

DBK A100 Thermoelectric Cooler

DBK SERIES AIR-TO-AIR THERMOELECTRIC COOLERS

The DBK A100 is a 100W air to air thermoelectric cooler, employing forced air convection provided by IP54 axial fans.

It forms part of the DBK standard range which provides assemblies from 60W to 200W.

Custom designs are available by request including Direct and Liquid cooling applications.

FEATURES

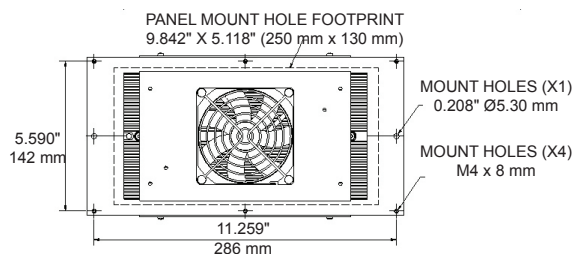
- Compact Design
- DC Operation
- Reliable solid-state construction
- ETL recognized and RoHS compliant

Electronic Control Systems are available to complement the DBK range.



Image for illustration purposes only

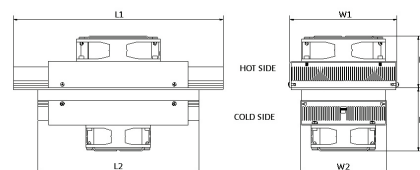
Mounting Dimensions



Specifications

Rated Cooling Power	100 Watts
Typical Current	5.8 Amps (measured after 5 mins @68°F)
Nominal Voltage	24 Vdc (options available)
Operating Temperature	14 to 122 °F / -10 to 50 °C
Cold Side Airflow @zero static pressure	58 cfm
Hot Side Airflow @zero static pressure	53.5 cfm
Fan Life L10 @ 104° F	65,000 hrs
Weight (approx.)	9.92 lb (4.5 kg)
Standard Lead Length	23.62" (600 mm) (options available)
Length - L1 / L2	11.81" / 9.06" (300 mm / 230 mm)
Width - W1 / W2	6.02" / 4.84" (153 mm / 123 mm)
Height - H1 / H2	2.91" / 3.55" (74 mm / 90.2 mm)

Overall Dimensions



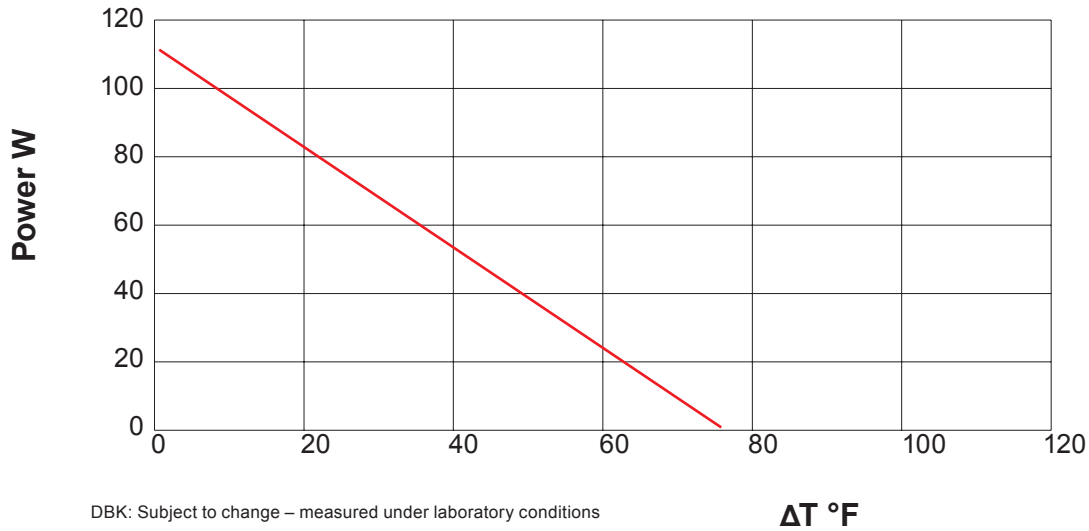
Typical Applications

- Control Panels/Outdoor Enclosures
- Analytical/Medical Instrumentation
- Industrial Instrumentation
- Food and Beverage Cooling
- Telecom Cabinets

This information is subject to change without notice. Data is given for illustration purposes only and does not release the customer from independent application tests.

Measured Performance Data

DBK A100 Cooler Power vs ΔT



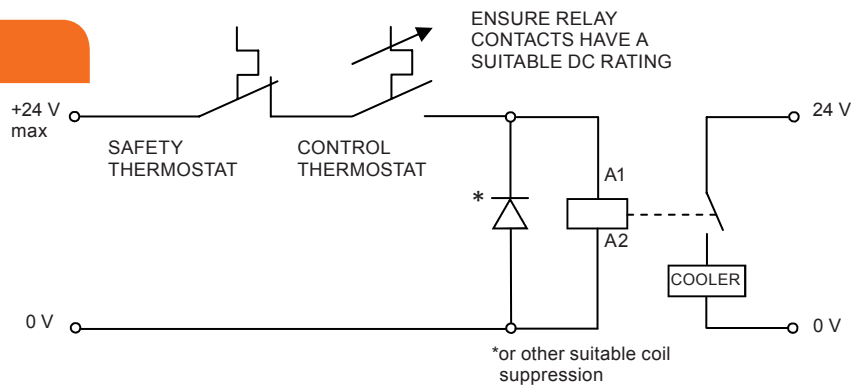
Wiring Information

In normal operation to provide cooling, the unit should be wired up as below. If required the unit can be operated with reverse polarity across the Cooler only to provide a heat source. The polarity supplied to the fans should not be changed.

Wire Color	Function
Red	Cooler (16awg) and Fans (24awg) 24V +ve supply
Black	Cooler (16awg) and Fans (24awg) 24V -ve supply
Orange	HOT Side Safety Thermostat for overheat control
Blue	COLD Side Safety Thermostat for overheat control - only required when unit is operated in reverse polarity for use as a heater.

Typical Circuit Diagram

A typical circuit diagram is shown to indicate use of a control thermostat such as DBK FGT101 & FGT201 to maintain the enclosure temperature within the required conditions.



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