



Control Unit AN 5969

Signal Unit AN 5970

Signal Unit AN 5971

- Programmable for
  - new signal alarm according to DIN 19 235
  - first signal alarm according to DIN 19 235
  - continuous-light alarm
  - for open- or closed circuit operation
- Expandable from 4 up to 200 inputs
- With one relay each, for common signal and horn
- With LEDs for each fault signal
- Potential separation between signal-input and lamp-output
- Operate delay of the signal-output
- Width 100 mm

### Application

Monitoring of industrial plants and buildings

### Function

The fault annunciator system AN 5969 consists of a central control unit AN 5969 and the signal units, AN 5970 and AN 5971, which are alternatively usable. To a central control unit, up to maximum 50 signal units, can be connected.

### Control unit AN 5969:

- LED for common signal
- 1 relay each for common signal and horn
- Pushbuttons for lamp test, acknowledgement of horn and new/first signal acknowledgement, audible external connectable
- selector switch for programming of signal "H" and common signal "S" for continuous signal or intermittent signal.

Via pushbutton "lamp test" all lamp diodes and relay outputs - except for the output of the audible alarm - can be tested. A special advantage in this case is the built-in release delay of 10 seconds, which makes possible a visual test e.g. at other switch boards within that time, even if the push-button is no longer operated. Fault signals, coming in during test will be registered.

### Signal unit AN 5970 with indication by LEDs

- LEDs for individual fault signals
- relay output for common signal
- controlled via contacts or sensors with max. 5 mA residual current

The input-voltage relates to the respective nominal voltage of the fault signal unit, whereas the connection of different inputs on different phases is possible. The shortest operate time is 20 ms. On demand, all inputs can be equipped with a delay of 1s, 3 s or 10 s, in order to avoid short-time fault signals.

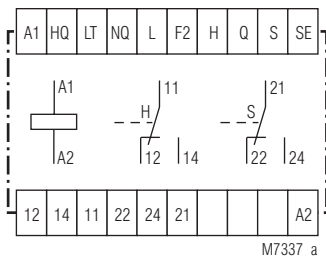
Programmable via option-switch for:

- Open-circuit operation
  - DA: signal with continuous light
  - NA: new signal alarm
  - EA: first signal alarm
- Closed-circuit operation
  - DR: signal with continuous light
  - NR: new signal alarm
  - ER: first signal alarm

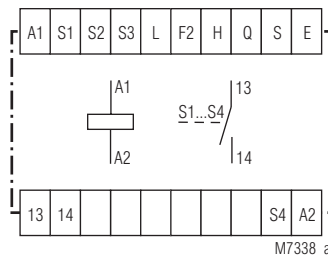
### Signal unit AN 5971 with indication via LEDs and relay outputs

Same as AN 5971, however with 4 additional relay outputs for external fault signal lamps and without relay output for common alarm.

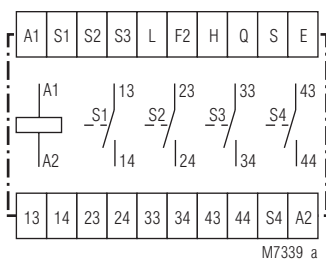
### Circuit Diagrams



AN 5969



AN 5970



AN 5971

Indication	
AN 5969:	LED for common signal, programmable for continuous- or flash light, when fault applied
AN 5969, AN 5970:	LEDs for each fault signal, programmable for continuous- or flash light, when fault applied

Technical Data	
<b>Weight</b>	
AN 5969:	450 g
AN 5970:	470 g
AN 5971:	510 g
<b>Dimensions</b>	
<b>Width x height x depth:</b>	100 x 78 x 115 mm

**Notes**

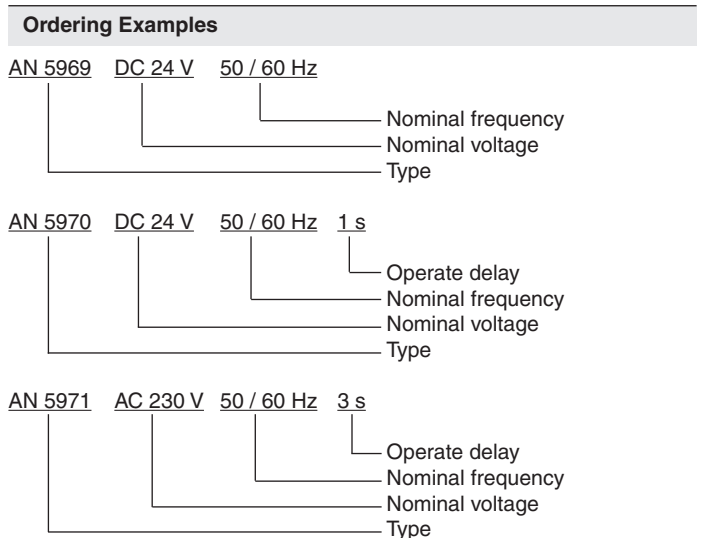
The inputs of the signal units can be controlled from different phases. The signal units can be put separately from the control unit. In this case, the connection circuits to the control unit are to be screened.

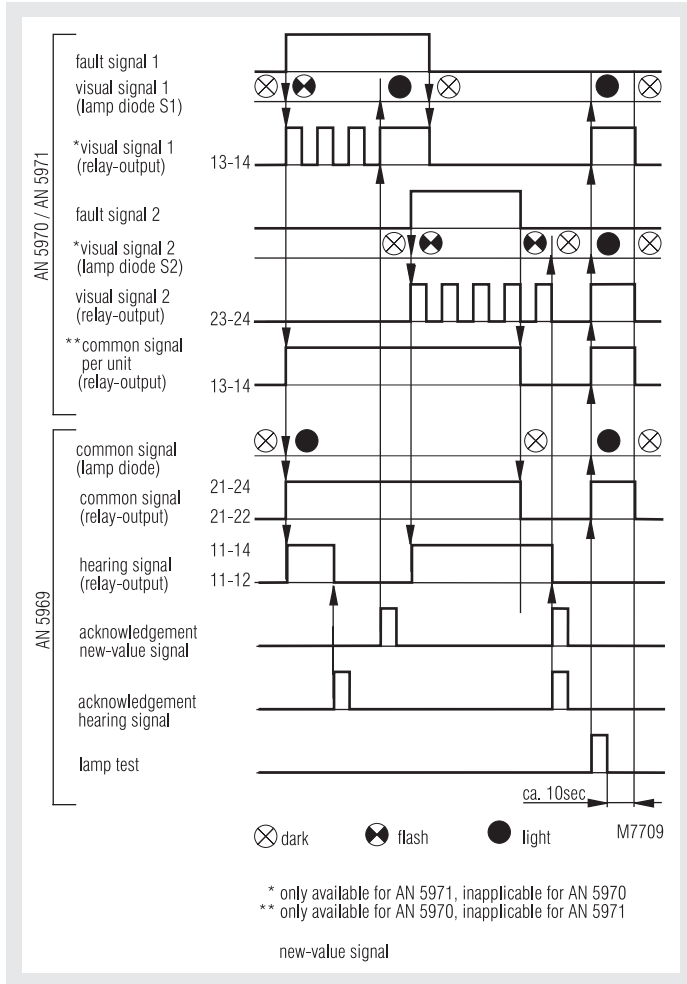
Technical Data	
<b>Input</b>	
<b>Nominal voltage <math>U_N</math> / input voltage:</b>	AC 24, 42, 110, 127, 230, 240 V DC 24 V with pole-protection
<b>Special voltage:</b>	DC 48, 60, 110, 230 V ( $\pm 5\%$ ) Special voltage with resistor (see connection example), at terminals A1. The signal inputs are dimensioned for the ordered directly to the control voltage and not via the series resistor.
<b>Voltage range:</b>	0.8 ... 1.1 $U_N$
<b>Nominal consumption</b>	
AN 5969:	AC 3.5 VA
AN 5970:	AC 3.5 VA
AN 5971:	AC 4.5 VA
<b>Nominal frequency:</b>	50 / 60 Hz
<b>Output</b>	

<b>Thermal current <math>I_{th}</math>:</b>	10 A
<b>Switching capacity to AC 15</b>	
NO contact:	3 A / AC 230 V IEC/EN 60 947-5-1
NC contact:	1 A / AC 230 V IEC/EN 60 947-5-1
<b>Operate delay:</b>	0.02 s, 1 s, 3 s, 10 s
<b>Short circuit strength max. fuse rating:</b>	6 AgL IEC/EN 60 947-5-1
<b>Mechanical life:</b>	> 30 x 10 <sup>6</sup> switching cycles

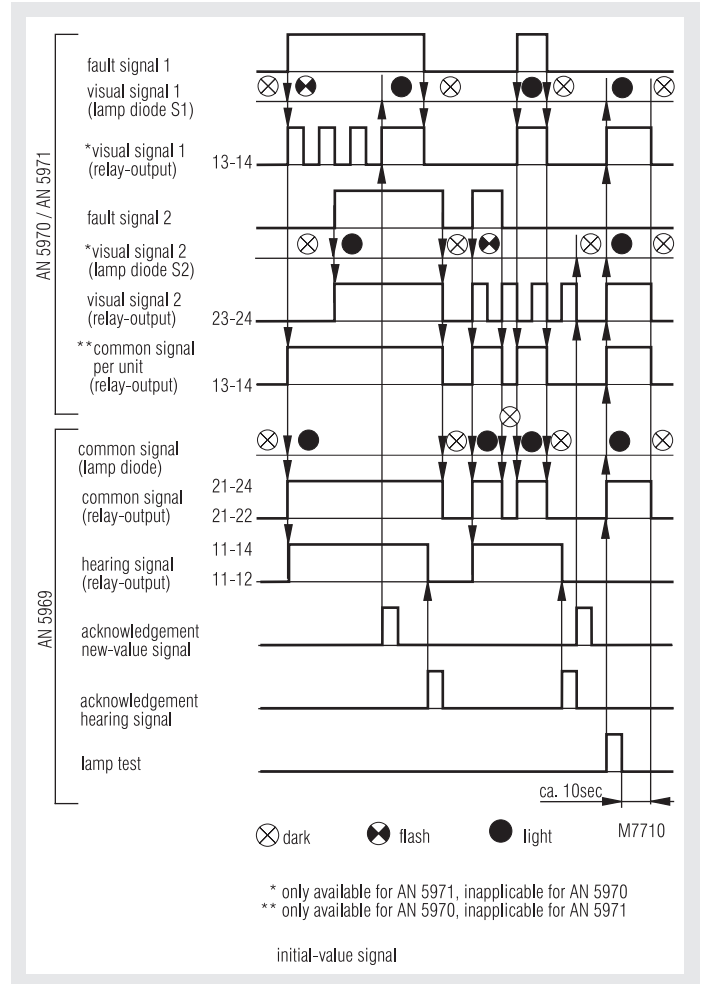
General Data	
<b>Operating mode:</b>	Continuous operation
<b>Temperature range:</b>	- 20 ... + 50°C
<b>Clearance and creepage distances</b>	
rated impuls voltage / pollution degree:	4 kV / 2 IEC 60 664-1
<b>EMC</b>	
Electrostatic discharge:	6 kV (contact) IEC/EN 61 000-4-2
HF-irradiation:	10 V / m IEC/EN 61 000-4-3
Fast transients:	2 kV IEC/EN 61 000-4-4
Surge voltages between	
wires for power supply:	1 kV IEC/EN 61 000-4-5
between wire and ground:	2 kV IEC/EN 61 000-4-5
Interference suppression:	Limit value class B EN 55 011
<b>Degree of protection</b>	
Housing:	IP 40 IEC/EN 60 529
Terminals:	IP 20 IEC/EN 60 529
<b>Housing:</b>	Thermoplastic with V0-behaviour according to UL subject 94
<b>Vibration resistance:</b>	Amplitude 0.35 mm frequency 10...55Hz IEC/EN 60 068-2-6
<b>Climate resistance:</b>	20 / 050 / 04 IEC/EN 60 068-1
<b>Terminal designation:</b>	EN 50 005
<b>Wire connection:</b>	2 x 2.5 mm <sup>2</sup> solid or 2 x 1.5 mm <sup>2</sup> stranded wire with sleeve DIN 46 228
<b>Wire fixing:</b>	Flat terminals with self-lifting clamping piece IEC/EN 60 999-1
<b>Mounting:</b>	DIN rail IEC/EN 60 715
<b>Screw mounting::</b>	50 x 85 mm and 60 x 85 mm

Standard Types	
AN 5969 AC 230 V 50 / 60 Hz	
Article number:	0019221 stock item
• Nominal voltage $U_N$ :	AC 230 V
• Width:	100 mm
AN 5970 AC 230 V 50 / 60 Hz 1 s	
Article number:	0020163 stock item
AN 5971 AC 230 V 50 / 60 Hz 1 s	
Article number:	0019995 stock item
• Nominal voltage $U_N$ :	AC 230 V
• Operate delay:	1 s
• Width:	100 mm



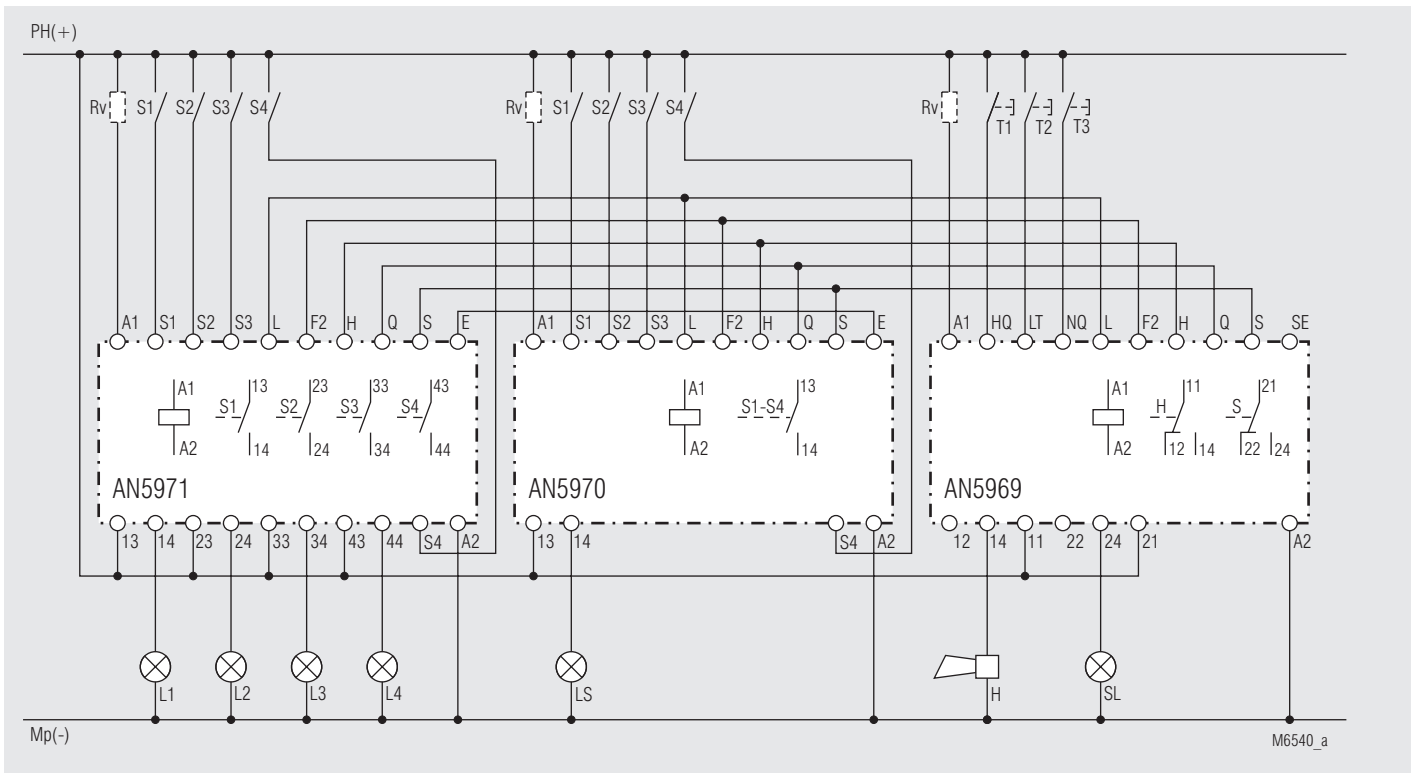


New signal detection



First signal detection

## Connection Example



The control unit AN 5969 can be switched together with signal units AN 5970 and AN 5971. It is only to be observed, that, if in a plant signal units are programmed for initial-value signal, the 'BUS-circuit "S" of these devices are to be connected on terminals SE of the control unit, whereas all signal units programmed for new-value signal or continuous light are to be connected with the BUS-circuit S of the signal unit AN 5969. See connection example.

- L1 - L4 Individual fault signal lamp
- LS Common fault signal lamp per signal unit
- SL Common fault signal lamp for the whole system
- H Audible signal for the whole system
- S1 - S4 Switching contact for the signal fault input
- T1 External acknowledgement pushbutton for the audible alarm
- T2 External pushbutton for lamp test
- T3 External acknowledgement pushbutton for new signal, alternatively first signal detection
- R<sub>v</sub> External resistor for the DC-version

The fault signal input can be effected, depending on the programming, on open-circuit- or closed-circuit operation via NO- or NC-contact. The signal inputs S1-S4 and the acknowledgement inputs HQ, LT, LQ can be connected to different phases (L1, L2 or L3). All relay-outputs are voltage free and can be connected on voltage-circuits, independent from fault signal system.