MD Series integrated servo driver

Innovative and practical integrated design

Compact structure

The product integrates servo driver and low-voltage servo motor as one, which is smaller in volume and saves equipment installation space.

High Reliability

The connection line between the motor and the driver is omitted to reduce the equipment failure caused by connection problems and reduce the equipment failure rate.

Lower cost

Save the connection cable, effectively reduce the equipment cost.

Integrated servo motor naming rules

MD Series integrated servo driver Model description

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

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

①-Series name	MD:Integated servo motor
②-flange	60:60x60(mm) 80:80x80(mm)
③-Rated power	020:20x10(W) 040:40x10(W) 075:75x10(W)
④-Supply voltage	D:DC48V
⑤-Encoder type	M:Magnetoelectric encoder
⑥-Brake	A:Without brake B: brake
⑦-The shaft style	K:Withkey
⑧ Control mode	LA:RS232、RS485 CA:RS232、CANopen EA:RS232、EtherCAT
⑨Software version	000:Software version

Note:Oil seal is an optional accessory and may not be installed on unnecessary occasions

MD integrated servo motor technical prameter

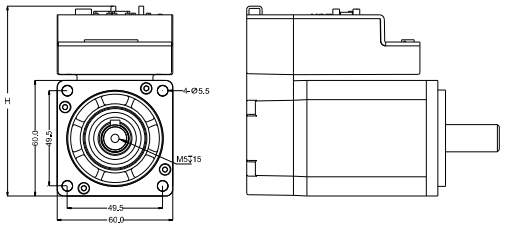
Model parameters		MD integrated servomotor		
		MD60-020-DM□K-■A-000	MD60-040-DM□K-■A-000	MD80-075-DM□K-■A-000
Power	Power	24VDC～70VDC	24VDC～70VDC	24VDC～70VDC
Current	Rated current (rms)	5Arms	10Arms	20Arms
	Peak current(PEAK)	21Ap	36Ap	80Ap
Brake holding torqueT(Nm)		1.5	1.5	3.2
Feedback signal		Magnetoelectric encoder		
Brake chopper		Via wiring an external braking resistor (mainly in quick start and stop application)		
Brake chopper threshold		DC73V ± 2V (Default value, Adjustable via software)		
Over-voltage alarming threshold		DC83V ± 2V		
Under-voltage alarming threshold		DC18V ± 2V		
Cooling method		Natural air cooling		
Input specification		4 digital inputs, with COM1 terminal, high level:12.5~30VDC,low level:0~5VDC, max frequency:1KHZ, input impedance:5KΩ		
Output specification		2 digital outputs COMO terminal (drive current up to 100mA)		
Impulsive control		Pulse+Direction、CCW+CW、A Phase+B Phase (5~24V) The input voltage:3.3V～24V; Maximum frequency:500KHz (Note:MD□□-□□□-DM□K-EA-000 don't support this function)		
Brake		Built-in brake power supply		
RS232		Default baud rate is 38400bps, the maximum support is 115.2kbps Baud rate, upper computer Kincoservo+		
RS485		The max. baudrate is 115.2KHz, use Modbus RTU protocol to communicate with controller.		
CAN BUS		Support maximum 1MHz baudrate. Communicate with controller via CANopen protocol		
EtherCAT		Support CoE(CiA402 protocol) and CSP/CSV/PP/PV/PT/HM mode, Communication speed 100M		
Rated Speed nN(rpm)		3000		
Rated Torque Tn(Nm)		0.64	1.27	2.39
Moment of inertia Jm (Kg · cm2)		0.214	0.405	1.087
		0.218 (Brake)	0.409 (Brake)	1.099 (Brake)
Operation Environment	Operation temperature	0~40°C		
	Storage temperature	-10°C~70°C		
	Humidity(non-condensing)	Below 90%RH		
	Protection class	IP20		
	Installation environment	Installed in a dust-free, dry and lockable environment (such as in a electrical cabinet)		
	Installation mode	Install vertically or horizontally		
	Height	Rated working altitude at 1000m or below, Above 1000m: Drecreasing 1.5% per 100m rise, maximum altitude 4000m		
	Atmospheric pressure	86kpa~106kpa		

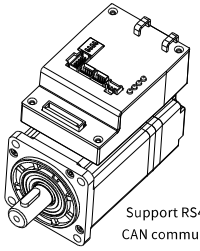
Note: □=A:Wtihout brake
□=B:Brake

■=L:Com port RS232、RS485
■=C:Com port RS232、CANopen
■=E:Com port RS232、EtherCAT

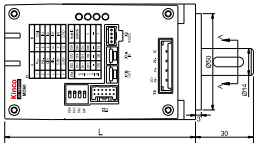
MD mechanical dimension drawing

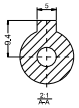
MD mechanical dimension drawing (Unit:mm)

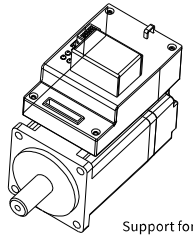




Support RS485 and CAN communication





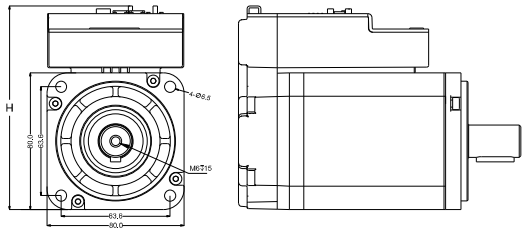


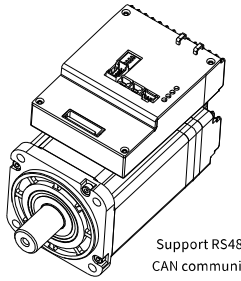
Support for EtherCAT communication

Md60 Series model	Brake	Weight (KG)	Body height H(mm)	Body size 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-DMBK-LA-000	✓	1.6	98.6	129.2±1.5
MD60-020-DMBK-CA-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-DMBK-LA-000	✓	2	98.6	155.2±1.5
MD60-040-DMBK-CA-000				

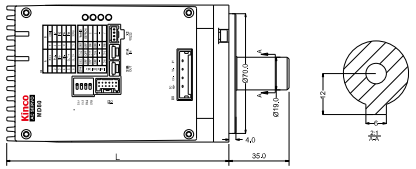
MD mechanical dimension drawing

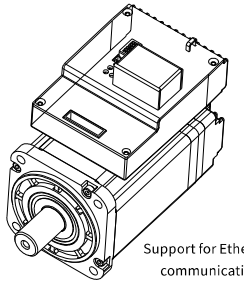
MD mechanical dimension drawing (Unit:mm)





Support RS485 and CAN communication





Support for EtherCAT communication

Md80 Series model	Brake	Weight (KG)	Body heightH (mm)	Body sizeL (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-DMBK-LA-000	✓	3.5	119.1	164.2±1.5
MD80-075-DMBK-CA-000				