

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

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.

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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

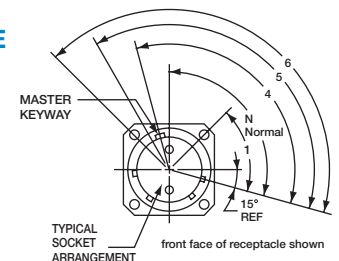
Shell Size	Current Rating Amps	DC
		2 Wire 28 VDC
28	40	N (105°)
32	60	N (105°)
44	100	N (105°)
52	200	N (105°)

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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