Product Research Report: Siemens 1LA9166-2LA91-ZT30

1. Product Name

Siemens 1LA9 Series AC Induction Motor 1LA9166-2LA91-ZT30

2. SEO Keywords

- Siemens 1LA9 motor
- 1LA9166-2LA91-ZT30
- Siemens induction motor
- Siemens AC motor 160 frame
- Siemens Simotics GP motor
- Siemens IE2 motor 15kW
- Siemens industrial motor 2-pole

3. Category

[new] Motor -> Siemens

4. Product Introduction

Series#: Motor -> Siemens
- Siemens 1LA9166-2LA91-ZT30 AC Induction Motor
- We have large inventory for Siemens 1LA9 Series AC Induction Motors, Siemens Simotics GP motors and related accessories.
- 100% Original and new, In stock by Eaton Company.
- Delivery time: Ready in stock and 1 days for ship out
- MOQ: 1pcs

5. Brand & Model

model：1LA9166-2LA91-ZT30
brand：Siemens

6. Service & Applications

The Siemens 1LA9166-2LA91-ZT30 is a 2-pole squirrel-cage AC induction motor from the 1LA9 series, designed for general industrial applications. This motor delivers 15 kW (20 HP) rated power at 400V/690V (Delta/Star), with a nominal speed of approximately 2930-2970 rpm at 50Hz. It features IP55 protection, IC411 self-ventilated cooling, and Class F insulation with Class B temperature rise. The IM B3 foot-mounted design with a 160mm shaft height ensures compatibility with standard pump, fan, compressor, and conveyor installations. The Z-code suffix indicates factory-special options which may include specific bearing arrangements, special grease, or tropicalization coatings — always verify against the physical nameplate before commissioning.

7. Specifications Table

Feature	Specification
Manufacturer	Siemens
Series	1LA9 (Simotics GP equivalent)
Frame Size	160
Number of Poles	2
Motor Type	Squirrel-Cage Induction Motor
Rated Power	15 kW (20 HP)
Rated Voltage	400V Δ / 690V Y
Rated Current @400V	~28.5 A
Rated Current @690V	~16.5 A
Frequency	50 Hz
Speed	2930 - 2970 rpm
Efficiency Class	IE2 / IE3 (varies by production year)
Power Factor (cos φ)	~0.88
Construction Type	IM B3 (Foot mounting)
Shaft Height	160 mm
Shaft Diameter	~42 mm
Degree of Protection	IP55
Cooling Method	IC411 (Self-ventilated)
Insulation Class	F (Temperature rise limited to Class B)
Ambient Temperature	-20°C to +40°C
Max Altitude	1000 m (without derating)
Duty Cycle	S1 (Continuous running)
Special Code	-Z: Factory specials; T30: Application-specific configuration

8. FAQ

Q: What is the rated power of the Siemens 1LA9166-2LA91-ZT30 motor?
A: The rated power is 15 kW (approximately 20 HP) at 50Hz, 400V.

Q: What does the "Z" suffix mean in 1LA9166-2LA91-ZT30?
A: The "-Z" indicates factory-special options that deviate from the standard catalog motor. "T30" is an internal specification code that may refer to specific bearing arrangements, special grease, or tropicalization. The exact meaning requires the original order confirmation or physical nameplate.

Q: What are the physical dimensions and mounting type?
A: It uses IM B3 foot-mounted construction with a 160mm shaft height. The shaft diameter is approximately 42mm.

Q: What is the protection rating of this motor?
A: IP55 — dust-tight and protected against water jets.

Q: Can this motor be used with a Variable Frequency Drive (VFD)?
A: Yes, the insulation is Class F rated. However, the "T30" code may specifically include provisions for VFD operation (such as insulated bearings). Verify the nameplate and documentation before VFD use.

Q: What is the efficiency class of this motor?
A: IE2 standard, with some production batches potentially reaching IE3 depending on the manufacturing year.

Q: What applications is this motor suitable for?
A: Pumps, fans, compressors, conveyor systems, and general industrial machinery requiring continuous duty (S1) operation.