

# The World-Wide Voltage/Frequency Guide

Country	Freq.	Voltage	
		Single Phase	3-phase
Afghanistan	50	220	220/380
Algeria	50	127/220	220/380
Angola	50	220	220/380
Antigua	50	230	230/400
Argentina	50	220	220/380
Australia	50	240	240/415
Austria	50	220	220/380
Azores	50	220	220/380
Bahamas	60	120	120/208
Bahrain	60		
Bangladesh	50	230	230/400
Babados	50	110/220	120/208
Belgium	50	127/220.115/200	220/380
Bermuda	60	115/230	230
Bolivia	60	115/230	220/380
Botswana	50	220	220/380
Brazil	50/60	110/220/127	220/380
Bulgaria	50	220	220/380
Burma	50	230	230/440
Burundi	50	220	220/380
Cambodia	50	120	220/380
Cameroon	50	127/220	220/380
Canada	60	120/240.110/120.115/230	220/240.480
Canary Island	50	127/220	220/380
Central Africa Rep.	50	220	220/380
Ceylon	50	230	230/400
Chad	50	220	220/380
Channel Island	50	240	240/415
Chile	50	220	220/380
China Peoples Rep.	50	220	220/380
Colombia	60	110/220	220
Congo	50	220	220/380
Costa Rica	60	120/240	240
Cuba	60	115/120	
Cyprus	50	240	240/415
Czechoslovakia	50	120/240	220/380
Dahomey	50	220	220/380
Denmark	50	220	220/380
Dominican Rep.	60	110/220	220/220/440
Dubai	50	220	
England	50	220/240	415/346
Ecuador	50	120/127	208/220
Egyptian Arab Rep.	50	220	220/380

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		Single Phase	3-Phase
El Salvador	60	110/220.115	220/230
Equatorial Guinea	50	220	
Ethiopia	50	220	220/380
Faeroe Island	50	220	220/380
Fiji	50	240	240/415
Finland	50	220	220/380
France	50	115/220.127	220/380
Gabon	50	220	220/380
Gambia	50	230	220/400
Germany Federal Rep	50	110/220	220/380
Ghana	50	220	220/400
Gibraltar	50	240	240/415
Great Britain	50		
Greece	50	220	220/380
Greenland	50	220	200/380
Guam	60	110	
Grenada	50	220	220/400
Guatemala	60	120/127/220	200/240
Guinea	50	220	200/380
Gayana	50	110/200	220
Haita	60	110/220	220
Hawaii	60	120	
Honduras	60	110/220	220
Hong Kong	50	200/230	346.220/380
Hungary	50	230	220/380
Iceland	50	220	220/380
India	50	230	220/380.230/400
Iran	50	110/220	220/380
Iraq	50	220	220/380
Ireland	50	220	200/380
Isle of Man	50	240	240/415
Israel	50	230	230/400
Italy	50/60		220/380
Indonesia	50		220/380
Ivory Coast	60	220	200/380
Jamaica	60	110/220	200
Japan	60	100/200	220
Jordan	50	220	220/380
Kenya	50	240	240/415
Korea Rep.	50	110/200	200.220/380
Kuwait	50	220/240	220/380.415
Lebanon	50	110/190.110/220	220/380

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		Single Phase	3-Phase
Lesotho	50	220	220/380
Liberia	60	120/240.208	208/240/440
Libya	50	127/220	220/230/400
Luxembourg	50	120/208	220/380
Laos	50		220/380
Macao	50	115/220.107/220	220/380
Madeiral	50	220	220/380
Majokca Isiand	50	127/220	220/380
Malagasy Rep.	50	127/220	220/380
Malawi	50	230	220/400
Malaysia	50	115/240.230	240/415.400/440
Mali Rep.	50	220	220/380
Malta	50	240	240/415
Martinique	50	220	220/380
Mauritania	50	220	220
Mauritius	50	230	230/400
Mexico	60	110/220.120/127	208/220
Monaco	50	127/220	220/380
Montserrat	60	230	230/400
Morocco	50	115/200.220	220/380
Mozambique	50	220	220/380
Nepal	50	230	230/440
Netherlands	50	110/220	220/380
New Caledonia	50	220	220/380
New Zealand	50	230	230/400
Nicaragua	60	120/240	240
Niger	50	220	220/380
Nigeria	50	230	230/400
Norway	50	230	230
Okinawa	60	120/240.100/200	230 200
Oman	50	220	220/400
Pakistan	50	230	230/400.220/380
Panama	60	110/220/120	220/240
Paraguay	50	220	220
Peru	60	220	220
Philippines	60	115/230	220
Poland	50	220	220/380
Portugal	50	110/190/220	220/380
Puerto Pico	60	120/240	240
Qatar	50	240	240/415
Rhodesia	50	220/230	220/380.230/400
Romania	50	220	220/380
Rwanda	50	220	220/380

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		Single Phase	3-Phase
Saudi Arabia	50/60	120/208.127/220	220/380.230/400.415
Scotland	50	240	240/415
Senegal	50	110/220	220
Sierra Leone	50	220	220/440
Singapore	50	115/230.240	230/400.415/440
Somalia	50	110/220	220/380
South Africa	50	220/230	220/380.230/400
Spain	50	127/220	220/380
Sri Lanka	50	230	220/400
Sudan	50	240	240/415
Surinam	60	110/220.115/230.127	220/230
Swaziland	50	230	230/400
Sweden	50	120/127/220	220/380
Switzerland	50	220	220/380
Syria Arab Rep	50	115/200	220/380
Tahiti	60	127/220	220
Taiwan	60	110/220	220
Tazania	50	230	230/400
Thailand	50	220.110/220	220/380
Togo Rep. of	50	127/220	220/380
Tonga	50	240	240/415
Trinidad	60	115/230.127/220	230/400.220
Tobago	60	115/230.127/220	230/400.220
Tunisia	50	127/220	220/380
Turkey	50	127/230.220	220/380
Uganda	50	240	240/415
USA	60	120/240	240/480
USSR	50	127/220	220
United Kingdom	50	240	240/415
Upper Volta Rep.of	50	220/230	220/380
Uruguay	50	220	220
Venezuela	60	120/240	240
Viet-Nam	50	120/240	220/380
Virgin Island	60	120/240	240
Western Samoa	50	230	230/400
Yemen(Aden)	50	230	230/400
Yemen(Arab)	50	220	220
Yugoslavia	50	220	220/380
Zaire Rep. of	50	220	220/380
Zambia	50	220	220/380