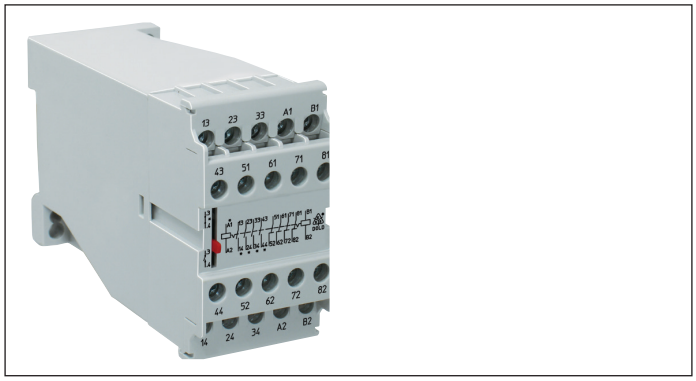
Latching Relay
AD 8851

Translation of the original instructions

0232902



- According to IEC/EN 61810-1
- Manual operation possible
- Contact position indication via control lever
- Max. 4 NC contacts, 4 NO contacts
- Width 45 mm

Product Description

The bistable function of the AD 8851 latching relay is realised by two hinged armature magnet systems that interlock with each other. The relay has a solid torsion-resistant mounting frame that supports both magnet systems and the common contact block, allowing the relay to withstand even the toughest mechanical loads.
On all types, a switch lever located on the front panel allows manual magnet system adjustment and indicates the magnet or contact position.

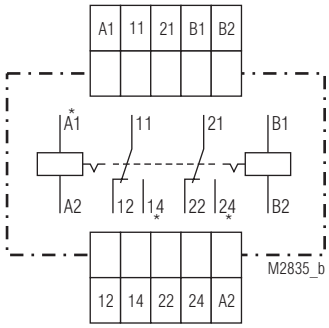
Approvals and Markings

CE

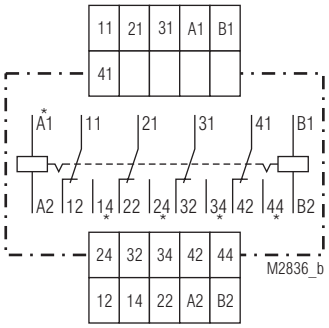
Application

Interlocking of control circuits

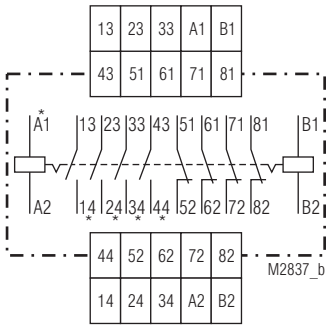
Circuit Diagrams



AD 8851.12



AD 8851.14 / AD 8851.13
(without 41-42-44)



AD 8851.19 / AD 8851.18 (without 81-82; 43-44)
AD 8851.17 (without 81-82; 71-72; 43-44; 33-34)

The Circuit Diagrams have been provided with star-Marking.
If the coil, provided with the star will be energized, the contacts, provided with the star, are closed.

Function

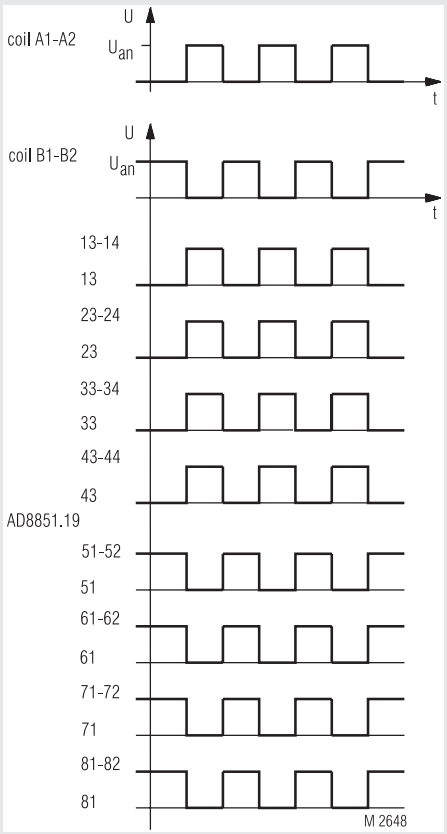
The relay will be actuated by impulse or continuous energizing of the coils A1-A2 or B1-B2. During the energizing of both systems at the same time, the interlocking is disabled; the contact position corresponds with the energizing of the coil A1-A2.

All contacts are on the same magnetic system, which is connected on A1, A2. Thus it is achieved, that in case of energizing of both systems at the same time, there will be no undefined contact condition.

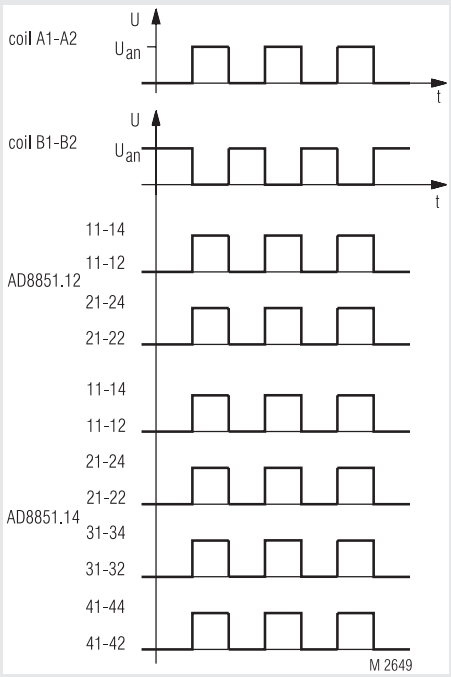
Connection Terminals

Terminal Designation	Signal description
A1 / A2; B1 / B2	Control signal AC Control signal DC (polarity selectable)
11,12,14; 21,22,24; 31,32,34; 41,42,44	Changeover contact LOAD
13,14; 23,24; 33,34; 43,44	NO contacts LOAD
51,52; 61,62; 71,72; 81,82	NC contacts LOAD

Function Diagram



Function Diagram



Technical Data

Input

Nominal voltage U_N:	AC 110, 220, 230 V DC 24, 110, 125, 220, 240 V (AC/DC 24 ... 240 V see UG 8851)
Voltage range:	0.8 ... 1.1 U_N
Nominal consumption:	AC 230 V / 3 VA DC 220 V / 3 W
Nominal frequency:	50 / 60 Hz
Frequency range:	± 5 %

Output

Contacts		
AD 8851.12:	2 changeover contacts	
AD 8851.13:	3 changeover contacts	
AD 8851.14:	4 changeover contacts	
AD 8851.17:	2 NO, 2 NC contacts	
AD 8851.18:	3 NO, 3 NC contacts	
AD 8851.19:	4 NO, 4 NC contacts	
Operate time of contacts:	< 40 ms	
Release time of contacts:	< 40 ms	
Thermal current I_{th}:	8 A / 5 A / 4 A current via 2/3/4 contacts	
Switching capacity		
to AC 15		
NO contacts:	3 A / AC 230 V	IEC/EN 60947-5-1
NC contacts:	1 A / AC 230 V	IEC/EN 60947-5-1
Electrical life		IEC/EN 60947-5-1
to AC 15 at 1 A, AC 230 V:	1 x 10^5 switching cycles 3000 switches/h at 50 % of the switching capacity 0.5 x 10^6 switching cycles 1000 switches/h at 100% of the switching capacity	
Permissible switching frequency:	3000 switching cycles / h	
Short circuit strength max. fuse rating:	10 A gG / gL	IEC/EN 60947-5-1
Mechanical life:	50 x 10^6 switching cycles	

General Data

Operating mode:	Continuous operation	
Temperature range		
Operation:	- 20 ... + 45 °C	
Storage:	- 20 ... + 45 °C	
Altitude:	≤ 2000 m	
Clearance and creepace distances		
Rated impulse voltage / pollution degree:	4 kV / 2	IEC 60664-1
EMC		
Electrostatic discharge:	6 kV (contact)	IEC/EN 61000-4-2
HF irradiation		
80 MHz ... 6 GHz:	10 V / m	IEC/EN 61000-4-3
Fast transients:	4 kV	IEC/EN 61000-4-4
Surge voltages between		
Wires for power supply:	2 kV	IEC/EN 61000-4-5
Between wire and ground:	4 kV	IEC/EN 61000-4-5
HF-wire guided:	10 V	IEC/EN 61000-4-6
Degree of protection:		
Housing:	IP 40	IEC/EN 60529
Terminals:	IP 20	IEC/EN 60529
Housing:	Thermoplast with V0-behaviour to UL subject 94	
Vibration resistance:	Amplitude 0.35 mm frequency 10...55Hz,	IEC/EN 60068-2-6
Climate resistance:	Humid heat	IEC/EN 60068-2-30
Terminal designation:	EN 50005	
Wire connection:	2 x 2.5 mm^2 solid or 2 x 1.5 mm^2 stranded wire with sleeve DIN 46228-1/-2/-3/-4	
Wire fixing:	Flat terminals with self-lifting clamping piece	IEC/EN 60999-1
Fixing torque:	0.8 Nm	
Mounting:	DIN rail	IEC/EN 60715
Weight:	400 g	

Dimensions

Width x height x depth:	45 x 77 x 127 mm

Standard Type

AD 8851.19 AC 230 V 50 / 60 Hz

Article number	0016356
• Output:	4 NO, 4 NC contacts
• Nominal voltage U_N:	AC 230 V
• Width:	45 mm

Variants

AD 8851._ _/007:	With recovery diodes to reduce switching spikes (on request)
AD 8851._ _/025:	With recovery diodes and without manual operation (on request)

Ordering Example for Variants

AD 8851 .18 / _ _ _ AC 230 V 50 / 60 Hz

- 50 / 60 Hz — Nominal frequency
- AC 230 V — Nominal voltage
- / _ _ _ — Variant, if required
- .18 — Contacts
- AD 8851 — Type