

# Timers

## Delay on Operate

### Type DAA01, PAA01

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- Time range 0.1 s to 100 h
- Knob selection of time range
- Knob adjustable time setting
- Automatic start
- Repeatability:  $\leq 0.2\%$
- Output: 8 A SPDT or 2 x 8 A SPDT relays
- For mounting on DIN-rail in accordance with DIN/EN 50 022 or Plug-in
- 22.5 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 operate timer with 7 selectable time ranges within 0.1 s and 100 h. For mounting on DIN-rail (DAA01) or plug-in (PAA01).

## Ordering Key

**DAA 01 C M24**

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

## Type Selection

Mounting	Output	Housing	Supply: 24 VDC and 24 to 240 VAC	Supply: 24 to 240 VAC/DC
DIN-rail	1 x SPDT 2 x SPDT	D-Housing	DAA01CM24	DAA01DM24
Plug-in	1 x SPDT 2 x SPDT	P-Housing	PAA01CM24	PAA01DM24

## 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> Power supply interruption	$\geq 200$ ms

## Output Specifications

<b>Output</b>	1 or 2 x SPDT relays
<b>Rated insulation voltage</b>	250 VAC (rms)
<b>Contact Ratings</b> (AgSnO <sub>2</sub> )	$\mu$
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 voltage	4 kV (1.2/50 $\mu$ s)



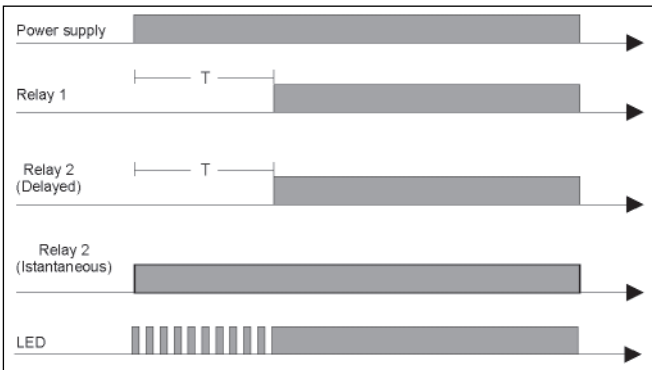
Supply Specifications

<b>Power supply</b>		Overvoltage cat. III (IEC 60664, IEC 60038)
Rated operational voltage through terminals:		
(DAA01C)	A1, A2 or	24 VDC $\pm$ 15% and
(PAA01C)	2, 10	24 to 240 VAC + 10% -15%,
		45 to 65 Hz
(DAA01D)	A1, A2 or	24 to 240 VAC/DC
(PAA01D)	2, 10	+ 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

Time Setting

<b>Centre knob:</b>	<b>Lower knob:</b>
Time setting on relative scale: 1 to 10 with respect to the chosen range	Setting of time range

Operating Diagram



General Specifications

<b>Power ON delay</b>	$\leq$ 100 ms
Reaction time	
Instantaneous contact	$<$ 20 ms from power ON
<b>Indication for</b>	
Power supply status	LED, green
Output status	LED, yellow (flashing when timing)
<b>Environment</b>	
Degree of protection	(EN 60529) IP 20
Pollution degree	3 (DAA01), 2 (PAA01) (IEC 60664)
Operating temperature	-20° to +60°C, R.H. $<$ 95%
Storage temperature	-30° to +80°C, R.H. $<$ 95%
<b>Weight</b>	Approx. 130 g
<b>Screw terminals (DAA01)</b>	
Tightening torque	Max. 0.5 Nm according to IEC 60947
<b>Approvals</b>	UL, CSA
<b>CE marking</b>	Yes
<b>EMC</b>	
Immunity	Electromagnetic Compatibility
Emission	According to EN 61000-6-2 According to EN 50081-1
<b>Timer Specifications</b>	According to EN 61812-1

Mode of Operation

The yellow LED, flashing when timing, is ON as soon as the relay turns ON.

The second relay can operate as instantaneous or delayed changeover contact. The selection is made by a DIP-switch placed under the plastic door on the device's front.

The set delay period begins as soon as the power supply is connected. At the end of the set delay the relay operates and does not release until the power supply is interrupted for at least 200 ms. If the power supply is interrupted for at least 200 ms before the relay operates the time is set to zero and the circuit is ready for a new time period.

Wiring Diagrams

