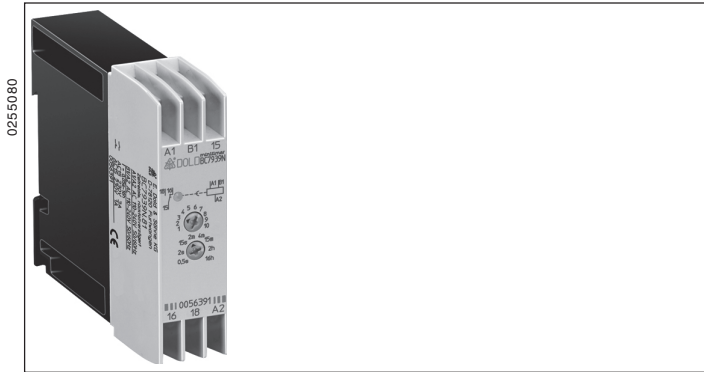
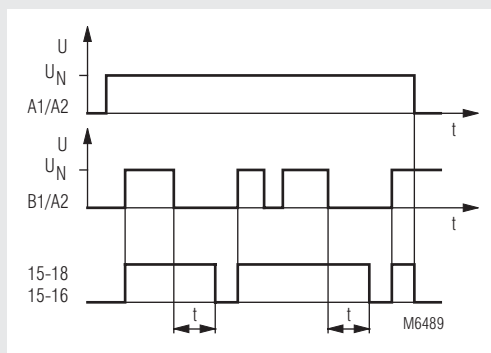


## Time relay BC 7939N, release delay minitimer

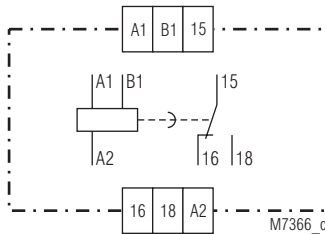


- According to IEC/EN 61 812-1
- 8 settable time ranges between 0,05 s and 10 h
- Settable release delay
- With auxiliary voltage
- Wide voltage range AC 110 ... 240 V
- Control input operated with nominal voltage, No voltage free contact necessary
- LED indicator for status of contact
- 1 changeover contact
- Wire connection: also 2 x 1,5 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 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.

### Technical data

#### Time circuit

**Time ranges:** 8 settable 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 1:10  
**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<sub>N</sub>:** (A1/A2 and B1/A2)  
 AC 110 ... 240 V  
 AC 42 V  
 AC/DC 24 V

**Voltage range:** AC: 0,8 ... 1,1 U<sub>N</sub>  
 DC: 0,9 ... 1,25 U<sub>N</sub>

**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<sub>N</sub>

## Technical data

### Output

#### Contacts:

BC 7939N.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 contact life** IEC/EN 60 947-5-1

to AC 15 at 1 A, AC 230 V: 1,5 x 10<sup>5</sup> switching cycles

#### Short circuit strength

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

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

## General data

**Operating mode:** Continuous operation

**Temperature range:** -20 ... +60 °C

#### Clearance and creepage distances

overvoltage category /  
pollution degree: 4 kV / 2 IEC 60 664-1

#### EMC

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

between

wires for power supply: 1 kV IEC/EN 61 000-4-5

between wire and ground: 4 kV IEC/EN 61 000-4-5

Interference suppression: Limit value class B EN 55 011

#### Degree of protection:

Housing: IP 40 IEC/EN 60 529

Terminals: IP 20 IEC/EN 60 529

#### Enclosure:

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:

1 x 4 mm<sup>2</sup> solid or  
1 x 2,5 mm<sup>2</sup> stranded wire with sleeve  
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

#### Wire fixing:

Terminal screws M 3,5  
Box terminal with wire protection

**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

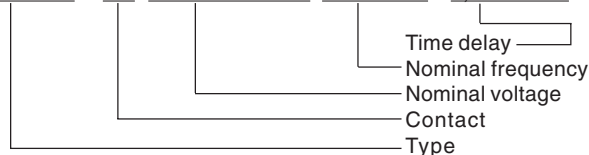
BC 7939N.81 AC 110 ... 240 V 50/60 Hz 16 h

Article number: 0056391

- Front colour grey, with box terminals
- Output: 1 changeover contact
- Nominal voltage  $U_N$ : AC 110 ... 240 V
- Time range: 0,05 ... 16 h
- Width: 22,5 mm

## Ordering example

BC 7939N .81 AC 110 ... 240 V 50 / 60 Hz 0,05 ... 16 h



## Connection example

