



## ENGINEERING SPECIFICATION

### SYMCOM MODEL ALT-115-S, ALT-115-S-SW, ALT-230-S, ALT-230-S-SW Alternating Relay

#### PART 1 GENERAL

##### 1.1 REFERENCES

- A. UL 508 Industrial Control Equipment – Underwriters Laboratories
- B. IEC 60947 Low Voltage Switchgear and Controlgear – International Electrotechnical Commission
- C. CSA C22.2 No. 14 Industrial Control Equipment – Canadian Standards Association
- D. ANSI/IEEE C62.41 – American National Standards Institute/Institute of Electrical & Electronics Engineers

##### 1.2 WARRANTY

- A. Manufacturer Warranty: The manufacturer shall guarantee the equipment to be free from material and workmanship defects for a period of five years from the date of manufacture when installed and operated according to the manufacturer's requirements.

#### PART 2 PRODUCTS

##### 2.1 MANUFACTURERS

*For Model ALT-115-S*

The equipment specified shall be the Model ALT-115-S, manufactured by SymCom, Inc.

*For Model ALT-230-S*

The equipment specified shall be the Model ALT-230-S, manufactured by SymCom, Inc.

*For Model ALT-115-S-SW*

The equipment specified shall be the Model ALT-115-S-SW, manufactured by SymCom, Inc.

*For Model ALT-230-S-SW*

The equipment specified shall be the Model ALT-230-S-SW, manufactured by SymCom, Inc.

##### 2.2 DESCRIPTION

###### A. Regulatory Requirements:

1. The equipment shall be UL certified:
  - a. The equipment shall be UL Recognized as type NKCR2—Industrial Control Equipment-Motor Controllers-Auxiliary Devices-Component.
  - b. The equipment shall be UL Listed, when used with SymCom's model OT08 socket, as type NKCR—Industrial Control Equipment-Motor Controllers-Auxiliary Devices.
2. The equipment shall be ULC certified:
  - a. The equipment shall be ULC Recognized as type NKCR8—Industrial Control Equipment-Motor Controllers-Auxiliary Devices Certified for Canada-Component.
  - b. The equipment shall be ULC Listed, when used with SymCom's model OT08 socket, as type NKCR7—Industrial Control Equipment-Motor Controllers-Auxiliary Devices Certified for Canada
3. The equipment shall be CSA certified as class 3211-03—Industrial Control Equipment-Motor Controllers-Auxiliary Devices.

##### 2.3 PERFORMANCE/DESIGN CRITERIA: SINGLE-PHASE ALTERNATING RELAY

###### A. Capabilities and Features:

1. Inputs
  - a. The equipment shall provide one control input.  
*For the ALT-115-S and ALT-115-S-SW*
  - b. The equipment shall accept single-phase input voltage rated 95-125VAC.  
*For the ALT-230-S and ALT-230-S-SW*
  - b. The equipment shall accept single-phase input voltage rated 195-250VAC.
2. Outputs
  - a. The equipment shall include one SPDT output relay contact pilot duty rated at 480VA @ 240VAC.
3. Functional Specifications
  - a. The equipment shall provide alternating logic.
    - 1) The equipment shall energize load 1 upon power up.
    - 2) The equipment shall alternate loads as determined by the control input/pilot device.
  - b. The equipment shall have two indicator LEDs capable of indicating the status of the output relay.  
*For the -SW option*
  - c. The equipment shall provide the following functions controlled from a dial or switch:
    - 1) Force load 1: only load 1 will be allowed to operate.
    - 2) Force load 2: only load 2 will be allowed to operate.
    - 3) Automatic: normal alternation between load 1 and load 2.

###### B. Electromagnetic Compatibility:

1. The equipment shall be immune to electrostatic discharge per IEC 61000-4-2, Level 2, 4kV contact discharge and 4kV air



- discharge.
2. The equipment shall be immune to electrical fast transient bursts per IEC 61000-4-4, Level 3. Specified limits shall be 2kV power supply port, 1kV input/output ports.
  3. The equipment's power supply port shall be immune to electrical surges per IEC 61000-4-5, Level 3. Specified limits shall be 2kV line-to-line and line-to-ground.
  4. The equipment shall be immune to radiated radio frequency emissions. Specified limits shall be 10V/m at 150 MHz.
- C. Dielectric Isolation: Equipment withstands an alternating current potential of 1000V plus twice the rated voltage of the equipment for 1 minute without breakdown between uninsulated live parts and the enclosure with the contacts open and closed; between terminals of opposite polarity with the contacts closed; and between uninsulated live parts of different circuits.
- D. Environmental Requirements:
5. The equipment shall operate continuously without derating in ambient temperatures of -20° to 50°C (-4° to 122°F).
  6. The equipment shall operate continuously without derating in relative humidity of up to 95% non-condensing per IEC 68-2-3.
  7. The equipment shall operate properly after storage in ambient temperatures of -40° to 80°C (-40° to 176°F).
- E. Dimensions: The equipment dimensions shall not exceed 1.750" H x 2.375" W x 4.125" D (with socket).
- F. Mounting:
1. The equipment shall be mounted using the SymCom OT08-PC 8-pin Socket.
    - a. The socket shall be 600V rated.
    - b. The socket shall be 10A rated.
    - c. The socket shall provide a means for mounting on the surface or on a DIN rail.

End of Section