Latching Relay
UG 8851

0268644

Your Advantage
- Large voltage range AC/DC 24 ... 240 V
- Protection against manipulation by sealable transparent cover over setting switches
- More contacts at small design
- Energy saving, no holding capacity neccessary

Features
- According to IEC/EN 61810-1
- With forcibly guided contacts according to DIN EN 50205
- With manual operation and contact position indication via control lever
- With impulse energization A1 - A2
- With reset pulse B1 - B2
- 4 NC contacts, 4 NO contacts or 4 changeover contacts
- With pluggable terminal blocks for easy exchange of devices
- Width 22.5 mm

Product Description

The latching relay UG8851 is designed with a wide AC/DC nominal voltage range. Short pulses of several miliseconds switch the relay into a defined position. To change the contact position only low power is necessary. No energy is necessary to hold the relay in ON-state. This is energy efficientand reduces the powerdissipation of the unit. On loss of power the relay stays in it's defined position. The special feature of forcibly guided contacts (EN 50205) allows safe monitoring of the contact state.

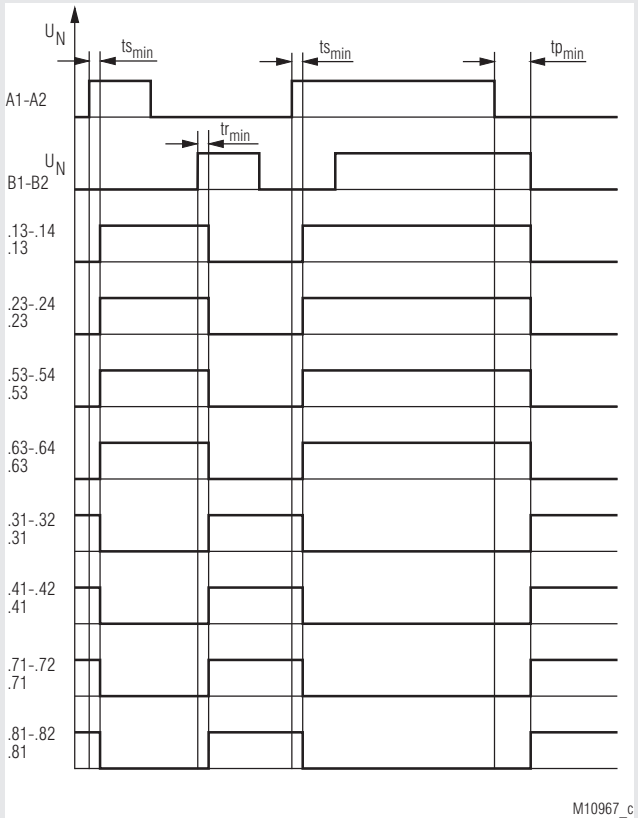
Approvals and Markings

CE

Application

Pulse conversion into a continuous function
A pulse control (inputs side) leads to a continuous function (output side).

Function Diagram



ts_{min} = min. pulse de_activating (A1/A2)
tr_{min} = min. pulse de_activating (B1/B2)
tp_{min} = min. off/changeover time *)

*) tp_{min} is the minimum time that has to pass after the negative edge of a control voltage pulse before the unit accepts a new control voltage pulse.

Function

The relay is operated either by voltage pulses or continuous voltage on the inputs A1-A2, B1-B2. When both coils are activated the contacts keep the state of the first energized coil. The 2 coil systems operate status driven. This means when both coils are energised and the first energised coil is deactivated the status of the contacts is inverted. On loss of voltage, the latching relay remains in it's las contact position.

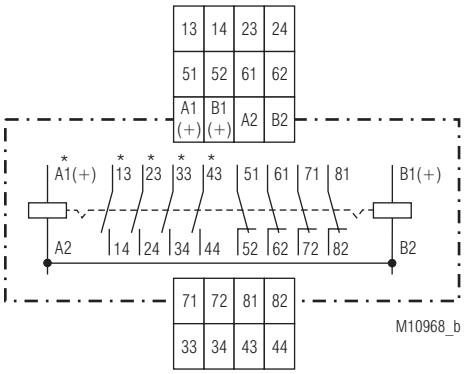
Indication

yellow LED *A1:	on, when control voltage A1/A2 connected
yellow LED B1:	on, when control voltage B1/B2 connected

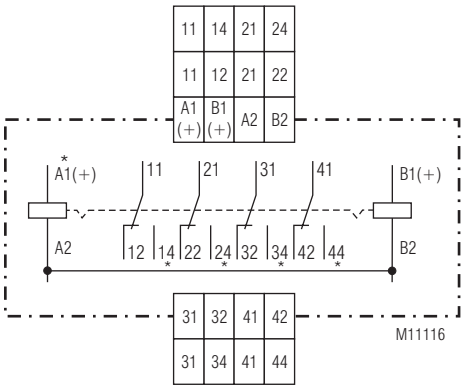
Notes

If coil A1-A2 / coil B1-B2 are controlled with DC, the terminals A1(+) and B1(+) have to be connected on the positive pole.
The device is available on request with customer specific RC element (Snubber Circuit) over the switching contact.

Circuit Diagrams



UG 8851.19



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Connection Terminals

Terminal designation	Signal designation
A1(+), A2	Pulse excitation AC/DC
B1(+), A2	reset pulse AC/DC
13 to 44	4 forcibly guided NO contacts
51 to 82	4 forcibly guided NC contacts
11 to 44 (UG 8851.14)	4 forcibly guided C/O contacts

Technical Data

Input

Nominal voltage U_N: AC/DC 24 ... 240 V
Voltage range: AC 0.8 ... 1.1 U_N
DC 0.9 ... 1.15 U_N
Nominal consumption: AC 24 V / 0.1 VA
DC 24 V / 0.12 W
AC 230 V / 1.3 VA
DC 230 V / 1.4 W
Max. consumption during switching operation
t_{ein} < 100ms: AC 24 V / 2.5 VA
DC 24 V / 3 W
AC 230 V / 5.6 VA
DC 230V / 4.3 W
Nominal frequency: 50 ... 400 Hz
Frequency range: ± 5 %
Min. pulse duration ts_{min} , tr_{min}: < 30 ms
Min. on and off time tp_{min}: < 300 ms
Permissible residual current: AC/DC < 1.8 mA

Output

Contacts:
UG 8851.19: 4 NO, 4 NC contacts
UG 8851.14: 4 changeover contacts
Operate time of contacts: < 30 ms
Release time of contacts: < 30 ms
Thermal current I_{th}: 6 A / 4 A / 3 A
current via 2 / 3 / 4 contacts

Switching capacity
to AC 15
NO contacts: 3 A / AC 230 V IEC/EN 60 947-5-1
NC contacts: 2 A / AC 230 V IEC/EN 60 947-5-1
Electrical life IEC/EN 60 947-5-1
to AC 15 at 1 A, AC 230 V: 1 x 10^5 switching cycles
3 000 switches/h at 50 % of the switching capacity
0.5 x 10^6 switching cycles
1 000 switches/h at 100% of the switching capacity

Permissible switching frequency: 3 000 switching cycles / h
Short circuit strength
max. fuse rating: 6 A gL IEC/EN 60 947-5-1
Mechanical life: 10 x 10^6 switching cycles

General Data

Operating mode: Impulse- or continuous operation
Temperature range: - 20 ... + 60°C
Clearance and creepace distances
rated impulse voltage / pollution degree: 4 kV / 2 IEC 60 664-1
EMC
Electrostatic discharge: 8 kV (air) IEC/EN 61 000-4-2
HF irradiation IEC/EN 61 000-4-3, EN 50 121-3-2
80 MHz ... 1 GHz: 20 V / m
1 GHz ... 2,7 GHz: 10 V / m
Fast transients: 4 kV IEC/EN 61 000-4-4
Surge voltages
between
wires for power supply: 2 kV IEC/EN 61 000-4-5
between wire and ground: 4 kV IEC/EN 61 000-4-5
Interference suppression: Limit value class B EN 55 011
HF-wire guided: 10 V IEC/EN 61 000-4-6
Degree of protection:
Housing: IP 40 IEC/EN 60 529
Terminals: IP 20 IEC/EN 60 529
Housing: Thermoplast with V0-behaviour to UL subject 94
Vibration resistance: Amplitude 0,35 mm frequency 10...55Hz, IEC/EN 60 068-2-6
Climate resistance: 20 / 60 / 04 IEC/EN 60 068-1
Terminal designation: EN 50 005

Technical Data

Wire connection:		DIN 46 228-1/-2/-3/-4
Terminal blocks with screw terminals		
Cross section:	1 x 0.25 ... 2.5 mm² solid or stranded ferruled (isolated) or 2 x 0.25 ... 1.0 mm² solid or stranded ferruled (isolated)	
Insulation of wires or sleeve length:	7 mm	
Wire fixing:	captive slotted screw	
Mounting:	DIN rail	IEC/EN 60 715
Weight:	190 g	

Dimensions

Width x height x depth:	22.5 x 110 x 120.3 mm	

Classification to DIN EN 50155

Vibration and shock resistance:	Category 1, Class B	IEC/EN 61 373
Protective coating of the PCB:	No	

Standard Type

UG 8851.19PS AC/DC 24 ... 240 V

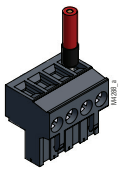
Article number:	0065644
• Output:	4 NO contacts, 4 NC contacts
• Nominal voltage U_N:	AC/DC 24 ... 240 V
• Width:	22.5 mm

Ordering example

UG 8851 .19 PS AC/DC 24 ... 240 V

- AC/DC 24 ... 240 V: Nominal voltage
- PS: Type of terminals
  - PS (plug in screw): pluggable terminal blocks with screw terminals
- .19: Contacts
- UG 8851: Type

Option with Pluggable Terminal Block



Screw terminal
(PS/plugin screw)

Safety Notes

Dangerous voltage.
Electric shock will result in death or serious injury.

Disconnect all power supplies before servicing equipment.

- Faults must only be removed when the relay is disconnected
- The user has to make sure that the device and corresponding components are installed and wired according to the local rules and law (TUEV, VDE, Health and safety).
- Settings must only be changed by trained staff taking into account the safety regulations. Installation work must only be done when power is disconnected.
- Observe proper grounding of all components