EQUIPMENT DATA SPECIFICATION
AIR CONDITIONER
CS011

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SPECIFICATION

1.0 SCOPE

This specification covers the minimum general and specific requirements for the Air Conditioner unit for electrical enclosures.

2.0 REQUIREMENTS

• Type of Heat Exchange	Compressor based air conditioner
• Ambient Operating Temperature	60°F – 131°F
• Approvals and Stamps	UL, cUL, CE
• NEMA Type	12, 04, or 4X
• Voltage	110-120 VAC, 60 Hz, 10.1A Inrush, 2.7A Running
• BTU Rating	1000 – 2000 BTUH, Nominal
• Material Type	NEMA 12, 04: Powder coated cold rolled steel NEMA 4X: 304 or 316 Stainless Steel, #4 Finish
• Construction	Chassis: Rigid, insulated, closed loop Shroud: Seam welded, insulated
• Enclosure Mounting	Two coil design with condenser air intake from either or both sides, permits installation on right or left side of wall mounted enclosure
• Condensate Removal	Active evaporation utilizing superheated refrigerant coil
• Refrigerant	R134a
• Refrigerant Metering	Thermal expansion valve

- Refrigerant Service Ports
  - High pressure
  - Low pressure
- Digital Controller
  - Controls
    - Cooling set point
    - Cooling set point differential
    - Compressor protection:
      - Anti-short cycle delay
      - Condenser high temperature limit
      - Evaporator low pressure limit
    - Probes displayed:
      - Evaporator temperature
      - Condenser temperature
    - Auxiliary set points:
      - Heater
      - Dry contact
    - Auxiliary set point differential
  - Alarms
    - Enclosure probe failure (P1)
    - Condenser probe failure (P2)
    - Maximum temperature for 3 minutes (HA)
    - Minimum temperature for 3 minutes (LA)
    - Condenser high temperature for 3 minutes (HA2)
    - Condenser low temperature for 3 minutes (LA2)
    - Evaporator low pressure for 2 minutes (CA)
- Compressor Head Pressure Control — Pressure controlled condenser fan switch
- Compressor Protection — Thermal/current overload switch (self-resetting)
- Electrical Connection
  - Power cord with plug
  - Power On/Off switch
- Dimensions — 17”H x 7”W x 7”D
- Unit Weight — 30 lbs.
- Shipping — Corrugated packaging and pallet

3.0 OPTIONS

• Refrigeration Circuit Protection	Electrostatic epoxy coated coils Passivated refrigeration tubing joints
• Dry Contact (Operation when enclosure temperature exceeds maximum limit)	Normally open Normally closed Normally open & normally closed
• Integrated Heater	350W (Not available with Remote Controller, Modbus RTU or Ethernet/IP.)
• Custom Programming	Factory programming of digital controller for Celsius temperature or deviation from default settings
• External Heat Output	100 W – 950W
• Open Door Kill Switch	Disables power to air conditioner when equipment enclosure door is open
• Adjustable Temperature Probe	Monitor & maintain temperature at any point inside equipment enclosure
• High Ambient	For operation at ambient temperatures above 131°F
• Low Ambient	For operation at ambient temperatures below 60°F
• Remote Controller	Digital controller supplied with 10 ft. cable & bracket for installation inside equipment cabinet
• Controller Communication Output	Modbus RTU Ethernet/IP

4.0 ACCESSORIES

• Alarm & Controlling Web Server	XWEB300D-8B000 – for up to 6 air conditioners XWEB300D-8F000 – for up to 18 air conditioners

5.0 CODES AND STANDARDS

- ANSI/UL 484 — Room Air Conditioners (Special Purpose)
- ANSI/NFPA 70 — National Electrical Code
- CSA-C22.2 No. 236-M90 — Heating and Cooling Equipment
- CSA-C22.2 No. 117 — Room Air Conditioners (Special Purpose)
- CAN/CSA-C22.1 — Canadian Electrical Code, Part I.
- EN Harmonized European Standards
  - EN 378-1 through -4 — Refrigerating Systems and Heat Pumps
  - EN 60204-1 — Electrical Equipment of Machinery
  - EN 60529, IP — IP Code
  - EN 61000-3-11 — Electromagnetic Compatibility
  - EN 61000-6-2 — Emission
  - EN 61000-6-4 — Immunity
- Hazardous Location Standards
  - ANSI/UL 1203 — Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations
  - UL 698 — Industrial Control Equipment for Use in Hazardous (Classified) Locations
  - ANSI/UL 877 — Circuit Breakers and Circuit-Breaker Enclosures for Use in Hazardous (Classified) Locations
  - UL 886 — Outlet Boxes and Fittings for Use in Hazardous (Classified) Locations
  - ANSI/UL 894 — Switches for Use in Hazardous (Classified) Locations
  - ANSI/UL 1002 — Electrically Operated Valves for Use in Hazardous (Classified) Locations
  - ANSI/UL 1010 — Receptacle-Plug Combinations for Use in Hazardous (Classified) Locations
  - ANSI/UL 913 — Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, Hazardous (Classified) Locations
  - ANSI/ISA-12.12.01 — Non-Incendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations
  - UL 1604 — Electrical Equipment for Use in Class I and II, Division 2, and Class III Hazardous (Classified) Locations
  - ANSI/NFPA 496 — Purged and Pressurized Enclosures for Electrical Equipment
  - IEC 60529 — Classification of Degrees of Protection Provided by Enclosures
  - CSA-C22.2 No. 30-1986 — Explosion-Proof Enclosures for Use in Class I Hazardous Locations
  - CSA-C22.2 No. 25-1966 — Enclosures for Use in Class II Groups E, F and G Hazardous Locations
  - CAN/CSA-E61241-1-1-2002 — Limitation - Specification for Apparatus Electrical Apparatus for Use in the Presence of Combustible Dust - Part 1-1: Electrical Apparatus Protected by Enclosures and Surface Temperature
  - CAN/CSA-C22.2 No. 157-1992 — Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
  - CSA-C22.2 No. 213-1987 — Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
  - ANSI/NFPA 496 — Purged and Pressurized Enclosures for Electrical Equipment