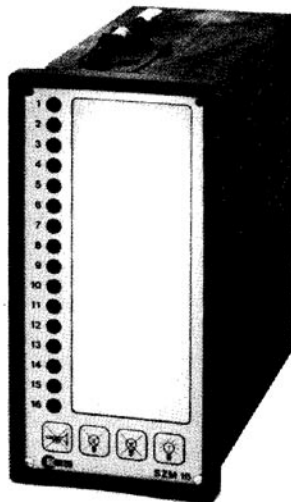


Panel-mounted Standard Fault Annunciator

with 1- or 2-frequency flash light indication
72 x 144 mm housing

SZM 16



Performance data . . .

Compact module for 16 alarms 24 V . . . 250 V AC/DC
connectable directly at voltages up to 250 V DC
16 relay contacts alternatively parallel to inputs/outputs
All circuits are isolated by opto-couplers 4 kV
waterprotect foil-front panel with pushbuttons
clear window for slide-in lable
Functions programmable by DIP-switches
pluggable screw-terminals on rear side
optionally 2-wire interface for long distances up to 15 km
many special functions possible

The fault indicator for high voltage switching areas

General system description:

Especially in high voltage switching areas there is a frequent demand on a compact and completed fault annunciator to be used as universally as possible.

The battery powered supply voltage is mostly 110 or 220 V DC and should be connected directly to the system.

The fault indication is given by 16 red LED's built in the frontpanel and displayed as a 1-frequency standard sequence or 2-frequency (option). The LED's may be labeled by slide-in strip with 40mm text length and 3,5mm height per channel.

The collective report relay contacts are subdivided into 2 priorities (channel 1 . . . 8 Σ 1 and 9 . . . 16 Σ 2). The contacts may be internally changed from n.o. to n.c. types. Furthermore there are 16 relay contacts which are either paralleled to the alarm inputs or lamp outputs so that a parallel lamp tableau may be driven or an annunciation to a central control. The internal push buttons for acknowledge lamp and horn without lamp test may be paralleled by external keys via integrated opto-couplers.

Furthermore the 16 alarm inputs are subdivided into 4 circuits so it's possible to feed in alarms out of different phases or (optionally) voltages. As a furthermore option a 2-wire interface may be installed to drive by use of EES-2-wire system „ZS 8“ a parallel tableau or central control up to a distance of 15km via 2 arbitrary wires.

Programming the functions:

After removing the front panel the following functions may be selected at a DIP-switch installed at the bottom side of the left PCB-board (see drawing).

Attention: Switch of power before opening!

The standard version is: All switches in OFF-position, output relays paralleled to the inputs and contacts in n.o.-function. Other versions and special functions on request.

Programming facilities:

„Make“ switch position: 1 OFF - The alarm inputs are connected as make circuits; i.e. an alarm is detected when a voltage is applied to the inputs.

„Break“ switch position: 1 ON - The alarm inputs are connected as break circuits; i.e. a voltage is supplied to the input in no-alarm condition and is disconnected in fault condition. No used inputs must be supplied!

„Horn retrigger“ switch position: 2 OFF - The horn sounds for each incoming alarm provided it was acknowledged previously.

„Horn no retrigger“ switch position: 2 ON - After the first alarm and its acknowledgement, the horn does not sound for the next incoming alarm. The horn cannot be activated unless all alarms have been eliminated.

„First-up“ switch position: 3 ON - The first alarm is indicated by a flashing LED, all other alarms are indicated by permanent light.

„No first-up“ switch position: 3 OFF - All incoming alarms are indicated by flashing LED's. Faults already eliminated but not yet acknowledged are indicated by flashing in phase opposition.

„Collective report non-inverted“ switch position: 4 OFF - The alarm relay is dropped out in released condition and attracts with an incoming alarm.

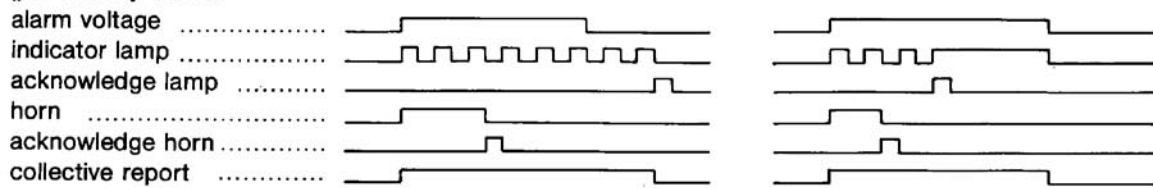
„Collective report inverted“ switch position: 4 ON - The alarm relay is continuously attracted in released condition and drops out on case of an alarm or power failure.

Options:

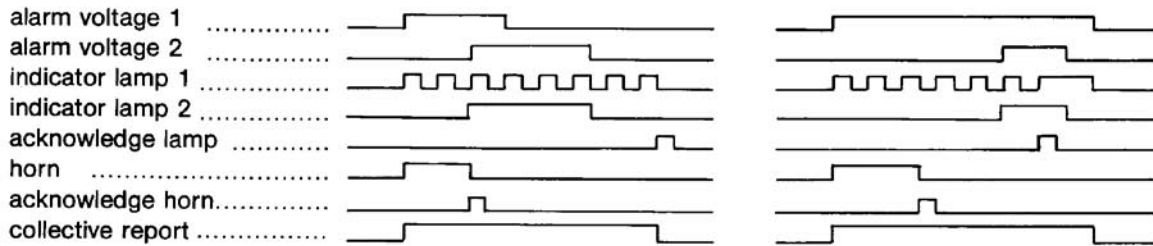
- 2-frequency flash light sequence a fast flash light/steady light/slow flash light.
Alternatively fast flash light/steady light/steady light.
- Instead of collective report Σ 2 a second horn priority. Channel 1 . . . 8 on horn H 1 and channel 9 . . . 16 on horn H2.
- 2-wire interface for transmission of 16 alarms to a tableau or control system up to a distance of 15 km. Exiting paralleled to inputs or flashing LED's.
- All relay outputs wired as n.c.
- Tropicalized version for humidity >75% and harsh climatic conditions.

Alarm sequencea:

„no first up alarm“



„first up alarm“



Electrical data:

Series	SZM 16/24	SZM 16/110	SZM 16/220 V
Supply voltage	24 V DC $\pm 20\%$	110 V DC $\pm 20\%$	220 V DC $\begin{smallmatrix} +15\% \\ -20\% \end{smallmatrix}$
Nom. input voltage	24... 60 V AC/DC $\begin{smallmatrix} +10\% \\ -15\% \end{smallmatrix}$	85... 125 V DC $\begin{smallmatrix} +10\% \\ -15\% \end{smallmatrix}$	185... 230 V DC $\begin{smallmatrix} +10\% \\ -15\% \end{smallmatrix}$
Switch on delay	approx. 100ms	approx. 100 ms	approx. 100 ms
Response threshold	approx. 16V	approx. 70V	approx. 160V
Max. input current	approx. 4mA	approx. 2,5mA	approx. 1,5mA
Surge input voltage	4kV acc. to IEC-Pub. 60 1,2 us/50 us		
Isolation inputs/supply/outputs	4kV		
Load of relay contacts	24... 250 V AC 2 A; 110 V DC 0,5 A; 220 V DC 0,3 A		
Flashing frequency	approx. 1 Hz/0,25 Hz		
Power consumption	max. 10 W		

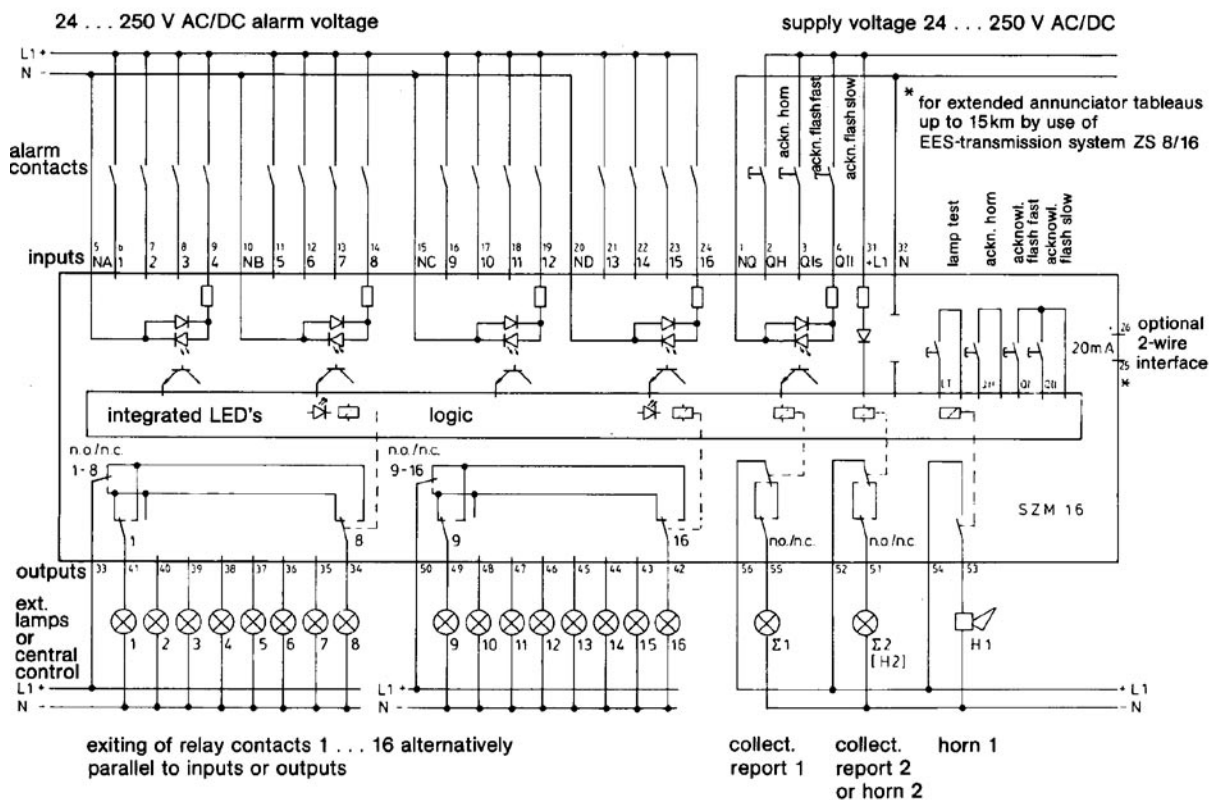
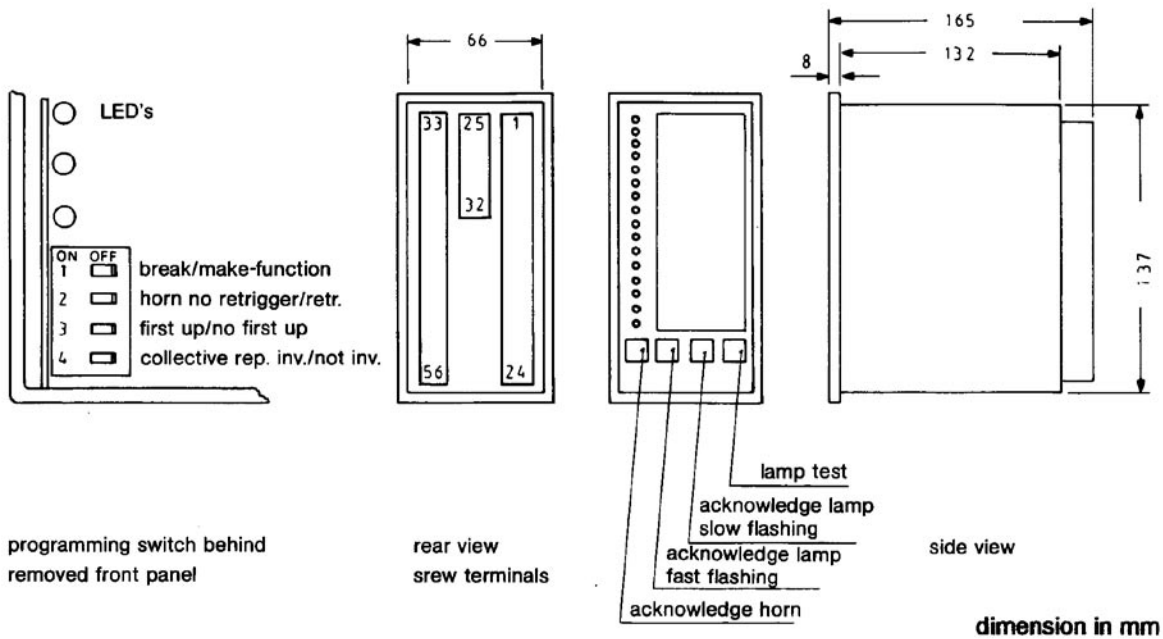
Mechanical data:

Panel frame	72 x 144 mm; max. mounting depth 158 mm
Mounting hole	68 x 138 + 1 mm
Mounting position	arbitrary
Weight	approx. 1,1 kg

Ambient conditions:

Ambient temperature	- 20° C... + 60° C without condensation
Storage temperature	- 20° C... + 70° C without condensation
Duty cycle	100%
Protection	IP 50
Terminals	Cross section 1,5mm ² , pluggable
Humidity	≅ 75% mean (group F DIN 40040)

other values on request



Subject to technical changes without prior notice



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