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Servo System Technical Datasheet



Servo Product Specification			
Basic parameters	Rated current	SD23 series	1.6-14A
		SD40 series	8.5-20A
	Main circuit power	SD23 series	Single phase 220 VAC±10%, 50/60Hz
		SD40 series	Three-phase 380 VAC±10%, 50/60Hz
Control circuit power	SD23 series	Single phase 220 VAC±10%, 50/60Hz	
	SD40 series	Single phase 380 VAC±10%, 50/60Hz	
Regenerative brake		Internal, External	
Control method		Position, speed and torque control	
Encoder feedback		Incremental and absolute encoder	
Configuration	24V power	P24V-COM, maximum output 200mA	
	5V power	P5V-GND, maximum output 200mA	
	Pulse input	P_HI, PULSE+, PULSE-, S_HI, SGN+, SGN-, Differential input/open collector input is available.	
	Digital input	8-channel digital input terminals (DI1~DI8)[*optional]	
	Digital output	4-channel digital output terminals (DO1~DO4) [*optional]	
	Analog input	1-channel analog input (AIN), DC±10V, 12-bit conversion accuracy	
	Analog output	1-channel analog output (AO+, AO-), DC±10V[*optional]	
	Frequency dividing output	Differential output (≤ 500kHz), collector output (≤ 200kHz)	
Control feature	Speed bandwidth response	Above 400Hz	
	Speed fluctuation ratio	<±1.5% (Load 0-100%); <±0.6% (Power -15~+10%)	
	Speed regulation ratio	1:30000	
	Input pulse frequency	≤ 500 kHz	
Control	Electronic gear ratio	1~32767/1~32767	
Position	Input way	Pulse + sign; CW pulse + CCW pulse; Orthorhombic AB phase pulse	
	Feedback pulse	32~32768 Pulses / rev., settable	
Feedback way		Motor shaft end encoder feedback	
Parameter setting		Input via keyboard; RS485 MODBUS communication	
Load inertia		Less than 10 times motor inertia	
Braking mode		Resistance energy consumption braking	
Built-in	Overtravel prevention	Stopped immediately if CWL or CCWL acts	
	Protection function	Over-current, overvoltage, overload, main circuit detection abnormality, radiator overheat, power phase missing, over-speed, encoder abnormality, CUP abnormality, parameter abnormality	

	LED display function	Main power indicator CHARGE, 5-bit LED
	Connecting device	RS232, RS485
	Communication protocol	MODBUS
	1:N communication	When RS485, up to N=247 stations
	Shaft address setting	According to the user setting
	Others	Gain control, alarm recording, JOG operation
Environment requirements	Ambient temperature	0 ~ 45°C (derating if the ambient temperature is above 45°C)
	Storage temperature	-20~+70°C
	Humidity	90%RH or less (no condensation)
	Vibration	4.9m/s ²
	Protection level	IP10
	Pollution level	2
	Altitude	Below 1000m

Mechanical parameters and specifications of motor:

Description	
Rated time	Continuous
Vibration level	V15
Ambient temperature	-20°C ~ 40°C
Insulation grade	Above 500 VDC, 10MΩ
Installation method	Flange
Exciting way	Permanent magnet
Electrical insulation grade	Class F
Insulation voltage	1500 VAC (200V)
	1800 VAC (400V)
Housing protection level	IP65 (expect for shaft through part)
Environment humidity	<90% (no condensation)
Connection method	Direct connection
Rotation direction	Forward rotation, counter-clockwise direction when viewing from load side

Servo Motor specification:

Motor Base	Rated Power (kW)	Rated Current (A)	Rated Speed (RPM)	Rated Torque (N*m)	Peak Torque (N*m)	Rotor Inertia (10 ⁻³ Kg*m ²)
220V						
40	0.05-0.1	0.4-1.1	3000	0.16-0.32	0.32-0.64	0.0025-0.0051
60	0.2-0.6	1.8-3.5	3000	0.637-1.91	1.911-5.73	0.0175-0.039
80	0.4-1.2	2-4.5	2000-3000	1.27-4	3.8-12	0.105-0.297
90	0.75-1	3-4	2000-3000	2.4-4	7.1-12	0.245-0.37
110	0.6-1.8	2.5-6	2000-3000	2-6	6-18	0.31-0.76
130	1-3.8	4-13.5	1000-2500	4-15	12-30	0.85-2.77
180	2.5-3.7	10-16	1000-1500	17-35	42-70	6.5-12.25
380V						
130	1-3.8	2.5-8.8	1000-2500	10-15	20-30	1.94-2.77
180	2.5-7.5	6.5-20	1500-2000	17-48	42-96	6.5-16.72