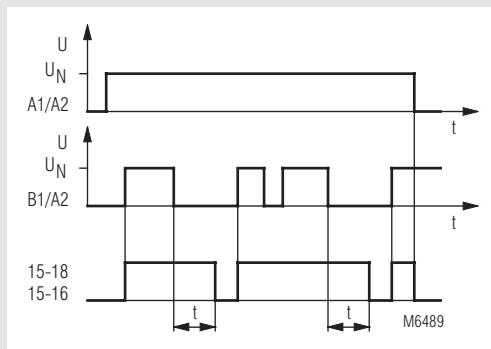


- According to IEC/EN 61 812-1
- Time ranges between 0,05 s and 10 h
- Settable release delay
- With auxiliary voltage
- Wide voltage range AC 110 ... 240 V
- Control input operated with nominal voltage, No voltage free contact necessary
- LED indicator for status of contact
- 1 changeover contact
- BC 7933N, 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 marking



### Applications

Time-dependent control circuits

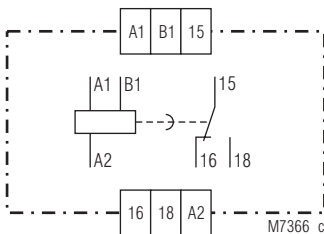
### Indicators

yellow LED: on, when output relay activated (contact 15 - 18 closed)

### Notes

The relay needs a supply voltage continuously connected to A1-A2. At relays with auxiliary supply < AC 180 V the control input must not be operated before the auxiliary supply is present for at least 150 ms. In this case also the recovery time after time delay is 150 ms.

### Circuit diagram



### Technical data

#### Time circuit

Time ranges:	0,05 ... 1 s	0,5 ... 10 m
	0,15 ... 3 s	1,5 ... 30 m
	0,5 ... 10 s	0,15 ... 3 h
	1,5 ... 30 s	0,5 ... 10 h
	5 ... 100 s	
	15 ... 300 s	

**Time setting:** infinitely variable 1:20  
(Control input B1)

**Min. closing time:** AC: 15 ms  
DC: 5 ms

**Recovery time:** < 50 ms

**Repeat accuracy:** ≤ 0,5 % + 10 ms

**Voltage influence:** ≤ 1 %

**Temperature influence:** ≤ 0,25 % / K

#### Input

**Nominal voltage  $U_N$ :** (A1/A2 and B1/A2)  
AC 110 ... 240 V  
AC 42 V  
AC/DC 24 V

**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:** AC: 50 / 60 Hz

**Frequency range:** AC: 45 ... 65 Hz

**Reset voltage:** (Control input B1)  
≥ 15 %  $U_N$

## Technical data

### Output

#### Contacts:

BC 7933.81, BC 7933N.81: 1 changeover contact

**Thermal current  $I_{th}$ :** 4 A

#### Switching capacity

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

**Electrical contact life** IEC/EN 60 947-5-1

to AC 15 at 1 A, AC 230 V: 1,5 x 10<sup>5</sup> switching cycles

#### Short circuit strength

**max. fuse rating:** 4 A gL IEC/EN 60 947-5-1

**Mechanical life:** 10<sup>8</sup> switching cycles

## General data

**Operating mode:** Continuous operation

**Temperature range:** -20 ... +60 °C

#### Clearance and creepage distances

overvoltage category /  
contamination level: 4 kV / 2 IEC 60 664-1

#### EMC

Electrostatic discharge: 8 kV (air) IEC/EN 61 000-4-2

HF irradiation: 10 V/m IEC/EN 61 000-4-3

Fast transients: 4 kV IEC/EN 61 000-4-4

Surge voltages

between

wires for power supply: 1 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

**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

BC 7933:

1 x 4 mm<sup>2</sup> solid or

2 x 1,5 mm<sup>2</sup> stranded wire with sleeve

DIN 46 228-1/-2/-3/-4

BC 7933N:

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

#### Wire fixing:

BC 7933:

Flat terminals with self-lifting

clamping piece IEC/EN 60 999-1

BC 7933N:

Terminal screws M 3,5

Box terminal with wire protection

#### 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 7933N.81 AC 110 ... 240 V 50/60 Hz 0,5 ... 10 s

Article number: 0052777

• Front colour grey, with box terminals

• Output: 1 changeover contact

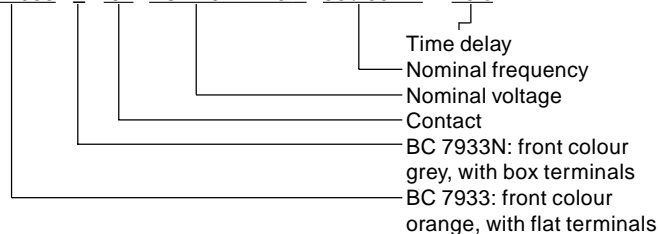
• Nominal voltage  $U_N$ : AC 110 ... 240 V

• Time range: 0,5 ... 10 s

• Width: 22,5 mm

## Ordering example

BC 7933 .81 AC 110 ... 240 V 50 / 60 Hz 10 s



## Connection example

