

COMMERCIAL CLASS L

MIL-DTL-22992-STYLE



**WALL MOUNT RECEPTACLE
(POWER SOURCE)**

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.
- Rugged Construction - Machined from high strength aluminum. Straight-line attachment of accessories eliminates possibility of cable twisting or misalignment. Never Die-cast.
- Accessories - Supplied with all Class L connectors as indicated on the individual connector descriptions. Replacement accessories may be ordered separately. Caps purchased separately.



STRAIGHT PLUG



**CABLE CONNECTING
RECEPTACLE WITHOUT
COUPLING RING**



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| Condition | Configuration | Description | Reference |
|---|-------------------|--|---|
| Thermal Shock | Unmated | Five complete on 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 500 hours for Durmalon plating | 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 |



DURMALON FINISH

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PDS-235-3

| 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 |
| CL90555 | C | 32 | X | 13 | S | Y |

*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 |

NEW

*Contact Amphenol for Black Zinc Nickel Availability
**Grounding Assemblies: Finish C
***Non-grounding Assemblies: Finish N

Shell Master Key/Keyway Position

| Shell Size | Current Rating Amps | 60Hz & 400 Hz | | | | | | |
|------------|---------------------|---------------|----------|-------------|-------------|-------------|-------------|-------------|
| | | 1 Phase | | | 3 Phase | | | |
| | | 2 Wire | | 3 Wire | 3 Wire | 4 Wire | | |
| | | 120 VAC | 240 VAC | 120/240 VAC | 450/480 VAC | 120/208 VAC | 240/416 VAC | 277/480 VAC |
| 28 | 40 | 4 (120°) | 5 (135°) | 4 (120°) | – | 4 (120°) | 5 (135°) | 6 (150°) |
| 32 | 60 | 4 (120°) | 5 (135°) | 4 (120°) | – | 4 (120°) | 5 (135°) | 6 (150°) |
| 44 | 100 | 4 (120°) | – | 4 (120°) | 1 (60°) | 4 (120°) | 5 (135°) | 6 (150°) |
| 52 | 200 | – | – | 4 (120°) | – | 4 (120°) | 5 (135°) | 6 (150°) |

Shell Master Key/Keyway Position

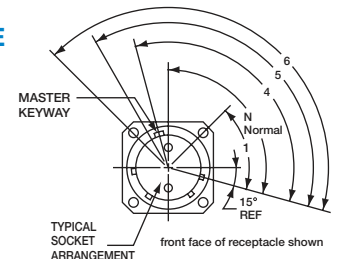
| Shell Size | Current Rating Amps | DC |
|------------|---------------------|------------------|
| | | 2 Wire 28 VDC |
| 28 | 40 | N (105°) |
| 32 | 60 | N (105°) |
| 44 | 100 | N (105°) |
| 52 | 200 | N (105°) |

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.



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

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.

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.

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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