

Smart Technology. Delivered.™

# DA PowerCool Series DA-045-12-02

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 thru 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.

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## **FEATURES**

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

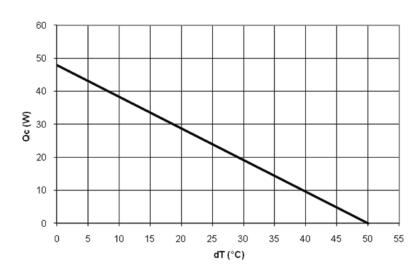
## **APPLICATIONS**

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

SPECIFICATIONS		
Cooling Power Qcmax (W)	48	
Running Current (A)	6.1	
Startup Current (A)	7.0	
Nominal Voltage (V)	12	
Max Voltage (V)	15	
Power Input (W)	73	
Operating Temperature (°C)	-10 to 46	
Weight (kg)	1.2	
MTBF (fans – hrs)	50,000	
Performance Tolerance	±10%	

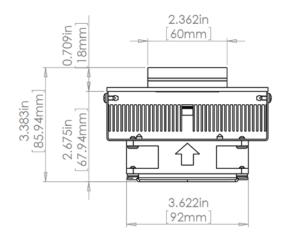
# **PERFORMANCE CURVE**

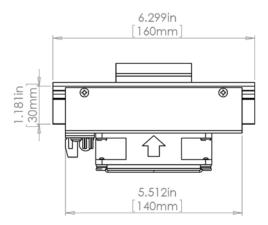




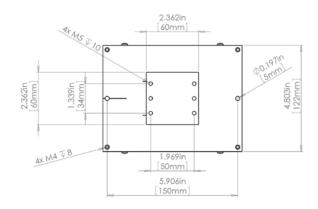


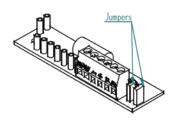
## ISOMETRIC DRAWINGS





#### MOUNTING HOLE LOCATION





# **NOTES**

For indoor use only
Thermally Conductive Grease enclosed
Overheating Thermostat: 75°C ± 5°C
on hot side heat sink surface

# **WIRING SCHEMATIC**

Electrical connections
"+": + TEM
"-": - TEM
"F+": + Fan(s)
"F-": - Fan(s)

To use single supply. Lift the jumpers and rotate
90° to short-cut the pin pairs. Connect the unit
to "+" & "...".
Warning: Single supply not applicable in
heating mode or with PWM-regulation.

#### LAIRD-ETS-DA-045-12-02-DATA-SHEET-100616

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