



Universal fault annunciator

with 2-frequency flashlight and programmable functions in a compact housing which can be mounted on 35mm DIN-rail

ESV 8



The performance data

Compact module with 8 channels for supply voltages 24V AC/DC and 230V AC
Alarm voltage potential separated 24 ... 250V AC/DC
Built-in LED state display
Adjustable response delay
4 functions programmable
Pluggable terminals

General description of the system

The universal fault annunciator system ESV 8 is designed as a 2-frequency flashlight system. The response delay for each channel is individually adjustable in 2 ranges, respectively 10 ms – 2 s and 0,6 s – 2 min. The range selection is performed for 2 channels: 1 and 2, 3 and 4, 5 and 6, 7 and 8, respectively, via the coding switches.

Via the programming switch the selection feasibility is also designed as a no-first-up or a first-up-signal, horn to be reactivated or not by a sequential signal, inverted or not- inverted collective signals as well as a basis of NO and NC function of the fault signal inputs.

Besides at the floating contacts of the lamp outputs the signal state of all channels is discernible via built-in LED's. Via optocouplers all inputs can be triggered at any phase and are isolated from the power supply. The supply voltage circuit and the output circuit for lamps are protected by fine-wire fuses against overloading. The collective signal contact is designed as a floating change-over switch and the horn contact as a normally open contact.

The following can be connected as external operating keys:

Horn acknowledgement, fast flashlight, slow flashlight, lamp test and functional test.

A parallel connection of several devices is feasible by means of a ribbon cable connection.

Standardization of the components:

The device is manufactured in 2 designs:

Supply and input voltage

24 V AC/DC

ESV 8/24 V

220 V AC

ESV 8/220 V

Other voltages are available on request.

Lamp voltage up to 250 V AC/DC selectable.

Functional description

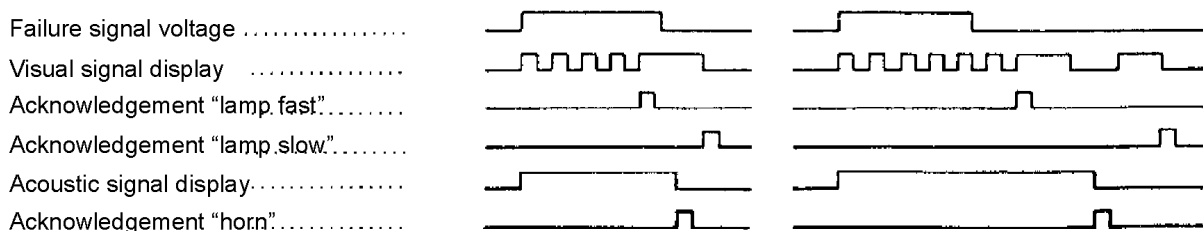
The required functional selection may be performed via the coding switches, arranged on the front panel and the response delay via the potentiometers.

In parallel operation of several components, only the flashing synchronisation will be looped if each component shall operate as an individual function group. If, however, the ribbon cable is looped, all functions of the complete system are transferred; the connection of the collective signal, horn, test and acknowledgement keys are solely performed in one component.

Signal sequence:

If a fault signal of minimal length of the set response delay is applied to the inputs the corresponding LED starts to flash rapidly, horn and collective signal will be activated and the signal stored. At actuating the acknowledgement "horn" the horn signal is disabled. At actuating the acknowledgement "lamp fast" the fast flashing LED changes to a continuous light, assuming the fault signal is still valid; or it changes to a slow-flashing light, if the failure signal has disappeared in the meantime. At actuating the acknowledgement "lamp slow" the display is cleared.

2-frequency flashing failure signal



Programming capabilities

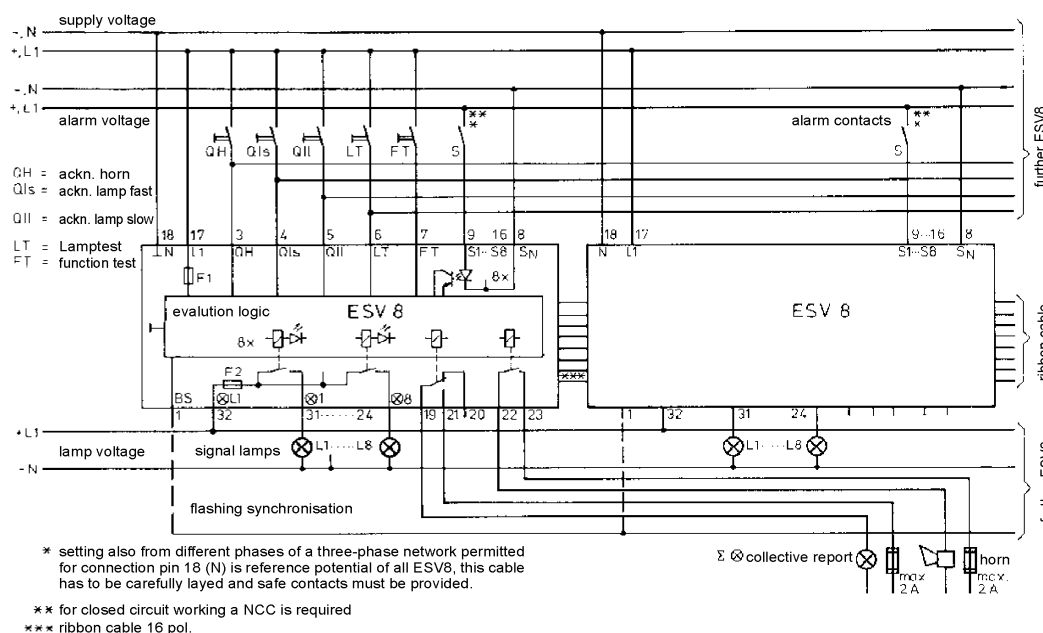
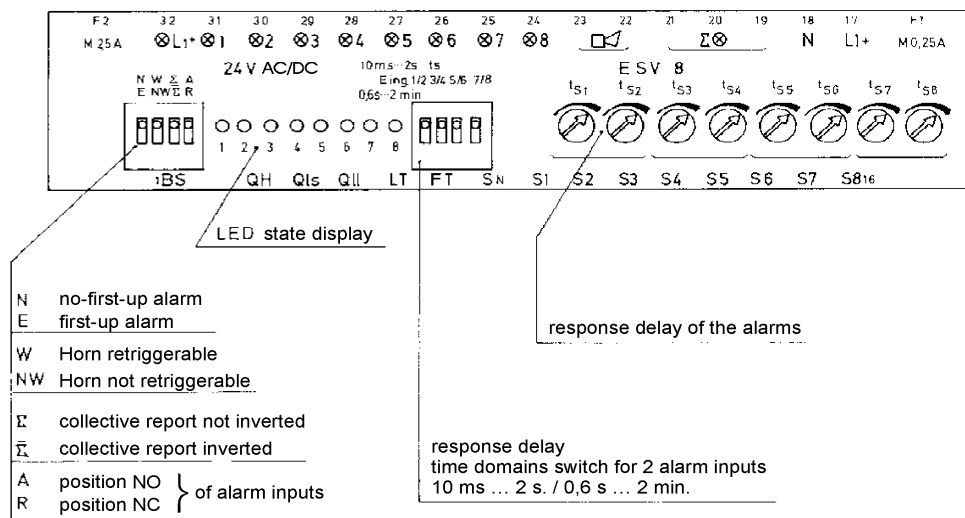
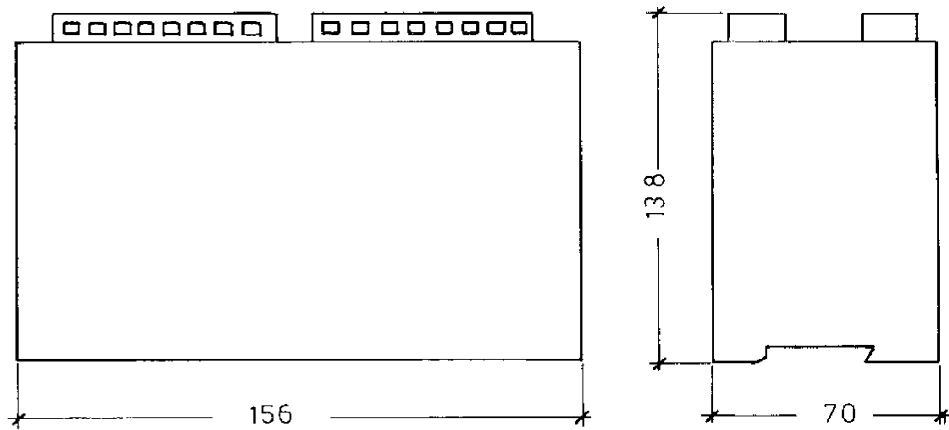
- a) Switch position "NO" (A):
The fault signal inputs are switched to normally open-circuit operation.
This means that a fault is recognized when applying the voltage to the inputs.
- b) Switch position "NC" (R):
The fault signal inputs are switched to normally closed-circuit operation.
This means that in a failure-free condition the voltage is applied to the inputs and in a failure condition the voltage is switched off.
- c) Switch position "horn retriggerable"(W):
The horn sounds at any new entered fault signal, if it was previously acknowledged.
- d) Switch position "horn not retriggerable" (NW):
The horn does not sound again at a new entered fault signal if it was previously acknowledged.
- e) Switch position "first-up alarm" (E):
The first entered fault signal appears as a fast flashlight, all others in a continuous light.
- f) Switch position "no-first-up alarm" (N):
All entered fault signals appear as a fast flashlight. Faults that are already disabled but not yet acknowledged are indicated by anti-phase flashing.
- g) Switch position "collective report not inverted" (Σ):
The collective relay has dropped in rest condition and is only energized at an entered signal.
- h) Switch position "collective signal inverted" ($\overline{\Sigma}$):
In the rest condition the signal relay is continuously energized and deenergizes at a fault signal or voltage loss.

Electrical and mechanical data

| Type | ESV 8 / 24 V | ESV 8 / 230 V |
|---------------------------------------|--|-----------------------|
| Fault signal voltage | 16 ... 60V AC / DC | 16 ... 60V AC / DC |
| Supply voltage | 24V AC / DC +20 -15% | 230V AC / DC +10 -15% |
| Lamp voltage | up to 250V AC / DC | |
| Switch-on-delay | 10ms ... 2s and 0,6s ... 2min. adjustable | |
| Max. input current | approx. 2mA | approx. 1mA |
| Power consumption | approx. 5W | |
| Loading capacity of the relay contact | 24V AC / DC and 250V AC 2A or 250V DC 0,2A | |
| Flashing frequency | approx. 1Hz (fast), approx. 0,25Hz (slow) | |
| Fault voltage stability of the inputs | 2,5kV acc. IEC Pub 60 1,2 μ s / 50 μ s | |
| Mounting position | any | |
| Weight | approx. 0,6kg | |

Environmental conditions

| | |
|--------------------------------------|---|
| Ambient temperature during operation | -20°C ... +60°C without condensation |
| Storage temperature | -20°C ... +70°C without condensation |
| Operating factor | 100% |
| Protection | IP 40 |
| Terminals | section 1,5mm ² , plug-in-type |
| Permissible air humidity | ≥75% in the annual mean (group F DIN 40040) |



Technische Änderungen vorbehalten
subject to modifications