

DESCRIPTION

PRODUCTS COVERED:

USL, CNL - Switching Power Supply, Models HWS15A-3, HWS15A-5, HWS15A-12, HWS15A-15, HWS15A-24 or HWS15A-48, followed by /A or /HDA, may be followed by FG or DIN.

GENERAL:

These devices are open-type switching power supplies having limited energy output circuit, employing an Isolating-Type, Step-down Transformer and related circuitry enclosed within a metallic cover. These power supplies are intended for use in industrial control applications, in a pollution degree 2 environment.

ELECTRICAL RATINGS:

Model	Input			Output		
	Vac	Hz	A	Vdc	A (max.)	W (max.)
HWS15A-3	100-240	50-60	0.3	3.3 (2.97-3.96)	3	9.9
HWS15A-5	100-240	50-60	0.4	5 (4.0-6.0)	3	15
HWS15A-12	100-240	50-60	0.4	12 (9.6-14.4)	1.3	15.6
HWS15A-15	100-240	50-60	0.4	15 (12.0-18.0)	1	15
HWS15A-24	100-240	50-60	0.4	24 (19.2-28.8)	0.65	15.6
HWS15A-48	100-240	50-60	0.4	48 (38.4-52.8)	0.33	15.8

The permissible maximum output current is specified in the derating curve related to the surrounding air temperature, and mounting direction. See ILL. 1 for derating curve.

ENVIRONMENTAL RATINGS: Maximum Surrounding Air Temperature - 70°C.

NOMENCLATURE

Example:

HWS15A-	3	/A	DIN
A	B	C	D

A - Basic type

B - Output voltage rating

3: 3.3 V

5: 5 V

12: 12 V

15: 15 V

24: 24 V

48: 48 V

C - Conformal coating for PWB

/A: Not provided

/HDA: Provided

D - Other designation

None: Not provided

FG: Low leakage current type

DIN: DIN rail mounting type

TECHNICAL CONSIDERATIONS (NOT FOR UL REPRESENTATIVE'S USE):

*USL - Indicates Investigated **to United States Standard as noted in the Test Record, Listed.**

CNL - Indicates Investigated **to Canadian National Standard as noted in the Test Record, Listed.**

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CONSTRUCTION DETAILS

* Spacings - **The spacings** were evaluated **using the Standards as noted in the Test Record.**

Corrosion Protection - All ferrous metal parts are suitably protected against corrosion by painting, plating or the equivalent.

Connections - All electrical connections made by wiring mechanically secured before soldering, or terminated in Listed closed-loop type, unturned-end type, or male/female quick-disconnect type connectors with positive engagement.

Summary of Figures and Illustrations - The following figures and illustrations are included in this Report.

FIG or ILL. No.	Description
FIG. 1	Overall view
FIG. 2	Internal view (PWB)
ILL. 1	Derating curve
ILL. 2	Printed wiring board
ILL. 2A	Alternate - Printed wiring board
ILL. 3	Transformer
ILL. 4	Coating area details

MARKINGS:

The following marking shall be appeared on the device by molded, die-stamped, paint-stenciled, stamped, etched metal, laser engraved or on a label R/C (PGDQ2/8) or (PGJI2/8). No. 1 through No. 3 shall be visible when the device is mounted singularly.

1. Listee's name, trademark or trade name.
2. Catalog number.
3. Electrical rating.
4. **For USL models**, "Use wires suitable for at least 75°C" or "Use wires rating at least 75°C" or equivalent.
5. "For use in Pollution Degree 2 Environment" or "Pollution Degree: 2" or equivalent.
6. "Maximum surrounding air temperature 70°C" or "Max. surrounding air temperature: 70°C" or equivalent.
7. The month and year of manufacture or date coding serial numbers.
8. **"See derating curves and mounting orientation information in instruction manual" or equivalent.**
9. **For CNL models**, "WARNING: Use conductors with insulation rated for at least 90°C".

* The following markings shall be **shipped separately with** the device, on the smallest unit container or **carton**. **In addition, the device shall be marked where it is visible when the device is mounted singularly, with a reference to the information such as by diagram number or document number:**

1. Marking for proper connections at wiring terminals.
2. Wire type of field installed conductor, Copper conductors only.
3. Tightening torque for field wiring terminals, 14.2 lb-in. and 1.6 N·m.
4. The output derating curve, related to the surrounding air temperature and mounting direction.
5. "For use in Pollution Degree 2 Environment".

The following markings shall be shipped separately with the device.

1. **The ratings of overcurrent protection, the type of overcurrent protection and the coordination of the conductor sizes with overcurrent protection for the power output circuit. If cUL Listed fuse or UL Listed with CSA certified fuse is used as overcurrent protection, "type" may be represented by the Class.**