



Guide to Worldwide Plug/Socket Patterns & Power Mains (Single-Phase)

The most frequently specified plug pattern for electrical or electronic equipment will appear in bold type. Note that the information provided for developing countries is not precise. The data given for single phase voltages and frequencies are nominal and are subject to a standard tolerance of 10%, but in some areas, particularly in developing countries, tolerances may be much greater. The information was compiled from several sources, including IEC at www.iec.ch, as well as the BSI publications “World Electricity Supplies” and “Electrical Plugs and Wiring.” Information current as of the time of publication. Subject to change without notification. Call our Customer Service Department for current information.

Country	Voltage	Freq/Hz	Pattern
Afghanistan	220	50	C1, E2, F1
Albania	230	50	C1, E1, E2, F1
Algeria	230	50	C1, E1, E2, F1
American Samoa	120	60	120V— A1, B1 240V— F1, I1
Andorra	230	50	C1, E2, F1
Angola	220	50	C1, E2, F1
Anguilla	110	60	A1, B1, D1, G1
Antigua & Barbuda	230	60	A1, B1, G1
Argentina	220	50	I1 , I7
Armenia	230	50	C1, E2, F1
Aruba	127	60	A1, B1 , C1, E2, F1
Australia	230	50	I1 , I2, I3
Austria	230	50	C1, E2, F1
Azerbaijan	220	50	C1, E2, F1
Bahamas	120	60	A1, B1 , B4
Bahrain	230	50	D1, G1
Bangladesh	220	50	D1, G1
Barbados	115	50	A1, B1 , B4
Belarus	220	50	C1, E2, F1
Belgium	230	50	C1, E2, F1
Belize	110/220	60	A1, B1 , B4, C1, G1
Benin	220	50	A1, C1, E2, F1
Bermuda	120	60	A1, B1 , B4
Bhutan	230	50	C1, D1 ,E2, F1, G1
Bolivia	115/230	50	A1, B1 , B4, C1
Bosnia & Herzegovina	230	50	C1, E2, F1
Botswana	230	50	D1 , G1
Brazil	127/220	60	A1, B1, B4, C1, N1 , N2
British Virgin Islands	110	60	A1, B1 , B4, G1
Brunei	240	50	D1, G1
Bulgaria	230	50	C1, E2, F1
Burkina Faso	220	50	C1, E1, E2, F1
Burundi	220	50	C1, E1, E2, F1
Cambodia	230	50	A1, C1, E2, F1, G1
Cameroon	220	50	C1, E1 , E2, F1
Canada	120	60	A1, B1 , B3, B4, B5
Canary Islands (Spain)	220	50	C1, E1, E2, F1
Canary Islands	220	50	C1, E1, E2, F1
Cape Verde	220	50	C1, E2, F1
Cayman Islands	120	60	A1, B1
Central African Republic	220	50	C1, E1, E2, F1
Chad	220	50	C1, E1, E2, F1
Channel Islands	240	50	C1, D1, E1, E2, F1, G1
Chile	220	50	C1, E1, F1, L1
China	220	50	I4 , I5
Christmas Island (Australia)	240	50	I1 , I2, I3
Cocos Island (Australia)	240	50	I1 , I2, I3
Colombia	110	60	A1, B1, C1, E2, F1
Comoros	220	50	C1, E2, F1
Congo, Republic of the	230	50	C1, E2, F1
Congo, Democratic Republic of	220	50	C1, E1, E2, F1
Cook Islands	240	50	I1 , I2, I3
Costa Rica	120	60	A1, B1, B4, G1
Cote d'Ivoire	230	50	C1, E1, E2, F1
Croatia	230	50	C1, E2, F1
Cuba	110	60	A1, B1, B4, C1, E2, F1
Curacao Island	110/220	60	A1, B1, B4, C1, E2, F1
Cyprus	240	50	D1, G1
Czech Republic	230	50	C1, E1, E2, F1
Denmark	230	50	C1, K1 , K2, K3
Djibouti	220	50	C1, E1, E2, F1
Dominica	230	50	D1, G1

Country	Voltage	Freq/Hz	Pattern
Ecuador	120	60	A1, B1 , B4
Egypt	220	50	C1, E2, F1
El Salvador	115	60	A1, B1, G1
Equatorial Guinea	220	50	C1, E1 , E2, F1
Eritrea	230	50	C1, E2, F1, I1
Estonia	230	50	C1, E2, F1
Ethiopia	220	50	C1, E1, E2, F1, L1, L2
Falkland Islands (Malvinas)	240	50	C1, G1
Faroe Islands	230	50	C1, E1, E2, F1, K1
Fiji	240	50	I1 , I2, I3
Finland	230	50	C1, E2, F1
France	230	50	C1, E1, E2
French Guiana	220	50	C1, E1, E2, F1
Gabon	220	50	C1, E1, E2, F1
Gambia	230	50	D1, G1
Georgia	220	50	C1, E2, F1
Germany	230	50	C1, E2, F1
Ghana	230	50	G1
Gibraltar	240	50	C1, D1, E1, E2, F1, G1
Greece	230	50	C1, E2, F1
Greenland	230	50	C1, K1 , K2, K3
Grenada	230	50	D1, G1
Guadeloupe	230	50	C1, E1, E2, G1
Guam	110	60	A1, B1 , B4
Guatemala	120	60	A1, B1, B4
Guinea	220	50	C1, E1, E2, F1
Guinea Bissau	220	50	C1, E2, F1
Guyana	240	60	A1, B1, D1, G1
Haiti	110	60	A1, B1, B4
Honduras	110	60	A1, B1 , B4
Hong Kong	220	50	D1, G1
Hungary	230	50	C1, E2, F1
Iceland	230	50	C1, E2, F1
India	230	50	D1, M1
Indonesia	220/110	50	C1, E1, E2, F1
Iran	220	50	C1, E2, F1
Iraq	230	50	C1, D1, E2, F1, G1
Ireland	230	50	G1 , G2
Isle of Man	240	50	D1, G1
Israel	230	50	C1, H1
Italy	230	50	C1, L1, L2
Jamaica	110	50	A1, B1 , B4, D1, G1
Japan	100	50/60	A2 , B2
Jordan	230	50	C1, D1, E2, F1, G1
Kazakhstan	220	50	C1, E2, F1
Kenya	240	50	D1, G1
Kiribati	240	50	I1
Korea, Republic of (South Korea)	220	60	A2, B2, B4, C1, E2, E3, F1
Kuwait	240	50	D1, G1
Kyrgyzstan	220	50	C1, E2, F1
Lao People's Democratic Republic (Laos)	230	50	A1, B1 , B4, C1, E1, E2, F1
Latvia	230	50	C1, E2, F1
Lebanon	220	50	A1, A2, C1, D1, E2, F1, G1
Lesotho	220	50	D1, G1

Country	Voltage	Freq/Hz	Pattern
Libya	127/230	50	C1, D1, E1, E2, F1, L1
Liechtenstein	230	50	C1, J1 , J2
Lithuania	220	50	C1, E2, F1
Luxembourg	230	50	C1, E2, F1
Macau	220	50	D1 , E2, F1, G1
Macedonia	230	50	C1, E2, F1
Madagascar	127/220	50	C1, E1 , E2
Malawi	230	50	G1
Malaysia	240	50	D1, G1
Maldives	230	50	A1, C1, D1, G1 , J1, K1, L1
Mali	220	50	C1, E1, E2, F1
Malta	230	50	G1
Martinique	220	50	C1, E1, E2, F1
Mauritania	220	50	C1, E2, F1
Mauritius	230	50	C1, G1
Mexico	127	60	A1, B1 , B3, B4, B5
Micronesia, Federated States of	120	60	A2, B2
Moldova	220	50	C1, E2, F1
Monaco	230	50	C1, D1, E1, E2, F1
Mongolia	220	50	C1, E1, E2, F1
Montenegro	230	50	C1, E2, F1
Montserrat	230	60	A1, B1, G1
Morocco	127/220	50	C1, E1, E2, F1
Mozambique	220	50	C1, D1, E2, F1
Myanmar	230	50	C1, D1, E2, F1, G1
Namibia	220	50	D1, G1
Nauru	240	50	I1 , I2, I3
Nepal	230	50	C1, D1 , E2, F1, G1
Netherlands Antilles	230	50	C1, E2, F1
New Caledonia	220	50	C1, E1, E2, F1
New Zealand	230	50	I1 , I2, I3
Nicaragua	120	60	A1, B1 , B4
Niger	220	50	A1, B1, C1, D1, E1, E2, F1
Nigeria	230	50	D1, G1
Norway	230	50	C1, E2, F1
Oman	240	50	C1, G1
Pakistan	230	50	C1, D1, E1, E2, F1
Palau	120	60	A1, B1
Panama	110	60	A1, B1 , B4
Papua New Guinea	240	50	I1 , I2, I3
Paraguay	220	50	C1, E2, F1
Peru	220	60	A1, B1, C1, E2, F1
Philippines, Rep. of the	220	60	A1, B1, B4, C1
Pitcairn Island (UK)	240	50	D1
Poland	230	50	C1, E1, E2, F1
Portugal	230	50	C1, E2, F1
Puerto Rico	120	60	A1, B1 , B4
Qatar	240	50	D1, G1
Reunion	220	50	C1, E1 , E2
Romania	230	50	C1, E2, F1
Russia	220	50	C1, E2, F1
Rwanda	230	50	C1, E2, F1, J1
Saint Kitts and Nevis	230	60	D1, G1
Saint Lucia	240	50	G1
Saint Martin	120/220	60	C1, E2, F1

Country	Voltage	Freq/Hz	Pattern
Saint Pierre & Miquelon (Fr.)	115	60	A1, B1, B4, C1, E1, E2, F1
Samoa	230	50	I1 , I2, I3
San Marino	230	50	C1, E2, F1, L1
Sao Tome & Principe	220	50	C1, E2, F1
Saudi Arabia	127/220	60	A1, B1, G1
Senegal	230	50	C1, E1, E2, F1
Serbia	230	50	C1, E2, F1
Seychelles	240	50	D1, G1
Sierra Leone	230	50	D1, G1
Singapore	230	50	D1, G1
Slovakia	230	50	C1, E1, E2, F1
Slovenia	230	50	C1, E2, F1
Solomon Islands	220	50	C1, E2, F1, G1 , I1 , I2, I3
Somalia	220	50	C1, E1, E2, F1
South Africa	230	50	D1, N3
Spain	230	50	C1, E1, E2, F1
Sri Lanka	230	50	D1, G1
Sudan	230	50	C1, D1, G1
Suriname	127	60	A1, B1, C1, E2, F1
Svalbard (Norway)	220–240	50	C1, E2, F1
Swaziland	230	50	D1, G1
Sweden	230	50	C1, E2, F1
Switzerland	230	50	C1, J1 , J2
Syrian Arab Republic	220	50	C1, E1, E2, F1, L1
Tahiti	220	60	A1, B1, B4, C1, E1, E2, F1
Taiwan	110	60	A2, B2 , I1, I4
Tajikistan	220	50	C1, E2, F1
Tanzania	230	50	D1, G1 , O1, P1
Thailand	220	50	A1, B1, B4, C1, E2, F1, H2
Timor-Leste (East Timor)	220	50	C1, E1, E2, F1, I1
Togo	220	50	C1, E1, E2, F1
Tonga	240	50	I1 , I2
Trinidad & Tobago	115	60	A1, B1, B4
Tunisia	230	50	C1, E1, E2, F1
Turkey	230	50	C1, D1, E2, F1, G1
Turkmenistan	220	50	B1, C1, E2, F1
Turks & Caicos Islands	120	60	A1, B1
Tuvalu	220	50	I1 , I2, I3
Uganda	240	50	D1, G1
Ukraine	220	50	C1, E2, F1
United Arab Emirates	230	50	C1, D1, G1
United Kingdom	230	50	D1, G1
United States, Virgin Islands	110	60	A1, B1, B4
United States of America	120	60	A1, B1 , B3, B4, B5
Uruguay	230	50	C1, E2, F1, I1 *, L1, L2
Uzbekistan	220	50	C1, E2, F1 , I1
Vanuatu	220	50	C1, E2, F1, G1 , I1
Venezuela	120	60	A1, B1, B4, C1, E2, F1
Vietnam	220	50	A1, B1 , B4, C1, E1, E2, F1
Yemen	230	50	D1, G1
Zambia	230	50	C1, D1 , E2, F1, G1
Zimbabwe	220	50	D1, G1
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Guide to Worldwide Plug/Socket Patterns & Power Mains (Single-Phase)



A1 15A/125V North America It is common to use a NEMA 5-15 socket with a NEMA 1-15 plug. standard: ANSI/NEMA WD 6 plug type: NEMA 1-15 plug: not available socket: 88212100 cord set: 86222105 or 8622285	B5 20A/250V North America standard: ANSI/NEMA WD 6 plug type: NEMA 6-20 plug: 88030180 socket: 88030030 or 88251100 cord set: 86226100	B11 30A/250V North America standard: ANSI/NEMA WD 6 plug type: NEMA L6-30 plug: 88030310 socket: 88030040 cord set: not available	E2 10A France/Belgium standard: IEC 60083 plug type: CEE 7/17 Class II socket type: CEE 7/5 plug: not available socket: 88010550 cord set: 86532200	H1 16A Israel standard: SI 32 plug: 88010781 socket: not available cord set: 86275010	I4 10A China standard: GB 1002 plug: 88040250 socket: 88040260 cord set: 86272010	J2 16A Switzerland standard: SN 441011 plug type: 23 plug: not available socket: 88011030 cord set: 86285110	L2 16A Italy standard: CEI 23-50 plug type: S17 plug: 88010873 socket: 88010672 cord set: 86260060
A2 15A/125V Japan It is common to use a Class I socket with a Class II plug. standard: JIS C 8303 plug type: JIS C 8303 Class II plug: not available socket: 88040350 cord set: 86277010	B6 15A/125V North America standard: ANSI/NEMA WD 6 plug type: NEMA L5-15 plug: 88030240 socket: 88030490 cord set: not available	B12 30A 125/250V North America standard: ANSI/NEMA WD 6 plug type: NEMA L14-30 plug: 88030760 socket: not available cord set: not available	E3 16A/250V Korea plug type: KSC8305 & KC6084-1 plug: not available socket: not available cord set: 86263010	H2 16A Thailand standard: TIS 166-2549 plug: not available socket: not available cord set: not available	I5 16A China standard: GB 1002 plug: not available socket: 88040360 cord set: 86272230	K1 16A Denmark standard: Afsnit 107-2-D1 plug type: DK-2-1A plug: 88010741 socket: 88010541 cord set: 86280010	M1 16A India/South Africa India: standard: IS 1293 plug: not available socket: not available cord set: 86559050 South Africa: standard: SANS 164-1 plug: 88010764 socket: 88010562 cord set: 86265070
B1 15A/125V North America standard: ANSI/NEMA WD 6 plug type: NEMA 5-15 plug: 88030100 socket: 88212100 cord set: 70401020244	B7 15A/250V North America standard: ANSI/NEMA WD 6 plug type: NEMA L6-15 plug: 88030220 socket: 88030660 cord set: not available	B15 30A 120/208V North America standard: ANSI/NEMA WD 6 plug type: NEMA L21-30 plug: 88030680 socket: 88031250 cord set: not available	F1 16A Continental European standard: IEC 60083 plug type: CEE 7/7 socket type: CEE 7 plug: 88010801 socket: 88052011 cord set: 86230110	I1 10A Australia standard: AS/NZS 3112 plug: 88010713 socket: 88010512 cord set: 86210720	I6 10A Argentina standard: IRAM 2073 plug: 88040270 socket: 88040290 cord set: 86270010	K2 16A Denmark (Medical) standard: Afsnit 107-2-D1 plug type: DK-2-8A plug: 88010940 socket: not available cord set: 86280810	N1 10A Brazil standard: NBR 14136 plug: 88040200 socket: 88040340 cord set: 86286110
B2 15A/125V Japan standard: JIS C 8303 plug: not available socket: 88040350 cord set: 86277160	B8 20A/125V North America standard: ANSI/NEMA WD 6 plug type: NEMA L5-20 plug: 88030140 socket: 88030510 cord set: not available	C1 2.5A Europlug standard: IEC 60083 plug type: CEE 7/16 plug: 88040030 socket: see K1, E1, E2, J1, L1, L2 cord set: 86234020	G1 13A United Kingdom standard: BS 1363 plug: 88040011 socket: 88010621 cord set: 86240150	I2 15A Australia standard: AS/NZS 3112 plug: 88010450 socket: 88010441 power cord 86210250	I7 20A Argentina standard: IRAM 2073 plug: not available socket: not available cord set: 86270350	K3 16A Denmark (Data) standard: Afsnit 107-2-D1 plug type: DK-2-5A plug: not available socket: 88011040 cord set: not available	N2 20A Brazil standard: NBR 14136 plug: 88040300 socket: 88040340 cord set: 86286510
B3 20A/125V North America standard: ANSI/NEMA WD 6 plug type: NEMA 5-20 plug: 88030120 socket: 88030330 or 88231100 cord set: 86226020	B9 20A/250V North America standard: ANSI/NEMA WD 6 plug type: NEMA L6-20 plug: 88030160 socket: 88030530 cord set: not available	D1 6A India/South Africa India: standard: IS1293 plug: not available socket: not available cord set: not available South Africa: standard: SANS 164-1 plug: not available socket: not available cord set: not available	G2 13A United Kingdom (Data) standard: BS 1363 plug: 88010470 socket: 88010460 cord set: not available	I3 20A Australia standard: AS/NZS 3112 plug: 88010455 socket: not available cord set: not available	J1 10A Switzerland standard: SN 441011 plug type: 12 plug: 88010732 socket: 88010530 or 88052041 cord set: 86285010	L1 10A Italy standard: CEI 23-50 plug type: S11 plug: 88010772 socket: 88010572 cord set: 86394000	N3 16A South Africa standard: SANS 164-2 plug: not available socket: not available cord set: not available
B4 15A/250V North America standard: ANSI/NEMA WD 6 plug type: NEMA 6-15 plug: 88030200 socket: 88030450 or 88241100 cord set: 86610100	B10 30A/125V North America standard: ANSI/NEMA WD 6 plug type: NEMA L5-30 plug: 88031070 socket: not available cord set: not available	E1 16A France/Belgium standard: IEC 60083 plug type: CEE 7/7 plug: 88010801 socket: 88010550 cord set: 86230110					