

MULTITIMER Multifunction Relay BA 7811



0277746



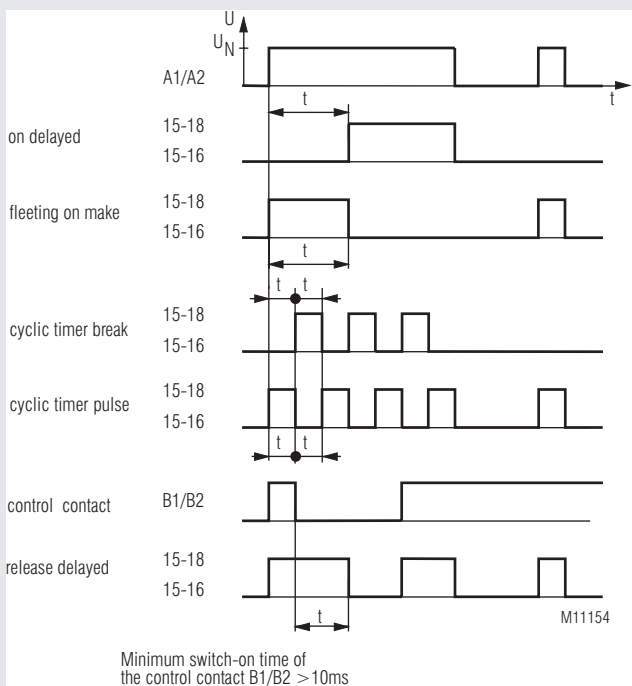
Your Advantage

- Adjustable on front side via absolute scale
- High switching capacity

Features

- According to IEC/EN 61 812-1
- Programmable via rotary switch for
 - On delay (AV)
 - Release delay (RV)
 - Fleeting on make (EW)
 - Cyclic timer / start with break (TP)
 - Cyclic timer / start with pulse (TI)
- 4 time ranges from 0.05 ... 1000 s or 0.05 ... 1000 min
- Decadic time ranges
- 1 or 2 changeover contacts
- LED indicators for power supply and state of contact
- Width: 45 mm

Function Diagram



Approvals and Markings



Applications

Time dependent controls, process controls

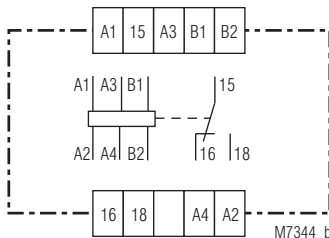
Indicators

red LED:	on, when supply connected
green LED:	on, when corresponding output relay is active

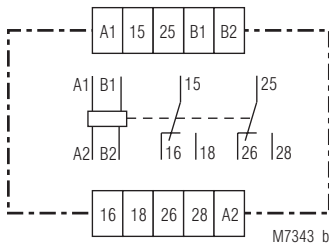
Notes

A voltage free control contact is required for the release delay. The device switches as a cyclic timer with a pulse/pause ratio of 1:1 and can also be used as a flasher relay with a short time setting.

Circuit Diagrams



BA 7811.81
A1/A2: AC 110 - 220 V
A3/A4: AC/DC 24 - 60 V
B1/B2: Control contacts for release delay



BA 7811.82
A1/A2: Operation voltage
B1/B2: Control contacts for release delay

Connection Terminals

Terminal designation	Signal description
A1, A2	Power supply AC
A3, A4	Power supply AC/DC
B1, B2	Control contacts for release delay
15, 16, 18	Changeover contacts (output relay)
25, 26, 28	Changeover contacts (2. output relay)

Technical Data

Time Circuit

Time ranges:	0.05 ... 1 s or 0.05 ... 1 min
	0.5 ... 10 s 0.5 ... 10 min
	5 ... 100 s 5 ... 100 min
	50 ... 1000 s 50 ... 1000 min
Time setting:	infinite
Recovery time:	≤ 20 ms
Repeat accuracy:	≤ ± 1 % of setting value ± 10 ms
Voltage influence:	< 0.5 %
Temperature influence:	± 0.1 % / K

Input

Nominal voltage U_N	At devices with 1 changeover contact: AC/DC 24 ... 60 V and AC 110 ... 230 V At devices with 2 changeover contacts: AC/DC 24 ... 60 V or AC 110 ... 230 V
Voltage range:	0.8 ... 1.1 U _N
Minimum switch-on time of the control contact B1 / B2:	≥ 10 ms
Nominal consumption:	≤ 4 VA
Nominal frequency:	50 / 60 Hz
Frequency range:	± 5 % f _N

Output

Contacts	
BA 7811.81:	1 changeover contact, delayed
BA 7811.82:	2 changeover contacts, delayed
Contact material:	AgNi + 0.2 µm Au
Measured nominal voltage:	AC 250 V
Thermal current I_{th}:	10 A
Switching capacity	
to AC 15	
BA 7811.81	
NO contact:	10 A / AC 230 V IEC/EN 60 947-5-1
NC contact:	5 A / AC 230 V IEC/EN 60 947-5-1
BA 7811.82	
NO contact:	2 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 3 A, AC 230 V	
BA 7811.81:	3 x 10 ⁵ switching cycles
BA 7811.82:	1.5 x 10 ⁵ switching cycles
Permissible switching frequency:	6 000 switching cycles / h
Short circuit strength	
max. fuse rating:	4 A gG / gL IEC/EN 60 947-5-1
Mechanical life:	
BA 7811.81:	30 x 10 ⁶ switching cycles
BA 7811.82:	50 x 10 ⁶ switching cycles

General Data

Nominal operating mode:	continuous operation
Temperature range:	
Operation:	- 20 ... + 60 °C
Storage:	- 20 ... + 60 °C
Altitude:	< 2,000 m
Clearance and creepage distance	
Rated impulse voltage / pollution degree:	4 kV / 2 IEC 60 664-1
EMC	
Electrostatic discharge (ESD):	8 kV (air) IEC/EN 61 000-4-2
HF irradiation:	10 V/m IEC/EN 61 000-4-3
Fast transients	
on wires for power supply:	4 kV IEC/EN 61 000-4-4
on control input:	2 kV IEC/EN 61 000-4-4
Surge voltage between	
wires for power supply:	2 kV IEC/EN 61 000-4-5
between wire and ground:	4 kV IEC/EN 61 000-4-5
HF-wire guided:	10 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 acc. 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 arrangement:	DIN 46 199-5
Terminal designation:	EN 50 005
Wire connection:	2 x 2.5 mm ² solid or 2 x 1.5 mm ² stranded wire with sleeve DIN 46 228-1/-2/-3/-4
Wire fixing:	Flat terminals with self-lifting clamping piece IEC/EN 60 999-1
Fixing torque:	0.8 Nm
Mounting:	DIN rail IEC/EN 60 715
Weight:	320 g

Dimensions

Width x height x depth:	45 x 73 x 133 mm
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Standard Type

BA 7811.81	AC/DC 24 ... 60 V + AC 110 ... 230 V	50 / 60 Hz	1000 s
Article number:	0022010		
• 4 time ranges from 0.05 ... 1000 s			
• Nominal voltage U _N :	AC/DC 24 ... 60 V + AC 110 ... 230 V		
• Output:	1 Wechsler, verzögert		
• Width:	45 mm		

Ordering Example

BA 7811	.82	AC/DC 24 ... 60 V	50 / 60 Hz	1000 s	
					Timerangemax.value
					Nominal frequency
					Nominal voltage
					Contacts
					Type

Accessories

ET 4762-5	Adapter for screw fixing Article number: 0023119
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