

# Timers

## True Delay on Release

### Type DBB51

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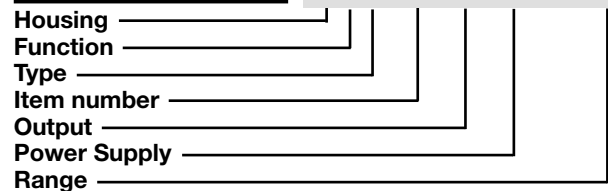
- Time range 1 to 600 s - capacitor powered
- Knob-adjustable time setting
- Automatic start after drop-out of power supply
- Repeatability:  $\leq 0.2\%$
- Output: 8 A SPDT relay
- For mounting on DIN-rail in accordance with DIN/EN 50 022
- 17.5 mm DIN-rail housing (DIN 43880)
- Combined AC and DC power supply
- LED indication for relay status and power supply ON

### Product Description

Multi voltage (true) delay on release timer. Time ranges from 1 to 600 s covered by 3 models.

Housing 17.5 mm wide suitable for DIN-rail mounting. Fits in M36 cover.

### Ordering key **DBB 51 C M24 10M**



### Type Selection

Mounting	Output	Time range	Supply: 24 VDC and 24 to 240 VAC
For DIN-rail	SPDT	1 to 10 s	<b>DBB 51 C M24 10S</b>
	SPDT	6 to 60 s	<b>DBB 51 C M24 1M</b>
	SPDT	60 to 600 s	<b>DBB 51 C M24 10M</b>

### Time Specifications

<b>Time ranges</b>	
Type 10 S	1 to 10 s
Type 1 M	6 to 60 s
Type 10 M	60 to 600 s
<b>Repeatability</b>	$\leq 0.2\%$
<b>Time variation</b>	
Within rated power supply	$\leq 0.05\%$
Within ambient temperature	$\leq 0.2\%$
<b>Reset</b>	Power supply applied for:
DBB51CM2410S	$\geq 200$ ms
DBB51CM241M,	$\geq 200$ ms
DBB51CM2410M	$\geq 400$ ms

### Supply Specifications

<b>Power supply</b>	Overvoltage cat. II (IEC 60664, IEC 60038)
Rated operational voltage through terminals: A1, A2	24 VDC $\pm 15\%$ and 24 to 240 VAC $+10\%$ $-15\%$ , 45 to 65 Hz
<b>Voltage interruption</b>	$\leq 40$ ms
<b>Rated operational power</b>	
AC supply:	1.5 VA
DC supply:	0.06 W

### Output Specifications

<b>Output</b>	SPDT relay
<b>Rated insulation voltage</b>	250 VAC (RMS)
<b>Contact Ratings (AgSnO<sub>2</sub>)</b>	$\mu$
Resistive loads	AC 1 5 A @ 50 VAC
	DC 12 5 A @ 24 VDC
Small inductive loads	AC 15 2.5 A @ 250 VAC
	DC 13 2.5 A @ 24 VDC
<b>Mechanical life</b>	$\geq 30 \times 10^6$ operations
<b>Electrical life</b>	$\geq 10^5$ operations (at 5 A, 250 V, $\cos \varphi = 1$ )
<b>Operating frequency</b>	$< 7200$ operations / h
<b>Dielectric strength</b>	
Dielectric voltage	2 kVAC (RMS)
Rated impulse withstand voltage	2.5 kV (1.2/50 $\mu$ s)



## General Specifications

<b>Power ON delay</b>	≤ 200 ms
<b>Power OFF delay</b>	≤ 100 ms
<b>Indication for</b> Power supply status Output status	LED, green LED, yellow (flashing when timing)
<b>Environment</b> Degree of protection Pollution degree Operating temperature Storage temperature	(EN 60529) IP 20 3 (IEC 60664) -20 to 60 °C, R.H. < 95% -30 to 80 °C, R.H. < 95%
<b>Weight</b>	70 g
<b>Screw terminals</b> Tightening torque	Max 0.5 Nm according to IEC EN 60947
<b>CE Marking</b>	Yes
<b>EMC</b> Immunity Emission	Electromagnetic Compatibility According to EN 61000-6-2 According to EN 50081-1
<b>Timer Specifications</b>	According to EN 61812-1

## Mode of Operation/Settings

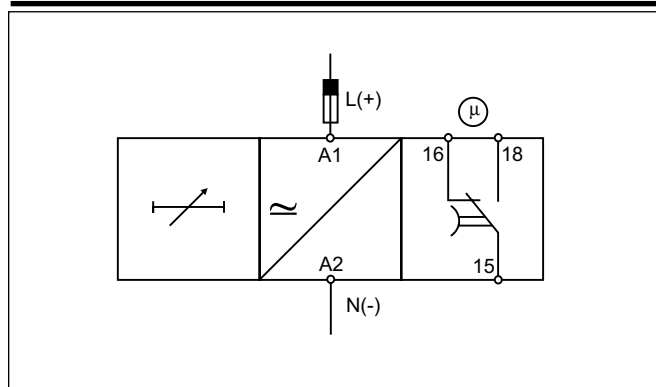
When the power supply is applied the relay operates. When the power supply is interrupted the time period starts and, at the end of the set time period, the relay releases. If power supply is reapplied before the relay releases the time is reset and the relay remains ON.

**Note:**  
DBB51 should not be operated by pulses shorter than 200 ms. For these purposes the relay DMB51, operated by external contact function, should be used.

### Time setting

Knob adjustable on absolute scale.

## Wiring Diagram



## Operation Diagram

