

General Specification for Universal Enclosures

Insulated heating units 20W for heating electrical or electronical devices in enclosures from low voltage switchgear panels to automation and control installations for avoiding problems of condensation, high humidity or low or extreme temperatures

Heating Power:

20W

Reference product:

NSYCR20WU2C

1. General Terms

(Product) are used for heating multi-material enclosures installations placed indoors and outdoors.

Complies with the safety provisions for people and required by the following Council Directives:

2006/95/CE *Low voltage*

2004/108/CE *Electromagnetic compatibility*

2002/95/CEE *RoHs*

2. Compliance with the standards

Standard	Title	Use
EN60335-1	Household and similar electrical appliances - Safety - Part 1: General requirements	- Part 1: General requirements
EN55014-1	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus	- Part 1: General requirements
EN61000-6-2	Electromagnetic compatibility (EMC)	Part 6-2: Generic standards - Immunity for industrial environments
EN61000-3-2	Electromagnetic compatibility (EMC)	Part 3-2 : limits - Limits for harmonic current emissions (equipment input current inferior or equal 16 A per phase)
UL 508A	UL Standard for Safety for Industrial Control Panels, UL 508A	The basic standards used to investigate products in this category are: UL 508A, "Industrial Control Panels," CAN/CSA-C22.2 No. 14, "Industrial Control Equipment," CAN/CSA C22.2 No. 94-M91, Special Purpose Enclosures and CAN/CSA C22.2 No. 73, Electrically Equipped Machine Tools.

Note: All this documentation is downloadable from the website: www.schneider-electric.com

3. Specific requirements

Insulated heating units are manufactured with the integration of different pieces , an extruded aluminium block with an insulated ptc unit element heater fitted inside for well transmitting the heat throughout aluminium flaps .

Insulated heating units The position of installation of the heater inside the enclosure has to be as maximum as the lowest part of the enclosure and allowing to create a heat air column of internal convection and to maintain a minimum distance of 100mm from any other electrical device installed upper or under the heater.

Heating Power: 20W

Voltage: 110-250V

Frequency : 50/60Hz

Fixing mode: DIN Rail

Degree index of protection

Also the protection degree should be IP : **20**

Ambients

Heaters will be installed in watertight enclosures (min IP54) protection and for being effective against high humidity's or condensation.

Control type

controlled by Thermostat or Hygrostat or Hygrotherm for being more efficient

Surface temperature :

Surface temperature on heaters mustn't overpass 70°C on lateral sides.

Support system of the heater

Heaters will be fixed into the enclosure with a DIN Rail or safe similar fixing system.

Accessories to supply:

No additional accessories to supply for this thermal solution.

Manufacturer: Schneider Electric or similar

4 Operation & Maintenance

4.1 Quality Assurance

All materials and products shall be new, sound and uniform in quality, size, shape, colour.

The manufacturer shall be responsible for ensuring that the required standards of quality control as mentioned in relative sections are maintained for the proposed Insulated heating units.

If requested by the client, the supplier shall provide proof of application of a quality procedure complying with standards. This means:

- Use of a quality manual approved and signed by a management representative.
- regular updating of this manual so that it reflects the most recent applicable quality control procedures,
- ISO 9001 or ISO 14001 certification

4.2 Product delivery, storage and handling

- Deliver, store, protect and handle products to site as per manufacturer's instructions.

5. Sustainable development

- Production site organisation shall be non polluting and certified to comply with ISO 9001 and ISO 14001 standards.

6. Technical requirements for material suppliers

Answers like “Complying with the specs” or “Ok” are not acceptable. The supplier shall provide the technical characteristics of his equipment and prove the information with documentation or official certificates if required.

Description	Specifications required	Offered by the supplier
Performance	20W	
Voltage (V)	110-250V	

7. Software for thermal solution selection

For the correct selection of the thermal management solution the supplier must present a thermal study clearly indicating:

- > Highest temperature of the board without temperature management
- > Necessary cooling power
- > Cooling power offered by the solution
- > and the calculations made

To ensure that the installation conditions in according with the thermal components selected are correct. We recommend to use Proclima software from Schneider Electric or similar.