SuperCool Series Thermoelectric Cooler Assembly

The SLA-140-24-02 Liquid-to-Air thermoelectric assembly is a high-performance thermoelectric based liquid cooler. It is designed to temperature control small chambers used in medical diagnostics, lasers, imaging systems or sample storage compartments in analytical instrumentation. This unique, patented design offers a high performance hot side heat dissipation mechanism that convects heat more efficiently than conventional heat exchanger technologies. The design utilizes custom thermoelectric modules to maximize cooling capacity and premium grade fans to keep the noise down. Moisture resistant insulation is used to keep condensation from penetrating into the TEM cavity. This unit operates at 24 VDC and is designed for indoor lab use environment. It has a maximum Qc of 129 Watts when ΔT = 0 and a maximum ΔT of 34 °C at Qc = 0.


Features
- High performance
- Compact form factor
- Reliable solid-state operation
- RoHS-compliant

Applications
- Liquid Cooling Options for PET and SPECT Scanners
- Peltier Cooling for Refrigerated Centrifuges
- Heating and Cooling of Incubator Chambers
- Thermal Management Solutions for Beverage Cooling

ELECTRICAL AND THERMAL PERFORMANCE

Heat Pumped at Cold Side (Qc)  
Tambient = 35°C | Tcontrol = 20°C

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Operating Current (Amps)

Operating Voltage (Volts)
**SPECIFICATIONS**

**Operating Temperature Range**
-20 °C to 60°C

**Supply Voltage**
24.0 VDC nominal / 30.0 VDC maximum

**Current Draw**
5.0 A running / 6.4 A startup

**Power Supply**
120.0 Watts

**Performance Tolerance**
10%

**Fan MTBF**
50,000 hours

**Sound Level (1 m distance)**
61 hours

**Weight**
2.33 kg

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**MOUNTING HOLE LOCATION**

**WIRING SCHEMATIC**

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**NOTES**

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<td>1</td>
<td>Turbulators are mounted inside liquid channels to create turbulent flow</td>
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<tr>
<td>2</td>
<td>For indoor use only</td>
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<td>3</td>
<td>Cold block requires insulation to minimize moisture buildup under dew point conditions.</td>
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