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Project 12SC04151

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REPORT

On

COMPONENT - DRIVERS FOR LIGHT-EMITTING-DIODE ARRAYS, MODULES AND CONTROLLERS

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DESCRIPTION

PRODUCT COVERED:

USR/CNR - Class 2 LED Driver, Models **AC-5C350ABR**, AC-5C500ABV, AC-5C700ABY, AC-5C1.05ABM, AC-12C350UVHM, AC-12C500UVHM, AC-6C700ARG, AC-12C700UVHM, AC-12C1.05UVHM, AC-A12V12H1.0M, AC-A12V24H0.5M, AC-A12V36H0.33M and AC-A20V12H1.67M. Suitable for Damp Location.

GENERAL:

The units are switch-mode isolating power supply with Class 2 output. The units consist of transformers and other related electronic circuitry provided with input/output pigtail leads for connection in the end-use application.

ELECTRICAL RATINGS:

Model Number	Input Voltage (V)	Input Current (A)	Frequency (Hz)	Maximum Output Voltage (Vdc)	Output Current (mA)
* AC-5C350ABR	120-277	0.06-0.03	50/60	14Vdc	350
* AC-C500ABV	120-277	0.06-0.03	50/60	10Vdc	500
* AC-C700ABY	120-277	0.06-0.03	50/60	7Vdc	700
* AC-5C1.05ABM	120-277	0.07-0.03	50/60	5Vdc	1050
* AC-12C350UVHM	120-277	0.13-0.06	50/60	34Vdc	350
* AC-12C500UVHM	120-277	0.15-0.06	50/60	24Vdc	500
* AC-6C700ARG and AC-12C700UVHM	120-277	0.15-0.06	50/60	17Vdc	700
* AC-12C1.05UVHM	120-277	0.12-0.06	50/60	11Vdc	1050
AC-A12V12H1.0M	120-277	0.12-0.06	50/60	12Vdc	1000
AC-A12V24H0.5M	120-277	0.12-0.06	50/60	24Vdc	500
AC-A12V36H0.33M	120-277	0.12-0.06	50/60	36Vdc	330
AC-A20V12H1.67M	120-277	0.2-0.09	50/60	12Vdc	1660

TECHNICAL CONSIDERATIONS (NOT FOR UL FIELD REPRESENTATIVE USE):

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

USR - Indicates investigation to the United States requirements UL Standard for Safety for Light Emitting Diode (LED) Equipment for Use In Lighting Products, UL 8750.

CNR - Indicates investigation to the Canadian Standard for the Standard for Power Supplies with Extra-Low-Voltage Class 2 Outputs, CAN/CSA-C22.2 No. 223.

The outputs were evaluated as Class 2 per UL Standard for Safety for Class 2 Power Units, UL 1310.

CN - Either the Canadian Standards Association Certification or Component Acceptance Mark or the UL Listing or UL Recognition Mark for Canada.

Spacing's have been evaluated in accordance with an Overvoltage Category II and Pollution Degree 1 (potted enclosure) per Exception #1 of cl. 7.8.3 of UL 8750 (with live parts to enclosure spacing's evaluated per Table 7.6) and CSA C22.2 No. 223, Clause 4.10.6 and CSA C22.2 No. 107.1 via the CSA Reference Standard C22.2 No. 0.2 for voltages > 250Vac per cl. 4.17.1 and Table 6 (which included live parts to enclosure).

Model Difference - All models are similar in construction, schematic and layout, except for the component ratings noted in the report.

Conditions of Acceptability - When installed in the end-use equipment, the following are among the considerations to be made:

1. The power supply shall be installed in compliance with the enclosure, mounting, spacing, casualty, temperature, and segregation requirements of the end-use application.
2. All units utilize a Class B insulation system for the isolation transformer (T2).
3. The drivers were temperature tested with a case temperature of 90°C above T2.
4. The products were tested while connected to a 20A branch circuit. Additional testing shall be considered in the end-use product if used on a branch circuit greater than 20A.
5. The products are provided with input and output pigtail leads. The suitability of the leads shall be determined in the end-use application.
6. Tests were conducted using resistive and/or electronic loads resulting in an output rating current as note in the electrical ratings table.
7. The enclosure is required to be grounded in the end-use application. Proper grounding shall be evaluated during the end-product installation since the unit only employs functional bonding to the case.
8. The need for conducting additional Leakage Current Test is to be determined as part of the end-product evaluation.
9. The drivers have been evaluated for use in Dry and Damp location. The use of other environmental locations shall be considered in the end product.
10. Humidity Test was waived due to the drivers are fully potted. The need for conducting Humidity Test is to be determined as part of the end-product evaluation.