

## **EQUIPMENT DATA SPECIFICATION**

### **AIR CONDITIONER TM081**

#### **Hazardous Location Systems**



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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 used in hazardous locations.

### 2.0 REQUIREMENTS

- Type of Heat Exchange Compressor based air conditioner
- Ambient Operating Temperature 60°F – 122°F
- Approvals and Stamps cUL<sub>US</sub> (Safety), cMET<sub>US</sub> (Haz Loc), CE
- Area Classification Class I, Division 2, Groups A, B, C & D, T4
- UL Type 4X
- Voltage 103.5-126.5 VAC, 60 Hz, 43.3A Inrush, 11.6A Running  
207-253 VAC, 60 Hz, 33.7A Inrush, 7.0A Running  
414-506 VAC, 60 Hz, 16.85A Inrush, 3.5A Running
- BTU Rating 8000 BTUH, Nominal
- Material Type 304 stainless steel housing, #4 Finish
- Construction Chassis: Rigid, insulated, closed loop  
Shroud: Seam welded, sloped top, insulated
- Refrigeration Circuit Protection Electrostatic epoxy coated condenser coil
- Condensate Removal Active evaporation utilizing superheated refrigerant coil
- Refrigerant R438a
- 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 Protection Thermal/current overload switch (self-resetting)
- Condenser Filter Filter free
- Electrical Connection Terminal block
- Dimensions
  - UL Type 12: 15.6”H x 26.3”W x 20.2”D
  - UL Types 4 & 4X: 15.6”H x 30.6”W x 20.2”D
- Unit Weight
  - 115 V: 111 lbs.
  - 230 V: 111 lbs.
  - 460 V: 154 lbs.
- Shipping Corrugated packaging and pallet
- Warranty 5 years

### 3.0 OPTIONS

- Material Type 316 stainless steel housing, #4 Finish
- Refrigeration Circuit Protection Electrostatic epoxy coated evaporator coil  
Epoxy coated refrigeration tubing
- Condenser Filter Std Capacity: Expanded aluminum, 250 micron, 60% efficiency  
High Capacity: 2" Pleated, 304 Stainless steel mesh, 250 micron, 94% efficiency
- Louvered Security Filter Cover 304 or 316 Stainless Steel
- Low Ambient For operation at ambient temperatures below 60°F
- Dry Contact Normally open  
(High Temperature Warning)
- Custom Programming Factory programming of digital controller for Celsius temperature or deviation from default settings
- Extended Temperature Probe Monitor & maintain temperature at any point inside equipment enclosure
- Remote Controller Digital controller supplied with 10 ft. cable & bracket for installation inside equipment cabinet
- Vibration Package Protects air conditioner components from effects of moderate or severe vibration

### 4.0 ACCESSORIES

- Replacement Filters Standard Capacity  
High Capacity

## 5.0 CODES AND STANDARDS

- ANSI/UL 484
  - UL508A
  - ANSI/NFPA 70
  - CSA-C22.2 No. 236-M90
  - CSA-C22.2 No. 117
  - CAN/CSA-C22.1
  - Harmonized European Standards
    - EN 378-1 through -4
    - EN 60204-1
    - EN 60529, IP
    - EN 61000-3-11
    - EN 61000-6-2
    - EN 61000-6-4
    - 2011/65/EU
  - Hazardous Location Standards
    - ANSI/ISA-12.12.01-2015
    - CAN/CSA C22.2 No. 213-15
- Room Air Conditioners (Special Purpose)  
Industrial Control Panels (Complies when installed with UL508A approved industrial control panels)  
National Electrical Code  
Heating and Cooling Equipment  
Room Air Conditioners (Special Purpose)  
Canadian Electrical Code, Part I.
- Refrigerating Systems and Heat Pumps  
Electrical Equipment of Machinery  
IP Code  
Electromagnetic Compatibility  
Emission  
Immunity  
Restriction of the use of certain hazardous substances in electrical and electronic equipment
- Nonincendive Electrical Equipment for use in Class I and II, Division 2 and Class III, division 1 and 2 Hazardous (Classified) Locations
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