



# Country Fact Sheet Motors

## USA



Regional Characteristics											
Voltage	3 ~ 460V ± 10% 1 ~ 208V ± 10%										
Frequency	60 Hz										
<b>Approval Mark</b>	<b>UL recognized or UL listed</b>										
Standard	UL 1004										
Scope	Not mandatory but strict market requirement due to insurance and employer safety reasons. Proofs the accordance with UL standards and verifies product testing regarding safety aspects like flammability.										
Marking	 (for components) or  (for devices)										
<b>Energy Efficiency</b>	<b>UL energy verified</b>										
Regional Standard	UL 1004										
Regulation	DOE 10 CFR Part 431										
Mandatory Efficiency Class	Premium (equates to IE3)										
Scope	<ul style="list-style-type: none"> <li>- Rated output power from 1HP (0.75 kW) up to 500 HP (375 kW)</li> <li>- Rated voltage up to 600 V</li> <li>- Rated frequency 50 and 60 Hz</li> <li>- 2-, 4-, 6- and 8-pole</li> <li>- For continuous duty operation</li> </ul>										
Exemptions	<ul style="list-style-type: none"> <li>- Intermittent duty like S3 or S6 (duty factor &lt;80%)</li> <li>- Exclusively suitable for inverter operation</li> <li>- Motors for heavy environmental conditions like ambient temperature above +60°C or below -30°C, installation altitude above 4000m</li> <li>- Pole-changeable motors</li> </ul>										
Marking	<ul style="list-style-type: none"> <li>- IE3 Energy Efficiency Level</li> <li>- CC-number of US Department of Energy</li> </ul>										
Solutions from Lenze											
Three-phase AC motors	<table border="0"> <tr> <td>0.12 ... 0.55 kW</td> <td>m550-H IE2-high efficiency motors</td> </tr> <tr> <td>0.75 ... 22.0 kW</td> <td>m550-P IE3-premium efficiency motors</td> </tr> <tr> <td>30.0 ... 55.0 kW</td> <td>m540-P IE3-premium efficiency motors</td> </tr> <tr> <td>0.55 ... 22.0 kW</td> <td>MF inverter-optimized AC motors</td> </tr> <tr> <td>0.47 ... 1.36 kW</td> <td>m300 Lenze Smart Motors</td> </tr> </table>	0.12 ... 0.55 kW	m550-H IE2-high efficiency motors	0.75 ... 22.0 kW	m550-P IE3-premium efficiency motors	30.0 ... 55.0 kW	m540-P IE3-premium efficiency motors	0.55 ... 22.0 kW	MF inverter-optimized AC motors	0.47 ... 1.36 kW	m300 Lenze Smart Motors
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