

File E150057
Project 07CA48323

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REPORT

on

COMPONENT - INDUSTRIAL CONTROL PANEL HEATER

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DESCRIPTION

PRODUCT COVERED:

USR, CNR - Component Air Heaters for mounting in Industrial Control Panels, Type CS 030 and Type CS 130, followed by 6, followed by 0, followed by 0 or 9 (0 = 230 V ac, 9 = 120 V ac), followed by 00 or 01.

GENERAL:

These devices are used to control the temperature within industrial control panels. These devices are equipped with a thermostat for temperature regulation, an auto reset type temperature limit control, a PTC type heater element, a fan, a terminal block suitable for factory wiring, all enclosed within a thermoplastic enclosure.

ELECTRICAL RATING:

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Models	Heater Wattage	Voltage	Hz	Differences	Fan Power (W)
CS 03060.9-00	1200	120	50/60	Bottom Mount/with thermostat	15 / 14
CS 03060.9-01	1200	120	50/60	Bottom Mount/without thermostat	15 / 14
CS 13060.9-00	1200	120	50/60	Rear Mount/with thermostat	15 / 14
CS 13060.9-01	1200	120	50/60	Rear Mount/without thermostat	15 / 14
CS 03060.0-00	1200	230	50/60	Bottom Mount/with thermostat	15 / 14
CS 03060.0-01	1200	230	50/60	Bottom Mount/without thermostat	15 / 14
CS 13060.0-00	1200	230	50/60	Rear Mount/with thermostat	15 / 14
CS 13060.0-01	1200	230	50/60	Rear Mount/without thermostat	15 / 14

NOMENCLATURE

CS 030 6 0 Y- **XX**
A B C D **E**

A - 130 Air heater with clip mounting Din rail mounted (Rear Mount)
030 Air heater for screw mounting (Bottom Mount)

B - 6 Enclosure made of thermoplastic

C - Heater Power

0. = 1200 W

D - Supply voltage

0 = 230V, ac
9 = 120V ac

E - 00 = Temperature Regulating Thermostat

01 = without Temperature Regulating Thermostat

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

USR - Indicates investigation to UL Standard 499, Dated November 17, 2005 containing revisions through and including March 31, 2006.

CNR - Indicates investigation to CSA 22.2 No. 88-1958 (reaffirmed 2004), First Edition.

DOUBLE INSULATION - These units have been evaluated to the requirements of UL 1097, the Standard for Double Insulation Systems for Use in Electrical Equipment, Fifth Edition, Dated July 30, 2004.

SPACINGS:

These heaters have been judged on the basis of the spacings required in the UL Standard for Electric Heating Appliances, UL 499, Table 26.2, and the Canadian Standard for Industrial Heating Equipment, C22.2, No. 88-1958 (R1999), Table I, which would cover the component itself if submitted for Listing.

CONDITIONS OF ACCEPTABILITY:

Some of the features which should be considered in determining the acceptability of this heater in the specific applications are indicated below:

1. The heater is intended for use within an enclosure in accordance with UL 508A, the standard for Industrial Control Panels.
2. The terminal block for the supply connections is only suitable for factory wiring.
3. These heaters employ PTC type heater elements. The suitability of any switching devices or fuses with respect to Inrush Current, both at room ambient and cold ambient shall be considered in the end product application.
4. The maximum surface temperature of the PTC heaters shall not exceed 200°C in the ultimate application. NOTE: The heating element is a conductor deemed as an uninsulated live part.
5. These units are provided with a strain relief clamp for the supply connections. The acceptability of the strain relief clamp shall be considered in the end-product application.
6. These heaters require an unobstructed flow of air to maintain both the marked power rating and safe operating temperatures. A minimum of 25 mm shall be maintained below the air intake, and a minimum of 100 mm shall be maintained between the heater and other surfaces.
7. The units employ ventilation openings below the temperature regulating thermostat. Consideration shall be given to molten metal, burning insulation, flaming particles, or the like, from falling onto combustible materials, including the surface upon which the heater is supported.
8. These units have been evaluated to the requirements of UL 1097, the Standard for Double Insulation Systems for Use in Electrical Equipment, Fifth Edition, Dated July 30, 2004. They shall not provided with means for grounding.

9. These units were subjected to a temperature test in a test alcove. Consideration shall be given to temperature tests in an enclosed enclosure.

MARKINGS:

All Marking label materials are PGJI2/PGJI8 by 3M, type 7818, suitable to be affixed to Polyphenylene, max. temperature of 100°C. Combination of printer, ink, and label stock are identified in the Recognized Component Directory.

Indelibly marked with the following (See Illustration #1):

Recognized Company name or UL File number

Model or Type designation

Electrical ratings in amperes, volt-amperes, or watts, and volts.

UL Recognized Component Mark

Symbol for Double Insulation

Production date marking: Day/Year, for ex: 024/08 means 24th day of the year 2008.

The following markings shall also be provided.

Fan motor is thermally protected. Marking: ("TP").

Unit shall be marked "When Servicing, use only identical replacement parts"

Due to surfaces is hotter then 85°C a permanent warning Marking shall be applied on a surface visible after mounting. " Hot surface - Avoid Contact". The relevant pictogram may also be provided in addition to the marking, but not in place of the marking. See Illustration #2.

