



# SERVOSTAR™ CD SynqNet

## Description

The **CD SynqNet** is a SynqNet™ servo drive based on the field-proven range of SERVOSTAR™ CD drives. The power stage is the same as that of the CD, while the control stage is a dedicated SynqNet™ design. The **CD SynqNet** is designed as a Torque drive, with torque command being provided at high servo update rates from the SynqNet™ controller. Extensive I/O support is provided, with both function-specific inputs, such as Limit Switches, Home and Brake, and numerous general purpose I/Os. The **CD SynqNet** provides divide-by-N capability, enabling it to be programmed to generate an output pulse every N counts of the drive's encoder counter register.

## SynqNet™

SynqNet™ (<http://www.synqnet.org>) is a high performance, all-digital synchronous network designed for multi-axis motion control applications. The physical layer of SynqNet™ is based on IEEE 802.3 standards for 100BASE-TX, the physical layer of Ethernet, while the data link and application layers of SynqNet™ are specifically designed for motion control applications. The 100BASE-TX media system is based on specifications published in the ANSI TP-PMD physical media standard. The 100BASE-TX system operates over two pairs of wires, one pair for 'receive' data signals and the other pair for 'transmit' data signals.



## Power Ratings

Identification	Output Continuous Current (RMS per phase)	Output Peak Current (RMS per phase)	AC Line Input Voltage (VAC L-L nominal)	DC Bus Voltage (nominal)
Lx 03 5x5	3 Amps	9 Amps (0.5 Sec)	115 - 1phase	160VDC
			230 - 1phase	320VDC
			3 phase, 110V per phase	160VDC
Lx 06 5x5	6 Amps	18 Amps (0.5 Sec)	115 - 1phase	160VDC
			230 - 1 phase	320VDC
			3 phase, 110V per phase	160VDC
Lx 10 5x5	10 Amps	20 Amps (2 sec)	3 phase, 110V per phase	160VDC
Lx 06 6x5	6 Amps	12 Amps (2 sec)	3 phase, 380V	540VDC
			3 phase, 480V	680VDC
Lx 10 6x5	10 Amps	18 Amp. (0.5 sec)	3 phase, 380V	540VDC
			3 phase, 480V	680VDC



# SERVOSTAR™ CD SynqNet™

## Features

### Feedback

- Incremental Encoder and Heidenhain EnDat® Sine Encoder. Other options include support for Resolver and Stegmann Hiperface®.
- Auxiliary encoder feedback, used for Dual Loop or Master / Slave operation.
- Commutation initialization with minimal motion.

### SynqNet™

- Network bandwidth for torque updates up to 16kHz
- Remote diagnostics of motor drive performance
- Remote drive configuration and setup
- Real-time diagnostic programming/ data collection over SynqNet
- Support for multiple feedback and dual-loop servo control
- Automatic network configuration and integrity check
- Cabling over 100 Meters between each node
- Electrical isolation for robust noise immunity

### Servo Control

- Fully digital current loop
- Advanced patented sinewave commutation technology provides smooth, precise low-speed control as well as high-speed performance
- Accurate torque control due to precision balanced current loops with closed loop sensors
- Patented torque angle control enhances motor performance

### I/O

- 5V through 24V operation
- Dedicated Hardware enable, Positive and Negative Limit and Home inputs
- Brake Output via dry contact relay
- Eight general purpose opto-isolated inputs
- Four general purpose opto-isolated outputs
- Two bi-directional RS422 I/Os
- Fast Divide-by-N pulse output
- Two analog inputs

### Robust Power Stage Options

- Self-protecting power modules
- Full protection against short circuit, over-voltage, under-voltage, motor and drive over-temperature, over-current and feedback loss
- Flexible current foldback protection

## Ordering Information

Please note: Some models are not standard, but are available upon request

### 300V Option:

**Feedback Options**  
 E - Encoder  
 R - Resolver  
 B - Sine Encoder

LE 06 565

**Logic Power Source**  
 5 - Internal logic power  
 6 - External logic power

**Current Rating**  
 03 - 3Amp continous; 9Amp peak  
 06 - 6Amp continous; 18Amp peak  
 10 - 10Amp continous; 20Amp peak

### 600V Option:

LE 06 665

**Current Rating**  
 06 - 6Amp continous; 12Amp peak  
 10 - 10Amp continous; 18Amp peak

