





# Melody/Alarm Horn







110<sub>dB at 1m</sub>

32 Channels (Binary)

**IP65** 

NPN/PNP Open-collector

Cable



Terminal m



# Exceptional Sound Quality Field Programmable Melody/Alarm Horn

#### **FEATURES**

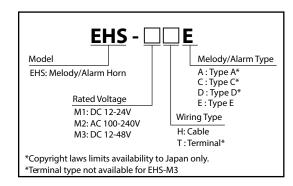
- EHS comes with 32 preloaded melody and alarm sounds with adjustable volume up to 110dB (at 1m).
- Ideal for plant-wide notification, public address and process control.
- · Robust, indoor and outdoor use with vibration resistance up to 4.5G.
- Protection Rating of IP65.
- UL464, CSA-C22.2 NO.205-M1983, FCC Part 15 Subpart B Class 4.
- CE, RoHS Compliant (EHS-M1 Only).

#### EHS vs EHV (Functionality Comparisons)

| Model | Onboard Sounds | MP3 Playback | Playback Modes | No. of Playback Channels           |
|-------|----------------|--------------|----------------|------------------------------------|
| EHS   | 32 Sounds      | No           | 1 Mode         | 8 ch Bit Input/ 32 ch Binary Input |
| EHV   | 63 Sounds      | Yes*         | 4 Modes        | 8 ch Bit Input/ 63 ch Binary Input |

<sup>\*</sup> Internal Memory size of 2 Mbytes, maximum playback of 220 seconds at a 64kbit/sec rate

## How to Order



# Specifications

#### EHS

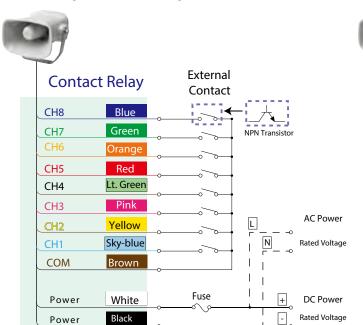
| Model    | Rated<br>Voltage | Voltage Range                                 | Power Consumption                        | Sound Pressure                  | Operating<br>Temperature<br>Range | No. of Playback<br>Messages | Protection<br>Rating               | Wiring<br>Type                   | Mass   |       |        |
|----------|------------------|---|--|---------------------------------|-----------------------------------|-----------------------------|------------------------------------|----------------------------------|--------|-------|--------|
| EHS- M1H |                  | DC 10.8V to                                   | 5.0W (DC24V NPN, Non-voltage             |                                 |                                   |                             |                                    | Cable                            |        |       |        |
| EHS- M1T | DC 12 - 24V 35V  | Contact)<br>5.9W (DC24V PNP, Voltage Contact) |  |                                 |                                   |                             | Terminal                           | 1.25kg                           |        |       |        |
| EHS- M3H | DC 12 - 48V      | DC 10V to 60V                                 | 5.1W (DC48V NPN, Non-voltage<br>Contact) | Alarm:<br>Max. 110dB (at<br>1m) | Max. 110dB (at                    | Max. 110dB (at              | -20°C to +50°C<br>(85% RH or less) | Bit Input: 8<br>Binary Input: 32 | IP65   | Cable | 1.15kg |
| EHS- M2H | AC 100 -         | AC 90V to                                     | 6.9W (AC240V NPN, Non-voltage            |                                 |                                   |                             |                                    | Cable                            | 1.25kg |       |        |
| EHS- M2T | 240V             | 264V  | Contact)                                 |                                 |                                   |                             | [                                  | Terminal                         | 1.23Kg |       |        |

#### Notes:

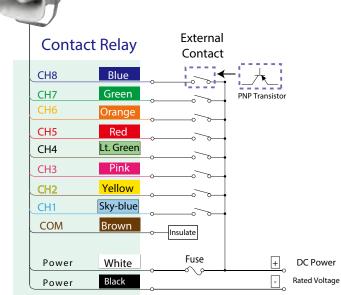
- The sound pressure level is based on measurements under controlled conditions (voice-synthesized 1 kHz sine wave played back from a distance of 1 meter), therefore the surrounding environmental conditions and message content will result in different values for the sound pressure level.
- Even when starting two or more units simultaneously, a lag will occur during message playback.
- MPEG Layer-3 audio coding technology licensed from Fraunhoffer IIS and Thompson Licensing

# Wiring

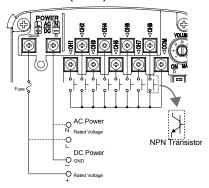
# Non-voltage (NPN) Wiring



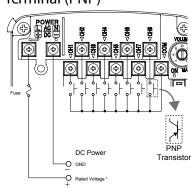
## **PNP Wiring**



## Terminal (NPN)



## Terminal (PNP)



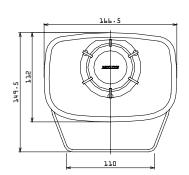
| Transistor Capacity (NPN & PNP) |                          |  |  |  |
|---------------------------------|--------------------------|--|--|--|
| Current Capacity                | $I_{C} \geq 15mA$        |  |  |  |
| Current Leakage                 | $I_L \leq 0.1 \text{mA}$ |  |  |  |
| Withstand Voltage               | V <sub>C</sub> ≥ 35V     |  |  |  |
| ON Voltage(V <sub>sat</sub> )   | Less than 1V             |  |  |  |

| Recommended Fuse |          |  |  |  |
|------------------|----------|--|--|--|
| Rated Voltage    | 250V     |  |  |  |
| Rated Current    | 1A       |  |  |  |
| Fuse Type        | Standard |  |  |  |

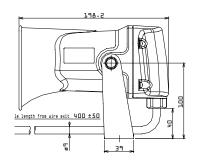
| Maximum Inrush Current |       |  |  |  |
|------------------------|-------|--|--|--|
| EH∏-M1                 | 12.5A |  |  |  |
| EHM2                   | 23.0A |  |  |  |
| EHM3                   | 45.0A |  |  |  |

## Dimensions (Unit: mm)

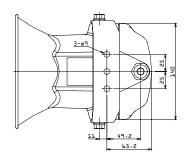
#### Front View



Side View



## **Underside View**



# Melody List

| Type A                           |                              |                          | (Japan Only)          |
|----------------------------------|------------------------------|--------------------------|-----------------------|
| Beep (slow intermittent)         | Stutter (rapid intermittent) | Bell (clear high-pitch)  | Yelp (rapid siren)    |
| Rapid Hi-Lo                      | Melody Chime                 | Synthesized Piano        | Synthesized Bell      |
| Stutter + Bell                   | Synthesized Melody           | Chime                    | Call Sign             |
| Fur Elise                        | Maiden's Prayer              | Bach Minuet in Gmaj      | Annie Laurie          |
| London Bridge is falling<br>down | Hol-di-ri-Dia                | Mary had a little Lamb   | Camptown Races        |
| Cuckoo Song                      | Village Blacksmith           | On the Bridge of Avignon | Daydream Believer     |
| Amaryllis                        | Mozart Symphony No. 40       | Quiet Lakeside           | Ich bin ein Musikante |
| Spanish Romance                  | Katyusha                     | Grandfather's Clock      | Ave Maria             |

| Type D                            | (Japan Only)                   |                                |                        |
|-----------------------------------|--------------------------------|--------------------------------|------------------------|
| Beep (slow intermittent)          | Stutter (rapid intermittent)   | Bell (clear high-pitch)        | Yelp (rapid siren)     |
| Rapid Hi-Lo                       | Melody Chime                   | Synthesized Piano              | Synthesized Bell       |
| Runner                            | Mamotte Agetai                 | Chime                          | Call Sign              |
| Iribiao Kikinagara                | September                      | Doyoubino Koibito              | Akino Kehai            |
| Saafu Tengoku Sukii 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        |
| Schubert'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 Air        |

| Type C                        | (Japan Only)                 |                         |                                    |
|-------------------------------|------------------------------|-------------------------|------------------------------------|
| Beep (slow intermittent)      | Stutter (rapid intermittent) | Bell (clear high-pitch) | Yelp (rapid siren)                 |
| Rapid Hi-Lo                   | Synthesized Melody           | Synthesized Piano       | Synthesized Bell                   |
| Stutter + Bell                | Synthesized Melody Chime     | Chime                   | Call Sign                          |
| Can't take my eyes off of you | Top of the World             | The Entertainer         | Amazing Grace                      |
| Amairono Kamino Otome         | Les Champs-Elysees           | Canon                   | Rara Sunshine                      |
| Uchuusenkan Yamamoto          | Oshiete                      | Makenaide               | Gonna Fly Now (Theme from "Rocky") |
| I don't Wanna Miss a Thing    | Yozorano Mukou               | Aiwa Katsu              | Haruyo Koi                         |
| Gattsudaze                    | Odoru Ponpokorin             | Imasugu Kisu Mi         | Truth                              |

| Туре Е                       | (Worldwide)        |                     |                                  |
|------------------------------|--------------------|---------------------|----------------------------------|
| Beep (slow intermittent)     | Stutter + Bell     | Inverted Reveille   | Annie Laurie                     |
| Stutter (rapid intermittent) | Synthesized Melody | Galactic Motor      | London Bridge is falling<br>down |
| Bell (clear high-pitch)      | Chime              | Ringing Phone       | Mary had a little Lamb           |
| Yelp (rapid siren)           | Call Sign          | Two Tone            | Camptown Races                   |
| Rapid Hi-Lo                  | Train Ride         | Alarm Clock         | Amaryllis                        |
| Melody Chime                 | Galloping Hi-Lo    | Ringing Hi-Lo       | Mozart Symphony No. 40           |
| Synthesized Piano            | Alien Chatter      | Fur Elise           | Ave Maria                        |
| Synthesized Bell             | Falling Crystals   | Bach Minuet in Gmaj | Grandfather's Clock              |

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