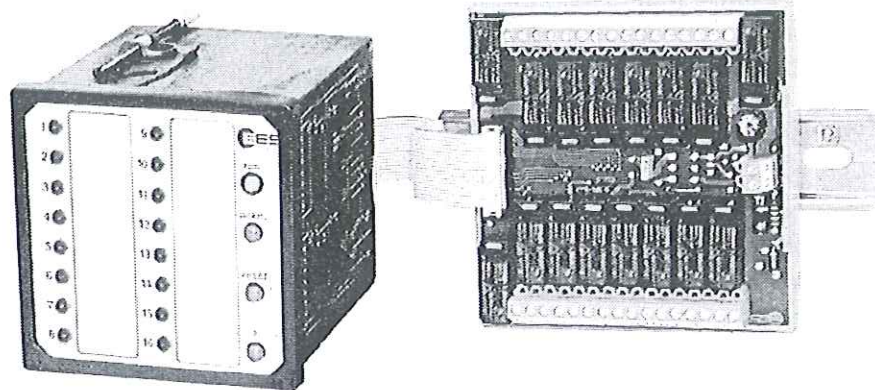




For medium- and high voltage switchgear  
compact fault annunciator —

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### **SSM 16-R-B5A** panel-mounted standard fault annunciator

16 alarms and external relay output module

Operation indication with green LED and live-contact

#### **Performance data:**

- Compact module for 16 alarms 24 V ... 250 V
- Standard LED - colour red, other colours optional
- 2-frequency flashing display
- Electrical insulation of all circuits
- Pluggable connection terminals
- Marker strip connectable to transparent window

## General 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 **SSM 16-R-B5A** module, in a panel-mounted housing 96 x 96 mm is a complete fault annunciator unit with integrated 5mm LED's, push buttons for lamp test, QLS (acknowledgement fast flashing light) and QLL (acknowledgement slow flashing light). The horn can be acknowledged with an external push button. Alarm voltage is potentially separated from the supply voltage and every phase can be used as alarm voltage.

By use of the external relay module **RM 16** each alarm signal can be passed – for example - to a central control system. This relay module is connected by a ribbon cable with the basic annunciator **SSM 16-R-B5A** and can be snapped onto DIN-rail. Each relay-contact is wired to a screw terminal and standardly assembled in NO function. NC function of relays is available on request. If more than one relay contact is needed, the ribbon cable may be equipped with a second plug connector for connection of a further relay module. The relays are switched according to the alarm inputs.

The following functions are fixed, other functions on request.

- 1) Make-input principle for all alarms
- 2) No first-up alarm
- 3) Horn retriggerable with the following alarms
- 4) Collective report not inverted

The wiring is made by plug-in terminals. The LED's can be labelled by slide-in strips - two rows with 21 mm text length and 10 mm height per channel.

## Functional description

The input voltages are conducted by opto-couplers and resistance dividers to an electronic switching stage each. This ensures that interfering voltage below the response threshold (ripple) can not result in sounding horn or in flashing LED's. The LED's 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.

## Alarm sequence

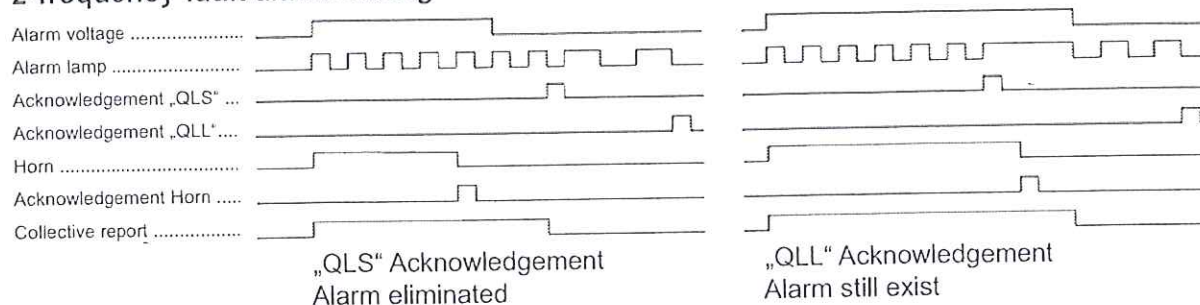
If an alarm prevails for more than about 100 ms, the corresponding LED flashes fast, horn and collective report will be activated and the alarm will be stored. All incoming alarms are indicated by fast flashing. Faults already eliminated, but not yet acknowledged are indicated up to here acknowledgement by fast flashing.

As soon as the "QLS" button is activated the LED changes from fast flashing to permanent light, if the fault signal still exist; otherwise the fast flashing changes to slow flashing. Faults signalling by slow flashing turns off after activating the push button "QLL". The collective report turns off only after all individual fault signals have been acknowledged and eliminated.

The live-relay release if the annunciator is disturbed.



## 2-frequency fault annunciating



## Technical data

Item number	55SSM16RBB5A	55SSM16RBD5A	55SSM16RBE5A
Supply voltage	24 V DC $\pm$ 20%	48 V DC $\pm$ 20%	60 V DC +20 / -15%
Power consumption	approx. 5 W	approx. 8 W	approx. 8 W
Alarm voltage	24 ... 60 V DC +10 / -15%	40 ... 60 V DC +10 / -15%	48 ... 72 V DC +20 / -15%
Response threshold	approx. 16 V max. 70 V	approx. 38 V max. 60 V	approx. 48 V max. 72 V
Input current	approx. 4 mA	approx. 2,5 mA	approx. 2,5 mA

Item number	55SSM16RBF5A	55SSM16RBH5A	55SSM16RBJ5A
Supply voltage	110 V DC $\pm$ 20%	125 V DC $\pm$ 20%	220 V DC +20 / -15%
Power consumption	approx. 8 W	approx. 8 W	approx. 8 W
Alarm voltage	85 ... 150 V DC +10 / -15%	85 ... 150 V DC +10 / -15%	185 ... 220 V DC +20 / -15%
Response threshold	approx. 72 V max. 165 V	approx. 72 V max. 165 V	approx. 185 V max. 250 V
Input current	approx. 2,5 mA	approx. 2,5 mA	approx. 1,5 mA

Switch on delay	approx. 100 ms
Surge input voltage	2,5 kV according to IEC-Pub. 60 1,2 $\mu$ s / 50 $\mu$ s
Load capacity of relay contacts	24 ... 250 V AC 2A; 110 V DC 0,5 A; 220 V DC 0,3 A
Flash frequency	approx. 2 Hz / 1 Hz

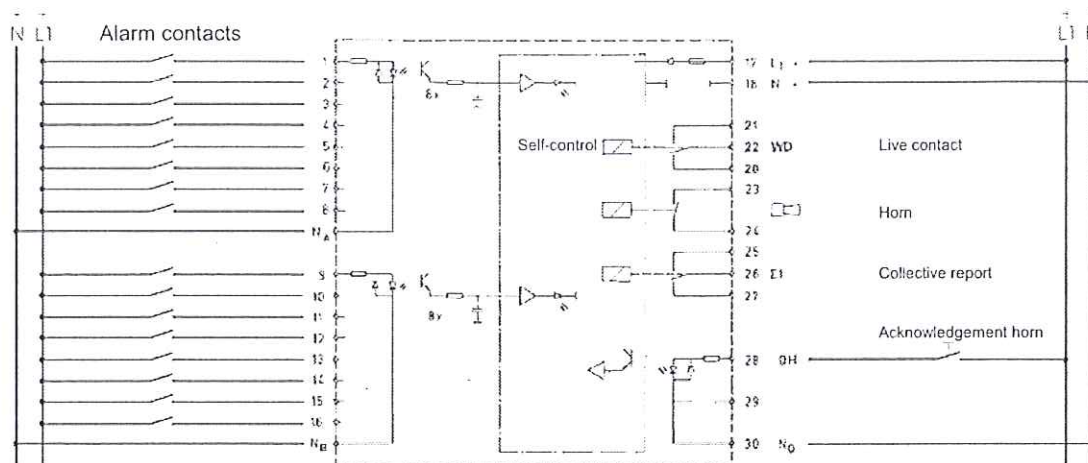
Mechanical data	
Panel frame	96 x 96 mm; maximum mounting depth 125mm
Mounting hole	91 x 91 $^{+0,5}$ mm
Mounting position	arbitrary
Weight	approx. 0,5 kg

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 50 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 <sup>2</sup>
Relative humidity	max. 75% mean (group F DIN 40040)
Noise immunity	EMC-tested according to EN 61000-4-2,4,5

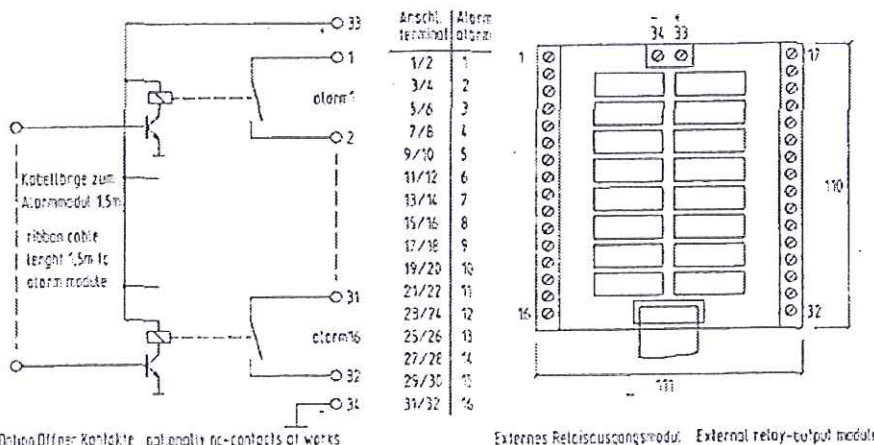
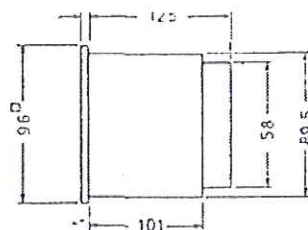
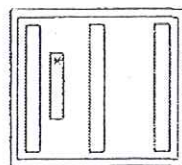
 Other voltages and switches on delay on demand.

## Available Options

- BSV 1 labelling pattern (10 in a pack)
- BSV-Soft a disk with labelling pattern templates for WIN WORD from Version 6.0 onwards
- KSH 1 protection cover (IP 65)
- KST 1 window door (IP 42)
- tropical-proof version



\* ribbon cable connector to external relay module 1,5m long



Option: Offener Kontakte optional: no-contacts at works

Externes Relaisausgangsmodul External relay-output module

Relay-module RM 16

dimension in mm

Subject to technical changes without prior notice.

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



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