

# Timers

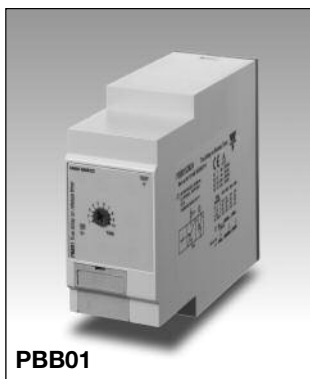
## True delay on release

### Types DBB01, PBB01

CARLO GAVAZZI



DBB01



PBB01

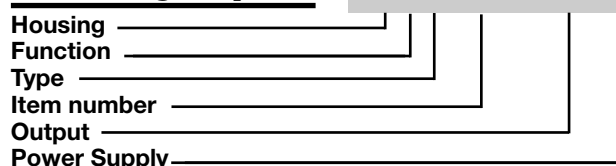
- Time range 0.1 to 600 s - capacitor powered
- 4 time ranges selectable by DIP-switches
- Knob-adjustable time setting
- Automatic start after drop-out of power supply
- Repeatability:  $\leq 0.2\%$
- Output: 8 A SPDT or 8 A DPDT relay
- For mounting on DIN-rail in accordance with DIN/EN 50 022 or Plug-in
- 22.5 mm Euronorm or 36 mm Plug-in module housing
- Combined AC and DC power supply
- LED indication for relay status and power supply ON

### Product Description

Multi voltage true delay on release timer with 4 time ranges from 0.1 to 600 s selectable by DIP-switches. For mounting on DIN-rail (DBB01) or Plug-in (PBB01).

### Ordering key

**DBB 01 C M24**



### Type Selection

Mounting	Output	Housing	Supply: 12 to 24 VDC	Supply: 24 to 240 VAC/DC
For DIN-rail	SPDT DPDT	D - Housing D - Housing	DBB 01 C 724 DBB 01 D 724	DBB 01 C M24 DBB 01 D M24
Plug-in	SPDT DPDT	P - Housing P - Housing	PBB 01 C 724 PBB 01 D 724	PBB 01 C M24 PBB 01 D M24

### Time Specifications

<b>Time ranges</b> Selectable by DIP-switches	0.1 to 1 s 1 to 10 s 6 to 60 s 60 to 600 s
<b>Repeatability</b>	$\leq 0.2\%$
<b>Time variation</b> Within rated power supply Within ambient temperature	$\leq 0.05\%$ $\leq 0.2\%$
<b>Reset</b>	Power supply applied for min. 200 ms

### Output Specifications

<b>Output</b>	SPDT or DPDT relay
<b>Rated insulation voltage</b>	250 VAC (RMS)
<b>Contact Ratings (AgNi)</b>	$\mu$
Resistive loads	AC 1 DC 12
Small inductive loads	AC 15 DC 13
<b>Mechanical life</b>	$\geq 2 \times 10^6$ operations
<b>Electrical life</b>	AC1 $\geq 10^5$ operations (at max load)
<b>Operating frequency</b>	$< 3600$ operations / h
<b>Dielectric strength</b>	
Dielectric voltage	2 kVAC (RMS)
Rated impulse withstand voltage	4 kV (1.2/50 $\mu$ s)

### Supply Specifications

<b>Power supply</b> Rated operational voltage through terminals:	Overvoltage cat. III (IEC 60664, IEC 60038)
(DBB01...M24) A1, A2	24 to 240 VAC/DC
(PBB01...M24) 2, 10	+10% -15%, 45 to 65 Hz
(DBB01...724) A1, A2	12 to 24 VDC
(PBB01...724) 2, 10	+15% -10%
<b>Voltage interruption</b>	$\leq 40$ ms
<b>Rated operational power</b>	
AC supply:	2.2 VA
DC supply:	0.6 W

## General Specifications

<b>Power ON delay</b>	≤ 200 ms
<b>Power OFF delay</b>	≤ 100 ms
<b>Indication for</b> Power supply ON Output relays ON	LED, green LED, yellow (flashing when timing)
<b>Environment</b> Degree of protection Pollution degree  Operating temperature Storage temperature	(EN 60529) IP 20 3 (DBB01), 2 (PBB01) (IEC 60664) -20 to 60 °C, R.H. < 95% -30 to 80 °C, R.H. < 95%
<b>Housing</b> Dimensions	DBB01 22.5 x 80 x 99.5 mm PBB01 36 x 80 x 94 mm
<b>Weight</b>	Approx 120 g
<b>Screw terminals</b> Tightening torque	(DBB01) Max 0.5 Nm according to IEC EN 60947
<b>Approval</b>	UL (except 724) CSA (except 724)
<b>CE Marking</b>	Yes
<b>EMC</b> Immunity Emission	Electromagnetic Compatibility According to EN 61000-6-2 According to EN 61000-6-3
<b>Timer Specifications</b>	According to EN 61812-1

## Mode of Operation

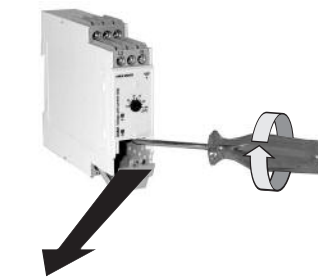
When the power supply is applied the relay operates. When the power supply is interrupted the time period starts and, at the end of the set time period, the relay releases. If power supply is reapplied before the relay releases the time is reset and the relay remains ON.

**Note:**  
DBB01, PBB01 should not be operated by pulses shorter than 200 ms. For these purposes the relays DMB01 or PMB01, operated by external contact function, should be used.

## Range/Time Setting

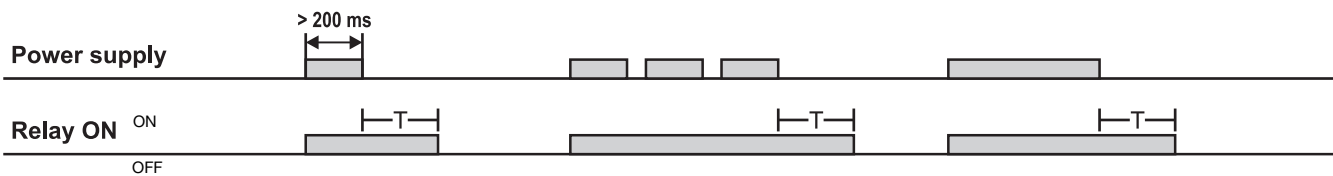
Adjust the time range setting the DIP-switches 1 and 2 as shown below. To access the DIP-switches open the plastic cover using a screwdriver as shown below.

**Centre knob:**  
Time setting on relative scale: 1 to 10 with respect to the chosen range.

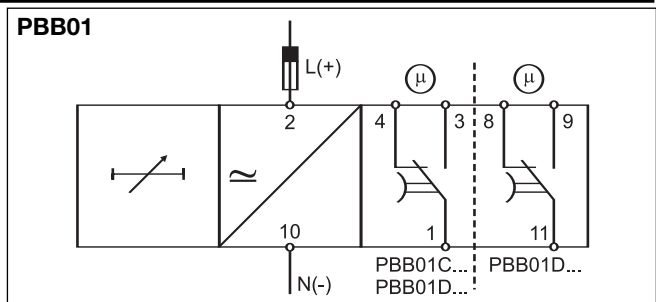
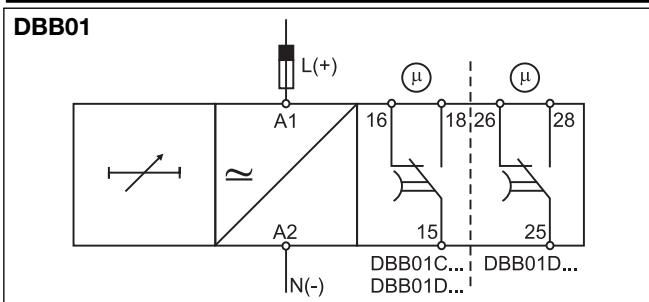


Time range				
1	2	3	4	OFF ON OFF OFF: 0.1 to 1 s
1	2	3	4	ON OFF ON ON: 1 to 10 s
1	2	3	4	ON ON ON OFF: 6 to 60 s
1	2	3	4	OFF OFF OFF ON: 60 to 600 s

## Operation Diagram



## Wiring Diagrams



## Dimensions

