



Outdoor Air-to-Air Thermoelectric Assembly (Peltier cooler and heater) ceiling placement

TA-AA-1000-48-CP

- Industrial measuring instruments
- Analytical devices
- Outdoor telecom box and shelter
- Outdoor displays and kiosks
- Air conditioner for electronic cabinets
- Battery cabinets
- Others

The product complies with the requirements of EU RoHS., limiting the content of harmful substances, adopted by the European Union.

Protective shroud of external side executes the following functions:

- split up the incoming flow of "cold" and outgoing of "hot" air without lowering the cooling capacity
- it is an additional heat exchanger
- protects the unit from unauthorized access.
- presses flange to the wall cabinet, ensuring the tightness of the installation site.
- close the window for the installation of thermoelectric cooling assembly, thereby maintaining the aesthetic appearance of the equipment.

The shroud is made of steel 1.5 mm thickness (on request can be made of steel 2 mm thickness or of aluminum 3mm thickness).

Protection from exposure to atmospheric corrosion is realised dip galvanized (Steel) and powder painting.



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| Type | TA-AA-1000-48-CP |
| Voltage (nominal /maximal) | 48/54 VDC |
| Amperage ±10% (nominal/starting) | 20A/46A (at 48VDC) |
| Max ripple | 5% |
| Cooling capacity at $dT = 0^{\circ}\text{C}$ and nominal voltage . ¹ | 970W |
| Heating ² | 1076W |
| Operating temperature of the heatsinks on the inner and outer side, not more than ³ | 85°C |
| Temperature range (external /internal) | -25°C to +70°C/-25°C to +70°C |
| Fans lifetime (at temperatures not higher than +40°C) and nominal voltage | ≥60,000 hours |
| Sound level (distance 1m.) | 86dB(A) |
| Mode of operation | long-term |
| Protection of heatsinks | Anodizing film thickness of 10-20 microns |
| Overheat protection | by demand the customer (Additional option) |
| Type of connector | by demand the customer (Additional option) |
| Degree of protection ⁴ | IP55 |
| Weight ⁵ | 44kg ⁶ |

- 1-Cooling capacity is rated at ambient temperature +35°C.
- 2-Heating capacity is rated at external temperature of -40°C, nominal voltage, and $dT = -45^{\circ}\text{C}$.
- 3-Possibility of increase to 150°C - Additional option.
- 4- IP 68 of external fans - additional option.
- Explosion-proof external fans II 3G Ex nA IIA T4 Gc (-30°C ≤ TA ≤ +35°C)X 230AVC - additional option.
- 5-Possible deviation +/-5%.
- 6- Including 11 kg the weight of the protective shroud .

ALL PARMETERS WERE MEASSURED WITH A PROTECTIVE SHROUD

NOTE! A method of transferring heat - forced convection.
Not recommended to reduce airflow external and internal side.

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Performance Q-ΔT

Q



dT

$$dT^{\circ}\text{C} = T^{\circ}\text{ ambient} - T^{\circ}\text{ internal}$$

Q - cooling capacity, W.

for ambient temperature +35 ° C and rated voltage

INSTALLATION SCHEME



