

**SERIES ET70 MULTI-CANDELA
SPEAKER STROBES
& SPEAKERS**

Description:

Wheelock's patented Series ET70 Multi-Candela Speaker Strobes and Series ET Speakers are designed for high efficiency sound output, with dual voltage (25/70 volt) capability and field selectable taps from 1/8 to 8 watts. 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 ET70 Multi-Candela Speaker Strobes incorporate the low current, zero inrush, Series RSS Multi-Candela Strobe with field selectable settings of: 15, 30, 75 or 110 cd.

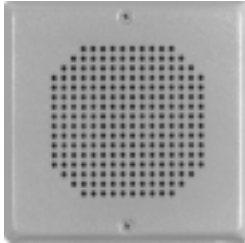
Series ET70 Multi-Candela Speaker Strobes and Series ET Speakers provide high audio output with clear audibility and are designed to meet the critical needs of the life safety industry for effective emergency voice communications, tone signaling and visible signaling to alert the hearing impaired.

All Multi-Candela Speaker Strobes may be synchronized when used in conjunction with the Wheelock SM, DSM sync modules or the PS-12/24-8 Power Supply with patented sync protocol. Wheelock's synchronized strobes offer an easy way to comply with ADA recommendations concerning photo-sensitive epilepsy.

Series ET70 Multi-Candela Speaker Strobes are UL Listed for indoor use, wall mount, under Standard 1971 (Signaling Devices for the Hearing-Impaired) and Standard 1480 (Speaker Appliances). All inputs are supervised and employ IN/OUT wiring terminals for fast installation using # 12 to # 18 AWG wiring.



**SERIES ET70
Speaker Strobe**



**SERIES ET70
Speaker**



**SERIES ET70
Strobe Cover Plate**



**SERIES ET70
Speaker Strobe
Mounting Plate**

Features:

- Approvals include: UL 1971, UL 1480, New York City (MEA): California State Fire Marshal (CSFM), Pending Factory Mutual (FM) and Chicago (BFP).
- ADA / NFPA / ANSI compliant.
- Meets OSHA 29 Part 1910.165.
- Field Selectable Candela Settings: 15, 30, 75 or 110 cd (Speaker Strobe Models).
- Strobes produce 1 flash per second over the regulated input voltage range.
- Strobes operate at 24 VDC with wide New UL "Regulated Input Voltage" of 16-33-VDC using filtered (DC) or unfiltered FWR Voltage.
- Wall Mount
- Strobe Synchronization with Wheelock SM, DSM Sync Modules or PS-12/24-8 Power Supply with Wheelock's built-in Patented sync protocol.
- Fast installation with IN / OUT screw terminals using #12 to #18 AWG wires.
- Field selectable taps from 1/8 to 8 watts.
- Compatible with Series ET90 Ceiling Mount Speaker Strobes, Speakers and all Wheelock products.
- ZERO Inrush above Peak.

Specifications and Ordering Information

Model Number	Order Code	Description	Mounting Options*
ET70-24MCW-FR	9020	Multi-Candela Speaker Strobe / 24V / Wall Mount / Red	L,O,P,Q,
ET70-24MCW-FW	9021	Multi-Candela Speaker Strobe / 24V / Wall Mount / White	L,O,P,Q,Y
ET70-R	7840	Speaker / Square / Red	L,O,P,Q,V,Y
ET70-W	7844	Speaker / Square / White	L,O,P,Q,V,Y
ET90-W	7842	Speaker / Round / White	L,O,P,Q,V,Y

*Refer to Data Sheet S7000 for Mounting Options.

NOTE: All CAUTIONS and WARNINGS are identified by the symbol **▲**. All warnings are printed in bold capital letters.

▲ WARNING: 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 AND 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.

General Notes:

- Strobes are designed to flash at 1 flash per second minimum over the "Regulated Input Voltage Range" of 16-33 VDC (for 24 VDC models). Note that NFPA-72 (1999) 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 1971. Series ET70 Multi-Candela Speaker Strobes and Series ET Speakers are Listed for indoor used with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 85%.

#"Regulated Input 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"

WALL MOUNT MULTI-CANDELA SPEAKER STROBES

Model Number	Strobe Candela	Strobe Average Current* @ 24 VDC				Speaker dBA at 10 Feet** Actual UL Testing						
		15cd	30cd	75cd	110cd	1/8	1/4	1/2	1	2	4	8
ET70-24MCW-FR	15/30/75/110	.047	.081	.128	.166	78.3	81.5	84.4	87.2	90.1	92.8	94.9
ET70-24MCW-FW	15/30/75/110	.047	.081	.128	.166	78.3	81.5	84.4	87.2	90.1	92.8	94.9

Note: Inrush is less than peak current

WALL OR CEILING MOUNT SPEAKERS

ET70-R or W	_____	_____	78.3	81.4	84.4	87.2	90.1	92.8	94.9
ET90-W	_____	_____	78.3	81.5	84.4	87.2	90.1	92.8	94.9

CEILING MOUNT SPEAKER STROBES

ET Ceiling Speaker Strobes	Model Number	Order Code	Strobe Candela	Strobe Average Current* @ 24 VDC	Speaker dBA at 10 Feet** Actual UL Testing						Mounting Options***	
					1/8	1/4	1/2	1	2	4		8
	ET90-2415C-FW	7861	15	.073	78.3	81.5	84.4	87.2	90.1	92.8	94.9	L,Q,V,Y
	ET90-2430C-FW	7862	30	.105	78.3	81.5	84.4	87.2	90.1	92.8	94.9	L,Q,V,Y
	ET90-2475C-FW	7863	75	.225	78.3	81.5	84.4	87.2	90.1	92.8	94.9	L,Q,V,Y
	ET90-24100C-FW	7864	100	.270	78.3	81.5	84.4	87.2	90.1	92.8	94.9	L,Q,V,Y

Note: Inrush is less than Peak Current

*Average Current per actual Wheelock Production Testing @ 24VDC

**dBA Ratings are based on UL actual testing under Standard UL 1480

SYNC MODULES / POWER SUPPLY

Model##	Order Code	Input Voltage VDC	Average Current (AMPS) @ 24 VDC	Mounting Options ***
SM-24-R	6369	24	.025	W
DSM-24-R	6374	24	.038	W
PS-12/24-8	8114	120 VAC		

##Series SM and DSM Sync Module circuits are rated for 3.0 amperes each at 24VDC.

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).

Refer to Data Sheet S9001 or Installation Instructions (P83862 for PS-12/24-8 Power Supply).

***Refer to Data Sheet S7000 for Mounting Options.

Note: Wall and Ceiling Mount Models are Compatible

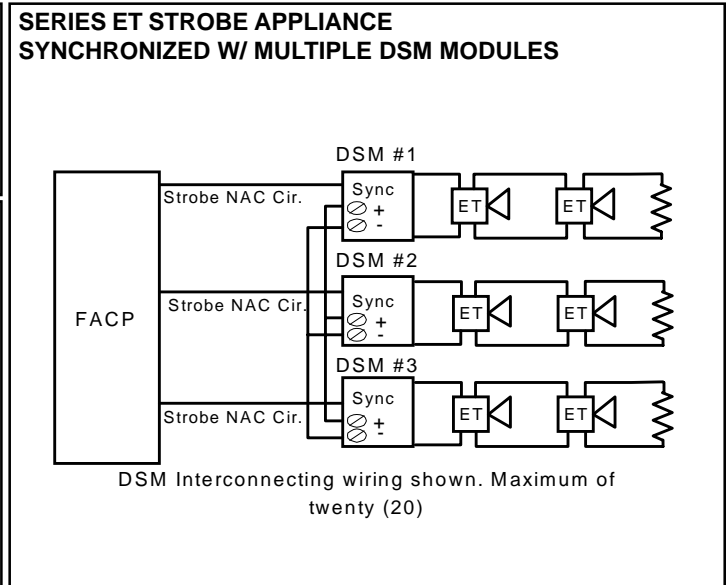
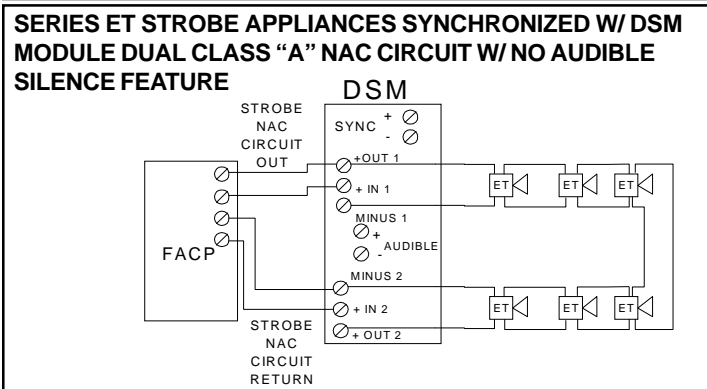
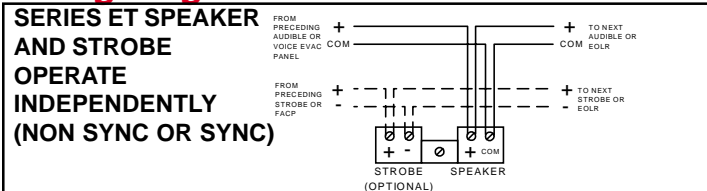
Series ET70 / ET90 / ET70 Multi-Candela Quick Reference Guide

Model Number	Wall Mount	Ceiling Mount	Non-Sync	Sync w/ SM, DSM or PS-12/24-8	Strobe Candela	24 VDC	Model Color RED	Model Color White
ET70-24MCW-FR	X		X	X	15/30/75/110	X	X	
ET70-24MCW-FW	X		X	X	15/30/75/110	X		X
ET90-2415C-FW		X	X	X	15	X		X
ET90-2430C-FW		X	X	X	30	X		X
ET90-2475C-FW		X	X	X	75	X		X
ET90-24100C-FW		X	X	X	100	X		X
ET70-R	X	X					X	
ET70-W	X	X						X
ET90-W	X	X						X

▲ WARNING: CONTACT WHELOCK FOR THE CURRENT “INSTALLATION INSTRUCTIONS” (P83933) 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.
- THE VOLTAGE APPLIED TO THESE PRODUCTS MUST BE WITHIN THEIR REGULATED INPUT VOLTAGE RANGE.
- ADDING, REPLACING OR CHANGING APPLIANCES OR CHANGING CANDELA SETTINGS WILL EFFECT 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 SOURCE OR FUSES.
- 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 STROBE 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.

Wiring Diagrams#



For detail using SM or DSM Sync Module refer to Data Sheet S3000 or Installation Instructions (P83123 for SM and P83177 for DSM). For wiring information on the PS-12/24-8 Power Supply refer to Installation Instructions P83862.

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).

Architects and Engineers Specifications

The speaker appliances shall be Wheelock Series ET Speakers and the Speaker Strobe Appliances shall be Wheelock Series ET70 Multi-Candela 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 and shall incorporate low temperature compensation to ensure the lowest possible current consumption.

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 94.9 dBA 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 Input Voltage Range of 16 to 33 VDC for 24 VDC models and shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens. The strobe shall be of low current design and shall have Zero Inrush. The strobe intensity shall have a minimum of four (4) field selectable settings and shall be rated per UL 1971 for: 15, 30, 75 or 110 candela (wall mount versions). The switch for selecting the candela setting shall be located on the rear of the appliance in order to prevent tampering from unauthorized persons. When synchronization is required, the strobe portion of the appliance shall be compatible with Wheelock's SM, DSM sync modules or PS-12/24-8 Power Supply with built-in 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.

All speakers and speaker strobes shall be backward compatible.

WE SUPPORT AND ENCOURAGE NICET CERTIFICATION

MADE IN THE USA

NOTE: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Wheelock Inc. standard terms and conditions.

NATIONAL SALES OFFICE

800-631-2148

Canada **800-397-5777**

E-Mail: Info@wheelockinc.com

<http://www.wheelockinc.com>

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273 BRANCHPORT AVENUE • LONG BRANCH, NJ 07740 • TEL: 732-222-6880 • FAX: 732-222-2588

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