



DATA SHEET DS27-02

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MACRO SYSTEM SL/10 LINE SURVEILLANCE UNIT



SL/10 unit fitted with BRK-30 rack mount kit

The Mustang **MACRO** system encompasses a comprehensive range of both AC and AC/DC powered amplifier, zone control, surveillance, and alarm units, designed for use by the emergency services or in high integrity communications and alarm systems. Equipment is manufactured to the highest standards of electronic and mechanical performance, and with Quality Assurance procedures to ISO.9002. Systems may be configured using standard **MACRO** units and allied equipment to meet the requirements of BS.5839 and BS.7443.

For installations associated with life safety or high security, it is necessary to ensure that loudspeaker networks and related amplifiers are fully operational. On a large or complex site the cost of achieving this manually would be prohibitive. The Mustang **MACRO** SL/10 surveillance concept offers an inaudible, constant and automatic alternative. In practice, the **MACRO** amplifier units and zone control units within the system would be specified with a surveillance tone option, and the resulting signals set up in the loudspeaker network would then be silently and continuously monitored by the SL/10.

The SL/10 may be incorporated within the equipment rack to monitor outgoing circuit groups and any deviation from expected loudspeaker loading may be set to register a fault. As the unit will accommodate up to ten loudspeaker circuits, the loudspeaker network would ideally be divided and grouped accordingly, to enable pin-pointing of a problem area with the aid of the front panel LED display. As many SL/10 units as required may be incorporated into one system.

Applications for the SL/10 would include large public buildings, industrial sites, security and emergency service buildings, larger entertainment and leisure venues, and retail outlets.

Use of the finest electronic and mechanical components ensures a long and maintenance-free life, dramatically reducing the long-term 'cost of ownership'.

MAIN FEATURES

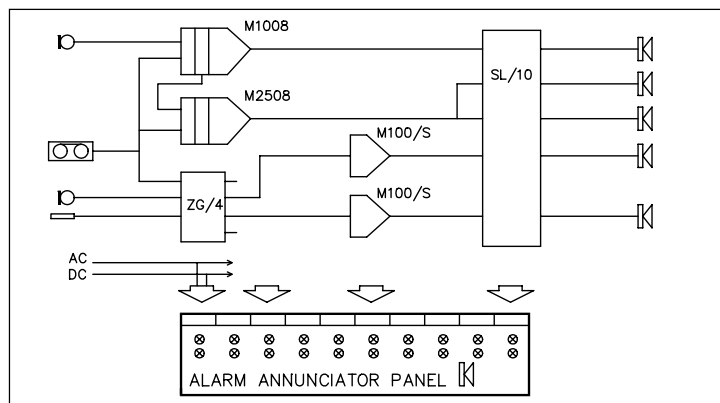
- Load variation sensing
- Fully adjustable triggering sensitivity
- Easy to set up
- No line terminating resistors required
- Amplifier output integrity monitoring
- Ten channels capacity
- AC/DC powered
- Isolated alarm outputs for remote reporting
- Fascia LED display and internal audible alarm
- Complementary fascia for MACRO range
- Standard 100V line input/output (linked through)
- Negligible insertion loss
- Laced cableforms throughout
- Stabilised PSU and full reporting of AC and DC status
- Tough powder coated steel construction with charcoal and royal blue colour scheme
- Fully cased. Standard 3U rack mounting by optional kit

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TECHNICAL SPECIFICATION

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Application	Integrity monitoring of 100 Volt line loudspeaker circuits and their associated drive amplifiers
Circuit capacity	Up to ten isolated and independent channels
Adjustment range	Loudspeaker loads of between 30 Watts and 400 Watts per circuit
Maximum combined load	1500 Watts RMS continuous sine wave for all ten channels simultaneously
Detection resolutions	Adjustable for triggering on unexpected load reporting of $\pm 10\%$, $\pm 20\%$ and $\pm 30\%$ deviation from nominal load, per channel
Amplifier failure detection	Alarm raised when surveillance tone amplitude drops to less than approximately 25% of expected.
Operating frequency	Centre 20kHz ± 100 Hz. Bandwidth -3dB @ ± 1 kHz; -12dB @ ± 2 kHz.
Indicators	Individual LEDs for overload and underload, per channel. Steady illumination indicates load fault. Alternate flashing indicates amplifier failure/signal loss. AC & DC supply status; power 'ON' LED.
Internal adjustments	Individual channel null setting, individual channel disable, individual detection resolution, individual channel sensitivity ranges, internal buzzer disable.
Alarm outputs	Non latching volt-free changeover contacts for load/signal failure. 1A 30V non inductive Individual AC or DC PSU failures indicated by volt-free opening contacts. Contacts closed when unit powered and systems OK Amplifier failure alarms provided by individual open collectors with 2k2 holdup resistors from +15V. Normally high. 5mA rating for TTL or CMOS control
Auxiliary output connector	25pin D female connector. Panel mounted at rear. Mating connector supplied
Operator controls	Power on-off, internal buzzer reset.
100V connections	M3.5 (4BA) barrier terminals to suit wire ends, spades or rings
AC supply requirement	220-240V 50/60Hz 6VA
AC connector	Standard 3-pin 6A IEC (supplied)
DC supply requirement	24V DC 200mA
DC connector	MIL 97 (supplied)
AC/DC power relationship	Instantly powered by DC supply when AC fails, and reverts automatically. No glitch. Tri-colour fascia LED displays the supply status.
Other features	** Front power switch isolates both AC poles and DC+. ** Regulated supplies ** Optional extra rack mount bracket kit - BRK-30 with pull handles.
Weights	7kg Net. Gross shipping weight 8.5kg
Dimensions (19" style)	432 x 133 x 345mm (WxHxD). Add 30mm at front for rack mount handles. Add 40mm extra at rear to accommodate connectors and cables. Add 4mm for removable feet. Shipping: 540 x 225 x 470mm. Volume 0.057cu.M



A typical SL/10 application - Signals from four amplifiers are applied between five loudspeaker circuits, which are monitored by the SL/10. Loud-speaker load errors are indicated at the Annunciator panel, as are faults in the AC/DC supplies and the amplification.

If in doubt, please contact our technical support staff for guidance.

QUALITY ASSURANCE

Guided by a policy of non-obsolescence, every part for the **MACRO** range of amplification is carefully manufactured direct from raw materials to ensure total control of all aspects of quality and delivery. Every sub-assembly and finished unit is exhaustively and individually tested.

All procedures meet our internal Quality Assurance standards, which in turn are maintained to ISO.9002.

CONTACT

We will be pleased to receive enquiries regarding application of the **MACRO** range, either by phone, fax, or email.

In the interests of continuous development, specifications are subject to change without notice. E & OE.
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Electromagnetic compatibility (EMC) directive 89/336/EEC and amendment directive 92/31/EEC
This equipment has been designed and manufactured to the highest standards. If connected and operated as set out in this manual, there should be no Electromagnetic Compatibility problems. If any aspect of operation gives rise to concern, then please contact the manufacturer for advice.