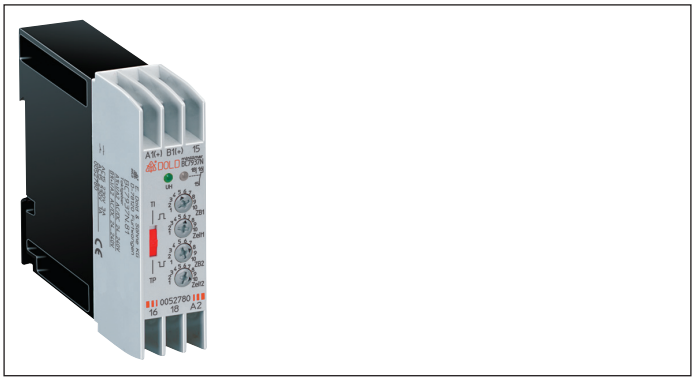
MINITIMER
Cyclic Timer
BC 7937N

Translation of the original instructions

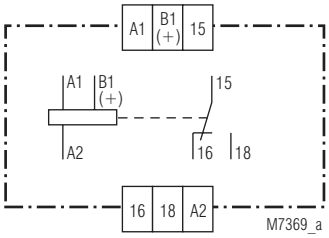
DOLD

0226191



- 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
- AC/DC 24 ... 240 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
- Wire connection: Also 2 x 1.5 mm² stranded ferruled (isolated), DIN 46228-1/-2/-3/-4 or 2 x 2.5 mm² stranded ferruled DIN 46228-1/-2/-3
- Width 22.5 mm

Circuit Diagram



Approvals and Markings

CE

Applications

Time-dependent controllers

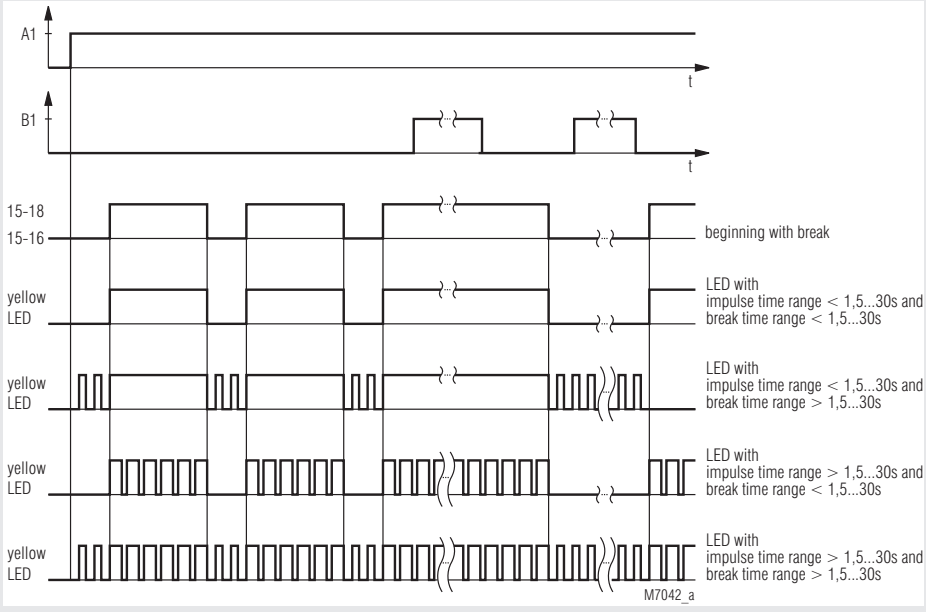
Indicators

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

Notes

When changing the time ranges for impulse / break the device must be reset by disconnecting the supply voltage. By energising control input B1 the time elapse is stopped. E.g. activating control input B1 during timing of T_{impuls} for the time B1 the output is energized for T_{impuls} and T_{B1}.

Function Diagram



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		
	selectable via time-range-switch (ZB)		
Time setting:	Infinite variable via potentiometer (Zeit)		
Recovery time:	≤ 50 ms		
Repeat accuracy:	≤ 2 %		
Voltage influence:	≤ 1 %		
Temperature influence:	≤ 0.05 % / K		

Input

Nominal 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:	0 ... + 60°C	
Clearance and creepage distances		
Rated impulse voltage / pollution degree:	4 kV / 2	IEC 60664-1
EMC		
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	
Wire connection:	1 x 4 mm² solid or	
	1 x 2.5 mm² stranded ferruled (isolated)	
	or	
	2 x 1.5 mm² stranded ferruld (isolated)	
	DIN 45228-1/-2/-3/-4 or	
	2 x 2.5 mm² stranded ferruled	
	DIN 46228-1/-2/-3	

Technical Data

Wire fixing:	Terminal screws M 3.5	
	Box terminal with wire protection	
Mounting:	DIN rail	IEC/EN 60715
Weigth:	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

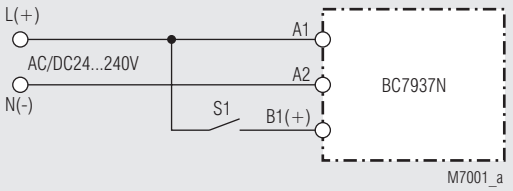
- Front colour grey, with box terminals
- Output: 1 changeover contact
- Nominal voltage U_N: AC/DC 24 ... 240 V
- Width: 22.5 mm

Ordering Example

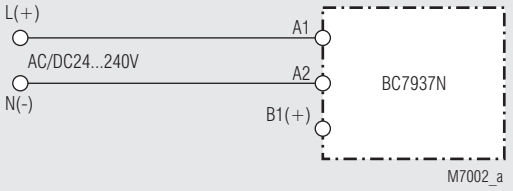
BC 7937N .81 AC/DC 24 ... 240 V 50 / 60 Hz

- 50 / 60 Hz — Nominal frequency
- AC/DC 24 ... 240 V — Nominal voltage
- .81 — Contacts
- BC 7937N — Type

Connection Examples

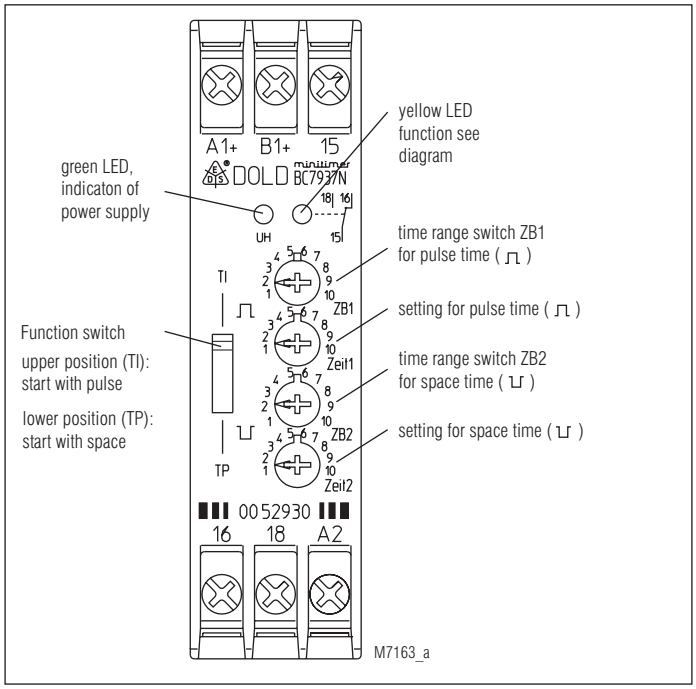


Connection example with control contact S1 for interruption of the time elapse



Connection example without control contact

Setting


A1+
B1+
15
DOLD
minitimer
BC7937N
18
16
15
UH
TI
ZB1
Zeit1
ZB2
Zeit2
TP
00529330
16
18
A2
M7163_a
green LED,
indicaton of
power supply
yellow LED
function see
diagram
time range switch ZB1
for pulse time (⎍)
setting for pulse time (⎍)
Function switch
upper position (TI):
start with pulse
lower position (TP):
start with space
time range switch ZB2
for space time (⎎)
setting for space time (⎎)