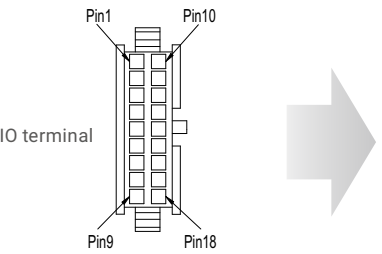


iGMK series communication terminal definition



IO terminal

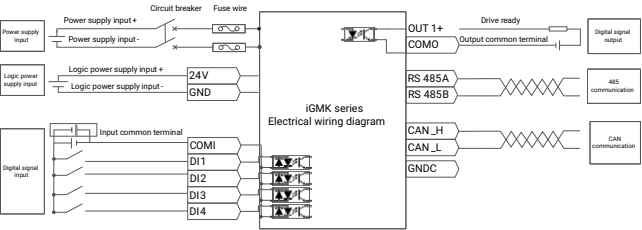
A			B		
Pin	signal	Cable color	Pin	signal	Cable color
1	24V	Red	10	GND	Black
2	DI4	Purple	11	GNDC	Purple - Black
3	CANH	Blue - Black	12	CANL	Blue
4	CANH	Blue - Black	13	CANL	Blue
5	RS485A	Orange - Black	14	RS485B	Orange
6	RS485A	Orange - Black	15	RS485B	Orange
7	OUT1+	Yellow - Black	16	COMO	Yellow
8	COMI	White	17	DI1	Green
9	DI3	Green - Black	18	DI2	White - Black

Note: Kinco EXC-iGMK-AA-A6 external cable can be purchased

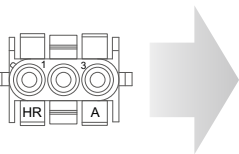
IO terminal description

signal	description
24V	24V logic power input;The logic power supply is an optional option. When using the logic power supply, ensure that the power supply and logic are completely isolated. If the system power supply is not isolated, the logical ground cable is not connected. The logic power supply is connected at DC- and 24V
GND	Logic electrical reference ground
CANH	CAN signal positive end
CANL	CAN signal negative end
RS485A	RS485 data positive end
RS485B	RS485 data negative end
OUT1+	Digital signal output,OUT1 for the open collector output, the highest voltage 30V, driving capacity of 100mA
COMO	Digital signal output common terminal
COMI	Digital signal input to the common end
GNDC	Signal ground
DI1	Digital signal input,COMI terminal; High level: 12.5 ~ 30VDC ;Low level: 0 ~ 5VDC; Input impedance: 5KΩ Maximum frequency: 1KHz
DI2	
DI3	
DI4	

iGMK electrical wiring



power terminal



Pin	Signal	Cable color
1	48V+	red
2	/	/
3	48V-	black

Kinco® Automation

en.kinco.cn Email:sales@kinco.cn

Add: Building 1, No.6 Langshan 1st Rd, Hi-tech Park North, Nanshan, Shenzhen, China. 518057

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iGMK Intergrated Servo Motor



The servo drive, motor, reducer and bus interface are integrated into one.
The extremely short body ensures a higher space utilization rate for the device.

■ Specification range

iGMK can be used for AMR/ AGV with loads of 600Kg, 1T and 1.5T

■ Advantage

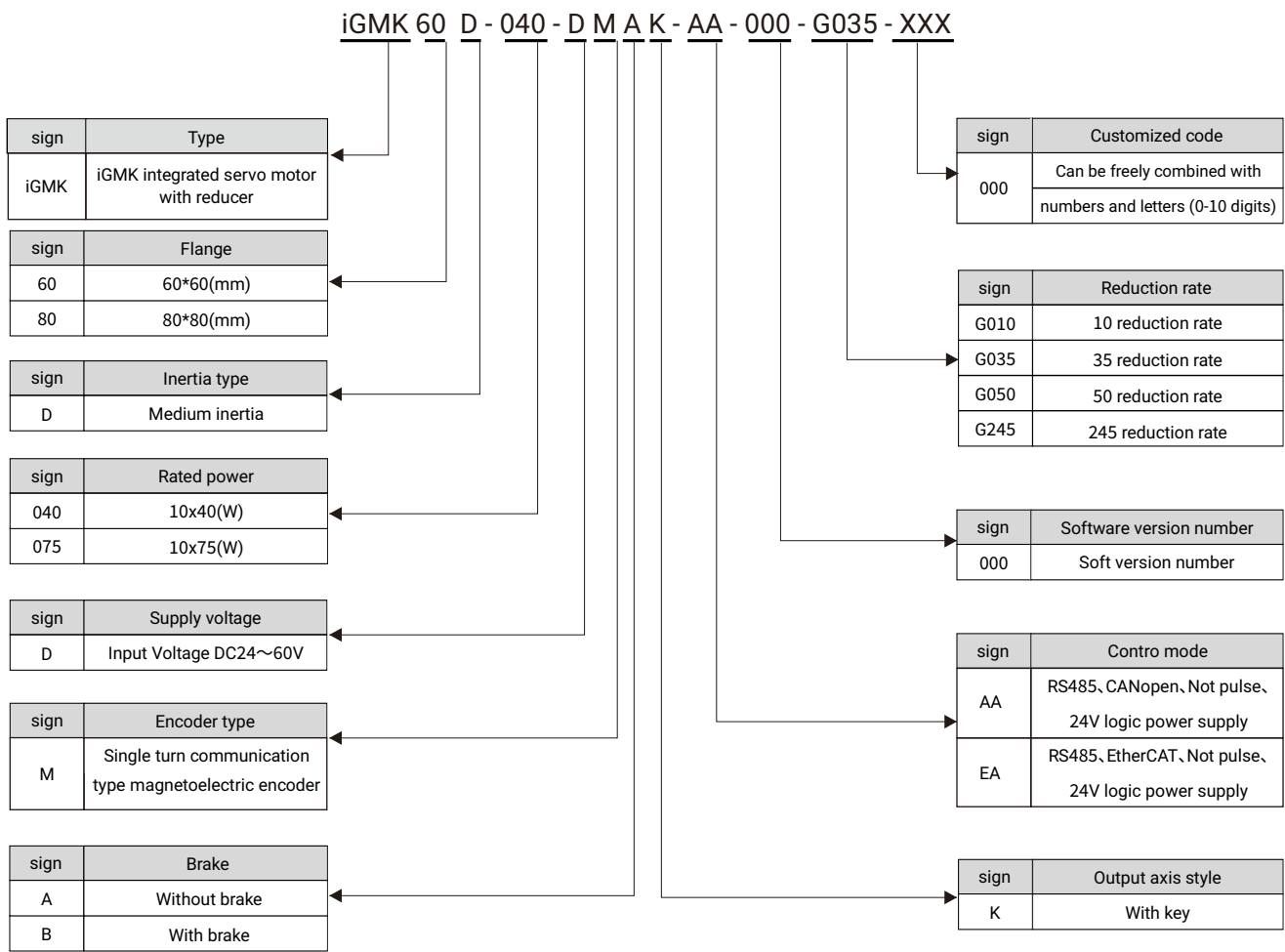
Motor+reducer are directly connected, Higher transmission efficiency and control accuracy.
Considering the compatibility of the installation size, there is no need for user to assemble individual component again, which saving installation costs.
iGMK has three times the overload capacity based on a lower temperature rise.

iGMK Intergrated Servo Motor

Feature

- Supports wide voltage input:DC24V~60V
- Support CANopen、Modbus RTU communication
- Power range:400W-750W
- Speed ratio range:5、7、10、20、35、50、70、245
- iGMK meet three times overload capacity, features low temperature rise and low noise
- Overvoltage protection, undervoltage protection, motor overheat (I²T) protection, short circuit protection, drive overheat protection
- iGMK has a compact structure, which is conducive to the miniaturization of the vehicle body
- The iGMK motion control component is modularized,featuring high reliability and quick assembly and disassembly, saving 50% installation time

Naming rule



iGMK Intergrated Servo Motor

iGMK Integrated Servo Reduction Motor Parameter Table

Model parameter		iGMK60D-040-DM■K-AA-000-GXXX			iGMK80D-040-DM■K-AA-000-GXXX		iGMK80D-075-DM■K-AA-000-GXXX	
Power		Rated 48VDC(24VDC~60VDC)						
Logic power		24VDC						
Rated power Pn (W)		400			400		750	
Rated torque Ts (Nm)		1.27			1.27		2.39	
Rated speed nN (rpm)		3000			3000		3000	
Rated current In(A)		10			10.3		18.1	
Max current Im(A)		32.1			33		62	
Brake holding torque (Nm)		2			1.5		4	
Complete machine	Reduction ratio	10	35	50	35		35	50
	Rated torque Ts (Nm)	11.81	40	45	40		75.3	85
	Rated speed nN (rpm)	300	85	60	85.7		85.7	60
	Max torque Tm(Nm)	30	90	90	120		170	170
	Max speed (rpm)	350	100	70	100		100	70
	Max radial force N	700	700	700	1300		1300	1300
	Max axial force N	600	600	600	1000		1000	1000
Energy consumption brake		There is no brake circuit inside the driver, and an external brake module is required						
Overvoltage alarm voltage		The default is 68±2 V						
Undervoltage alarm voltage		The default is 18±2V						
Cooling mode		Natural cooling						
Logical loss power (mW)		900						
Duty		S3-10min-60% (intermittent periodic duty, cycle time 10min, 60% working time)						
		S1 (continuous duty) torque must be derated to 70%						
General function	Input specification	4 channel digital input, COM1 terminal; High level: 12.5 ~ 30VDC Low level: 0 ~ 5VDC ,Input impedance: 5KΩ Maximum frequency: 1KHz						
	Input function	Freely defined as required, the functions are as follows: drive enable, drive error reset, drive mode control, speed loop proportional control, positive limit, negative limit, origin signal, command reverse, internal speed segment control, internal position segment control, emergency stop, start to find the origin, command activation, electronic gear ratio switching, gain switching						
	Output specification	1 digital output, OUT1 for the open collector output, the highest voltage 30V, driving capacity of 100mA						
	Output function	Freely defined according to needs, the functions are as follows: driver ready, driver error, motor position to, motor zero speed, motor lock brake, motor speed to, index Z signal appears, maximum limit speed in torque mode, motor lock shaft, motor limit medium, origin finding						
	Protect function	Overvoltage protection, undervoltage protection, motor overheat (I ² T) protection, short circuit protection, drive overheat protection						
Bus function	Modbus/RS485	It supports a maximum 115.2Kbps baud rate and can communicate with the controller using the Modbus RTU						
	CANopen	It supports a maximum 1Mbps baud rate and can communicate with the controller using the CANopen						
Working Temperature		-20°C~40°C (no freezing) ,When the operating temperature exceeds 40°C, the drive needs to be derated(derating 2%/1°C)						
Working Humidity		20%~80% (no condensation)						
Storage temperature		Short term storage (within 1 month): -20 °C~65 °C.						
		Long term storage (over 1 month):- 10 °C to 55 °C.						
Protection grade		IP54						
Altitude		Less than 3000m,power dreating 1.5%/100m between 1000m and 3000m.						
Atmospheric pressure		67kpa~106kpa						
Installation method		Motor flange mounting (Reduction ratio 10,35,50)						
		Side ear installation((Reduction ratio 245)						

Note 1: ■ = A:Without brake
B:With brake

Note 2:GXXX=G010:Reduction ratio 10
G035:Reduction ratio 35
G050:Reduction ratio 50

Note 3:The reduction method used by iGMK in different scenarios is different.
If you need to use it in more than 40 degrees, please contact the manufacturer.

Note 4: If you need other gear ratios, please contact regional marketing representative.

iGMK Intergrated Servo Motor

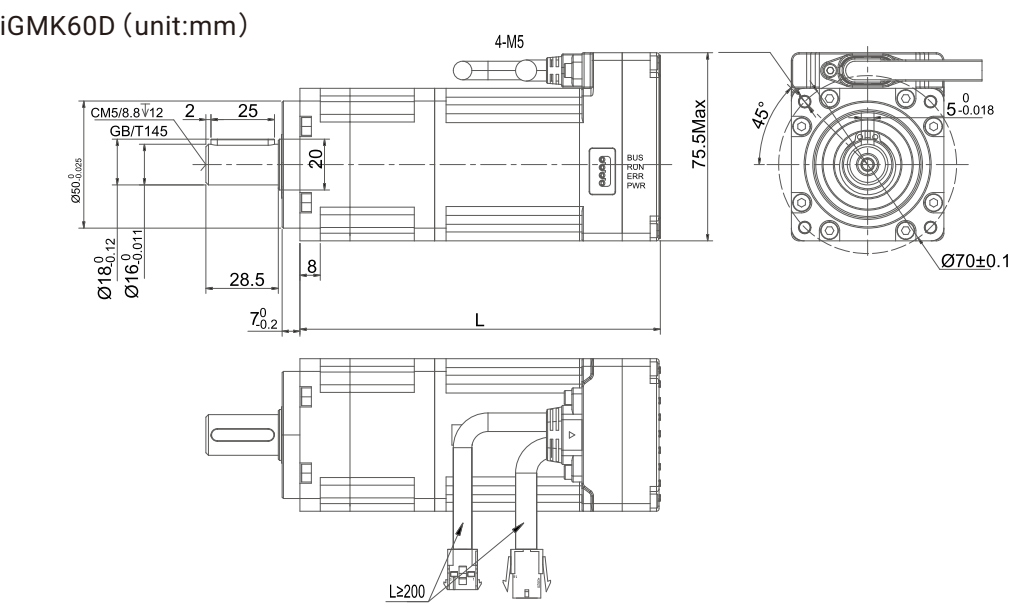
■ iGMK_AGV/AMR Rotating Jacking Special Integrated Servo Reducer Motor Parameter Table

Model parameter		iGMK60D-040-DM■K-AA-000-GXXXM01	iGMK80D-040-DM■K-AA-000-GXXXM01			iGMK80D-075-DM■K-AA-000-GXXXM01		
Power			Rated 48VDC(24VDC~60VDC)			Rated 48VDC(24VDC~60VDC)		
Logic power			24VDC			24VDC		
Rated power Pn (W)		400	400			750		
Rated torque Ts (Nm)		1.27	1.27			2.39		
Rated speed nN (rpm)		3000	3000			3000		
Rated current In(A)		10	10.3			18.1		
Max current Im(A)		32.1	33			62		
Brake holding torque (Nm)		2	1.5			4		
Complete machine	Reduction ratio	35	35	245	35	50	245	
	Rated torque Ts (Nm)	40	40	248.9	75.3	85	468	
	Rated speed nN (rpm)	85	85	12.2	85	60	12.2	
	Max torque Tm(Nm)	90	120	500	170	170	1000	
	Max speed (rpm)	100	100	14	100	70	14	
	Max radial force N	630	1500	18000	1500	1500	22000	
	Max axial force N	530	500	1000	500	500	1000	
Energy consumption brake		There is no brake circuit inside the driver, and an external brake module is required						
Overvoltage alarm voltage		The default is 68±2 V						
Undervoltage alarm voltage		The default is 18±2V						
Cooling mode		Natural cooling						
Logical loss power (mW)		900						
Duty		S3-10min-60% (intermittent periodic duty, cycle time 10min, 60% working time)						
		S1 (continuous duty) torque must be derated to 70%						
General function	Input specification	4 channel digital input, COM1 terminal; High level: 12.5 ~ 30VDC Low level: 0 ~ 5VDC ,Input impedance: 5KΩ Maximum frequency: 1KHz						
	Input function	Freely defined as required, the functions are as follows: drive enable, drive error reset, drive mode control, speed loop proportional control, positive limit, negative limit, origin signal, command reverse, internal speed segment control, internal position segment control, emergency stop, start to find the origin, command activation, electronic gear ratio switching, gain switching						
	Output specification	1 digital output, OUT1 for the open collector output, the highest voltage 30V, driving capacity of 100mA						
	Output function	Freely defined according to needs, the functions are as follows: driver ready, driver error, motor position to, motor zero speed, motor lock brake, motor speed to, index Z signal appears, maximum limit speed in torque mode, motor lock shaft, motor limit medium, origin finding						
	Protect function	Overvoltage protection, undervoltage protection, motor overheat (I ² T) protection, short circuit protection, drive overheat protection						
Bus function	Modbus/RS485	It supports a maximum 115.2Kbps baud rate and can communicate with the controller using the Modbus RTU						
	CANopen	It supports a maximum 1Mbps baud rate and can communicate with the controller using the CANopen						
Working Temperature		-20°C~40°C (no freezing) ,When the operating temperature exceeds 40°C, the drive needs to be derated(derating 2%/1°C)						
Working Humidity		20%~80% (no condensation)						
Storage temperature		Short term storage (within 1 month): -20 °C ~ 65 °C.						
		Long term storage (over 1 month): -10 °C ~ 55 °C.						
Protection grade		IP54						
Altitude		Less than 3000m,power dreating 1.5%/100m between 1000m and 3000m.						
Atmospheric pressure		67-106Kpa						
Installation method		Motor flange mounting (Reduction ratio 10,35,50)						
		Side ear installation((Reduction ratio 245)						

Note 1: ■ = A:Without brake
B:With brake
Note 2:GXXX= G035:Reduction ratio 35
G050:Reduction ratio 50
G245:Reduction ratio 245
Note 3:The reduction method used by iGMK in different scenarios is different.
If you need to use it in more than 40 degrees, please contact the manufacturer.

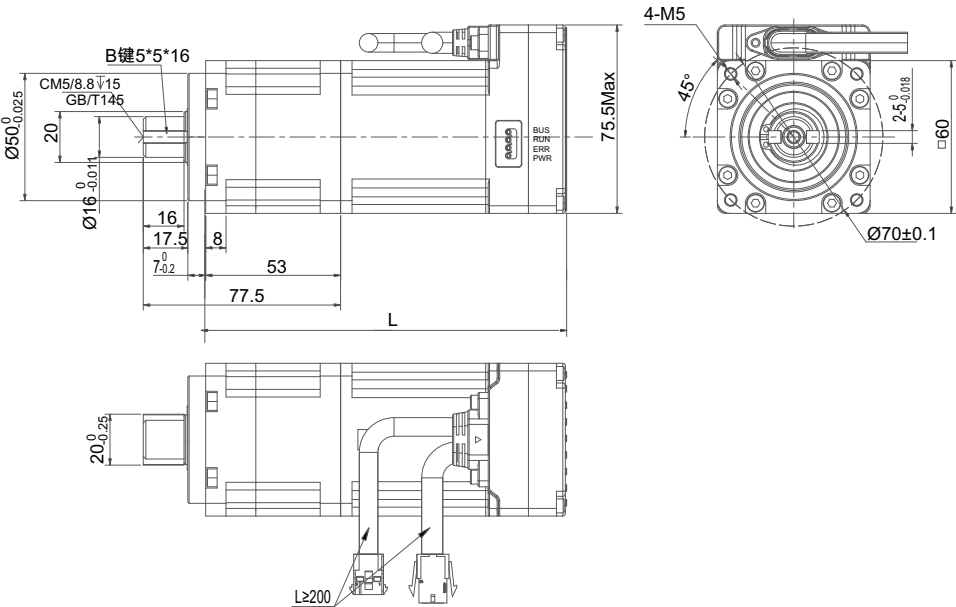
iGMK Intergrated Servo Motor

■ iGMK series mechanical dimensions



iGMK60D	With brake	Approx weight (Kg)	Overall dimension L (mm)
iGMK60D-040-DMAK-AA-000-G010		1.8	125±1.5
iGMK60D-040-DMBK-AA-000-G010	√	2.25	164.5±1.5
iGMK60D-040-DMAK-AA-000-G035		2.1	141.8±1.5
iGMK60D-040-DMBK-AA-000-G035	√	2.55	181.3±1.5
iGMK60D-040-DMAK-AA-000-G050		2.1	141.8±1.5
iGMK60D-040-DMBK-AA-000-G050	√	2.55	181.3±1.5

iGMK60D_ AGV/AMR Rotating Jacking Special (unit:mm)

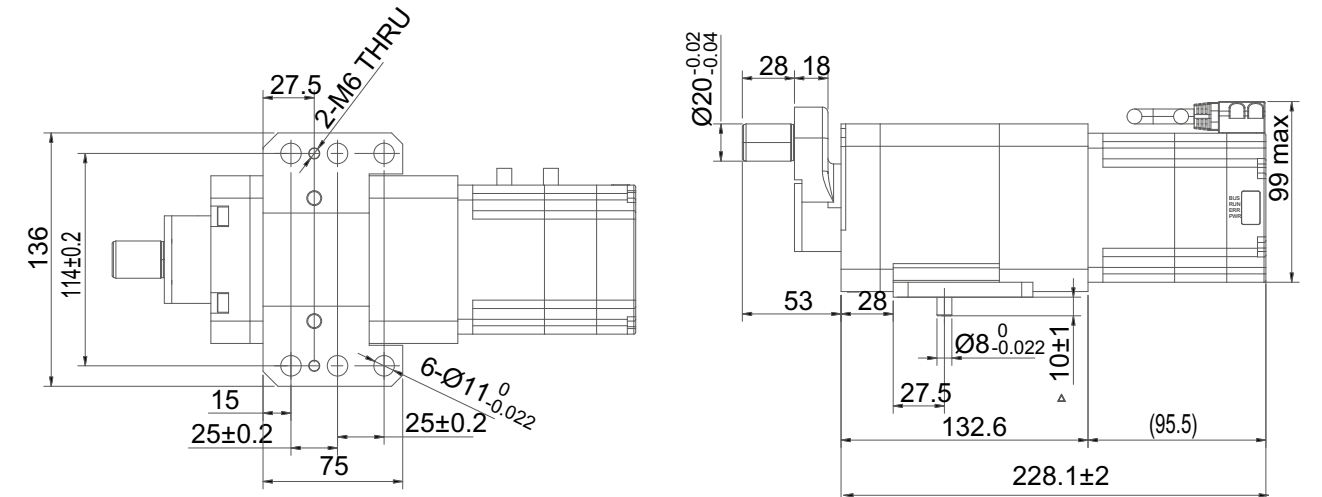


iGMK60D	With brake	Approx weight (Kg)	Overall dimension L (mm)
iGMK60D-040-DMAK-AA-000-G035M01		2.1	141.8±1.5
iGMK60D-040-DMBK-AA-000-G035M01	√	2.55	181.3±1.5

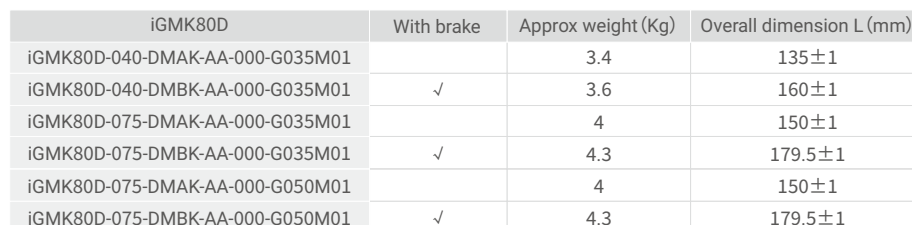
iGMK Intergrated Servo Motor

■ iGMK series mechanical dimensions

iGMK80D-040-DMBK-AA-000-G245 (unit:mm)

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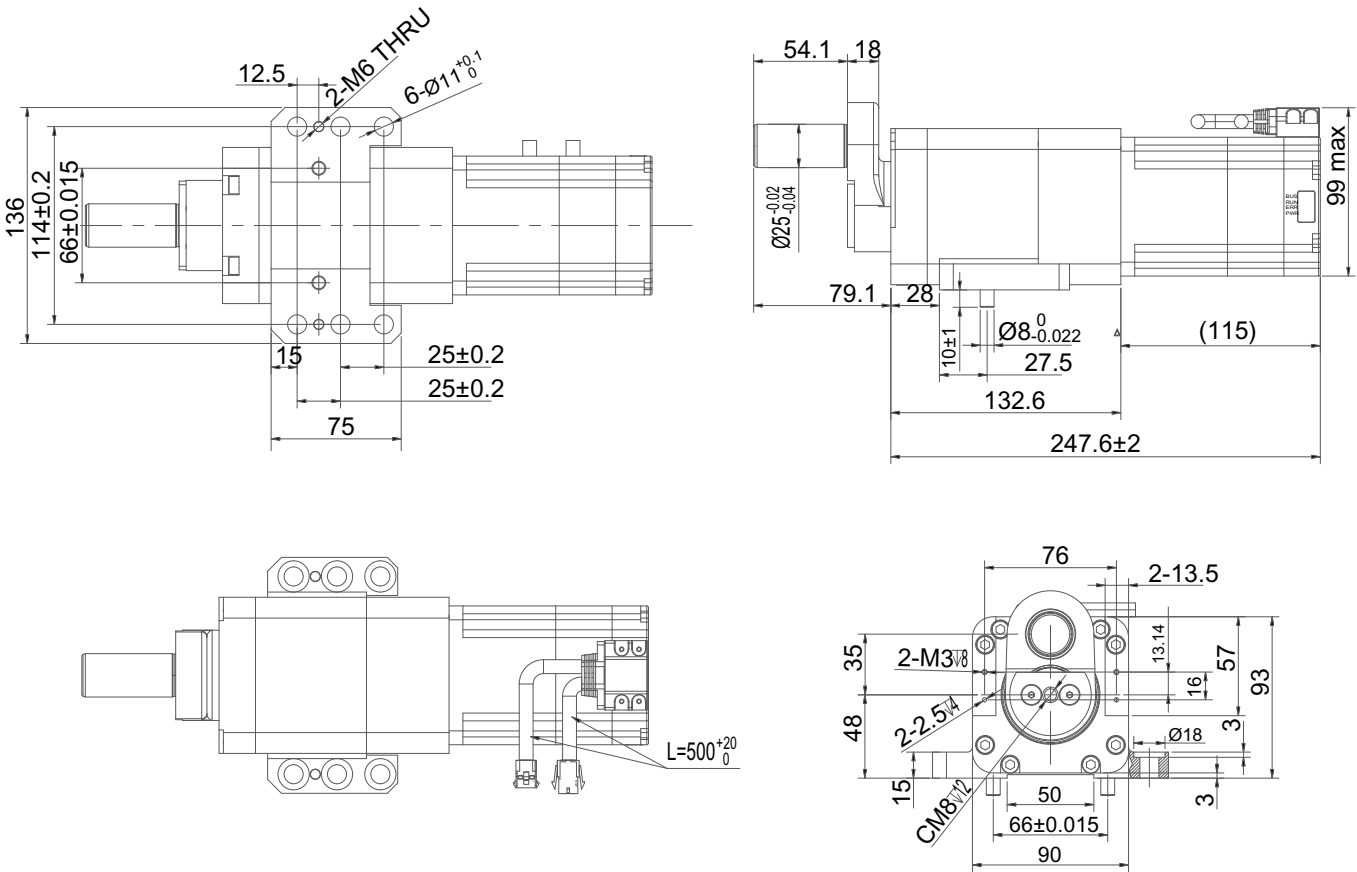
iGMK80D	With brake	Approx weight (Kg)	Overall dimension L (mm)
iGMK80D-040-DMBK-AA-000-G245	√	9	228.1±1



iGMK Intergrated Servo Motor

iGMK series mechanical dimensions

iGMK80D-075-DMBK-AA-000-G245 (unit:mm)



iGMK80D	With brake	Approx weight (Kg)	Overall dimension L (mm)
iGMK80D-075-DMBK-AA-000-G245	√	10	247.6±2

iGMK Intergrated Servo Motor

iGMK series torque characteristic curve chart

