



LSM 8/8 A-1

Combined operating indicator and fault annunciator

Performance characteristics:

- Signal voltage approx. 24V ...250V AC/DC
- 8 operating and 8 fault indications
- Standard LED colours for fault messages red, operating messages green, other colours optional
- 1 frequency flasher
- First up message, make principle, horn control
- Electrical insulation of all circuits using optocoupler
- Pluggable connection terminals
- Compact module in 96 x 96mm housing
- Marker strip connectable to transparent window

System description

In control and monitoring units there is often the requirement for a simple, but as universally applicable as possible fault annunciator unit. Wiring should be kept to the minimum possible, and there is no space for additional control elements.

The **LSM 8/8** module, available as 96x96 mm panel mounting housing, provides for operating indications and fault messages with integrated 5mm LEDs, buttons for lamp test, acknowledgement of the horn and the lamp. 8 operating and 8 fault indications are processed.

The signal voltage can reach up to 250V AC/DC. It is separated electrically from the power supply and can be taken from any phase. The collective report is implemented as a potential-free change-over contact and the horn contact as a NO contact.

The acknowledgement of lamp and horn can be carried out by internal or external buttons. The wiring is carried out by means of pluggable cable connectors. The marking of the LED display is done with push-in marker strips.

Functional description

The input voltages are conducted by AC-optocouplers and resistance dividers to an electronic switching stage each. This ensures that parasitic voltages below the response threshold (hum voltage) does not result in actuation of the horn and LEDs. The LEDs are controlled directly from the switching stage and supplied by the power supply so that a constant brightness is maintained even with high variations of the input voltage.

Alarm sequence

Operating messages (contacts 1 – 8):

When a signal voltage is switched on, the corresponding green LEDs light up continuously. A connection to the fault indicator logic exists only through the lamp test button.

Fault messages (contacts 9 -16):

When a message is present for longer than 100ms the corresponding red LED flashes with a 1 frequency flasher. Horn and collective report are activated and message saved. All incoming messages appear with a flashing light. Faults eliminated, but not yet acknowledged are displayed by opposite phase flashing.

If the acknowledgement button for horn and LEDs are actuated, the horn signal goes out and the flashing display changes to constant illumination for as long as the fault exists, otherwise the LED goes out. The collective report is not extinguished until all individual alarms have been acknowledged and eliminated.

Function sequence



Options available:

- **BSV 1** Labelling pattern (10 in a pack)
- **BSV-Soft** Disk with labelling pattern templates for WIN WORD from version 6.0 onwards
- **KST 1** Windows door (IP 42)
- **KSH 1** Protection cover (IP 65)
- **tropical-proof version**

5 types of unit are available in the voltage levels 24V ,60V, 110V, 125V and 230V as standard. The respective signal voltage can basically be AC or DC and vary in wide limits. Other voltages can also be supplied on demand.

Technical data

| Type | LSM 8/8 A-1 / 24V AC/DC | LSM 8/8 A-1/60V DC | LSM 8/8 A-1/110V DC |
|--------------------|------------------------------|------------------------------|-----------------------------|
| Supply voltage | 24V AC/DC± 20% | 60V DC ± 20% | 110V DC ± 20% |
| Power consumption | approx. 6 W | approx. 8 W | approx. 10 W |
| Signal voltage | 24 ... 60V AC/DC +10/-15% | 48 ... 72V AC/DC +10/-15% | 85...125V AC/DC +10/-15% |
| Response threshold | approx. 16V, max. 70V | approx. 38V, max. 85V | approx. 70V, max. 140V |
| Max. input current | approx. 4mA | approx. 2.5mA | approx. 2.5mA |

| Type | LSM 8/8 A-1/125V DC | LSM 8/8 A-1/230V AC |
|--------------------|--------------------------------|------------------------------|
| Supply voltage | 125V DC ± 20% | 230V AC +10/-15% |
| Power consumption | approx. 5W | approx. 5W |
| Signal voltage | 100 ... 150V AC/DC +10/-15% | 185...230V AC/DC +10/-15% |
| Response threshold | approx. 85V, max.165V | approx. 160V, max. 250V |
| Max. input current | approx. 2.5mA | approx. 1.5mA |

Switch on delay approx. 100ms
Surge input voltage 2.5kV according to IEC-Pub. 60 1.2µs / 50µs
Load capacity of relay contact 24 ... 250V AC 2A; 110V DC 0.5A;
220V DC 0.3A
Flash frequency approx. 1Hz

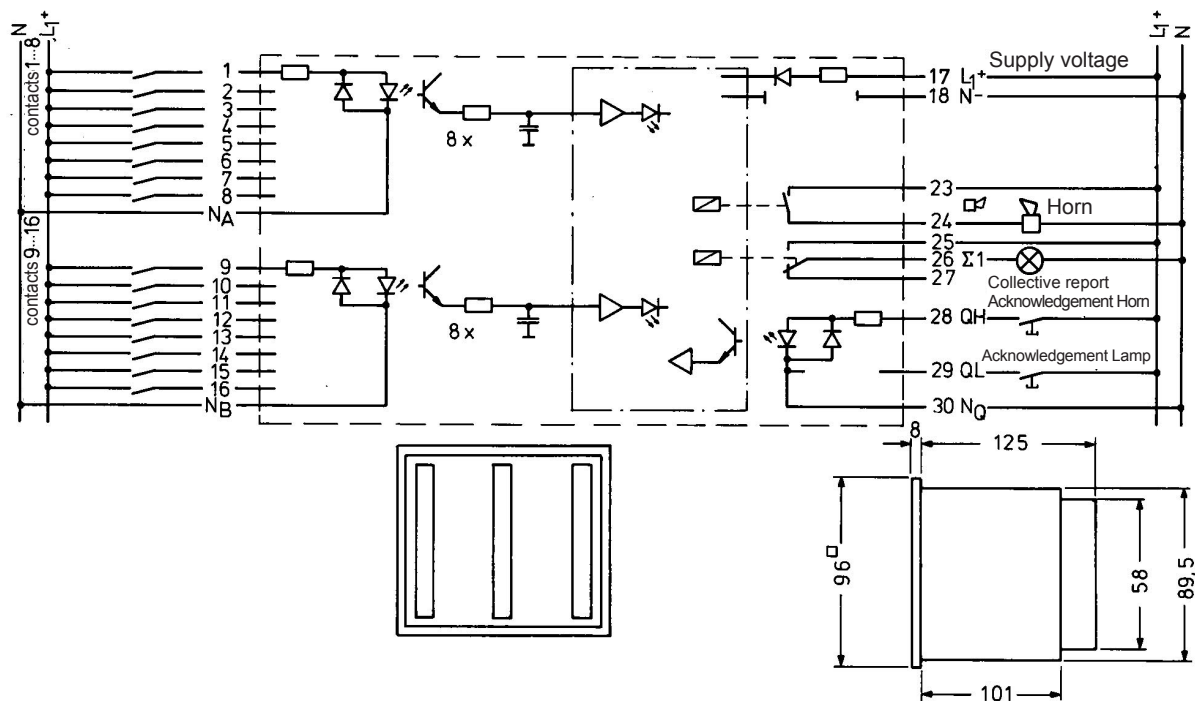
Mechanical data

Panel frame 96 x 96mm; maximum mounting depth 125mm
Mounting hole 91 x 91 ^{+0.5}mm
Mounting position arbitrary
Weight approx. 0.5 kg

Ambient environment

| | |
|-----------------------------------|---|
| Operating and ambient temperature | -20°C ... +60°C without condensation |
| Storage temperature | -20°C.... +70°C without condensation |
| Duty cycle | 100% |
| Type of protection front side | IP 40; IP 42 with window door, IP 65 with protection cover |
| Type of protection rear side | IP 20 |
| Connection terminals | nominal cross section 0.2 ... 2.5 mm ² |
| Relative humidity | max. 75% mean (Group F DIN 40040) |
| Noise immunity | EMC tested according to EN 61000-4-2,4,5 |

Wiring diagram and housing LSM8/8A-1



The right to make technical changes is reserved

Dimensions in mm

Further accessories and more detailed information may be found in the appropriate product sections in the catalogue.



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