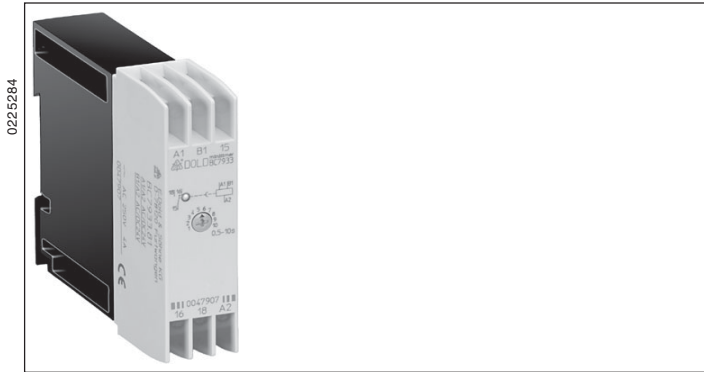


Time control technique

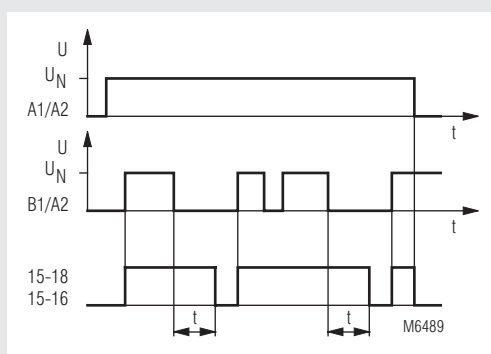
Time relay BC 7933, BC 7933N, release delay minitimer

BC 7933N with
Box terminals

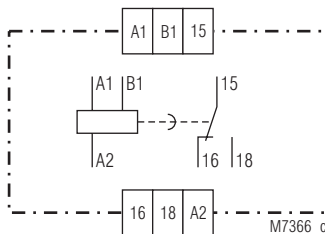


- According to IEC/EN 61 812-1
- Time ranges between 0,05 s and 10 h
- Settable release delay
- With auxiliary voltage
- Wide voltage range AC 110 ... 240 V
- Control input operated with nominal voltage, No voltage free contact necessary
- LED indicator for status of contact
- 1 changeover contact
- BC 7933N, Wire connection: also 2 x 1,5 mm² stranded ferruled (isolated), DIN 46 228-1/-2/-3/-4 or 2 x 2,5 mm² stranded ferruled DIN 46 228-1/-2/-3
- Width 22,5 mm

Function diagram



Circuit 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.

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
Min. closing time: (Control input B1)

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: $1,5 \times 10^5$ switching cycles

Short circuit strength

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

Mechanical life: 10^8 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 mm² solid or
2 x 1,5 mm² stranded wire with sleeve
DIN 46 228-1/-2/-3/-4

BC 7933N: 1 x 4 mm² solid or
1 x 2,5 mm² stranded ferruled (isolated)
or
2 x 1,5 mm² stranded ferruled (isolated)
DIN 46 228-1/-2/-3/-4 or
2 x 2,5 mm² 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

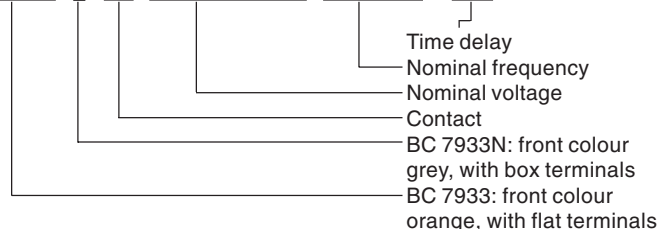
BC 7933N.81 AC 110 ... 240 V 50/60 Hz 0,5 ... 10 s

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

