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Find the *Rockwell / Anorad I-SERV-BR1* at our website: *Click HERE*

I-Series Controller Product Highlights

I-Serv (Servo Motor Controller)
I-Step (Stepper Motor Controller)



- Panel mount, stand alone, low cost servo and stepper controller modules with integral amplifiers
- Second order digital filter
- High level programming language using Anorad's standard ACSPL
- Programmable 1-3 KHz servo update rate

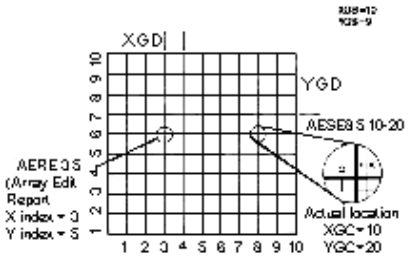
Anorad's I-Series controllers were the first panel mount, stand-alone controller introduced by Anorad. With years of robust service to the industry, these compact, self-contained models are still the most cost effective solution for brushed and stepper motor technology. Each model in the series includes controller, drive(s) and a power supply, and offers a broad spectrum of motion control features. The I-Series brushed, brushless and stepper motor controllers, as well as the newer digital drives D/M-Serv's share the same versatile programming language, ACSPL (Advanced Control System Programming Language), and may be networked, linking up to 16 axes via a single RS-232C communications connection. The I-Series controllers are available as independent controllers or with Anorad's brushed and brushless linear servo motors, precision positioning stages or integrated into complete custom systems.

- Responsive, 1-3 KHz servo update rate for improved path accuracy and fast settling times.
- Superior servo performance with programmable second order digital filter; velocity and acceleration feedforward.
- High efficiency, fully protected 20 KHz MOSFET PWM (pulse width modulated) drives.
- Smooth programmable S-curve acceleration.
- Up to 32 general purpose digital I/O connections.
- Two analog inputs and one analog output.
- Dedicated end of travel limits and emergency stop inputs.
- Three programmable timers - one count up, two counts down, accurate to 1 msec.
- Communication through RS-232 (I-EEE 488 optional).
- Encoder or laser interferometer feedback.
- Dual Axis error mapping for accuracy enhancement.
- Arbitrary path generation.
- Master Slave firmware.
- Position Event Generator firmware.
- Real time data collection firmware.
- Linear and circular interpolation.
- Powerful 32K memory -- 16K for programs, 16K for variables.
- Microstepper with a high resolution of 50,000 steps/revolution, functional to 3,000 RPM.
- Programmable current levels during standstill, acceleration, constant velocity and deceleration.
- User programmable third harmonic compensation.

Exceptional Features

Error Mapping

The accuracy of an X,Y stage can be improved to approach the stage's level of repeatability. Using a laser interferometer or glass master, a 32 x 32 matrix of positioning errors may be stored in the controllers' memory. For any commanded point-to-point move, a two-dimensional error compensation value is computed by interpolation of the errors of the four closest X,Y grid values. This compensation value corrects the commanded axis position, virtually eliminating mechanical error.

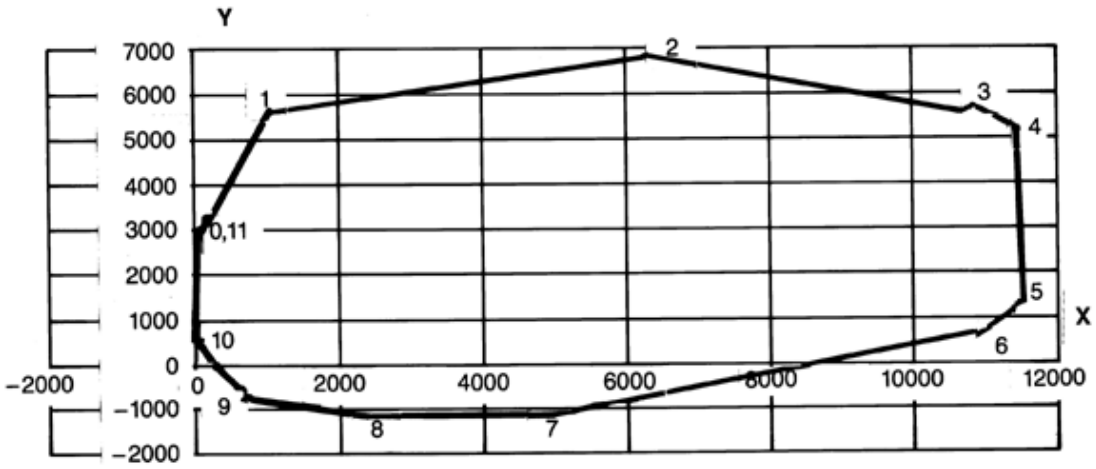


Arbitrary Path Generation

Arbitrary path generation (teach mode) provides the means to move the axes along user-generated path(s). These paths may be described by moving the axes manually along the

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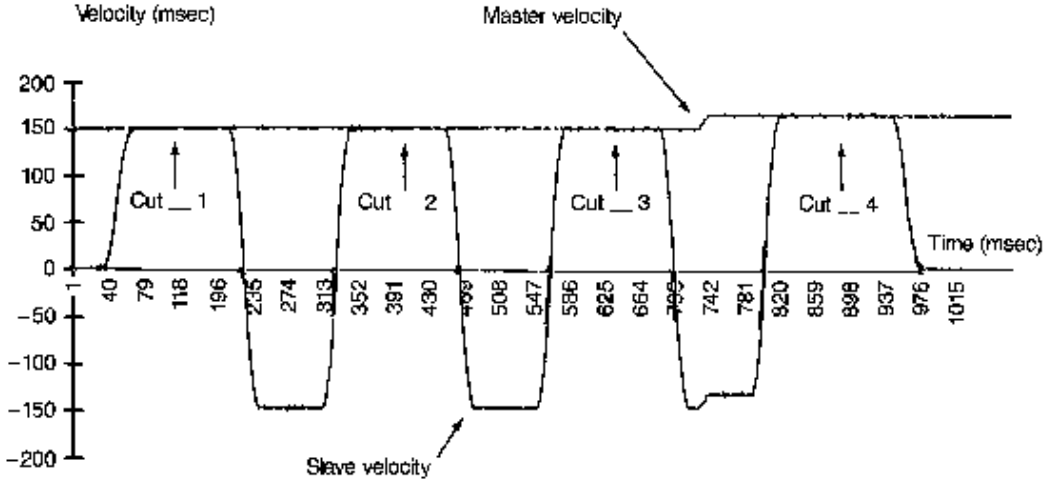
specified path or defining position arrays. With the combination of the data collection and path generation capabilities, any table motion can be recorded (digitized) and accurately repeated.



Master Slave Operation

The master/slave operation will provide a variable "gear ratio" between the two axes for tracking or "cam" applications. Features include:

- A high resolution gear ratio (1:8,000,000).
- Superimposed smoothed trapezoidal profiles and phase correction.
- On-the-fly switching from master/slave mode to non-slaved velocity mode and vice versa.
- On-the-fly index searching of both the master and the slave.
- Minimal following error between the master and the slave down to ± 1 count.
- Cam profiles may be stored in calculated arrays and scaled internally or may be learned via theY axis encoder input in real time.

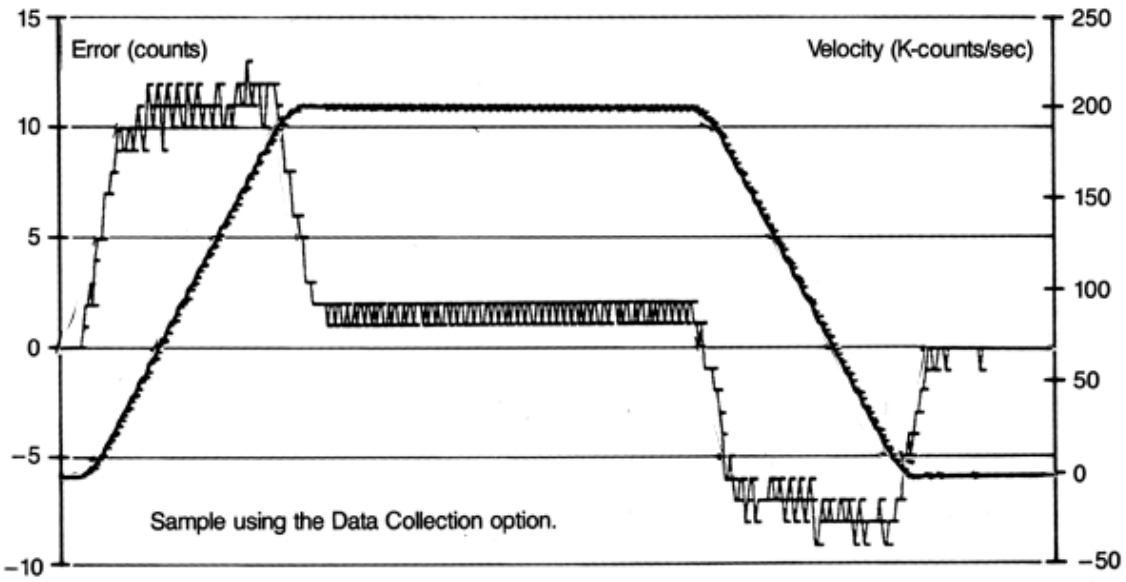


Position Event Generator

The position event generator is superb for high accuracy position marking. The position event generator will strobe selected outputs at up to 1,024 specified positions or at specified position intervals. The strobe is generated within ± 1 count, has no minimum distance limitation between adjacent signals and is accurate to .2 microseconds.

Data Collection

Real-time data collection and analysis of position, error, velocity, torque command and I/O status can be collected at a programmable rate of up to 1,000 Hz during any preprogrammed motion. Up to 2,048 data points can be collected per sample. Statistical analysis of the collected data is also supported. Short-term velocity can be measured over a programmable distance using a 32 MHz clock.



Back

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