The Bosch EVAX System for high-rise applications is a networked emergency relocation and paging system with integrated two-way fireman’s telephone system. It operates with the Fire Alarm Control Panel (FACP) in a building to provide automatic response to life safety emergencies. While providing all necessary features for an effective voice evacuation system, it can easily convey evacuation, stay-in-place, or other public address announcements and automatic messages with multiple channels of simultaneous audio.

Configure your system to include Fire Fighter Phones or Warden Stations as required, for fire fighter communications to supplement 2-way radios and for use in areas of refuge assistance so trapped individuals can communicate with fire command. Smoke control features include automatic or manual positive or negative pressurization for compartments, floors, or stairwells. The simple to use interfaces allow fire department authorities to take over controls and communicate effectively.

- Master panel with capability for multiple distributed panels
- Operates as stand-alone or connected to an FACP
- Network transmission over fiber optic or copper pair cable
- Digitized live voice and prerecorded messaging
- Zone paging control

**System overview**

The maximum system configuration contains up to 256 Distributed Panels providing up to 2028 monitor and control points.
Distributed Panels
The Distributed Panels communicate with the Master Panel through the NetCom Loop. They typically provide:
- Voice Evacuation Speaker Loops – dedicated data and audio loops using a minimum of 18 AWG wire with end-of-line resistors (EOLR).
- Fire Phone Loops – dedicated audio loop using a minimum of 20 AWG twisted pair wiring with an EOLR.
- Fan and Damper Loops – data loop using a minimum 20 AWG twisted pair wiring on which up to 32 modules can be attached. Each module provides two points (one control and one monitor) for a total of 64 points on the circuit.
- Additionally, local Audio Amplifiers can be connected to the Distributed Panels.

The Bosch Distributed Panels additional provide specific accessories to support specific functions. The HMB-DP provides four audio circuits, the HMB-DP/P provides four Fire Phone circuits, and the HMB-DP-42 provides 16 audio circuits.

Certifications and approvals

<table>
<thead>
<tr>
<th>Region</th>
<th>Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>UL</td>
</tr>
<tr>
<td></td>
<td>UOXX: Control Unit Accessories, System (ANSI/UL 864)</td>
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<tr>
<td></td>
<td>CSFM</td>
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<td>see our website</td>
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</table>

Installation/configuration notes

Compatible Products

Main Panel Accessories

<table>
<thead>
<tr>
<th>Designator</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-SLC</td>
<td>Switch/LED Card</td>
<td>F.01U.201.669</td>
</tr>
<tr>
<td>MB-SSC</td>
<td>Switch Scan Card</td>
<td>F.01U.201.670</td>
</tr>
<tr>
<td>MB-MFA</td>
<td>Master Fire Phone Assembly</td>
<td>F.01U.201.671</td>
</tr>
<tr>
<td>MB-XI</td>
<td>Extended Input Interface</td>
<td>F.01U.201.672</td>
</tr>
<tr>
<td>MB-OI</td>
<td>Output Interface Card</td>
<td>F.01U.201.673</td>
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</tbody>
</table>

Distributed Panel Accessories

<table>
<thead>
<tr>
<th>Designator</th>
<th>Description</th>
<th>Part Number</th>
</tr>
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<tbody>
<tr>
<td>EVX-25E</td>
<td>Expander Module 25 W</td>
<td>4.998.143.753</td>
</tr>
<tr>
<td>EVX-50E</td>
<td>Expander Module 50 W</td>
<td>4.998.143.785</td>
</tr>
<tr>
<td>EVX-100E</td>
<td>Expander Module 100 W</td>
<td>4.998.143.761</td>
</tr>
<tr>
<td>EVX-T2885</td>
<td>Power transformer for EVX-25E</td>
<td>4.998.143.738</td>
</tr>
<tr>
<td>EVX-T17528</td>
<td>Power transformer for EVX-50E/100E</td>
<td>4.998.143.739</td>
</tr>
<tr>
<td>MB-MBK</td>
<td>Mother Board Relays</td>
<td>F.01U.201.677</td>
</tr>
<tr>
<td>MB-AMI</td>
<td>Audio Module Interface</td>
<td>F.01U.201.678</td>
</tr>
</tbody>
</table>
### Phone Accessories

<table>
<thead>
<tr>
<th>Designator</th>
<th>Description</th>
<th>Part Number</th>
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</thead>
<tbody>
<tr>
<td>MB-FPI</td>
<td>Fire Phone Interface</td>
<td>F.01U.201.679</td>
</tr>
<tr>
<td>MB-FPO2</td>
<td>Fire Phone Output Adapter</td>
<td>F.01U.201.680</td>
</tr>
<tr>
<td>MB-FO</td>
<td>Fiber Optic Interface Card</td>
<td>F.01U.201.681</td>
</tr>
<tr>
<td>EVB-BA100</td>
<td>Backup Audio Interface</td>
<td>F.01U.201.682</td>
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</table>

### Replacement Parts

<table>
<thead>
<tr>
<th>Designator</th>
<th>Description</th>
<th>Part Number</th>
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</thead>
<tbody>
<tr>
<td>MB-DCC</td>
<td>Data Communication Controller</td>
<td>F.01U.201.688</td>
</tr>
<tr>
<td>MB-ASC</td>
<td>Audio System Control</td>
<td>F.01U.201.689</td>
</tr>
<tr>
<td>MB-MMC</td>
<td>Master Microphone Control</td>
<td>F.01U.201.690</td>
</tr>
<tr>
<td>MB-MBR</td>
<td>Mother Board Remote</td>
<td>F.01U.201.691</td>
</tr>
<tr>
<td>MB-PWR</td>
<td>Master Panel Power Supply</td>
<td>F.01U.201.692</td>
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</table>

### Parts included

<table>
<thead>
<tr>
<th>Quant.</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Master or Distributed Panel</td>
</tr>
<tr>
<td>1</td>
<td>Literature – Installation Instructions</td>
</tr>
</tbody>
</table>

### Technical specifications

#### Communications Bus

- **Communication Type:** RS-485 standard
- **Data Rate:** 1 MB
- **Frequency:** 1.024 MHz
- **Wire Type:** Twisted pair, Category 5 UTC
- **Current:** 50 mA maximum
- **Impedance:** 120 Ω maximum between panels
- **Voltage (peak to peak):** 5 V maximum

#### Electrical (Master Panel)

<table>
<thead>
<tr>
<th>Current Draw</th>
<th>Alarm: 30 mA, Standby: 30 mA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASC:</td>
<td></td>
</tr>
<tr>
<td>DCC:</td>
<td>Alarm: 80 mA, Standby: 80 mA</td>
</tr>
<tr>
<td>IOI:</td>
<td>Alarm: 20 mA, Standby: 20 mA</td>
</tr>
<tr>
<td>MMC:</td>
<td>Alarm: 45 mA, Standby: 45 mA</td>
</tr>
</tbody>
</table>

#### Batteries

- **Type:** Two 12 VDC Gel Cell in series
- **Current (battery charging):** 800 mA
- **Current (input):**
  - Typical Load: 0.28 A
  - Maximum Load: 0.4 A
- **Capacity:**
  - Minimum: 24 VDC, 7 Ah
  - Maximum: 24 VDC, 18 Ah

#### Power

- **Input (primary):** 120 VAC at 60 Hz
- **Input current:** 0.28 A at 120 VAC
- **Input (circuits):** all circuits at 24 VDC

1. Two 7 Ah batteries is the maximum size that will fit in the Master Panel Enclosure which has a battery mounting area (HxWxD) of 4 in. x 14.25 in. x 2.5 in. (101 mm x 362 mm x 64 mm). Larger batteries must be installed in a UL Listed battery enclosure.

2. Two 12 Ah batteries is the maximum size that will fit in the Distributed Panel Enclosure which has a battery mounting area (HxWxD) of 5 in. x 14.25 in. x 4 in. (127 mm x 362 mm x 101 mm). Larger batteries must be installed in a UL Listed battery enclosure.
### Mechanical

<table>
<thead>
<tr>
<th>Enclosure</th>
<th>Charcoal grey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (h x w x d):</td>
<td>27 in x 14.5 in x 4 in (685.8 mm x 368.3 mm x 101.6 mm)</td>
</tr>
</tbody>
</table>

### Ordering information

**HMB-MP16 Master Panel**
- 16 Switch/Input, includes DCC, ASC, SSC, PWR-2A, MMC, 1-SLC, 1-IOI, Swing Door and Cabinet
- Order number HMB-MP16

**HMB-DP Distributed Panel, 4 Audio Circuits**
- Includes DCC, MBR, AMI, 1-MBK IN Standard Cabinet, no amplifiers in basic assembly
- Order number HMB-DP

**HMB-DP/P Distributed Panel, 4 Fire Phone Circuits**
- Includes DCC, MBR, 1-FPI, PWR-2A used for phone only systems
- Order number HMB-DP/P

**HMB-DP-42 Distributed Panel, 16 Audio Circuits**
- Includes DCC, AMI, 2-MBR, 4-MBK, 2-MBI in CAB-42 Cabinet
- Order number HMB-DP-42

### Accessories

**EVX-25E Expander Module 25 Watt**
- Complete module with built-in tone generator capable of operating as a stand-alone Voice Evacuation System with only tone and microphone amplification; power transformer or cabinet not included
- Order number EVX-25E

**EVX-50E Expander Module 50 Watt**
- Complete module with built-in tone generator capable of operating as a stand-alone Voice Evacuation System with only tone and microphone amplification; power transformer or cabinet not included
- Order number EVX-50E

**EVX-100E Expander Module 100 Watt**
- Complete module with built-in tone generator capable of operating as a stand-alone Voice Evacuation System with only tone and microphone amplification; power transformer or cabinet not included
- Order number EVX-100E

**EVB-BA100 Backup Audio Interface**
- Provides a means to switch in a backup amplifier in the event of a primary amp failure
- Order number EVB-BA100

**EVX-T2885 Power Transformer for EVX-25E**
- Open frame, 28 VAC @ 180 VA
- Order number EVX-T2885

**EVX-T17528 Power Transformer for EVX-50E/100E**
- Open frame, 28 VAC @ 180 VA
- Order number EVX-T17528

**MB-AMI Audio Module Interface**
- Controls 2 EVX-25E/50E/100E Expander Modules in Distributed Panels
- Order number MB-AMI

**MB-ASC Audio System Control**
- Order number MB-ASC

**MB-DCC Data Communications Controller**
- Order number MB-DCC

**MB-FH Portable Handset**
- Color red, 6 mount in MB-TC cabinet
- Order number MB-FH

**MB-FJ Telephone Jack**
- Brushed stainless steel single gang plate
- Order number MB-FJ

**MB-FO Fiber Optic Interface Card**
- Provides termination for Fiber Optic communications between the Master Panel and the Distributed Panels
- Order number MB-FO

**MB-FPO2 Fire Phone Output Adapter**
- Extra terminal card that must be used with the 2nd, 3rd and 4th MB-FPI cards in a Distributed Panel
- Order number MB-FPO2

**MB-FS Fire Phone Station**
- Coax cord, thumb turn latch, cabinet: red, surface/semi-flush mount
- H x W x D: 12-3/4 x 7 1/4 x 3 3/4 in
- Order number MB-FS

**MB-MBK Mother Board Relays**
- Provides 4 Class B speaker loop outputs, a maximum of 2 MB-MBK cards provide 8 Class B or 4 Class A speaker circuits per Distributed Panel
- Order number MB-MBK

**MB-MFA Master Fire Phone Assembly**
- Master Panel's Fire Phone handset, plate and interface PC board
- Order number MB-MFA

**MB-MMC Master Microphone Control**
- Order number MB-MMC
MB-MBR Mother Board Remote
Provides the 4 card slots (can be extended to max 7) for MB-AMI and MB-FPI and 2 MB-MBK
Order number MB-MBR

MB-OI Output Interface Card
Adds 16 outputs to Master Panel
Order number MB-OI

MB-PWR Master Panel Power Supply
Order number MB-PWR

MB-SLC Switch/LED Card
16 switches and LEDs for manual control at Master Panel
Order number MB-SLC

MB-SSC Switch Scan Card
Controls up to 8 Switch/LED Cards (128 Switches). Multiple (16) MB-SSC cards can be used for a system capacity of 2048 switches. Field additions or replacement only.
Order number MB-SSC

MB-TC Fire Phone Cabinet
Cabinet: charcoal gray, surface/semi-flush mount, key lock
H x W x D: 27 x 14-1/2 x 4 in.
Order number MB-TC

MB-WS Warden Station
Cabinet: red, surface/semi-flush mount
H x W x D: 12-3/4 x 7-1/4 x 3-3/4 in.
Order number MB-WS

MB-XI Extended Input Interface
Adds 16 inputs to Master Panel
Order number MB-XI

BATB-40 Battery Box Enclosure
The BATB-40 Battery Box holds two dry or wet cell batteries. The box can be used with fire alarm systems or intrusion systems.
Order number BATB-40

BATB-SHELF Optional Battery Shelf
An optional battery shelf for the BATB-40. It allows two additional batteries to be placed in the battery box.
Order number BATB-SHELF

BATB-80 Battery Box Enclosure with Shelf
The BATB-80 Battery Box holds up to four dry or wet cell batteries. The box can be used with fire alarm systems or with intrusion systems.
Order number BATB-80