

Technical specifications

Overview of technical specifications 1TZ9

This table lists the most important technical specifications.

Type of motor	IEC Low-Voltage Motors
Connection types	Star connection/delta connection.
Number of poles	2, 4, 6, 8
Frame sizes	71 M ... 315 L
Rated output	0.18 ... 315 kW
Frequencies	50 Hz and 60 Hz
Versions	<ul style="list-style-type: none"> • IE1 (Standard Efficiency) • IE2 (High Efficiency) • IE3 (Premium Efficiency) <p>Forced-air cooled 1TZ9 motors without external fan and fan cover with:</p> <ul style="list-style-type: none"> • IE1 (Standard Efficiency) • IE2 (High Efficiency) <p>Naturally cooled 1TZ9 motors without external fan and fan cover with:</p> <ul style="list-style-type: none"> • IE1 (Standard Efficiency) • IE2 (High Efficiency)
Marking	IEC 60034-30 IE1, IE2, IE3: 2, 4 and 6-pole US Energy Independence Security Act EISA: 2, 4, 6 and 8-pole
Rated speed (synchronous speed)	750 ... 3000 rpm
Rated torque	2.6 ... 2020 Nm (1TZ9 motor series)
Insulation of the stator winding in accordance with EN 60034-1 (IEC 60034-1)	Temperature class 155 (F), utilized acc. to temperature class 130 (B) (also for motors with increased output) DURIGNIT IR 2000 insulation system
Degree of protection according to EN 60034-5 (IEC 60034-5)	<ul style="list-style-type: none"> • Self-ventilated (1TZ9 motor series) frame size 80 M to 315 L (IC 411), • Forced-air cooled (1TZ9 motor series with order code F90) frame size 80 M to 160 L (IC 418) • Naturally cooled (1PC1 motor series) frame size 100 L to 160 L (IC 410)
Admissible coolant temperature and site altitude	-20 ... +40 °C as standard, site altitude up to 1000 m above sea level.
Vibration severity level according to EN 60034-14 (IEC 60034-14)	Level A (normal – without special vibration requirements) Optionally: level B (with special vibration requirements)
Shaft extension according to DIN 748 (IEC 60072)	Balance type: half-key balancing as standard
Sound pressure level according to DIN EN ISO 1680 (tolerance +3 dB)	The sound pressure level is listed in the selection and ordering data for the required motor.
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Modular mounting concept	Rotary pulse encoder, brake, separately driven fan or prepared for mountings
Consistent series concept	<ul style="list-style-type: none"> • Cast housing feet, screwed-on feet available as an option and retrofittable • Terminal box obliquely partitioned and rotatable through 4 x 90°