

UL-Zertifikat/certificate



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Project 09CA29505

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REPORT

on

HEATERS SPECIALTY-COMPONENT

Hotset Heizpatronen & Zubehoer GMBH
Luedenscheid, DE

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DESCRIPTION

PRODUCT COVERED:

USR, CNR - Cartridge Heaters, Type HHP and LHT followed by letters and/or numbers.

GENERAL:

These are cartridge heaters containing a resistance type heating wire encased in an insulating material. Typical applications are plastic molding, extrusion, and molding presses.

These heaters are intended to be permanently hard wired in place with the sheath grounded.

USR indicates compliance with United States Standard UL 499.

CNR indicates compliance with Canadian Standard CSA C22.2 No. 72-M1984.

MODEL DIFFERENCES:

In the High Watt (HHP) Models the NiCr wire is wound very close to the inside of the heater case, to provide very quick response to the heater sheath, and allowing the heater to carry a higher watt density.

The Medium Watt (LHT) heater the wire is suspended inside the ceramic core, rather than around the outside. Thus providing lower surface watt density of the heater, and makes the heater slow to respond, however can be a more durable construction in the end use application depending on the fit to the tool.

MAXIMUM RATINGS:

Models	Sizes, dia. (mm)	<u>Volts, AC</u>	<u>Density, W/cm²</u>	<u>Sheath Temperature °C</u>
HHP	(4-25.4)	250	57	max 750
LHT	(4-25.4)	250	12	max 750

MARKING:

The sheath of each heater is stamped with the manufacturer's name or file number, type HHT or LHT and work order, watts, volts, date code and R/C Mark.

See C-UR Sec. Gen. for Canadian Markings.

SPACINGS:

Spacings of 1/16 in. between live parts of opposite polarity and between live parts and grounded metal shall be maintained.

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

Use - For use only in products where the acceptability of the combination is determined by UL.

Conditions of Acceptability -

1. A complete enclosure should be provided in the end-use product for protection from physical damage to the integral leads of the heater.
2. Temperatures shall be judged in the end-use. The sheath shall not exceed 750°C. The wire insulation temperature rating shall be suitable for the temperatures measured during end-use tests. The temperature on the insulating tubing shall not exceed 200°C. The end seal materials shall be suitable rated for temperatures measured during end use according to the here after values specified.

Epoxy:	130°C
Silicon:	150°C
PTFE:	180°C

3. The ceramic end seal cement does not have a defined maximum temperature limit.
4. The end use product description should include the complete catalog/part number of the acceptable heater construction.
5. These heaters are for use only in dry locations.
6. The heaters shall not be used in applications where corrosion to the heater would occur.
7. The suitability of the termination methods, which includes flexible or rigid conduit, metal braid over lead wires or plugs with armour-covered cable is to be determined in the end-use application. The method of termination and the American wire gauge size of the wire must be described in the end-use devices.
8. The grounding terminal shall be determined in accordance with the end product Standard's requirements.
9. Vibrations and mechanical shocks were not evaluated.
10. Spacings between terminals, if provided, shall be evaluated in the end product.