SIGRINER

Ω6 AC Servo System
Samples for model selection

Wisdom-driven, freely controlled

Ω6 Servo System Brochure
www.step-sigriner.com.cn

About SIGRINER

1982

Sigriner GmbH was established in Germany, specialized in technical development of drive and control products

2003

STEP Sigriner Electronic GmbH embarked on a new journey

2016

Adhering to the mission of sharing the convenience and happiness of the intelligent society, the Sino-German R&D team has joined forces to create Ω series servo drive and control products
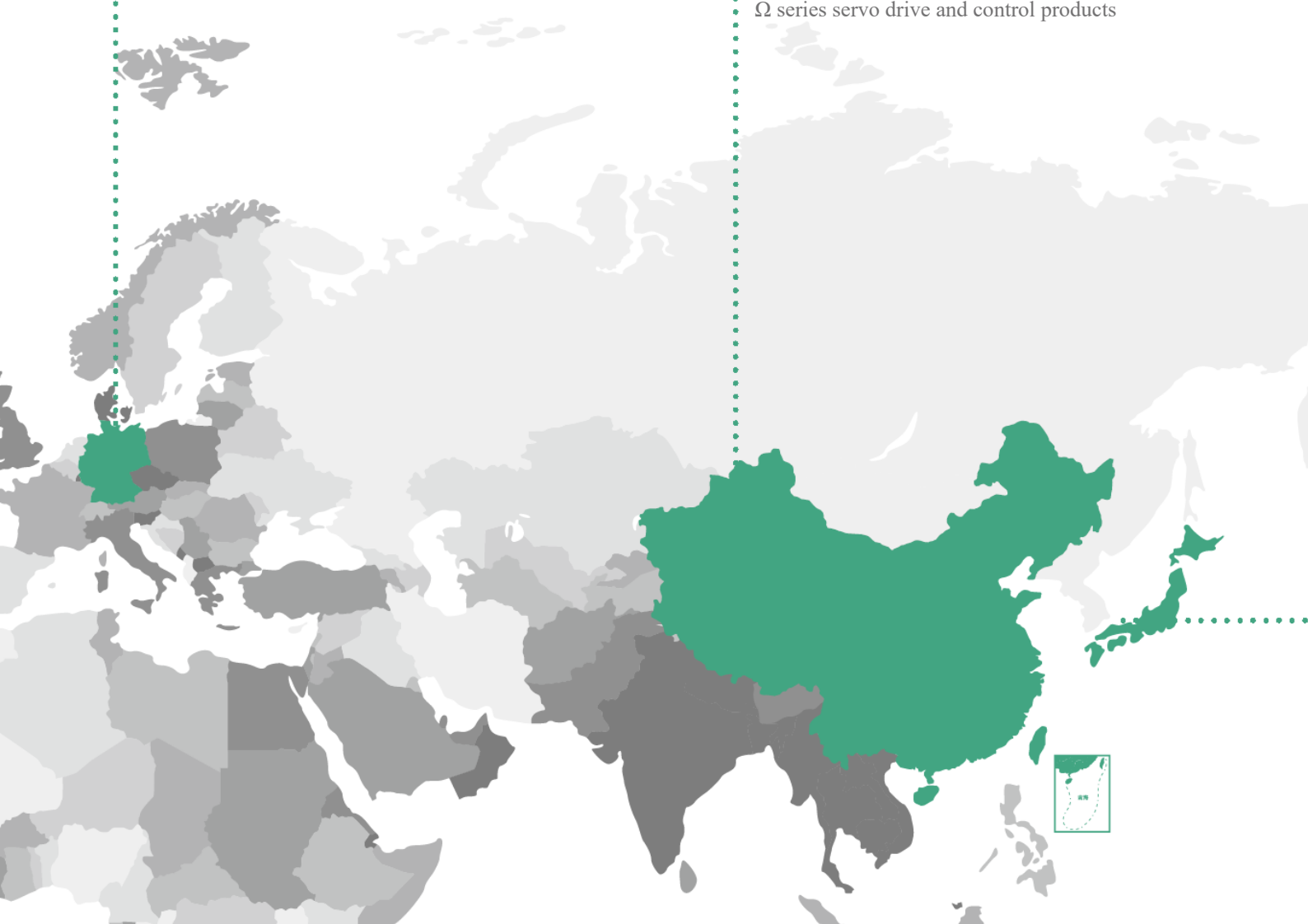
Index
目录

2019

The Japanese Research Institute was established officially, dedicated to transformation of cutting-edge technology of operation control and research & development of key technologies

Driver Information

Motor Information

List of Accessories

Ω6 AC Servo Driver

Naming conventions

ODSAP6 A 401 G B **

| 1-6 | 7 | 8-10 | 11 | 12 | 13-14 |

ODS	Product series	
1-6	Symbols	Type
	ODSAP6	Ω6 series single-axis pulse type
	ODSAN6	Ω6 series single-axis bus type

A	Voltage class	
7	Symbols	Type
	A	AC 220V
	B	AC 380V

401	Power specifications	
8-10	Symbols	Type
	201	200W
	401	400W
	751	750W
	102	1.0kW
	152	1.5kW
	202	2.0kW
	302	3.0kW
	......	......

G	Control type	
11	Symbols	Type
	B	Basic type
	G	General-purpose type
	F	Full-function type

B	Encoder type	
12	Symbols	Type
	B	Serial communication type

**	Special specifications	
13-14	Symbols	Type
	Vacancy	Standard motor

Powerful performance Out-of-the-box

Self-tuning, no debugging, saving 90% of the equipment debugging time

Speed loop bandwidth
3.5kHz

Current loop refresh rate
1MHz

With three-way 16-digit analog command entered, the change in 2 mv voltage can be distinguished and the control precision can be improved by 16 times

Strong power for easy handling

115%   **350%**

Overload rate of continuous load   Instantaneous overload

Response to IO in 1 μ s makes it easy to deal with the needs of aerial photography and probe

With two-degree-of-freedom control + pseudo-differential feedforward control, both high-speed response and strong interference are available
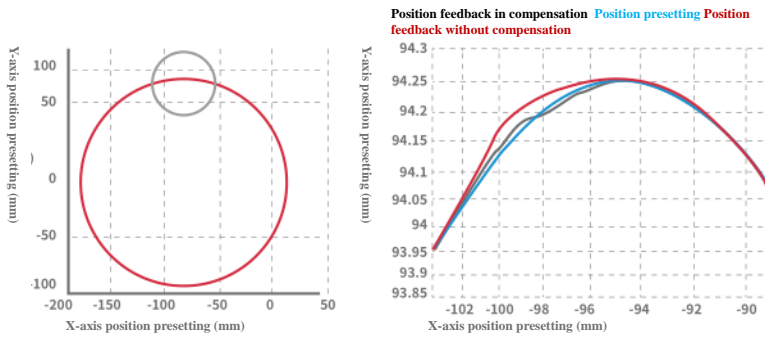
Equipped with 16 M pulse control interface, the control precision can be increased by 4 times

Friction compensation + over-quadrant bump inhibition

Easily dealing with precision machining, and improving the roundness by 85%

Position feedback in compensation **Position presetting** **Position feedback without compensation**

New gantry synchronization algorithm + standard RJ45 socket

Easily dealing with precision machining, and improving the roundness by 85%

Automatic tilt correction
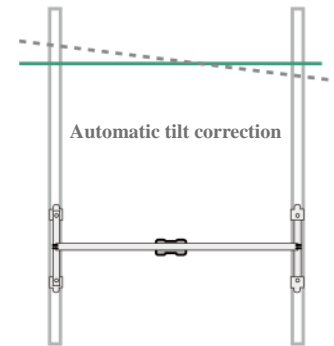
On-line inertia identification + on-line parameter self-tuning

Easily dealing with up to 30-time inertia ratio

For small inertia ratio

Speed response under initial parameters

Self-tuned speed response

For 30-time inertia ratio

Speed response under initial parameters

Self-tuned speed response
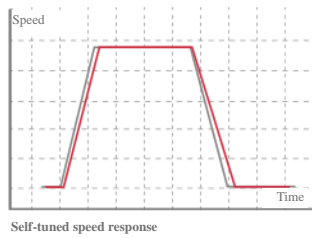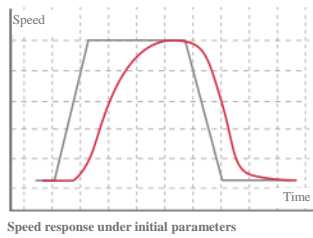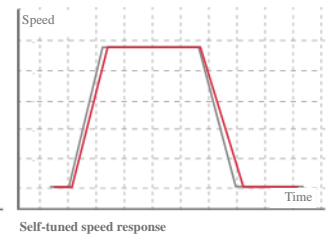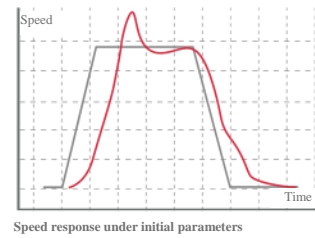
V-shaped anti-vibration control + end vibration control + self-adaptive notch filter

Sweep away the full-band vibration to cure the robot's Parkinson's disease

Without V-shaped anti-vibration waveform

With V-shaped anti-vibration waveform

Position deviation Torque command Positioning completion signal
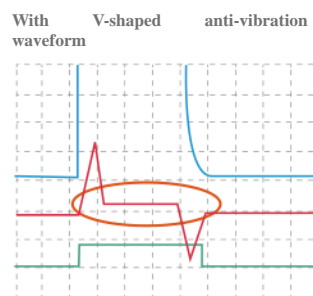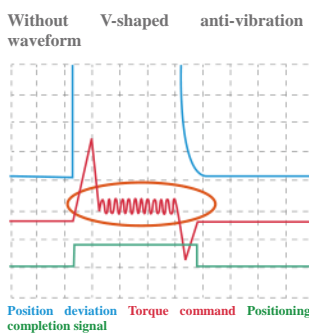
Work waveform of the device without end vibration function
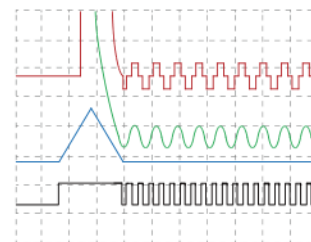
Work waveform of the device added with end vibration control algorithm

Position deviation Device end vibration Position command speed Positioning completion signal
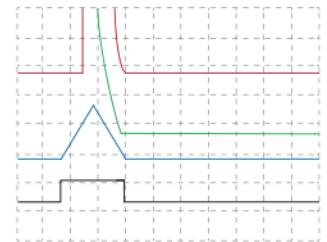
One QR code for one device

Easily confirming the product information, acquiring application data, and more assured to trace the source

WiFi wireless connection

With wireless monitoring, debugging, and upgrade, everything is close at hand

Built-in black box

Monitoring the running state in real time, diagnosing potential risks and conducting timely maintenance

Modular configuration

Cascade expansion of battery holder and band-type brake. Special interface for perfect match

Comprehensive safety protection

▶ The CE-compliant product conforms to relevant safety requirements for devices in the European and US markets.
▶ Independent cooling duct + temperature monitoring system + thickened UV coating can resist harsh environments featured by high temperature, high humidity, and dust.
▶ After passing more than 300 rigorous tests in HASS and HALT experiments, the device can still run stably in various harsh environments.

Multiple safety functions

STO   Safe torque off   SS   Safe stop

SBC   Safe brake control
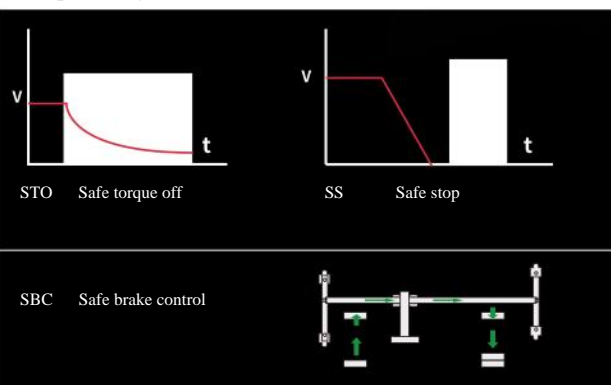
Dynamic braking effectively resolves the galloping problem

Motor stop without dynamic braking   Motor stop with dynamic braking
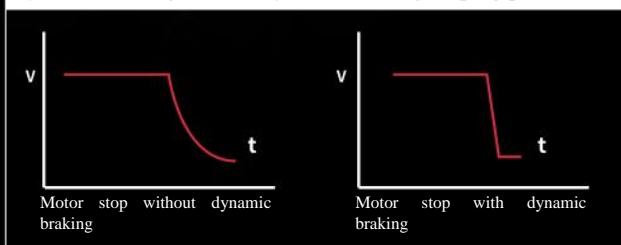
Specifications & models

Specifications & models	200V-grade driver specifications						
Driver power, kw	0.2	0.4	0.75	1.0	1.5	2.0	3.0
Rated current, Arms	2.1	2.8	5.0	6.0	8.4	12.5	18.1
Continuous running current, Arms	2.4	3.2	5.6	7.0	9.7	14.4	20.8
Maximum output current, Arms	6.3	9.8	15	18	30	37.5	54.3
Outline name	Type A	Type A	Type B	Type B	Type C	Type D	Type D
Power source of main circuit	Single-phase AC200V~240 V, -15%~10%		Single/three-phase AC200V~240V, -15%~10%		Three-phase AC200V~240V, -15%~10%		
Power source of control circuit	Single-phase AC200V~240 V, -15%~10%						

Note: 2kW and 3kW are coming soon. Please stay tuned

Technical specifications

Full-function type (F)
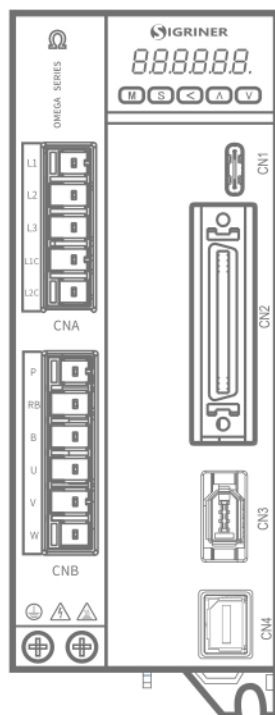
Input power			
200V series	Power source of main circuit	Type A	Single-phase AC200V~240V, -15%~10%; 50/60Hz
		Types B~C	Single/three-phase AC200V~240V, -15%~10%; 50/60Hz
	Power source of control circuit	Types A~C	Single-phase AC200V~240V, -15%~10%; 50/60Hz

Insulation and voltage resistance
Primary — to ground AC1,500 V, withstand voltage for 1 min (leakage triggered current: 20 mA) (200 V series)

Encoder feedback	
Encoder 1	17-digit, 23-digit, and 24-digit serial communication encoders
Encoder 2	16Mbps ABZ encoder

Service conditions	
Operating temperature	-5℃ ~ 55℃ (not frozen)
Storage temperature	-20℃ ~85℃
Service/storage humidity	< 95%RH (no freeze or condensation)
Vibration resistance	Below 5.88 m/s^2, 10 Hz (continuous use at the resonant frequency is not allowed)
Impact resistance	19.6m/s^2
Altitude	Normal use for < 1,000m; please conduct derating service for 1,000m~2,000m

IO interface connector		
Digital signal	Input	10 channels for the general-purpose input, 3 of which are high-speed DIs Select the functions of general-purpose input according to the parameters
	Output	6 channels for the general-purpose input, 2 of which are high-speed DOs Select the functions of general-purpose output according to the parameters
Analog signal	Input	3-channel 16bit A/D, ±10V
	Output	2-channel 12bit D/A, ±10V
Pulse signal	Input	2 Input The maximum differential input is 16Mpps, and the pulse width should be no lower than 62.5ns The maximum photocoupler input is 1Mpps, and the pulse width should be no lower than 2us (5V, 12V and 24V input can be supported respectively)
	Output	4 Output Differential output of phases A, B, and Z Open-collector output of phase Z

Communication function	
USB (Type-C)	Servo debugging, parameter setting and monitoring state can be carried out with the computer connected
Modbus	For 1 of the upper controller: n Communication, Modbus-RTU and ASCII modes are supported, Baud rate of 2,400bps~230,400bps can be set
Wifi (Type-C)	The wireless communication of AP and STA modes are supported through Wifi module
Safety terminal	The terminal corresponding to the safety function
Front panel	5-digit key, 6-digit LED display
Indicator band	It is used for indication of servo state, with blue breathing light for normal servo (non-enabled) or blue indicator normally on (enabled); red breathing light for warning; and red indicator normally on for alarm
Braking resistor	Type A: without built-in brake resistor (for external use only), types B~C : with built-in brake resistor (for external use as well)
Dynamic brake	Types A~C: built-in
Control modes	①Position control ② speed control ③ torque control④ position/speed control ⑤ position/torque control ⑥ speed/torque control and ⑦ full-closed loop control The 7 control modes can be switched according to the parameters

General-purpose	
Automatic adjustment	The load inertia and the gain of automatic settings relative to the rigid settings are inferred in real time by the action command of the upper computer and that issued by the installation and debugging software Ω Master, when the motor is driving.

Frequency division function of feedback pulse	
The number of pulses can be set arbitrarily (not exceeding the number of feedback pulses of the encoder)	

Protection functions	
Hardware errors	Over-voltage, under-voltage, over-speed, overload, over-current, and abnormal encoder etc.
Software errors	Excessive position deviation, frequency division of command pulse and abnormal EEPROM parameters etc.
Built-in black box	Monitoring the running state in real time, diagnosing potential risks and conducting timely maintenance

Absolute type function of infinite rotation	
The function used to set the upper limit of multi-turn data of absolute type encoder	

Position control	
Control input	Deviation counter clear, command pulse inhibitory input, command frequency division and multiplication switching and brake vibration control switching etc.
Control output	Positioning stop etc.

Pulse input	
Maximum command pulse frequency number	1M pulse/s (photocoupler input) 16M pulse/s (differential input)
Input pulse signal form	For photocoupler input or differential input, the input type and model form can be selected according to the parameters (① forward direction/reverse direction; ② phase A/B; ③ command + direction)
Command pulse frequency division and multiplication	Command pulse frequency number $\times$ electronic gear ratio ($\frac{1\sim2^{30}}{1\sim2^{30}}$) Processed as position command input However, please use the electronic gear ratio of 1/1,000~8,000 times
Smoothing filter	For command input, delay filter or FIR filter can be selected once

Analog input (position control)	
Torque limit command input	The torque limits in all directions can be set respectively
Torque feedforward input	The torque feedforward can be inputted according to the analog voltage
Brake vibration control	At most 4 controls can be used at the same time
V-shaped brake vibration filter	At most 1 filter can be used at the same time
2-degree-of-freedom	It is available
Load change inhibition control	It is available
Position comparison output function	It is available

Speed control	
Control input	Internal command speed selection 1. internal command speed selection 2. internal command speed selection 3. zero speed clamping etc.
Control output	Speed reached, etc.

Analog input (speed control)	
Speed command input	The speed command can be inputted according to the analog voltage
Torque limit input command	The torque limits in all directions can be set respectively
Torque feedforward input	The torque feedforward can be inputted according to the analog voltage
Internal speed command	8 internal speeds can be switched according to the control input
Soft start/power-off function	0-10s/1,000r/min, speed will be otherwise set for acceleration and deceleration
Zero speed clamping	The internal speed command can be set as 0 according to the zero speed clamping input
2-degree-of-freedom	It is available
Load change inhibition control	It is available
Position comparison output function	It is not available

Torque control	
Control input	Zero speed clamping, torque command symbol input etc.
Control output	Speed reached, etc.
Torque command input	The torque command can be inputted according to the analog voltage
Speed limit function	The speed limit value can be set according to the parameters
2-degree-of-freedom	It is not available
Load change inhibition control	It is not available
Position comparison output function	It is not available

Full-closed loop control	
Control input	Deviation counter clear, command pulse inhibitory input, command frequency division and multiplication switching and brake vibration control switching etc.
Control output	Positioning stop etc.
Pulse input	1M pulse/s (photocoupler input)
Maximum command pulse frequency number	16M pulse/s (differential input)
Input pulse signal form	For photocoupler input or differential input, the input type and model form can be selected according to the parameters (① forward direction/reverse direction; ② phase A/B; ③ command + direction)
Command pulse frequency division and multiplication	Command pulse frequency number $\times$ electronic gear ratio ($\frac{1\sim2^{30}}{1\sim2^{30}}$) Processed as position command input However, please use the electronic gear ratio of 1/1,000~8,000 times
Smoothing filter	For command input, delay filter or FIR filter can be selected once
Torque limit command input	The torque limits in all directions can be set respectively
Frequency division and multiplication of encoder 2	1/40 ~ 1,280 times
Setting range	The ratio of encoder feedback pulse (numerator) to external displacement sensor pulse (denominator) can be arbitrarily set when the numerator = 1 ~ 2^{23} and denominator = 1 ~ 2^{23}, but please use it within the above range
Brake vibration control	At most 4 controls can be used at the same time
V-shaped brake vibration filter	It is not available
2-degree-of-freedom	It is not available
Load change inhibition control	It is available
Position comparison output function	It is available

Specifications configuration

Function	Basic type (B)	General-purpose type (G)	Full-function type (F)
USB communication	✓	✓	✓
Modbus	✓	✓	✓
Wifi		✓	✓
Safety functions			✓
Command pulse input	✓	✓	✓
Analog voltage input		✓	✓
Encoder 2			✓
High speed DI (3 channels)		✓	✓
High speed DO (2 channels)		✓	✓
High speed probe		✓	✓
Aerial photography		✓	✓
Gantry function			✓
Black box		✓	✓
Brake module		✓	✓

Interface	Basic type (B)	General-purpose type (G)	Full-function type (F)
CN1	✓	✓	✓
CN2	✓	✓	✓
CN3	✓	✓	✓
CN4			✓
CN5		✓	✓
CN6	✓	✓	✓
CN7	✓	✓	✓
CN8			✓

Note: the Ω6 series servo system is divided into full-function type (F), general-purpose type (G) and basic type (B). For functions not covered, please refer to the full-function type.

Wiring diagram

Wiring diagram of type A driver

STO connector

CN8

CN6

CN7

Upper controller

Multiple servo drivers in parallel

Communication interface

Single-phase power supply

AC220V

Wiring circuit breaker
It is used to protect the power line and cut off the power in case of overcurrent.

EMI filter
Install a noise filter to prevent noise outside the power cord.

Electromagnetic contactor
Turn on/off the servo power. Install a surge suppressor before use.

Upon delivery, L1 and L2C, and L3 and L1C have been short circuited. If the wiring mode recommended by the diagram is adopted, the two short circuited lines above should be removed.

Braking resistor
When using internal brake resistor, short circuit RB and B (RB and B have been short circuited upon delivery); when braking capacity is insufficient, connect external brake resistor between P and B, and remove the short circuited line between RB and B

Servo motor
It must have a one-to-one correspondence with the motor UWW terminals.

SIGRINER

OMEGA SERIES

L1
NC
L3
L1C
L2C
CNA

P
RB
B
U
V
W
CNB

CN1

CN2

CN3

CN4

Type C connector
Connect to the PC communication

CN1

Functional IO terminal
Connect to the upper controller

CN2

Motor encoder

CN3

External encoder

CN4

Connect to external displacement sensor

System grounding

CN5

Brake module

Battery holder

Wiring diagram

Wiring diagram of types B~C drivers

STO connector

CN8

CN6

CN7

Upper controller

Communication interface

Multiple servo drivers in parallel

Three-phase power supply

AC220V

Wiring circuit breaker
It is used to protect the power line and cut off the power in case of overcurrent.

EMI filter
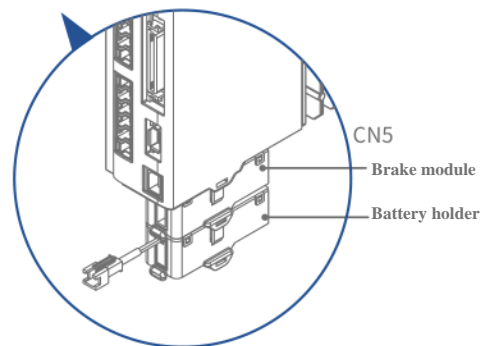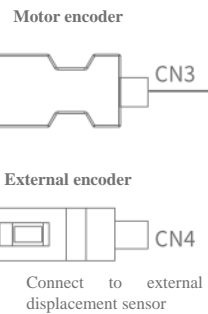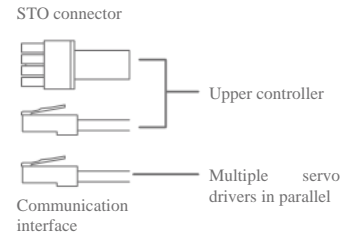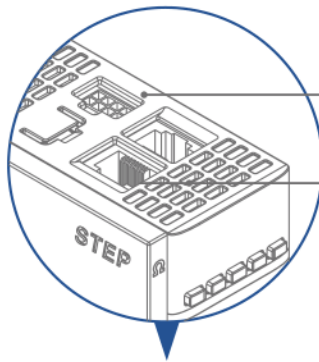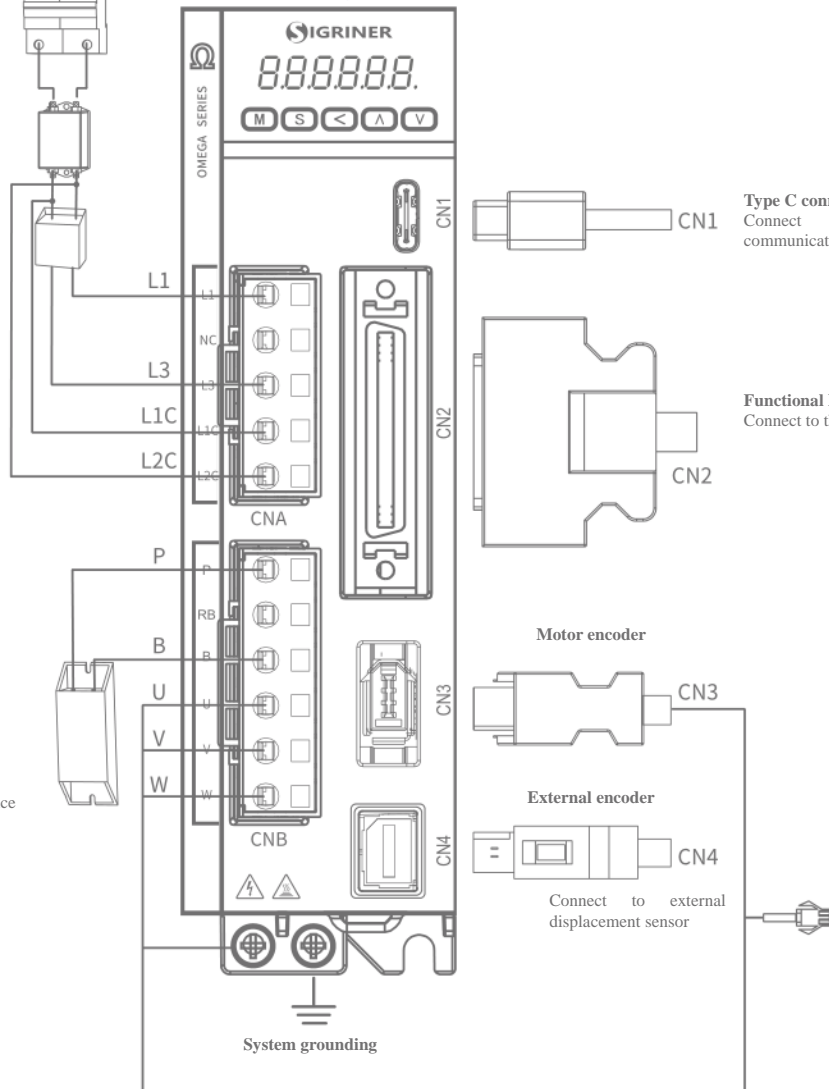Install a noise filter to prevent noise outside the power cord.

Electromagnetic contactor
Turn on/off the servo power. Install a surge suppressor before use.

Upon delivery, L1 and L2C, and L3 and L1C have been short circuited. If the wiring mode recommended by the diagram is adopted, the two short circuited lines above should

Braking resistor
When using internal brake resistor, short circuit RB and B (RB and B have been short circuited upon delivery); when braking capacity is insufficient, connect external brake resistor between P and B, and remove the short circuited line between RB and B

Servo motor
It must have a one-to-one correspondence with the motor UWW terminals.

Ω

OMEGA SERIES

SIGRINER

8.8.8.8.8.8.

M S < ∧ ∨

L1

L2

L3

L1C

L2C

CNA

P

RB

B

U

V

W

CNB

CN1

CN2

CN3

CN4

Type C connector
Connect to the PC communication

CN1

Functional IO terminal
Connect to the upper controller

CN2

Motor encoder

CN3

External encoder

CN4

Connect to external displacement sensor

System grounding

CN5

Brake module

Battery holder

Definition of servo system terminal

CN2 wiring:

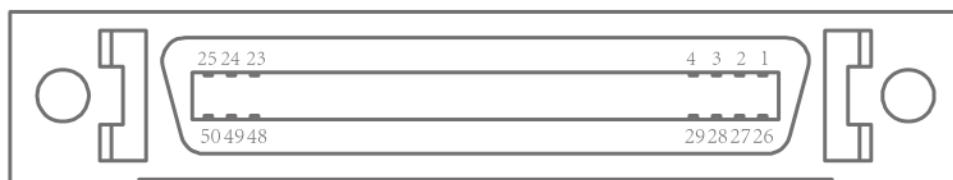The CN2 interface on the controller panel is the connection interface for the digital and analog input and output of the driver and communication signal. CN2 is SM50J pin socket. The following is the schematic diagram of panel interface:


Terminal No.	Definition	Manual Naming	Signal Name	Function Description
1	OPC1	OPC1	Low-speed pulse input signal (The level is 12~24V)	Photocoupler input, pulse (≤ 500KHz) input signal, the external level can be connected is 12~24V
2	OPC2	OPC2	Low-speed pulse direction control (The level is 12~24V)	Photocoupler input, pulse (≤ 500KHz) input signal, the external level can be connected is 12~24V
3	PULS1	PULS1	Low-speed pulse input signal (The level is 5V)	Photocoupler input, pulse (≤ 500KHz) input signal, the external level can be connected is 5V for this pin
4	PULS2	PULS2	Low-speed pulse input circuit signal (The level is GND)	This pin can be connected to the GND signal of external PLC
5	SIGN1	SIGN1	Low-speed pulse direction control (The level is 5V)	Photocoupler input, pulse (≤ 500KHz) input signal, the external level can be connected is 12~24V
6	SIGN2	SIGN2	Low-speed pulse direction control circuit (The level is GND)	This pin can be connected to the GND signal of external PLC
7	COM+	COM+	Photocoupler input common terminal	Analog monitor input, photocoupler input common terminal
8	NOT	NOT	Reverse direction drive inhibitory input	Digital input, reverse direction drive inhibitory input
9	POT	POT	Forward direction drive inhibitory input	Digital input, forward direction drive inhibitory input
10	BRKOFF-	BRKOFF-	External brake release signal -	Digital output, external brake release negative signal
11	BRKOFF+	BRKOFF+	External brake release signal+	Digital output, external brake release positive signal
12	ZSP	ZSP	Zero speed detection signal	Digital output, zero speed detection signal. This pin supports up to 1Mhz high-speed digital signal output
13	GND	GND	GND signal	High-speed pulse input and analog GND signal

| Terminal No.	Definition	Manual Naming	Signal Name	Function Description
14	SPR/TRQR/SPL	SPR/TRQR/SPL	Analog input	Analog input 1
15	GND	GND	GND signal	High-speed pulse input and analog GND signal
16	P-ATL/TFQR	P-ATL/TFQR	Analog input	Analog input 2
17	GND	GND	GND signal	High-speed command input and analog GND signal
18	N-ATL	N-ATL	Analog input	Analog input 3
19	CZ	CZ	Phase Z signal of encoder	Open-collector output, phase Z signal of encoder
20	NC	NC	-	Do not connect
21	OA+	OA+	Phase A positive terminal	Phase A positive terminal of pulse frequency division output
22	OA-	OA-	Phase A negative terminal	Phase A negative terminal of pulse frequency division output
23	OZ+	OZ+	Phase Z positive terminal	Phase Z positive terminal of pulse frequency division output
24	OZ-	OZ-	Phase Z negative terminal	Phase Z negative terminal of pulse frequency division output
25	GND	GND	GND signal	High-speed pulse input and analog GND signal
26	VS-SEL1	VS-SEL1	Brake vibration control switching input 1	Digital input, brake vibration control switching input 1
27	GAIN	GAIN	Gain switching input	Digital input, gain switching input
28	DIV1	DIV1	Command frequency division and multiplication switching input 1	Digital input, command frequency division and multiplication switching input 1. This pin supports up to 1MHz high-speed digital signal input
29	SRV-ON	SRV-ON	Servo start input	Digital input, servo start input
30	CL	CL	Deviation counter clear input	Digital input, deviation counter clear input
31	A-CLR	A-CLR	Alarm clear	Digital input, alarm clear
32	C-MODE	C-MODE	Control mode switching input	Digital input, control mode switching input
33	INH	INH	Command pulse inhibitory input	Digital input, command pulse inhibitory input. This pin supports up to 1MHz high-speed digital signal input
34	S-RDY-	S-RDY-	Negative terminal of servo preparation output	Digital output, negative terminal of servo preparation output
35	S-RDY+	S-RDY+	Positive terminal of servo preparation output	Digital output, positive terminal of servo preparation output
36	ALM-	ALM-	Alarm output negative terminal	Digital output, alarm output negative terminal
37	ALM+	ALM+	Alarm output positive terminal	Digital output, alarm output positive terminal
38	INP-	INP-	Positioning completion negative terminal	Digital output, positioning completion negative terminal
39	INP+	INP+	Positioning completion positive terminal	Digital output, positioning completion positive terminal
40	TLC	TLC	Signal output in torque limit	Digital output, signal output in torque limit. This pin supports up to 1MHz high-speed digital signal output
41	COM-	COM-	Photocoupler input common terminal	Analog monitor input, photocoupler input common terminal
42	IM	IM	Torque analog signal output	Analog monitor output, torque analog signal output
43	SP	SP	Speed analog signal output	Analog monitor output, speed analog signal output
44	PULSH1	PULSH1	Command pulse input 1	Position command pulse input, maximum frequency of 16Mpulses/s (differential input). Special pulse train interface of long-distance driver (when the frequency is 500 k pulse/s ~ 4M pulse/s, please use this interface)
45	PULSH2	PULSH2	Command pulse input 2	
46	SIGNH1	SIGNH1	Command symbol input 1	
47	SIGNH2	SIGNH2	Command symbol input 2	
48	OB+	OB+	Phase B positive terminal	Phase B positive terminal of pulse frequency division output
49	OB-	OB-	Phase B negative terminal	Phase B negative terminal of pulse frequency division output
50	FG	FG	Housing grounding	Connect to the ground terminal inside the servo driver

CN3 wiring:
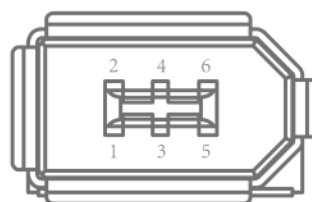
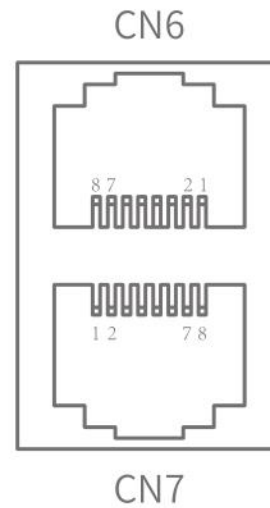| Name	Symbols	Connector pin No.	Contents
Encoder power supply	E5V	1	Encoder power source +5V
	E0V	2	Encoder power source 0V
	NC	3	Do not connect any device
	NC	4	Do not connect any device
Encoder RS485	PS	5	Encoder communication signal+
	PS	6	Encoder communication signal-
Encoder RS485	FG	Housing	Connect to the ground terminal inside the servo driver

CN4 wiring:
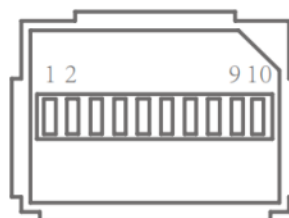
Name	Symbols	Connector pin No.	Contents
Power output	EX5V	1	Encoder power source +5V
	EX0V	2	Encoder power source 0V
	NC	3	Do not connect any device
	NC	4	Do not connect any device
Encoder signal input of phases A, B, and Z	EXA	5	Phase A input signal
	EXA	6	
	EXB	7	Phase B input signal
	EXB	8	
	EXZ	9	Phase Z (origin) input signal
	EXZ	10	
Housing grounding	FG	Housing	Connect to the ground terminal inside the servo driver

Note: please be sure to use shielded cables for wiring of CN3 and CN4, and have the terminal shielded layer grounded, so as to improve the interference rejection
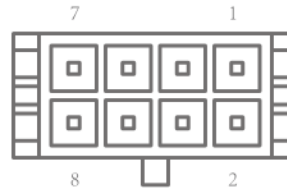
Wiring of CN6 and CN7:

CN6

CN7

Function definition of pin CN6

Name	Symbols	Connector pin No.	Contents
Synchronous signal input	SYNC_RX+	1	Differential signal of gantry synchronization functional input
	SYNC_RX-	2	
	NC	3	Do not connect any device
RS485 signal	RS485-	4	RS485 signal data +
	RS485+	5	RS485 signal data -
	NC	6	Do not connect any device
	NC	7	Do not connect any device
Signal grounding	485_GND	8	RS485 signal GND

Function definition of pin CN7

Name	Symbols	Connector pin No.	Contents
Synchronous signal output	SYNC_TX+	1	Differential signal of gantry synchronization functional output
	SYNC_TX-	2	
Impedance adaptation	RS485_X-	3	It is used to connect the built-in terminal resistor of the driver
RS485 signal	RS485-	4	RS485 signal data +
	RS485+	5	RS485 signal data -
Impedance adaptation	RS485_X+	6	It is used to connect the built-in terminal resistor of the driver
	NC	7	Do not connect any device
Signal grounding	RS485_GND	8	RS485 signal GND

CN8 wiring:

Name	Symbols	Connector pin No.	Contents
-12V	—	1	STO safety bypass power supply from inside the driver
+12V	—	2	
Safety input 1	SF1-	3	STO safety bypass power supply from inside the driver
	SF1+	4	STO request input signal data 1+
Safety input 2	SF2-	5	STO request input signal data 2-
	SF2+	6	STO request input signal data 2+
EDM output	EDM-	7	Monitoring output signal data - of STO safety function failure
	EDM+	8	Monitoring output signal data + of STO safety function failure

That is, the wiring of standard security bypass plug (internal wiring) of the driver upon delivery when no safety function is used and no safety circuit is formed:
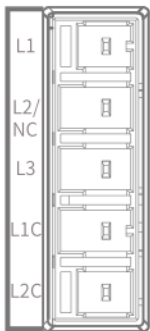
Pin No.

CNA wiring:

CNA provides interfaces for the electric power supply and control power supply of the driver.

Name	Symbols	Connector pin No.	Contents
L1	L1	1	L1 connection interface of single-phase/three-phase power supply
L2/NC	L2/NC	2	L2 connection interface of three-phase power supply (NC for type A driver)
L3	L3	3	L3 connection interface of single-phase/three-phase power supply
L1C	L1C	4	Single-phase input of control power supply
L2C	L2C	5	Single-phase input of control power supply

CNB wiring:

CNB provides interfaces for the electric power supply and control power supply of the driver.
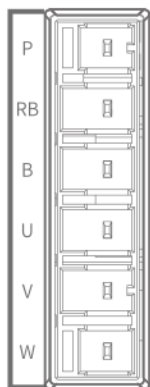
Name	Symbols	Connector pin No.	Contents
P	P	1	Braking resistor+
RB	RB	2	Internal braking resistor. If internal braking resistor is required, B and RB should be short circuited
B	B	3	Interface for external braking resistor
U	U	4	Motor phase U output
V	V	5	Motor phase V output
W	W	6	Motor phase W output

Installation dimension drawing

Outline dimension of type A driver	Unit: mm
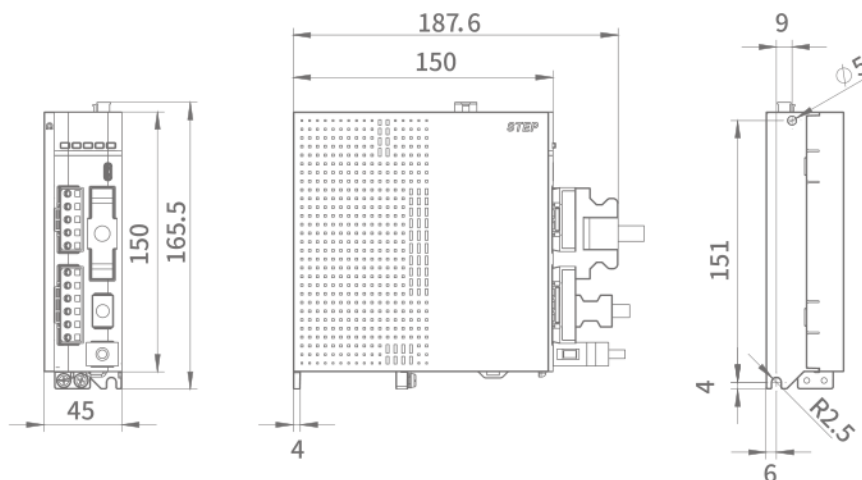
Outline dimension of type B driver	Unit: mm
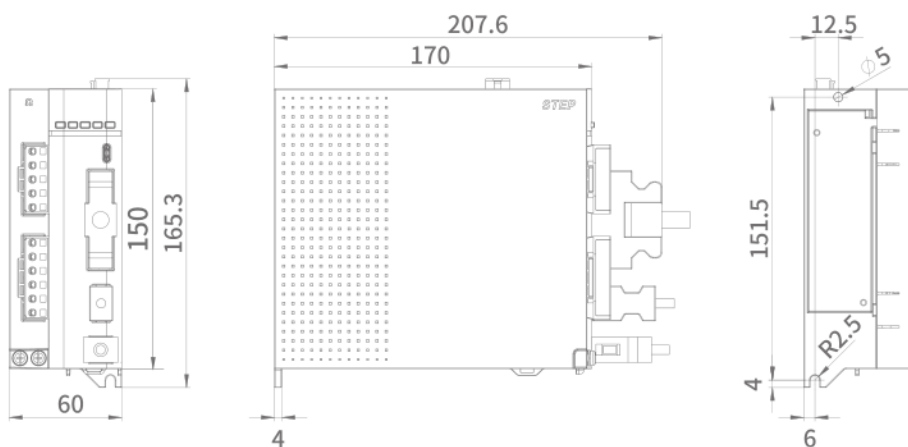
Outline dimension of type C driver	Unit: mm

Motor Information

Naming conventions

OM S 1 401 N 2 S A **
1-2   3   4   5-7   8   9   10   11   12-13

OM	Product series	
1-2	Symbols	Type
	OM	Ω series servo motor

S	Inertia type	
3	Symbols	Type
	S	Low inertia
	M/D	Medium inertia
	G/H	High inertia

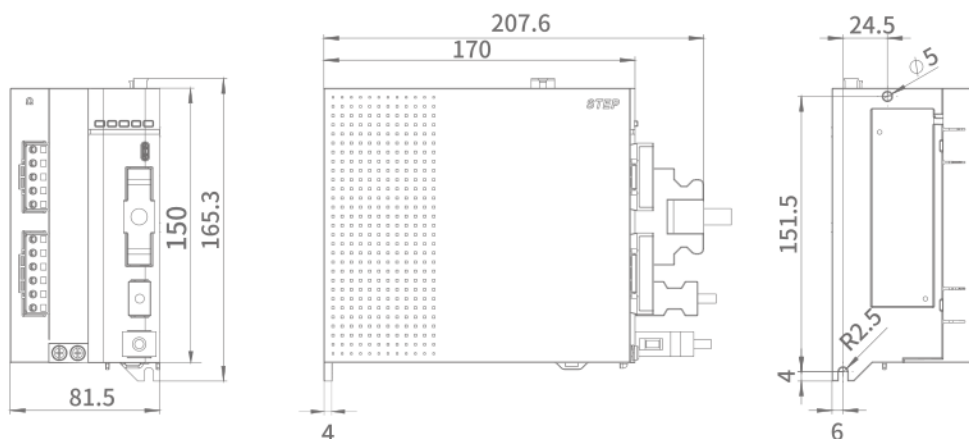| 1	Internal coding	
4	Symbols	Type
	1	OM1 series motor
	2	OM2 series motor

401	Motor power	
5-7	Symbols	Type
	500	50W
	101	100W
	201	200W
	401	400W
	751	750W
	951	1.0kW
	102	1.0kW
	152	1.5kW
	202	2.0kW
	302	3.0kW
	851	850W
	132	1.3kW
	182	1.8kW

N	Brake	
8	Symbols	Type
	N	Without brake
	A	With brake

2	Voltage class	
9	Symbols	Type
	2	220V

S	Shaft/oil seal	
10	Symbols	Type
	S	Direct-axis motor without oil seal
	K	Spline shaft motor without oil seal
	T	Direct-axis motor with oil seal
	L	Spline shaft motor with oil seal

A	Encoder type	
11	Symbols	Type
	N	17-digit incremental type
	A	17-digit absolute value
	D	23-digit incremental type
	F	23-digit absolute value

**	Special specifications	
12-13	Symbols	Type
	Vacancy	Standard motor

Parameters and characteristics of OM1 series motor:
### 1. Low inertia of OMS1201/OMS1401/OMS1751/OMS1951

Parameter list

Items	Unit	Specifications			
Motor model	-	OMS1201	OMS1401	OMS1751	OMS1951
Rated output	W	200	400	750	1000
Voltage	V(AC)	220	220	220	220
Rated torque	N·m	0.64	1.27	2.39	3.18
Maximum torque	N·m	1.91	3.82	7.1	9.55
Rated current	A	1.7	2.7	4.2	5.2
Maximum current	A	5.2	8.5	12.2	15.2
Rated speed	r/min	3000	3000	3000	3000
Maximum speed	r/min	6000	6000	6000	6000
Torque constant	N · m/A	0.409	0.490	0.63	0.65
Reverse potential constant	mV/(r/min)	14.3	17.1	21.9	22.9
Rotor inertia					
Without brake	×10⁻⁴kg · m²	0.14	0.23	0.74	1.12
With brake	×10⁻⁴kg · m²	0.17	0.26	0.94	1.29

Outline dimension

Unit: mm

Motor model	OMS1201 □ 2	OMS1201 □ 2 □□ 01	OMS1401	OMS1751	OMS1951
LC	60	60	60	80	80
LL					
Without brake	76.5	76.5	93.5	107.3	127.3
With brake	113	113	130	144.3	164.3
LR	30	30	30	35	35
S	14	11	14	19	19
LA	70	70	70	90	90
LB	50	50	50	70	70
LE	3	3	3	3	3
LF	6.5	6.5	6.5	8	8
LH	43	43	43	53	53
LX	210	210	210	210	210
LZ	5.5	5.5	5.5	6.6	6.6
Shaft end with keys					
LW	25	20	25	25	25
LK	22.5	18	22.5	22	22
KW	5	4	5	6	6
KH	5	4	5	6	6
RH	11	8.5	11	15.5	15.5
TP	M5 depth 10	M4 depth 8	M5 depth 10	M5 depth 10	M5 depth 10

Torque characteristics

OMS1201

OMS1401

OMS1751

OMS1951
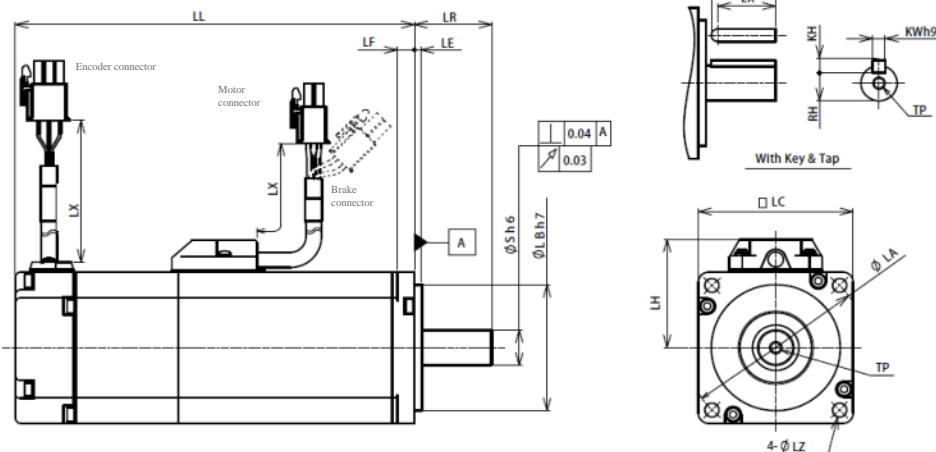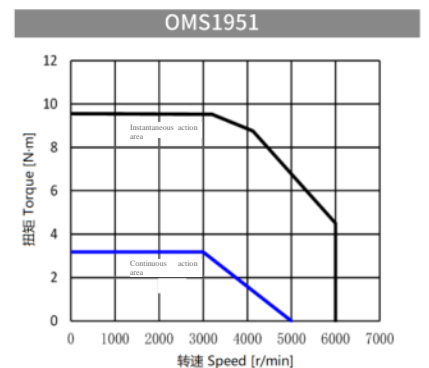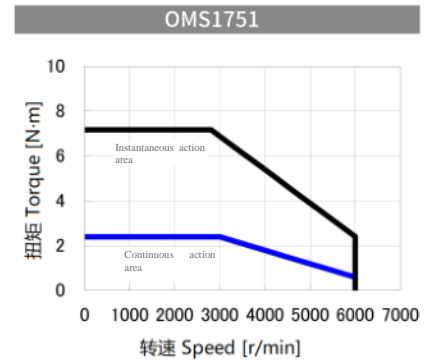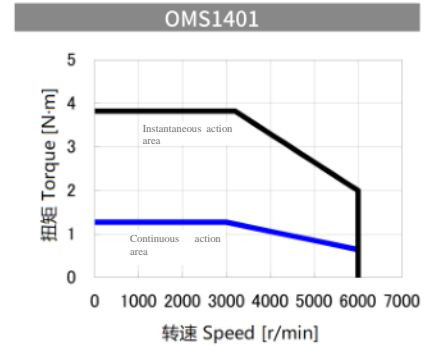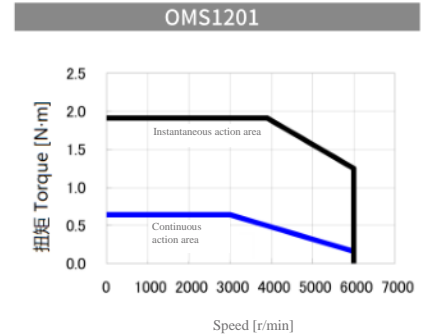
2. Low inertia of OMS1102/OMS1152/OMS1202

Parameter list

Items	Unit	Specifications		
Motor model	-	OMS1102	OMS1152	OMS1202
Rated output	kW	1.0	1.5	2.0
Voltage	V(AC)	220	220	220
Rated torque	N·m	3.18	4.77	6.37
Maximum torque	N·m	9.55	14.3	19.1
Rated current	A	6.8	7.6	10.6
Maximum current	A	19.9	24.9	33.9
Rated speed	r/min	3000	3000	3000
Maximum speed	r/min	5000	5000	5000
Torque constant	N·m/A	0.52	0.64	0.62
Reverse potential constant	mV/(r/min)	18.15	22.27	21.68
Rotor inertia				
Without brake	$\times10^{-4}$kg·m^2	1.94	2.81	3.68
With brake	$\times10^{-4}$kg·m^2	2.35	3.25	4.09

Outline dimension

Unit: mm

Motor model	OMS1102	OMS1152	OMS1202
LC	100	100	100
LL			
Without brake	132	151	170
With brake	162	181	200
LM			
Without brake	108	127	146
With brake	138	157	176
LR	55	55	55
S	19	19	19
LA	115	115	115
LB	95	95	95
LE	3	3	3
LF	10	10	10
LZ	9	9	9
KB1	78	97	116
KB2			
Without brake	120	97	116
With brake	150	139	158
KB3			
Without brake	--	--	--
With brake	119.3	138.3	157.3
Shaft end with keys			
LW	45	45	45
LK	42	42	42
KW	6	6	6
KH	6	6	6
RH	15.5	15.5	15.5
TP	M5 depth 10	M5 depth 10	M5 depth 10

Torque characteristics

OMS1102

OMS1152

OMS1202
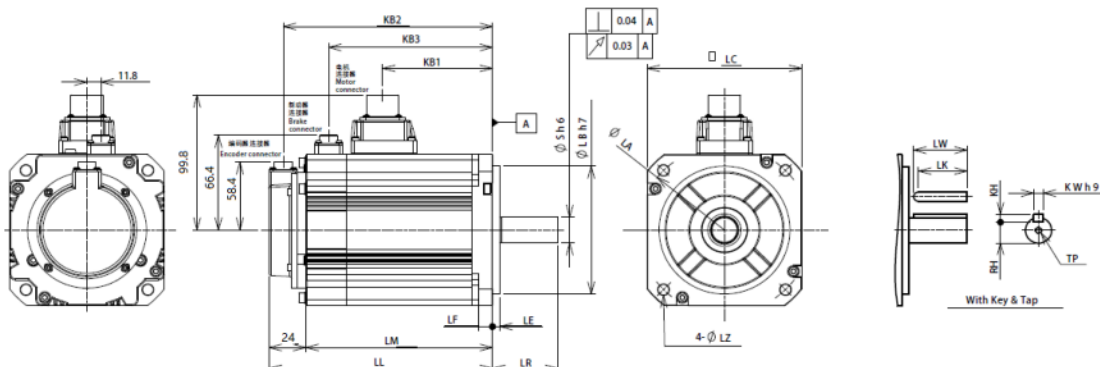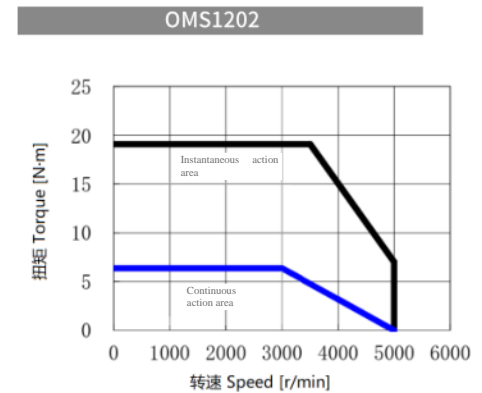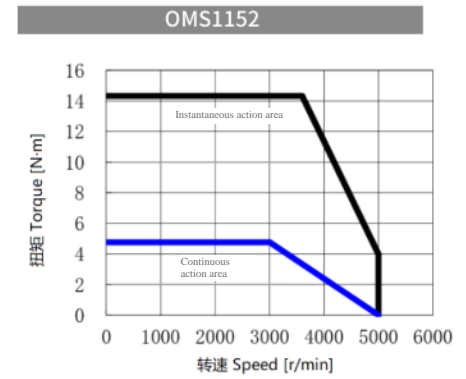
3. Medium inertia of OMM1500/OMM1101

Parameter list

Items	Unit	Specifications	
Motor model	–	OMM1500	OMM1101
Rated output	W	50	100
Voltage	V(AC)	220	220
Rated torque	N·m	0.16	0.32
Maximum torque	N·m	0.56	1.12
Rated current	A	0.68	0.97
Maximum current	A	2.4	3.3
Rated speed	r/min	3000	3000
Maximum speed	r/min	6000	6000
Torque constant	N·m/A	0.25	0.35
Reverse potential constant	mV/(r/min)	8.8	12.3
Rotor inertia			
Without brake	$\times 10^{-4} kg \cdot m^2$	0.039	0.061
With brake	$\times 10^{-4} kg \cdot m^2$	0.047	0.069

Torque characteristics

OMM1500

OMM1101

Outline dimension

Unit: mm

Motor model	OMM1500 □ 2S OMM1500 □ 2K	OMM1500 □ 2T OMM1500 □ 2L	OMM1101 □ 2S OMM1101 □ 2K	OMM1101 □ 2T OMM1101 □ 2L
LC	40	40	40	40
LL				
Without brake	66.4	72	82.4	88
With brake	106.8	112.4	122.8	128.4
LR	25	25	25	25
S	8	8	8	8
LA	46	46	46	46
LB	30	30	30	30
LE	2.5	2.5	2.5	2.5
LF	5	5	5	5
LH	33	33	33	33
LX	210	210	210	210
LZ	4.5	4.5	4.5	4.5
Shaft end with keys				
LW	15.5	15.5	15.5	15.5
LK	14	14	14	14
KW	3	3	3	3
KH	3	3	3	3
RH	6.2	6.2	6.2	6.2
TP	M3 depth 6	M3 depth 6	M3 depth 6	M3 depth 6
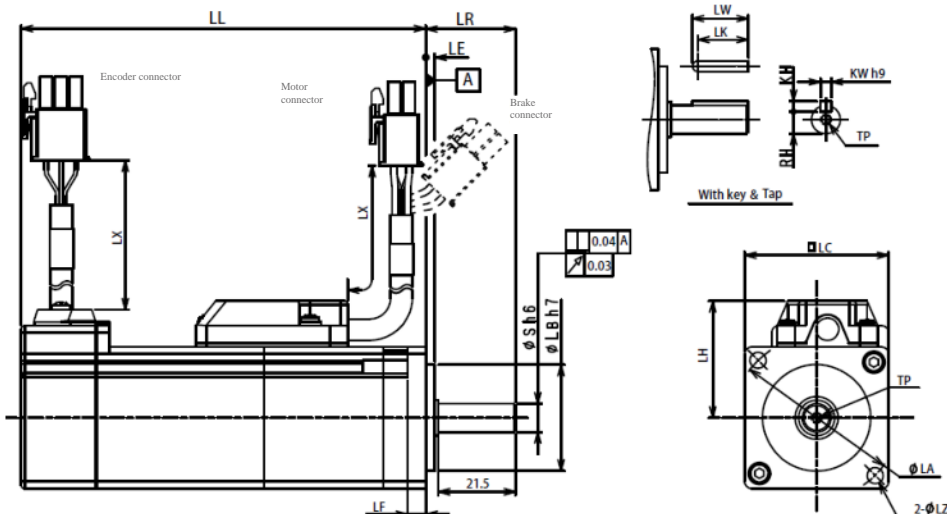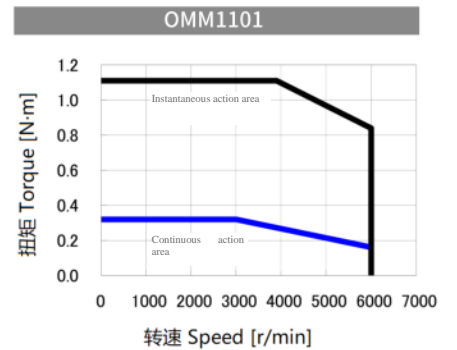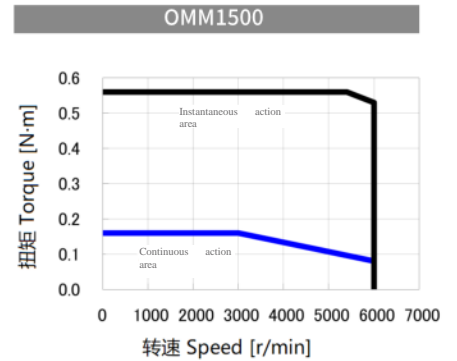
4. Medium inertia of OMM1102/OMM1152/OMM1202

Parameter list

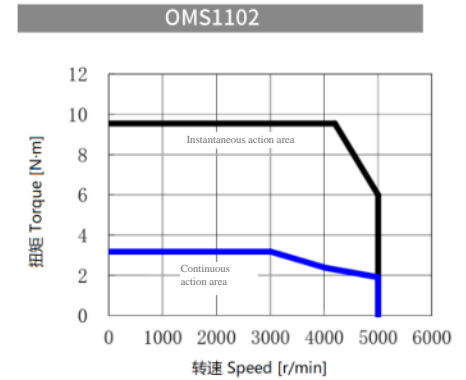| Items	Unit	Specifications		
Motor model	-	OMM1102	OMM1152	OMM1202
Rated output	kW	1.0	1.5	2.0
Voltage	V(AC)	220	220	220
Rated torque	N·m	4.77	7.16	9.55
Maximum torque	N·m	14.3	21.5	28.6
Rated current	A	5.6	9.0	11.9
Maximum current	A	16.8	27	35.7
Rated speed	r/min	2000	2000	2000
Maximum speed	r/min	3000	3000	3000
Torque constant	N·m/A	0.88	0.81	0.85
Reverse potential constant	mV/(r/min)	30.9	28.4	29.6
Rotor inertia				
Without brake	$\times 10^{-4}$kg·m^2	4.56	6.67	8.70
With brake	$\times 10^{-4}$kg·m^2	6.24	8.35	10.38

Outline dimension

Unit: mm

Motor model	OMM1102	OMM1152	OMM1202
LC	130	130	130
LL			
Without brake	128	145.5	163
With brake	153	170.5	188
LM			
Without brake	97	114.5	132
With brake	122	139.5	157
LR	55	55	55
S	22	22	22
LA	145	145	145
LB	110	110	110
LE	6	6	6
LF	12	12	12
LZ	9	9	9
KB1	57.5	75	92.5
KB2			
Without brake	116	133.5	151
With brake	141	158.5	176
KB3			
Without brake	--	--	--
With brake	102.8	120.3	137.8
Shaft end with keys			
LW	45	45	45
LK	41	41	41
KW	8	8	8
KH	7	7	7
RH	18	18	18
TP	M6 depth 20	M6 depth 20	M6 depth 20

Torque characteristics

OMM1102

OMM1152

OMM1202
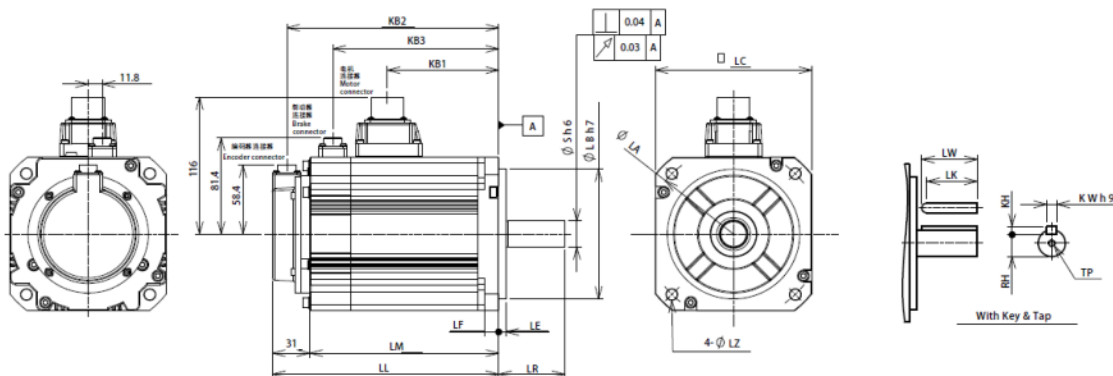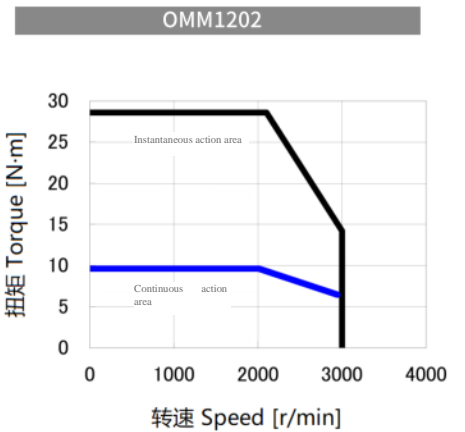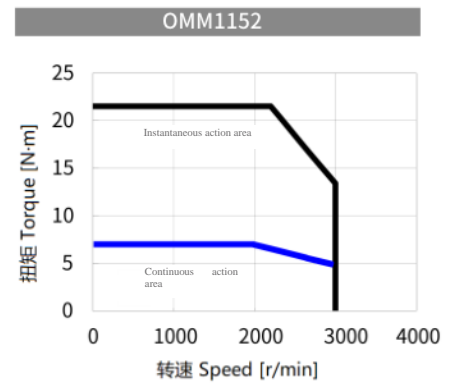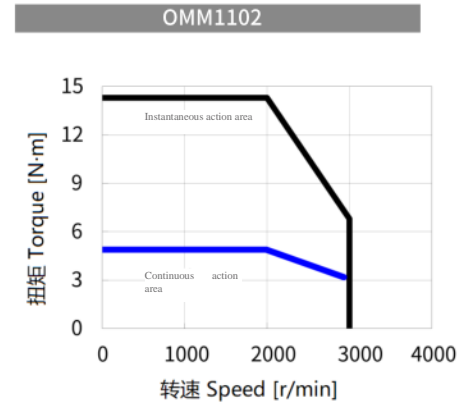
5. Medium inertia of OMD1500/OMD1101/OMD1201/OMD1401

Parameter list

Items	Unit	Specifications			
Motor model	-	OMD1500	OMD1101	OMD1201	OMD1401
Rated output	W	50	100	200	400
Voltage	V(AC)	220	220	220	220
Rated torque	N·m	0.16	0.32	0.64	1.27
Maximum torque	N·m	0.56	1.12	1.91	3.82
Rated current	A	0.71	0.99	1.7	2.7
Maximum current	A	2.4	3.4	5.2	8.5
Rated speed	r/min	3000	3000	3000	3000
Maximum speed	r/min	6000	6000	6000	6000
Torque constant	N·m/A	0.25	0.37	0.409	0.490
Reverse potential constant	mV/(r/min)	8.7	12.7	14.3	17.1
Rotor inertia					
Without brake	×10⁻⁴kg·m²	0.039	0.064	0.255	0.481
With brake	×10⁻⁴kg·m²	0.047	0.072	0.279	0.504

Outline dimension

Unit: mm

Motor model	OMD1500□2S OMD1500□2K	OMD1500□2T OMD1500□2L	OMD1101□2S OMD1101□2K	OMD1101□2S OMD1101□2K	OMD1201	OMD1401
LC	40	40	40	40	60	60
LL						
Without brake	57.1	64.7	70.7	78.3	78.5	98
With brake	89.1	97.1	103.1	110.7	104.5	124.5
LR	25	25	25	25	30	30
S	8	8	8	8	14	14
LA	46	46	46	46	70	70
LB	30	30	30	30	50	50
LE	2.5	2.5	2.5	2.5	3	3
LF	5	5	5	5	6.5	6.5
LH	33	33	33	33	43	43
LX	210	210	210	210	210	210
LZ	4.5	4.5	4.5	4.5	5.5	5.5
Shaft end with keys						
LW	15.5	15.5	15.5	15.5	25	25
LK	14	14	14	14	22.5	22.5
KW	3	3	3	3	5	5
KH	3	3	3	3	5	5
RH	6.2	6.2	6.2	6.2	11	11
TP	M3 depth 6	M3 depth 6	M3 depth 6	M3 depth 6	M5 depth 10	M5 depth 10
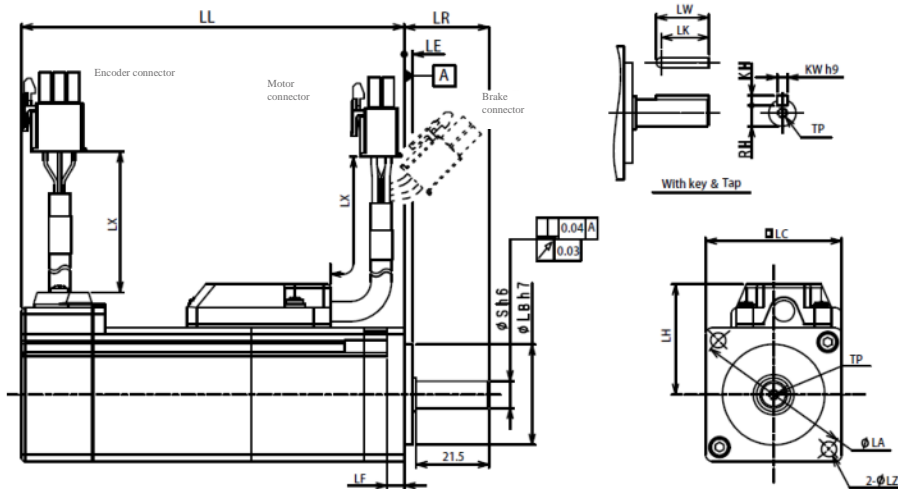
Torque characteristics

注：200W/400W 电机含 4 个固定螺母孔。
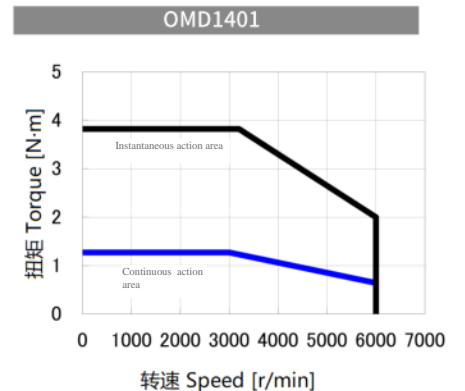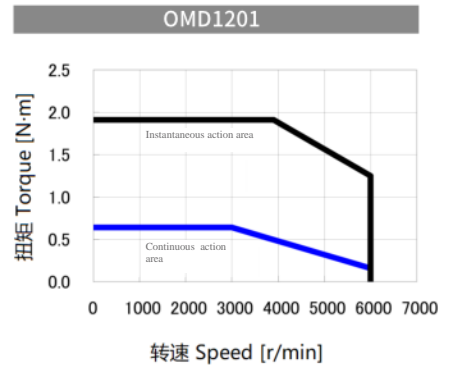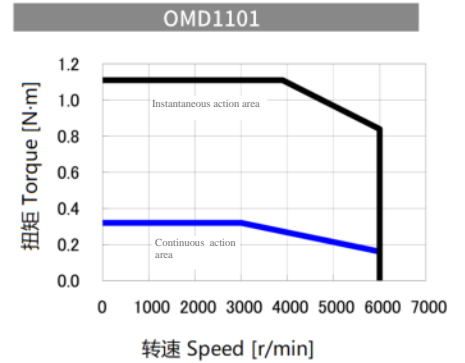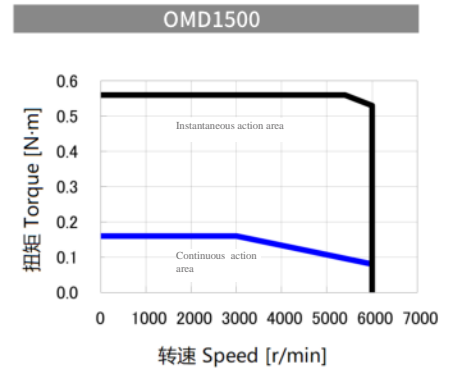
6. High inertia of OMG1851/OMG1132

Parameter list

Items	Unit	Specifications	
Motor model	-	OMG1851	OMG1132
Rated output	W	850	1300
Voltage	V(AC)	220	220
Rated torque	N·m	5.39	8.34
Maximum torque	N·m	14.2	23.3
Rated current	A	6.9	10.7
Maximum current	A	17	28
Rated speed	r/min	1500	1500
Maximum speed	r/min	3000	3000
Torque constant	N·m/A	0.828	0.853
Reverse potential constant	mV/(r/min)	28.9	29.8
Rotor inertia			
Without brake	$\times10^{-4}$kg·m^2	13.9	19.8
With brake	$\times10^{-4}$kg·m^2	16.0	21.9

Torque characteristics

OMG1851

OMG1132

Outline dimension

Unit: mm

Motor model	OMG1851	OMG1132
LC	130	130
LL		
Without brake	128	145.5
With brake	162	179.5
LM		
Without brake	97	114.5
With brake	131	148.5
LR	58	58
S	19	22
LA	145	145
LB	110	110
LE	6	6
LF	12	12
LZ	9	9
KB1	70	87.5
KB2		
Without brake	116	133.5
With brake	150	167.5
KB3		
Without brake	--	--
With brake	109	126
Shaft end with keys		
LW	28	28
LK	25	25
KW	5	6
KH	5	6
RH	16	19
TP	M5 depth 12	M5 depth 12
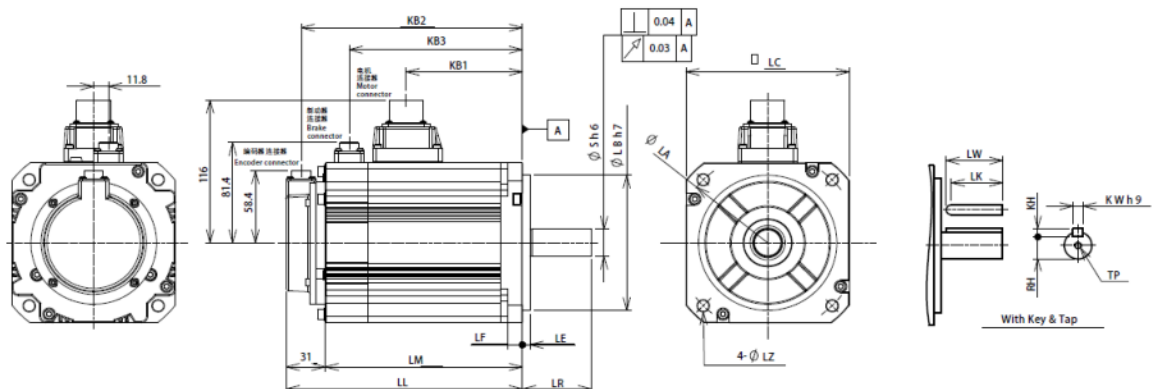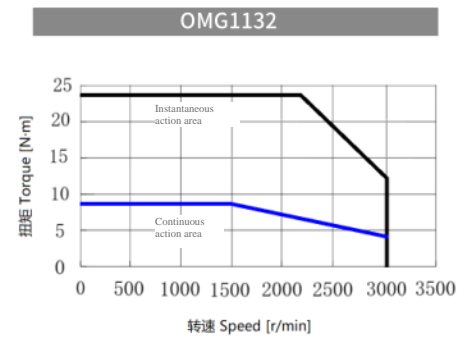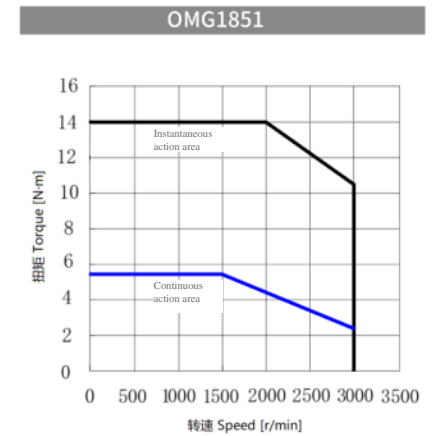
7. High inertia of OMH1201/OMH1401/OMH1751

Parameter list

Items	Unit	Specifications		
Motor model	-	OMH1201	OMH1401	OMH1751
Rated output	W	200	400	750
Voltage	V(AC)	220	220	220
Rated torque	N·m	0.64	1.27	2.39
Maximum torque	N·m	1.91	3.82	7.1
Rated current	A	1.7	2.7	4.2
Maximum current	A	5.2	8.5	12.2
Rated speed	r/min	3000	3000	3000
Maximum speed	r/min	6000	6000	6000
Torque constant	N·m/A	0.409	0.490	0.63
Reverse potential constant	mV/(r/min)	14.3	17.1	21.9
Rotor inertia				
Without brake	×10^{-4}kg·m^2	0.44	0.71	1.61
With brake	×10^{-4}kg·m^2	0.47	0.73	1.81

Outline dimension

Unit: mm

Motor model	OMH1201 □ 2	O□M2H□12□0101	OMH1401	OMH1751
LC	60	60	60	60
LL				
Without brake	93.5	93.5	110.5	122.3
With brake	130	130	147	159.3
LR	30	30	30	35
S	14	11	14	19
LA	70	70	70	90
LB	50	50	50	70
LE	3	3	3	3
LF	6.5	6.5	6.5	8
LH	43	43	43	53
LX	210	43	210	210
LZ	5.5	5.5	5.5	6.6
Shaft end with keys				
LW	25	20	25	25
LK	22.5	18	22.5	22
KW	5	4	5	6
KH	5	4	5	6
RH	11	8.5	11	15.5
TP	M5 depth 10	M4 depth 8	M5 depth 10	M5 depth 10

Torque characteristics

OMH1201

OMH1401

OMH1751
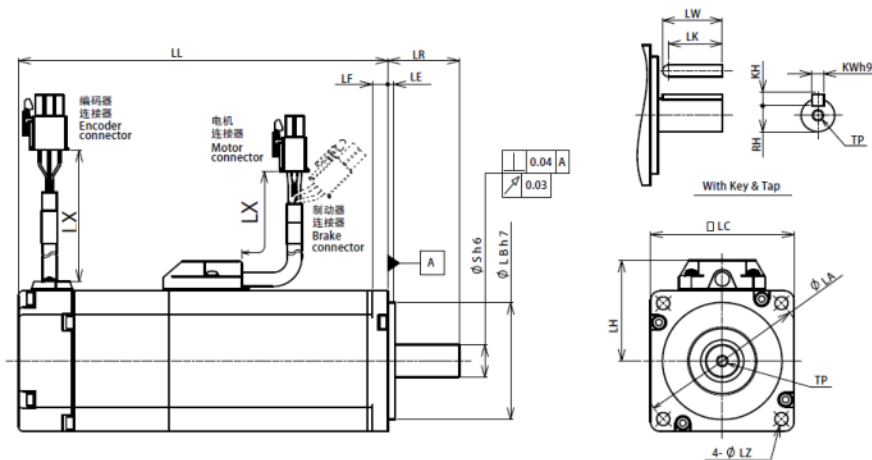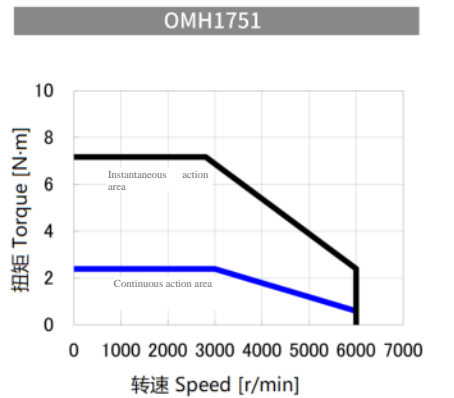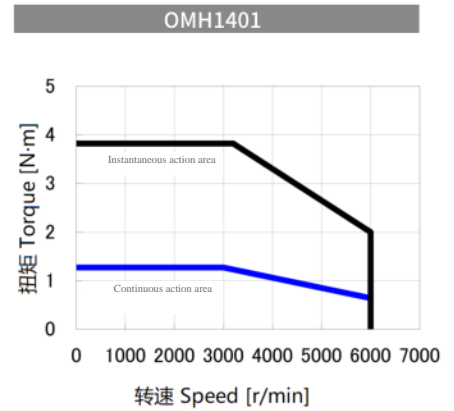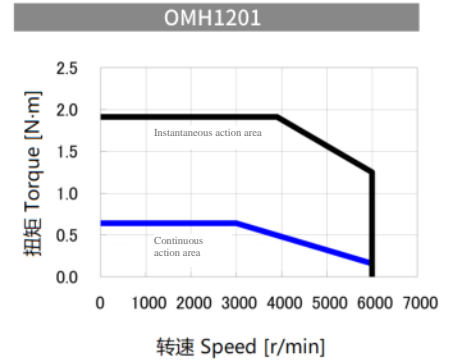
8. High inertia of OMH1102/OMH1152

Parameter list

Items	Unit	Specifications	
Motor model	-	OMH1102	OMH1152
Rated output	kW	1.0	1.5
Voltage	V(AC)	220	220
Rated torque	N·m	4.77	7.16
Maximum torque	N·m	14.3	21.5
Rated current	A	5.6	9.0
Maximum current	A	16.8	27
Rated speed	r/min	2000	2000
Maximum speed	r/min	3000	3000
Torque constant	N·m/A	0.88	0.81
Reverse potential constant	mV/(r/min)	30.9	28.4
Rotor inertia			
Without brake	$\times 10^{-4} kg·m^2$	24.9	37.12
With brake	$\times 10^{-4} kg·m^2$	26.4	38.65

Outline dimension

Unit: mm

Motor model	OMH1102	OMH1152
LC	130	130
LL		
Without brake	163	180.5
With brake	188	205.5
LM		
Without brake	132	149.5
With brake	157	174.5
LR	70	70
S	22	22
LA	145	145
LB	110	110
LE	6	6
LF	12	12
LZ	9	9
KB1	92.5	110
KB2		
Without brake	151	168.5
With brake	176	193.5
KB3		
Without brake	--	--
With brake	137.8	155.3
Shaft end with keys		
LW	45	45
LK	41	41
KW	8	8
KH	7	7
RH	18	18
TP	M6 depth 20	M6 depth 20

Torque characteristics

OMH1102

OMH1152
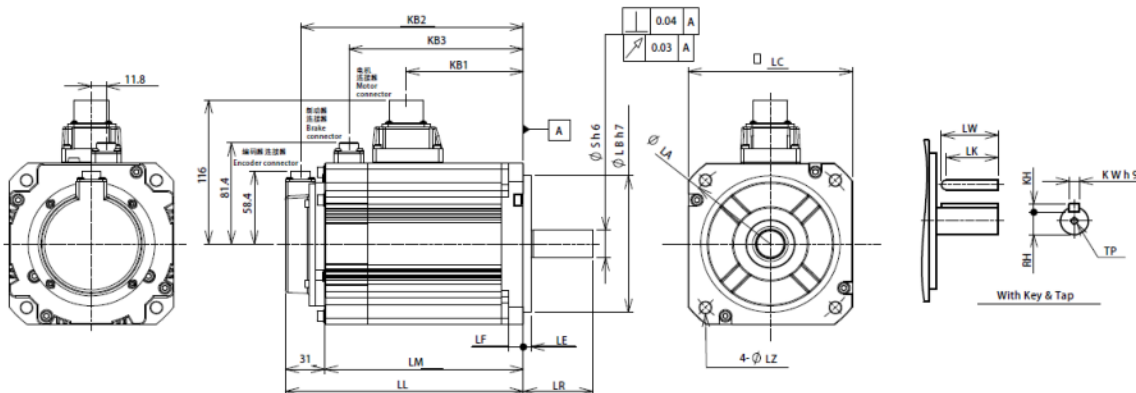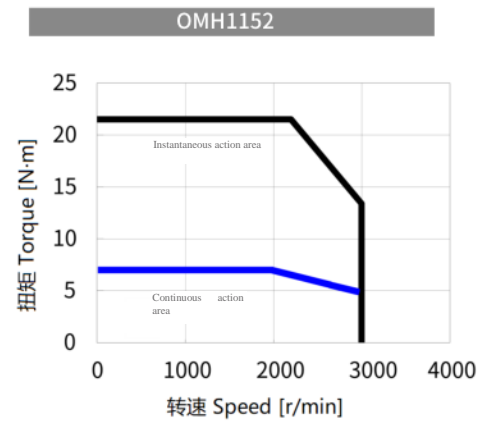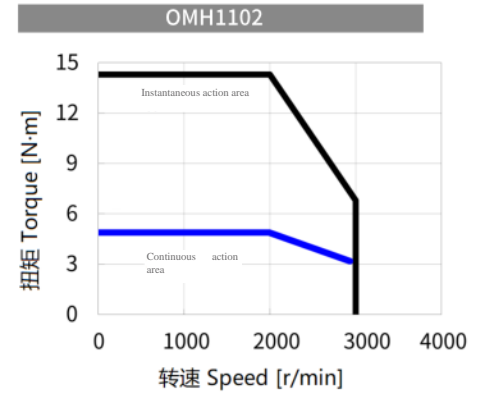
OM1 motor brake specifications

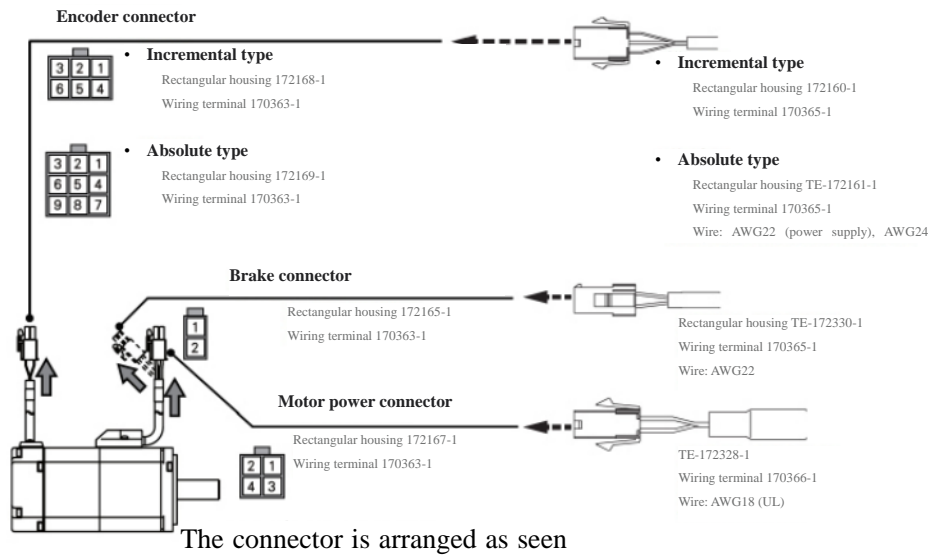| Motor series	Motor power	Purpose	Rated voltage (V)	Rated current (A)	Static friction torque (N·m)	Pull up time (ms)	Release time (ms)	Release voltage (V)
OMS1	200W、400W	For holding	DC24 V ±10%	0.3	Above 1.27	50	15	Above DC1V
	750W	For holding	DC24 V ±10%	0.4	Above 2.39	70	20	Above DC1V
	1.0kW(□80)	For holding	DC24 V ±10%	0.47	Above 3.18	70	20	Above DC1V
	1.0kW(□100)	For holding	DC24 V ±10%	1	Above 7.8	120	30	Above DC1V
	1.5kW、2.0kW	For holding	DC24 V ±10%	1	Above 7.8	120	30	Above DC1V
OMM1	50W	For holding	DC24 V ±10%	0.25	Above 0.16	35	20	Above DC1V
	100W	For holding	DC24 V ±10%	0.25	Above 0.32	35	20	Above DC1V
	1.0kW、1.5kW、2.0kW	For holding	DC24 V ±10%	1	Above 9.55	120	30	Above DC1V
OMD1	50W	For holding	DC24 V ±10%	0.25	Above 0.16	35	20	Above DC1V
	100W	For holding	DC24 V ±10%	0.25	Above 0.32	35	20	Above DC1V
	200W、400W	For holding	DC24 V ±10%	0.3	Above 1.27	50	20	Above DC1V
OMG1	850W	For holding	DC24 V ±10%	0.41	Above 12.7	100	60	Above DC1V
	1.3kW	For holding	DC24 V ±10%	0.41	Above 19.6	100	60	Above DC1V
OMH1	200W、400W	For holding	DC24 V ±10%	0.3	Above 1.27	50	15	Above DC1V
	750W	For holding	DC24 V ±10%	0.4	Above 2.39	70	20	Above DC1V
	1.0kW、1.5kW	For holding	DC24 V ±10%	1	Above 9.55	120	30	Above DC1V

OM1 motor wiring diagram

1. 50W~1.0kW (□80), excluding 850W

Encoder connector

- **Incremental type**
  Rectangular housing 172168-1
  Wiring terminal 170363-1

- **Absolute type**
  Rectangular housing 172169-1
  Wiring terminal 170363-1

- **Incremental type**
  Rectangular housing 172160-1
  Wiring terminal 170365-1

- **Absolute type**
  Rectangular housing TE-172161-1
  Wiring terminal 170365-1
  Wire: AWG22 (power supply), AWG24

Brake connector
Rectangular housing 172165-1
Wiring terminal 170363-1

Rectangular housing TE-172330-1
Wiring terminal 170365-1
Wire: AWG22

Motor power connector
Rectangular housing 172167-1
Wiring terminal 170363-1

TE-172328-1
Wiring terminal 170366-1
Wire: AWG18 (UL)

The connector is arranged as seen in the direction of ↑

Name	Pin NO.	Signal Name	Contents
Motor power connector	1	U	Phase U of motor power
	2	V	Phase V of motor power
	3	W	Phase W of motor power
	4	地线	Motor housing grounding
Brake connector	1	BRK+	Brake power supply DC24V
	2	BRK-	Brake power supply GND
Encoder connector (incremental type)	1	NC	Do not connect any device
	2	PS	Encoder signal data +
	3	PS	Encoder signal data -
	4	E5V	Encoder power supply +5V
	5	E0V	Encoder power source
	6	FG（屏蔽）	Shielding
Encoder connector (absolute type)	1	BAT+	Battery BAT+
	2	NC	Do not connect any device
	3	FG（屏蔽）	Shielding
	4	PS	Encoder signal data +
	5	PS	Encoder signal data -
	6	NC	Do not connect any device
	7	E5V	Encoder power supply +5V
	8	E0V/BAT-	Encoder power source/battery BAT-
	9	NC	Do not connect any device

2. 850W~2.0kW, excluding 1.0kW(□ 80)

Encoder connector

· Incremental type, absolute type, general-purpose type

CM10-R10P-D(D7)

· **Incremental type, absolute type, general-purpose type**

Straight SC-CMV1-SP10C

Right-angled SC-CMV1-AP10C

10-core aviation female plug

Brake connector

CM10-R2P-D(D7)

Straight SC-CMV1-SP02C

Right-angled SC-CMV1-AP02C

2-core aviation female plug

Motor power connector

JL04V-2E18-10PE-B-R

Straight CMS3106A18-10S

Right-angled CMS3108A18-10SI

4-core aviation female plug

The connector is arranged as seen in the direction of A.

Name	Pin NO.	Signal Name	Contents
Motor power connector	A	U	Phase U of motor power
	B	V	Phase V of motor power
	C	W	Phase W of motor power
	D	Ground wire	Motor housing grounding
Brake connector	1	BRK+	Brake power supply DC24V
	2	BRK-	Brake power supply GND
Encoder connector (incremental type)	1	E5V	Encoder power source +5V
	2	E0V	Encoder power source
	3	NC	Do not connect any device
	4	NC	Do not connect any device
	5	PS	Encoder signal data +
	6	PS	Encoder signal data -
	7	NC	Do not connect any device
	8	NC	Do not connect any device
	9	NC	Do not connect any device
	10	FG (shielded)	Shielding
Encoder connector (absolute type)	1	E5V	Encoder power source +5V
	2	E0V	Encoder power source
	3	NC	Do not connect any device
	4	BAT+	Battery BAT+
	5	PS	Encoder signal data +
	6	PS	Encoder signal data -
	7	NC	Do not connect any device
	8	NC	Do not connect any device
	9	BAT-	Battery BAT-
	10	FG (shielded)	Shielding

Parameters and characteristics of OM2 series motor

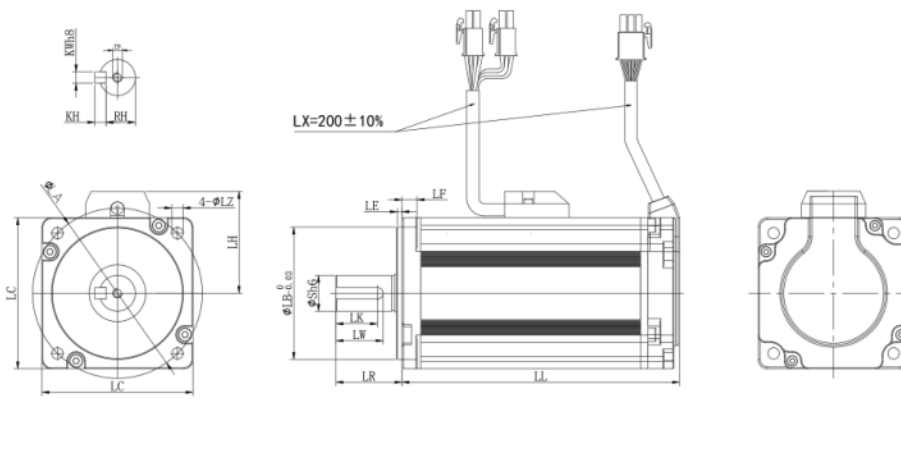## 1. Low inertia of OMS2101/OMS2201/OMS2401/OMS2751/OMS2951

Parameter list

Items	Unit	Specifications				
Motor model		OMS2101	OMS2201	OMS2401	OMS2751	OMS2951
Rated power	W	100	200	400	750	1000
Voltage	V(AC)	220	220	220	220	220
Rated torque	N m	0.32	0.64	1.27	2.39	3.18
Maximum torque	N m	0.96	1.92	3.8	7.2	9.54
Rated speed	r/min	3000	3000	3000	3000	3000
Maximum speed	r/min	6000	6000	6000	6000	4500
Rated current	A	1.4	2.1	3.2	4.8	4.9
Maximum current	A	4.2	6.3	9.6	13.4	14.7
Torque constant	N m/A	0.23	0.304	0.396	0.498	0.649
Reverse potential constant	mV/(r/min)	10.1	12.7	15.5	20.2	25.0
Rotational inertia						
Without brake	$\times 10^{-4}$kg $\cdot$ m^2	0.048	0.15	0.27	0.9	1.0
With brake	$\times 10^{-4}$kg $\cdot$ m^2	0.05	0.17	0.29	1.0	1.1

Outline dimension

Unit: mm

Motor model	OMS2101	OMS2201	OMS2401	OMS2751	OMS2951
LC	40	60	60	80	80
LL					
Without brake	98.1	91.5	111.5	120.5	145.5
With brake	137.2	134.5	154.5	161.5	186.5
LR	25	30	30	35	35
S	8	14	14	19	19
LA	46	70	70	90	90
LB	30	50	50	70	70
LE	2.5	3	3	2.5	2.5
LF	5	6.5	6.5	8	8
LX	200	200	200	200	200
LH	44.2	44	44	54	54
LZ	4.5	5	5	6	6
Shaft end with keys					
LK	12.5	22.5	22.5	22	22
LW	14	25	25	25	25
KW	3	5	5	6	6
KH	3	5	5	6	6
RH	6.2	11	11	15.5	15.5
TP	M3 depth 6	M5 depth 10	M5 depth 10	M5 depth 10	M5 depth 10

LX=200±10%

Torque characteristics

OMS2101

Torque [N•m]

The broken line is reference line

Instantaneous action area

Continuous action area

Speed [r/min]

OMS2201

Torque [N•m]

The broken line is reference line

Instantaneous action area

Continuous action area

Speed [r/min]

OMS2401

Torque [N•m]

The broken line is reference line

Instantaneous action area

Continuous action area

Speed [r/min]

OMS2751

Torque [N•m]

The broken line is reference line

Instantaneous action area

Continuous action area

Speed [r/min]

OMS2951

Torque [N•m]

The broken line is reference line

Instantaneous action area

Continuous action area

Speed [r/min]

2. Medium inertia of OMM2102/OMM2152/OMM2202/OMM2302

Parameter list

Items	Unit	Specifications			
Motor model		OMM2102	OMM2152	OMM2202	OMM2302
Rated power	kW	1.0	1.5	2.0	3.0
Voltage	V(AC)	220	220	220	220
Rated torque	N·m	4.77	7.16	9.55	14.3
Maximum torque	N·m	14.3	21.48	28.65	42.9
Rated speed	r/min	2000	2000	2000	2000
Maximum speed	r/min	3000	3000	3000	3000
Rated current	A	6.0	8.2	10.0	13.8
Maximum current	A	18.0	24.6	31.5	41.4
Torque constant	N·m/A	0.795	0.873	0.905	1.04
Reverse potential constant	mV/(r/min)	29.5	31.7	35.2	37.5
Rotational inertia					
Without brake	×10⁻⁴kg·m²	4.6	6.7	8.7	15.1
With brake	×10⁻⁴kg·m²	6.6	8.7	10.7	17.1

Outline dimension

Unit: mm

Motor model	OMM2102	OMM2152	OMM2202	OMM2302
LC	130	130	130	130
LL				
Without brake	163.5	181	198.5	251.5
With brake	197.5	215	232.5	285.5
LR	55	55	55	65
S	22	22	22	24
LA	145	145	145	145
LB	110	110	110	110
LE	6	6	6	6
LF	13	13	13	13
LH	119	119	119	118
LZ	9	9	9	9
Shaft end with keys				
LK	41	41	41	41
LW	45	45	45	45
KW	8	8	8	8
KH	7	7	7	7
RH	18	18	18	20
TP	M8 depth 15	M8 depth 15	M8 depth 15	M8 depth 15

Torque characteristics

OMM2102

Torque [N·m]

The broken line is reference line

Instantaneous action area

Continuous action area

Speed [r/min]

OMM2152

Torque [N·m]

The broken line is reference line

Instantaneous action area

Continuous action area

Speed [r/min]

OMM2202

Torque [N·m]

The broken line is reference line

Instantaneous action area

Continuous action area

Speed [r/min]

OMM2302

Torque [N·m]

The broken line is reference line

Instantaneous action area

Continuous action area

Speed [r/min]

3. High inertia of OMG2851/OMG2132/OMG2182

Parameter list

Items	Unit	Specifications		
Motor model		OMG2851	OMG2132	OMG2182
Rated power	kW	0.85	1.3	1.8
Voltage	V(AC)	220	220	220
Rated torque	N·m	5.39	8.6	11.5
Maximum torque	N·m	14.3	21.48	28.65
Rated speed	r/min	1500	1500	1500
Maximum speed	r/min	3000	2500	3000
Rated current	A	7.0	7.6	12.2
Maximum current	A	19.0	19.0	31.5
Torque constant	N·m/A	0.77	1.13	0.905
Reverse potential constant	mV/(r/min)	29.5	38.3	35.2
Rotational inertia				
Without brake	$\times10^{-4}$kg·m^2	13.9	20	26
With brake	$\times10^{-4}$kg·m^2	15.9	22	28

Outline dimension

Unit: mm

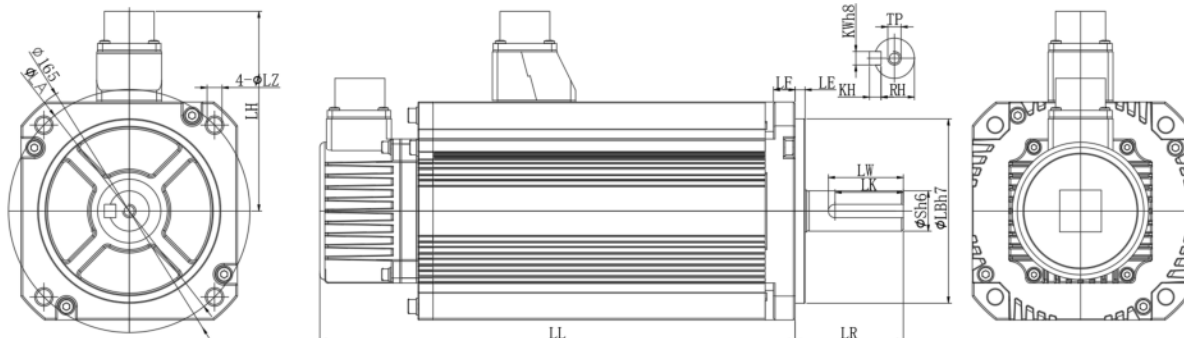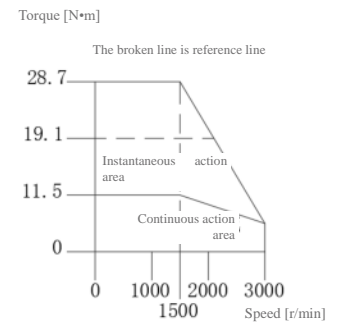| Motor model	OMG2851	OMG2132	OMG2182
LC	130	030	130
LL			
Without brake	181	198.5	216
With brake	215	232.5	250
LR	55	55	55
S	19	22	22
LA	145	145	145
LB	110	110	110
LE	6	6	6
LF	13	13	13
LH	119	119	119
LZ	9	9	9
Shaft end with keys			
LK	22.5	41	41
LW	25	45	45
KW	5	8	8
KH	5	7	7
RH	16	18	18
TP	M5 depth 10	M8 depth 15	M8 depth 15

Torque characteristics
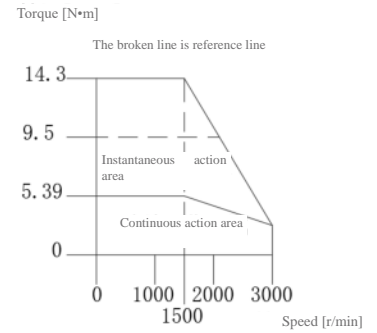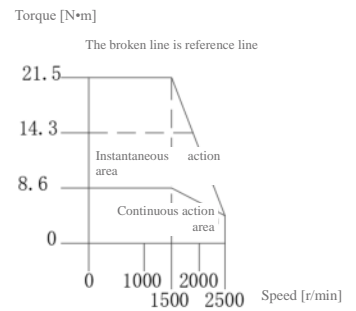
OMG2851
OMG2132
OMG2182

4. High inertia of OMH2201/OMH2401/OMH2751/OMH2951

Parameter list

Items	Unit	Specifications			
Motor model		OMH2201	OMH2401	OMH2751	OMH2951
Rated power	W	200	400	750	1000
Voltage	V(AC)	220	220	220	220
Rated torque	N m	0.64	1.27	2.39	3.18
Maximum torque	N m	1.92	3.8	7.2	9.54
Rated speed	r/min	3000	3000	3000	3000
Maximum speed	r/min	5000	5000	5000	4500
Rated current	A	1.90	2.8	4.0	4.9
Maximum current	A	5.70	8.4	12.0	14.7
Torque constant	N m/A	0.337	0.453	0.597	0.649
Reverse potential constant	mV/(r/min)	13.2	16.9	22.9	25.0
Rotational inertia					
Without brake	$\times 10^{-4} kg \cdot m^2$	0.57	0.67	1.5	2.38
With brake	$\times 10^{-4} kg \cdot m^2$	0.59	0.69	1.6	2.48

Outline dimension

Unit: mm

Motor model	OMH2201	OMH2401	OMH2751	OMH2951
LC	60	60	80	80
LL				
Without brake	105.5	130.5	140.5	145.5
With brake	148.5	173.5	181.5	186.5
LR	30	30	35	35
S	14	14	19	19
LA	70	70	90	90
LB	50	50	70	70
LE	3	3	2.5	2.5
LF	6.5	6.5	8	8
LX	200	200	200	200
LH	44	44	54	54
LZ	5	5	6	6
Shaft end with keys				
LK	22.5	22.5	22	22
LW	25	25	25	25
KW	5	5	6	6
KH	5	5	6	6
RH	11	11	15.5	15.5
TP	M5 depth 10	M5 depth 10	M5 depth 10	M5 depth 10

Torque characteristics
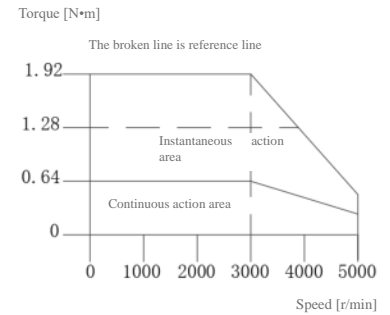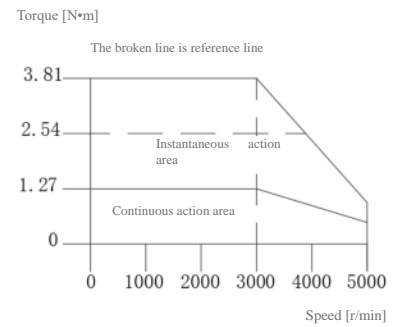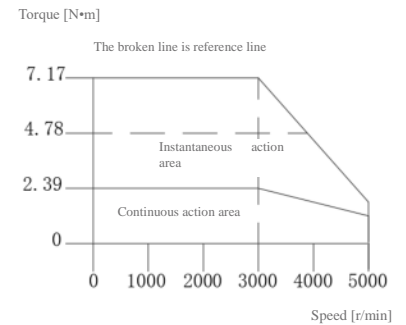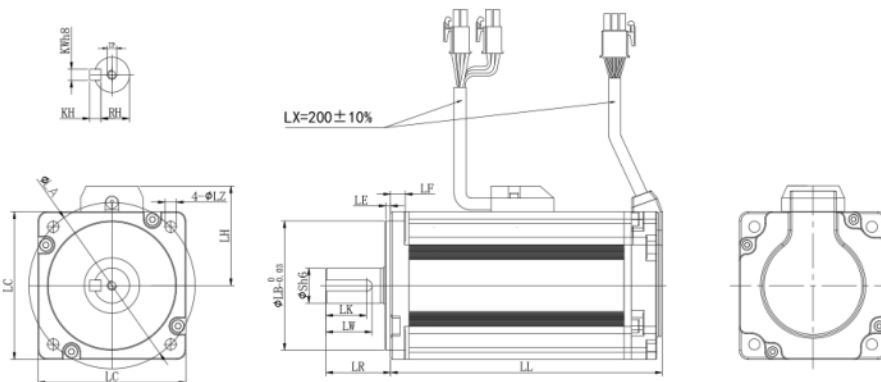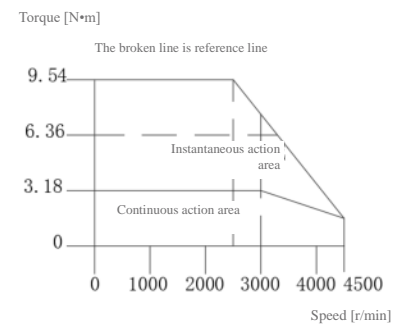
5. High inertia of OMH2102/OMH2152/OMH2202/OMH2302

Parameter list

Items	Unit	Specifications			
Motor model		OMH2102	OMH2152	OMH2202	OMH2302
Rated power	kW	1.0	1.5	2.0	3.0
Voltage	V(AC)	220	220	220	220
Rated torque	N m	4.77	7.16	9.55	14.3
Maximum torque	N m	14.3	21.48	28.65	42.9
Rated speed	r/min	2000	2000	2000	2000
Maximum speed	r/min	3000	3000	3000	3000
Rated current	A	6.0	8.2	10.0	13.8
Maximum current	A	18.0	24.6	31.5	41.4
Torque constant	N m/A	0.795	0.873	0.905	1.04
Reverse potential constant	mV/(r/min)	29.5	31.7	35.2	37.5
Rotational inertia					
Without brake	$\times10^{-4}$kg · m2	13.9	20	26	32.4
With brake	$\times10^{-4}$kg · m2	15.9	22	28	34.4

Outline dimension

Unit: mm

Motor model	OMH2102	OMH2152	OMH2202	OMH2302
LC	130	130	130	130
LL				
Without brake	181	198.5	216.5	269
With brake	215	232.5	250	303
LR	55	55	55	65
S	22	22	22	24
LA	145	145	145	145
LB	110	110	110	110
LE	6	6	6	6
LF	13	13	13	13
LH	119	119	119	118
LZ	9	9	9	9
Shaft end with keys				
LK	41	41	41	41
LW	45	45	45	45
KW	8	8	8	8
KH	7	7	7	7
RH	18	18	18	20
TP	M8 depth 15	M8 depth 15	M8 depth 15	M8 depth 15

Torque characteristics

OMH2102

Torque [N•m]

The broken line is reference line

Speed [r/min]

OMH2152

Torque [N•m]

The broken line is reference line

Speed [r/min]

OMH2202

Torque [N•m]

The broken line is reference line

Speed [r/min]

OMH2302

Torque [N•m]

The broken line is reference line

Speed [r/min]

OM2 motor brake specifications

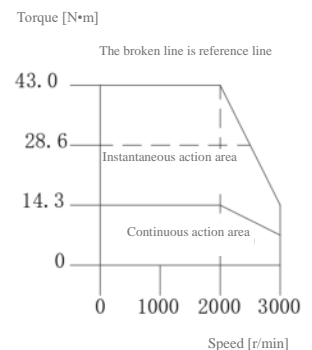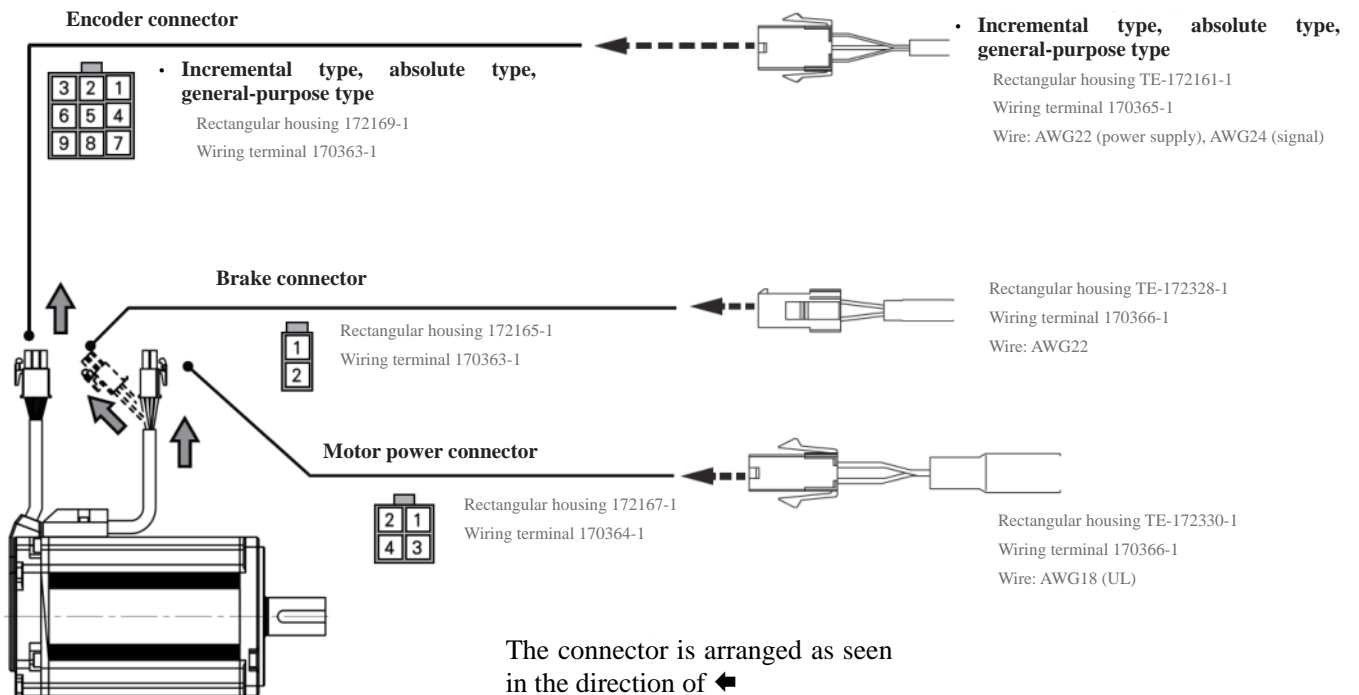| Motor series	Motor power	Purpose	Rated voltage (V)	Power (W)	Static friction torque (N·m)	Pull up time (ms)	Release time (ms)	Release voltage (V)
OMS2 OMM2	100W	For holding	24	6	0.64	35	20	DC1V
	200W、400W	For holding	24	7	1.3	50	15	DC1V
	750W	For holding	24	12	3.2	70	20	DC1V
	1.0kW	For holding	24	20	15	110	50	Above DC2V
	1.0kW~3.0kW	For holding	24	20	15	110	50	Above DC2V
OMG2	0.85KW~1.8kW	For holding	24	20	15	110	50	Above DC2V
	200W、400W	For holding	24	7	1.3	50	15	DC1V

OM2 motor wiring diagram

1. 100W~1.0kW (□ 80), excluding 850W

Encoder connector

- Incremental type, absolute type, general-purpose type
  Rectangular housing 172169-1
  Wiring terminal 170363-1

- Incremental type, absolute type, general-purpose type
  Rectangular housing TE-172161-1
  Wiring terminal 170365-1
  Wire: AWG22 (power supply), AWG24 (signal)

Brake connector

Rectangular housing 172165-1
Wiring terminal 170363-1

Rectangular housing TE-172328-1
Wiring terminal 170366-1
Wire: AWG22

Motor power connector

Rectangular housing 172167-1
Wiring terminal 170364-1

Rectangular housing TE-172330-1
Wiring terminal 170366-1
Wire: AWG18 (UL)

The connector is arranged as seen in the direction of ⬅

Name	Pin NO.	Signal Name	Contents
Motor power connector	1	U	Phase U of motor power
	2	V	Phase V of motor power
	3	W	Phase W of motor power
	4	地线	Motor housing grounding
Brake connector	1	BRK+	Brake power supply DC24V
	2	BRK-	Brake power supply GND
Encoder connector	1	BAT+	Battery BAT+
	2	BAT-	Battery BAT-
	3	FG (shielded)	Shielding
	4	PS	Encoder signal data +
	5	PS	Encoder signal data -
	6	NC	Do not connect any device
	7	E5V	Encoder power source +5V
	8	E0V	Encoder power source
	9	NC	Do not connect any device

2. 850W~3.0kW (□ 80), excluding 1.0kW(□ 80)

Encoder connector

- Incremental type, absolute type, general-purpose type

JL10-2A20-29P

- Incremental type, absolute type, general-purpose type

Straight CMS3106A20-29S
Right-angled CMS3108A20-29SI

17-core aviation female plug

Motor power connector

Straight CMS3106A20-4S
Right-angled CMS3108A20-4SI

4-core aviation female plug

JL10-E20-4PE

Straight CMS3106A20-18S
Right-angled CMS3108A20-18SI

9-core aviation female plug

JL10-2E20-18PE

The connector is arranged as seen in the

Name	Pin NO.	Signal Name	Contents
Motor power connector (4-core)	A	U	Phase U of motor power
	B	V	Phase V of motor power
	C	W	Phase W of motor power
	D	Ground wire	Motor housing grounding
Motor power connector (9-core)	G	BRK+	Brake power supply DC24V
	H	BRK-	Brake power supply GND
	A	NC	Do not connect any device
	F	U	Phase U of motor power
	I	V	Phase V of motor power
	B	W	Phase W of motor power
	E	Ground wire	Motor housing grounding
	D	Ground wire	Motor housing grounding
	C	NC	Do not connect any device
Encoder connector	A	NC	Do not connect any device
	B	NC	Do not connect any device
	C	NC	Do not connect any device
	D	NC	Do not connect any device
	E	NC	Do not connect any device
	F	NC	Do not connect any device
	G	E0V	Encoder power source
	H	E5V	Encoder power source +5V
	J	FG (shielded)	Shielding
	K	PS	Encoder signal data +
	L	PS	Encoder signal data -
	M	NC	Do not connect any device
	N	NC	Do not connect any device
	P	NC	Do not connect any device
	R	NC	Do not connect any device
	S	BAT-	Battery BAT-
	T	BAT+	Battery BAT+

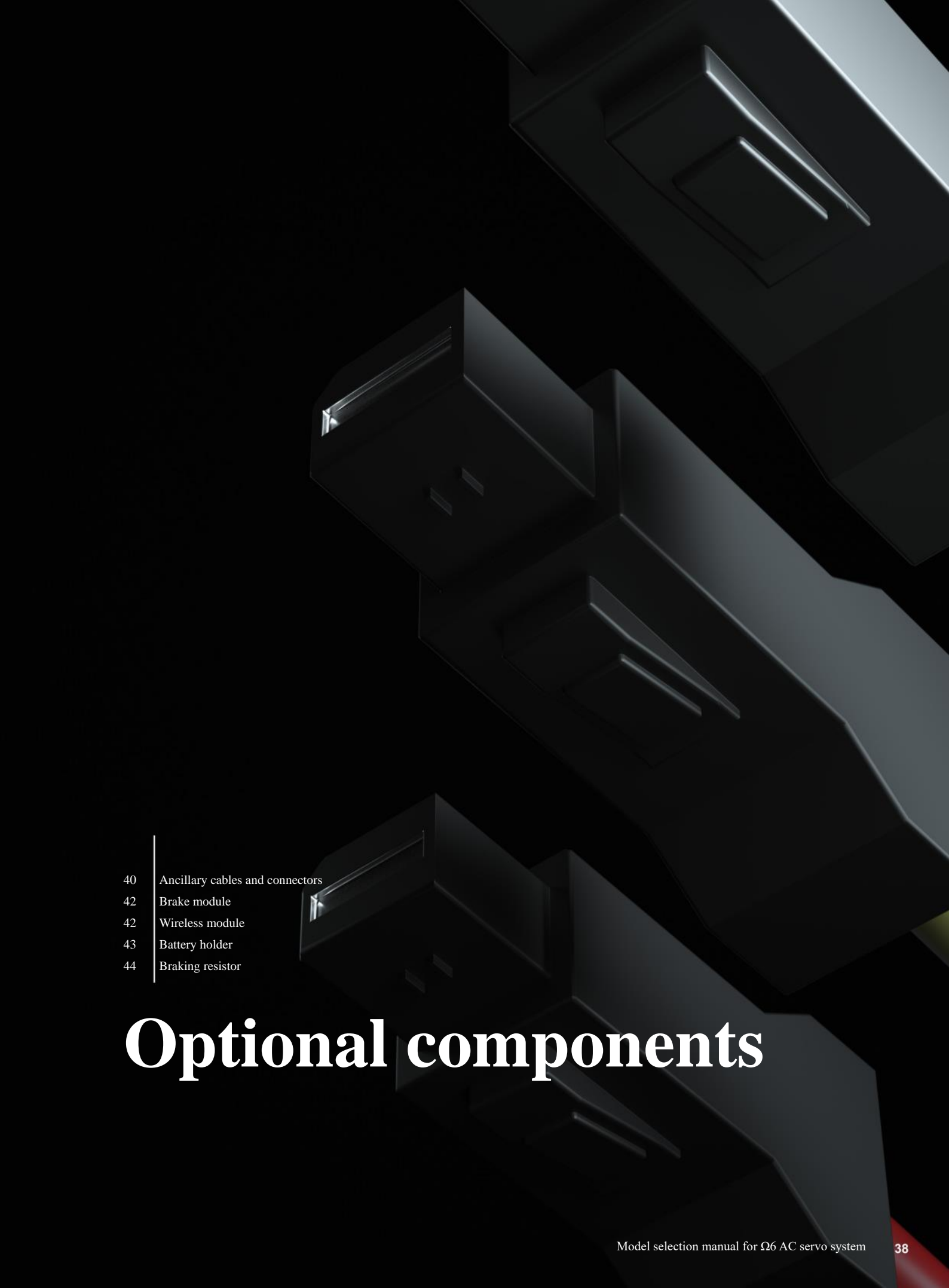# Table of comparison for model selection

1. Matching components of OM1 series motor and driver

Power supply	Motor type	Rated speed	Model	Flange size	Rated power	Driver model
Single-phase 220V	OMS1 low inertia	3000r/min	OMS1201	□ 60	200W	ODSA □ 6A201 □ B
			OMS1401	□ 60	400W	ODSA □ 6A401 □ B
Single/three-phase 220V	OMS1 low inertia	3000r/min	OMS1751	□ 80	750W	ODSA □ 6A751 □ B
			OMS1951	□ 80	1.0kW	ODSA □ 6A102 □ B
			OMS1102	□ 100	1.0kW	ODSA □ 6A102 □ B
			OMS1152	□ 100	1.5kW	ODSA □ 6A152 □ B
			OMS1202	□ 100	2.0kW	ODSA □ 6A202 □ B
Single-phase 220V	OMM1 medium inertia	3000r/min	OMM1500	□ 40	50W	ODSA □ 6A201 □ B
			OMM1101	□ 40	100W	ODSA □ 6A201 □ B
Single/three-phase 220V	OMM1 medium inertia	2000r/min	OMM1102	□ 130	1.0kW	ODSA □ 6A102 □ B
			OMM1152	□ 130	1.5kW	ODSA □ 6A152 □ B
			OMM1202	□ 130	2.0kW	ODSA □ 6A202 □ B
Single-phase 220V	OMD1 medium inertia	3000r/min	OMD1500	□ 40	50W	ODSA □ 6A201 □ B
			OMD1101	□ 40	100W	ODSA □ 6A201 □ B
			OMD1201	□ 60	200W	ODSA □ 6A201 □ B
			OMD1401	□ 60	400W	ODSA □ 6A401 □ B
Single/three-phase 220V	OMG1 high inertia	1500r/min	OMG1851	□ 130	850W	ODSA □ 6A102 □ B
			OMG1132	□ 130	1.3W	ODSA □ 6A152 □ B
Single-phase 220V	OMH1 high inertia	3000r/min	OMH1201	□ 60	200W	ODSA □ 6A201 □ B
			OMH1401	□ 60	400W	ODSA □ 6A401 □ B
Single-phase 220V	OMH1 high inertia	3000r/min	OMH1751	□ 80	750W	ODSA □ 6A751 □ B
Single/three-phase 220V	OMH1 high inertia	2000r/min	OMH1102	□ 130	1.0kW	ODSA □ 6A102 □ B
			OMH1152	□ 130	1.5kW	ODSA □ 6A152 □ B

2. Matching components of OM2 series motor and driver

Power supply	Motor type	Rated speed	Model	Flange size	Rated power	Driver model
Single-phase 220V	OMS2 low inertia	3000r/min	OMS2101	□ 40	100W	ODSA □ 6A201 □ B
			OMS2201	□ 60	200W	ODSA □ 6A201 □ B
			OMS2401	□ 60	400W	ODSA □ 6A401 □ B
Single/three-phase 220V	OMS2 low inertia	3000r/min	OMS2751	□ 80	750W	ODSA □ 6A751 □ B
			OMS2951	□ 80	1.0kW	ODSA □ 6A102 □ B
Single/three-phase 220V	OMM2 medium inertia	2000r/min	OMM2102	□ 130	1.0kW	ODSA □ 6A102 □ B
			OMM2152	□ 130	1.5kW	ODSA □ 6A152 □ B
			OMM2202	□ 130	2.0kW	ODSA □ 6A202 □ B
			OMM2302	□ 130	3.0kW	ODSA □ 6A302 □ B
Single/three-phase 220V	OMG2 high inertia	1500r/min	OMG2851	□ 130	850W	ODSA □ 6A102 □ B
			OMG2132	□ 130	1.3kW	ODSA □ 6A152 □ B
			OMG2182	□ 130	1.8kW	ODSA □ 6A202 □ B
Single-phase 220V	OMH2 high inertia	3000r/min	OMH2201	□ 60	200W	ODSA □ 6A201 □ B
			OMH2401	□ 60	400W	ODSA □ 6A401 □ B
Single/three-phase 220V	OMH2 high inertia	3000r/min	OMH2751	□ 80	750W	ODSA □ 6A751 □ B
			OMH2951	□ 80	1.0kW	ODSA □ 6A102 □ B
Single/three-phase 220V	OMH2 high inertia	2000r/min	OMH2102	□ 130	1.0kW	ODSA □ 6A102 □ B
			OMH2152	□ 130	1.5kW	ODSA □ 6A152 □ B
			OMH2202	□ 130	2.0kW	ODSA □ 6A202 □ B
			OMH2302	□ 130	3.0kW	ODSA □ 6A302 □ B

Optional components

Ancillary cables and connectors

Naming conventions

OLE-S-H S 0 1-100-1-∗

1-3   4   5   6   7   8   9-11   12   13

OLE	Cable purpose	
1-3	OLE	Encoder wire
	OLD	Power line
	OLB	Brake line

S	Motor code	
4	N	Without special definition
	S	Sigriner OM1
	Z	Sigriner OM2

F	Cable specifications	
5	S	Common cable
	G	High-flexible cable
	H	Ultra-flexible cable

S	Encoder/brake type	
6	Encoder	
	D	Incremental encoder
	S	Absolute encoder (with battery holder)
	Brake	
	B	With brake
	N	Without brake

0	Wire diameter	
7	0	0.2mm2/24AWG
	1	0.3mm2/22AWG
	2	0.75mm2/18AWG
	3	1.5mm2/15AWG
	4	2.5mm2/13AWG

1	Drive side type	
8	Power line/brake connector	
	1	Needle type + special type
	2	Full-needle type
	Encoder terminal	
	5	6PIN 1394
	6	10PIN 1394

100	Cable length	
9-11	030	3.0m
	050	5.0m
	080	8.0m
	100	10.0m

1	Motor side terminal type	
12	Power line terminal	
	1	Grid
	2	Military 18-10 straight terminal
	3	Military 18-10 right-angled terminal
	4	Military 20-4 straight terminal
	5	Military 20-4 right-angled terminal
	8	Military 20-18 straight terminal
	9	Military 20-18 right-angled terminal
	A	Military 24-11 straight terminal
	B	Military 24-11 right-angled terminal
	Brake terminal	
	0	Without separate brake terminal
	1	Grid
	2	2PIN aviation plug straight terminal
	3	2PIN aviation plug right-angled terminal
	Encoder terminal	
	1	6/9 grid
	2	10PIN aviation plug straight terminal
	3	10PIN aviation plug right-angled terminal
	4	Military 20-29 straight terminal
	5	Military 20-29 right-angled terminal

★	Special number	
13	Vacancy	Standard cable

Model selection of cables of 1kW (□ 80) and below

Motor model: OM □□

Cable name	Cable model	Outside drawing of cable
Power line of motor without brake	OLD- □ - □ N21-030-1-* OLD- □ - □ N21-050-1-* OLD- □ - □ N21-080-1-* OLD- □ - □ N21-100-1-*	
Single-turn absolute/ABZ motor encoder cable	OLE- □ - □ D0 □ -030-1-* OLE- □ - □ D0 □ -050-1-* OLE- □ - □ D0 □ -080-1-* OLE- □ - □ D0 □ -100-1-*	
Multi-turn absolute motor encoder cable	OLE- □ - □ S0 □ -030-1-* OLE- □ - □ S0 □ -050-1-* OLE- □ - □ S0 □ -080-1-* OLE- □ - □ S0 □ -100-1-*	
Brake line	OLB- □ - □ B22-030-1-* OLB- □ - □ B22-050-1-* OLB- □ - □ B22-080-1-* OLB- □ - □ B22-100-1-*	

Connector model of cables of 1kW (□ 80) and below

Motor model: OM □1

Name and position	Connector	Connector model
Incremental encoder on the motor side	Connector	172160-1
	Crimping terminal	170365-1
Absolute encoder on the motor side	Connector	TE-172161-1
	Crimping terminal	170365-1
Electric power supply on the motor side	Connector	TE-172300-1
	Crimping terminal	170366-1
Brake line on the motor side	Connector	TE-172328-1
	Crimping terminal	170366-1
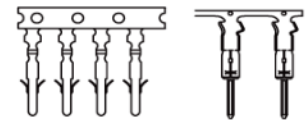
Motor model: OM □2

Name and position	Connector	Connector model
Encoder on the motor side	Connector	TE-172161-1
	Crimping terminal	170365-1
Electric power supply on the motor side	Connector	TE-172330-1
	Crimping terminal	170366-1
	Terminal bar	E7510
	With circular insulated terminal	RV1.25-4
Brake line on the motor side	Connector	TE-172328-1
	Crimping terminal	170366-1

Encoder connector on the drive side	Encoder 1	1394-6P male plug
	Encoder 2	MUF-PK10K-X

Rectangular housing

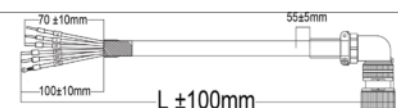**Crimping terminal**
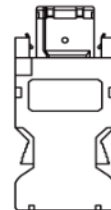
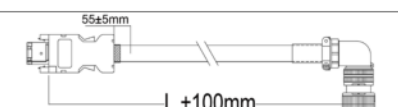**Encoder connector**
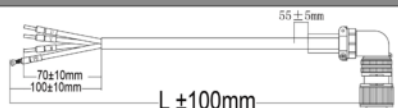
Tubular cold-pressed terminal

Circular cold-pressed terminal

1 kW (□ 100)—2 kW cable model selection

Motor model: OM □1, OM □2

Cable name	Cable model	Outside drawing of cable
Power line of motor without brake	OLD- □ - □ N □ 1-030- □ -* OLD- □ - □ N □ 1-050- □ -* OLD- □ - □ N □ 1-080- □ -* OLD- □ - □ N □ 1-100- □ -*	
Power line of motor with brake	OLD- □ - □ B □ 1-030- □ -* OLD- □ - □ B □ 1-050- □ -* OLD- □ - □ B □ 1-080- □ -* OLD- □ - □ B □ 1-100- □ -*	
Single-turn absolute/ABZ motor encoder cable	OLE- □ - □ D0 □ -030- □ -* OLE- □ - □ D0 □ -050- □ -* OLE- □ - □ D0 □ -080- □ -* OLE- □ - □ D0 □ -100- □ -*	
Multi-turn absolute motor encoder cable	OLE- □ - □ S0 □ -030- □ -* OLE- □ - □ S0 □ -050- □ -* OLE- □ - □ S0 □ -080- □ -* OLE- □ - □ S0 □ -100- □ -*	
Brake line	OLB- □ - □ B22-030- □ -* OLB- □ - □ B22-050- □ -* OLB- □ - □ B22-080- □ -* OLB- □ - □ B22-100- □ -*	

Connector model of cables of 1 kW (□ 100)—2 kW

Motor model OM □1

Name and position	Connector	Connector model
Encoder on the motor side	Straight	SC-CMV1-SP10C
	Right-angled	SC-CMV1-AP10C
Electric power supply on the motor side	Straight	CMS3106A18-10S
	Right-angled	CMS3108A18-10SI
Brake line	Straight	SC-CMV1-SP02C
	Right-angled	SC-CMV1-AP02C

Motor model: OM □2

Name and position	Connector	Connector model
Encoder on the motor side	Right-angled	CMS3108A20-29SI
	Straight	CMS3106A20-29S
Electric power supply on the motor side	Right-angled	CMS3108A20-4SI
	Straight	CMS3106A20-4S
	Right-angled	CMS3108A20-18SI
	Straight	CMS3106A20-18S
	Terminal bar	E1510
	With circular insulated terminal	RV1.25-4

Encoder connector on the drive side	Encoder 1	1394-6P male plug
	Encoder 2	MUF-PK10K-X
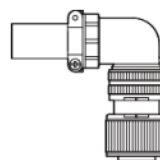
Right-angled aviation plug
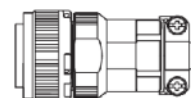
Straight aviation plug

Encoder connector

**Tubular cold-pressed terminal**

Circular cold-pressed terminal

Brake module

To simplify customer's wiring and improve system security, the driver provides a separate brake driver module for customers to select. This module needs to provide an additional 24V power supply to drive the motor to brake.

Parameters of brake module

Voltage range: 24V ±10%
Current range: 0.3A~3A
Overload protection: yes
Open-circuit protection: yes
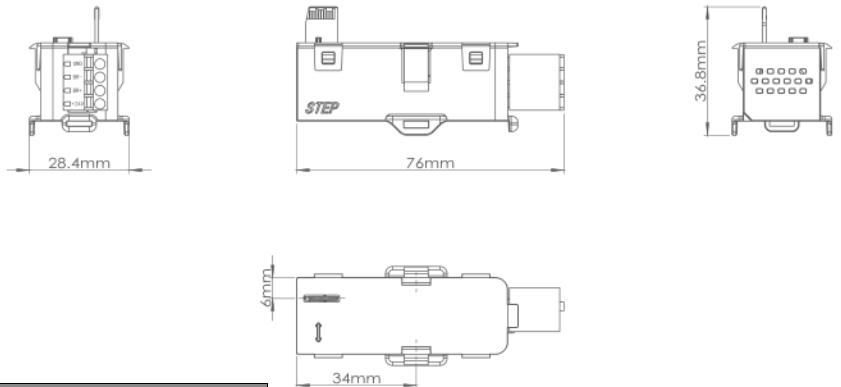
Definition of interface of brake module:

Name	Symbols	Connector pin No.	Contents
Negative terminal of brake power supply	GND	1	External power supply GND for brake power supply
Brake negative terminal	BRK-	2	Brake-
Brake positive terminal	BRK+	3	Brake +
Brake power supply	+24V	4	External power supply for brake power supply

Wireless module

Ω6 series servo system allows to connect dedicated WIFI module through CN1 (USB-type C),
Wireless communication can be conducted through the adapted Ω-master upper computer software.

Link indicator: STA mode connected successfully

Ready indicator: Module start completed

| Name	Symbols
Operating voltage	5V ±10%
Operating current	0.2A max
WIFI specifications	WIFI-2.4G
Wireless channel	Channels 1~11
Connection distance	AP mode 5m
	STA mode 10m
Operation mode	AP mode and STA mode
Wireless speed	2Mbps
Wireless protocol	Ω Master proprietary protocol
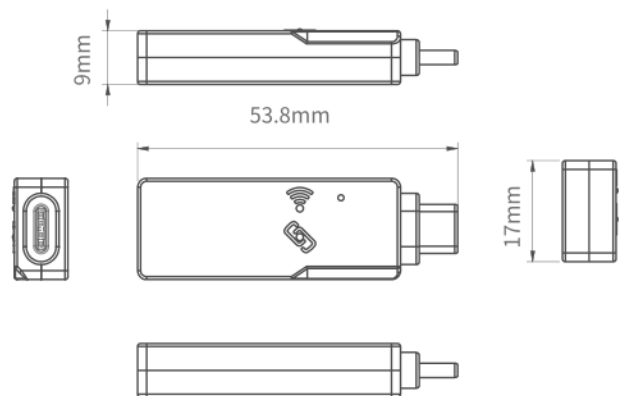
Warning: this module is a dedicated fitting. Do not connect it to the computer, mobile phone or other devices.

Battery holder

The battery holder is used for placing the external battery of the motor encoder. Please refer to the specification definition of the battery for wiring.

Ensure that the wiring definitions are consistent before connecting the motor encoder. If they are inconsistent, the battery and the motor encoder may be damaged.
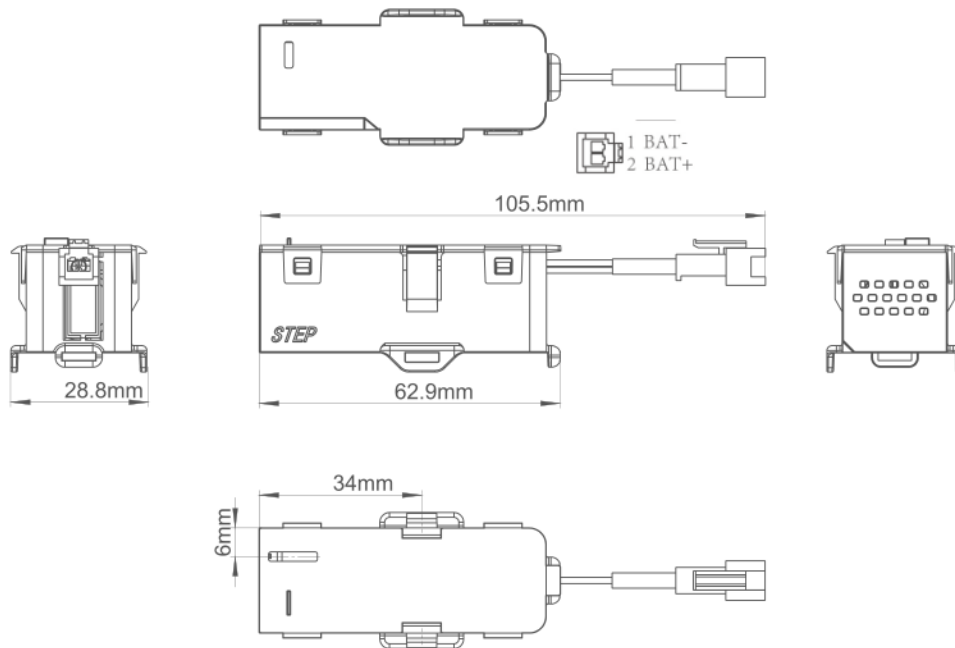
Specifications of battery specific to absolute type encoder inside the battery holder

Name and position	EVE lithium battery
Model	ER14505
Battery size	D14.55mm*H50.5mm
Standard voltage	3.6V
Rated capacity	2700mAH
Maximum continuous discharge current	40mA
Operating temperature	-60℃ -+85℃

External braking resistor

When the servo driver brakes, the motor feeds back the energy to the driver to increase the bus voltage, which is called regenerative power. Regenerative power may only be absorbed by internal bus capacitor. If the voltage on the bus capacitor exceeds the threshold of the capacitor, the brake circuit in the driver will be activated, and the excess energy will be discharged through the braking resistor. When the built-in braking resistor cannot completely absorb the regenerative brake energy, an external braking resistor is needed to absorb the regenerative energy. With external braking resistor shaped as follows, it is recommended to be used in the environment with powerful fan.

**The recommended model selection of external braking resistor for drivers of different models are as follows:**

Model	Resistance	Rated power	Driver model
RXLG-50W100RJ	100Ω	50W	ODSA □ 6A201 □ B
RXLG-100W60RJ	60Ω	100W	ODSA □ 6A401 □ B
RXLG-100W50RJ	50Ω	100W	ODSA □ 6A751 □ B
RXLG-120W40RJ	40Ω	120W	ODSA □ 6A102 □ B
RXLG-150W30RJ	30Ω	150W	ODSA □ 6A152 □ B
RXLG-120W30RJ	30Ω	120W	ODSA □ 6A202 □ B
RXLG-150W25RJ	25Ω	150W	ODSA □ 6A302 □ B

RS232 to RS485 module

Optional fittings, provided for RS232 to RS485 module, are used to convert RS485 interface of Ω6 servo system to RS232 interface when RS232 communication is needed.

Performance parameters:

Interface characteristics	The interface is compatible with RS-232C and RS485 standard of EIA/TIA
Electrical interface	DB9 hole type connector of terminal RS-232, DB9 needle type connector of terminal RS-485
Operation mode	Asynchronous half-duplex differential transmission
Transmission media	Twisted pair (wire diameter more than or equal to 0.5mm2) or shielded wire
Transmission rate	300-115.2Kbps
Use environment	-20℃ to 70℃, relative humidity: 5% to 95%
Transmission distance	1,200M (RS-485), 15m (RS-232)
Communication mode	Point-to-point, two-wire half-duplex, and point-to-multipoint, two-wire half-duplex
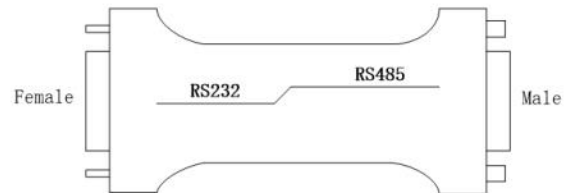
Interface definition:

Female(PIN)	RS-232C interface signal
1	Data carrier detect DCD
2	Transmitting data TXD
3	Receiving data RXD
4	Data terminal ready DTR
5	Signal ground GND
6	Data set ready DSR
7	Request to send RTS
8	Clear to send RTS
9	Ring indicator RI

DMBa9le(PIN)	Output signal	RS-485 half-duplex wiring
1	T/R+	RS-485+
2	T/R-	RS-485-
5	GND	Signal GND

Note:
Although this product is a passive product, it does supply power to the module circuit. The module is mainly powered by the serial port 9 pins. Therefore, terminal RS232 can communicate normally only with the standard 9 pins or USB to RS232. For instance, when some serial ports have no power supply pins, (9-12V)DC should be supplied at pin 7 of 9 pins.

SIGRINER

Ver.2021.3

Official account   Official website