Wheelock Series MT Multitone Horns and Multitone Horn-Strobes

K-75-001

Effective: April 2016

FEATURES

- ***Approvals include: UL 1971, UL 1638, UL 464, and California State Fire Marshal (CSFM). The MT-12/24-R and MTWP-2475W-FR are also FM approved***
- ***Designed to meet or exceed ADA/NFPA/UFC/ANSI Standards and Accessibility Guidelines***
- ***Meets OSHA 29 Part 1910, 165***
- ***One alarm appliance with eight (8) selective signals to provide superior sound penetration for various ambient and wall conditions with two field selectable sound output levels***
- ***Audible and strobe can operate from a single signaling circuit with any of the eight (8) audible signals***
- ***Code-3 Horn and Tone meet ANSI/NFPA temporal pattern for standard emergency evacuation signaling***
- ***Multi-Candela MT Strobe models available with field selectable 15/30/75/110 candela settings***
- ***Weatherproof MT Strobe models available with 180 candela rating***
- ***FIRE and AGENT markings available***
- ***Polarized inputs for compatibility with standard reverse polarity type supervision of circuit wiring by an alarm panel***
- ***Flush and surface mount options; no additional trim-plate required for flush mounting***
- ***IN and OUT wiring terminations that accept two (2) #12 to #18 AWG wires at each terminal***

DESCRIPTION

Eaton's Wheelock Series MT Multitone Horns and Horn-Strobes are compatible with Kidde Fire Systems' AEGIS™ and ARIES™ families of Fire-Alarm Suppression Control Units and offer a choice of eight (8) nationally and internationally recognized alerting sounds: Horn, Bell, March Time Horn, Code-3 Tone, Code-3 Horn, Slow Whoop, Siren or Hi/Lo Tone. The Code-3 horn and tone patterns are engineered to comply with NFPA/ANSI Temporal Pattern specifications without requiring additional equipment.

The MT Strobes are designed for ADA applications with maximum performance, reliability and cost-effectiveness while meeting or exceeding the requirements of NFPA 72, ANSI 117.1, UFC and UL Standard 1971 as well as meeting ADA requirements concerning photosensitive epilepsy.

Each MT and MT Strobe appliance has two user selective sound output levels: STANDARD dBA and HIGH dBA. The MT-12/24 provides dual voltage capability in one unit, 12 VDC or 24 VDC operation, filtered or FWR. The MT Strobe Electronic appliances operate with 24 VDC and may be used with filtered or unfiltered (full-wave-rectified) input voltages. Separate input terminals are available and shunt wires are provided to enable both tone and strobe to operate simultaneously from a single input.

The Multitone Strobe appliances are UL Listed for indoor wall mount applications, under Standard 1971 for Devices for the Hearing Impaired and under Standard 464 for Audible Signal Appliances. MT Strobe models are listed for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 93% ± 2%.

Series MT Horn

Series MT Horn-Strobe with IOB Backbox

The MT-12/24 and MTWP models for outdoor use are Listed for -31°F to 150°F (-35°C to 66°C) and maximum humidity of 95%. The strobe devices use a Xenon flashtube with solid state circuitry enclosed in a rugged Lexan® (or equivalent) lens to provide maximum reliability for effective visible signaling. Strobe lens markings available for "Fire" and "Agent" labeled applications.

The Series MT appliances have IN and OUT wiring terminations that accept two #12 to #18 AWG wires at each terminal. Inputs are polarized for compatibility with standard reverse polarity type supervision.

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GENERAL NOTES

- Strobes are designed to flash at 1 flash per second minimum over their “Regulated Voltage Range” (16-33v for 24VDC units and 8-17.5v for 12VDC units).
- All candela ratings represent minimum effective Multitone Strobe intensity based on UL 1971.
- The MT Audible is UL 464 Listed.
- “Regulated Voltage Range” is the terminology used by UL to identify the voltage range. Prior to this change, UL used the terminology “Listed Voltage Range.”

Table 1: Alarm Tones

Tone	Alarm Tones Pattern Description
Horn	Broadband Horn (Continuous)
Bell	1560 Hz Modulated (0.07 sec ON/Repeat)
March Time Horn	Horn (0.25 sec ON/0.25 sec. OFF/Repeat)
Code-3 Horn	Horn (ANSI S3.41 Temporal Pattern)
Code-3 Tone	500 Hz (ANSI S2.41 Temporal Pattern)
Slow Whoop	500-1200 Hz SWEEP (4.0 sec ON/0.5 sec. OFF/Repeat)
Siren	600-1200 HZ SWEEP (1.0 sec. ON/Repeat)
Hi/Lo	1000/800 (0.25 sec. ON/Alternate)

Table 2: Current Ratings for Series MT Strobe Portion

Model	RMS Current (Amps)				
	MTWP-2475	MT-24MCW			
Candela	180cd	15cd	30cd	75cd	110cd
24.0 VDC	0.094	0.041	0.063	0.109	0.140
UL Max*	0.138	0.060	0.092	0.185	0.220

*RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum listed voltage (33v for 24v units). For unfiltered FWR ratings, see installation instructions.

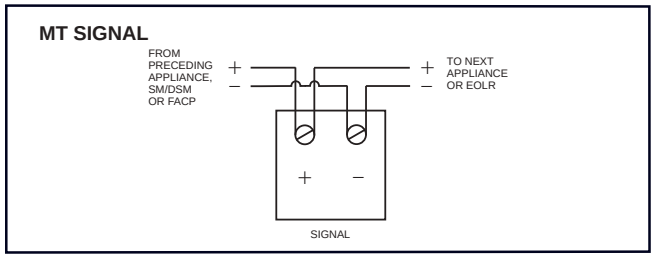
SPECIFICATIONS

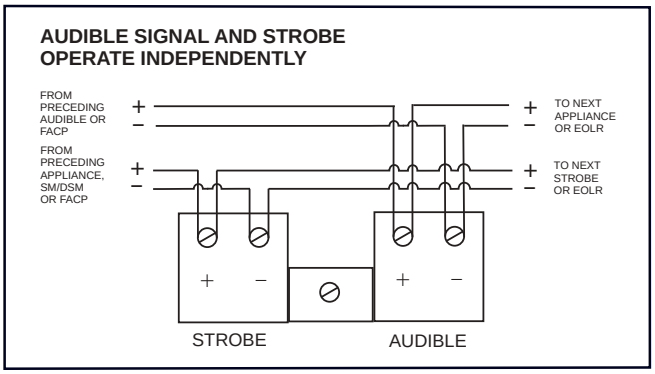
Table 3: UL dBA and Current Ratings for Series MT Audible Portion

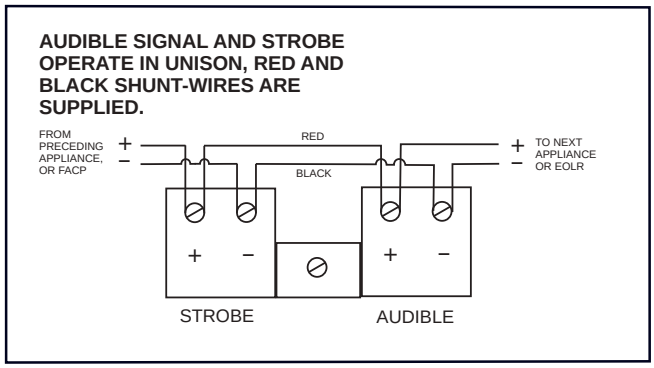
Tone	RMS Current (Amps)								dBA @ 10 FT (UL Reverberant) per UL 464			
	24 VDC				12 VDC				24 VDC		12 VDC	
	HI Output		STD Output		HI Output		STD Output		HI Output	STD Output	HI Output	STD Output
	@ 24 VDC	UL max*	@ 24 VDC	UL max*	@ 24 VDC	UL max*	@ 24 VDC	UL max*				
Horn	0.074	0.108	0.033	0.044	0.145	0.176	0.023	0.034	92	87	90	77
Bell	0.040	0.053	0.018	0.024	0.077	0.095	0.014	0.020	86	80	85	69
March Time Horn	0.067	0.104	0.033	0.038	0.109	0.142	0.023	0.034	89	84	89	74
Code-3 Horn	0.069	0.091	0.026	0.035	0.100	0.142	0.023	0.034	88	83	88	73
Code-3 Tone	0.061	0.075	0.026	0.035	0.088	0.105	0.015	0.021	85	80	84	70
Slow Whoop	0.069	0.098	0.028	0.037	0.100	0.142	0.025	0.035	90	85	89	75
Siren	0.080	0.104	0.027	0.036	0.122	0.152	0.021	0.030	89	84	89	75
HI/LO	0.044	0.057	0.020	0.026	0.089	0.114	0.018	0.026	86	81	86	71

*RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum listed voltage (33v for 24v units). For unfiltered FWR ratings, see installation instructions.

WIRING DIAGRAMS







INSTALLATION NOTES

1. If the strobe and audible operate on the same circuit, add the strobe current from Table 2 to the audible current from Table 3. For Peak and Inrush current across the listed voltage range, refer to Installation Instructions.
2. The average current indicated is per actual Production Testing at listed VDC. For rated average and Peak current across the UL listed voltage range for both filtered DC and unfiltered VRMS, see Installation Instructions.

WARNING

Failure to comply with the installation instruction sheets could result in improper installation, application, and/or operation of these products in an emergency situation, which could result in property damage and serious injury or death.

3. Contact Kidde for “Installation Instructions” sheets on these products. These materials contain important information that should be read prior to specifying or installing these products, including:
   - Total current required by all devices connected to system primary and secondary power sources.
   - Fuse ratings on signaling circuits to handle maximum inrush or peak currents from all devices on those circuits.
   - Composite flash rate from multiple strobes within a person’s field of view.
   - Installation in office areas and other specification and installation issues.
   - Use strobes only on circuits with continuously applied operating voltage. Do not use strobes on coded or interrupted circuits in which the applied voltage is cycled on and off, as the strobe may not flash.
   - The voltage applied to these products must be within their rated input voltage range.
   - Conductor size (AWG), length and ampacity should be taken into consideration prior to design and installation of these products, particularly in retrofit installations.
4. These notification appliances must be used within their published specifications and must be PROPERLY specified, applied, installed, operated, maintained and operationally tested in accordance with their installation instructions at the time of installation and at least twice a year or more often and in accordance with local, state and federal codes, regulations and laws. Specification, application, installation, operation, maintenance and testing must be performed by qualified personnel for proper operation in accordance with all of the latest National Fire Protection Association (NFPA), Underwriters’ Laboratories (UL), National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA), local, state, county, province, district, federal and other applicable building and fire standards, guidelines, regulations, laws and codes including, but not limited to, all appendices and amendments and the requirements of the local Authority Having Jurisdiction (AHJ).

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ARCHITECTS AND ENGINEERS SPECIFICATIONS

The notification appliance shall be an MT Series audible/visual device or equivalent. Notification appliance shall be electronic and use solid state components. Electromechanical alternatives are not approved. Each electronic signal shall provide eight (8) field selectable alarm tones.

The tones shall consist of: HORN, BELL, MARCH TIME HORN, CODE-3 HORN, CODE-3 TONE, SLOW WHOOP, SIREN AND HI/LO. Tone selection shall be by durable dip switch assembly and not clips or jumpers. The Multitone Audible appliance shall be UL Listed under Standard 464 for Audible Signal Appliances. The audible and the strobe shall be able to operate from a single notification circuit while producing any of these tones. The device shall provide two output sound levels: STANDARD and HIGH dBA. The HIGH dBA setting shall provide a minimum 5 dBA increase in sound output at nominal voltage. The HIGH reverberant dBA measurement at 10 feet for the alarm HORN SETTING shall be 88 dBA minimum. Operating voltages shall be 24 VDC using filtered power or unfiltered power supply (full-wave-rectified). All models shall have provisions for standard reverse polarity type supervision and IN/OUT field wiring using terminals that accept #12 to #18 AWG wiring.

Combination audible/visual appliances shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens or equivalent with solid state circuitry. Strobe shall produce a flash rate of one (1) flash per second minimum over the voltage range. The strobe intensity shall be rated per UL and Listed under Standard 1971 for Signaling Devices for the Hearing Impaired with field selectable 15/30/75/110 candela settings. Strobe models shall incorporate circuitry for synchronized strobe flash and shall be designed for compatibility with Kidde Fire Systems' AEGIS and ARIES families of Fire-Alarm Suppression Control Units and DSM Sync Modules. The strobes shall not drift out of synchronization at any time during operation. If the module fails to operate (i.e., contacts remain closed), the strobes shall revert to a non-synchronized default flash rate.

All Listed strobe appliances shall incorporate low temperature compensation to insure the lowest possible current consumption. Strobe activation shall be via independent input or from the same input circuit as the audible.

The combination audible/visual appliances may be installed indoors and surface or flush mounted. They shall mount to standard electrical hardware requiring no additional trimplate or adapter. The aesthetic appearance shall not have any mounting holes or screw heads visible when the installation is completed. The appliance shall be finished in a textured red color.

The audible device may be installed indoors or outdoors with the proper backbox.

For weatherproof applications where specifications require 75 cd at -31°F (-35°C) and full temperature range of -31°F to 150°F, the Model MTWP-2475W FR shall be used.

ORDERING INFORMATION

Part Number	Input Voltage	Rated Candela	Strobe Label	Mounting* Options
MT-12/24-R	12/24	---	---	B,H,I,J,K
MT-24MCW-FR	24	15/30/75/110	FIRE	B,H,I,J,K
MT-24MCW-AR	24	15/30/75/110	AGENT	B,H,I,J,K
MTWP-2475W-FR	24	180@ 77°F (25°C) 75 cd @ -31°F (-35°C)	FIRE	H, H+WP-KIT, S

*Letters correspond to letter of applicable mounting options from datasheet K-75-008.

Notes:

1. MT-12/24 Audible can be used with the RSSP Multi-Candela for applications requiring 15, 30, 75, 110 cd wall strobes.
2. MTWP-2475W is weatherproof and rated for 180 cd @ 77°F (25°C) and 75 cd @ -31°F (-35°C) with low current draw.
3. DSM Dual Circuit Modules are rated for 3.0 amperes per circuit. Maximum number of interconnected DSM modules is twenty (20). Refer to Data Sheet K-75-012 Series DSM Sync Modules.

MOUNTING OPTIONS

Part Number	Mounting Options*
DBB-R	A
ISP-R	B
WBB-R	E
IOB-R	H
RP-R	J
IOB + WP-KIT	H, H plus WP-KIT
WFP	S

The MT-12/24-R and the MTWP-2475W-FR can be used in weatherproof applications using mounting options H, H plus the WP-KIT and S.

*Letters correspond to letter of applicable mounting options from datasheet K-75-008.
For complete mounting options, refer to the Notification Appliance Mounting Accessories datasheet K-75-008.

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Table 6-4. Notification Appliances

Model No.	Part Number	Description
MT-12/24	75-000010-001	Multi-Tone Horn
MT-24 Series	75-000015-001	Multi-Tone Horn w/15-75 cd Strobe (FIRE)
	75-000015-002	Multi-Tone Horn w/15-75 cd Strobe (AGENT)
	75-000016-001	Multi-Tone Horn w/75 cd Strobe (FIRE)
	75-000016-002	Multi-Tone Horn w/75 cd Strobe (AGENT)
	75-000017-001	Multi-Tone Horn w/75 cd Strobe (FIRE) Weatherpr.
MIZ Series	75-000020-001	Mini Horn-Steady (Red)
	75-000020-002	Mini Horn-Steady (White)
	75-000025-001	Mini Horn-Steady/Temporal (Red)
	75-000025-002	Mini Horn-Steady/Temporal (White)
NH-12/24	75-000080-001	Steady / Temporal Horn
NS-24 Series	75-000082-001	Steady/Temp. Horn w/15-75 cd Strobe (FIRE)
	75-000082-002	Steady/Temp. Horn w/15-75 cd Strobe (AGENT)
	75-000086-001	Steady/Temp. Horn w/15-30-75-110 cd Strobe (FIRE) Red
	75-000086-002	Steady/Temp. Horn w/15-30-75-110 cd Strobe (AGENT) Red
	75-000087-001	Steady/Temp. Horn w/15-30-75-110 cd Strobe (FIRE) Wht
	75-000087-002	Steady/Temp. Horn w/15-30-75-110 cd Strobe (AGENT) Wht
RSS(P) Series	75-000002-011	15-75 cd Strobe (FIRE)
	75-000002-012	Retrofit 15-75 cd Strobe (FIRE)
	75-000002-013	15-75 cd Strobe (AGENT)
	75-000005-021	15-30-75-110 cd Strobe (FIRE)-Red
	75-000005-022	15-30-75-110 cd Strobe (AGENT)-Red
	75-000005-023	Retrofit 15-30-75-110 cd Strobe (FIRE)-Red
	75-000005-024	Retrofit 15-30-75-110 cd Strobe (AGENT)-Red
	75-000005-031	15-30-75-110 cd Strobe (FIRE)-White
	75-000005-032	15-30-75-110 cd Strobe (AGENT)-White
	75-000005-033	Retrofit 15-30-75-110 cd Strobe (FIRE)-White
	75-000005-034	Retrofit 15-30-75-110 cd Strobe (AGENT)-White
	75-000005-041	75 cd Strobe (FIRE)-Weatherproof
	75-000005-042	75 cd Strobe (AGENT)-Weatherproof