



Applications

- cooling aggressive liquids
- liquid cooling circuit
- cooling viscous liquids
- condensation of vapors of oils and petroleum products
- water separation from vapor of oil
- small water recooling tower
- cooling of liquid lubricant
- others

Direct-to-Air Thermoelectric Assembly TA-DA-250-48-PFH Features

- The TA-DA series thermoelectric coolers are developed and produced on the base of Crystal Ltd. high effective Peltier modules. This ensures high values of Coefficient of Performance (COP) of the assemblies
- The heat is absorbed through contact of the aluminum cold plate with threaded holes for mounting at flat surface
- Small size and weight
- Capability of operation in Cooling or Heating modes
- Any orientation in space
- Easy mounting and electrical connection
- Operating voltage from 44 to 54 VDC
- Environmentally friendly solid-state heat exchange operation that has not CFC or HCFC ozone depleting refrigerants and toxicity and flammability hydrocarbons refrigerants like isobutane (R-600a) and propane (R-290)
- Precise temperature control
- Do not support combustion and solvent-resistant Thermal Insulation Materials were used
- The product complies with the requirements of EU RoHS



Type	TA-DA-250-48-PFH
Voltage (nominal / maximal)	48/54 VDC
Amperage, ±10%, (nominal / starting)	6.2/8.5A (at 48 VDC)
Max ripple	5%
Cooling capacity at $dT = 0^{\circ}\text{C}$ and nominal voltage ¹	250 W
Operating temperature of the outside heatsink, not more	+85°C
Operating temperature of the inside heatsink, not more	+120°C
Operating ambient temperature range	-50°C to +60°C
Fans lifetime (at temperature not higher than +40°C) and nominal voltage	≥60,000 hours
Sound level (distance 1m)	53 dB(A)
Mode of operation	continuous
Heatsink corrosion protection	anodizing film thickness of 6-20 microns
Overheating protection	by demand of the customer (additional option)
Type of connector	terminal block with cage clamps
Weight ²	6.5 kg

1- Cooling capacity is rated at ambient temperature +35°C for voltage range (48÷54) VDC.

2- possible deviation +/-5%.

NOTE!

A method of transferring heat at external side is forced convection. Not recommended to reduce airflow at external side.

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Performance



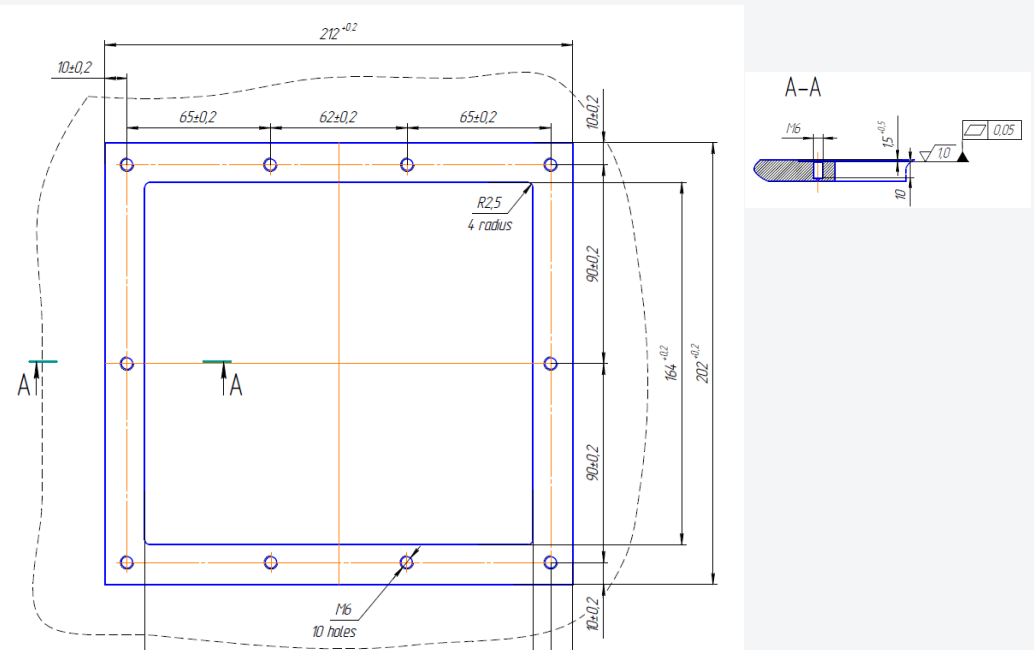
dT

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

Q – cooling capacity, Watts

at ambient air temperature +35°C and nominal voltage

Mounting scheme



Mechanical drawings

