



ENGINEERING SPECIFICATION

SYMCOM MODEL ACBC-120

ALARM CONTROLLER WITH BATTERY CHARGER

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. ANSI/IEEE C62.41 – American National Standards Institute/Institute of Electrical & Electronics Engineers
- D. CSA C22.2 No. 14 Industrial Control Equipment – Canadian Standards Association

1.2 WARRANTY

- A. 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 PRODUCT

2.1 MANUFACTURERS

The equipment specified shall be the Model ACBC-120, manufactured by SymCom, Inc.

2.2 DESCRIPTION

- A. Regulatory Requirements:
 - 1. The equipment shall be UL Listed as type NKCR—Industrial Control Equipment-Motor Controllers-Auxiliary Devices.
 - 2. The equipment shall be ULC Listed as type NKCR7—Industrial Control Equipment-Motor Controllers-Auxiliary Devices Certified for Canada.
 - 3. The equipment shall be CE marked for use in the European Union and evaluated against IEC 60947 Low Voltage Switchgear and Controlgear.

2.3 PERFORMANCE/DESIGN CRITERIA: ALARM CONTROLLER WITH BACKUP BATTERY CHARGER

- A. Capabilities and Features
 - 1. Inputs
 - a. The equipment shall provide a horn silencing input.
 - b. The equipment shall accept single-phase input voltage rated 108-132VAC.
 - c. The equipment shall accept 12VDC from a lead-acid rechargeable battery.
 - 2. Outputs
 - a. The equipment shall have the ability to charge a battery with the following currents:
 - 1) 100mA +/- 10% in fast charge mode
 - 2) 14mA +/- 50% in maintenance mode
 - b. The equipment shall have the ability to power a 12VDC, 1A external alarm strobe light from a battery.
 - c. The equipment shall have the ability to power a 12VDC, 1A external alarm horn from a battery for two seconds on and two seconds off.
 - 3. Functional Specifications
 - a. The equipment shall have the following modes represented by two indicator LEDs:
 - 1) Maintenance mode
 - 2) Fast charge mode
 - 3) Trip delay mode
 - 4) Battery error mode
 - 5) Low battery mode
 - 6) Alarm mode
 - b. The equipment shall have a test button on the front of the unit.
 - c. The equipment shall be protected from the following battery conditions:



- 1) Battery connected in reverse polarity
- 2) Battery terminals short-circuited
- d. The equipment shall have the ability to indicate the following battery conditions:
 - 1) No battery present or battery connected in reverse polarity
 - 2) Low battery voltage
- B. Electromagnetic Compatibility
 1. The equipment shall be immune to electrostatic discharge per IEC 61000-4-2, 6kV contact discharge and 8kV air discharge.
 2. The equipment shall be immune to electrical fast transient bursts per IEC 61000-4-4. Specified limits shall be Level 4 4kV.
 3. The equipment shall be immune to electrical surges per IEC 61000-4-5. Specified limits shall be Level 4 2kV line-to-line.
 4. The equipment shall be immune to electrical surges per ANSI/IEEE C62.41 Surge and Ring Wave. Specified limits shall be 6kV line-to-line.
 5. 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
 1. The equipment shall operate continuously without derating in surrounding air temperatures of -40° to 60°C (-40° to 140°F).
 2. The equipment shall operate continuously without derating in relative humidity of 10% up to 95% non-condensing per IEC 68-2-3.
 3. 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" high X 2.375" wide X 3.680" deep.
- F. Mounting:
 1. The equipment shall be mounted using the SymCom SD12-PC 12-pin rectangular 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.

End of Section