DC to AC VFD—Mini Inverter for Auxiliary Motors

750VDC Nominal Input
Variable Voltage/Speed Output

*Typical Light Rail Blower installations*

**Highlights of the VFD-Mini System**
- Operates AC induction motors from DC line voltage
- Input Operating range of 450VDC to 900VDC
- Reverse polarity protection
- IP-67 rated
- In case of power loss, Auto Restart with automatic Motor Speed Search for uninterrupted operation
- Electronic motor thermal overload protection
- Suitable for Blowers, Compressors, Evaporators and Air Handlers
- Over 200 delivered units in operation

**VFD-Mini Electrical Specifications**

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power</strong></td>
<td></td>
</tr>
<tr>
<td>Input Voltage</td>
<td>750VDC nominal</td>
</tr>
<tr>
<td></td>
<td>450VDC to 900VDC</td>
</tr>
<tr>
<td></td>
<td>Contact factory for other ranges</td>
</tr>
<tr>
<td>Output Current</td>
<td>15A RMS Continuous</td>
</tr>
<tr>
<td></td>
<td>(w/2.5m/s airflow)</td>
</tr>
<tr>
<td></td>
<td>9A RMS Continuous without airflow</td>
</tr>
<tr>
<td>Output Frequency</td>
<td>0 - 125Hz</td>
</tr>
<tr>
<td><strong>Control I/O</strong></td>
<td></td>
</tr>
<tr>
<td>Reverse Polarity</td>
<td>Software and hardware detection</td>
</tr>
<tr>
<td>Power Loss</td>
<td>Auto restart with automatic motor speed search to continue operation.</td>
</tr>
<tr>
<td>Load Short Circuit</td>
<td>Current Control Overload Trip</td>
</tr>
<tr>
<td></td>
<td>IGBT Over Current Protection</td>
</tr>
<tr>
<td>Thermal Protection</td>
<td>Heat Sink Over-temperature Alarm at 75°C Shutdown at 80°C</td>
</tr>
<tr>
<td>Motor Overload</td>
<td>Electronic Time trip</td>
</tr>
<tr>
<td>Overcurrent Protection</td>
<td>Programmable</td>
</tr>
</tbody>
</table>
DC to AC VFD-Mini Inverter
750VDC Nominal Input
Variable Voltage/Speed Output

CN1—DC Input
CN2—AC to Motor
CN3—Fault Relay
CN4—Diagnostic Port

* SUPPLIED BY CUSTOMER

* R1
10A, 200W MIN.
1...2 Ω

750VDC

CN1

A300505
VFD-MINI
INVERTER

CN2

T1
T2
T3

INDUCTION
MOTOR
3HP
460VAC

MOTOR
OT
SWITCH

CN3

FAULT
RELAY

COM

NO

NC
(OPTION)

CN4

TO HAND-HELD
OP-STATION

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Electric Propulsion Controls and Accessories