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*Thank you for using our products.*

**INSTALLATION INSTRUCTIONS  
 SERIES MB BELLS**

*Use this product according to this instruction manual. Please keep this instruction manual for future reference.*

**GENERAL:**

Series MB Motor Bells are UL Listed for Fire Protective Service with the exception of the 6VDC Motor Bell which is UL approved for general signaling use. The Motor Bell Series incorporates a high torque permanent magnet motor to provide high output with minimum current draw. Integral MOV suppression is provided to minimize RFI and turn-off transients. In-out wiring terminals and a built-in trim plate, for semi-flush mounting, are provided for easy installation. The Motor Bell Series is available in 6VDC with a 6" bell shell and 12VDC or 24VDC with either a 6" or 10" bell shell.

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

**WARNING: PLEASE READ THESE INSTRUCTIONS CAREFULLY. FAILURE TO COMPLY WITH ANY OF THE FOLLOWING 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.**

**SPECIFICATIONS:**

*Table 1: UL Listed Models and Ratings*

Model	Gong Size	Voltage Range (VDC/VRMS)	Maximum RMS Current Draw		Reverberant dBA Per UL 464			Mounting
			DC	FWR	Min	Nom	Max	Options
MB-G6-6	6"	4.2-7.8	0.130	0.160	75	82	85	A,B,C,D
MB-G6-12	6"	8.0-17.5	0.090	0.110	79	85	88	A,B,C,D
MB-G10-12	10"	8.0-17.5	0.090	0.110	82	88	91	A,B,C,D
MB-G6-24	6"	16.0-33.0	0.040	0.056	82	85	88	A,B,C,D
MB-G10-24	10"	16.0-33.0	0.040	0.056	82	88	91	A,B,C,D

**WARNING: FOR UL APPLICATIONS THESE APPLIANCES WERE TESTED TO THE OPERATING VOLTAGE LIMITS OF 16-33 VOLTS FOR 24V MODELS, 8-17.5V FOR 12V MODELS, OR 4.2-7.8V FOR 6V MODELS USING FILTERED (DC) OR UNFILTERED FULL-WAVE-RECTIFIED (FWR). DO NOT APPLY 80% AND 110% OF THESE VOLTAGE VALUES FOR SYSTEM OPERATION.**

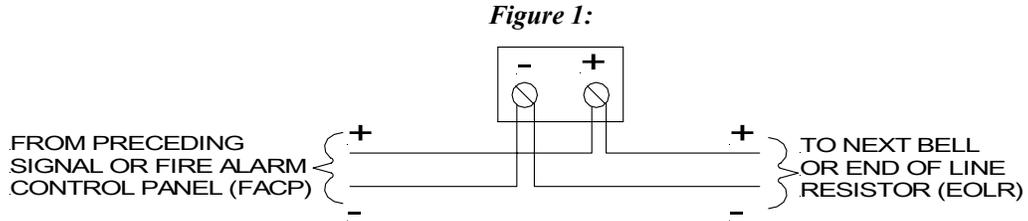
**WARNING: MAKE SURE THAT THE TOTAL RMS CURRENT REQUIRED BY ALL APPLIANCES THAT ARE CONNECTED TO THE SYSTEM'S PRIMARY AND SECONDARY POWER SOURCES, NAC CIRCUITS, SM, DSM SYNC MODULES OR WHEELOCKS POWER SUPPLIES DO NOT EXCEED THE POWER SOURCES' RATED CAPACITY OR THE CURRENT RATINGS OF ANY FUSES ON THE CIRCUITS TO WHICH THESE APPLIANCES ARE WIRED. OVERLOADING POWER SOURCES OR EXCEEDING FUSE RATINGS COULD RESULT IN LOSS OF POWER AND FAILURE TO ALERT OCCUPANTS DURING AN EMERGENCY, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.**

When calculating the total currents: Use Table 1 to determine the highest value of "RMS Current" for an individual bell (across the expected operating voltage range of the bell), then multiply these values by the total number of bells; be sure to add the currents for any other appliances, including audible signaling appliances, powered by the same source and include any required safety factors.

If the peak current exceeds the power supplies' peak capacity, the output voltage provided by the power supplies may drop below the listed voltage range of the appliances connected to the supply and the voltage may not recover in some types of power supplies. For example, an auxiliary power supply that lacks filtering at its output stage (either via lack of capacitance and/or lack of battery backup across the output) may exhibit this characteristic.

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**WIRING DIAGRAM:**

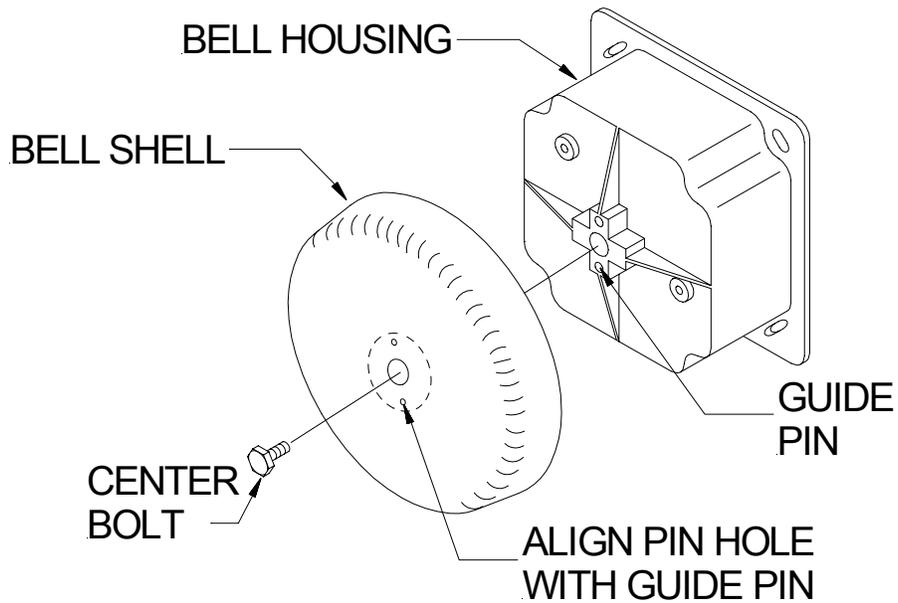


**MOUNTING INFORMATION:**

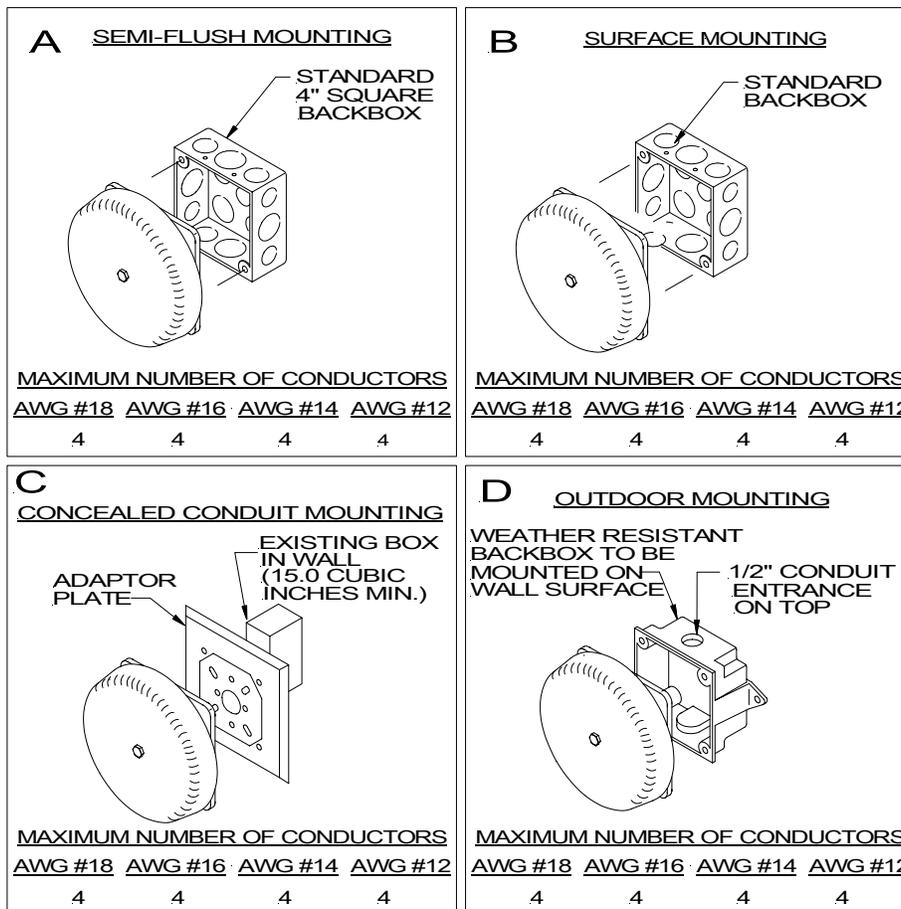
Mounting Options Are Shown In The Following Diagrams:

1. Unscrew the center bolt to remove the bell shell. (See Mounting Procedures Note 2 .)
2. Connect wiring as shown in wiring diagram. Note polarity indicated on back cover of housing.
3. Mount housing with screws provided. (Note "TOP" arrow.)
4. Replace bell shell and secure with center bolt. Be sure shell is properly aligned with housing.

**Figure 2: Bell Shell Mounting**



**MOUNTING OPTIONS:** (Mounting Plates and backboxes ordered separately - specify color)



**MOUNTING PROCEDURES:**

**⚠ CAUTION:** If sheathed multiconductor cable or 3/4" conduit fittings are used, check that installed product has sufficient clearance and wiring room prior to installing backboxes and conduit.

1. For weather resistant installation, use outdoor mounting option. Outdoor backbox must be mounted vertically with "TOP" as marked to allow any moisture or condensation to drain properly through drain holes on bottom of backbox.
2. Each bell mechanism is adjusted to operate only with the shell provided. Do not mix shells and mechanisms during installation. Do not readjust bell mechanisms during installation.
3. The polarity shown in the wiring diagram is for the proper operation of the signals.
4. Inrush current of all bells is approximately 4 times rated current. This inrush current surge exists for about 0.006 seconds and must be supplied by the system power supply to insure start-up of all devices. If the system power supply does not have sufficient surge capability (generally provided by large filter capacitors), loading of the supply should be based on the DC bell inrush requirements rather than on their rated (steady-state) current. Make sure the system power supply is compatible with the specified inrush current.
5. All bells will operate on full-wave-rectified (unfiltered) DC as well as pure (filtered) DC. Motor Bells will operate over a voltage range of: 6VDC = 4.2-7.8VDC; 12VDC = 8-17.5VDC; 24VDC = 16-33VDC. Operate only within specified voltage range for rated performance and endurance. Performance ratings are based on nominal input voltage.
6. All bells will operate on "coded systems" up to 2 on-off cycles per second
7. Each input terminal accepts (2) leads for in-out wiring of 12-22 AWG wire. Break wire run to provide electrical supervision. Strip leads approximately 3/8" for connection to terminals.
8. Select largest backbox shown in Mounting Options where possible, to provide additional wiring room for easy installation.
9. Conduit entrance to backboxes should be selected to insure sufficient wiring clearance for installed equipment. When extension rings are required, conduit should enter through backbox, not extension ring. Use Steel City #53151/1-1/2" deep or #53171/2-1/8" deep extension rings or equal with same area cut out in back.
10. Anechoic dB ratings are "free field" (anechoic) conditions. Typical indoor sound output is usually higher than rated anechoic dB.

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This control unit does not generate a temporal pattern signal. If the distinctive three-pulse temporal pattern Fire Alarm Evacuation Signal (or total evacuation) in accordance with NFPA 72 is required; the control unit must be used with appliances that can generate the temporal pattern signal. Refer to Manufacturer's instruction manual for details.

**⚠ CAUTION:** Check the installation instructions of the manufacturers of other equipment used in the system for any guidelines or restrictions on wiring and/or locating Notification Appliance Circuits (NAC) and notification appliances. Some system communication circuits and/or audio circuits, for example, may require special precautions to assure electrical noise immunity (e.g. audio crosstalk).

**IMPORTANT: READ SEPARATE "GENERAL INFORMATION" SHEET FOR INFORMATION ON THE PLACEMENT, LIMITATIONS, INSTALLATION, FINAL CHECKOUT, AND PERIODIC TESTING OF NOTIFICATION APPLIANCES.**

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