

DESCRIPTION

PRODUCT COVERED:

USR/ CNR Power supply, Models PAQ50S48 and PAQ100S48 Series.

RATINGS:

<u>Model</u>	<u>Input</u>		<u>Output</u>	
	<u>V dc</u>	<u>A</u>	<u>V dc</u>	<u>A</u>
PAQ50S48-1R2	36-76	1.7	1.2	12
PAQ50S48-1R8	36-76	1.7	1.8	12
PAQ50S48-2R5	36-76	1.7	2.5	12
PAQ50S48-3R3	36-76	1.7	3.3	12
PAQ50S48-3R3/15A	36-76	1.7	3.3	15
PAQ50S48-5	36-76	1.7	5	10
PAQ50S48-8	36-76	1.7	8	6.3
PAQ100S48-1R2	36-76	3.3	1.2	25
PAQ100S48-1R8	36-76	3.3	1.8	25
PAQ100S48-2R5	36-76	3.3	2.5	25
PAQ100S48-3R3	36-76	3.3	3.3	25
PAQ100S48-5	36-76	3.3	5	20

Note: May be provided with suffix "/P", "/V", "/PV", "/B", "/BP", "/BV", "/BPV", "/C", "/CP", "/CV", "/CPV". "/L", "/LV", "/LP", "/LPV" (for all models except for Model PAQ50S48-8). "/B", "/BV", "/BP", "/BPV" (for Model PAQ50S48-8).

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MODEL DIFFERENCES:

Suffix	On/Off Logic	OVP (+)	OCP (++)
Nothing or "/B" (Standard) or "/C"	Negative (H:Off/L:On)	Shut down. (On/Off Control Reset or Manual Reset.)	Shut down. (On/Off Control Reset or Manual Reset.)
"/P" or "/BP" or "/CP"	Positive (H:On/L:Off)		
"/V" or "/BV" or "/CV"	Negative (H:Off/L:On)	Auto Restart	Auto Restart
"/PV" or "/BPV" or "/CPV"	Positive (H:On/L:Off)		

Note: Models with suffix "B" denote aluminum heat sink provided. Models with suffix "C" denote height of Input/Output Terminal Supports are 10.2 mm.

Models with suffix "L" denote height of Input/Output pin terminal are 5.1 mm.

- (+) - OVP: Over Voltage Protection.
- (++) - OCP: Over Current Protection.

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

Use - For use only in (or with) complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Special Considerations - The following items are considerations that were used when evaluating this product.

*USR/CNR indicates investigation to the U.S. and Canadian (Bi-National) Standard for **Information Technology Equipment - Safety - Part 1: General Requirements, 60950-1, 2nd Edition, 2007-03-27 and CSA C22.2 No. 60950-1-07, 2nd Edition, 2007-03.**

Conditions of Acceptability - When installed in the end product, considerations shall be given to the following:

- *1. This component has been judged on the basis of the required spacing in the Standard for **Information Technology Equipment - Safety - Part 1: General Requirements, 60950-1, 2nd Edition, 2007-03-27 and CSA C22.2 No. 60950-1-07, 2nd Edition, 2007-03,** Subclause 2.10.
2. The terminals are suitable for factory wiring only.
3. The equipment has been evaluated for use in a Pollution Degree 2 environment.
4. Component failure tests were conducted with the power supply input protected by an external fuse, Listed or R/C (JDYX2), Cooper Industries Inc. Bussmann Div., Type PCD5, PCE5, PCG5 or PCI5, rated DC 250 V, 5 A (for Model PAQ50S48 Series), or R/C (JDYX2), Daito Communication Apparatus Co., Ltd., Type BD63, rated DC 900 V, 5 A (for PAQ50S48 Series), 6.3 A (for PAQ100S48 Series). The suitability of the protective device should be considered in the end-use application.
5. The source to these dc/dc converters are intended to be supplied from an isolated source, such as a battery, or a source which meets the requirements for basic (ELV) or reinforced (SELV) insulation from primary (mains) or TNV-2 circuitry, depending on output type required.

If the input meets all the requirements for ELV, the outputs may be considered ELV.

If the input meets all the requirements for SELV or TNV-2, then the outputs may be considered SELV. Output voltages remain within SELV limits, even with internally generated non SELV voltages, if any.

For cases where the input voltage is between $60 < V < 76$, the following must be adhered to, if the converter output is to be considered SELV:

Double or reinforced insulation must be provided in the 61-76 V source that isolates it from the ac mains. The working voltages shall be taken into consideration on primary and secondary of the 61-76 V power source. In addition, the source shall meet all spacing (creepage and clearance), electrical and insulation requirements for reinforced insulation.

The SELV Reliability Test was conducted with the Input voltage at 76 V dc and the primary to secondary windings on the planar transformers were shorted during this test. If the Input voltage is greater than 76 V dc or the Input Source is not isolated from the mains by reinforced insulation, then the SELV Reliability Test must be conducted in combination with the end use product to ensure that the Output is SELV.

6. For models without heat sink (all models except for models with suffix "B"): The unit has been tested for maximum P.W.B. (near the Thermistor TH1) temperature of 90°C at 100% load and 100°C at 50% load. External forced air source was used to maintain the rated temperature. For models with heat sink (Model with suffix "B"): The unit has been tested for maximum heat sink temperature of 100°C at 100% load. External forced air source was used to maintain the rated temperature.
- *7. Between Input and Output are separated by basic insulation, also between Input and heatsink (for Model with suffix "B") are separated by **basic** insulation. The basic insulation provided between the primary and the secondary circuits for PAQ Series power supplies is in accordance **sub-Clauses 2.10.5.5 and 2.10.6.1 of UL 60950-1, 2nd Edition, 2007-03-27 and CSA C22.2 No. 60950-1-07, 2nd Edition, 2007-03**. The insulation was evaluated as **distance** through insulation (**DTI**) and the compliance was checked by the electric strength test. In addition, no minimum distance was required between the windings on the same inner layer of multi-layer printed wiring boards.
8. The SELV Reliability and Abnormal Fault testing was conducted using a current limited 10.0 Amp external input fuse. Consideration should be given to reconducting these tests in the end-use product of the input source has a greater current potential.
9. The component was tested with either the Positive or Negative Input Terminal referenced to earth.