

SPDT & DPDT DUPLEXOR

ARP SERIES

APPLICATION DATA

Voltage Tolerances: +10%/-15% of control voltage at 50/60Hz.

Load (Burden): Less than 3VA

Output Contacts:

10A @ 240V AC/30V DC,
1/2HP @ 120/240V AC (N.O.), 1/3HP @ 120/240VAC (N.C.)

Life:

Mechanical: 10,000,000 operations
Full Load: 100,000 operations

Temperature: Operating: -28° to 65°C (-18° to 149°F)
Storage: -40° to 85°C (-40° to 185°F)

Transient Protection: 10,000 volts for 20 microseconds

Indicator LEDs: 2 LEDs marked LOAD A and LOAD B

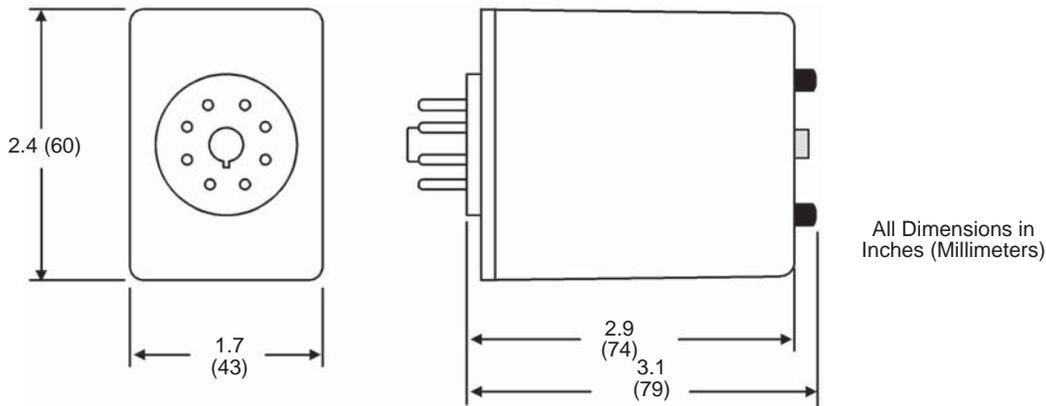
Optional Selector Switch Settings:

LOAD 1
ALTERNATE
LOAD 2

Approvals:



DIMENSIONS



TYPICAL INSTALLATIONS

In the initial off state (Figure A), the Control Switch is open, the Alternating Relay is in the LOAD 1 position, and both loads (M1 & M2) are off. The red LED marked "LOAD 1" is ON. When the Control Switch closes, it energizes Load M1. As long as the Control Switch remains closed, Load M1 remains energized. When the Control Switch opens, Load M1 is turned off and the Alternating Relay toggles to the LOAD 2 position. The red LED marked "LOAD 2" glows. When the Control Switch closes again, it energizes Load M2. When the Control Switch opens, Load M2 is turned off, the Alternating Relay toggles back to the LOAD 1 position, and the process can be repeated again. On relays with DPDT contacts, two pilot lights can be used for remote indication of LOAD 1 or LOAD 2 status.

To eliminate any bounce condition of the Control Switch, the addition of a second switch (OFF) along with two auxiliary contacts is recommended as shown in Figure B.

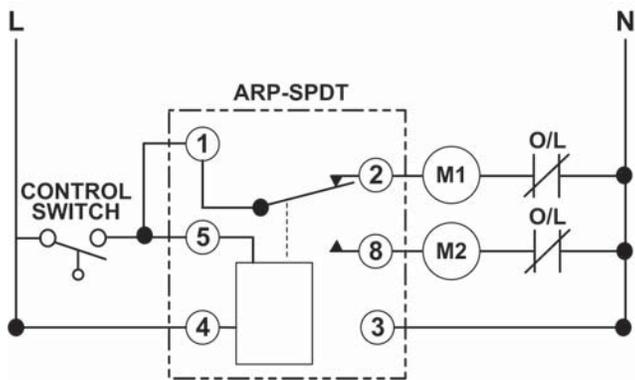


Figure A

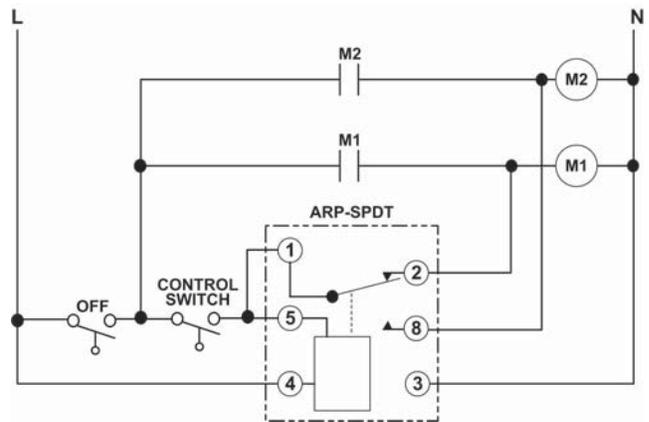


Figure B

DPDT CROSS-WIRED DUPLEXOR

ARP SERIES

APPLICATION DATA

Voltage Tolerances: +10%/-15% of control voltage at 50/60Hz.

Load (Burden): Less than 3VA

Output Contacts:

10A @ 240V AC/30V DC,

1/2HP @ 120/240V AC (N.O.), 1/3HP @ 120/240VAC (N.C.)

Life:

Mechanical: 10,000,000 operations

Full Load: 100,000 operations

Temperature: Operating: -28° to 65°C (-18° to 149°F)

Storage: -40° to 85°C (-40° to 185°F)

Transient Protection: 10,000 volts for 20 microseconds

Indicator LEDs: 2 LEDs marked LOAD A and LOAD B

Optional Selector Switch Settings:

LOAD 1 (always energizes first)

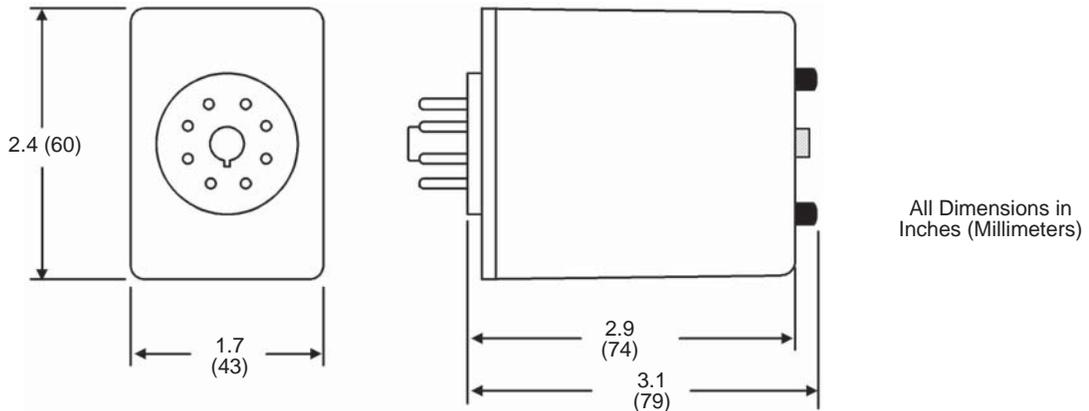
ALTERNATE

LOAD 2 (always energizes first)

Approvals:



DIMENSIONS



TYPICAL INSTALLATIONS

In the initial off state (diagram below left), both the LEAD Control Switch and the LAG Control Switch are open, the Alternating Relay is in the LOAD 1 position, and both loads are off. The red LED marked "LOAD 1" is ON. When the LEAD Control Switch closes, it energizes Load M1. As long as the LEAD Control Switch remains closed, Load M1 remains energized. If the LAG Control Switch closes, it energizes Load M2. When the LAG Control Switch opens, Load M2 is turned off. When the LEAD Control Switch opens, Load M1 is turned off and the Alternating Relay toggles to the LOAD 2 position. The red LED marked "LOAD 2" is ON. When the LEAD Control Switch closes, it turns on Load M2. If the LAG Control Switch closes, it will energize Load M1. When the LAG Control Switch opens, Load M1 is turned off. When the LEAD Control Switch opens, Load M2 is turned off, the Alternating Relay toggles back to the LOAD 1 position, and the process can be repeated again.

The diagram below right illustrates a type of operation known as "Sequence On - Simultaneously Off (S.O.S.O.)"-the two loads are energized sequentially, but remain on together until the OFF switch is opened.

In the initial OFF state, all three switches are open, the Alternating Relay is in the LOAD 1 position, and both loads are off. No action happens with the Alternating Relay or either load when the OFF Switch closes. When the LEAD Switch closes, Load M1 turns on. When the LAG Switch closes, Load M2 turns on. Both loads remain on as long as all three switches are closed.

When the LAG Switch opens, Load M2 remains on because the OFF Switch is still closed. When the LEAD Switch opens, Load M1 remains on because the OFF Switch is still closed. When the OFF Switch opens, both Load M1 and Load M2 are turned off simultaneously. The Alternating Relay toggles to the LOAD 2 position. The entire cycle is then repeated, but with Load M2 energized first followed by Load M1.

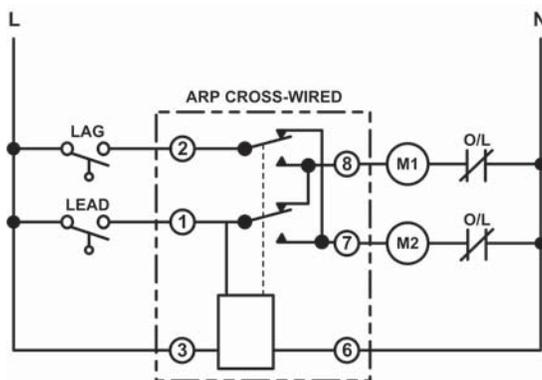


Figure A

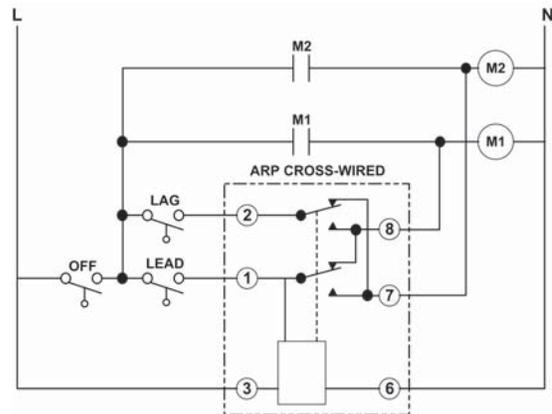


Figure B