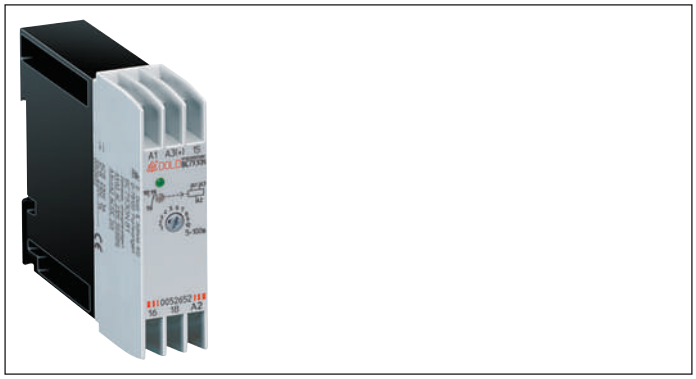
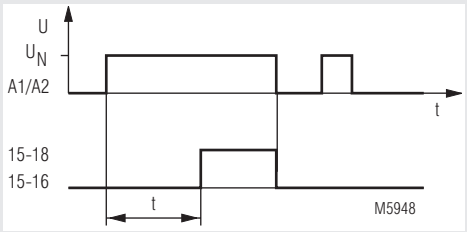
# MINITIMER
## Timer, On Delayed
## BC 7930N

0221544



- According to IEC/EN 61 812-1
- Time delay between 0.05 s ... 10 h
- Repeat accuracy ≤ 0.5 % + 10 ms
- Dual voltage supply
- LED indicator for contact position
- 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

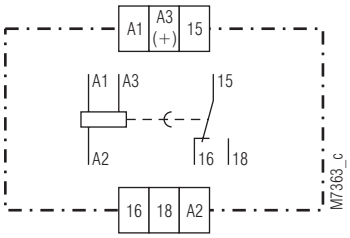
### Applications

Time dependent controllers

### Indicators

LED: on when output relay activated (contacts 15-18 are closed)

### Circuit Diagram




### Connection Terminals

| Terminal designation | Signal designation |
|---|---|
| A1, A3(+), A2 | Operating voltage |
| 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 min. |
| | 0.15 | ... | 3 s | 1.5 ... | 30 min. |
| | 0.5 | ... | 10 s | 3 ... | 60 min. |
| | 1.5 | ... | 30 s | 0.15 ... | 3 h |
| | 5 | ... | 100 s | 0.5 ... | 10 h |
| | 15 | ... | 300 s | | |

**Time setting:** stepless 1:20
**Recovery time:** ≤ 100 ms
**Repeat accuracy:** ≤ 0.5 % + 10 ms
**Voltage influence:** ≤ 1 %
**Temperature influence:** ≤ 0.25 % / K

### Input

**Nominal voltage $U_N$**
**(**Operating voltage): AC/DC 24 V[1)] + AC 230 V[2)]
AC/DC 24 V[1)] + AC 110 ... 127 V[2)]
AC/DC 24 V[1)] + AC 42 V[2)]
AC/DC 12 V
[1)] at terminals A3-A2
[2)] at terminals A1-A2
**Voltage range:** 0.8 ... 1.1 $U_N$ at AC
0.9 ... 1.25 $U_N$ at DC
**Nominal consumption:** AC: 4 VA
DC: 0.4 W
**Nominal frequency:** 50 / 60 Hz
**Frequency range:** ± 5 % $f_N$
**Release voltage:** 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 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: | 6 kV (contact) | IEC/EN 61 000-4-2 |
| | 8 kV (air) | IEC/EN 61 000-4-2 |
| HF irradiation | | |
| 80 MHz ... 2.7 GHz: | 20 V / m | IEC/EN 61 000-4-3 |
| Fast transients: | 4 kV | IEC/EN 61 000-4-4 |
| Surge voltages | | |
| between A1/A2: | 2 kV | IEC/EN 61 000-4-5 |
| between A3(+)/A2: | 0,5 kV | IEC/EN 61 000-4-5 |
| between A1, A2/PE: | 4 kV | IEC/EN 61 000-4-5 |
| HF-wire guided: | 20 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 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:**
Cross section: 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 46 228-1/-2/-3/-4 or
2 x 2.5 $mm^2$ 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 7930N.81 AC/DC 24 V + AC 230 V 5 ... 100 s
Article number: 0052652
- Front colour grey, with box terminals
- Output: 1 changeover contact
- Nominal voltage $U_N$: AC/DC 24 V + AC 230 V
- Time range: 5 ... 100 s
- Width: 22.5 mm

### Ordering Example

BC 7930N .81 AC/DC 24 + AC 230 V 50 / 60 Hz 10 s

