

# Timers

## Delay on Release

### Types DBA02, PBA02

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DBA02



PBA02

- Time range 0.1 s to 100 h
- Knob selection of time range
- Knob-adjustable time setting
- Repeatability:  $\leq 0.2\%$
- Output: 8 A SPDT 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 delay on release timer with 7 knob selectable time ranges with mounting on DIN-rail (DBA02) or Plug-in (PBA02). in 0.1 s and 100 h. For

## Ordering Key

**DBA 02 C M24**

Housing \_\_\_\_\_  
 Function \_\_\_\_\_  
 Type \_\_\_\_\_  
 Item number \_\_\_\_\_  
 Output \_\_\_\_\_  
 Power supply \_\_\_\_\_

## Type Selection

Mounting	Output	Housing	Supply: 24 VDC and 24 to 240 VAC
DIN-rail	SPDT	D-Housing	DBA 02 C M24
Plug-in	SPDT	P-Housing	PBA 02 C M24

## Time Specifications

<b>Time ranges</b> Knob Selectable	0.1 to 1 s 1 to 10 s 6 to 60 s 60 to 600 s 0.1 to 1 h 1 to 10 h 10 to 100 h
<b>Setting accuracy</b>	$\leq 5\%$
<b>Repeatability</b>	$\leq 0.2\%$
<b>Time variation</b> Within rated power supply Within ambient temperature	$\leq 0.05\%/V$ $\leq 0.2\%/^{\circ}C$
<b>Reset</b> Manual reset of time and/or relay	Close the trigger contact between pins A1 and Y1 or 2 and 5
Pulse duration	$\geq 100$ ms
Power supply interruption	$\geq 200$ ms

## 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 8 A @ 250 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 8 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 volt. 4 kV (1.2/50 $\mu$ s)

## Supply Specifications

<b>Power supply</b> Rated operational voltage through terminals: (DBA01C) A1, A2 (PBA01C) 2, 10	Overvoltage cat. III (IEC 60664, IEC 60038)  24 VDC $\pm 15\%$ and 24 to 240 VAC $+10\%/-15\%$ , 45 to 65 Hz
<b>Voltage interruption</b>	$\leq 10$ ms
<b>Rated operational power</b> AC supply DC supply	4 VA 1.5 W



## General Specifications

<b>Power ON delay</b>	≤ 100 ms		<b>Weight</b>	Approx. 130 g
<b>Indication for</b> Power supply ON Output relays ON	LED, green LED, yellow (flashing when timing)		<b>Screw terminals</b> Tightening torque	Max. 0.5 Nm according to IEC 60947
<b>Environment</b> Degree of protection Pollution degree	(EN 60529) IP 20 3 (DBA02), 2 (PBA02) (IEC 60664)		<b>Approvals</b>	UL, CSA
Operating temperature Storage temperature	-20 to 60°C, R.H. < 95% -30 to 80°C, R.H. < 95%		<b>CE Marking</b>	Yes
<b>Housing</b> Dimensions	DBA02 PBA02	22.5 x 80 x 99.5 mm 36 x 80 x 94 mm	<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

The relay operates as soon as the trigger contact is closed. The time period begins when the trigger contact is opened. The relay releases at the end of the set delay time or when the power supply is disconnect-

ed. The relay operates again when the input contact is closed again. If it is closed before the end of the delay time the relay keeps ON, a new time period begins as soon as the trigger contact is opened again.

**Additional Load**  
It's possible to wire an additional load (i.e. a relay) between pins Y1 and A2, or 5 and 10, driven by the trigger contact without damaging the device (see wiring diagram).

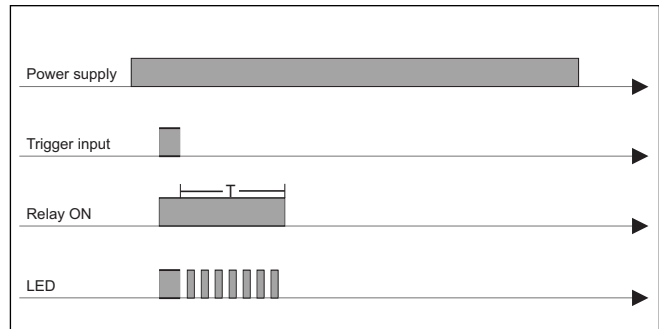
**Yellow LED working mode**  
Timing: Slow blinking  
Relay ON: See operation diagrams  
  
Incorrect knobs position:  
Fast blinking

## Time Setting

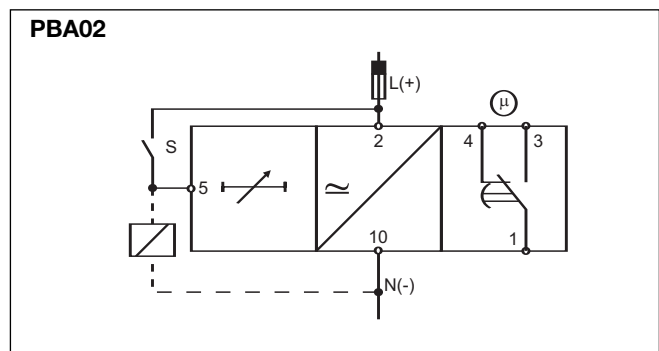
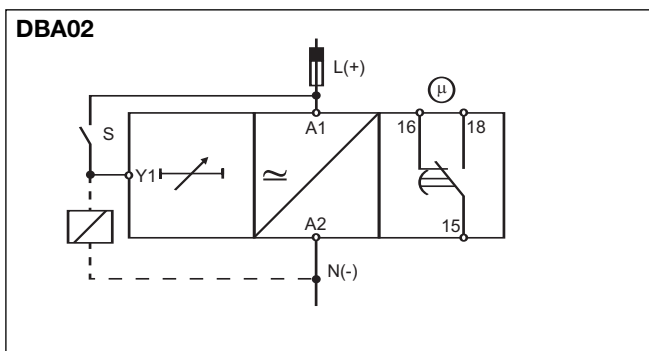
**Centre knob:**  
Time setting on relative scale: 1 to 10 with respect to the chosen range.

**Lower knob:**  
Setting of time range.

## Operating Diagram



## Wiring Diagrams



## Dimensions

