COMMERCIAL CLASS L

MIL-DTL-22992-STYLE

Amphenol Aerospace

PDS-235-3

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 seperatley.

WALL MOUNT RECEPTACLE (POWER SOURCE)

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 performaed by Boeing.

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1. Commercial Number*	2. Shell Finish	3. Shell Size	4. Alternate Master Key/Keyway Position	5. Insert Arrangement	6. Contact Type	7. 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
NEW	D	Durmalon: Nickel PTFE 500 hrs. salt spray

*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°)

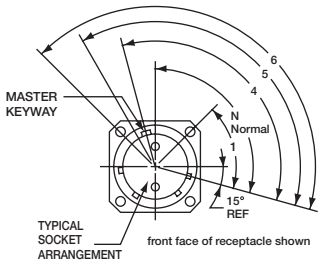
Shell Master Key/Keyway Position		
Shell Size	Current Rating Amps	DC 2 Wire 28 VDC
28	40	N (105°)
32	60	N (105°)
44	100	N (105°)
52	200	N (105°)

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

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.