

# All The Options – No Costly Extras



## Lenze - AC Tech POSITIONServo - The simple servo solution.

PositionServo offers a cost effective solution to everyday servo applications. The family of servo drives provides high resolution 64-bit indexing and can be matched with a range of quality Lenze - AC Tech servomotors to create a user-friendly and highly competitive servo package. Designed and manufactured to satisfy global standards for performance and interconnectivity, **PositionServo is in a world class of its own.**

### Power

80 – 528 VAC input, up to 7.5kW output  
2 – 18 Amps continuous rms current output  
300% overload, peak current

### Motor Solutions

Synchronous servo motors  
Asynchronous induction motors  
Encoder or resolver feedback

### EPM Memory Chip - OEM Magic

All PositionServo drives offer the benefits of the EPM, a rugged memory chip that plugs directly into the drive, cutting programming time to seconds. An EPM programming module allows drive parameters to be instantly copied onto the chip, and once plugged in, the EPM ensures the drive is ready to run without being powered up. OEM manufacturers can speed-up production and suppliers can provide effective low-cost product support.

**Lenze**  
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[www.Lenze-ACTech.com](http://www.Lenze-ACTech.com)

## Specifications

### Inputs/Outputs:

- All I/O is optically isolated
- 12 Digital inputs (5-24 VDC)
  - including 1 high-speed (2  $\mu$ s)
- 5 Digital Outputs (5-24 VDC @ 15 mA)
- 2 Analog Inputs ( $\pm 10$  V differential, 16-bit and 10-bit)
- 1 Analog Output ( $\pm 10$  V single-ended, 10-bit)

### Feedback:

- Encoder: Up to 2 MHz
- Resolver: 12-bit resolution

### Pulse Width Modulation:

- Chopper Frequency: 8 or 16 kHz

### Modes of Operation:

- Torque, Velocity, Position
- Full-featured motion control
- Internal or External reference

### Programming Tools:

- Free MotionView® software
- Single-step execution capability
- Breakpoints
- I/O Status and variable WATCH window
- “Real-time” Oscilloscope
- EVENT handler
- Fault monitor

### Scan Rate:

- 512 $\mu$ s EVENT handler (deterministic)
  - 3 $\mu$ s reaction to registration mark (Encoder)
  - 7 $\mu$ s reaction to registration mark (Resolver)
  - 1 $\mu$ s per step/instruction (depending on program length)

### User Program Memory:

- Up to 25KB for user compiled program
- Removable memory chip (EPM)
- Non volatile parameter set

### Motion:

- 64-bit indexing (incremental, absolute, registered, segmented)
- 32-level motion queue
- Linear and S-curve accel and decel

### Index Profiles:

- Trapezoidal, multi-segment, S-curve, multi-segment with S-curve

### Serial Communications:

- Standard: Ethernet Modbus TCP/IP, Ethernet IP

### Optional:

- RS485 Modbus RTU @ 115/38.4 KBPS (addressable to 32 devices)
- CANopen DS301 V4.02 250/500/1000 KBPS
- DeviceNet
- PROFIBUS DP
- Ethernet/IP

## Electrical Characteristics

### Single-Phase Models

Type Type <sup>(1)(2)</sup>	Mains Voltage <sup>(3)</sup>	1 $\emptyset$ Mains Current (doubler)	1 $\emptyset$ Mains Current (Std)	Rated Output Current	Peak Output Current <sup>(6)</sup>
E94_020S1N_X	120V <sup>(4)</sup> or 240V	9.7	5.0	2.0	6.0
E94_040S1N_X		16.8	8.6	4.0	12.0
E94_020S2F_X	120 / 240V <sup>(5)</sup> (80V -0%...264 V +0%)	—	5.0	2.0	6.0
E94_040S2F_X		—	8.6	4.0	12.0
E94_080S2F_X		—	15.0	8.0	24.0
E94_100S2F_X		—	18.8	10.0	30.0
E94_120S2F_X		—	24.0	12.0	36.0

### Single/Three-Phase Models

Type Type <sup>(1)(2)</sup>	Mains Voltage <sup>(3)</sup>	1 $\emptyset$ Mains Current	3 $\emptyset$ Mains Current (Std)	Rated Output Current	Peak Output Current <sup>(6)</sup>
E94_020Y2N_X	120 / 240V <sup>(5)</sup> 1 $\emptyset$ or 3 $\emptyset$ (80V -0%...264 V +0%)	5.0	3.0	2.0	6.0
E94_040Y2N_X		8.6	5.0	4.0	12.0
E94_080Y2N_X		15.0	8.7	8.0	24.0
E94_120Y2N_X		24.0	13.9	12.0	36.0
E94_180T2N_X	240V 3 $\emptyset$ (180V -0%...264 V +0%)	—	19.6	18.0	54.0
E94_020T4N_X	400 / 480V 3 $\emptyset$ (320V -0%...528 V +0%)	—	2.7	2.0	6.0
E94_040T4N_X		—	5.5	4.0	12.0
E94_050T4N_X		—	6.9	5.0	15.0
E94_060T4N_X		—	7.9	6.0	18.0
E94_090T4N_X		—	12.0	9.0	27.0

(1) The first “\_” equals either “P” for the Model 940 encoder based drive OR an “R” for the Model 941 resolver based drive.

(2) The second “\_” equals either “E” for incremental encoder (must have E94P drive) OR an “R” for the standard resolver (must have E94R drive).

(3) Mains voltage for operation on 50/60 Hz AC supplies (48 Hz -0% ... 62Hz +0%).

(4) Connection of 120VAC (45 V ... 132 V) to input power terminals L1 and N on these models doubles the voltage on motor output terminals U-V-W for use with 230VAC motors.

(5) Connection of 240VAC or 120VAC to input power terminals L1 and L2 on these models delivers an equal voltage as maximum to motor output terminals U-V-W allowing operation with either 120VAC or 230VAC motors.

(6) Peak RMS current allowed for up to 2 seconds. Peak current rated at 8kHz. Derate by 17% at 16kHz.