

Glentek's SynqNet[®] Digital PWM Servo Amplifiers

Description

Glentek's Omega-SynqNet[™] Digital PWM Servo Amplifiers offer the latest in DSP control of rotary and linear, brush and brushless, servo motors combined with the power and flexibility of the SynqNet[™] Network. The Omega-SynqNet[™] amplifiers feature one of the industry's highest PWM update rates (24kHz) for superior bandwidth and are designed for high performance OEM applications. These amplifiers are available in a variety of power ranges and can be configured to operate from 24-370 VDC or directly from 110-130 VAC or 208-240 VAC main lines. They accept a wide range of incremental encoder inputs including inexpensive, low-resolution encoders, reduced wire encoders, and fine-pitch linear scales and all models include dedicated optically isolated I/O (limits, enable, home and fault), general purpose controller configured optically isolated I/O, and high speed, general purpose, differential receivers and transmitters for use as input captures and output compares. Initial configuration and tuning can be performed through an RS232 port using Glentek's Windows[™] based MotionMaestro[™] software or directly by the SynqNet controller. These amplifiers include extensive fault detection with associated 7-segment display diagnostics.

SynqNet[™] is an all-digital motion control interface for connections between controllers and drives developed by Motion Engineering specifically for the motion control industry. The physical layer of SynqNet is based on IEEE 802.3 standards for 100Base-TX, the physical layer of Ethernet. It supports up to 32 coordinated axes with update rates up to 48KHz (4 axes) and cable lengths up to 100 meters between nodes. Full SynqNet[™] compliant drives, such as Glentek's Omega-SynqNet[™] drive, synchronize their control loop updates to the master SynqNet[™] drive strobe to minimize control loop jitter and skew resulting in improved motion control. SynqNet[™] facilitates remote configuration, control and monitoring of drives and remote drive firmware updates. The network is electrically isolated for noise immunity and includes data path redundancy for fault tolerant operation. SynqNet[™] eliminates the traditional noise-prone $\pm 10V$ analog signal, and relocates the encoder and I/O connections, which traditionally required routing through long cumbersome cables, to the drives. The only remaining connection required at the controller is an industry standard 100Base-Tx network cable. By locating the drives near the motors, the cabling can be kept short which aids in noise immunity, reduces EMI, and reduces cabling complexity and cost. To learn more about SynqNet[™], visit www.synqnet.org.