CARTRIDGE HEATERS
Modifications and Options (for CIR Series)

MODIFICATIONS & OPTIONS
Cartridge heaters can be easily specified to meet the demands of special applications. Simply select from a variety of standard options and features to customize the heater to your specific needs. For customized engineering or alternative options, contact your OMEGALUX sales representative for fast turnaround on your specifications.

- Leadwire Types
- End Seals Options
- Lead Options
- Mounting Options

LEADWIRES TYPES

<table>
<thead>
<tr>
<th>Description</th>
<th>Volts</th>
<th>Operating Temperature (°F) (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mica Fiberglass Insulation</td>
<td>300V Std 600V</td>
<td>842 450</td>
</tr>
<tr>
<td>Fluoropolymer</td>
<td>300V 600V</td>
<td>392 200</td>
</tr>
</tbody>
</table>

SEAL OPTIONS

- Epoxy: Epoxy seal available on above leads by voiding end of sheath and filling with epoxy to provide moisture barrier.
- Fluoro-polymer: A swaged-in seal that provides additional moisture resistance.
- RTV: For applications where a moisture barrier is required.
- Hermetic: Ceramic-to-metal seal is good for element temperatures up to 1000°F. Specify heater length before seal. Metal portion of the seal overlaps the heater sheath by 3/16". For washdown conditions.

LEAD OPTIONS (cont’d.)
Flexible Stainless Steel Conduit
Flexible Stainless Steel Conduit provides leadwire protection from abrasion and sharp edges, and facilitates easier handling in harsh environments. Available in both straight and right angle configurations.

- Right Angle Flexible Leads
  - Code 14C
  - Heat Shrink Insulation (100°C)
  - Protective Spring provides a flexible strain relief to leadwire

- Straight
  - Code 4C - Standard
  - Code 5C - Moisture Resistant

Protective Spring
Available in both straight and right angle configurations, the Protective Spring gives strong, yet flexible leadwire protection from bending, fatigue and flexing.

- Right Angle
  - Code 18C
  - Heat Shrink Insulation (100°C)
  - Protective Spring

- Straight Code 3C
  - Protective Spring Provides a Flexible Strain Relief to Leadwire
  - Heat Shrink Insulation (100°C)
CARTRIDGE HEATERS

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LEAD OPTIONS (cont’d.)

Metal Braid
Stainless Steel metal braid protects leadwire from abrasion and sharp edges, yet maintains flexibility and ease of installation. Metal braid is available in both straight and right angle configurations.

Ceramic Beads
Ceramic Bead insulation can be specified to protect leadwires from high ambient temperatures up to 650°C (1200°F). To order, specify ceramic beads length and additional lead length.

Threaded Post Terminals
Post Terminals provide a strong, secure connection to buss bars or ring/fork connectors. Available only on ⅜ and ⅝ diameter heaters.

MOUNTING OPTIONS

Threaded Fittings
Threaded fittings allow the heater to be easily installed into a threaded hole for immersion applications. Available with single or double threaded fittings. The fitting overlaps the cartridge heater sheath by ⅛. Specify "brass" or "stainless steel" threaded fitting.

Threaded Fitting Sizes

<table>
<thead>
<tr>
<th>Nom. Heater Diameter (in)</th>
<th>NPT Size (in)</th>
<th>Hex Size (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>⅜</td>
<td>⅛-27</td>
<td>⅞</td>
</tr>
<tr>
<td>⅔</td>
<td>⅝-18</td>
<td>⅜</td>
</tr>
<tr>
<td>⅞</td>
<td>⅞-24</td>
<td>⅞</td>
</tr>
<tr>
<td>⅛</td>
<td>⅛-14</td>
<td>⅜</td>
</tr>
</tbody>
</table>

Mounting Flange
The mounting flange option allows for easy mounting and specific positioning of the heater within an application.

Wire Pull
The Wire Pull assists in heater removal.

ADDITIONAL FEATURES (PLEASE CONTACT SALES)

1. Special Voltage and/or Wattage
2. Distributed Wattage
3. Special Lengths
4. Longer Leads
5. CIR Heaters with Type A Leads
6. Extra Fiberglass Sleevings
7. Type 3C Protective Spring
8. Type 4C Lead Abrasion Protection Straight Conduit
9. Type 5C Moisture Protection Straight Conduit
10. Type 6C Hermetic Seal Available with:
    - ⅛ heater
    - ¼ heater
    - ⅜ heater
11. Type 9CS Single-Ended Threaded Fitting
    - ⅛ Brass, Stainless Steel
    - ¼ Brass, Stainless Steel
    - ⅜ Brass, Stainless Steel
    - ⅞ Brass, Stainless Steel
12. Type 9CD Double-Ended Threaded Fitting
    - ⅛ Brass, Stainless Steel
    - ¼ Brass, Stainless Steel
    - ⅜ Brass, Stainless Steel
13. Type 10C Flanges
14. Type 11C Wire Pull
15. Type 12C Ceramic Bead Insulation
16. Type 13C Straight Stainless Steel Metal Braid
17. Type 14C Right Angle Leads
18. Type 15C Abrasion Protection Right Angle Conduit
19. Type 16C Moisture Protection Right Angle Conduit
20. Type 17C Right Angle with Stainless Steel Metal Braid
21. Type 18C Right Angle with Protective Spring
22. Type 19C Strain Relief Clip
23. Type 20C Post Terminals
24. Plug Caps for 4C, 5C, 15C and 16C Straight Blade Grounded:
    - #5266-C, P/N 221-511506-010, 15 amp 125V
    - #5466-C, P/N 221-511506-008, 20 amp 250V
    - Twist-Lock Grounded:
      - #4720-C, P/N 221-511556-005, 15 amp 125V
      - #4570-C, P/N 221-511556-006, 20 amp 250V
25. Epoxy End Seal
26. RTV End Seal