

The **Expandable Alternating Relays** are designed for use in multiple load installations that are required to alternate in sequence and have the ability to accept an additional load installation in the future.

ARA-120-AME: The ARA-120-AME is a **Duplexor/Triplexor Alternating Relay**. With the selector switch in position A, this alternating relay will duplex the loads on terminals 7 and 9. With the switch in position B, the Alternating Relay will triplex the three loads on terminals 7, 9 and 11.

For automatic alterations, a factory-installed jumper is in place between terminals 3 and 4. The alternating action is accomplished when the control switch between terminals 2 and 4 opens.

For external clocking alterations, remove the factory installed jumper between terminals 3 and 4 and place an isolated normally open switch between terminals 2 and 3. The alternating action will occur each time this isolated switch is closed and then re-opened.

ARA-120-ANE: The ARA-120-ANE is a **Triplexor/Quadruplexor Alternating Relay**. With the selector switch in position A, the Alternating Relay will triplex between the loads on terminals 7, 8 and 9. With the switch in position B, the Alternating relay will quadruplex the loads on terminals 7, 8, 9 and 10.

For automatic alterations, a factory installed jumper is in place between terminals 11 and 12. The alternating action is accomplished when the control switch between terminals 2 and 3 opens. For external clocking alterations, remove the factory installed jumper between terminals 11 and 12 and place an isolated normally open switch between terminals 2 and 3. The alternating action will occur each time this isolated switch is closed and then re-opened.

In the event of a power failure the Alternating Relays will return to their quiescent state and continue sequencing loads on one-at-a-time.

SPECIFICATIONS

CONTROL VOLTAGE 120 VAC $\pm 10\%$, 50/60 Hz

CONTROL SWITCH CURRENT 2 mA

POWER REQUIRED 3 VA (Approximately)

DUTY CYCLE Continuous

OUTPUT RATING Triplexor (3) 5 Amp Resistive, 1/6 hp, 211 VA @ 120 VAC, Inductive Externally Switched to terminal #2
 Quadruplexor (4) 5 Amp Resistive, 1/6 hp, 211 VA @ 120 VAC, Inductive Externally Switched to terminal #2

LIFE EXPECTANCY Mechanical 10,000,000 Operations (Minimum)
 Electrical 100,000 Operations @ Rated Load

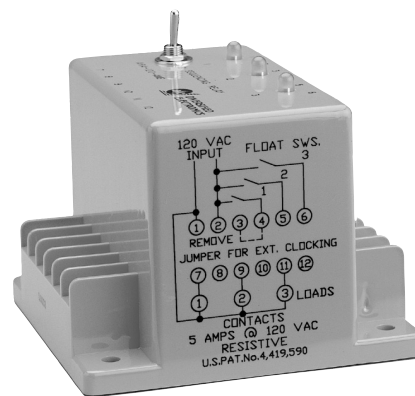
INDICATORS LED's Show Condition of Outputs

TEMPERATURES RATING Operate -4° to 131°F (-20° to $+55^{\circ}\text{C}$)
 Storage -40° to 185°F (-40° to $+85^{\circ}\text{C}$)

ENCLOSURE Style "E" Lexan® Surface Mounted

TERMINATIONS (12) #8-32 Screw Terminals

WEIGHT 12.5 to 14 oz.

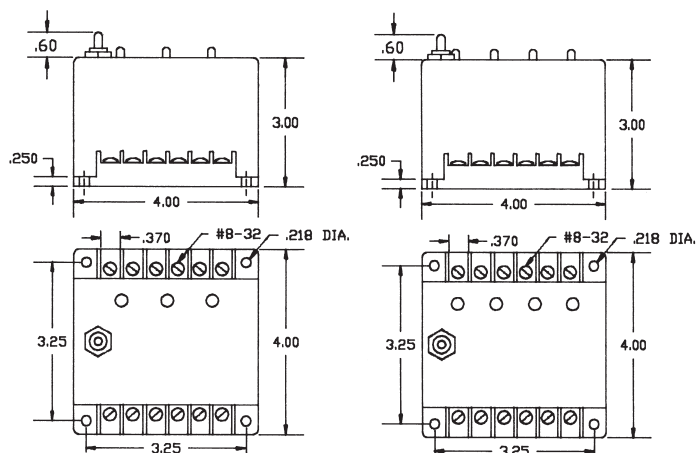


Expandable Alternating Relays

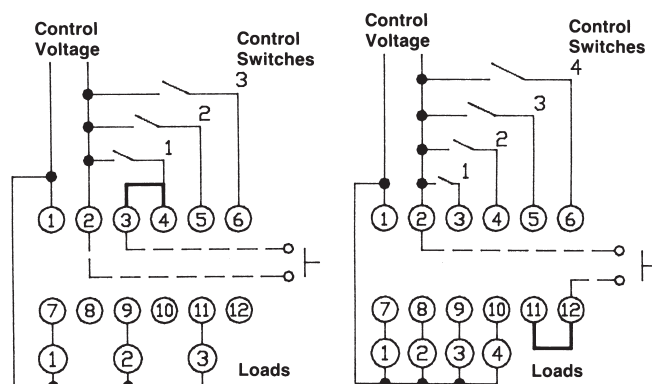
ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
ARA-120-AME	Duplexor/Triplexor
ARA-120-ANE	Triplexor/Quadruplexor

DIMENSIONS (INCHES)



WIRING



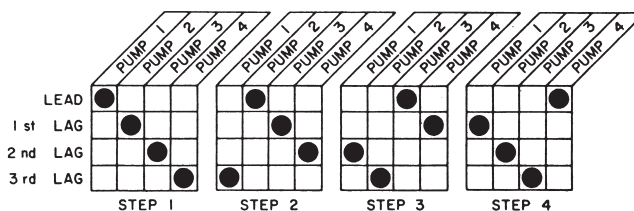
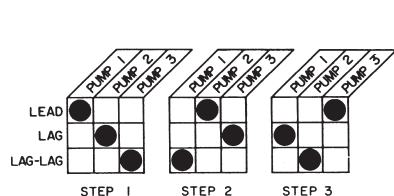
ALTERNATING RELAYS

ATC-Diversified Electronics offers a wide variety of models for various staging requirements. The different models available are: **Duplexors, Triplexors, Quadraplexors, Special Function, and Expandable Alternating Relays.**

The **Alternating Relay** is used in multiple load installations to assure equal run time on all loads. They also allow for the addition of more capacity in the event of excess load requirements. The Alternating Relay provides equal run time on two or more loads by alternating the sequence in which the loads are allowed to start up. In each case, the alternating action is initiated each time the control switch across designated terminal opens. The control switch may be a float, a thermostat, a pressure switch, or a timer contact.

FEATURE MATRIX

Model Number	NUMBER OF LOADS SEQUENCED			ENCLOSURE STYLE		EXPANDABLE	EXTERNAL CLOCKING	AUTOMATIC ALTERNATING	FIELD SELECTABLE SEQUENCING	UL/CANADIAN UL RECOGNIZED	UL LISTED	CSA CERTIFIED
	2	3	4	A	E							
ARA-XXX-ABA	●			●				●		●		●
ARA-XXX-ACA	●			●				●		●		●
ARA-XXX-ADA	●			●				●		●		●
ARA-XXX-AEA	●			●				●		●		●
ARA-XXX-AFE		●			●		●	●			●	●
ARA-XXX-AGE			●		●		●	●			●	●
ARA-120-AHE		●			●		●	●				
ARA-120-AJE		●			●		●	●	●			
ARA-120-AME	●	●			●	●	●	●				
ARA-120-ANE		●	●		●	●	●	●				
ARB-XXX-ABA	●			●				●	●	●		●
ARB-XXX-ACA	●			●				●	●	●		●
ARB-XXX-ADA	●			●				●	●	●		●
ARB-XXX-AEA	●			●				●	●	●		●
ARC-XXX-AAA	●			●				●		●		
ARD-XXX-AAA	●			●				●	●	●		
AUC-XXX-AAA	●			●				●			●	
AUD-XXX-AAA	●			●				●	●		●	



ALTERNATING CONTROLLERS

The **ARM Series, Alternating Controllers**, are used in multiple load installations to assure equal run time on all loads. They also allow for the addition of more capacity in the event of excess load requirements. The Alternating Controllers provide equal run time on two or more loads by alternating the sequence in which the loads are allowed to start up.

All **ARM** models feature **intrinsically safe inputs** and logic that allows the outputs to operate even if one of the inputs fails to open or close. For example: if the off switch fails to close, the lead load will not energize until both the lead and the lag switches close. An inrush delay on all models reduces line sags by preventing multiple loads from energizing simultaneously.

FEATURE MATRIX

Model Number	NUMBER OF LOADS SEQUENCED			STYLE	SURFACE MOUNT	PANEL MOUNT	AUTOMATIC ALTERNATING	SELECTABLE SEQUENCING	OUTPUT LOGIC (SOSO)	OUTPUT LOGIC (FOSO)	OMIT	LEAD SELECT	UL LISTED 913
	2	3	4										
ARM-XXX-AAE		●			●		●		●				●
ARM-XXX-AAEP		●			●		●		●				●
ARM-XXX-ABE		●			●		●			●			●
ARM-XXX-ABEP		●			●		●			●			●
ARM-XXX-ACE		●			●		●		●		●	●	●
ARM-XXX-ACEP		●			●		●		●		●	●	●
ARM-XXX-ADE		●			●		●			●		●	●
ARM-XXX-ADEP		●			●		●			●		●	●
ARM-XXX-AFE	●				●		●		●			●	●
ARM-XXX-AFEP	●				●		●		●			●	●
ARM-XXX-AGE			●		●		●		●				●
ARM-XXX-AGEP			●		●		●		●				●
ARM-XXX-AHE			●		●		●			●			●
ARM-XXX-AHEP			●		●		●			●			●