

Series E Speakers

Series E/ET Speaker-Strobes



A UTC Fire & Security Company

F-75-005

FEATURES

- Approvals include: UL 1971/UL 1480. New York City (MEA), California State Fire Marshal (CSFM) and Factory Mutual (FM) Pending.
- ADA/NFPA/ANSI compliant.
- Meets OSHA 29 Part 1910.165
- Series E Speaker only models
- Series E and ET Multi-Candela Speaker-Strobe models with Field Selectable Candela Settings of 15, 30, 75 or 110 cd.
- Strobes produce 1 flash per second over the regulated voltage range.
- 24 Vdc with wide New UL "Regulated Voltage" using filtered DC or unfiltered VRMS input voltage.
- Speakers are wall or ceiling mount. Speaker strobes are wall mount.
- Synchronize with Fenwal SM or DSM sync modules.
- Field selectable taps for 25 or 70 VRMS operation: Series E from 1/8 to 2 watts, Series ET from 1/8 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.
- Zero Inrush above Peak.
- Red or white color options.

DESCRIPTION

Fenwal Series E Low Profile Speakers and Speaker-Strobes are designed for high efficiency sound output, with dual voltage (25/70 VRMS) capability and field selectable taps from 1/8 to 2 watts. The Series ET Speaker Strobes are similarly designed with 1/8 to 8 watt field selectable taps. The Series E Speakers and Speaker-Strobes and Series ET Speaker-Strobes 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. 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 E and Series ET Speaker-Strobe models incorporate the Low Current, Zero Inrush, Series RSS Non-Sync/Sync Strobes.



Series E-70/ET70
Speaker Strobe



Series #90
Speaker

All Speaker-Strobes are suitable for wall mounting and use a patented Multi-Candela strobe with field selectable candela settings of: 15, 30, 75 or 110 cd.

The strobe portion of all Series E and Series ET Speaker-Strobes may be synchronized when used in conjunction with the Fenwal SM or DSM Sync Modules. Fenwal synchronized strobes offer an easy way to comply with ADA recommendations concerning photosensitive epilepsy.

The Series E and ET 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.

GENERAL NOTES

1. Strobes are designed to flash at 1 flash per second minimum over their "Regulated Voltage Range". 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.
2. All candela ratings represent minimum effective Strobe intensity based on UL 1971.
3. Series E Speakers, E Speaker-Strobes and Series ET Speaker-Strobes and Series E Speakers are listed under UL 1971 for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 85%.
4. "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."S

SPECIFICATIONS

Use the highest value of rated average current to determine the maximum number of strobes and to establish power supplies and wire gauge requirements. Use the rated peak current or rated inrush current (whichever is higher) to verify fuse requirements.

Table 1. Series E Speakers - Speaker dB

Model Number	Speaker dB @ 10 Feet ** (Rated Watts)				
	1/8	1/4	1/2	1	2
E70-R	78.1	80.8	83.8	86.0	88.8
E90-W	78.1	80.8	83.8	86.0	88.8

INSTALLATION NOTES



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.

1. Contact Fenwal for the current "Installation Instructions" 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 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 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.
2. 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.
 3. Conductor size (AWG), length and ampacity should be taken into consideration prior to design and Installation of these products, particularly in retrofit installations.

Table 2. Series E Speaker-Strobes: Strobe Currents and Speaker dB

Model Number	Strobe Candela	Strobe Average Current @ 24 Vdc**				Speaker dB @ 10 Feet * (Rated Watts)				
		15cd	30cd	75cd	110cd	1/8	1/4	1/2	1	2
E70-24MCW-FR	15/30/75/110	.047	.081	.130	.171	77.5	80.4	83.2	85.7	87.8
E70-24MCW-FW	15/30/75/110	.047	.081	.130	.171	77.5	80.4	83.2	85.7	87.8

Table 3. Series ET Speaker-Strobes: Strobe Currents and Speaker dB

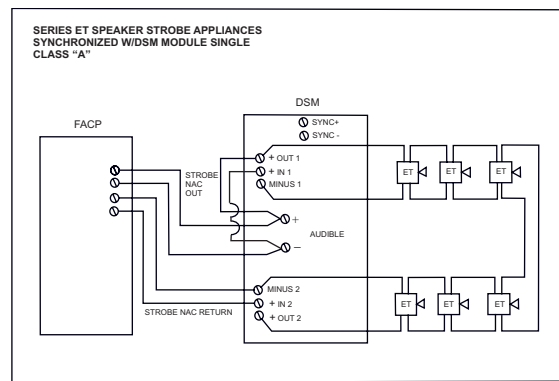
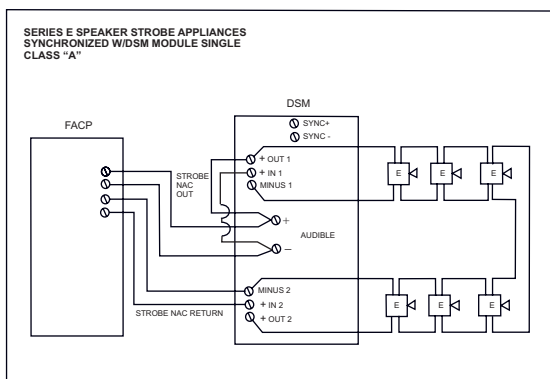
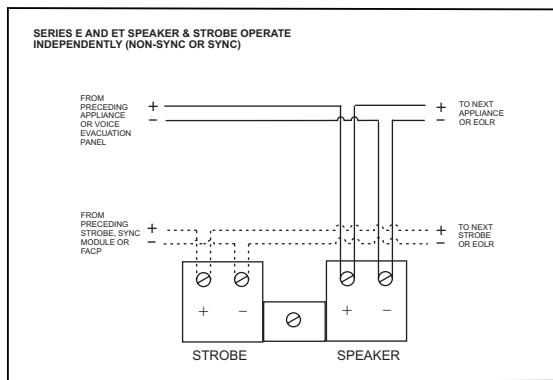
Model Number	Strobe Candela	Strobe Average Current @ 24 Vdc**				Speaker dB @ 10 Feet * (Rated Watts)						
		15cd	30cd	75cd	110cd	1/8	1/4	1/2	1	2	4	8
ET70-24MCW-FR	15/30/75/110	.047	.081	.130	.171	78.3	81.5	84.4	87.2	90.1	92.8	94.9
ET70-24MCW-FW	15/30/75/110	.047	.081	.130	.171	78.3	81.5	84.4	87.2	90.1	92.8	94.9

* dB ratings are based on UL actual testing per UL 1480

**Average current per actual production testing at 24 Vdc. See Installation Instructions for Rated Average and Peak current across UL regulated voltage range for both filtered DC and unfiltered VRMS.

4. Fenwal 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).

WIRING DIAGRAMS



ARCHITECTS AND ENGINEERS SPECIFICATIONS

The Speaker appliances shall be the Fenwal Series E Speakers while the Speaker-Strobe appliances shall be the Fenwal Series E Speaker-Strobes, Series ET Speaker-Strobes or approved equals.

Series E Speakers and Speaker-Strobes shall be utilized for applications requiring a listed sound output of 87 dB at 10 feet. However, for applications requiring a listed sound output of 93 dB at 10 feet, the Series ET Speaker-Strobes shall be used.

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 Emergency 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 power taps for wattage selection. Speakers with 87 dB sound output shall have taps for 1/8 to 2 watt whereas Speakers with 93 dB shall have taps for 1/8 to 8 watt. All models shall have 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 wire sizes of AWG 12 to 18.

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 flash tube enclosed in a rugged Lexan® lens. The strobe shall be of low current design and shall have Zero in-rush. 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. The selector switch for selecting the candela shall be tamper resistant and not accessible from the front of the appliance.

When synchronization is required, the Strobe portion of the appliance shall be compatible with Fenwal's SM or DSM sync modules. The strobes shall not drift out of synchronization at any time during operation. If the sync

module fails to operate (i.e., contacts remain closed), the strobe shall revert to a non-synchronized flash rate.

While Speaker-Strobes shall be suitable for wall mounting, Speakers shall be either wall or ceiling mounted. Both types of units 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 trim-plate or adapter.

ORDERING INFORMATION

Part Number	Model Number	Input Voltage	Speaker Output	Rated Candela cd	Strobe Label	Color	Mounting	Mounting Options
75-000060-005	E70-R	24 Vdc	87	—	—	Red	Ceiling/Wall	B, D, J
75-000060-006	E90-W	24 Vdc	87	—	—	White	Ceiling/Wall	B, D, J
75-000065-001	E70-24MCW-FR	24 Vdc	87	15/30/75/110	FIRE	Red	Wall	B, D, J
75-000065-002	E70-24MCW-FW	24 Vdc	87	15/30/75/110	FIRE	White	Wall	B, D, J
75-000075-001	ET70-24MCW-FR	24 Vdc	93	15/30/75/110	FIRE	Red	Wall	B, D, J
75-000075-002	ET70-24MCW-FW	24 Vdc	93	15/30/75/110	FIRE	White	Wall	B, D, J

MOUNTING OPTIONS

Part No.	Model No.	Mounting Option*
75-000000-002	ISP-R	B
75-000000-003	RP-R	J
75-000000-004	SBB-R	D
* For details of mounting options, refer to Data Sheet 75-008.A		

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