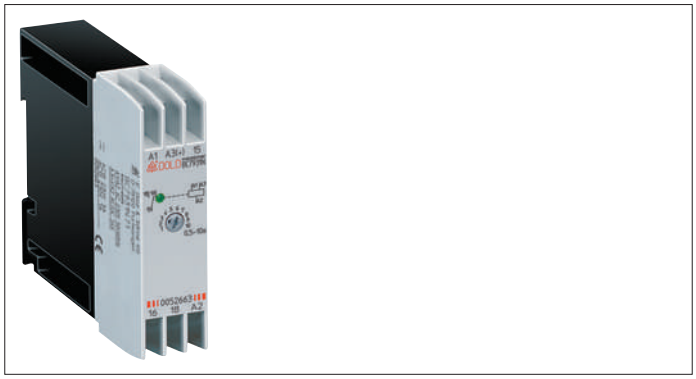
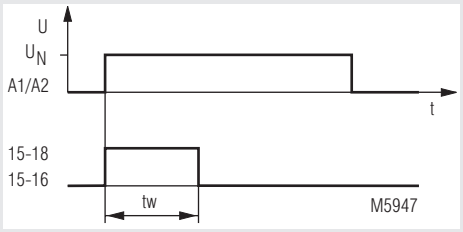
MINITIMER
Fleeting Action Relay
BC 7931N

0221545



- According to IEC/EN 61 812-1
- Fleeting action
- Repeat time adjustable to 100 s
- 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

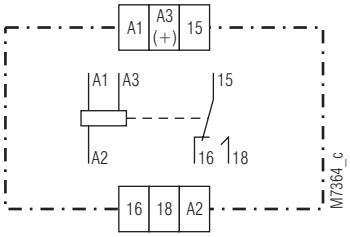
Applications

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 s 5 ... 100 s
Time setting:	stepless 1:20
Recovery time:	≤ 100 ms
Repeat accuracy:	≤ 0.5 % + 10 ms
Voltage influence:	< 1 % over voltage range
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] [1] at terminals A3-A2 [2] at terminals A1-A2
Voltage range:	AC 0.8 ... 1.1 U_N DC 0.9 ... 1.25 U_N
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:	1.5×10^5 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 frequency 10 ... 55 Hz	IEC/EN 60 068-2-6
Climate resistance:	20 / 060 / 04	IEC/EN 60 068-1
Terminal designation:	EN 50 005	
Wire connection:		
Cross section:	1 x 4 mm² solid or 1 x 2.5 mm² stranded ferruled (isolated) or 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	
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 7931N.71 AC/DC 24 V + AC 230 V 50/60 Hz 0.5 ... 10 s

Article number:	0052663
• Front colour grey, with box terminals	
• Output:	1 changeover contact
• Nominal voltage U_N:	AC/DC 24 V + AC 230 V
• Time range:	0.5 ... 10 s
• Width:	22.5 mm

Ordering Example

BC 7931N .71 AC/DC 24 V + AC 230 V 50/60 Hz 1 s

- 1 s — Time range end value
- 50/60 Hz — Nominal frequency
- AC/DC 24 V + AC 230 V — Nominal voltage
- .71 — Contacts
- BC 7931N — Type