OVERVIEW
The Amphenol Class “L” heavy duty connectors are now available in a commercial version with new finishes. The Class L meets the demands for heavy duty & heavy power connectors that are critical for rugged environmental conditions.

DESIGN FEATURES OF AMPHENOL CLASS L CONNECTORS:
- New Finish (Alternate to Cadmium) - Durmalon is RoHS compliant and provides protection against 500 hours dynamic salt spray.
- Greatest Capacity - Current ranges 40 to 200 amps, conductor sizes 6 to 4/0.
- Safety - Complete protection of personnel and equipment if connectors are inadvertently disconnected under load.
- Foolproof Mating - Design incorporates voltage, current, frequency, phase and grounding requirements
- Standardization - MIL-DTL-22992 Class L insert arrangements specify connector/cable combinations for maximum reliability.
- Serviceable Contacts - Contacts are normally crimped to the cable before connector assembly. No insertion tools required. Bushings are available to adapt smaller diameter wires to larger contacts.
- Arc Quenching Design - Recessed socket contacts within the insert create an arc suppressing chamber which protects the user when connectors are separated under load.
- Programmed Coupling Sequence - Grounding and neutral contacts engage before power contacts.
- Waterproof Design - A unique combination of grommets and seals provides waterproofing in any condition - mated or un-mated, capped or uncapped.
- Accessories - Supplied with all Class L connectors as indicated on the individual connector descriptions. Replacement accessories may be ordered separately. Caps purchased separately.
### COMMERCIAL CLASS L
**MIL-DTL-22992-STYLE**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Configuration</th>
<th>Description</th>
<th>Reference</th>
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<tbody>
<tr>
<td><strong>Thermal Shock</strong></td>
<td>Unmated</td>
<td>Five complete on hour temperature cycles of –55°C to +125°C</td>
<td>MIL-STD-1344, method 1003, test condition A</td>
</tr>
<tr>
<td><strong>Moisture Resistance</strong></td>
<td>Mated</td>
<td>Ten complete 24 hour cycles of +25°C to +65°C temperature at 90% to 98% humidity</td>
<td>MIL-STD-202, method 106</td>
</tr>
<tr>
<td><strong>Durability</strong></td>
<td>Mated</td>
<td>500 complete mating/unmating cycles</td>
<td>MIL-DTL-22992</td>
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<tr>
<td><strong>Salt Spray (Corrosion)</strong></td>
<td>Unmated</td>
<td>48 hour exposure to atomized 5% saline solution at +35°C 500 hours for Durmalon plating</td>
<td>MIL-STD-1344, method 1001</td>
</tr>
<tr>
<td><strong>Vibration</strong></td>
<td>Mated</td>
<td>10 to 55 Hz...06 inch total excursion in 1 minute cycles for 6 hours, 55 to 2000 Hz, 10G peak amplitude sweep</td>
<td>MIL-STD-1344, method 2005</td>
</tr>
<tr>
<td><strong>High Impact</strong></td>
<td>Mated</td>
<td>Nine hammer blows from 1, 3 and 5 feet, three each in three axes on mounting panel</td>
<td>MIL-STD-202, method 207</td>
</tr>
<tr>
<td><strong>Heat Rise (Class L only)</strong></td>
<td>Mated</td>
<td>Maximum rated DC current for four hours at +25°C in still air</td>
<td>MIL-DTL-22992</td>
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<tr>
<td><strong>Fluid Immersion</strong></td>
<td>Unmated</td>
<td>20 hours immersion in hydraulic fluid and lubricating oil</td>
<td>MIL-DTL-22992</td>
</tr>
<tr>
<td><strong>Water Immersion</strong></td>
<td>Mated and Unmated</td>
<td>4 hours immersion at 1 atmosphere pressure differential</td>
<td>MIL-DTL-22992</td>
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### DURMALON FINISH
**DURMALON™ - AMPHENOL’S ANSWER TO EU RoHS/ELV/Cadmium Free Restrictions**

Commercial, industrial & military markets are rapidly moving away from restricted materials such as Cadmium (Cd) & Hexavalent Chromium (Cr(VI)). Both of these restricted materials are toxic and known carcinogens. Durmalon, like Olive-Drab Cadmium plating (Class W), meets 500 hours of dynamic salt spray, combined with 500 mating cycles and meets specified millivolt drop shell-to-shell conductivity. Durmalon has been proven to meet this requirement as well as Potassium Formate-Deicer fluid testing performed by Boeing.
# COMMERCIAL CLASS L

**MIL-DTL-22992-STYLE**

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<tbody>
<tr>
<td>CL90555</td>
<td>C</td>
<td>32</td>
<td>X</td>
<td>13</td>
<td>S</td>
<td>Y</td>
</tr>
</tbody>
</table>

*Commercial Numbers are supplied less protection caps and strain reliefs which can be added separately.

### 1. SELECT A COMMERCIAL NUMBER
- CL90555: Wall Mount Receptacle (Power Source)
- CL90556: Straight Plug
- CL90557: Cable Connecting Receptacle without Coupling Ring
- CL90558: Wall Mount Plug with Coupling Ring (Equipment End)

### 2. SELECT A SHELL FINISH*
- **C**: Conductive for AC circuits
- **N**: Non-conductive for DC circuits
- **D**: Durmalon: Nickel PTFE 500 hrs. salt spray

*Contact Amphenol for Black Zinc Nickel Availability

**Grounding Assemblies: Finish C**

**Non-grounding Assemblies: Finish N**

### 3. SELECT A SHELL SIZE
(RELATED DIRECTLY TO CURRENT CARRYING CAPABILITY)
- 28: 40 amperes
- 32: 60 amperes
- 44: 100 amperes
- 52: 200 amperes

### 4. SELECT AN ALTERNATE MASTER KEY/KEYWAY POSITION (IF NEEDED)
N designates normal position. Positions 1, 4, 5 and 6 of the master key/keyway prevent cross-mating of incompatible voltages.

### 5. SELECT AN INSERT ARRANGEMENT
Contact Amphenol or visit www.amphenol-aerospace.com for available insert arrangements for Class L connectors. Insert arrangements are determined by connector size (current carrying capability) and cable configuration to be accommodated.

### 6. SELECT A CONTACT TYPE
- **P**: Pin Contacts
- **S**: Socket Contacts

CL90555 and CL90557 are supplied with socket contacts only. CL90556 and CL90558 are supplied with pin contacts only.

### 7. SELECT AN ALTERNATE INSERT ROTATION IF NEEDED
Used to prevent cross-mating of incompatible frequencies. Absence of a letter in this space indicates Normal (0°) position of the insert.

Notice: Specifications are subject to change without notice. Contact your nearest Amphenol Corporation Sales Office for the latest specifications. All statements, information and data given herein are believed to be accurate and reliable but are presented without guarantee, warranty, or responsibility of any kind, expressed or implied. Statements or suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should assume that all safety measures are indicated or that other measures may not be required. Specifications are typical and may not apply to all connectors.

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