

# COMMERCIAL CLASS L

## MIL-DTL-22992



### OVERVIEW

The Amphenol Class “L” heavy duty connectors are now available in a lower cost 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 PROVIDE:

- **New Finishes (Alternate to Cadmium)- Black Zink Nickle and Durmalon are RoHS compliant and provide 500 hours dynamic salt spary.**
- 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.
- Rugged Construction - Machined from high strength aluminum. Straight-line attachment of accessories eliminates possibility of cable twisting or misalignment.
- Accessories - Supplied with all Class L connectors as indicated on the individual connector descriptions. Replacement accessories may be ordered separately.

### WALL MOUNT RECEPTACLE (POWER SOURCE)



### STRAIGHT PLUG



### CABLE CONNECTING RECEPTACLE WITHOUT COUPLING RING



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PDS-235-2

Condition	Configuration	Description	Reference
Thermal Shock	Unmated	Five complete one hour temperature cycles of -55°C to +125°C	MIL-STD-1344, method 1003, test condition A
Moisture Resistance (Cable mounted connectors)	Mated	Ten complete 24 hour cycles of +25°C to +65°C temperature at 90% to 98% humidity	MIL-STD-202, method 106
Durability	Mated	500 complete mating/unmating cycles	MIL-DTL-22992
Salt Spray (Corrosion)	Unmated	48 hour exposure to atomized 5% saline solution at +35°C	MIL-STD-1344, method 1001
Vibration	Mated	10 to 55 Hz, .06 inch total excursion in 1 minute cycles for 6 hours, 55 to 2000 Hz, 10G peak amplitude sweep	MIL-STD-1344, method 2005
High Impact	Mated	Nine hammer blows from 1, 3 and 5 feet, three each in three axes on mounting panel	MIL-STD-202, method 207
Heat Rise (Class L only)	Mated	Maximum rated DC current for four hours at +25°C in still air	MIL-DTL-22992
Fluid Immersion	Unmated	20 hours immersion in hydraulic fluid and lubricating oil	MIL-DTL-22992
Water Immersion	Mated and Unmated	4 hours immersion at 1 atmosphere pressure differential	MIL-DTL-22992

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1.	2.	3.	4.	5.	6.	7.
Commercial Number*	Shell Finish	Shell Size	Alternate Master Key/Keyway Position	Insert Arrangement	Contact Type	Alternate Insert Rotation
<b>CL90555</b>	<b>C</b>	<b>32</b>	<b>X</b>	<b>13</b>	<b>S</b>	<b>Y</b>

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

### 1. SELECT A COMMERCIAL NUMBER

<b>CL90555</b>	Wall Mount Receptacle (Power Source)
<b>CL90556</b>	Straight Plug
<b>CL90557</b>	Cable Connecting Receptacle without Coupling Ring
<b>CL90558</b>	Wall Mount Plug with Coupling Ring (Equipment End)

### 2. SELECT A SHELL FINISH

<b>C</b>	**Conductive for AC circuits
<b>N</b>	***Non-conductive for DC circuits
<b>D</b>	Durmalon: Nickle PTFE 500 hrs. salt spray
<b>Z</b>	Black Zinc Nickle: 500 hrs. salt spray

\*\*Grounding Assemblies: Finish C

\*\*\*Non-grounding Assemblies: Finish N

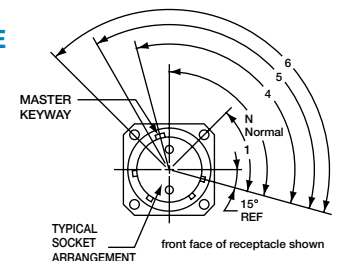
Shell Size	Current Rating Amps	Shell Master Key/Keyway Position							Shell Master Key/Keyway Position	
		60Hz & 400 Hz								DC
		1 Phase			3 Phase					
		2 Wire		3 Wire	3 Wire	4 Wire		2 Wire		
120 VAC	240 VAC	120/240 VAC	450/480 VAC	120/208 VAC	240/416 VAC	277/480 VAC	28 VDC			
28	40	4 (120°)	5 (135°)	4 (120°)	-	4 (120°)	5 (135°)	6 (150°)	N (105°)	
32	60	4 (120°)	5 (135°)	4 (120°)	-	4 (120°)	5 (135°)	6 (150°)	N (105°)	
44	100	4 (120°)	-	4 (120°)	1 (60°)	4 (120°)	5 (135°)	6 (150°)	N (105°)	
52	200	-	-	4 (120°)	-	4 (120°)	5 (135°)	6 (150°)	N (105°)	

### 3. SELECT A SHELL SIZE (RELATED DIRECTLY TO CURRENT CARRYING CAPABILITY)

<b>28</b>	40 amperes
<b>32</b>	60 amperes
<b>44</b>	100 amperes
<b>52</b>	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.



Note that insert arrangement does not rotate with master key/keyway

### 5. SELECT AN INSERT ARRANGEMENT

Contact Amphenol or visit [www.amphenol-aerospace.com](http://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

<b>P</b>	Pin Contacts
<b>S</b>	Socket Contacts

MS90555/CL90555 and MS90557/CL90557 are supplied with socket contacts only. MS90556 /CL90556 and MS90558/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.

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