Factory Automation

Motion Controllers

FX5-80SSC-S Specifications

Performance specifications

Control specifications	
Number of control axes	Up to 8 axes
Operation cycle (operation cycle settings) *1	0.888 ms, 1.777 ms
Interpolation function	Linear interpolation (up to 4 axes), 2-axis circular interpolation
Control method	Positioning control, speed control, speed-torque control, speed-position switching control, fixed-pitch feed, advanced synchronous control, cam control, continuous path control, position-speed switching control
Acceleration/deceleration processing	Trapezoidal acceleration/deceleration, S-curve acceleration/deceleration
Compensation function	Backlash compensation, electronic gear, near pass function
Synchronous control	Synchronous encoder input, command generation axis, cam, phase compensation, cam auto-generation
Control unit	mm, inch, degree, pulse
Positioning control method	Motion profile table
Number of positioning data	600 data (positioning data No. 1 to 600)/axis (Can be set with MELSOFT GX Works3 or a sequence program.)
Backup	Parameters, positioning data, and block start data can be saved on flash ROM (batteryless backup)
Home position return	Proximity dog method, count method 1, count method 2, data set method, scale home position signal detection method, driver home position return *2 (fast home position return control, home position return retry function, and home position shift function provided)
Positioning control	Linear interpolation control (up to 4 axes) *3, fixed-pitch feed control (up to 4 axes), 2-axis circular interpolation (auxiliary point-specified, central point-specified), speed control (up to 4 axes), speed-position switching control (INC mode, ABS mode), position-speed switching control (INC mode), current value change, NOP instruction, JUMP instruction, LOOP, LEND, block start, condition start, wait start, simultaneous start, repeated start
Manual control	JOG operation, inching operation, manual pulse generator operation (up to 1 module)
Speed-torque control	Speed control not including position loop, torque control, continuous operation to torque control
Absolute position system	Provided (Made compatible by setting battery to servo amplifier.)
Synchronous encoder operation function	Possible to connect 4 modules (Total of the internal interface (incremental 1 channel), via PLC CPU interface, and servo amplifier interface)
Speed limit	Speed limit value, JOG speed limit value
Torque limit function	Torque limit value same setting, torque limit value individual setting
Forced stop	Valid/invalid setting
Software stroke limit function	Movable range check with feed current value or with machine feed value
Hardware stroke limit function	Provided
Speed change	Provided
Override	1 to 300 %
Acceleration/deceleration processing change	Acceleration/deceleration time

Torque limit value change		Provided
Target position change function		Speed to a target position address and a target position is changeable.
M-code output function		Provided
Step function		Deceleration unit step, data No. unit step
Skip function		Via a CPU or an external command signal
Teaching function		Provided
Parameter initialization function		Provided
External input signal setting function		Via a CPU or a servo amplifier
Amplifier-less operation function		Provided
Mark detection function		Continuous detection mode, specified number of detections mode, ring buffer mode
	Mark detection signal	Up to 4 points
	Mark detection setting	16 settings
Optional data monitor function		Up to 4 points/axis
Functional safety		DI/O connection of the servo amplifier
Driver communication function		Provided
Connect/disconnect function of SSCNET communication		Provided
Digital oscilloscope function		Bit data: 16 channels, word data: 16 channels*4
Module specifications		
Number of control axes		Up to 8 axes
Servo amplifier connection method		SSCNET III/H
Maximum distance between stations [m]		SSCNET III/H: 100
24 V DC external current consumption [A]		0.25
Mass [kg]		0.30
Exterior dimensions [mm]		90.0 (H) x 50.0 (W) x 83.0 (D)

(*1)The number of controllable axes varies depending on the operation cycle.

(*2)The home position return method set in a driver (a servo amplifier) is used.

(*3)4-axis linear interpolation control is enabled only at the reference axis speed.

(*4)Eight channels of each word data and bit data can be displayed in real time.