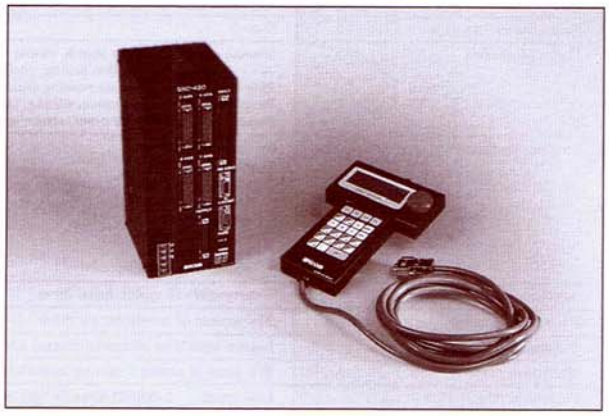
MC230/MC430
2 or 4 Axes Controller with Multi-Tasking features

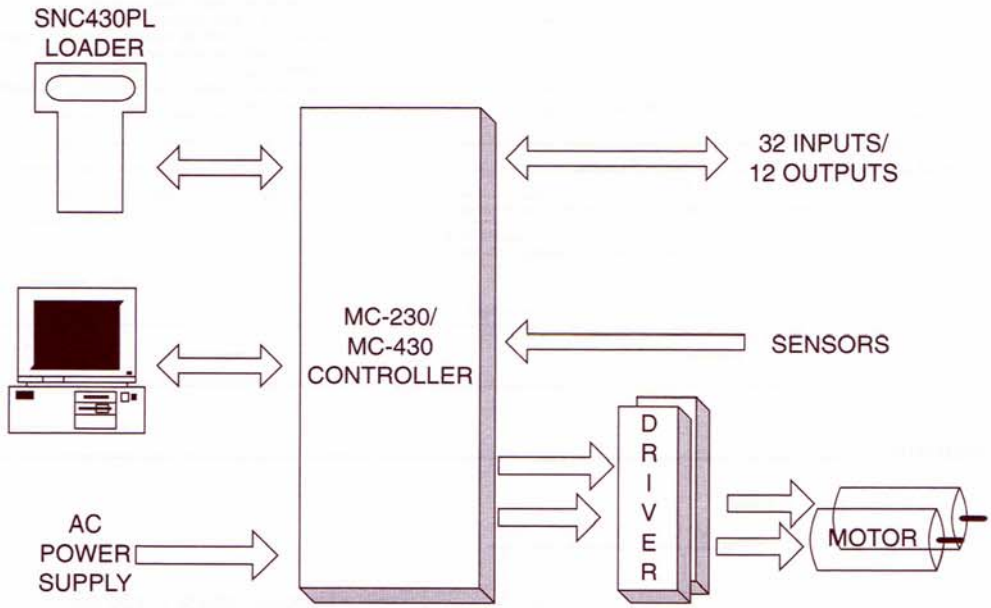
MC230 (2 Axes) or MC430 (4 Axes) controller can be used to control Point-to-point and linear interpolation operation for the stepper motors or pulse train servo motors of the general purposes 2 axes or 4 axes tables. The acceleration of this controller can be switched between S-curve and linear acceleration. With the S-curve acceleration profile, smoother operation is made possible by eliminating vibrations.



Closed loop control with compensation is made possible with the use of built-in encoder inputs. Teaching operation is also available for up to 2,000 points. Complex trapezoidal drive, Backlash compensation and Sub-task functions are also built-in. In addition, the MC230 and MC430 has Multi-Tasking functions which can handle up to 8 different tasks in parallel.

Programming is made simple via a handheld loader unit or via RS232C communication. The 32 general purpose inputs and 12 general purpose outputs can be used to interface to external peripheral for a more complex system control.

System Overview



MC230/430 Specifications

ITEMS	DESCRIPTIONS
Control system	Microprocessor control system
Number of axes	MC230 : 2 axes, MC430 : 4 axes (PTP or linear interpolation controlled)
Motors used with	Stepping motor or pulse train input servo motor
Program capacity	Program : 2,000 lines (Main program: 16) Position data : 2,000 positions
Storage means	EEPROM
Programming language	G-code
Control functions	Manual mode : Origin search, virtual origin set/return, coordinate specify feed, scan feed, index feed, step feed, I/O operation, sensor/driver signal operation, condition setting, position data storage Play mode : Program running (automatic execution, 1-line execution, external activation, online execution), moving positional data Program mode : Generation, editing, and deleting programs and positional data, teaching, uploading and downloading Parameter : Motor types, sensor logic, encoder set up, etc.
Program functions	* Set up conditions * return to origin * setting up the quantity of index * moving instruction * general purpose I/O * subroutines * end of program * virtual origin setting * timer * temporary stop of program * complex trapezoidal drive * unconditional jump * driver control operation * register mathematical operation * register conditional jump * Multi-task
Acceleration system	S-curve drive (8 types), linear drive
Pulse scaling factor	The amount of movement per pulse : 1~9,999,999
Command system	Loader input/Host computer/external activation signal
Movement range	The range of setting 1 moving instruction : 0~±9,999,999
Frequency range	Low speed : 1~65.535 Kpps in 1pps interval Standard : 12.5~819.187 Kpps in 12.5pps interval High Speed : 25~1638.375 Kpps in 25pps interval
Acceleration	Low speed : 10~1,000 pps/msec Standard : 125~125,000 pps/msec High speed : 225~225,000 pps/msec
Driver Interface	Clock output: 2-clock or 1-clock system (open collector or Line driver) Motor OFF output: CO for stepper or SERVO ON for servo Alarm input: selectable logic In-position input: for servo Deviation counter reset output: for servo motor 1-shot pulse: 0.1 sec Encoder input: A/B/Z phases (Multiple of 1/2/3 is possible)
Machine sensor I/F	Both end over-run, near origin, and origin sensor (selectable sensor logic)
General Purpose I/O	32 Inputs : Photo-coupler isolated 10mA internal power supply (+24V) 12 Outputs : Photo-coupler isolated, open collector 0.5A voltage resistance: 35V
Dedicated I/O	6 Inputs : Photo-coupler isolated 10mA internal power supply (+24V) Program activation input, emergency stop input, deceleration/stop input, RESET input, manual operation input, origin return input 7 Outputs : Photo-coupler isolated, open collector 0.5A voltage resistance: 35V, ready output, output while moving, error output, origin position
Program selection input	4 Inputs : Photo-coupler isolated 10mA internal power supply is used. 16 programs can be triggered (0~15)
External communication I/F	RS232-C : 1 channel parameter can be set up
Setup DIP switch	Parameter operation : permitted/prohibited
Parameter functions	* Set up the amount of movement for 1 pulse * Conditions for automatic operation are set up * Position of decimal point for coordinate display * Closed control is valid or invalid * Motor types and sensors are set * RS232C parameter is set * Auto return to origin before activating program can be set * Backlash compensation can be valid or invalid * Software limit are set up * Conditions for origin return is set up * Origin return axis sequence is set up * Multiplication ratio and direction of encoder input are set * S-curve slope (including pattern)/linear slope * Highest speed is set * Contents of execution to be displayed or not displayed during execution * Memory clear
Optional Handheld loader unit	SNC430PL
Input power supply	110Vac (Standard)/220Vac (Optional)
Noise resistance	1500V/1usec or more (Single controller)
Momentary stoppage	20msec minimum (when the loader input is stopping for emergency)
Ambient environment	During operation : Temperature 0~50°C (No dew condensation) During storage : Temperature 0~60°C (Humidity : 20~90%)
External dimension (excluding mounting bracket)	MC430 : 100 (W) × 225 (H) × 122 (D) mm MC230 : 80 (W) × 225 (H) × 122 (D) mm Loader : 125 (W) × 194 (H) × 25 (D) mm (OPTIONAL)
Weight	MC430 : 2.0 Kg MC230 : 1.5 Kg Loader : 0.5 Kg

Ordering Information:–