

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 necessary

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 milliseconds 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 efficient and 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.

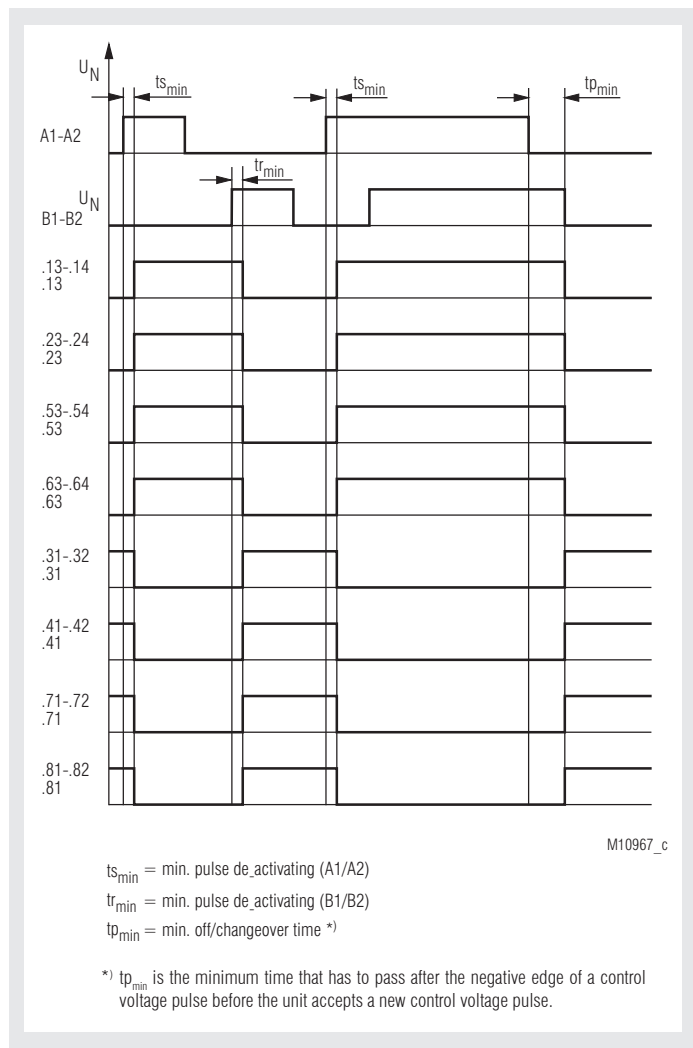
Approvals and Marking



Application

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

Function Diagram



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.

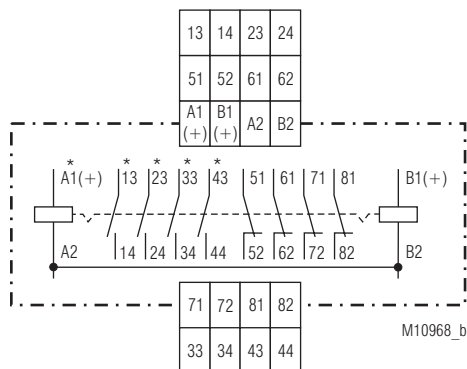
Indication

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

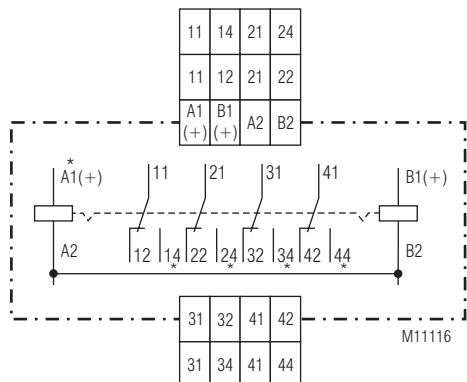
Notes

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



UG 8851.14

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

$t_{\text{ein}} < 100\text{ms}$:	AC 24 V / 2.5 VA DC 24 V / 3 W AC 230 V / 5.6 VA DC 230V / 4.3 W
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Nominal frequency:

50 ... 400 Hz

Frequency range:

$\pm 5\%$

Min. pulse duration t_{min} , t_{rmin} :

$< 30\text{ ms}$

Min. on and off time t_{pmin} :

$< 300\text{ ms}$

Permissible residual current:

AC/DC $< 1.8\text{ mA}$

Output

Contacts:

UG 8851.19:	4 NO, 4 NC contacts
UG 8851.14:	4 changeover contacts

Operate time of contacts:

$< 30\text{ ms}$

Release time of contacts:

$< 30\text{ ms}$

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

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 creepage 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 mm ² solid or stranded ferruled (isolated) or 2 x 0.25 ... 1.0 mm ² 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

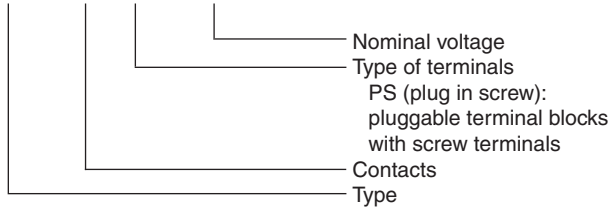
Width x height x depth: 22.5 x 110 x 120.3 mm

Standard Type

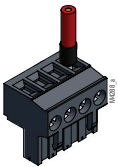
UG 8851.19PS AC/DC 24 ... 240 V	
Article number:	0065644
• Output:	4 NO contacts, 4 NC contacts
• Nominal voltage U _N :	AC/DC 24 ... 240 V
• Width:	22.5 mm

Ordering example

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



With Pluggable Terminal Block



Screw terminal
(PS/plug-in 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

