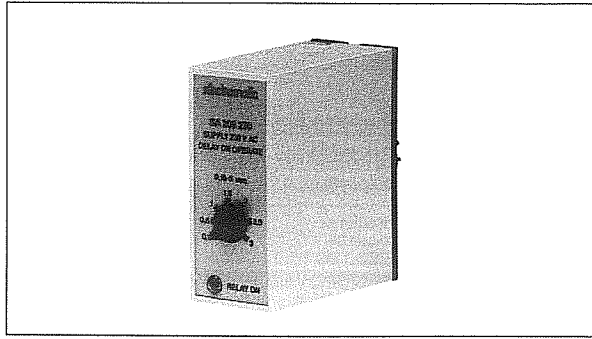
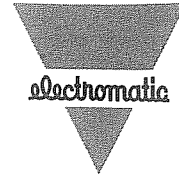


# Delay on Operate Timer Types SA 105, SA 205



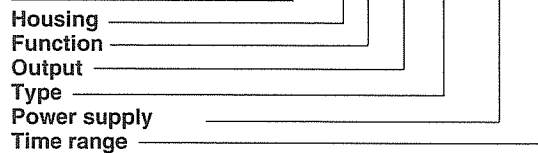
- Time ranges: 0.15 s to 600 s
- Automatic start
- Knob-adjustable time within range
- Oscillator-controlled time circuit
- Repeatability deviation:  $\leq 1\%$
- Output: 10 A SPDT or 8 A DPDT relay
- Plug-in type module
- S-housing
- LED-indication for relay on
- AC or DC power supply

## Product Description

Mono-function, plug-in, delay on operate time relays up to 600 s (10 min) covering 5 individual time ranges. Often used to prevent several motors from starting at the same time.

## Ordering Key

**SA 105 024 3S**



## Type Selection

Plug	Output	Time ranges	Supply: 24 VAC	Supply: 115 VAC	Supply: 230 VAC	Supply: 24 VDC
Circular ○	SPDT	0.15 - 3 s	SA 105 024 3S	SA 105 115 3S	SA 105 230 3S	SA 105 724 3S
		0.8 - 18 s	SA 105 024 18S	SA 105 115 18S	SA 105 230 18S	SA 105 724 18S
		3 - 60 s	SA 105 024 60S	SA 105 115 60S	SA 105 230 60S	SA 105 724 60S
		8 - 180 s	SA 105 024 180S	SA 105 115 180S	SA 105 230 180S	SA 105 724 180S
		30 - 600 s	SA 105 024 600S	SA 105 115 600S	SA 105 230 600S	SA 105 724 600S
Circular ○	DPDT	0.15 - 3 s	SA 205 024 3S	SA 205 115 3S	SA 205 230 3 S	SA 205 724 3S
		0.8 - 18 s	SA 205 024 18S	SA 205 115 18S	SA 205 230 18S	SA 205 724 18S
		3 - 60 s	SA 205 024 60S	SA 205 115 60S	SA 205 230 60S	SA 205 724 60S
		8 - 180 s	SA 205 024 180S	SA 205 115 180S	SA 205 230 180S	SA 205 724 180S
		30 - 600 s	SA 205 024 600S	SA 205 115 600S	SA 205 230 600S	SA 205 724 600S

## Time Specifications

Time ranges	0.15- 3 s 0.8 - 18 s 3 - 60 s 8 - 180 s 30 - 600 s	Repeatability deviation	$\leq 1\%$
Time range accuracy	0 to +10% on max. min. actual time $\leq$ min. set time	Time variation Within rated power supply and ambient temperature	$\leq 0.05\%/V$ $\leq 0.2\%/^{\circ}C$
		Reset Time and/or relay	power supply interruption min. 300 ms



## Output Specifications

	SA 105	SA 205
<b>Output</b>	SPDT relay	DPDT relay
Basic electrical insulation	250 VAC (RMS) (contact/electronics)	250 VAC (RMS) (contacts/elec., contact/contact)
<b>Contact ratings (Ag-CdO)</b>	$\mu$ (micro gap)	$\mu$ (micro gap)
Resistive loads	AC 1 10 A/250 VAC (2500 VA) DC 1 1 A/250 VDC (250 W) or 10 A/25 VDC (250 W)	8 A/250 VAC (2000 VA) 0.4 A/250 VDC (100 W) 4 A/25 VDC (100 W)
Small inductive loads	AC 11 2.5 A/230 VAC DC 11 5 A/24 VDC	2.5 A/230 VAC 5 A/24 VDC
<b>Mechanical life</b>	$\geq 30 \times 10^6$ operations	$\geq 30 \times 10^6$ operations
<b>Electrical life</b>	AC 1 $\geq 2.5 \times 10^5$ operations (at max. load)	$\geq 2.5 \times 10^5$ operations (at max. load)
<b>Operating frequency</b>	$\leq 7200$ operations/h	$\leq 7200$ operations/h
<b>Insulation voltages</b>		
Rated insulation voltage	$\geq 2.0$ kVAC (RMS) (contact/electronics)	$\geq 2.0$ kVAC (RMS) (contact/electronics)
Rated transient protection volt.	4 kV (1.2/50 $\mu$ s) (contact/electronics) (IEC 664)	4 kV (1.2/50 $\mu$ s) (contact/electronics) (IEC 664)

## Supply Specifications

<b>Power supply AC types</b>	installation cat. III (IEC 664)
Rated operational voltage through pins 2 & 10	230 230 VAC $\pm 15\%$ , 45 to 65 Hz 115 115 VAC $\pm 15\%$ , 45 to 65 Hz 024 24 VAC $\pm 15\%$ , 45 to 65 Hz
Dropout tolerance	$\geq 40$ ms
Rated insulation voltage	$\geq 2.0$ kVAC (RMS) (supply/elec.)
Rated transient protection volt.	4 kV (1.2/50 $\mu$ s) (line/neutral)
<b>Power supply DC type</b>	installation cat. III (IEC 664)
Rated operational voltage	724 24 VDC $\pm 15\%$ (pin 2 pos.)
Rated insulation voltage	none
Rated transient protection volt.	800 V (1.2/50 $\mu$ s) +/-
<b>Consumption</b>	AC supply 2.5 VA DC supply 1.5 W

## Mode of Operation

The delay period begins when power supply is applied.

At the end of the set delay, the relay will operate and will not release until power supply is interrupted.

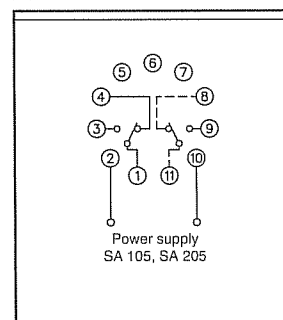
A recovery period of 300 ms should be allowed before re-applying power supply.

If power supply is interrupted for more than 300 ms before the relay operates, the time circuit is reset to zero and the time relay is ready for a new time period.

## General Specifications

<b>Power-on delay</b>	$\leq 200$ ms
<b>Power-off delay</b>	$\geq 300$ ms
<b>Indication for Output ON</b>	LED, red
<b>Environment</b>	IP 20 B 2 (IEC 664) Operating temperature -20 to +50°C (-4 to +122°F) Storage temperature -50 to +85°C (-58 to +185°F)
<b>Weight</b>	AC/DC types 200 g/125 g
<b>Approvals</b>	UL, CSA, SEV

## Wiring Diagram



## Time Setting

Knob-adjustable on scale in seconds.

## Accessories

Socket	S 411
Hold down spring	HF
Mounting rack	SM 13
Socket cover	BB 4
Front mounting bezel	FRS 2
Potentiometer lock	PL 1
For further information refer to "Accessories".	

## Operation Diagram

