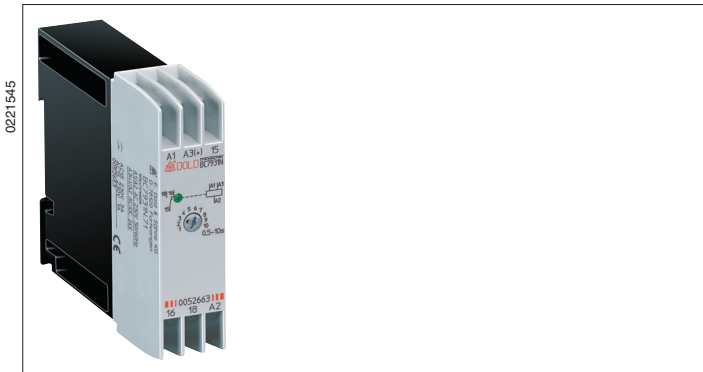


Time Control Technique

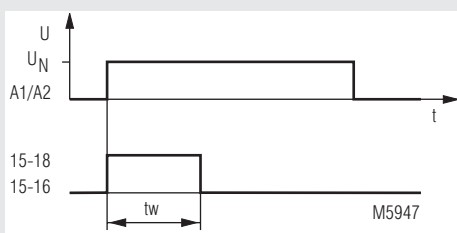
MINITIMER
Fleeting Action Relay
BC 7931N

Translation
of the original instructions



- According to IEC/EN 61812-1
- Fleeting action
- Repeat time adjustable to 100 s
- Repeat accuracy $\leq 0.5\% + 10\text{ ms}$
- Dual voltage supply
- LED indicator for contact position
- 1 changeover contact
- Wire connection: Also 2 x 1.5 mm² stranded ferruled (isolated), DIN 46228-1/-2/-3/-4 or 2 x 2.5 mm² stranded ferruled DIN 46228-1/-2/-3
- Width 22.5 mm

Function Diagram



Approvals and Markings



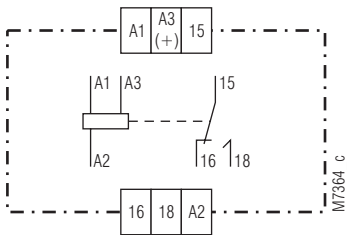
Applications

Time-dependent controllers

Indicators

LED: On when output relay activated (contacts 15-18 are closed)

Circuit Diagram



Connection Terminals

Terminal designation	Signal description
A1, A3(+), A2	Operating voltage
15, 16, 18	Changeover contact

Technical Data

Time Circuit

Time ranges:	0.05 ... 1 s 0.5 ... 10 s 5 ... 100 s
Time setting:	Stepless 1:20
Recovery time:	≤ 100 ms
Repeat accuracy:	≤ 0.5 % + 10 ms
Voltage influence:	< 1 % over voltage range
Temperature influence:	< 0.25 % / K

Input

Nominal voltage U_N (Operating voltage):	AC/DC 24 V ¹⁾ + AC 230 V ²⁾ AC/DC 24 V ¹⁾ + AC 110 ... 127 V ²⁾ AC/DC 24 V ¹⁾ + AC 42 V ²⁾ 1) at terminals A3-A2 2) at terminals A1-A2
Voltage range:	AC 0.8 ... 1.1 U_N DC 0.9 ... 1.25 U_N
Nominal consumption:	AC: 4 VA DC: 0.4 W
Nominal frequency:	50 / 60 Hz
Frequency range:	± 5 % f_N
Release voltage:	15 % U_N

Output

Contacts:	1 changeover contact
Contact material:	AgNi
Measured nominal voltage:	AC 250 V
Thermal current I_{th}:	4 A
Switching capacity To AC 15	
NO contact:	3 A / AC 230 V IEC/EN 60947-5-1
NC contact:	1 A / AC 230 V IEC/EN 60947-5-1
Electrical life: To AC 15 at 1 A, AC 230 V:	1.5 x 10 ⁵ switching cycles
Permissible switching frequency:	36000 switching cycles / h
Short circuit strength	
Max. fuse rating:	4 A gG / gL IEC/EN 60947-5-1
Mechanical life:	10 ⁸ switching cycles

General Data

Operating mode:	Continuous operation
Temperature range	
Operation:	- 20 ... + 60 °C
Storage:	- 25 ... + 70 °C
Relative air humidity:	95 % at 40 °C
Altitude:	< 2000 m
Clearance and creepage distances	
Overvoltage category / pollution degree:	4 kV / 2 (basis insulation) IEC 60664-1
Overvoltage category:	III
Insulation test voltage, type test:	2.5 kV; 1 min
EMC	
Electrostatic discharge:	6 kV (contact) IEC/EN 61000-4-2 8 kV (air) IEC/EN 61000-4-2
HF irradiation:	
80 MHz ... 2.7 GHz:	20 V/m IEC/EN 61000-4-3
Fast transients:	4 kV IEC/EN 61000-4-4
Surge voltages	
Between A1/A2:	2 kV IEC/EN 61000-4-5
Between A3(+)/A2:	0,5 kV IEC/EN 61000-4-5
Between A1, A2/PE:	4 kV IEC/EN 61000-4-5
HF-wire guided:	20 V IEC/EN 61000-4-6
Interference suppression:	Limit value class B EN 55011

Technical Data

Degree of protection

Housing:	IP 40	IEC/EN 60529
Terminals:	IP 20	IEC/EN 60529

Housing:

Thermoplastic with V0 behaviour according to UL subject 94

Vibration resistance:

Amplitude 0.35 mm IEC/EN 60068-2-6
frequency 10 ... 55 Hz

Climate resistance:

20 / 060 / 04 IEC/EN 60068-1

Terminal designation:

EN 50005

Wire connection:

Cross section: 1 x 4 mm² solid or
1 x 2.5 mm² stranded ferruled (isolated)
or
2 x 1.5 mm² stranded ferruled (isolated)
DIN 46228-1/-2/-3/-4 or
2 x 2.5 mm² stranded ferruled
DIN 46228-1/-2/-3

Insulation of wires or sleeve length:

10 mm

Wire fixing:

Terminal screws M 3.5
Box terminal with wire protection

Fixing torque:

0.8 Nm

Mounting:

DIN rail IEC/EN 60715

Weight:

80 g

Dimensions

Width x height x depth: 22.5 x 84 x 97 mm

Standard Type

BC 7931N.71 AC/DC 24 V + AC 230 V 50/60 Hz 0.5 ... 10 s

Article number: 0052663

- Front colour grey, with box terminals
- Output: 1 changeover contact
- Nominal voltage U_N : AC/DC 24 V + AC 230 V
- Time range: 0.5 ... 10 s
- Width: 22.5 mm

Ordering Example

