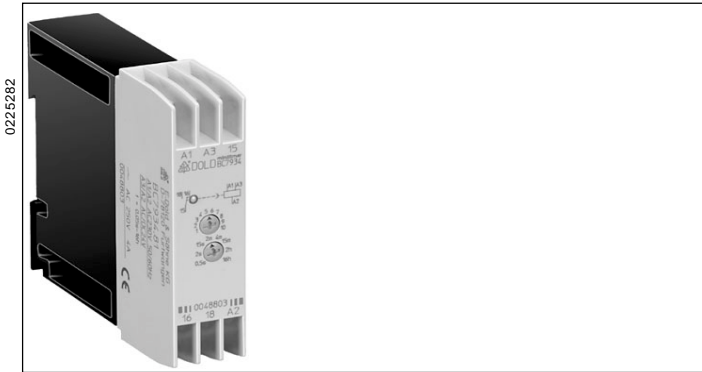


# Time control technique

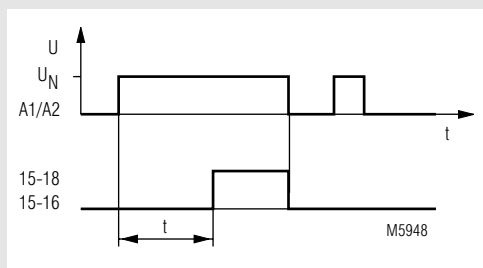
Multi range time relay BC 7934, BC 7934N operate delay minitimer

BC 7934N with Box terminals

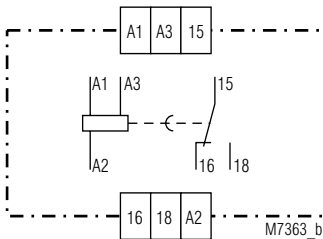


- According to IEC/EN 61 812-1
- 8 switching ranges from 0,05 s ... 16 h
- Infinite variable delay on every range 1 : 10
- Dual-voltage design as standard (e.g. AC 230 V + AC/DC 24 V)
- LED indicator for contact position
- 1 changeover contact
- BC 7934N, Wire connection: also 2 x 1,5 mm<sup>2</sup> stranded ferruled (isolated), DIN 46 228-1/-2/-3/-4 or 2 x 2,5 mm<sup>2</sup> stranded ferruled DIN 46 228-1/-2/-3
- Width 22,5 mm

## Function diagram



## Circuit diagram



## Approvals and marking



## Applications

Time-dependent controllers

## Indications

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

## Technical data

### Time circuit

**Time ranges:** 8 switching ranges  
 0,05 ... 0,5 s    0,4 ... 4 min.  
 0,2 ... 2 s    1,5 ... 15 min.  
 1,5 ... 15 s    0,2 ... 2 h  
 0,2 ... 2 min.    1,6 ... 16 h

**Time setting:** infinitely variable 1:10

**Recovery time:** ≤ 100 ms

**Repeat accuracy:** ≤ 0,5 % + 10 ms

**Voltage influence:** ≤ 1 %

**Temperature influence:** ≤ 0,25 % / K

### Input

**Nominal voltage  $U_N$ :** AC/DC 24 V<sup>1)</sup> + AC 230 V<sup>2)</sup>  
 AC/DC 24 V<sup>1)</sup> + AC 110 ... 127 V<sup>2)</sup>  
 AC/DC 24 V<sup>1)</sup> + AC 42 V<sup>2)</sup>

<sup>1)</sup> on terminals A3-A2

<sup>2)</sup> on terminals A1-A2

**Voltage range:** 0,8 ... 1,1  $U_N$  with AC  
 0,9 ... 1,25  $U_N$  with DC

**Nominal consumption:** AC: 4 VA  
 DC: 0,4 W

**Frequency range:** 45 ... 64 Hz at AC

**Release voltage:** ≥ 15 %  $U_N$

### Output

**Contacts:** BC 7934.81, BC 7934N.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 life**  
 to AC 15 at 1 A, AC 230 V: 1,5 x 10<sup>5</sup> switching cycles IEC/EN 60 947-5-1

**Short circuit strength**

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

**Mechanical life:** 10<sup>8</sup> switching cycles

## Technical data

### General data

|  |   |                   |
|--|---|-------------------|
| <b>Operating mode:</b>                               | Continuous operation  |                   |
| <b>Temperature range:</b>                            | - 20 ... + 60°C   |                   |
| <b>Clearance and creepage distances</b>              |   |                   |
| overvoltage category /<br>contamination level:       | 4 kV / 2  | IEC 60 664-1      |
| <b>EMC</b>   |   |                   |
| 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<br>between<br>wires for power supply: | 1 kV  | IEC/EN 61 000-4-5 |
| between wire and ground:                             | 2 kV  | IEC/EN 61 000-4-5 |
| Interference suppression:                            | Limit value class B   | EN 55 011         |
| <b>Degree of protection:</b>                         | Housing: IP 40  | IEC/EN 60 529     |
|  | Terminals: IP 20  | IEC/EN 60 529     |
| <b>Housing:</b>                                      | Thermoplastic with V0 behaviour<br>according to UL subject 94   |                   |
| <b>Vibration resistance:</b>                         | Amplitude 0,35 mm IEC/EN 60 068-2-6<br>frequency 10 ... 55 Hz   |                   |
| <b>Climate resistance:</b>                           | 20 / 060 / 04 IEC/EN 60 068-1   |                   |
| <b>Terminal designation:</b>                         | EN 50 005   |                   |
| <b>Wire connection</b>                               |   |                   |
| BC 7934:   | 1 x 4 mm <sup>2</sup> solid or<br>2 x 1,5 mm <sup>2</sup> stranded wire with sleeve<br>DIN 46 228-1/-2/-3/-4  |                   |
| BC 7934N:  | 1 x 4 mm <sup>2</sup> solid or<br>1 x 2,5 mm <sup>2</sup> stranded ferruled (isolated)<br>or<br>2 x 1,5 mm <sup>2</sup> stranded ferruled (isolated)<br>DIN 46 228-1/-2/-3/-4 or<br>2 x 2,5 mm <sup>2</sup> stranded ferruled<br>DIN 46 228-1/-2/-3 |                   |
| <b>Wire fixing:</b>                                  |   |                   |
| BC 7934:   | Flat terminals with self-lifting<br>clamping piece IEC/EN 60 999-1  |                   |
| BC 7934N:  | Terminal screws M 3,5<br>Box terminal with wire protection  |                   |
| <b>Mounting:</b>                                     | DIN rail IEC/EN 60 715  |                   |
| <b>Weight:</b>                                       | 85 g  |                   |

### Dimensions

**Width x height x depth:** 22,5 x 84 x 97 mm

### Standard type

BC 7934N.81 AC/DC 24 V + AC 230 V 16 h  
Article number: 0052673

- Front colour grey, with box terminals
- Output: 1 changeover contact
- Nominal voltage  $U_N$ : AC/DC 24 V + AC 230 V
- Time ranges: from 0,05 s ... 16 h
- Width: 22,5 mm

### Ordering example

BC 7934 .81 AC/DC 24 + AC 230 V 0,05 s ... 16 h

Time range end value  
Nominal voltage  
Contacts  
BC 7934N: front colour  
grey, with box terminals  
BC 7923: front colour  
orange, with flat terminals