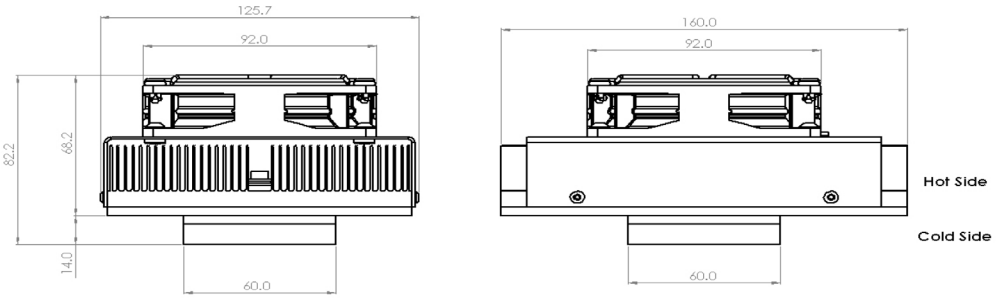
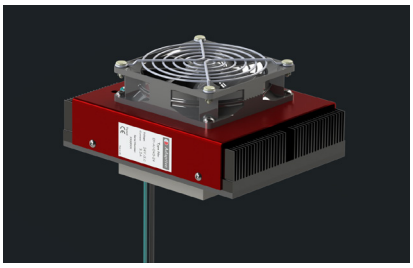
DT-AR-045-24

DIRECT TO AIR THERMOELECTRIC COOLING ASSEMBLY





The Direct-to-Air Thermoelectric cooling assemblies are compact devices that can be used to cool down objects through conduction. The objects to be cooled down are mounted onto the metallic plate at the 'cold side' of the assembly from where heat is pumped by Peltier thermo-electric modules and dissipated to the environment through the use of bespoke heat sinks and highly efficient DC fans at the hot side of the assemblies. The thermoelectric modules, whose reliability and maintenance-free operation has been proven by the years, are carefully selected for each assembly to ensure the best cooling performance and minimise power consumption.

Direct-to-air assemblies are available in a variety of cooling power outputs 24V.

Bespoke solutions/configurations are offered, as well as moisture protection options, however these are only available for large order quantities (minimum order quantities apply).

Features

- Reliability
- Compact design
- Excellent temperature control
- DC operation (24V nominal voltage input)
- Thermoelectric modules with high Coefficient of Perfomance (COP)
- ROHS compliant

Applications

- Electronics' cabinets
- Medical Instrumentation
- Analytical Diagnostics
- Industrial Automation
- Food and Beverage Cooling
- Laser Systems' Cooling

CHARACTERISTICS		
Maximum Cooling Power Pcmax	[W]	47.9
Nominal Voltage	[V]	24
Maximum Voltage	[V]	30
Rated current (A)	[A]	2.9
Power input (W)	[A]	58
Operating temperature (°C)	[W]	-10 to 50
Weight (kg)	[°C]	1.2
Performance tolerance (%)	[%]	±10
L10 of fans at 40oC (hrs)	[hrs]	40k (hot side)

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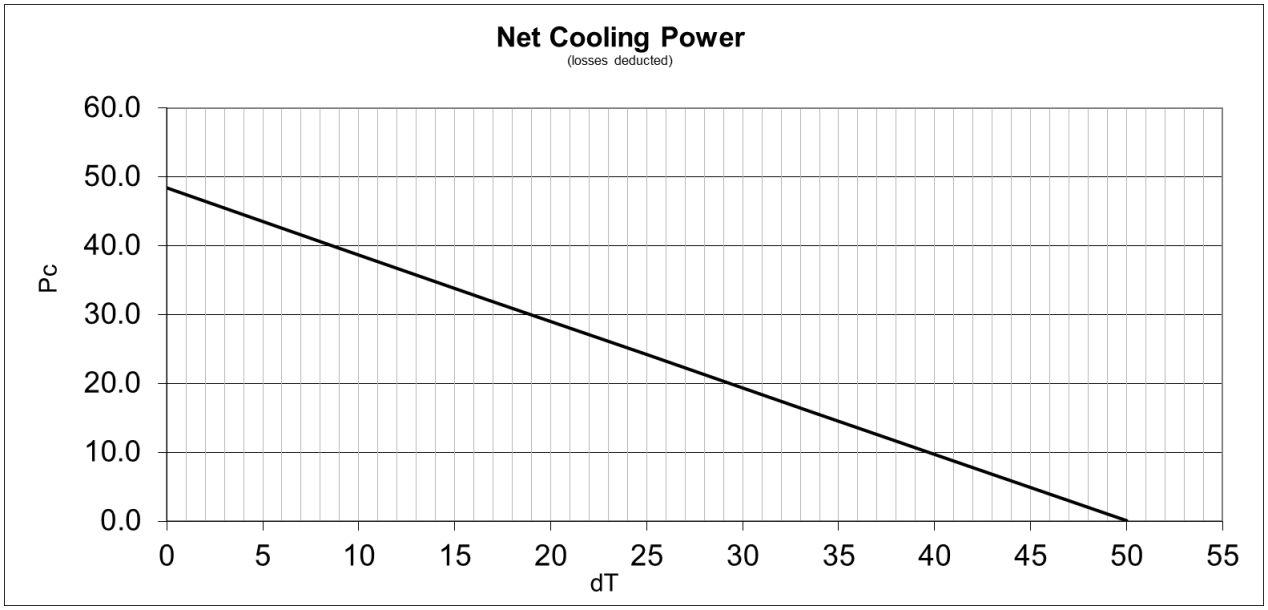
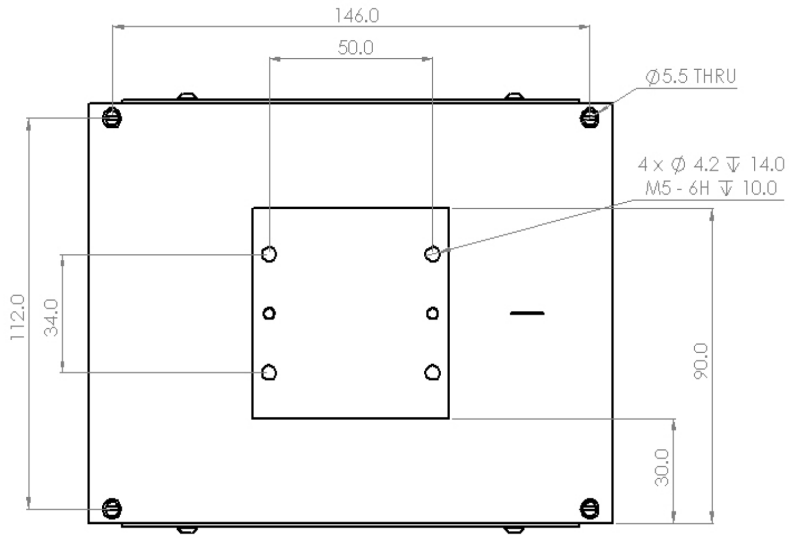
PERFORMANCE CURVE



LOCATION AND DIMENSIONS OF MOUNTING HOLES



NOTES:
1. All dimensions are in mm.
2. Thermally conductive interface material is applied on thermoelectric modules' surfaces for more efficient heat transfer.
3. The assembly, with its current configuration, is for indoor use only.

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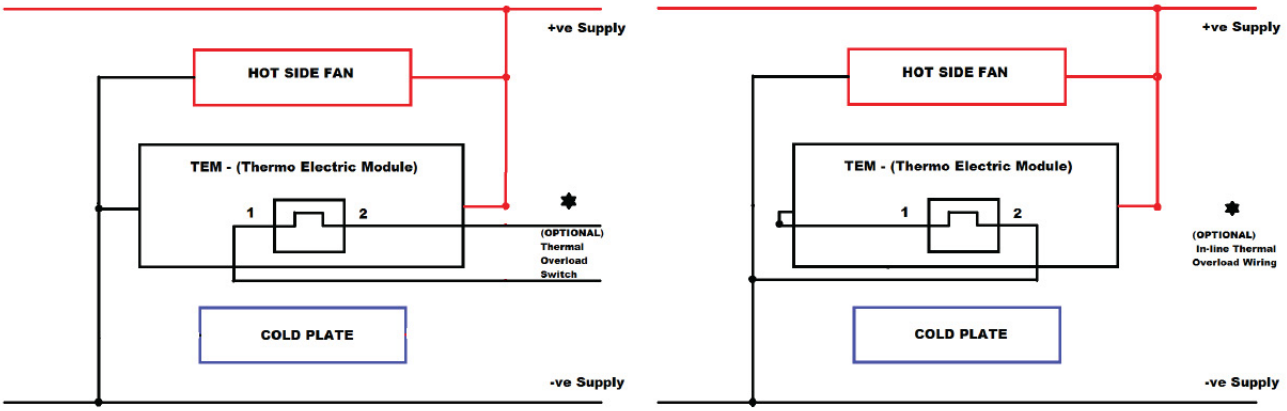
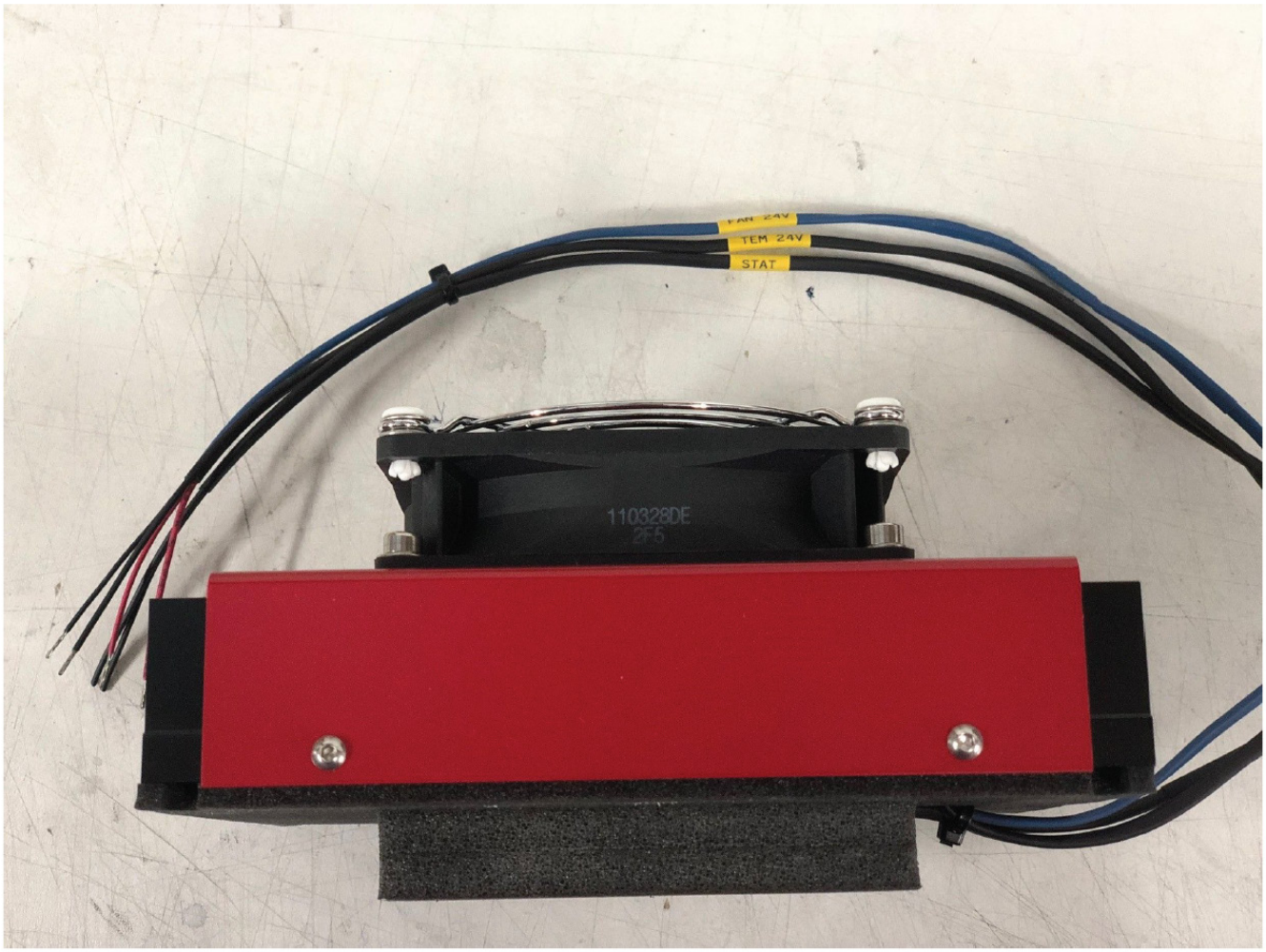
Direct to Air Thermoelectric Assembly Wiring Diagram





*OPTIONAL: Thermal Overload Switch (If fitted)
Can be configured as an In-Line circuit break or as an auxilary control device.

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