MD series integrated servo motor

Innovative and practical integrated design

Compact structure

The product integrates servo drive and low-voltage servo motor, which is smaller in size and saves equipment installation space.

High reliability

Eliminate the connection line between the motor and the drive, reduce equipment failures caused by connection problems, and reduce the equipment failure rate.

Lower cost

Save connecting cables and effectively reduce equipment cost.

Integrated servo motor naming rules

MD series integrated servo drive model description

Model description: MD 60- 040 - D M A K - CA - 000

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

①-Series name	MD：Integrated servo motor	⑤-EnCoder type	M：Magnetoelectric encoder
②-Flange	60：60x60(mm) 80：80x80(mm)	⑥-Brake	A：None B：Have
③-Rate power	0020：20x10(W) 0040：40x10(W) 0075：75x10(W)	⑦-Outgoing shaft style	K：Keyed
④-Supply voltage	D：DC48V	⑧ Control mode	LA：RS232、RS485、pulse CA：RS232、CANopen、pulse EA：RS232、EtherCAT PA：RS232，Profinet
		⑨Software version number	000：Software version number

Note: The oil seal is an optional accessory, and it can be omitted if it is not necessary.

MD integrated servo motor technical prameter

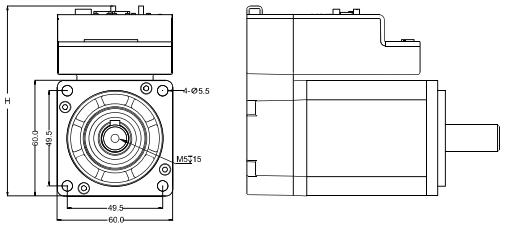
Model parameters		MD integrated servo motor		
		MD60-020-DM□K-■A-000	MD60-040-DM□K-■A-000	MD80-075-DM□K-■A-000
Power supply	Power	24VDC~60VDC	24VDC~60VDC	24VDC~60VDC
Current	Rated current (rms)	5Arms	10Arms	20Arms
	Peak current(PEAK)	21Ap	36Ap	80Ap
Brake holding torque T(Nm)		1.5	1.5	3.2
Feedback signal		Magnetoelectric encoder		
Energy consumption braking		Need for external braking resistor (depending on the operating conditions, mainly used in the case of rapid start/stop)		
Energy consumption brake voltage absorption point		DC73V ± 2V (default value, settable)		
Overvoltage alarm voltage		DC83V ±2V		
Undervoltage alarm voltage		DC18V ±2V		
Cooling method		Natural cooling		
Input specification		4-channel digital input,with COM1 terminal, high level:12.5~30VDC,low level:0~5VDC, max frequency:1KHZ, input impedance:5KΩ		
Output specification		2-channel digital output common COMO terminal|Maximum output current: 100mA		
Impulsive control		Pulse+Direction、CCW+CW、Phase A+Phase B (5~24V) The input voltage：3.3V～24V; Maximum frequency：500KHz (note:MD -060-D MK-EA-000 don't support this function)		
Brake		Built-in brake power supply		
RS232		The default baud rate is 38400bps, and the maximum baud rate is 115.2Kbps. The host computer Kincoservo+		
RS485		Maximum support 115.2Kbps baud rate, can use Modbus RTU protocol to communicate with the controller		
CAN BUS		Maximum support 1Mbps baud rate, can use CANopen protocol to communicate with the controller		
EtherCAT		Support CoE(CiA402 protocol)and CSP/CSV/PP/PV/PT/HM mode，communication speed 100M		
Profinet		Support No. 1 message, No. 3 message, No. 111 message, process object, aperiodic data read and write, etc.		
Rated Speed nN(rpm)		3000		
Rated Torque Tn(Nm)		0.64	1.27	2.39
Rotational inertia Jm (Kg•cm2)		0.214	0.405	1.087
		0.218 (with brake)	0.409 (with brake)	1.099 (with brake)
Operation environment	Operation temperature	0～40℃		
	Storage temperature	-10℃～70℃		
	Humidity(non-condensing)	Below 90%RH		
	Protection level	Shaft end IP54, protection level IP20		
	Installation environment	Dust-free, dry and lockable (such as electrical cabinets)		
	Installation mode	Vertical or horizontal installation		
	Height	The rated working altitude is below 1000m.When the working altitude is above 1000m, every 100 meters of ascent is required, and the maximum working altitude is 4000 meters above sea level		
	Atmospheric pressure	86kpa~106kpa		

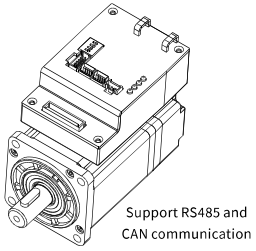
Note: ■=L: communication port RS232, RS485, pulse
■=C: Communication port RS232, CANopen, pulse
■=E: Communication port RS232, EtherCAT
■=P: Communication port RS232, Profinet

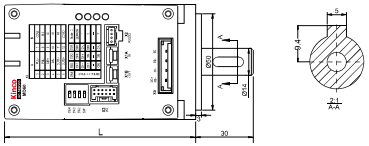
□=A: without brake
□=B: with brake

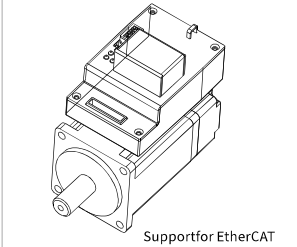
MD series mechanical dimension diagram

MD60 mechanical dimension diagram (Unit:mm)





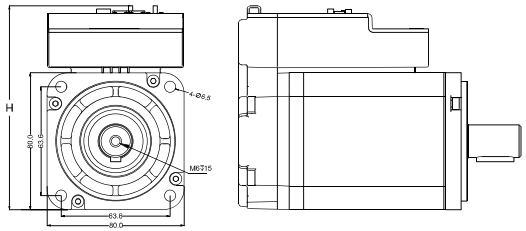


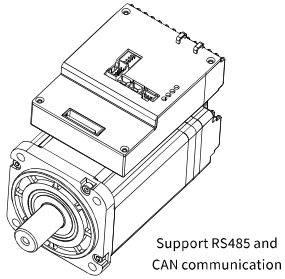


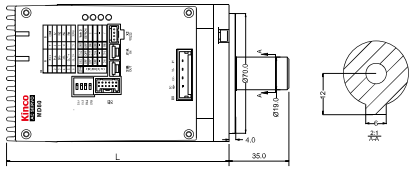
MD60 series models	Brake	Weight (KG)	Machine height H (mm)	Machine dimension L (mm)
MD60-020-DMAK-LA-000		1.2	98.6	99.2±1.5
MD60-020-DMAK-CA-000				
MD60-020-DMAK-EA-000		1.25	113.1	
MD60-020-DMAK-PA-000				
MD60-020-DMBK-LA-000	✓	1.6	98.6	129.2±1.5
MD60-020-DMBK-CA-000				
MD60-020-DMBK-EA-000		1.65	113.1	
MD60-020-DMBK-PA-000				
MD60-040-DMAK-LA-000		1.6	98.6	125.2±1.5
MD60-040-DMAK-CA-000				
MD60-040-DMAK-EA-000		1.65	113.1	
MD60-040-DMAK-PA-000				
MD60-040-DMBK-LA-000	✓	2	98.6	155.2±1.5
MD60-040-DMBK-CA-000				
MD60-040-DMBK-EA-000		2.05	113.1	
MD60-040-DMBK-PA-000				

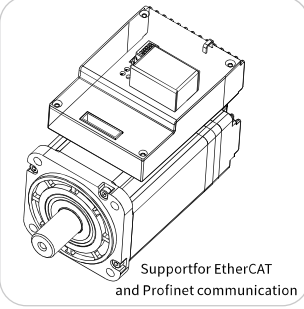
MD series mechanical dimension diagram

MD80 mechanical dimension diagram (Unit:mm)









MD80 series models	Brake	Weight (KG)	Machine height H (mm)	Machine dimension L (mm)
MD80-075-DMAK-LA-000		2.9	119.1	130±1.5
MD80-075-DMAK-CA-000				
MD80-075-DMAK-EA-000		2.95	133.6	
MD80-075-DMAK-PA-000				
MD80-075-DMBK-LA-000	✓	3.5	119.1	164.2±1.5
MD80-075-DMBK-CA-000				
MD80-075-DMBK-EA-000		3.55	133.6	
MD80-075-DMBK-PA-000				