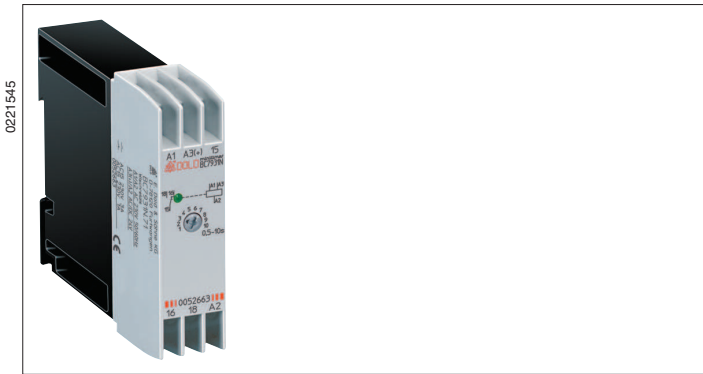


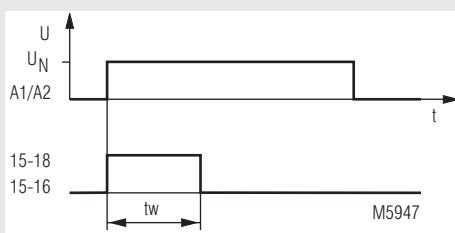
# Time Control Technique

## MINITIMER Fleeting Action Relay BC 7931N



- According to IEC/EN 61 812-1
- 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 mm<sup>2</sup> stranded ferruled (isolated), DIN 46 228-1/-2/-3/-4 or 2 x 2.5 mm<sup>2</sup> stranded ferruled DIN 46 228-1/-2/-3
- Width 22.5 mm

### Function Diagram



### Approvals and Markings



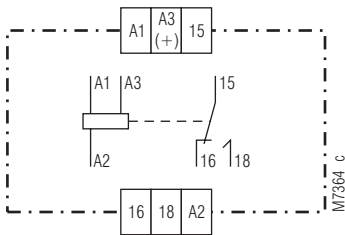
### Applications

Time-dependent controllers

### Indicators

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

### Circuit Diagram



### Connection Terminals

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

## Technical Data

### Time Circuit

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

### Input

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

### Output

<b>Contacts:</b>	1 changeover contact
<b>Contact material:</b>	AgNi
<b>Measured nominal voltage:</b>	AC 250 V
<b>Thermal current <math>I_{th}</math>:</b>	4 A
<b>Switching capacity</b> to AC 15	
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>Electrical life:</b> to AC 15 at 1 A, AC 230 V:	1.5 x 10 <sup>5</sup> switching cycles IEC/EN 60 947-5-1
<b>Permissible switching frequency:</b>	36 000 switching cycles / h
<b>Short circuit strength</b> <b>max. fuse rating:</b>	4 A gG / gL IEC/EN 60 947-5-1
<b>Mechanical life:</b>	10 <sup>8</sup> switching cycles

### General Data

<b>Operating mode:</b>	Continuous operation
<b>Temperature range</b>	
Operation:	- 20 ... + 60 °C
Storage:	- 25 ... + 70 °C
<b>Relative air humidity:</b>	95 % at 40 °C
<b>Altitude:</b>	< 2.000 m
<b>Clearance and creepage distances</b>	
overvoltage category / pollution degree:	4 kV / 2 (basis insulation) IEC 60 664-1 III
Overvoltage category:	III
Insulation test voltage, type test:	2.5 kV; 1 min
<b>EMC</b>	
Electrostatic discharge:	6 kV (contact) IEC/EN 61 000-4-2 8 kV (air) IEC/EN 61 000-4-2
HF irradiation:	
80 MHz ... 2.7 GHz:	20 V/m IEC/EN 61 000-4-3
Fast transients:	4 kV IEC/EN 61 000-4-4
Surge voltages	
between A1/A2:	2 kV IEC/EN 61 000-4-5
between A3(+)/A2:	0,5 kV IEC/EN 61 000-4-5
between A1, A2/PE:	4 kV IEC/EN 61 000-4-5
HF-wire guided:	20 V IEC/EN 61 000-4-6
Interference suppression:	Limit value class B EN 55 011

## Technical Data

### Degree of protection

Housing:	IP 40 IEC/EN 60 529
Terminals:	IP 20 IEC/EN 60 529

### Housing:

Thermoplastic with V0 behaviour according to UL subject 94

### Vibration resistance:

Amplitude 0.35 mm IEC/EN 60 068-2-6 frequency 10 ... 55 Hz

### Climate resistance:

20 / 060 / 04 IEC/EN 60 068-1

### Terminal designation:

EN 50 005

### Wire connection:

Cross section: 1 x 4 mm<sup>2</sup> solid or  
1 x 2.5 mm<sup>2</sup> stranded ferruled (isolated) or  
2 x 1.5 mm<sup>2</sup> stranded ferruled (isolated)  
DIN 46 228-1/-2/-3/-4 or  
2 x 2.5 mm<sup>2</sup> stranded ferruled  
DIN 46 228-1/-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 60 715

### 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

