Amphenol Commercial Class L MIL-DTL-22992

The Amphenol Class "L" heavy duty connectors are now available in a **lower cost** commercial version. 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:

- **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 unmated, 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.

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	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

Wall Mount Receptacle
(power source)

Straight Plug

Cable Connecting
Receptacle
without Coupling Ring

Wall Mount Plug with
Coupling Ring
(equipment end)

Contact Catalin Brandas for more information at cbrandas@amphenol-aao.com or call 607-563-5129

Easy Steps to build a part number... Commercial Class L Series

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	4	12	S	Y

Step 1. Select a Commercial Number

	Designates
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*)

Step 2. Select a Shell Finish

	Designates
C	Conductive for AC circuits
N	Non-conductive for DC circuits

Grounding Assemblies: Finish C

Shell Size	Current Rating Amps	Shell Master Key/Keyway Position						
		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°)

Non-grounding Assemblies: Finish N

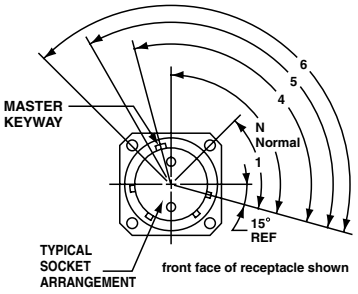
Shell Size	Current Rating Amps	Shell Master Key/Keyway Position
		DC
		2 Wire
		28 VDC
28	40	N (105°)
32	60	N (105°)
44	100	N (105°)
52	200	N (105°)

Step 3. Select a Shell Size - (related directly to current carrying capability)

	Designates Current Carrying Capability
28	40 amperes
32	60 amperes
44	100 amperes
52	200 amperes

Step 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

Step 5. Select an Insert Arrangement

Contact Amphenol or see catalog 12-C Edition 4 Circular Interconnects for available insert arrangements for Class L connectors. Insert arrangements are determined by connector size (current carrying capability) and cable configuration to be accommodated.

Step 6. Select a Contact Type

	Designates
P	Pin Contacts
S	Socket Contacts

MS90555/CL90555 and MS90557/CL90557 are supplied with socket contacts only. MS90556 /CL90556 and MS90558/CL90558 are supplied with pin contacts only.

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

Step 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. See catalog 12-C Edition 4 Circular Interconnects refer to page 466.

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