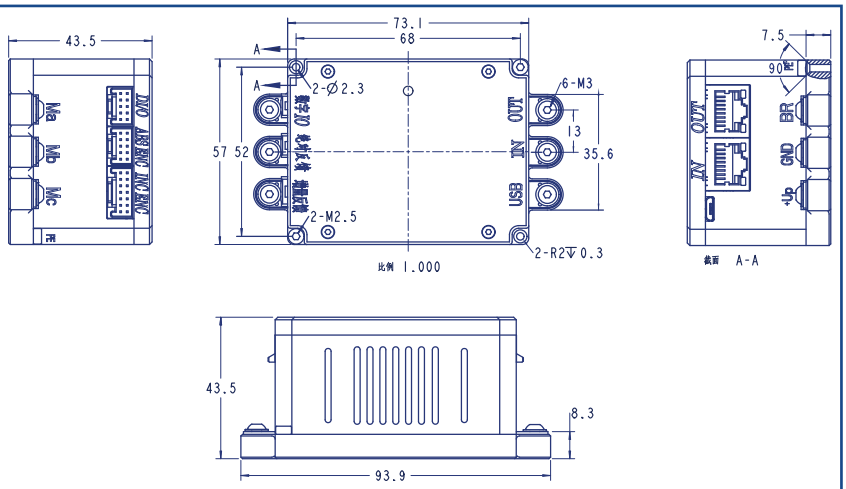
ETHERCAT BUS CONTROLLER



Model		Servo Controller (EtherCAT Bus Control)				
		AM-SOC0103-MAAS	AM-SOC0206-MAAS	AM-SOC0510-MAAS	AM-SOC1020-MAAS	AM-SOC1530-MAAS
Dimension (mm)		93.9*57*43.5				
Weight (g)		225				
Fundamental Specs	Output Rated Current (Coninuous, RMS)	1 A	2 A	5 A	10 A	15 A
	Output Max. Current (Intermittent, RMS)	3 A	6 A	10 A	20 A	30 A
	Input Power Supply Voltage Range	12 VDC~48 VDC (Usually according to Motor Rated Voltage)				
	Overload Recognition Time	3 s				
	Overload Trip Reset Delay	30 s				
	Temperature Raise	(Under Rated Current) 30min≤40K				
	Working Frequency	6khz ~ 34khz				
Rated Electric Insulation		Under DC voltage 1000V from input/output to housing, current leakage smaller than 3mA				
Total Electric Resistance		≥1MΩ（Temp. 40℃, RH 95%, no condensing water）				
Mean Time Before Failure (MTBF)		≥8000 Hrs				
Power Control		For BLDC & Servo Motor: SVPWM, Square Wave For Brushed Motor: Bipolar PWM				
IP Level		IP20				
Cooling Type		Natural Air Cool				
Connection Portal Info						
	Digital IO Input Portal	4 Channel (5VDC~24VDC), hardware default in high voltage level when not connected. Detail control functions can be set and adjusted by changing parameters.				
	Digital IO Output Portal	4 Channel (All four channels are open collector output, highest voltage at 30V; First three channels have max. continuous current of 0.25A, and last channel has max. continuous current of 2A)				
	Feedback Type	Electromagnetic/Optical Incremental Encoder; SSI Absolute Encoder; RS 485 Absolute Encoder				

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Model			Servo Controller (Traditional Control)
Basic Function	Application Mode		Position Closed-loop Control / Speed Closed-loop Control / Torque Closed-loop Control
	Preparation Time		Power on and no malfunction, controller ready in 3 seconds
	Hardware Protection Threshold	Under Voltage	9.5v
		Over Voltage	75v
		Over Current	Over Current Protection
		Overheat	85℃ Automate Alarm and Shut Down
		Power Switch	Equipped power switch to turn on or off the motor.
	Software Protection	Malfunction Lock	Automate slow down and stop when detect malfunction, and lock the malfunction for inspection.
		Over Load	When current is continuously over Max. continuous current for 10 seconds, default to alarm for malfunction.
		Over Current	Monitor real time current value, immediate cut off motor outpu when current over the pre-set value.
		Differential Protection	Current or speed setting and feedback differential protection
	Digital IO	Input	Multiplex the following functions by adjusting parameters: Servo start, zero-speed position clamp, emergency shut down, origin point signal, positive position limit, negative position limit.
		Output	Multiplex the following functions by adjusting parameters: Power supply under voltage, position abnormal, hall feedback abnormal, over current, over load, driver overheat, current differentiate, speed differentiate, power supply over voltage, servo ready, servo operation, zero speed arrival, targeted speed arrival,targeted position arrival, brake output, origin point recover finish, error alarm, negative stall, positive stall, negative indicate.
	Communication Portal	USB	Usually for Commissioning (also support host computer control)
		EtherCAT	1 set of in and out ports
Torque Control	Step Response		Rise time≤1.5ms；Over tune≤5%；Shock ≤2 times
	Current Closed Loop Control		≥1KHz
	Speed Limitation		Parameter Limits
Speed Control	Speed Feedback		Based on Encoder
	Encoder Power Supply		+5V±2%/500mA
	Speed Ratio		≥3000 : 1
	Step Response		Rise time≤40ms；Overtune≤15%；Shock≤2.5 times
	Sinusoidal Band Response		≥500Hz
	Static Error Rate		≤0.4%（In speed 1000RPM, rated torque load）
	Speed Fluctuation Rate		≤0.6%
	Linearity		≤0.45%
Postition Close-Loop Control			
	Command control mode		EtherCAT Bus Control
	Electronic gear ratio		Electronic Gear N/M, N: 1～65535, M: 1～65535 (parameter setting)
	Torque Limit		(Parameter Setting)
Environmental Requirements	Operation Temp.		-30°C+60°C
	Storage Temp.		-30°C+65°C
	Relative Humidity		0%～90%RH （No condensing）
	Vibration Requirements		Frequency 5Hz to 25Hz, amplitude with 1.6mm; Frequency 25Hz to 200Hz, Acceleration within 1.2g, time 30min.

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