

DA PowerCool Series, DA-044-24-02

Thermoelectric Assembly



POWERCOOL SERIES DIRECT-TO-AIR THERMOELECTRIC ASSEMBLY

The DA PowerCool Series is a Direct-to-Air thermoelectric assembly (TEA) that uses impingement flow to transfer heat. It offers dependable, compact performance by cooling objects via conduction. Heat is absorbed through a cold plate and dissipated through a high density heat exchanger equipped with an air ducted shroud and brand name fan. The thermoelectric modules are custom designed to achieve a high coefficient of performance (COP) to minimize power consumption. This product series is available in a wide range of cooling capacities and voltages. Custom configurations and moisture protection options are available, however, MOQ applies.

FEATURES

- Compact design
- Precise temperature control
- Reliable solid-state operation
- DC operation
- RoHS compliant

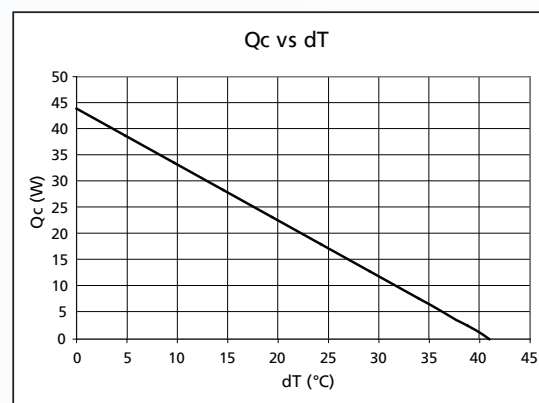
APPLICATIONS

- Analytical instrumentation
- Medical diagnostics
- Photonics laser systems
- Industrial instrumentation
- Food and beverage cooling

Specifications

| | |
|------------------------------|-----------|
| Cooling Power Q_{cmax} (W) | 44 |
| Running Current (A) | 2.2 |
| Startup Current (A) | 2.8 |
| Nominal Voltage (V) | 24 |
| Max Voltage (V) | 30 |
| Power Input (W) | 53 |
| Operating Temperature (°C) | -10 to 44 |
| Weight (kg) | 0.6 |
| MTBF (fans – hrs) | 50,000 |
| Performance Tolerance | ±10% |

PERFORMANCE CURVE



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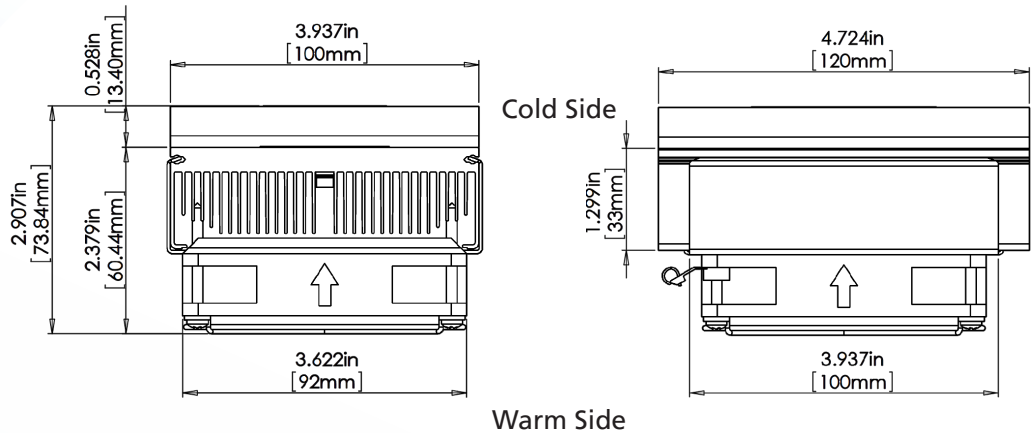
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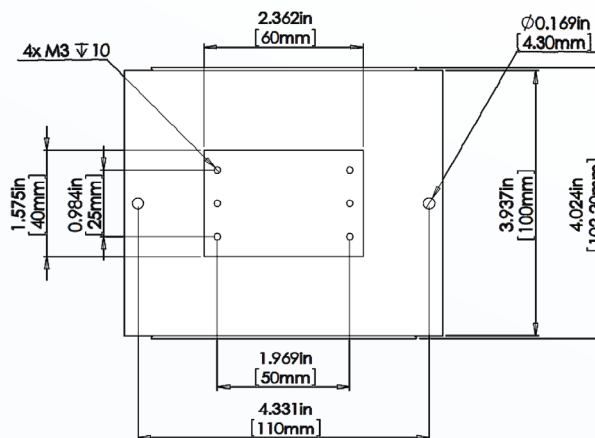
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ISOMETRIC DRAWINGS



MOUNTING HOLE LOCATION



WIRING SCHEMATIC

| Electrical connections | |
|------------------------|--------|
| TEM+ : | Orange |
| TEM- : | White |
| Fan+ : | Purple |
| Fan- : | Blue |

NOTES

- For indoor use only.
- Thermally conductive grease enclosed.

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