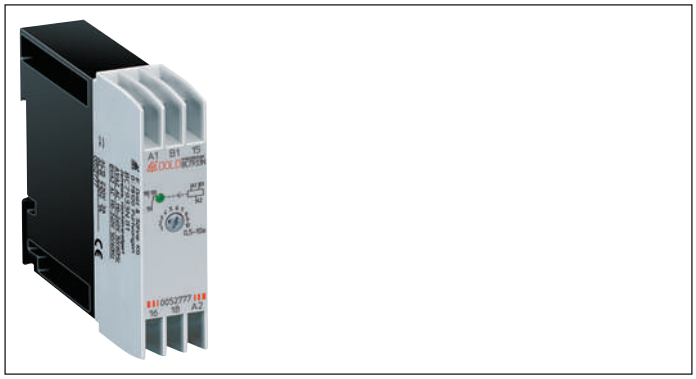
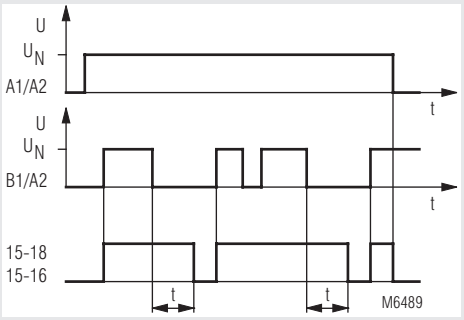
MINITIMER
Timer, Release Delay
BC 7933N

0225284



- According to IEC/EN 61 812-1
- Release delay with control signal
- Settable release delay between 0.05 s and 10 h
- 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
- 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



Approvals and Markings

CE

Applications

Time-dependent control circuits

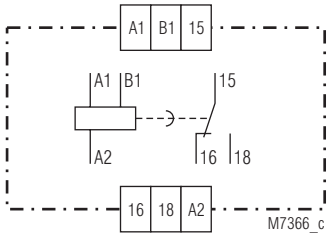
Indicators

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

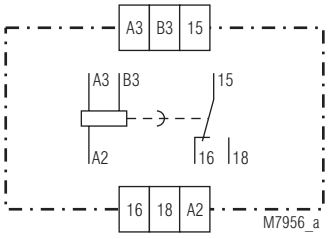
Notes

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 Diagrams



BC 7933N



BC 7933N/200

Connection Terminals

Terminal designation	Signal description
A1, A3, A2	Operating voltage
B1, B3	Control input
15, 16, 18	Changeover contact

All technical data in this list relate to the state at the moment of edition. We reserve the right for technical improvements and changes at any time.

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		
(Operating voltage):	(A1/A2 and B1/A2)	
	AC 110 ... 240 V	
	AC 42 ... 48 V / DC 48 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	

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 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 10^5 switching cycles	
Permissible switching frequency:	36 000 switching cycles / h	
Short circuit strength max. fuse rating:	4 A gG /gL	IEC/EN 60 947-5-1
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:	< 2.000 m	
Clearance and creepage distances		
overvoltge category / pollution degree:	4 kV / 2 (basis insulation)	IEC 60 664-1
Overvoltage category:	III	
Insulation test voltage, type test:	2.5 kV; 1 min	
EMC		
Electrostatic discharge:	4 kV (contact)	IEC/EN 61 000-4-2
	8 kV (air)	IEC/EN 61 000-4-2
HF irradiation		
80 MHz ... 1 GHz:	10 V / m	IEC/EN 61 000-4-3
1 GHz ... 2.5 GHz:	3 V / m	IEC/EN 61 000-4-3
2.5 GHz ... 2.7 GHz	1 V / m	IEC/EN 61 000-4-3
Fast transients:	2 kV	IEC/EN 61 000-4-4
Surge voltages		
between A1/A2:	1 kV	IEC/EN 61 000-4-5
between B1/A2:	1 kV	IEC/EN 61 000-4-5
between A1, A2/PE:	2 kV	IEC/EN 61 000-4-5
HF-wire guided:	10 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 frequency 10 ... 55 Hz	IEC/EN 60 068-2-6
Climate resistance:	20 / 060 / 04	IEC/EN 60 068-1
Terminal designation:	EN 50 005	
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 46 228-1/-2/-3/-4 or 2 x 2.5 mm² 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

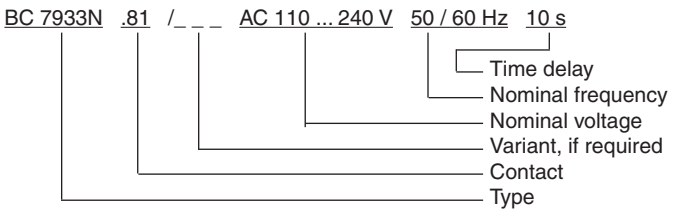
BC 7933N.81 AC 110 ... 240 V 50/60 Hz 0.5 ... 10 s
Article number: 0052777

- 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

Variant

BC 7933N.81/200: Special terminal designation:
A3 corresponds A1, B3 corresponds B1

Ordering example for variant



Connection Examples

