FIRE·LITE® ALarms

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Wheelock ET Series
Low-Profile Speakers and Speaker Strobes

Section: Audio/Visual Devices

GENERAL

Wheelock's high performance Series ET Speakers and Series ET Speaker Strobes provide high audio output, clear audibility, dual voltage (25/70 VRMS) capability and field selectable taps from 1/8 to 8 watts. They are designed to meet the critical needs of the life safety industry for effective emergency voice communications, tone signaling and visible signaling to alert the hearing impaired.

The low profile design incorporates a speaker mounting plate for faster and easier installation. Each model has a built-in level adjustment feature and an aesthetic two (2) screw grille cover.

The Series ET Speaker Strobe models incorporate Low Current draw Series RSS Strobes.

Strobe options for wall mount models include 1575 cd or Wheelock's patented MCW multi-candela strobe with field selectable candela settings of 15/30/75/110cd or the high intensity MCWH strobe with field selectable 135/185cd.

Ceiling mount models are available in Wheelock's patented MCC multi-candela ceiling strobe with field selectable intensities of 15/30/75/95cd or the high intensity MCCH strobe with field selectable 115/177cd.

The strobe portion of all Series ET Strobes may be synchronized when used in conjunction with the Wheelock SM, DSM sync modules or the power supply with patented Wheelock Sync Protocol. Wheelock's synchronized strobes offer an easy way to comply with ADA recommendations concerning photosensitive epilepsy.

Series ET70 and ET90 Speaker Strobes are UL Listed for indoor use under Standard 1971 (Signaling Devices for the Hearing Impaired) and Standard 1480 (Speaker Appliances), and use a Xenon flashtube with solid state circuitry enclosed in a rugged Lexan® lens to provide maximum reliability for effective visual signaling. All inputs are supervised and employ IN/OUT wiring terminals for fast installation using #12 to #18 AWG wiring.

Color options for Series ET speakers and speaker strobes are red or white plated.

Wheelock's Weatherproof Low Profile Speaker Strobe, Series ET70WP-2475W-FR appliance has an **extended temperature range of -31° F to 150° F (-35° C to 66° C)** that will satisfy virtually all outdoor and severe environment applications.

The strobe has a 75 candela intensity on axis at 31°F (-35°C) and 180cd at 77°F (25°C) with low current draw. For outdoor applications the ET70WP-2475W-FR must be wall mounted to a Weatherproof Back Box (IOB).

FEATURES

- ADA/NFPA/UFC/ANSI compliant
- Meets OSHA 29 Part 1910.165
- Wall mount models are available with Field Selectable Candela Settings of 15/30/75/110cd or 135/185cd (Multi-Candela models) or 1575cd (Single Candela model)
- Ceiling mount models are available with field selectable candela settings of 15/30/75/95cd or 115/177cd (multi-candela models)
- Strobes produce 1 flash per second over the regulated voltage range
- 24 VDC with wide UL "Regulated Voltage" using filtered DC or unfiltered VRMS input voltage
- Synchronize with Wheelock SM, DSM or power supply with built-in Wheelock sync protocol
- Field selectable taps for 25 or 70 VRMS operation from 1/8 watt to 8 watts
- High efficiency design for maximum output at minimum wattage across a frequency range of 400 to 4000 HZ
- Fast installation with IN/OUT screw terminals using #12 to #18 AWG wires

UL LISTED
S2652 (Speakers)
S2652/S5391
(Strobe/Speakers)

California State Fire Marshall
7135-0785:135
7125-0785:146
7125-0785:152

MEA
151-92-E
Vol. XXI



ET70 Series Speaker Strobe



ET90 Series Speaker Strobe



Multi-Candela Indicator
(bottom of Strobe Lens)

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This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.
For more information, contact **Fire•Lite Alarms**, One Fire-Lite Place, Northford, Connecticut 06472. Phone: (800) 627-3473, Toll-Free FAX: (877) 699-4105.

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QUALITY SYSTEMS

GENERAL NOTES:

- Strobes are designed to flash at 1 flash per second minimum over their "Regulated Voltage Range". Note that NFPA-72 specifies a flash rate of 1 to 2 flashes per second and ADA Guidelines specify a flash rate of 1 to 3 flashes per second.
- All candela ratings represent minimum effective Strobe intensity based on UL Standard 1971.
- Series ET Speaker Strobes and Series ET Speakers are listed under UL Standard 1971 for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 85%.
- Wheelock Weatherproof Appliances are designed to operate over an extended temperature of -31° F to 150°F (-35°C - 66°C) and all candela ratings represent minimum effective strobe intensity based on UL 1638. Maximum humidity of 93% RH ± 2%
- **"Regulated Voltage Range" is the newest terminology used by UL to identify the voltage range. Prior to this change UL used the terminology "Listed Voltage Range".**

⚠ WARNING! NOTE: All CAUTIONS and WARNINGS are identified by the symbol ⚠. All warnings are printed in bold capital letters. PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS OR WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

SPECIFICATIONS AND ORDERING INFORMATION

MODEL	STROBE CANDELA	NON-SYNC	SYNC W/SM,	MODEL COLOR	WALL/ CEILING	MOUNTING OPTIONS	AGENCY APPROVALS				
							UL	MEA	CSFM	FM	BFP
ET70-24MCW-FR	15/30/75/110	X	X	Red	Wall	L,O,P,Q,U,Y	X	X	X	*	X
ET70-24MCW-FW	15/30/75/110	X	X	White	Wall	L,O,P,Q,U,Y	X	X	X	*	X
ET70-241575W-FR	15 (75 on axis)	X	X	Red	Wall	L,O,P,Q,U,Y	X	X	X	*	X
ET70-24MCWH-FR	135/185	X	X	Red	Wall	L,O,P,Q,U,Y	X	*	*	*	*
ET70-24MCWH-FW	135/185	X	X	White	Wall	L,O,P,Q,U,Y	X	*	*	*	*
ET70WP-2475W	75	X	X	Red	Wall	M	X	X	X	*	*
ET90-24MCC-FW	15/30/75/95	X	X	White	Ceiling	L,Q,U,V,Y	X	*	X	*	*
ET90-24MCCH-FW	115/177	X	X	White	Ceiling	L,Q,U,V,Y	X	*	*	*	*
ET70-R	-	-	-	Red	Wall/ Ceiling	L,O,P,Q,U,Y	X	X	X	*	X
ET70-W	-	-	-	Nickel	Wall/ Ceiling	L,O,P,Q,U,Y	X	X	X	*	X

TABLE 1: AVERAGE RMS CURRENT*

ET70/ET90 SPEAKER STROBES	ET70 STROBE CURRENT - WALL MOUNT							ET90 STROBE CURRENT - CEILING MOUNT					
	241575W	24MCW				24MCWH		24MCC				24MCCH	
	1575cd	15cd	30cd	75cd	110cd	135cd	185cd	15cd	30cd	75cd	95cd	115cd	177cd
16 vdc	0.101	0.062	0.102	0.192	0.265	0.300	0.420	0.068	0.112	0.211	0.292	0.300	0.420
24 vdc	0.064	0.041	0.065	0.116	0.155	0.195	0.270	0.045	0.072	0.128	0.171	0.195	0.270
33 vdc	0.047	0.032	0.047	0.081	0.107	0.145	0.190	0.035	0.052	0.089	0.118	0.145	0.190

* Average RMS Current is per UL average RMS method and Average Mean Current is per UL average mean method. For rate In Rush and Peak current across the UL listed voltage range for both filtered DC and unfilitered VRMS (FWR), see installation instructions.

TABLE 2: ET70/ET90 UL REVERBERANT Dba @ 10 Feet**

watts	1/8	1/4	1/2	1	2	4	8
ET Speaker	78.3	81.5	84.4	87.2	90.1	92.8	94.9
ET Speaker Strobe	78.3	81.5	84.4	87.2	90.1	92.8	94.9
ET70WP-2475W	77	80	83	86	88	91	93

** dBA ratings based on UL testing under UL Standard 1480

SYNC MODELS/POWER SUPPLY			
MODEL NUMBER	INPUT VOLTAGE (VDC)	AVERAGE MEAN CURRENT @ 24 VDC	MOUNTING OPTIONS
SM-12/24-R	24	.028	W
DSM-12/24-R	24	.035	W

SM Sync Module is rated for 3.0 amperes @ 24 VDC.

DSM Sync Module is rated for 3.0 amperes per circuit. The maximum number of interconnected DSM modules is twenty (20). Refer to Data Sheet S3000 or Installation Instructions P83123 for SM and P83177 for DSM.

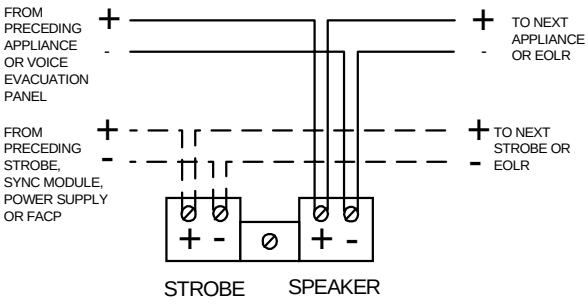
Table 3: UL Listed Model and Candela Strobe Rating

Voltage	*Rated Average Currenty	Rated Strobe Candela (cd)	
		@ 77°F (25C)	@ -31°F (-35C)
16.0VDC	0.150	180cd	75cd
24.0 VDC	0.102		
33.0 VDC	0.085		

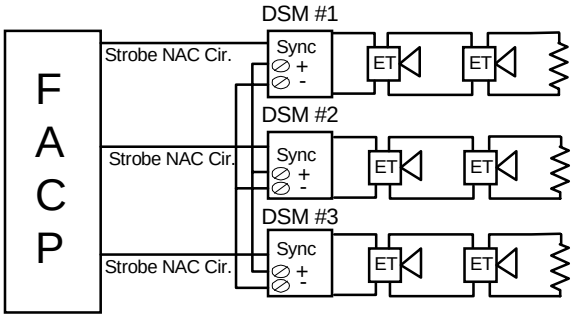
* Average current per actual Wheelock production testing. For rated average peak and inrush current across the UL Listed voltage range for both filtered DC and unfiltered VRMS, see Installation Instructions.

WIRING DIAGRAMS#

SERIES ET SPEAKER & STROBE OPERATE INDEPENDENTLY (NON-SYNC OR SYNC)



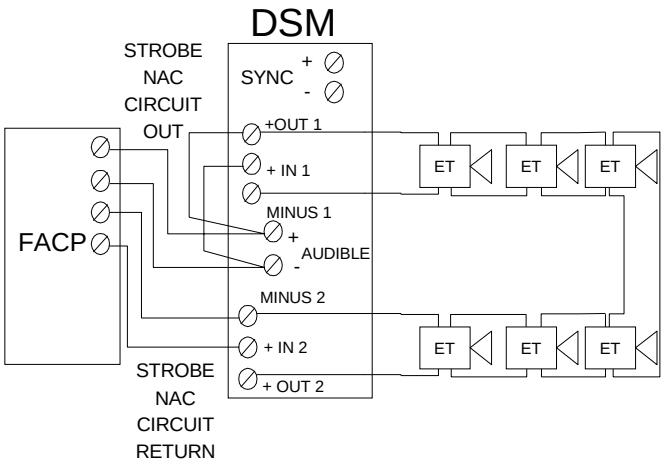
SERIES ET SPEAKER STROBES SYNCHRONIZED WITH MULTIPLE DSM MODULES



DSM Interconnecting wiring shown. Maximum of twenty (20)

Note: Figure shows interconnection to strobe through sync module. Speaker portion requires 2 separate conductors to FACP.

SERIES ET SPEAKER STROBE APPLIANCES SYNCHRONIZED WITH DSM MODULE SINGLE CLASS "A"



⚠ WARNING: CONTACT WHEELOCK FOR THE CURRENT "INSTALLATION INSTRUCTIONS" AND "GENERAL INFORMATION" SHEET (P82380) ON THESE PRODUCTS. THESE DOCUMENTS UNDERGO PERIODIC CHANGES. IT IS IMPORTANT THAT YOU HAVE CURRENT INFORMATION 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 APPLIANCES CONNECTED TO SYSTEM SECONDARY POWER SOURCES.**
- **FUSE RATINGS ON NOTIFICATION APPLIANCE CIRCUITS TO HANDLE PEAK CURRENTS FROM ALL APPLIANCES ON THOSE CIRCUITS.**
- **COMPOSITE FLASH RATE FROM MULTIPLE STROBES WITHIN A PERSON'S FIELD OF VIEW.**
- **ADDING, REPLACING OR CHANGING APPLIANCES OR CHANGING CANDELA SETTINGS WILL AFFECT CURRENT DRAW.**
  RECALCULATE CURRENT DRAW TO INSURE THAT THE TOTAL AVERAGE CURRENT AND TOTAL PEAK REQUIRED BY ALL APPLIANCES DO NOT EXCEED THE RATED CAPACITY OF THE POWER SOURCES OR FUSES.
- **THE VOLTAGE APPLIED TO THESE PRODUCTS MUST BE WITHIN THEIR "REGULATED VOLTAGE RANGE".**
- **INSTALLATION OF 110 CANDELA STROBE PRODUCTS IN SLEEPING AREAS.**
- **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 STROBES MAY NOT FLASH.**
- **FAILURE TO COMPLY WITH THE INSTALLATION INSTRUCTIONS OR GENERAL INFORMATION 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 TO YOU AND/OR OTHERS.**
- **CONDUCTOR SIZE (AWG), LENGTH AND AMPACITY SHOULD BE TAKEN INTO CONSIDERATION PRIOR TO DESIGN AND INSTALLATION OF THESE PRODUCTS, PARTICULARLY IN RETROFIT INSTALLATIONS.**

ARCHITECTS AND ENGINEERS SPECIFICATIONS

The speaker appliances shall be Wheelock Series ET Speakers and speaker strobe appliances shall be Wheelock Series ET Speaker Strobes or approved equals. The speakers shall be UL Listed under Standard 1480 for Fire Protective Service and speakers equipped with strobes shall be listed under UL Standard 1971 for Signaling Devices for the Hearing-Impaired. In addition, the strobes shall be certified to meet the requirements of FCC Part 15, Class B.

All speakers shall be designed for a field selectable input of either 25 or 70 VRMS, with selectable power taps from 1/8 watt to 8 watts. All models shall have listed sound output of up to 93 dB at 10 feet and a listed frequency response of 400 to 4000 Hz. The speaker shall also incorporate a sealed back construction. All inputs shall employ terminals that accept #12 to #18 AWG wire sizes.

The strobe portion of the appliance shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens. The strobe shall be of low current design. Where, Multi-Candela Speaker Strobes are specified, the strobe intensity shall have field selectable settings and shall be rated per UL Standard 1971 at 15/30/75/110cd or 135/185cd for wall mount and 15/30/75/95 cd or 115/177cd for ceiling mount. The selector switch for selecting the candela shall be tamper resistant. The 1575 strobe shall be specified when 15 candela UL Standard 1971 listing with 75 candela on-axis is required (e.g. ADA compliance).

When synchronization is required, the strobe portion of the appliance shall be compatible with Wheelock's SM, DSM sync modules or a a power supply with built-in Wheelock Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync module or Power Supply fails to operate, (i.e., contacts remain closed), the strobe shall revert to a non-synchronized flash rate.

The speaker and speaker strobe appliances shall be designed for indoor surface or flush mounting. The speaker and speaker strobe shall incorporate a speaker mounting plate with a grille cover which is secured with two screws for a level, aesthetic finish and shall mount to standard electrical hardware requiring no additional trimplate or adapter.
The finish of the Series ET speakers and speaker strobes shall be white, red or nickel plate.
All speakers and speaker strobes shall be backward compatible.

Wheelock products 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).

NOTE: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Fire•Lite's standard terms and conditions.