

# KAESLAM E/4

## AUDIO LINES/AMPLIFIERS MONITORING UNIT



The KAE SLAME/4 is a micro-controller-based monitoring system for 70V/100V speaker lines and amplifiers. It combines several functions related to the safe operation of audio systems and can be connected to all types of amplifiers and 70V/100 V loudspeaker lines.

The KAE SLAME/4 continuously monitors the audio system and is able to detect and record the following defaults (in accordance with standard EN 60849) :

amplifier out of order, amplifier gain incorrect, loudspeaker line in short circuit, loudspeaker line open, loudspeaker line shorted to ground, loudspeaker line unadjusted (abnormal impedance).

In case of an amplifier failure, the KAE SLAME/4 will automatically switch the corresponding loudspeaker line to a backup amplifier. The KAE SLAME/4 can communicate the system status through RS232 or RS485 protocol and provide a general default contact to a central management system. It also includes an integrated loudspeaker (E) to allow monitoring of the audio content of each line from the front of the unit.

The amplifier/line systems are tested sequentially in two ways :

**Continuously** : a low-level 18KHz signal generator is used to measure the amplifier output voltage and the current in the loudspeaker lines. These measurements can detect the following defaults : amplifier out of order, loudspeaker line in short circuit, loudspeaker line open.

**Periodically** (Time and interval are freely programmable) : A 1 KHz signal with adjustable level is applied to the loudspeaker lines. The impedance of each line is then measured and compared to the initial value allowing the following defaults to be detected : amplifier out of action, amplifier gain incorrect, loudspeaker line in short circuit, loudspeaker line open, loudspeaker line shorted to ground earth (instability), loudspeaker line unadjusted (abnormal impedance). If the system includes spare amplifiers they can also be monitored.

The measurement parameters (Time, Intervals, Detection limits) can be freely programmed to meet with the requirements of all types of installations. A relay contact is provided to override the zone attenuators during the measurement.

KAE SLAME/4 consists of a (three/one) unit 19-inch chassis containing a controller board, a keyboard/display panel, a power supply and from 1 up to 8/2 KAE SL20E modules (two amplifiers and two loudspeaker lines may be connected to each KAE SL20E\*. The capacity of the system is therefore:

16/4 amplifiers/lines channels with one spare amplifier or 2 groups of 8/2 amplifiers/lines channels with one spare amplifier per group.

- **Monitoring of up to 16/4 channels**
- **18KHz and 1KHz impedance measurements**
- **70V/100V loudspeaker lines monitoring**
- **Amplifiers monitoring**
- **Compliant with EN 60849**
- **Integrated speaker for audio monitoring**
- **Switching to backup amplifier**
- **Event recording on Flash Eprom**
- **Modular system**
- **Slampc 5.0 PC Management & Monitor Software**

\*The KAE SL20E has to be ordered separately



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## TECHNICAL SPECIFICATIONS

### ELECTRICAL

Frequency Response	30 Hz to 20Khz -3dB
THD at 1KHz	Less than 0.1%
Signal to Noise Ratio	> 80dB
Audio Input	Balanced, -20dB to + 6 dB, 10Kohms
Audio Output	Balanced, -30dB to + 6db, 50 Ohms
Auto Power per channel	500W

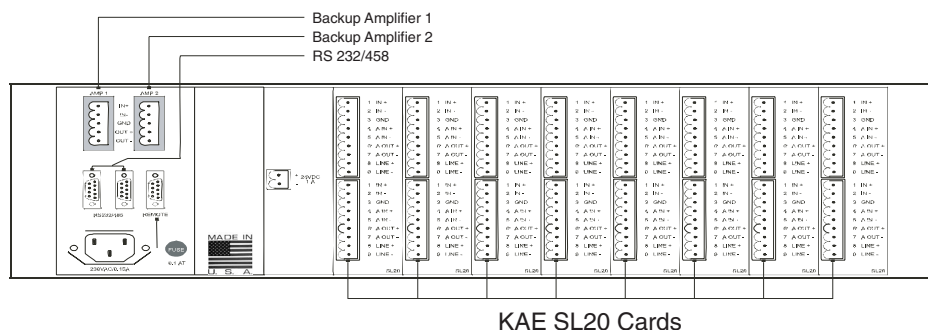
### POWER

Power Source	207VAC to 258 VAC / 50Hz 20VDC to 28VDC
Power consumption	25VA/230V -0.6A/24VDC / 0.2A/24VDC

### ENVIRONMENT AND MECHANICAL

Operation temperature	-10°C to + 50°C
Dimensions	L 483 x H 133 x P 340 / L 483 x H 45 x P 216 mm
Weight	Max 6.7 Kg / 1.95 Kg

### BLOCK SCHEMATIC



### MONITORING, DIAGNOSTIC, MANAGEMENT SOFTWARE

**ULTRAK SLAMPC 5.0**

File SLAM Configuration Serial Port Language

Site Name: NAMELESS SITE

Voies	Surveillance	Impédance	Gain	Fuite	Zone
C 1	OFF	0	0	0	0
C 2	OFF	0	0	0	0
C 3	OFF	0	0	0	0
C 4	OFF	0	0	0	0
C 5	OFF	0	0	0	0
C 6	OFF	0	0	0	0
C 7	OFF	0	0	0	0
C 8	OFF	0	0	0	0
C 9	OFF	0	0	0	0
C10	OFF	0	0	0	0
C11	OFF	0	0	0	0
C12	OFF	0	0	0	0
C13	OFF	0	0	0	0
C14	OFF	0	0	0	0
C15	OFF	0	0	0	0
C16	OFF	0	0	0	0

C 1 Surv OFF None

Niv1kHz Niv18kHz Imped.Tol Gain Tol Leak Mini

200mV 2500mV 25% 25% 5000 kOhms

START PERIOD Network Address Halted by to measure relay Spare Amplifiers

03:00 00:00 RS485: 1 Close Yes Aucun

Conversion: 1" = 25.4mm

Measurement conversions are approximate

Design and specifications subject to change without notice.

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