
- NPN compatible

Table of tones

RT-A/C/D/E type

Electronic sound

- 32 built-in tones available in four sets: A, C, D and E
- Selector switch to playback 8 sounds with bit input method or 32 sounds with binary.

Type A

Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter & Bell	Synthesized Melody	Chime	Call Sign
Fur Elise	A Maiden's Prayer	Minuet in Gmjr	Annie Laurie
London bridge is falling down	Holdiridia	Mary had a little Lamb	Camptown Races
Cuckoo Song	Village Blacksmith	On the Avignon Bridge	Daydream Believer
Amaryllis	Mozart Symphony No.40	Quiet Lakeside	Mountain Musician
Spanish Romance	Katyusha	Grandfather's Clock	Ave Maria

Type C

Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter & Bell	Synthesized Melody	Chime	Call Sign
Cant take my eyes off of You	Top of the World	The Entertainer	Amazing Grace
Maiden with the flaxen hair	Aux Champs-Elysees	Canon	La-la Sunshine
Space Battleship Yamato	Oshiete	Makenai de	Theme Song
I Dont Want to Miss a Thing	Yozora no Mukou	Ai wa Katsu	Truth
Guts Daze!!	Odoru Ponpokorin	Ima sugu Kiss Me	Haru yo, Koi

Type D

Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Runner	Mamotte Agetai	Chime	Call Sign
While listening to Olivia	September	Douyobi no Koibito	Aki no Kihai
Surf Tengoku, Ski Tengoku	Iro, White Blend	Happy Birthday	Hi Ho
I've been working on the Railroad	The Bear Song	Toys Go Cha-Cha-Cha	Konnako Irukana
Shubert's Lullaby	Rudolph the Red-nosed Reindeer	She Wore a Yellow Ribbon	My Darling Clementine
Yellow Rose of Texas	Yankee Doodle	When the Saints Go Marching In	Londonderry Aire

Type E

Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter & Bell	Synthesized Melody	Chime	Call Sign
Bee-boh sound	Galloping Hi-Lo	Alien Chatter	Falling Crystals
Inverted Reveille x3	Galactic Motor	Ringing Phone	Two Tone
Alarm Clock	Ringing Hi-Lo	Fur Elise	Minuet in Gmjr
Annie Laurie	London bridge is falling down	Mary had a little Lamb	Camptown Races
Amaryllis	Mozart Symphony No.40	Ave Maria	Grandfather's Clock

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- Bit input → plays 8 sounds (see instruction manual for 8 sound grouping) Binary input → plays 32 sounds
- Alarm tones are denoted in characters for convenience. Please inquire about actual tones or check our website for more details.

Specifications

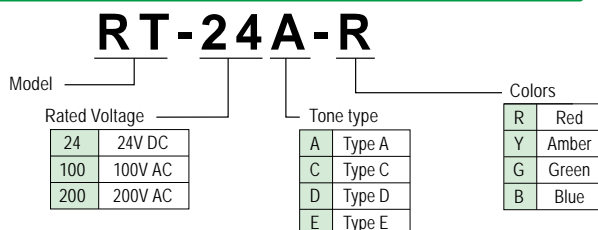
Model	Rated Voltage	Operating Voltage Range	Power Consumption	Bulb		Number of flashes	Sound Pressure Level	External Contact Capacity	Operating Temperature Range	Contact Input Method	Playback Channel	Protection Rating	Quality
				Number									
RT-24A-R/Y	24V DC	21 - 27V DC	24W	24V 20W	55	115/minute	Maximum 105dB (at 1m)	10mA or more	-20°C - +50°C (humidity 85% or less)	Normally closed contact input (1 bit per 9 points)	Bit input 8 Binary input 32	IP23	2.0kg
RT-100A-R/Y	100V AC	90 - 110V AC	32W	12V 15W	54	105/minute							2.5kg
RT-200A-R/Y	200V AC	180 - 240V AC	30W										95/minute

Bulb Shape: glass bulb G18 base BA15S

(Note) The indicated sound pressure level is at maximum volume and the actual level may be lower than the indicated sound pressure level due to tone and voltage fluctuations.

*When using multiple units, there may be variation in the playback sound even when started simultaneously.

Model Code



Optional Parts

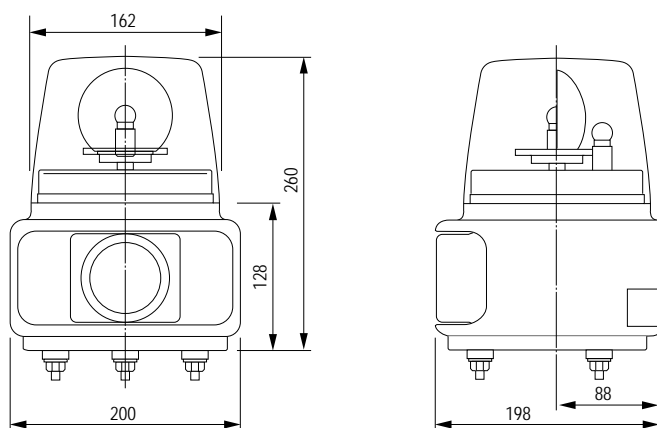
For details, see pages 182 to 187.

Optional Parts	Model
Wall Mount Bracket	SZ-023
Wall Mount Bracket	SZ-008

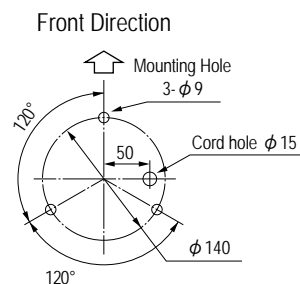
Light bulb No.	Model
54	D01201503-F1
55	D02402003-F1

*Light bulbs come in packs of 10.
*Stock for some light bulbs may be limited, as products become discontinued. We ask for your understanding in this regard.

Dimensions (mm)

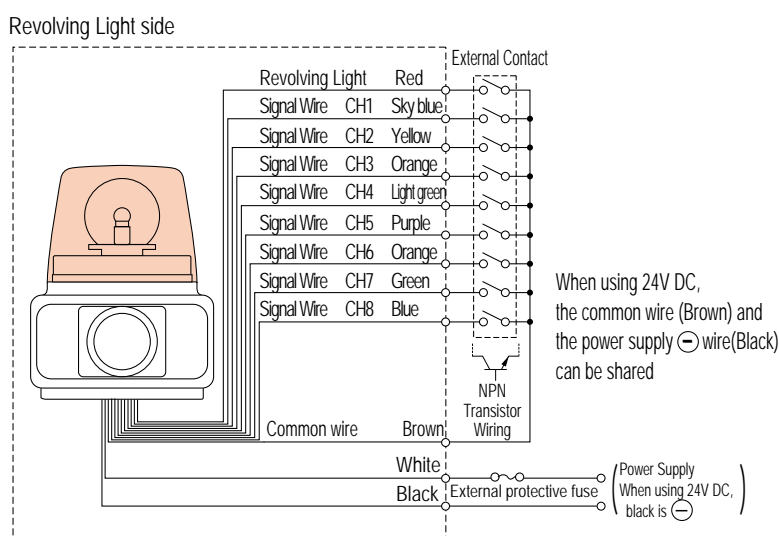


Installation Dimension Drawings



Wiring Diagram

RT-A/C/D/E types



Channel Priority

CH8 (Blue) > CH7 (Green) > CH6 (Orange) > CH5 (Purple) > CH4 (Light green) > CH3 (Pink) > CH2 (Yellow) > CH1 (Sky blue)
 *If multiple signals are input simultaneously, it will prioritize the channel with the highest number.

Model	Inrush Current	Fuse
RT-24	Maximum 10A/20ms	250V 2A
RT-100	None	250V 0.5A
RT-200	None	250V 0.5A

Power supply voltage	RT-A/C/D/E
100V AC 200V AC	Revolving light, sound signal wire When circuit is open: DC18V When circuit is closed: maximum 6mA
24V DC	Revolving light, sound signal wire When circuit is open: 24V When circuit is closed: maximum 6mA

*Also connectable with an NPN open collector transistor.

RT-24 □

RT-100 □ / 200 □

Rated cross sectional area : Wire type : Wire length
 Power supply wire : 0.75mm² : CKVV : 320mm
 Signal wire : 0.3mm² : CKVV : 300mm

Power supply wire : 0.75mm² : VCTF : 320mm
 Signal wire : 0.3mm² : CKVV : 300mm

RT-VF



Colors Red, Amber, Green, Blue

Globe Acrylic resin with superior weather resistance and translucency.

RT-VF/VFUL

The RT-VF Series features a 162mm diameter rotating incandescent light, programmable voice signaling, with a 105dB horn for highly effective signaling.

- High weather resistance for outdoor use
- Up to 105dB sound output at 1m
- Message capacity up to 63 seconds with 5 channel bit input or 31 channel binary input
- Easily accessible volume control
- Comes in multiple voltages
- NPN compatible

Simple message registration with various tools



(UL specifications only)

Specifications

RT-VF specifications

Model	Rated Voltage	Operating Voltage Range	Power Consumption	Bulb		Number of flashes	Sound Pressure Level	External Contact Capacity	Operating Temperature Range	Contact Input Method	Playback Channel	Protection Rating	Quality
				Number	W								
RT-24VF	24V DC	21 - 27V DC	24W	24V 20W	55	115/minute	Maximum 105dB (at 1m)	10mA or more	-10 °C to +50 °C (humidity 85% or less)	Normally closed contact input (1 bit per 6 points)	Bit input: 4 Binary input: 15 When using sound reduction mode Bit input: 3 Binary input: 7	IP23	2.0kg
RT-100VF	100V AC	90 - 110V AC	32W	12V 15W	54	105/minute							2.4kg
RT-200VF	200V AC	180 - 240V AC	30W		95/minute								

Bulb Shape ··· glass bulb G18 base BA15S

(Note) The indicated sound pressure level is the maximum volume (sine wave (1KHz)) and the actual level may be lower than the indicated sound pressure level due to message content, tone, and voltage fluctuations. *When using multiple units, there may be variation in the playback sound even when started simultaneously with the tone and voice.

RT-VFUL specifications (UL certified model)

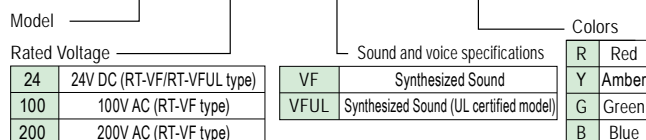
Model	Rated Voltage	Operating Voltage Range	Power Consumption	Bulb		Number of flashes	Sound Pressure Level	External Contact Capacity	Operating Temperature Range	Contact Input Method	Playback Channel	Protection Rating	Quality
				Number	W								
RT-24VFUL	24V DC	21 - 27V DC	24W	24V 20W	55	115/minute	Maximum 105dB (at 1m)	10mA or more	-10 °C to +50 °C (humidity 85% or less)	Normally closed contact input (1 bit per 6 points)	Bit input: 4 Binary input: 15 When using sound reduction mode Bit input: 3 Binary input: 7	IP23	2.0kg

Bulb Shape ··· glass bulb G18 base BA15S

(Note) The indicated sound pressure level is the maximum volume (sine wave (1KHz)) and simultaneously indicated sound pressure level due to message content, tone, and voltage fluctuations. *When using multiple units, there may be variation in the playback sound even when started simultaneously with the tone and voice.

Model Code

RT-24VFUL-R



Optional Parts

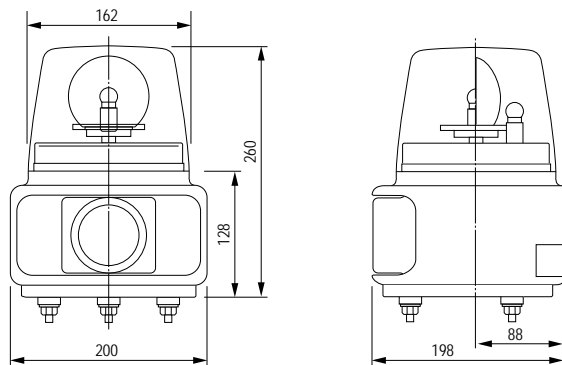
For details, see pages 182 to 187.

Optional Parts	Model
Wall Mount Bracket	SZ-023
Wall Mount Bracket	SZ-008
SD card (2GB)	SDV-2GP

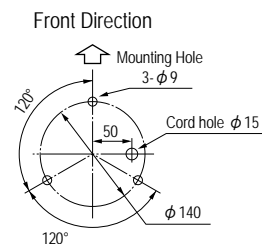
Light bulb No.	Model
54	D01201503-F1
55	D02402003-F1

*Light bulbs come in packs of 10.
*Stock for some light bulbs may be limited, as products become discontinued. We ask for your understanding in this regard.

Dimensions (mm)

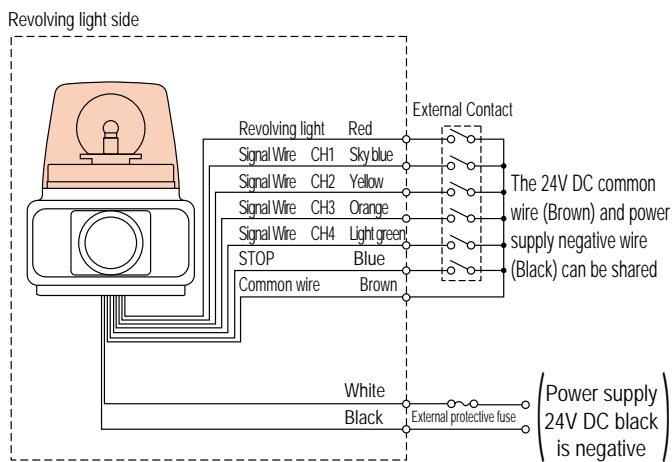


Installation Dimension Drawings



Wiring Diagram

RT-VF/VFUL



Channel Priority

STOP (Blue) > CH4 (Light green) > CH3 (Orange) > CH2 (Yellow) > CH1 (Sky blue)

*If multiple signals are input simultaneously, it will prioritize the channel with the highest number.

The beginning of the message may be cut off when starting a message with the ON/OFF power supply switch.

Model	Fuse
RT-24VF	250V 2A
RT-100VF	250V 0.5A
RT-200VF	250V 0.5A

Power supply voltage	RT-VF
100V AC	When circuit is open: 18V
200V AC	When circuit is closed: 6mA
24V DC	When circuit is open: power supply voltage
	When circuit is closed: 6mA

*Also connectable with an NPN open collector transistor.

RT-24VF, RT-24VFUL

Rated cross-sectional area : Wire type : Wire length
 Power supply wire : 0.75mm² : CKVV : 320mm
 Signal wire : 0.3mm² : UL1007 : 300mm

RT-100VF, RT-200VF

Rated cross-sectional area : Wire type : Wire length
 Power supply wire : 0.75mm² : VCTF : 320mm
 Signal wire : 0.3mm² : CKVV : 300mm

Playback mode (-VF/-VFUL)

Select various playback modes based on their application.

A	Bit input mode	Plays back up to 4 messages using Channels 1 to 4.
B	Binary input mode	Plays back up to 15 messages using Channels 1 to 4.
C	Bit input sound reduction mode	Plays back up to 3 messages using Channels 1 to 3. When Channel 4 receives an input, the volume is reduced by about -10dB.
D	Binary input sound reduction mode	Plays back up to 7 messages using Channels 1 to 3. When Channel 4 receives an input, the volume is reduced by about -10dB.
E	Playback prioritizing bit input subsequent input Mode	Plays back up to 7 messages using Channels 1 to 3. If a message input occurs during playback of another message, the message will stop and allow the input message to play back.
F	Playback mode prioritizing binary input subsequent input	Plays back up to 15 messages using Channels 1 to 4. If a message input occurs during playback of another message, the message will stop and allow the input message to play back.
G	Bit input hold playback mode	Plays back up to 4 messages using Channels 1 to 4. As long as the input continues, the message keeps playing. Once the input is removed, the message playback stops.*
H	Binary input hold playback mode	Plays back up to 15 messages using Channels 1 to 4. As long as the input continues, the message keeps playing. Once the input is removed, the message playback stops.*
I	Test mode	Plays back Message No. 1

KJT



Colors Red, Amber, Green, Blue
Globe Uses acrylic resin with superior weather resistance and translucency.

The KJT Series features an 116mm width, a 90dB audible alarm, and comes in multiple voltages.

- Incandescent bulb light source type
- Up to 90dB audible alarm at 1m
- Easily accessible volume control
- Modular design for field customizing
- NPN compatible

*1 sound pressure maximum values: 24V models: 90dB (at 1m); 100V, 200V models 85dB (at 1m). Sound pressure values change, based on tones and surrounding environment.

Sound pressure 90dB (24V model) IP23 116 mm

- Standard Colors:
 - 1-Tier model / Red (-R), Amber (-Y), Green (-G)
 - 2-Tier model / Red-Amber (-RY), Red-Green (-RG)
 - 3-Tier model / Red-Amber-Green (-RYG)

Network

Signal Tower

Signal Light

Revolving Warning Light

Cube Tower

Audibles

Hybrid Signaling Devices

LED Illumination

Options

Table of tones

■ KJT-A/C/D/E type

Electronic sound

- We provide 32 built-in sounds per unit across 4 types: A, C, D, and E.
- Enabled to play 8 sounds with a bit input method and 32 sounds with a binary input method using selection switch settings.

Type A

Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter & Bell	Synthesized Melody	Chime	Call Sign
Fur Elise	A Maiden's Prayer	Minuet in Gmjr	Annie Laurie
London bridge is falling down	Holdiridia	Mary had a little Lamb	Campdown Races
Cuckoo Song	Village Blacksmith	On the Avignon Bridge	Daydream Believer
Amaryllis	Mozart Symphony No.40	Quiet Lakeside	Mountain Musician
Spanish Romance	Katyusha	Grandfather's Clock	Ave Maria

Type C

Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter & Bell	Synthesized Melody	Chime	Call Sign
Can't take my eyes off of You	Top of the World	The Entertainer	Amazing Grace
Maiden with the flaxen hair	Aux Champs-Elysees	Canon	La-la Sunshine
Space Battleship Yamato	Oshiete	Makenai de	Theme Song
I Don't Want to Miss a Thing	Yozora no Mukou	Ai wa Katsu	Truth
Guts Daze!!	Odoru Ponpokorin	Ima sugu Kiss Me	Haru yo, Koi

Type D

Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Runner	Mamotte Agetai	Chime	Call Sign
While listening to Olivia	September	Douyobi no Koibito	Aki no Kihai
Surf Tengoku, Ski Tengoku	Iro, White Blend	Happy Birthday	Hi Ho
I've been working on the Railroad	The Bear Song	Toys Go Cha-Cha-Cha	Konnako Irukana
Shubert's Lullaby	Rudolph the Red-nosed Reindeer	She Wore a Yellow Ribbon	My Darling Clementine
Yellow Rose of Texas	Yankee Doodle	When the Saints Go Marching In	Londonderry Aire

Type E

Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter & Bell	Synthesized Melody	Chime	Call Sign
Bee-boh sound	Galloping Hi-Lo	Alien Chatter	Falling Crystals
Inverted Reveille x3	Galactic Motor	Ringin Phone	Two Tone
Alarm Clock	Ringin Hi-Lo	Fur Elise	Minuet in Gmjr
Annie Laurie	London bridge is falling down	Mary had a little Lamb	Campdown Races
Amaryllis	Mozart Symphony No.40	Ave Maria	Grandfather's Clock

- Bit input → plays 8 sounds (see instruction manual for 8 sound grouping) Binary input → plays 32 sounds
- Alarm tones are denoted in characters for convenience' sake. Please inquire about actual tones or check our website for more details.

Use of Copyrighted Material

PATLITE Corporation has not applied for permission to use certain copyrighted music or songs recorded for Type-A, Type-C and Type-D melody charts outside of Japan. Therefore, please contact the local copyright association for permission before using the product in case this product is used outside of Japan. Melody chart Type-E is recommended for use outside of Japan as this playlist does not include copyrighted music or songs, and permission is not required.

Specifications

Model	Rated Voltage	Operating Voltage Range	Power Consumption	Bulb		Number of flashes	Sound Pressure Level	External Contact Capacity	Operating Temperature Range	Contact Input Method	Playback Channel	Protection Rating	Mass				
				Number													
1 tier KJT-102□ KJT-110□ KJT-120□	24V DC	21 - 27V DC	21W	24V 10W	10	120±30 /minute	Maximum 90dB (at 1m)	10mA or more	-20°C - +45°C (humidity 85% or less)	Normally closed contact input (1 bit per 9 points)	Bit input 8 Binary input 32	IP23	1.3kg				
	100V AC	90 - 110V AC	20W	12V 5W	12	120±20 /minute	Maximum 85dB (at 1m)						1.7kg				
	200V AC	180 - 240V AC	20W	12V 5W	12	120±20 /minute	Maximum 85dB (at 1m)						1.9kg				
2 tier KJT-202□ KJT-210□ KJT-220□	24V DC	21 - 27V DC	31W	24V 10W	10	120±30 /minute	Maximum 90dB (at 1m)			10mA or more	-20°C - +45°C (humidity 85% or less)	Normally closed contact input (1 bit per 10 points)	Bit input 8 Binary input 32	IP23	2.4kg		
	100V AC	90 - 110V AC	26W	12V 5W	12	120±20 /minute	Maximum 85dB (at 1m)								2.5kg		
	200V AC	180 - 240V AC	26W	12V 5W	12	120±20 /minute	Maximum 85dB (at 1m)								2.4kg		
3 tier KJT-302□ KJT-310□ KJT-320□	24V DC	21 - 27V DC	41W	24V 10W	10	120±30 /minute	Maximum 90dB (at 1m)					10mA or more	-20°C - +45°C (humidity 85% or less)	Normally closed contact input (1 bit per 11 points)	Bit input 8 Binary input 32	IP23	2.5kg
	100V AC	90 - 110V AC	32W	12V 5W	12	120±20 /minute	Maximum 85dB (at 1m)										3.0kg
	200V AC	180 - 240V AC	32W	12V 5W	12	120±20 /minute	Maximum 85dB (at 1m)										3.0kg

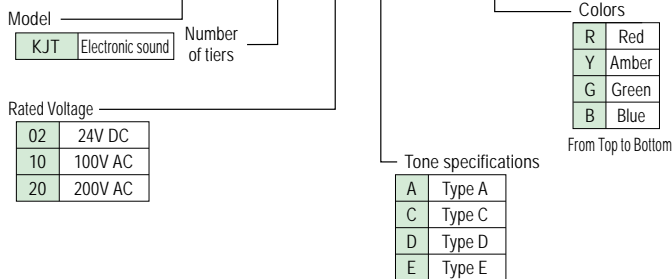
Bulb Shape... glass bulb G18 base BA15S

(Note) The indicated sound pressure level is at maximum volume and the actual level may be lower than the indicated sound pressure level due to tone and voltage fluctuations.

*When using multiple units, there may be variation in the playback sound even when started simultaneously with the tone.

Model Code

KJT-302A-RYG



Optional Parts

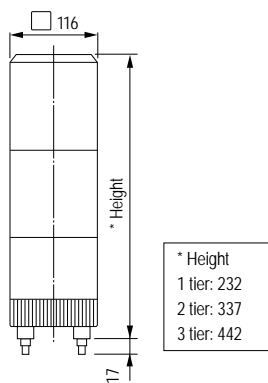
For details, see pages 182 to 187.

Optional Parts	Model
Wallmount Bracket	SZ-023
Wallmount Bracket	SZ-008

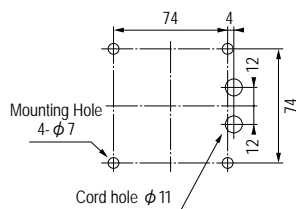
Light bulb No.	Model
10	D02401003A-F1
12	D01200503A-F1

*Light bulbs come in packs of 10.
*Stock for some light bulbs may be limited, as products become discontinued. We ask for your understanding in this regard.

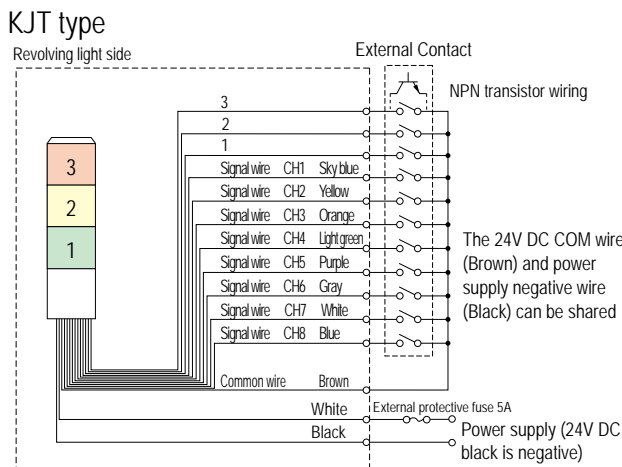
Dimensions (mm)



Installation Dimension Drawings



Wiring Diagram



Order of priority

CH8 (Blue) > CH7 (White) > CH6 (Gray) > CH5 (Purple) > CH4 (Light green) > CH3 (Pink) > CH2 (Yellow) > CH1 (Sky blue)

*If multiple signals are input simultaneously, it will prioritize the channel with the highest number.

Power supply voltage	KJT-AC/D/E
24V DC	Revolving light, sound signal wire When circuit is open: 24V When circuit is closed: 6mA

Nominal Cross-sectional Area : Wire Type : Wire Length
Power Supply Wire 0.75mm² : VCT : 330mm
Signal Wire 0.3mm² : UL1007 : 340mm

Revolving light signal wire classification table

Type	Wire Color		
	1	2	3
1-Tier model	Red R	—	—
2-Tier model	Orange O	Red R	—
3-Tier model	Green G	Orange O	Red R

RFT



Colors	Red, Amber, Green, Blue
Globe	Polycarbonate resin with superb shock and heat resistance

The RFT Series features a 100mm diameter rotating LED light, pre-loaded audible alarm sounds, with a 90dB horn for highly effective signaling.

- Efficient, maintenance-free LEDs
- Gear-method system for controlling light source and motor significantly increases product life
- High weather resistance for outdoor use
- Up to 90dB sound output at 1m
- 32 pre-loaded tone and alarm sounds
- IP54 protection rating
- Easily accessible volume control
- NPN compatible



Table of tones

32 Built-in Tones. Every unit has 32 tones built-in. Four built-in variations include RFT-A, RFT-C, RFT-D and RFT-E.

Type A

Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter & Bell	Synthesized Melody	Chime	Call Sign
Fur Elise	A Maiden's Prayer	Minuet in Gmjr	Annie Laurie
London bridge is falling down	Holdiridia	Mary had a little Lamb	Camptown Races
Cuckoo Song	Village Blacksmith	On the Avignon Bridge	Daydream Believer
Amaryllis	Mozart Symphony No.40	Quiet Lakeside	Mountain Musician
Spanish Romance	Katyusha	Grandfather's Clock	Ave Maria

Type C

Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter & Bell	Synthesized Melody	Chime	Call Sign
Can't take my eyes off of You	Top of the World	The Entertainer	Amazing Grace
Maiden with the flaxen hair	Aux Champs-Elysees	Canon	La-la Sunshine
Space Battleship Yamato	Oshiete	Makenai de	Theme Song
I Don't Want to Miss a Thing	Yozora no Mukou	Ai wa Katsu	Truth
Guts Daze!!	Odoru Ponpokorin	Ima sugu Kiss Me	Haru yo, Koi

Type D

Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Runner	Mamotte Agetai	Chime	Call Sign
While listening to Olivia	September	Douyobi no Koibito	Aki no Kihai
Surf Tengoku, Ski Tengoku	Iro, White Blend	Happy Birthday	Hi Ho
I've been working on the Railroad	The Bear Song	Toys Go Cha-Cha-Cha	Konnako Irukana
Shubert's Lullaby	Rudolph the Red-nosed Reindeer	She Wore a Yellow Ribbon	My Darling Clementine
Yellow Rose of Texas	Yankee Doodle	When the Saints Go Marching In	Londonderry Aire

Type E

Beep	Stutter	Bell	Yelp
Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
Stutter & Bell	Synthesized Melody	Chime	Call Sign
Bee-boh sound	Galloping Hi-Lo	Alien Chatter	Falling Crystals
Inverted Reveille x3	Galactic Motor	Ringling Phone	Two Tone
Alarm Clock	Ringling Hi-Lo	Fur Elise	Minuet in Gmjr
Annie Laurie	London bridge is falling down	Mary had a little Lamb	Camptown Races
Amaryllis	Mozart Symphony No.40	Ave Maria	Grandfather's Clock

Use of Copyrighted Material

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- Bit input →8 sound playback (See instruction manual for 8 sound grouping) Binary input →32 sound playback
- Alarm tones are denoted in characters for convenience. Please inquire about actual tones or check our website for more details.

Specifications

Model	Rated Voltage	Operating Voltage Range	Maximum power consumption	Sound Pressure Level	Channel input (number of playback tones)	Operating Temperature Range	Number of flashes	Mass
RFT-24	24V DC	24V DC ±10%	12W	Maximum 90dB (at 1m)	Bit input (8CH) Binary input (32CH)	-10 °C to +50 °C (humidity 85% or less)	115±15 /minute	1.0kg±10%
RFT-100A-R	100V AC	100V AC±10%	13W					1.2kg±10%
RFT-220	220V AC	220V AC±10%	13W					1.2kg±10%

(Note) The sound pressure level changes based on tone, use environment, and working voltage. *When using multiple units, there may be variation in the playback sound even when started simultaneously.

Network

Signal Tower

Signal Light

Revolving Warning Light

Cube Tower

Audibles

Hybrid Signaling Devices

LED Illumination

Options

Model Code

RFT-100A-R

Rated Voltage

24	24V DC
100	100V AC
220	220V AC

Tone specifications

A	Type A
C	Type C
D	Type D
E	Type E

Revolving light colors

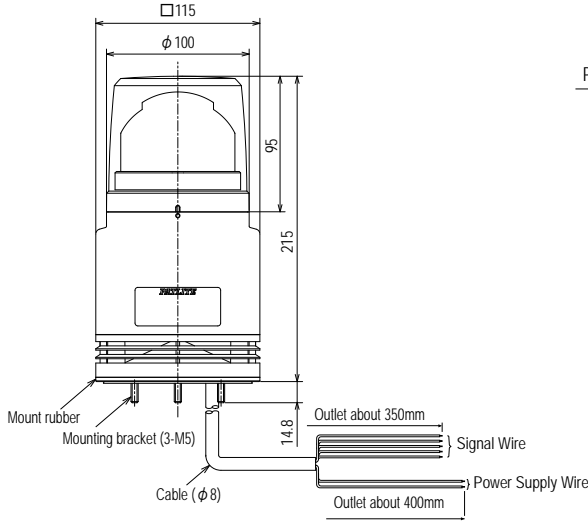
R	Red
Y	Amber
G	Green
B	Blue

Optional Parts

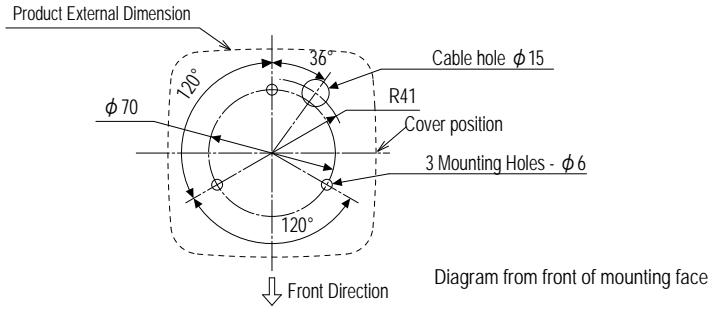
For details, see pages 182 to 187.

Optional Parts	Model
Wallmount Bracket	RF-001
Overhead mounting bracket	RF-002
SD card (2GB)	SDV-2GP

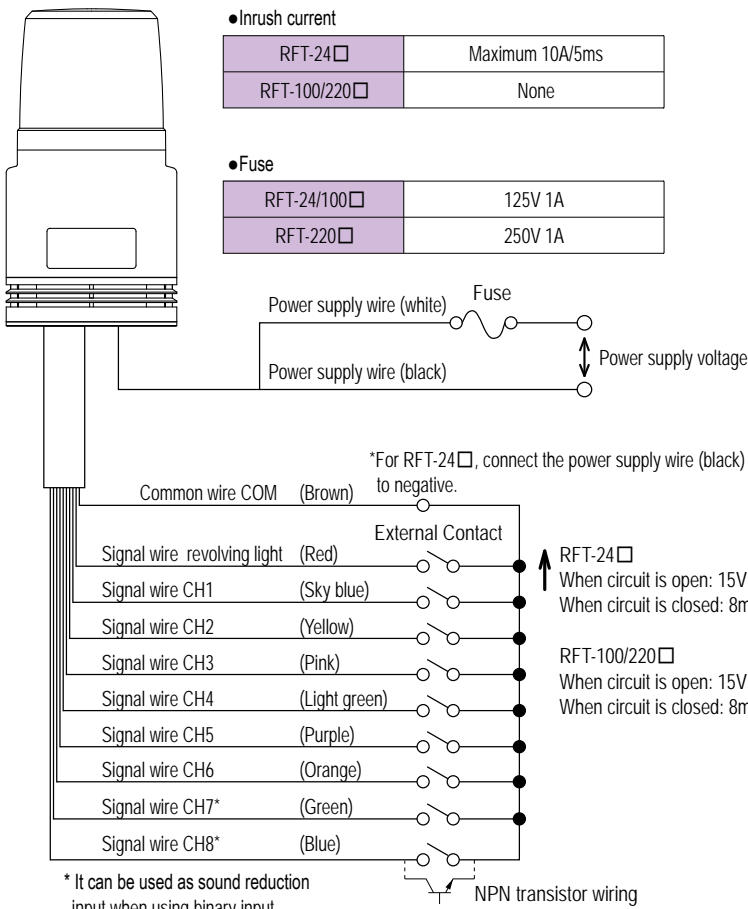
Dimensions (mm)



Installation Dimension Drawings

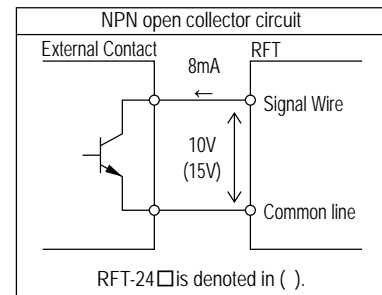
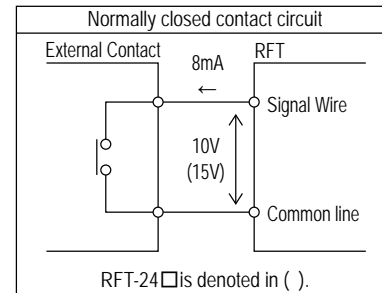


Wiring Diagram



* It can be used as sound reduction input when using binary input.

●The revolving light operates simultaneously when a tone is played back.



Contact Capacity	
Current Capacity	10mA or more
Withstand Voltage	20V DC or more
Leakage Current	0.1mA or less
ON voltage (Vsat)	1V or less

Nominal cross-sectional area : Wire type
 RFT-24: power supply wire : AWG18 : UL1061
 Signal wire : AWG22 : UL1061
 RFT-100/220: power supply wire : 0.75mm² : VSF
 Signal wire : AWG22 : UL1061

RFV



Colors	Red, Amber, Green, Blue
Globe	Polycarbonate resin with superb shock and heat resistance

The RFV Series features a 100mm diameter rotating LED light, pre-loaded audible alarm sounds, with a 90dB horn for highly effective signaling.

- Efficient, maintenance-free LEDs
- Gear-method system for controlling light source and motor significantly increases product life
- Message capacity up to 63 seconds with 4 channel bit input or 15 channel binary input
- High weather resistance for outdoor use
- Up to 90dB sound output at 1m
- Vibration resistant up to 4.5G
- IP54 protection rating
- Easily accessible volume control
- NPN compatible



Sound pressure 95dB
IP54
RoHS
CE
100φ

 (only 24V)

Specifications

Model	Rated Voltage	Operating Voltage Range	Power Consumption	Number of flashes	Sound Pressure Level	Audio File	Operating temperature range	Maximum Number of Playback Seconds	Number of messages	Protection Rating	Mass	Colors
RFV-24F	24V DC	24V DC ±10%	Maximum 18W	115±15 time/min	Maximum 95dB (at 1m)	MPEG1-Audio Layer 3 (MP3) Standard bitrate: 64kb/s, Fs=44.1kHz	-10 °C to +50 °C (humidity 85% or less)	63 s	4 (bit input) 15 (binary input)	IP54 (Mounted in the upright direction)	1.0kg±10%	R, Y G, B
RFV-100F	100V AC	100V AC ±10%	Maximum 16W									R, Y G, B
RFV-220F	220V AC	220V AC ±10%										R, Y G, B

(Note) The indicated sound pressure level is the maximum volume (synthetic sound type: sine wave (1KHz)) and the actual level may be lower than the indicated sound pressure level due to message content, tone, and voltage fluctuations. *When using multiple units, there may be variation in the playback sound even when started simultaneously with the tone and voice.

Model Code

RFV-100F-R

Rated Voltage

24	24V DC
100	100V AC
220	220V AC

Revolving light colors

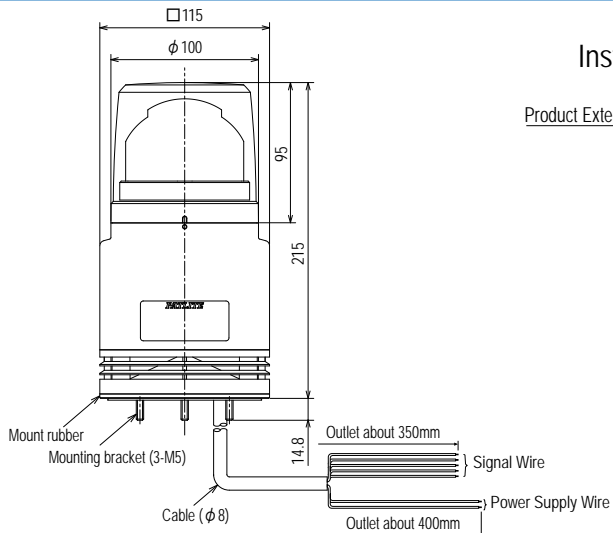
R	Red
Y	Amber
G	Green
B	Blue

Optional Parts

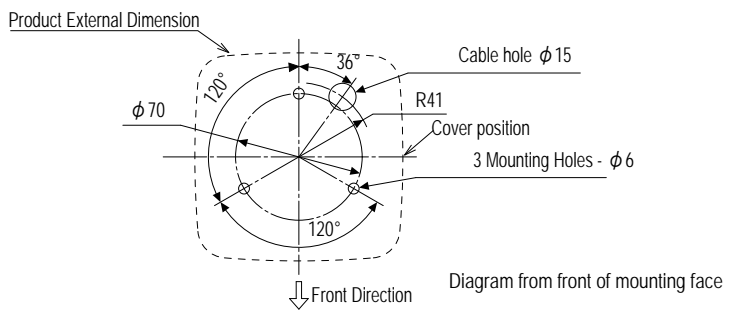
For details, see pages 182 to 187.

Optional Parts	Model
Wallmount Bracket	RF-001
Overhead mounting bracket	RF-002
SD card (2GB)	SDV-2GP

Dimensions (mm)

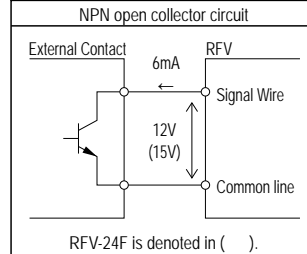
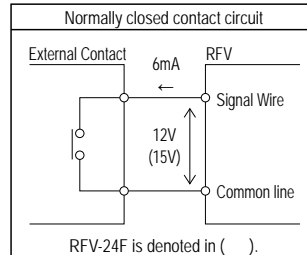
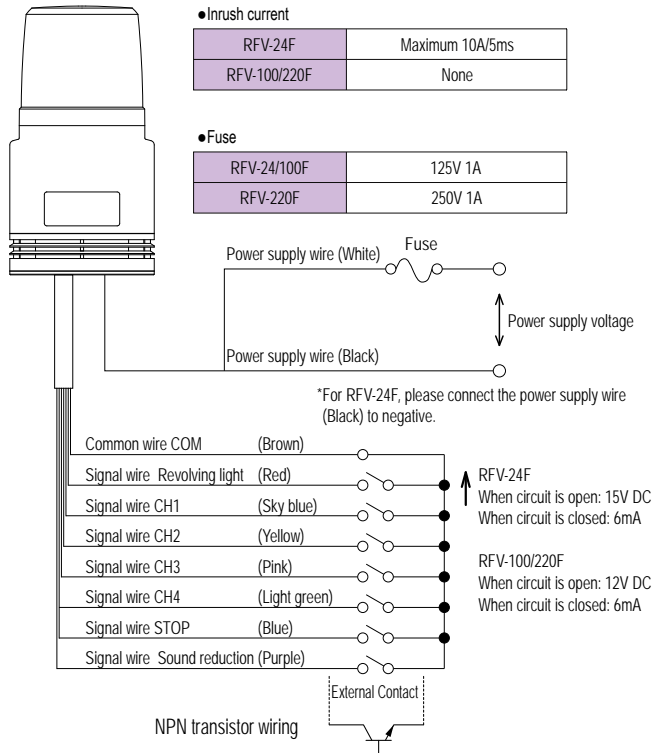


Installation Dimension Drawings



Network
Signal Tower
Signal Light
Revolving Warning Light
Cube Tower
Audibles
Hybrid Signaling Devices
LED Illumination
Options

Wiring Diagram



Contact Capacity	
Current Capacity	10mA or more
Withstand Voltage	20V DC or more
Leakage Current	0.1mA or less
ON voltage (Vsat)	1V or less

•The revolving light operates simultaneously when a message is played back.
(Note) Input requires at least 100msec.

Nominal cross sectional area : Wire type
RFV-24F : Power supply wire : AWG18 : UL1061
Signal wire : AWG22 : UL1061
RFV-100F/220F : power supply wire : 0.75mm² : VSF
Signal wire : AWG22 : UL1007

Network

Signal Tower

Signal Light

Revolving Warning Light

Cube Tower

Audibles

Hybrid Signaling Devices

LED Illumination

Options