ELECTROACOUSTIC
EMERGENCY WARNING SYSTEM
EN 54-16 / VDE 0833-4 / VDE 0828 / IEC 60849

for a maximum of system security
Rear view ESC-012A

1. Power supply input 230 V AC
2. Output relay contact „Emergency” A + B
3. Output relay contact „Error” and „Power failure”
4. Input 24V-DC emergency power supply
5. Input backup amplifier
6. Speaker line 1-12
7. Fire brigade call station 1 (FWS1 with priority of FWS2)
8. Fire brigade call station 2 (FWS2)
9. Input for annunciator 1-3
10. Input for annunciator 4-6
11. Line-level input program 1
12. Line-level input program 2
13. Line-level output for Equalizer
14. Line-level input for Equalizer
15. Line-level output for 100V amplifier 1-6
16. Line-level output for 100V backup amplifier
17. Contact input to activate program 2
18. Memory card for Textmessages
19. Serial Interface RS232 for Printer
20. Digital Interface RR-120 (optional)

Technical data

<table>
<thead>
<tr>
<th>Feature</th>
<th>VARES ESC-012A</th>
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<tbody>
<tr>
<td>Speaker lines</td>
<td>12 lines, max. 480 W each (6 lines with ELM-106)</td>
</tr>
<tr>
<td>Fire Brigade call stations</td>
<td>2x ESM-100D suitable for connection</td>
</tr>
<tr>
<td>Digital microphone stations</td>
<td>up to 10 devices ELM-106 (not monitored)</td>
</tr>
<tr>
<td>Signal outputs (max. 120V AC; max. 2A AC)</td>
<td>2x „Emergency” (break or open contact)</td>
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<tr>
<td>Signal inputs</td>
<td>1x „Error” (break or open contact)</td>
</tr>
<tr>
<td>PC-interface</td>
<td>RS-232</td>
</tr>
<tr>
<td>Voice memory</td>
<td>SD-card</td>
</tr>
<tr>
<td>Display</td>
<td>LCD 64 x 128 px, LEDs</td>
</tr>
<tr>
<td>Control panel</td>
<td>2 buttons, 6 programming buttons, selection wheel</td>
</tr>
<tr>
<td>Power supply</td>
<td>230V AC, 24V DC</td>
</tr>
<tr>
<td>Power consumption</td>
<td>&lt; 40 W</td>
</tr>
<tr>
<td>Dimensions (WxHxD)</td>
<td>483 x 89 x 340 mm, 2 RU</td>
</tr>
<tr>
<td>Weight</td>
<td>6.7 kg</td>
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</table>

Description

ELM-106 manages announcements into one or more selected zones and all-calls. An expansion to handle 12 call zones is possible by the use of an optional six-button module ELE-006.

- On an overall bus length of 100 m on CAT7 cable up to ten pcs. ELM-106 can be connected to a single ESC-012A. For larger distances please use lower resistance cables.
- With the extension module ELE-004 can be extended to a covered alarm button, three buttons for special functions and 2 fault LED’s.

Digital Microphone Station

Digital Microphone Station, Electret microphone with cardioid characteristic .................................................. ELM-106
Digital Microphone Station, as ELM-106, but without interface RR-120 ............................................................... ELM-106 WO
Button Extension Module, for ELM-106 to handle 12 call zones ................................................................. ELE-006
Function Extension Module, for ELM-106 to expand with further functions ...................................................... ELE-004
**Lifesaving in the case of an emergency!**

In the case of an alarm, an electroacoustic emergency warning system may avoid panic by understandable speaker announcements, which are, contrary to the howling of a siren, a much more efficient way of initiating the evacuation of a building. Certainly, the availability and safe working of such systems has to be guaranteed at any time by monitoring the complete signal path. The standard IEC 60849/ VDE 0828 and VDE 0833-4 defines the requirements for such systems.

**Description Control-Center ESC-012A**

VARES ESC-012 A has been developed in full accordance to the latest rules and regulations for security. Targeted towards small and medium-scaled usage scenarios, it handles all the tasks and challenges a voice alarm systems faces in everyday life.

Installation is handled in an easy and straightforward way by using the LCD based user interface. All connected auxiliary components are scanned and registered automatically.

Speaker lines can be configured in 12 single or 6 A/B lines for an increased of security. Even a mix of single and redundant line setups for custom scenarios is possible.

A logging function stores all system conditions on non-volatile memory in any case of a technical failure. The generated protocol can be viewed immediately or sent to a printer.

**Specifications:**

- Graphical user interface with adjustable colour scheme, in any case of an alarm the display flashes in red colour.
- Menu interface with digital rotary encoder.
- Password protected menu interface.
- Fully variable assignment of up to 12 speaker lines to a maximum of 6 power amplifiers, maximum amplifier power is 480 W each.
- A faulty power amplifier is detected and replaced by the backup amplifier automatically.
- Two line level inputs of different priority levels can be used for various tasks, like background music distribution or paging via a telephone system.
- Free assignment of the program to any of the 12 speaker lines.
- The internal digital message memory (based on an SD card) is equipped with an evacuation announcement, a siren according to DIN 33404 and various different chimes (one tone and four tones).
- All 12 speaker lines are monitored for short circuits, line breaks and impedance variation.
- Error messages are provided by clear text display, signalling LED, sounder and dry contact.
- Up to 10 digital call stations ELM-106 can be connected.
- ELM-106 call stations can be expanded to address 12 zones by ELE-006 expansion units.
- Emergency microphones ESM-100D and ESM-020H enjoy individual 3-band equalisation for best intelligibility of any announcement (up to two emergency microphones can be connected).

**Model designation**

VARES Control-Center, 2 RU ....................... ESC-012 A
Example of an emergency warning system compliant to IEC 60849

VARES – Emergency Control-Center

- Amplifier and Microphone Monitoring
- Text Module, Digital Speech Memory
- Fire-Alarm-Transfer Monitoring
- Speaker Line Monitoring
- Line Current and Battery Monitoring
- Automatic Error Log Recording

Possible connection of one to six Amplifiers
Disconnection of all non safety-relevant components when in emergency announcement operation.

2 monitored emergency call stations.

* unsupervised devices
**Made in Germany**

**VARES Fire Brigade Call Station**

**Description**
The call station is electronically monitored compliant to VDE 0828/IEC 60849. Measured values of the microphone cap, the entire signal path and the press-to-talk bar are detected and analysed.

The direct connection with VARES is made by a 4-pin shielded cable. The stable “slim” desktop housing has a functional design. It is suitably coloured for the specially targeted application.

**VARES Fire Brigade Call Station** .............. **ESM-100D**

**VARES Software Languages**

**VARES Language Options**
As alternatives to English and German ESC-012A offers a variety of menu languages as options:

1. German (factory setting, at no extra charge)
2. English ESL-001/2
3. Czech ESL-001/3
4. Spanish ESL-001/4
5. Italian ESL-001/5
6. Polish ESL-001/6

**VARES Software Language** ...................... **ESL-001/X**

(Please replace the „X“ by corresponding last digits, at ordering)

**VARES Fire Brigade Handheld Mic**

**Description**
The handheld microphone is electronically monitored compliant to VDE 0828/IEC 60849. Measured values of the microphone cap, the entire signal path and the press-to-talk bar are detected and analysed.

The direct connection with VARES is made by a 4-pin shielded cable. The handy, coloured housing with its lateral press-to-talk bar is optimized for its special purposes.

**VARES Fire Brigade Handheld Mic** .............. **ESM-020 H**

**Housing and Mounting Panel for ESM-020 H**

**Description**
The Mounting Panel VMF-020A for the fire brigade microphone ESM-020H provides installation in a standard housing according to DIN 14661 and DIN 14662 and can thus be integrated in a fire control panel.

The housing VCF-020A is optional, if no fire brigade control panel is available. It is designed as a standard housing according to DIN 14661 and DIN 14662, in red (RAL 3000).

- Protection type: IP40, DIN 40050
- Surface design according to DIN 14663
- The ESM-020H is part of the certification to EN 54-16

**Mounting Panel, for ESM-020H** ............... **VMF-020 A**

**Housing, for ESM-020 H (without mounting panel)** ............... **VCF-020 A**

Dimensions (WxHxD): 250x180x60 mm, 4 kg