

# **B10, B12, B20**

## **Технические характеристики**

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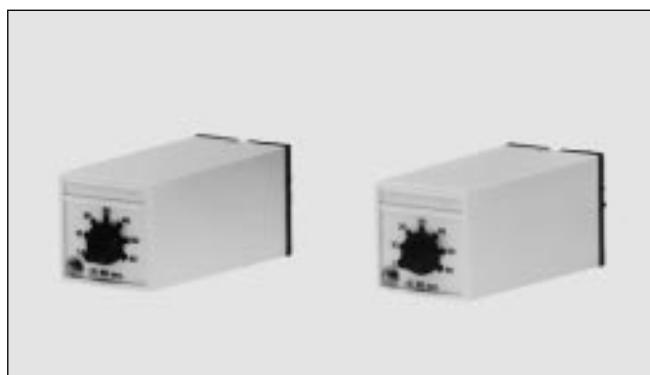
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# Timers

## Interval

### Types B 101, B 201, B 108, B 208



- Time ranges: 0.15 s to 600 s
- Automatic start
- Knob-adjustable time within range
- Oscillator-controlled time circuit
- Repeatability deviation:  $\leq 1\%$
- Output: 10 A SPDT or 8 A DPDT relay
- Plug-in type module
- Scantimer housing
- LED-indication for relay on
- AC or DC power supply

#### Product Description

Mono-function, plug-in miniature interval time relays up to 600 s (10 min) covering 3 individual time ranges. This economical timer is often used in applications such as lubricating pumps, drying elements, etc. where an operation is wanted to last for a longer period of time.

#### Ordering Key

**B 108 024 600**

Function	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Output	<input type="text"/>			
Type	<input type="text"/>			
Power supply	<input type="text"/>			
Time range	<input type="text"/>			

#### Type Selection

Plug	Output	Time ranges	Supply: 24 VAC/DC	Supply: 120 VAC	Supply: 220 VAC
Circular 8 pin	SPDT	0.15 - 6 s 1.5 - 60 s 15 - 600 s	B 108 024 006 B 108 024 060 B 108 024 600	B 108 120 006 B 108 120 060 B 108 120 600	B 108 220 006 B 108 220 060 B 108 220 600
Circular 11 pin		0.15 - 6 s 1.5 - 60 s 15 - 600 s	B 101 024 006 B 101 024 060 B 101 024 600	B 101 120 006 B 101 120 060 B 101 120 600	B 101 220 006 B 101 220 060 B 101 220 600
Circular 8 pin	DPDT	0.15 - 6 s 1.5 - 60 s 15 - 600 s	B 208 024 006 B 208 024 060 B 208 024 600	B 208 120 006 B 208 120 060 B 208 120 600	B 208 220 006 B 208 220 060 B 208 220 600
Circular 11 pin		0.15 - 6 s 1.5 - 60 s 15 - 600 s	B 201 024 006 B 201 024 060 B 201 024 600	B 201 120 006 B 201 120 060 B 201 120 600	B 201 220 006 B 201 220 060 B 201 220 600

#### Time Specifications

Time ranges	0.15- 6 s 1.5 - 60 s 15 - 600 s	Repeatability deviation	$\leq 1\%$
Time range accuracy	0 to +10% on max. min. actual time $\leq$ min. set time	Time variation Within rated power supply and ambient temperature	$\leq 0.05\%/\text{V}$ $\leq 0.2\%/\text{C}$
		Reset Time and/or relay	Power supply interruption $\geq 250 \text{ ms}$

## Output Specifications

	B 108, B 101	B 208, B 201
<b>Output</b>	SPDT relay 250 VAC (rms) (contact/electronics)	DPDT relay 250 VAC (rms) (contacts/elec., contact/contact)
<b>Contact ratings (AgCdO)</b>	$\mu$ (micro gap)	$\mu$ (micro gap)
Resistive loads	AC 1 10 A/250 VAC (2500 VA) DC 1 1 A/250 VDC (250 W) or 10 A/25 VDC (250 W)	8 A/250 VAC (2000 VA) 0.4 A/250 VDC (100 W) 4 A/25 VDC (100 W)
Small inductive loads	AC 15 2.5 A/230 VAC DC 13 5 A/24 VDC	2.5 A/230 VAC 5 A/24 VDC
<b>Mechanical life</b>	$\geq 30 \times 10^6$ operations	$\geq 30 \times 10^6$ operations
<b>Electrical life</b>	AC 1 $\geq 2.5 \times 10^5$ operations (at max. load)	$\geq 2.5 \times 10^5$ operations (at max. load)
<b>Operating frequency</b>	$\leq 7200$ operations/h	$\leq 7200$ operations/h
<b>Insulation voltages</b>	Rated insulation voltage $\geq 2.0$ kVAC (rms) (contact/electronics) Rated transient protection volt. 4 kV (1.2/50 $\mu$ s) (contact/electronics) (IEC 60664)	$\geq 2.0$ kVAC (rms) (contact/electronics) 4 kV (1.2/50 $\mu$ s) (contact/electronics) (IEC 60664)

## Supply Specifications

<b>Power supply AC types</b>	Installation cat. III
Rated operational voltage through pins 2 & 10 or pins 2 & 7	220 220 VAC + 15/- 20%, 45 to 65 Hz 120 120 VAC + 15/- 20%, 45 to 65 Hz 024 24 VAC + 15/- 20%, 45 to 65 Hz  Drop-out tolerance $\geq 10$ ms Rated insulation voltage None Rated transient protection volt. 4 kV (1.2/50 $\mu$ s) @ 220 VAC 2.5 kV (1.2/50 $\mu$ s) @ 120 VAC 800 V (1.2/50 $\mu$ s) @ 24 VAC (line/neutral)
<b>Power supply DC type</b>	Installation cat. III
Rated operational voltage 024	24 VDC + 15/- 20% (pin 2 pos.)
Rated insulation voltage	None
Rated transient protection volt.	800 V (1.2/50 $\mu$ s)
<b>Consumption</b>	AC supply 60 mA @ 50 Hz/70 mA @ 60 Hz DC supply 1 W

## General Specifications

<b>Power ON delay</b>	$\leq 200$ ms
<b>Power OFF delay</b>	$\geq 250$ ms
<b>Indication for Output ON</b>	LED. red
<b>Environment</b>	IP 20 B Pollution degree 2 (IEC 60664) Operating temperature -20° to +50°C (-4° to +122°F) Storage temperature -50° to +85°C (-58° to +185°F)
<b>Weight</b>	85 g
<b>Approvals</b>	UL, CSA

## Mode of Operation

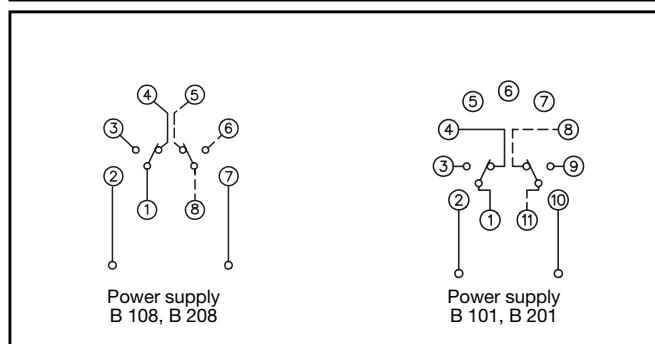
The relay operates and the time period starts when power supply is applied to the time relay.

At the end of the set delay, the relay releases and will not operate again until power supply is reapplied.

A recovery period of 250 ms should be allowed before reapplying power supply.

If power supply is interrupted for more than 250 ms before the time period has expired, the relay releases and the time is reset to zero.

## Wiring Diagrams



## Time Setting

Knob-adjustable on scale in seconds.

## Accessories

Sockets◊	S 408, S 411
Hold down spring◊	HF
Mounting rack	SM 13
Socket cover	BB 4
Potentiometer lock	PL 1

For further information refer to "Accessories".

## Operation Diagram

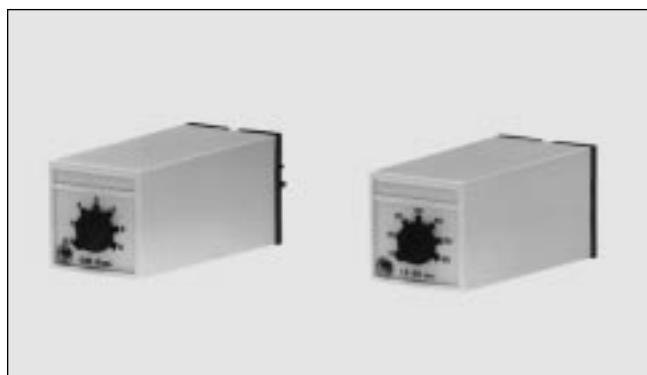


# Timers

## Delay on Release

### Types B 128, B 121

CARLO GAVAZZI



- Time ranges: 0.15 s to 60 s
- Automatic start after drop out of power supply
- Knob-adjustable time within range
- Repeatability deviation:  $\leq 1\%$
- Output: 10 A SPDT relay
- Plug-in type module
- Scantimer housing
- LED-indication for supply on
- AC or DC power supply

### Product Description

Mono-function, plug-in, delay on release, miniature time relays up to 60 s covering 2 individual time ranges. These economical timers are often used to switch on an exhaust fan and keep it running for a certain period of time after disconnection of power supply.

### Ordering Key

**B 128 220 006**

Function \_\_\_\_\_  
 Output \_\_\_\_\_  
 Type \_\_\_\_\_  
 Power supply \_\_\_\_\_  
 Time range \_\_\_\_\_

### Type Selection

Plug	Output	Time ranges	Supply: 24 VAC	Supply: 120 VAC	Supply: 220 VAC	Supply: 24 VDC
Circular 8 pins	SPDT	0.15 - 6 s 1.5 - 60 s	B 128 024 006 B 128 024 060	B 128 120 006 B 128 120 060	B 128 220 006 B 128 220 060	B 128 724 006 B 128 724 060
Circular 11 pins	SPDT	0.15 - 6 s 1.5 - 60 s	B 121 024 006 B 121 024 060	B 121 120 006 B 121 120 060	B 121 220 006 B 121 220 060	B 121 724 006 B 121 724 060

### Time Specifications

Time ranges	0.15 - 6 s 1.5 - 60 s
Time range accuracy	0 to +20% on max. min. actual time $\leq$ min. set time
Repeatability deviation	$\leq 1\%$
Time variation	$\leq 0.05\%/\text{V}$ $\leq 0.2\%/\text{C}$
Reset	Power supply interruption $\geq 500 \text{ ms}$
Time and/or relay	

### Output Specifications

Output	SPDT relay Basic electrical insulation
Contact ratings (AgCdO)	$\mu$ (micro gap) 10 A/250VAC (2500 VA) 1 A/250 VDC (250 W) or 10 A/25 VDC (250 W)
Resistive loads	AC 1 DC 1
Small inductive loads	AC 15 DC 13
Mechanical life	$\geq 30 \times 10^6$ operations
Electrical life	AC 1 $\geq 2.5 \times 10^5$ operations (at max. load)
Operating frequency	$\leq 7200$ operations/h
Insulation voltages	Rated insulation voltage Rated transient protection volt. $\geq 2.0 \text{ kVAC (rms) (cont./elec.)}$ $4 \text{ kV (1.2/50 } \mu\text{s) (cont./elec.)}$ (IEC 60664)

## Supply Specifications

<b>Power supply AC types</b>	Installation cat. III (IEC 60664)
Rated operational voltage	
Through pins 2 & 10	220
or pins 2 & 7	220 VAC $\pm 15\%$ , 45 to 65 Hz
120	120 VAC $\pm 15\%$ , 45 to 65 Hz
024	24 VAC $\pm 15\%$ , 45 to 65 Hz $\geq 10$ ms
Dropout tolerance	None
Rated insulation voltage	4 kV (1.2/50 $\mu$ s) @ 220 VAC
Rated transient protection volt.	2.5 kV (1.2/50 $\mu$ s) @ 120 VAC 800 V (1.2/50 $\mu$ s) @ 24 VAC (line/neutral)
<b>Power supply DC type</b>	Installation cat. III (IEC 60664)
Rated operational voltage	724
Rated insulation voltage	24 VDC $\pm 15/-20\%$ (pin 2 pos.)
Rated transient protection volt.	None 800 V (1.2/50 $\mu$ s)
<b>Consumption</b>	AC supply DC supply
	60 mA @ 50 Hz/70 mA @ 60 Hz 1 W

## General Specifications

<b>Power ON time</b>	$\geq 200$ ms
<b>Indication for</b>	
Power supply ON	LED, red
<b>Environment</b>	
Degree of protection	IP 20 B
Pollution degree	2 (IEC 60664)
Operating temperature	-20° to +50°C (-4° to +122°F)
Storage temperature	-50° to +85°C (-58° to +185°F)
<b>Weight</b>	85 g
<b>Approval</b>	UL, CSA

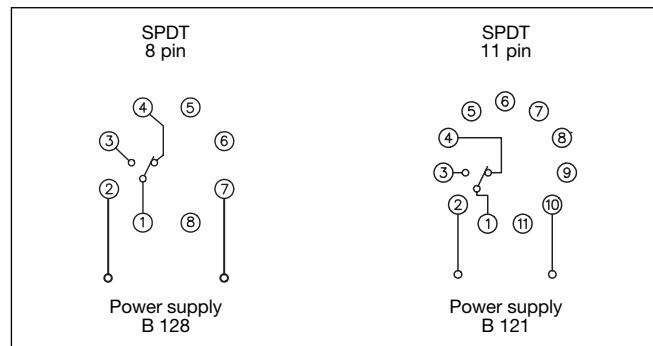
## Mode of Operation

The relay operates immediately after power supply is applied.

When power supply is interrupted, the time period starts and at the end of the set time the relay releases.

Please note  
B 128 and B 121 should not be operated by pulses shorter than 500 ms.

## Wiring Diagrams

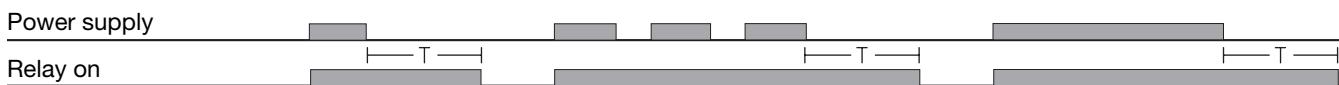


## Accessories

Sockets◊	S 408, S 411
Hold down spring◊	HF
Mounting rack	SM 13
Socket cover	BB 4
Potentiometer lock	PL 1

For further information refer "Accessories".

## Operation Diagram



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