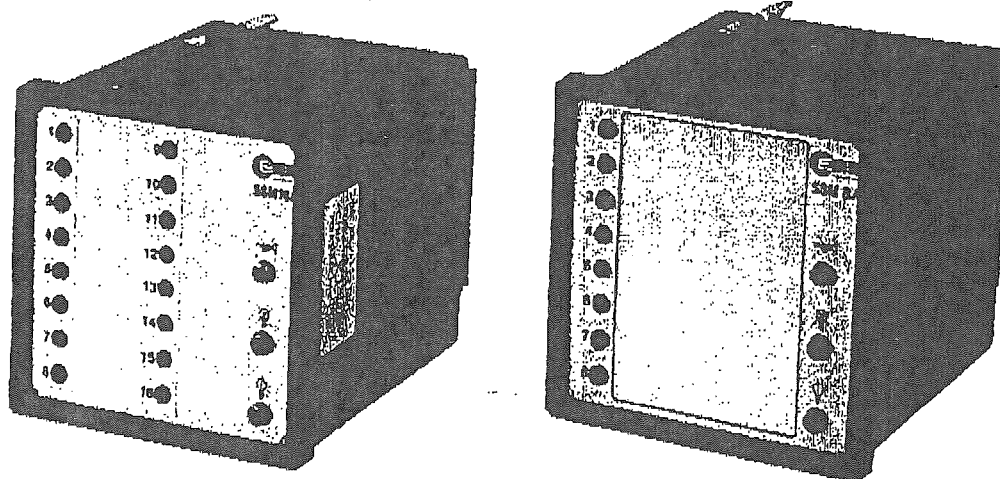




**Panel-mounted
Standard Fault annunciator
with 1-frequency flash light
96 x 96 mm housing**

**SSM 16A-1
and LSM 8/8 A-1**

SSM 8 A-1



Performance data

- SSM 16 A-1** Compact module for 16 alarms
- SSM 8 A-1** Compact module for 8 alarms
- LSM 8/8 A-1** Compact module for 8 operation indications and 8 alarms
with channel 1 ... 8 as operation indications with green LEDs
and channel 9 ... 16 as alarms with red LEDs
- Alarm voltage 24V ... 250V AC/DC
- No first up alarm, break input principle, retriggering horn fixed
- Potential separation of all circuits by optocoupler
- Screw terminals pluggable
- Clear windows for slide-in labels

The complete fault indicator for small control systems and machines

Catalogue group 5.5

General system description:

In control and monitoring systems, there is a frequent demand on a simple fault indicator to be used as universally as possible. The wiring efforts should be limited to a minimum; there is no space for additional controls.

The modules **SSM 16A-1**, **SSM 8A-1** and **LSM 8/8A-1** in a panel-mounted housing 96 x 96 mm are complete fault annunciator units with integrated 5 mm LEDs, push buttons for lamp test, horn acknowledgement and lamp acknowledgement.

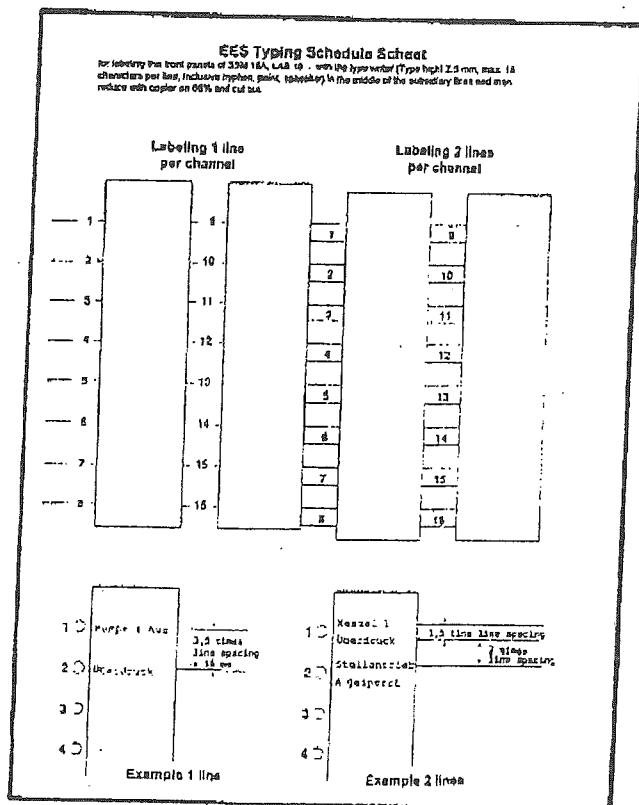
The alarm voltage may amount to 250V AC/DC; it is potentially separated by opto-couplers from the supply voltage and can be arbitrarily put on.

As standard, the following voltages can be used: 24V AC/DC, 110V DC and 230V AC (Other voltages on request).

The collective alarm contacts are performed as potentialfree changeover and the horn contacts as potentialfree n.o. contacts.

Lamps and horn can be also acknowledged by means of external push buttons by opto-coupler installed. The wiring is made by pluggable terminals.

The LEDs can be labeled by slide-in strips. Therefore, the typing schedule sheet **BSV 1** (10th set), available as option, can be used for the **SSM 16 A-1**. There are two strips with 21 mm text length and 10 mm height per channel. For the **SSM 8 A-1**, the text length amounts to 55 mm.



Typing schedule sheet

BSV1 for labeling the front panels of **SSM 16A-1** and **SSM 8A-1** with the type writer. Then, reduce on 66% with copier and cut out.

For labeling the **SSM 8A-1**, there is no need for a typing schedule sheet, there is more space open.

Electrical data:

Type:

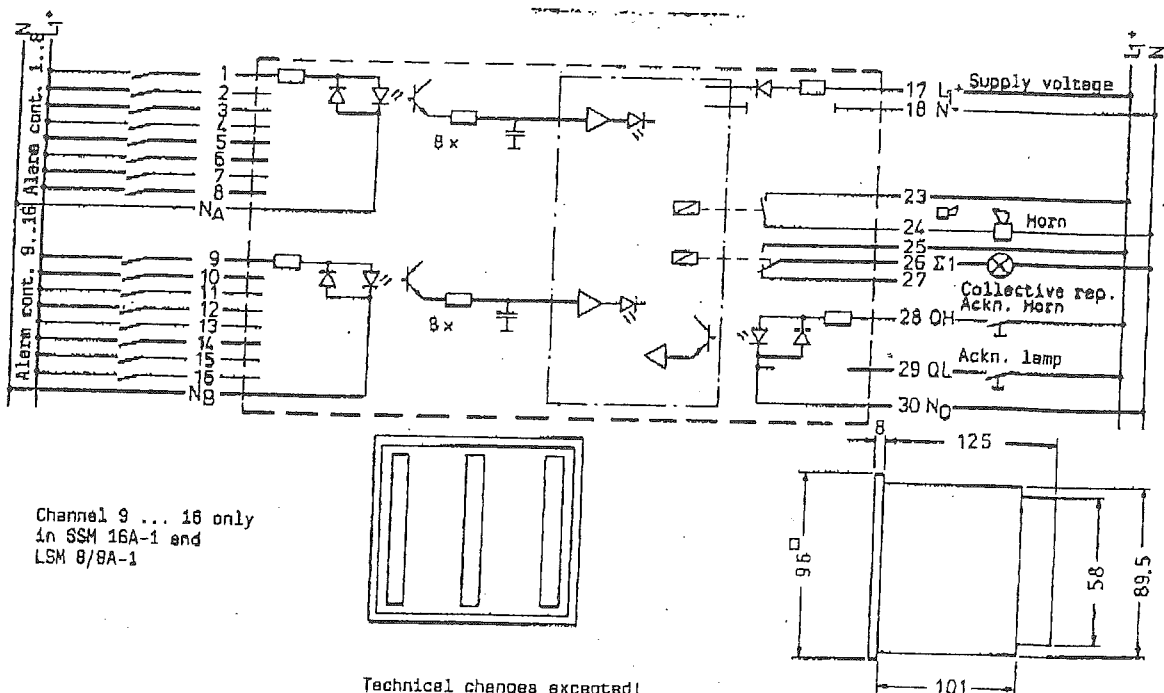
	SSM 16A-1/24 SSM 8A-1/24 LSM 8/8A-1/24	SSM 16A-1/110 SSM 8A-1/110 LSM 8/8A-1/110	SSM 16A-1/230 SSM 8A-1/230 LSM 8/8A-1/230
Supply voltage	24V AC/DC $\pm 20\%$	110V DC $\pm 20\%$	230V AC $\pm 10-15\%$
Power consumption	approx. 5W	approx. 10 W	approx. 5VA
Nom. input voltage	24 ... 60V AC/DC $\pm 10-15\%$	85 ... 125V DC $\pm 10-15\%$	185 ... 230V AC $\pm 10-15\%$
Switch on delay	approx. 100 ms	approx. 100 ms	approx. 100 ms
Response threshold	approx. 16V, max. 70V	approx. 70V, max. 140V	approx. 160V, max. 250V
Max. input current	approx. 4mA	approx. 2,5mA	approx. 1,5mA
Surge input voltage	2,5kV acc. to IEC-Pub. 60 1,2us/50us		
Load of relay contacts	24 ... 250V AC 2A; 110V DC 0,5A; 220V DC 0,3A		
Flashing frequency	approx. 1 Hz		

Mechanical data:

Panel frame	96 x 96 mm; max. mounting depth 125 mm
Mounting hole	91 x 91 $\pm 0,5$ mm
Mounting position	arbitrary
Weight	approx. 0,5 kg

Ambient conditions:

Ambient temperature	-20°C +60°C without condensation
Storage temperature	-20° +70°C
Duty cycle	100%
Protection	IP40; IP50 with window door
Terminals	Cross section 1,5 mm ²
Humidity	= 75% mean (groupe F DIN 40040)



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 (ripple) can not result in sounding horn or in flashing LEDs. The LEDs are directly controlled by the switching stage and supplied by the supply voltage to ensure the uniform brightness even for high variations of the input voltage.

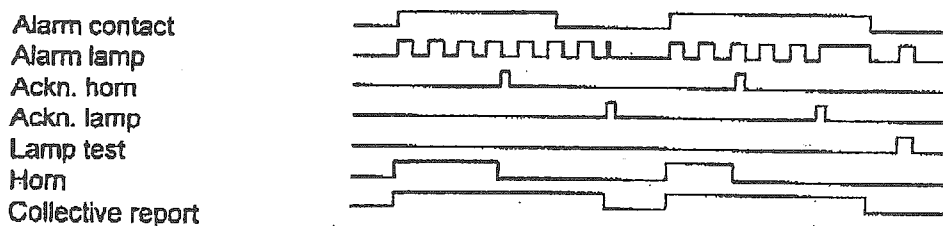
The alarm sequence is as follows:

If an alarm prevails for more than about 100 ms, the corresponding indicating lamps flashes with single frequency, horn and collective alarm are activated and the alarm is stored.

Any incoming alarm is indicated by fast flashing. Faults eliminated, but not yet acknowledged are indicated by flashing in phase opposition.

As soon as the acknowledgement buttons for horn and lamp are activated, the horn is muted and the lamp changes from flashing to permanent lighting, if the alarm still exists. Otherwise the LED is extinguished. The collective report is not extinguished, until all individual alarms have been acknowledged and eliminated.

Alarm sequence



Series

As standard, 3 devices are available for supply voltages of 24V AC/DC, 110V DC and 230V AC. The respective alarm voltage may be AC/DC and may vary in wide limits.

Version	SSM 16A-1/24V AC/DC LSM 8/8A-1/24V AC/DC SSM 8A-1/24V AC/DC	for supply voltage 24V AC/DC and alarm voltage between 24 and 60V AC/DC
Version	SSM 16A-1/110V DC LSM 8/8A-1/110V DC SSM 8A-1/110V DC	for supply voltage 110V DC and alarm voltage between 60 and 125V AC/DC
Version	SSM 16A-1/230V AC LSM 8/8A-1/230V AC SSM 8A-1/230V AC	for supply voltage 230V AC and alarm voltage between 125 and 250V AC/DC

Other voltages on request.