

Overview

NEMA is the National Electrical Manufacturers Association, a standards organization that defines a product, process or procedure with reference to one or more of the following:

- Nomenclature
- Operating characteristics
- Composition
- Performance
- Construction
- Ratings
- Dimensions
- Testing
- Tolerances
- The service for which it is designed
- Safety

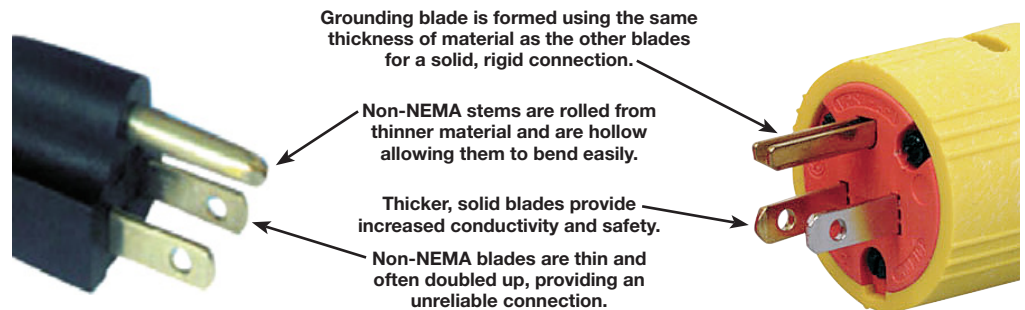
NEMA takes an existing product and makes it better. By developing new standards for design, safety, performance and reliability are greatly improved.

Not all plugs and connectors are NEMA-rated

NEMA-rated plugs are made to different standards. NEMA standards are “opt-in” by choice of a manufacturer. Some manufacturers choose to make their products to older standards and others to the newer NEMA standards. And although the non-NEMA-rated equipment still passes all recognized safety standards, it should only be used for repair of assemblies. When creating new assemblies, NEMA-rated plugs, connectors and recepticals should be used.

NEMA vs Non-NEMA

The main differences between NEMA and non-NEMA configurations are the blades and grounding stem on the plug and the connecting blades.



NEMA Alpha-Numeric Designation

Every plug and connector configuration has an alpha-numeric designation which refers to the shape and position of the blades. It is important to note that this designation applies to all plugs and connectors, even if it is not NEMA-rated as an assembly. If a NEMA-certified plug or connector is needed, please consult with the supplier to determine if the desired plug or connector is NEMA-rated as an assembly.

The following will explain the NEMA-designation nomenclature and how to decipher it:

N E M A **X** **5** - **15** **P**

Example: NEMA 5-15P is a 15A 125 V AC Plug

Indicates Plug or Receptacle

P	Plug
R	Receptacle or Socket

Indicates Standard Current Rating

15	Amps
20	Amps
30	Amps

Indicates the Voltage




















































































2	Indicates 115V AC, ungrounded for Class II connections
5	Indicates 125V AC, grounded for Class I connections
6	Indicates 250V AC, grounded for Class II connections
7	Indicates 227V AC, grounded for Class II connections
8	Indicates 480V AC, grounded for Class I connections
9	Indicates 600V AC, grounded for Class I connections
14	Indicates 125/250V AC, single phase, four wire, three pole
15	Indicates 250V AC, three phase, four wire, three pole
16	Indicates 480V AC, three phase, four wire, three pole
17	Indicates 600V AC, three phase, four wire, three pole
21	Indicates 120/208V AC, three phase, four wire, three pole
22	Indicates 277/480V AC, three phase, four wire, three pole
23	Indicates 347/600V AC, three phase, four wire, three pole

Indicates Locking or Non-Locking

L	Locking Device
Blank	Non-Locking Straight Blade

























































NEMA Configurations

NEMA Straight-Blade Plug and Receptacle Identification Table

		15 Amps		20 Amps		30 Amps		50 Amps		50 Amps	
		Receptacle	Plug	Receptacle	Plug	Receptacle	Plug	Receptacle	Plug	Receptacle	Plug
3 Pole, 2 Wire	125V										
	250V										
	277V	Reserved for Future Configurations									
	600V	Reserved for Future Configurations									
2 Pole, 3 Wire Grounding	125V										
	250 V										
	277V AC										
	247V AC										
	480V AC	Reserved for Future Configurations									
	600V AC	Reserved for Future Configurations									
2 Pole, 3 Wire	125/250V										
	3ø 250V										
	3ø 480V	Reserved for Future Configurations									
	3ø 600V	Reserved for Future Configurations									
3 Pole, 4 Wire Grounding	125/250V										
	3ø 250V AC										
	3ø 480V AC	Reserved for Future Configurations									
	3ø 600V AC	Reserved for Future Configurations									
4 Pole, 4 Wire	3øY 120/208V AC										
	3ø 480V AC	Reserved for Future Configurations									
	3ø 600V AC	Reserved for Future Configurations									
4 Pole, 5 Wire Grounding	3øY 120/208V AC	Reserved for Future Configurations									
	3øY 277/480V AC	Reserved for Future Configurations									
	3øY 347/600V AC	Reserved for Future Configurations									
	3øY 347/600V AC	Reserved for Future Configurations									










































NEMA Configurations (cont.)

NEMA Locking Device Identification Table

			15 Amps		20 Amps		30 Amps	
			Receptacle	Plug	Receptacle	Plug	Receptacle	Plug
2 Pole, 2 Wire	125V	ML1	ML-1R 	ML-1P 				
	125V	L1	L1-15R 	L1-15P 				
	250V	L2			L2-20R 	L2-20P 		
2 Pole, 3 Wire Grounding	125V	ML2	ML-2R 	ML-2P 				
	125V	L5	L5-15R 	L5-15P 	L5-20R 	L5-20P 	L5-30R 	L5-30P 
	250V	L6	L6-15R 	L6-15P 	L6-20R 	L6-20P 	L6-30R 	L5-60P 
	277V	L7	L7-15R 	L7-15P 	L7-20R 	L7-20P 	L7-30R 	L7-60P 
	480V AC	L8			L8-20R 	L8-20P 	L8-30R 	L8-60P 
	600V AC	L9			L9-20R 	L9-20P 	L9-30R 	L9-60P 
	28V DC	FSL1					FSL1 	FSL1 
	400 Hz 120V	FSL2					FSL2 	FSL2 
	3 Pole, 3 Wire	125/250V AC	ML3	ML-3R 	ML-3P 			
125/250V AC		L10			L10-20R 	L10-20P 	L10-30R 	L10-30P 
3?250V AC		L11	L11-15R 	L11-15P 	L11-20R 	L11-20P 	L11-30R 	L11-30P 
3?480V AC		L12			L12-20R 	L12-20P 	L12-30R 	L12-30P 
3?600V AC		L13					L13-30R 	L13-30P 

NEMA Configurations (cont.)

NEMA Locking Device Identification Table (cont.)

			15 Amps		20 Amps		30 Amps	
			Receptacle	Plug	Receptacle	Plug	Receptacle	Plug
3 Pole, 4 Wire Grounding	125/250V AC	L14			L14-20R 	L14-20P 	L14-30R 	L14-30P 
	3?250V AC	L15			L15-20R 	L15-20P 	L15-30R 	L15-30P 
	3?480V AC	L16			L16-20R 	L16-20P 	L16-30R 	L16-30P 
	3?600V AC	L17					L17-30R 	L17-30P 
	400 Hz 3? 120V	FSL3					FSL3 	FSL3 
4 Pole, 4 Wire	3?Y 120/208V AC	L18			L18-20R 	L18-20P 	L18-30R 	L18-30P 
	3?Y 277/380V AC	L19			L19-20R 	L19-20P 	L19-30R 	L19-30P 
	3?Y 347/600V AC	L20			L20-20R 	L20-20P 	L20-30R 	L20-30P 
4 Pole, 5 Wire Grounding	3?Y 120/208V AC	L21			L21-20R 	L21-20P 	L21-30R 	L21-30P 
	3?Y 277/480V AC	L22			L22-20R 	L22-20P 	L22-30R 	L22-30P 
	3?Y 347/600V AC	L23			L23-20R 	L23-20P 	L23-30R 	L23-30P 
	400 Hz 3?Y 120/208V	FSL4					FSL4 	FSL4 