

# Timers

## Delay on Release

### Type DBA52

CARLO GAVAZZI



- 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
- 17.5 mm DIN-rail 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 within 0.1 s and 100 h. For mounting on DIN-rail.

### Ordering Key

**DBA 52 C M24**

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

### Type Selection

Mounting	Output	Housing
DIN-rail	SPDT	D-Housing

Supply: 24 VDC and 24 to 240 VAC

DBA 52 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
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	5 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 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 volt.	2.5 kV (1.2/50 $\mu$ s)

### 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>	$\leq 10$ ms
<b>Rated operational power</b>	
AC supply	4 VA
DC supply	1.5 W

## General Specifications

<b>Power ON delay</b>	≤ 100 ms
<b>Indication for</b>	
Power supply ON	LED, green
Output relays ON	LED, yellow (flashing when timing)
<b>Environment</b>	(EN 60529)
Degree of protection	IP 20
Pollution degree	2 (IEC 60664)
Operating temperature	-20° to +60°C, R.H. < 95%
Storage temperature	-30° to +80°C, R.H. < 95%
<b>Housing dimensions</b>	17.5 x 81 x 67.2 mm
<b>Weight</b>	Approx. 75 g
<b>Screw terminals</b>	
Tightening torque	Max. 0.5 Nm according to IEC EN 60947
<b>Approvals</b>	UL
<b>CE Marking</b>	Yes
<b>EMC</b>	
Immunity	Electromagnetic Compatibility
Emission	According to EN 61000-6-2 According to EN 61000-6-3
<b>Timer Specifications</b>	According to EN 61812-1

## Time Setting

### Centre knob:

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

### Lower knob:

Setting of time range.

## 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 disconnected. 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

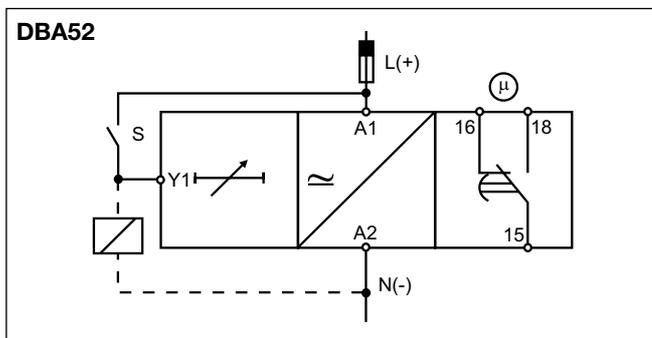
It's possible to wire an additional load (i.e. a relay) between pins Y1 and A2 driven by the trigger contact without damaging the device (see wiring diagram).

### Yellow LED working mode

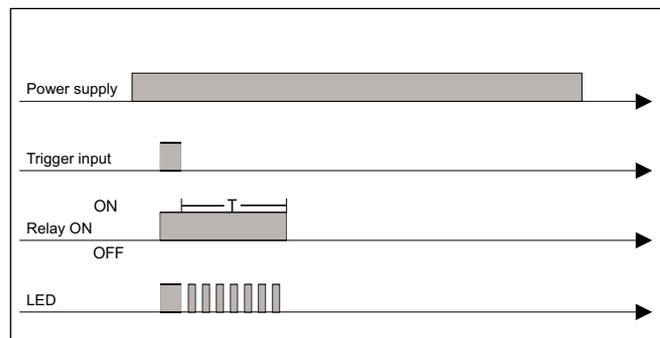
Timing: Slow blinking  
Relay ON: See operation diagrams

Incorrect knobs position:  
Fast blinking

## Wiring Diagram



## Operating Diagram



## Dimensions

