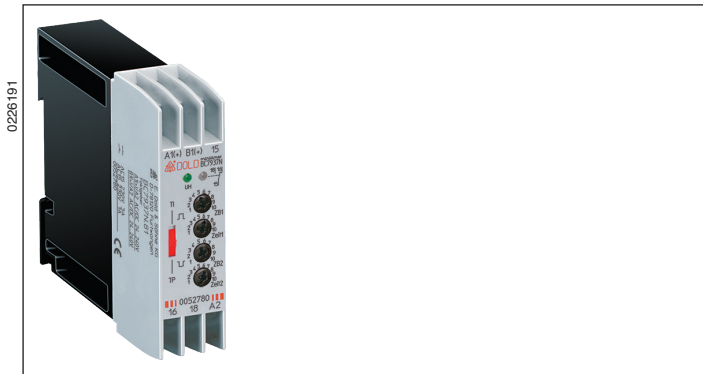


MINITIMER Cyclic Timer BC 7937N

Translation
of the original instructions



- Asymmetrical flasher relay according to IEC/EN 61812-1
- With 10 time ranges from 0.05 s ... 300 h
- Impulse and break time separately adjustable
- Selectable start with impulse or break
- Operating voltage AC/DC 24 ... 240 V, DC 12 V
- Control input for interruption of the time elapse
- LED indication for voltage supply and contact position
- Flashing function during elapse of time
- 1 changeover contact
- Width 22.5 mm

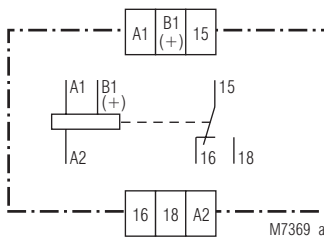
Product Description

The clock generator (asymmetrical flasher relay according to IEC/EN 61812-1) BC 7937N offers 10 continuously adjustable time ranges from 50 ms to 300 h. The pulse and pause times can be set separately. The start with pulse or pause time can be selected via the slide switch after applying the operating voltage.

Approvals and Markings



Circuit Diagram



Applications

Time-dependent controllers

Indicators

Green LED: On, when supply connected
Yellow LED: See Function Diagramm

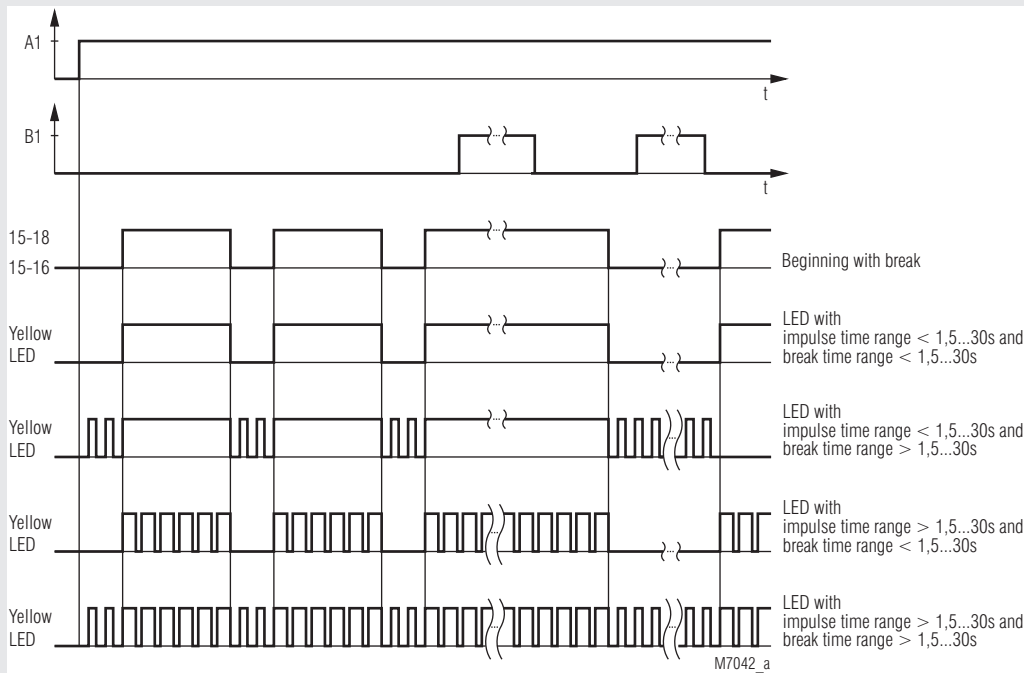
Connection Terminals

Terminal designation	Signal description
A1, A2	Operating voltage
15, 16, 18	1 changeover contact
B1(+)	Control input B1

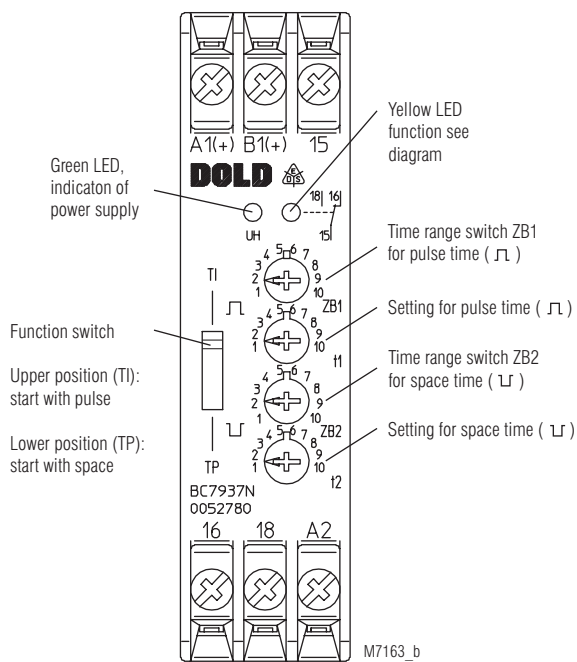
Notes

When changing the time ranges for impulse/break, the device must be reset by switching off the operating voltage. By activating control input B1(+) the time elapse is stopped. E.g. activating control input B1(+) during timing of T_{impuls} the output is energized for T_{impuls} and T_{B1} .

Function Diagram



Setting



Technical Data	
Time Circuit	
Time ranges:	1) 0.05 ... 1 s 7) 1.5 ... 30 min 2) 0.15 ... 3 s 8) 15 ... 300 min 3) 0.5 ... 10 s 9) 1.5 ... 30 h 4) 1.5 ... 30 s 10) 15 ... 300 h 5) 5 ... 100 s 6) 15 ... 300 s
Time setting:	selectable via time-range-switch (ZB)
Recovery time:	Infinite variable via potentiometer (Zeit)
Repeat accuracy:	≤ 50 ms
Voltage influence:	≤ 2 %
Temperature influence:	≤ 1 %
	≤ 0.05 % / K
Input	

Operating voltage U_N (A1/A2 and B1/A2):	AC/DC 24 ... 240 V, DC 12 V
Voltage range:	0.8 ... 1.1 U_N
Nominal consumption:	
At AC 240 V:	4 VA
At DC 240 V:	1.33 W
Nominal frequency:	50 / 60 Hz
Release voltage:	AC: ≥ 15 % U_N DC: ≥ 5 % U_N

Output	
Contacts:	1 changeover contact
Thermal current I_{th}:	4 A
Switching capacity	
To AC 15:	3 A / AC 230 V IEC/EN 60947-5-1
To DC 13:	2 A / DC 24 V IEC/EN 60947-5-1
Electrical life	IEC/EN 60947-5-1
To AC 15 at 1 A, AC 230 V:	Typ. 150 000 switching cycles
To DC 13 at 1 A, DC 24 V:	Typ. 100 000 switching cycles
Short circuit strength	
Max. fuse rating:	4 A gG / gL IEC/EN 60947-5-1
Mechanical life:	10 ⁸ switching cycles

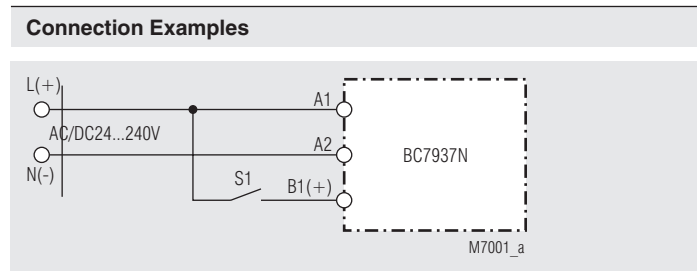
General Data	
Operating mode:	Continuous operation
Temperature range:	
Operation:	0 ... + 60 °C
Storage:	- 40 ... + 60 °C
Relative Luftfeuchte:	93 % at 40 °C
Altitude:	≤ 2000 m
Clearance and creepage distances	
Rated impulse voltage / pollution degree:	4 kV / 2 IEC 60664-1
Overvoltage category:	III
Insulation test voltage:	2.5 kV; 1 min (type test)
EMC:	EN 61812-1 (industrial environments)
Electrostatic discharge:	6 kV (air) IEC/EN 61000-4-2
HF irradiation:	10 V/m IEC/EN 61000-4-3
Fast transients:	2 kV IEC/EN 61000-4-4
Surge voltages	
Between	
wired for power supply:	1 kV IEC/EN 61000-4-5
Between wire and ground:	2 kV IEC/EN 61000-4-5
HF wire guided:	10 V IEC/EN 61000-4-6
Interference suppression:	Limit value class B EN 55011
Degree of protection	
Housing:	IP 40 IEC/EN 60529
Terminals:	IP 20 IEC/EN 60529
Housing:	Thermoplastic with V0 behaviour to UL subject 94
Vibration resistance:	Amplitude 0.35 mm frequency 10 ... 55 Hz IEC/EN 60068-2-6
Climate resistance:	0 / 060 / 04 IEC/EN 60068-1
Terminal designation:	EN 50005

Technical Data	
Wire connection:	1 x 4 mm ² solid or 1 x 2.5 mm ² stranded ferruled (isolated) or 2 x 1.5 mm ² stranded ferruled (isolated) DIN 45228-1/-2/-3/-4 or 2 x 2.5 mm ² stranded ferruled DIN 46228-1/-2/-3
Wire fixing:	Terminal screws M 3.5 Box terminal with wire protection
Fixing torque:	0.8 Nm
Mounting:	DIN rail IEC/EN 60715
Weight:	110 g
Dimensions	

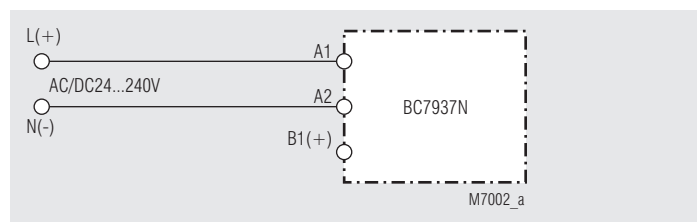
Width x height x depth: 22.5 x 84 x 97 mm

Standard Type	
BC 7937N.81	AC/DC 24 ... 240 V 50/60 Hz
Article number:	0052780
• Front colour grey, with box terminals	
• Output:	1 changeover contact
• Operating voltage U_N :	AC/DC 24 ... 240 V
• Width:	22.5 mm

Ordering Example	
BC 7937N .81	AC/DC 24 ... 240 V 50 / 60 Hz
	└─ Nominal frequency
	└─ Operating voltage
	└─ Contacts
	└─ Type



Connection example with control contact S1 for interruption of the time elapse



Connection example without control contact

