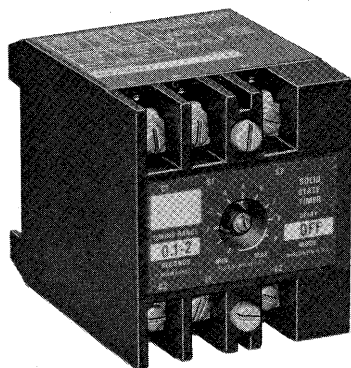


# TYPE PS SOLIDSTATE TIMER -SERIES A



Solid State Timer Catalog No. 700-PSPA  
Range of 0.1-2 Sec. Off-Delay Operation

Type PS timers are solid state devices, featuring encapsulated circuitry to provide improved reliability and protection against vibration, humidity, and atmospheric contaminants. They are supplied for On-Delay or Off-Delay operation in a choice of 4 timing ranges. The time delay, set by a self-contained potentiometer, is initiated by operating an external contact. The timed output of the device is a normally open sealed contact, having NEMA 8600 and P300 ratings.

These timers are designed for mounting directly on a 1-to 4-pole (single deck) Bulletin 700 Type P relay. The timer can be modified to mount directly on a panel or on Bulletin 700 Type M or MP mounting strips by using the Catalog No. 700-N25 accessory kit. The timer can also be modified to mount on a 4-pole Bulletin 700 Type R or RM relay by using the Catalog No. 700-N26 accessory kit.

**OPERATION**—The solid state timing circuit must be energized continuously. Timed operation of the output contact is controlled by an external initiating contact. Refer to the Specifications section for details of On-Delay and Off-Delay timing cycles.

**ADJUSTMENT**—The time delay is set by means of the adjustment potentiometer on the front of the device. The dial markings are provided for reference only and are not calibrated. As indicated in the Specifications section, the timing range is fixed by component characteristics, and may actually be greater than stated on the nameplate.

## SPECIFICATIONS —

Supply Voltage: 110-129V AC, 50/60 Hz.

Power Requirement: 4 VA, 2.5 watts

### Initiate Contact Requirement

On-Delay: 180V DC, 20 ma

Off-Delay: 160V DC, 15 ma

500 ma inrush at contact closure

### Output Contact Ratings

AC - NEMA B600			DC - NEMA P300		
Volts	Make	Break	Volts	Make	Break
120-600	3600 VA	360 VA	125-300	138 VA	138 VA
72-120	30 A	360 VA	46-125	138 VA	138 VA
5-72	30 A	5 A	5-46	3 A	3 A
Continuous Current: 5 Amperes					

Operating Temperature Range: -20 to +60°C ambient; storage, -40° to +100°C ambient.

**Operating Mode and Timing Range:** Timing is fixed by component characteristics. The maximum time may be 50% greater and the minimum time may be 50% less than the values specified below.

Nominal Timing Range	Timer Catalog No.	
	On-Delay Mode	Off-Delay Mode
0.1-2 Sec.	700-PSAA1	700-PSPA1
0.4-8 Sec.	PSBA1	PSRA1
1.5-30 Sec.	PSCA1	PSTA1
6-120 Sec.	PSDA1	PSUA1

Repeat Accuracy at Constant Voltage and Temperature:  $\pm 2\%$  of setting or  $\pm 0.004$  seconds, whichever is greater.

### Timing Cycle—

ON-DELAY OPERATION			
Initiating Contact	Timer Condition	Timer Output Contact	Remarks
Open	Reset	Open	Initial condition.
Closed	Timing	Open	If initiating contact opens before time-out, the output contact will not close.
	Timed-Out	Closed	
Open	Reset	Open	A minimum reset time of 20 milliseconds is required.
OFF-DELAY OPERATION			
Open	Timed-Out	Open	Initial condition.
Closed	Reset	Closed	A minimum reset time of 20 milliseconds is required.
Open	Timing	Closed	If initiating contact closes before time-out, the output contact remains closed.
	Timed-Out	Open	

**INSTALLATION**— The Type PS timer is designed for mounting directly over the front cover of a single deck (4-pole max) Bulletin 700 Type P control relay, by means of the two timer mounting screws. Tighten screws with 9 inch-pounds torque.

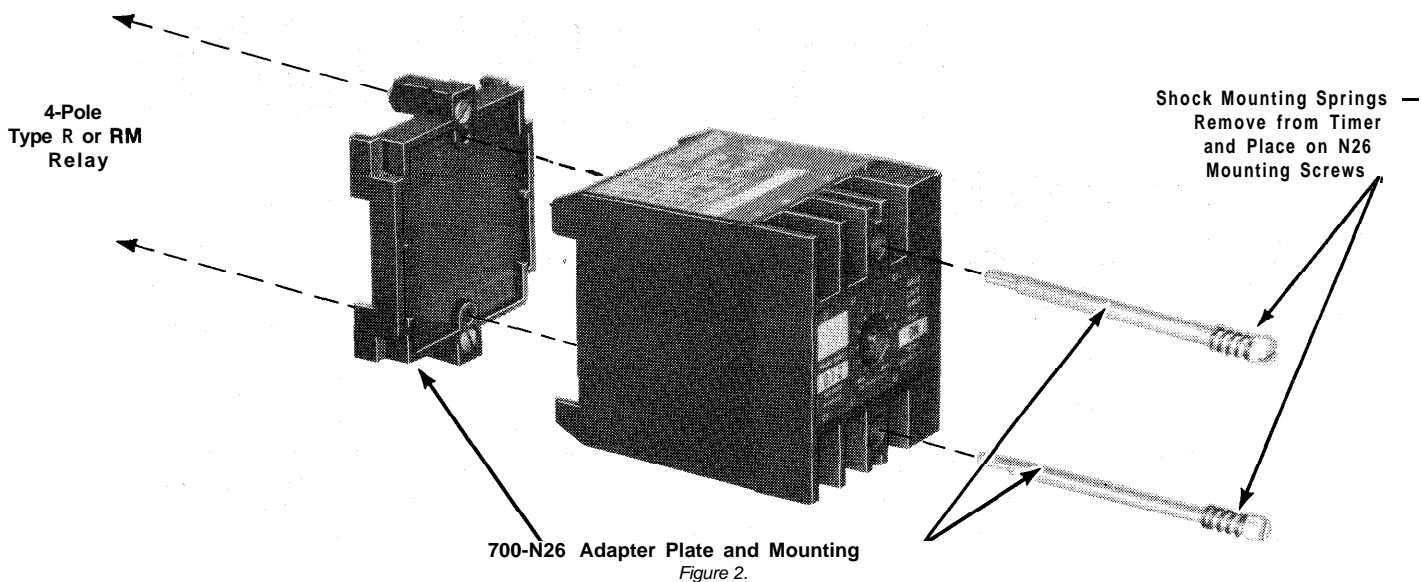
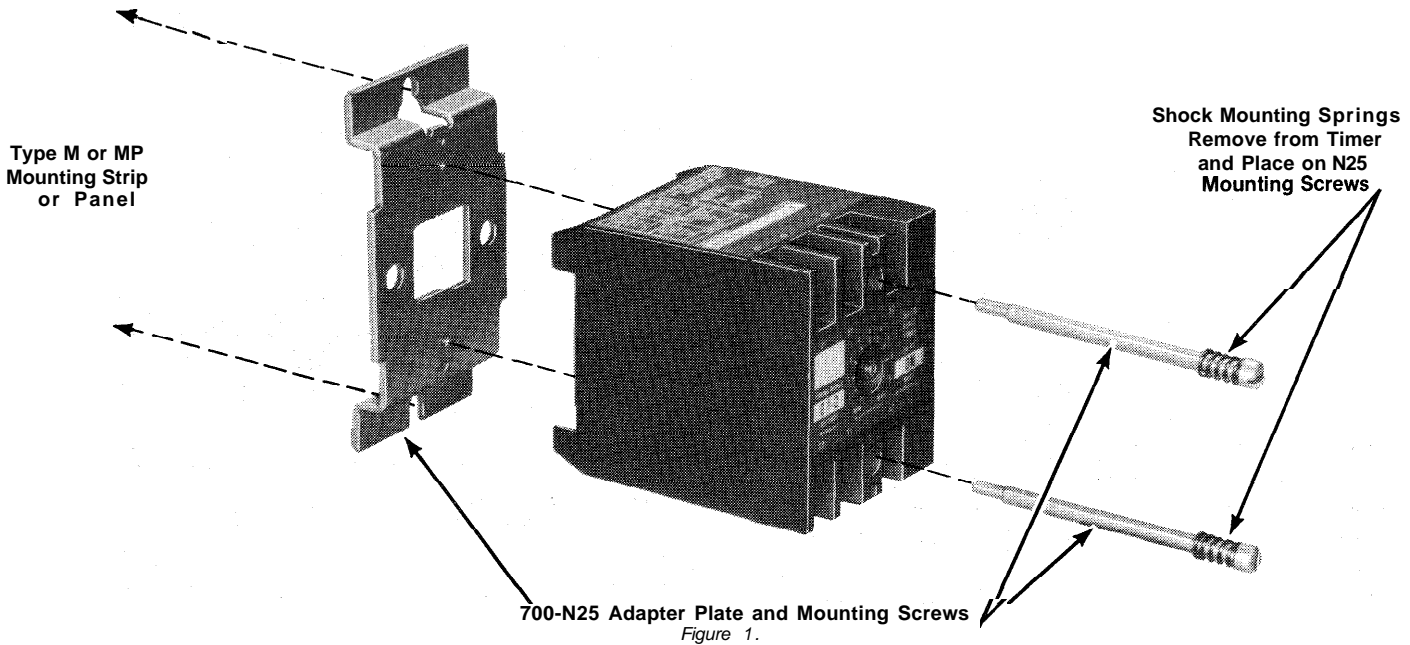
**Mounting Directly on Panel or Mounting Strip**— The Type PS timer can be mounted directly on a panel or installed on Bulletin 700 Type M or MP mounting strips by using the Catalog No. 700-N25 adapter plate kit. Procedure (refer to Figure 1):

1. Remove timer mounting screws by detaching C rings at the threaded ends of screws. **1** Remove shock mounting springs from screws. Place springs on the shorter mounting screws provided with the N25 adapter plate. Insert mounting screws with springs into timer mounting holes.
2. Attach timer to the N25 adapter plate. Tighten screws with 9 inch-pounds torque. Timer can now be mounted directly on a panel or installed on a standard relay mounting strip.

**Mounting on Type R or RM Relay** —The Type PS timer can be mounted on a Bulletin 700 Type R or RM relay (4-pole max) by using the Catalog No. 700-N26 adapter plate kit. Procedure (refer to Figure 2):

1. Remove timer mounting screws by detaching C rings at the threaded ends of screws. **1** Remove shock mounting springs from screws. Place springs on the shorter mounting screws provided with the N26 adapter plate. Insert mounting screws with springs into timer mounting holes. Set aside and perform step 2.
2. Attach the N26 adapter plate over front cover of Type R or RM relay (4-pole max). Tighten screws with 9 inch-pounds torque.
3. Attach timer to the N26 adapter. Tighten screws with 9 inch-pounds torque.

Retain C rings and timer mounting screws if timer may be mounted on a Type P relay at a later time.



**WIRING** – Connect timer terminals L1 and L2 directly to the supply voltage, as indicated in the connection diagram. Note that L2 is connected to panel or system ground. For ungrounded systems, connect L2 to the coil common line.

**WARNING:** To avoid electrical shock, do not touch timer terminals for at least 6 seconds after the supply voltage is interrupted.

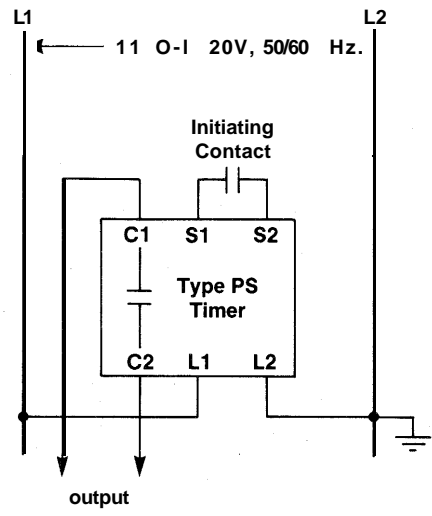
Connect the initiating contact to terminals S1 and S2 as shown. The lines may be up to 200 feet, with a resistance of up to 20 ohms including the contact resistance. Solid state relays are not recommended. Consult the factory for requirements which differ from these guidelines.

If the initiating contact is to be one contact of a 2NO,2NC, or 1 NO-1 NC contact pair, the second contact must switch at L1 polarity. Follow the cautionary information below.

**CAUTION:** To avoid timer damage, connect **only** the initiating contact at terminals S1 and S2. Do not switch an additional load or apply an external voltage at these terminals.

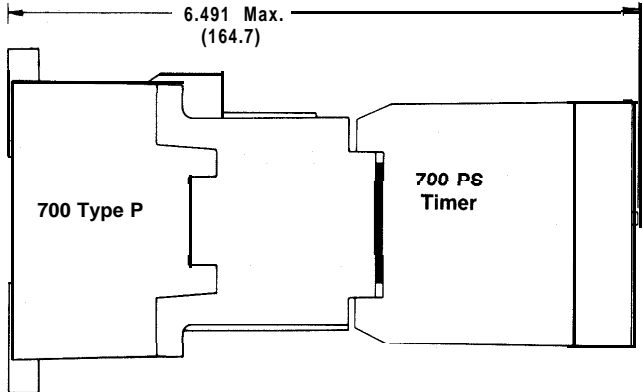
The normally open sealed output contact of the timer is accessible at terminals C1 and C2. Contact ratings are listed in the Specifications section.

**CONNECTION DIAGRAM**

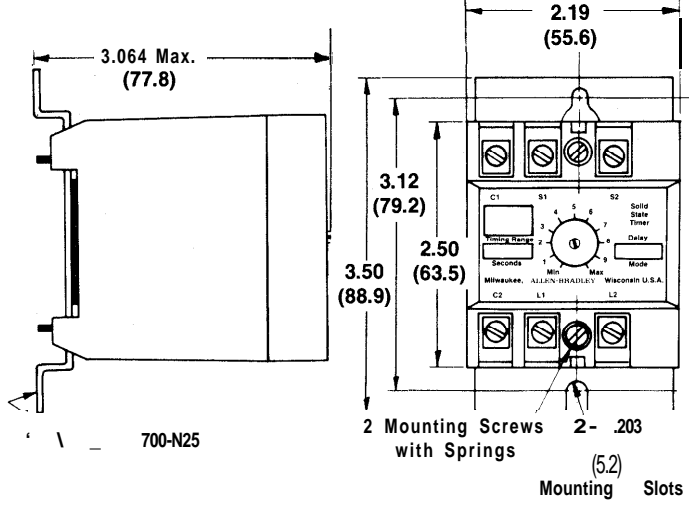


**MOUNTING DIMENSIONS**

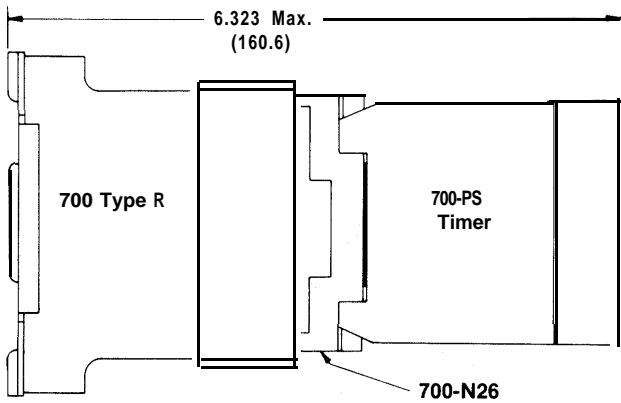
Dimensions shown in parentheses are in millimeters.



Type PS Timer Mounted on a 4-Pole Bulletin 700 Type P Relay



Type PS Timer Mounted on the 700-N25 Adapter Plate



Type PS Timer Mounted on a 4-Pole Bulletin 700 Type Relay