

Digitized Automation for a Changing World

Delta AC Servo Drive & Motor
ASDA-A3-EP Series

www.deltaww.com

Delta High-End Servo Systems Extreme Speed, Precision, Stability, and Safety

The **Delta High-Performance Servo System ASDA-A3-EP Series** features advanced Functional Safety capabilities and Delta's renowned high-performance servo functionalities. It ensures real-time responsiveness and precise positioning. This series delivers ultra-fast response times, creating a high-precision, highly efficient, and stable motion control.





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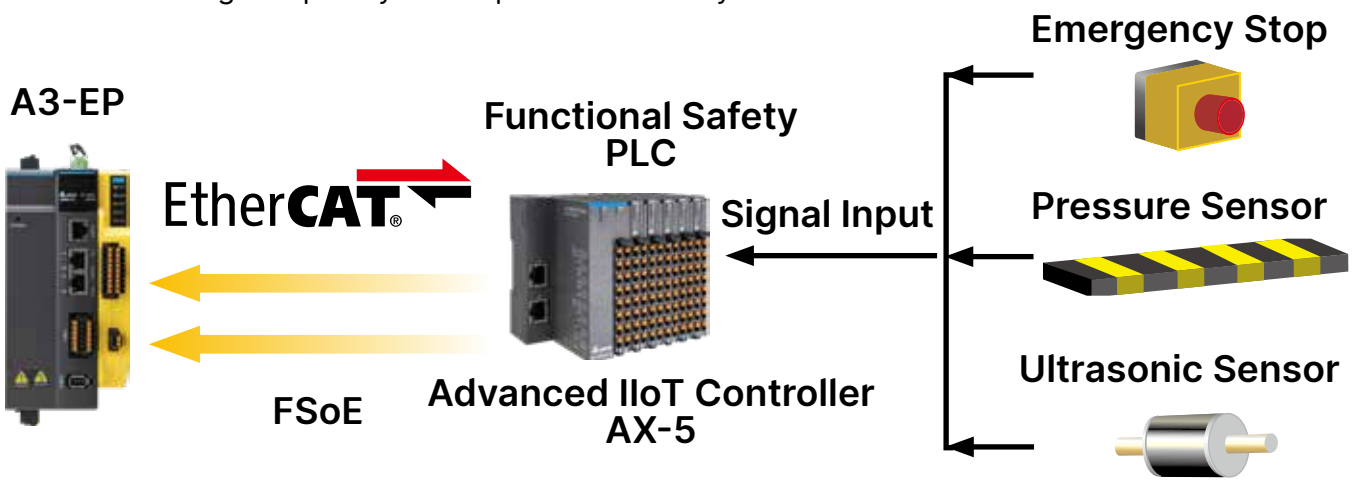
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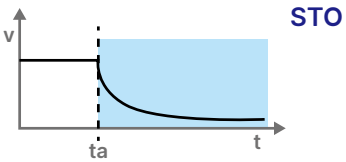
Comprehensive Safety Features New

Functional Safety Features

- **Comprehensive Safety Functions:** 14 advanced safety features compliant with TUV certified safety standards and SIL3 safety standards
- **Dual Activation Methods:** Supports activation via FSoE safety bus or I/O triggers. FSoE reduces wiring complexity and improves efficiency

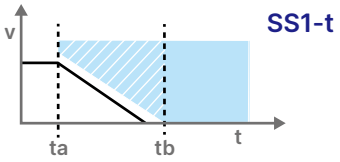


Safe Stop Functions



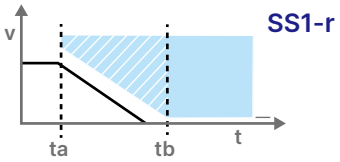
Safe Torque Off (STO)

- Disables the servo drive's output power. Motor may rotate without braking. Applications: Safety maintenance, emergency shutdown, preventing unintended start-up



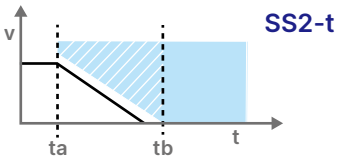
Safe Stop 1 Time Controlled (SS1-t)

- Motor decelerates to a stop within a defined time and auto-transitions to STO. Applications: High-speed operation or high risks of machine damage



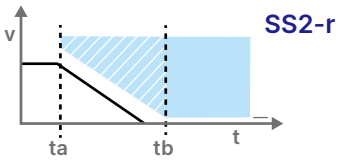
Safe Stop 1 Ramp Monitoring (SS1-r)

- Motor decelerates to a stop within a defined slope and auto-transitions to STO. Applications: High-speed operation or high risks of machine damage



Safe Stop 1 Time Controlled (SS2-t)

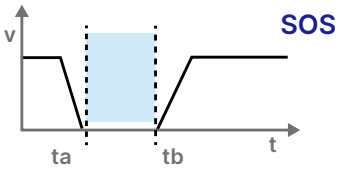
- Servo drive decelerates to a stop within a defined time. Motor torque stays available. Applications: Precise positioning and preventing unintended movement



Safe Stop 1 Ramp Monitoring (SS2-r)

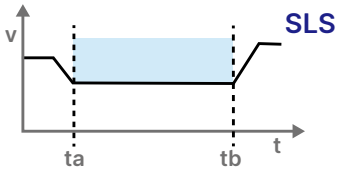
- Servo drive decelerates to a stop within a defined slope. Motor torque stays available. Applications: Precise positioning and preventing unintended movement

Safety Monitoring Functions



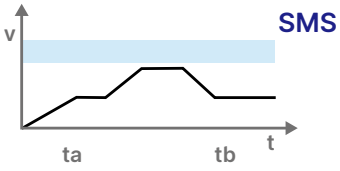
Safe Operating Stop (SOS)

- Servo drive stationary & motor servo-enabled for quick restarts with positional accuracy. Applications: Robot position adjustment



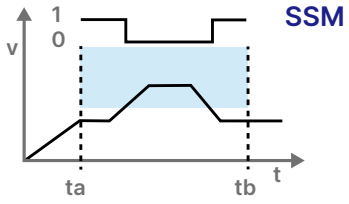
Safe Limited Speed (SLS)

- Monitors motor's operating speeds, which, if exceed a limit, triggers a stop or controlled deceleration



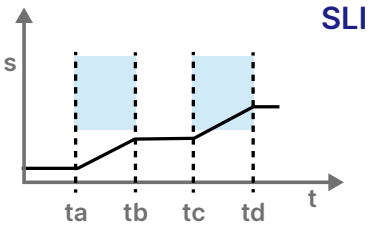
Safe Maximum Speed (SMS)

- Defines a static max. speed limit for the motor to ensure safe operation



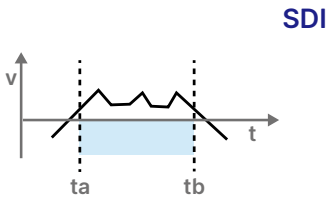
Safe Speed Monitoring (SSM)

- Continuously tracks the motor's operating speed and ensures it remains within a predefined safe threshold to allow operators to approach safely



Safety Limited Increment (SLI)

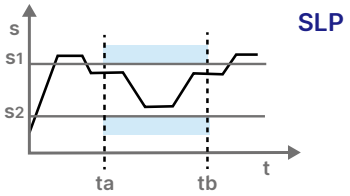
- Restricts motor displacement within a defined range over a specific time, preventing the motor from exceeding the designed space



Safe Direction (SDI)

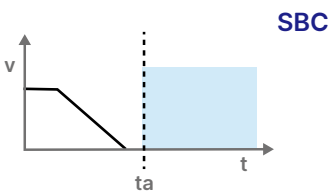
- Servo motor operates in the specified safe direction, preventing reverse movement. Particularly important for vertical motion machinery to avoid unintended load drops

Safe Output Functions



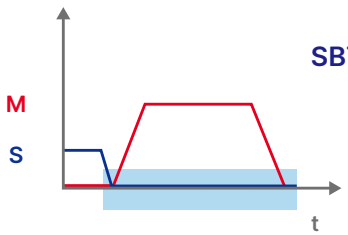
Safe Limited Position (SLP)

- Defines a safe operating range for the motor's movement. Applications: Industrial robots and lifting platforms



Safe Brake Control (SBC)

- Similar to STO & FSoE, but utilizes a dedicated output signal to engage the brake



Safe Brake Test (SBT)

- Diagnoses the deterioration of the electromagnetic brake holding force of the servo motor

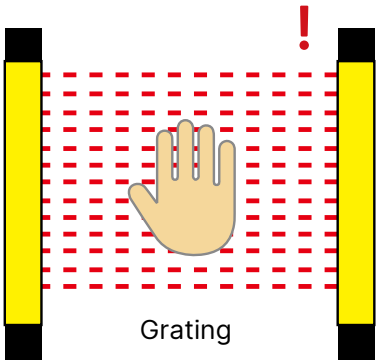
Complete Safety Features

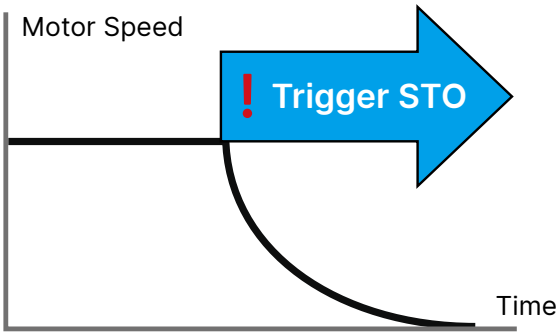
FailSafe over EtherCAT (FSoE)

- **High Integration:** Transmits standard data packets and safety data over the same network without requiring a separate safety bus. Compared to I/O-triggered methods, FSoE simplifies wiring, reduces installation and maintenance costs
- **High Reliability:** Includes robust error detection and validation mechanisms, such as **Cyclic Redundancy Check (CRC)** and timeout monitoring, which ensures data integrity and reliability when interference happens
- **Compliance with International Safety Standards:** Certified by TÜV and compliant with IEC 61508, SIL 3 and ISO 13849 PL e, meeting the highest industrial safety standards

Safe Torque Off (STO)

The built-in STO of the moving axis is triggered when the operator enters the protected areas to ensure safety





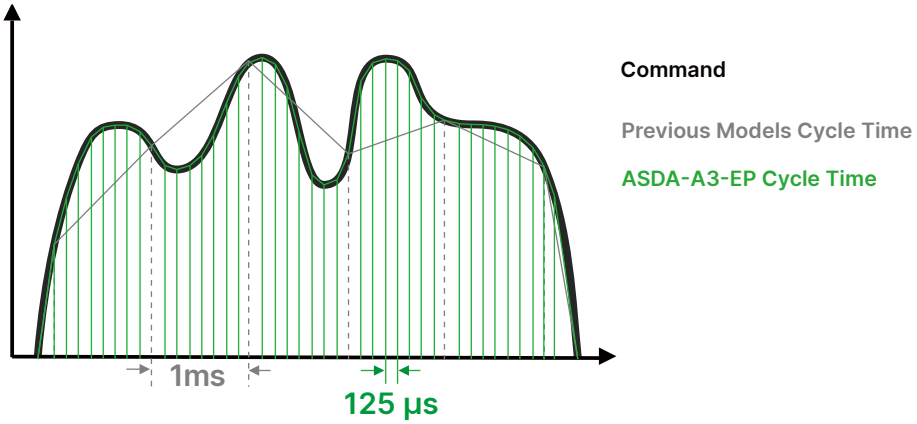
EtherCAT Communication Functions

Complies with the IEC 61158 and IEC 61800-7 fieldbus standards

Shorter Synchronization Cycle

- The synchronization cycle of the ASDA-A3-EP series is 125 µs, which is 8 times faster than that of the ASDA-A2 series

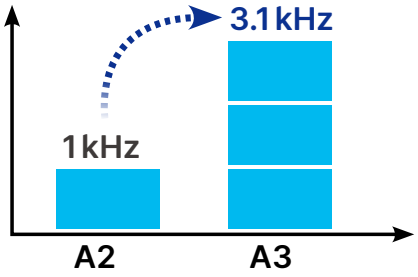
Synchronization Cycle

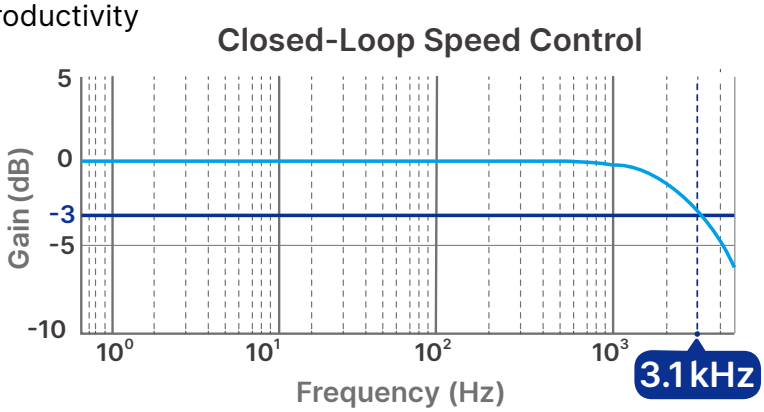


High Performance

3.1 kHz Bandwidth

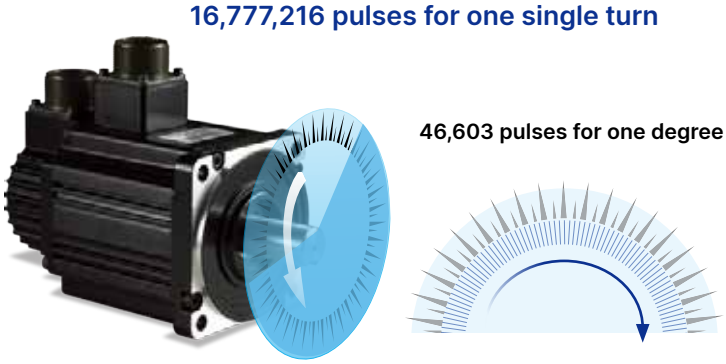
- Tripled bandwidth enhances responsiveness and position control accuracy (compared to ASDA-A2)
- Shortens the settling time to increase productivity





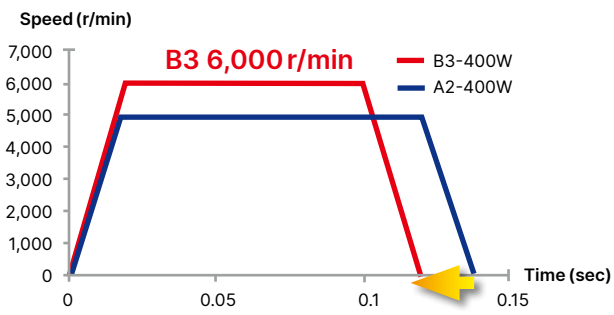
24-Bit Absolute Type Encoder

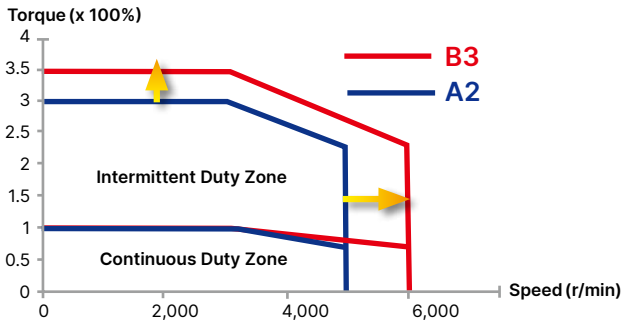
- The positioning precision is enhanced by the 16,777,216 pulses/turn encoder
- Reduced speed variance in low speed improves performance
- Absolute type encoder keeps motor's position when power is off



6,000 r/min and 350 % Peak Torque Motor

- Motor speed increases by 1,000 r/min*, reducing motion time and increasing productivity
  *Frame Size 60 mm, 80 mm and compared to the A2 Series
- Overload torque increases to 350% for faster start-up acceleration

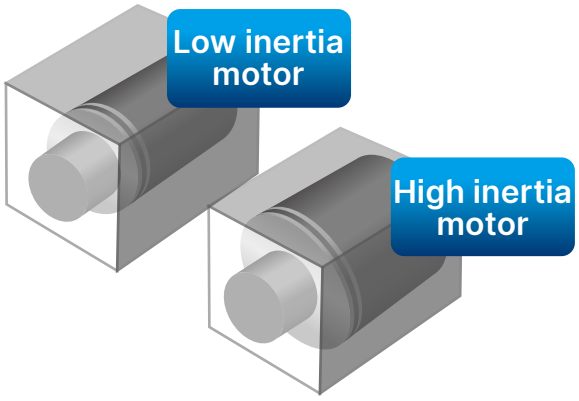




High Performance

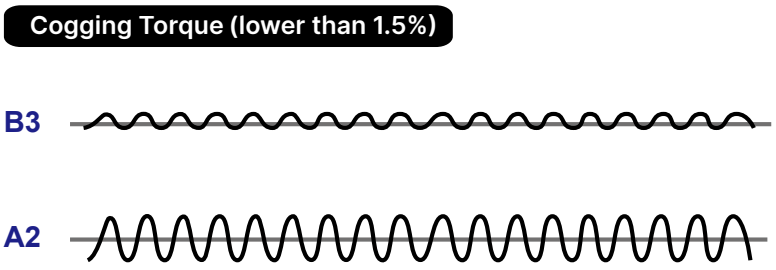
High & Low Inertia Rotor Motors

- High-Inertia Motors: Ideal for equipment requiring high speed stability and resistance to external impact (e.g., machine tools)
- Low-Inertia Motors: Suitable for high-speed positioning and rapid reciprocating motion (e.g., electronic equipment)



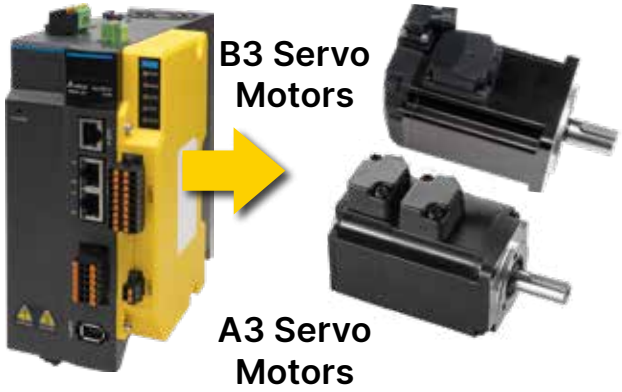
Low Cogging Torque Motor

- With a low cogging torque below 1.5%, it ensures smoother constant-speed operation and enhances stability in low-speed machining.



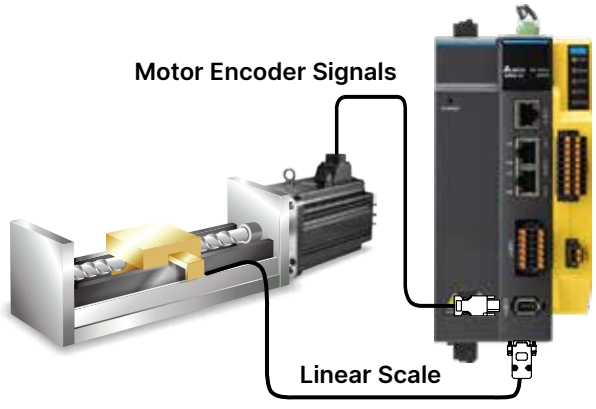
Motor Compatibility

- Supports A3 and B3 Series Motors



Full-Closed Loop Control

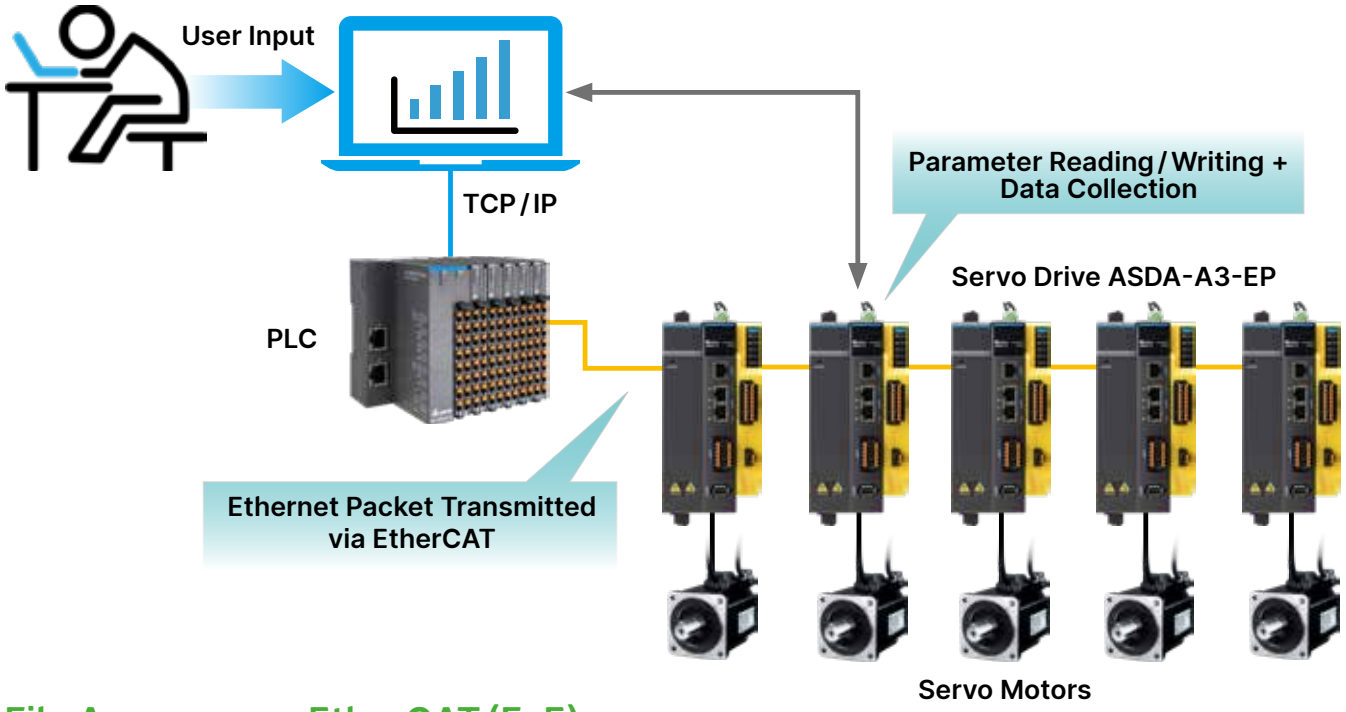
- Ensures positioning accuracy at the end and eliminates the effect of transmission backlash



Multifunctional

Ethernet over EtherCAT (EoE)

- **Direct Ethernet Data Transmission:** Leverages EtherCAT's high-speed communication to transmit Ethernet data directly. Eliminates the need for intermediate protocol conversion to ensure **high real-time performance and transmission efficiency.**
- **Optimized for Multi-Axis Systems:** Enables direct access to data from multiple axes through the controller without the need of handling information separately, which significantly improves operational efficiency

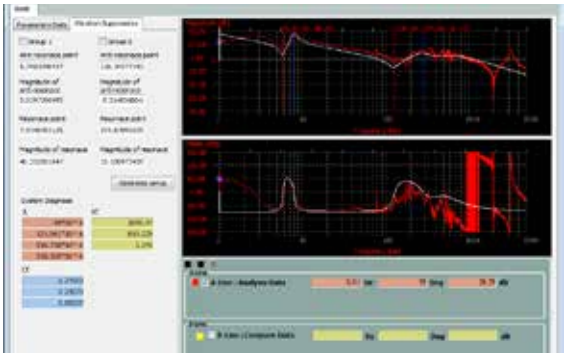


File Access over EtherCAT (FoE)

- FoE operates on the EtherCAT communication protocol's application layer, which allows reading and writing files between the master and slave devices
- FoE simplifies firmware updates as it eliminates the need for separate tools or systems. Version management across devices is more convenient with FoE

System Diagnosis

- Diagnose mechanical stiffness and damping coefficient by digitizing mechanical characteristics.
- Ensure consistent assembly quality with data of mechanical characteristics
- By comparing the data from different time span, the wear condition of a machine can be acquired

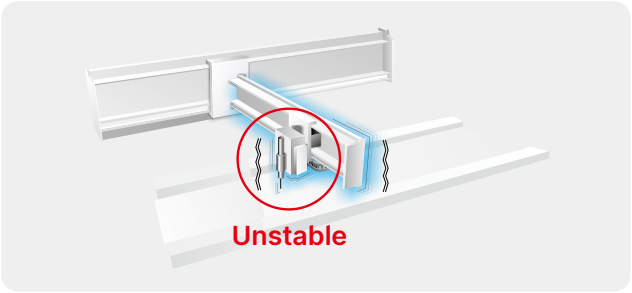


Multifunctional

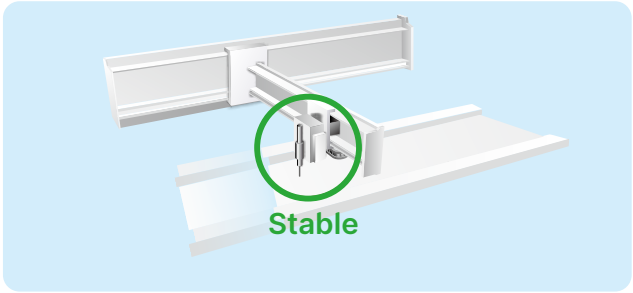
Vibration Elimination

- New algorithm and intuitive UI allow fast and easy adjustment of low-rigidity structure
- Supports 2 sets of elimination algorithm and 2 sets of low frequency vibration suppression commands
- The vibration can be eliminated without slowing down its response

Without Vibration Suppression

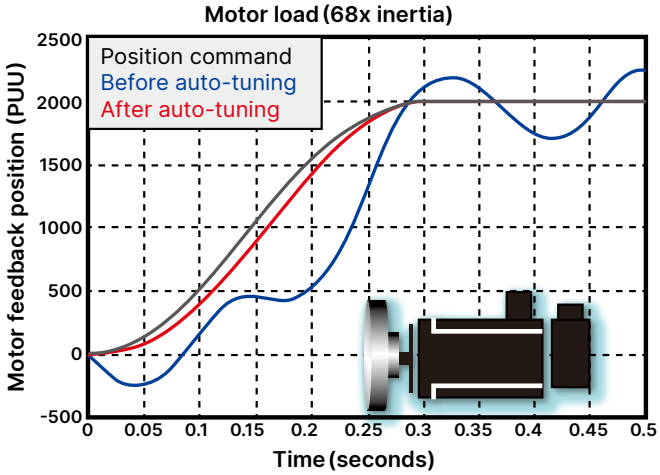


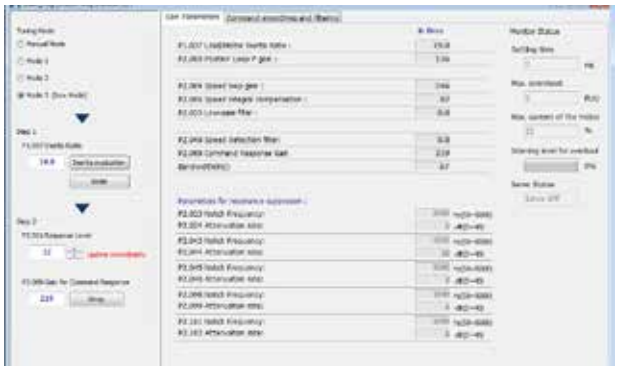
Delta Vibration Suppression



Automatic Gain Tuning

- New algorithm optimizes machine status
- Supports panel keypad and software auto-tuning
- The servo gains can be easily fine-tuned for better performance with its well-designed tuning modes

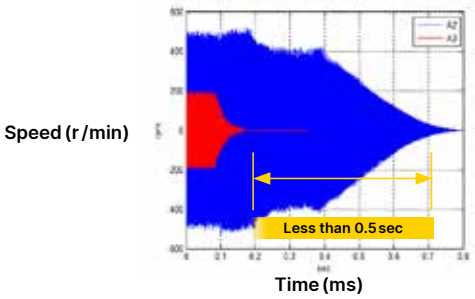




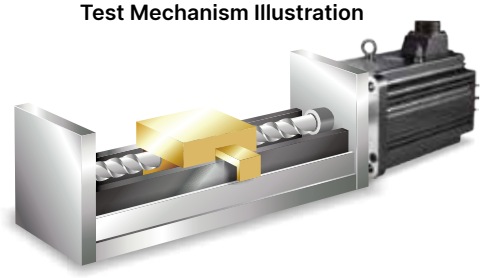
Multifunctional

Advanced Notch Filters

- 5 sets of notch filters with tunable bandwidth
- Filtering frequency up to 5,000Hz
- Simple settings to automatically eliminate resonance, which increases testing efficiency
- Shorter search time for resonance reduces impacts on the machine



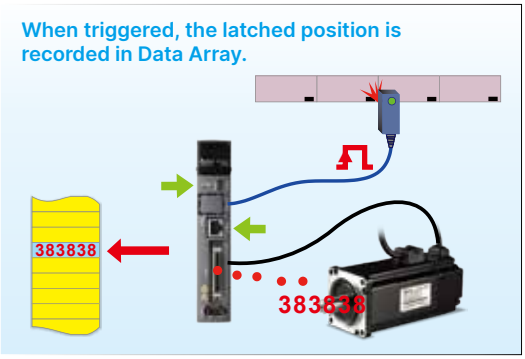
Test Mechanism Illustration



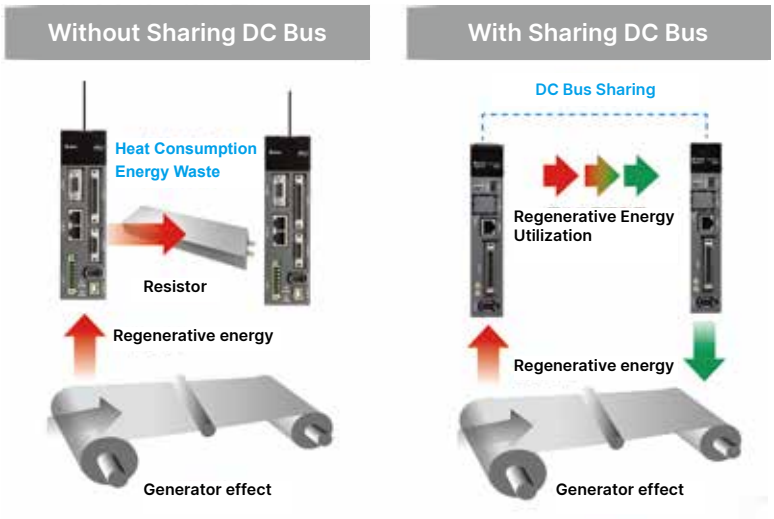
Built-in Motion Control

Touch Probe

- High-speed pulse capture
- High-speed DI captures instant position within 5 µs of response time



Energy-Saving and Compact Size



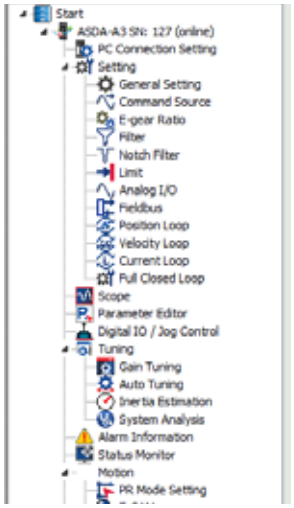
DC-Bus Sharing

- Allows shared usage of regenerative energy between A3 servo drives
- Multiple servo drives share DC Bus to reduce the need of braking resistors

User-Friendly Software

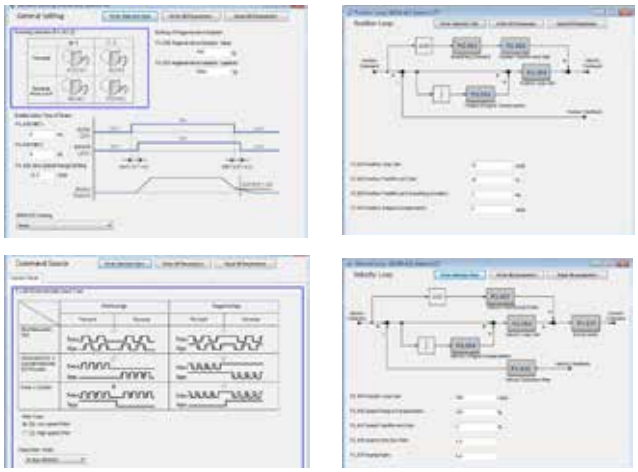
Tree-View Index Window

- Well-organized list and collapsible menu help to access functions easily



Graphical Interface for Parameter Settings

- Intuitive user interface for easy setups and parameter settings



Automatic Gain Tuning Wizard

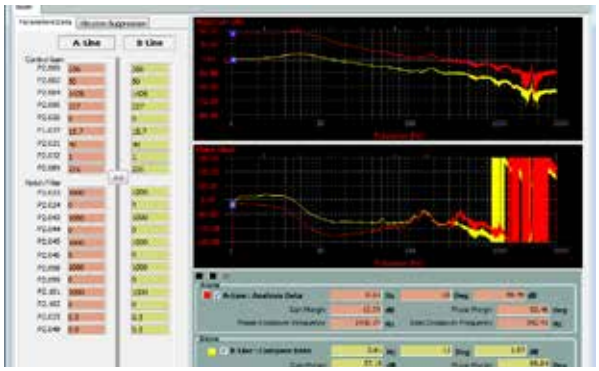
- Step-by-step guidance for servo system gain tuning



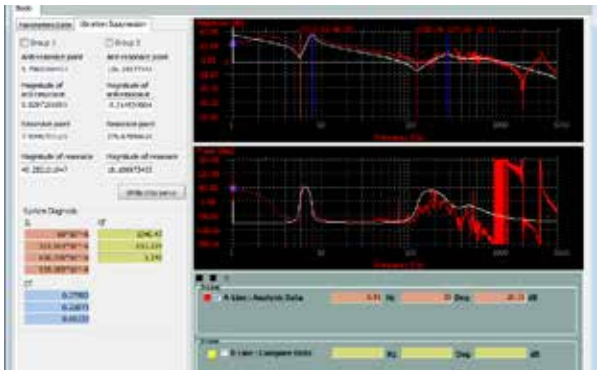
User-Friendly Software

System Analysis in Bode Plots

- **Speed Open-Loop Mode**
  Tracks the optimization level of the system with bode plots for enhanced performance

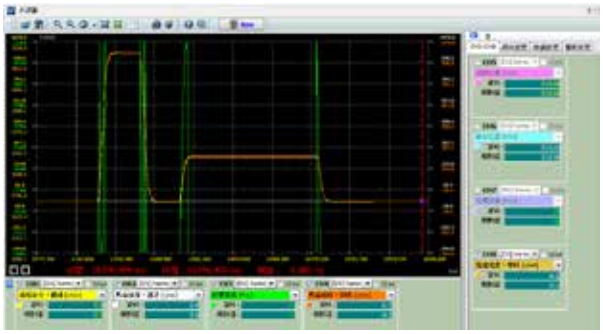


- **System Module Mode**
  The machine rigidity can be identified from the bode plot in this mode

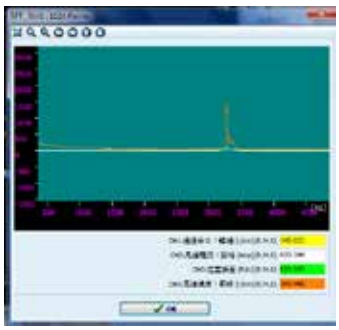


Oscilloscope

- Max. 8 channels with 16-bit data size, 10 kHz sampling rate
- High-resolution 4 channels with 32-bit data size and 10 kHz sampling rate
- High-sampling 4 channels with 16 bit data size and 20 kHz sampling rate



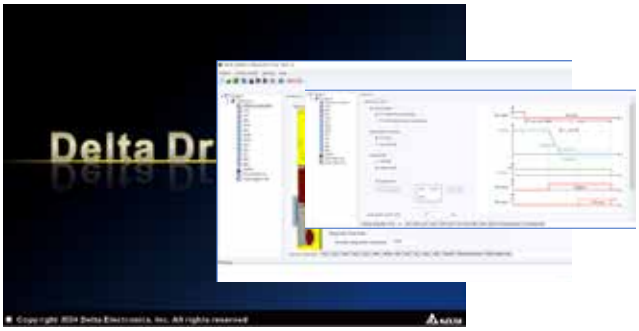
- Analyzes spectrum and calculates RMS by simply selecting certain period of signals
- Action and trigger conditions can be configured to collect data





Delta Drive Safety

- Visual interface enables more intuitive safety feature configuration



Product Information

Part Names and Functions

● STO (Safe Torque Off)
*Note: STO function is applicable to -M/-E models

- STO switch
- Connect to safety switch

● Main Circuit Input Terminal (R,S,T)

- R, S, T are used to connect to main circuit of the servo drive
- For 400 W~15 KW Servo Drives: Connects to 380-480 V (+-10%) 3-phase power supply

● Control Circuit Input Terminal (L_{1C}, L_{2C})

- L_{1C} and L_{2C} are used to connect DC 24 V +-10 single-phase power supply

  * 200V Models：L1c, L2c

  * 400V Models：DC 24V

● PC Connection Port (CN4)

- Connects PCs or notebooks for operating ASDA-SOFT software
- Ethernet-based

● EtherCAT Communication Port Connector (CN6)

- EtherCAT communication control

● I/O Connector (CN1)

- Connects Delta's PLC products or other NC controllers

● Encoder Connector (CN2)

- Connects connect the encoder of the servo motor



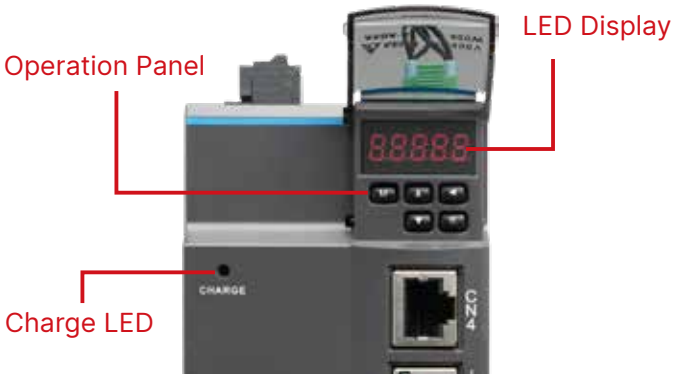
● Safety Module Extension



● LED Signal

● Safety Module Input / Output (CN12)

● Electromagnetic Brake Power Output (CN13)





Full-Closed Loop Control Terminal (CN5)

- Connects external linear scale or encoder for full-closed loop control

Servo Motor Output (U, V, W)

- Connect servo motor terminal U, V, W. Never connect to main circuit power as the AC drive may be damaged beyond repair if connected to wrong cables

Braking Resistor Terminal (P3, D C)

Product Information

Optional Accessories

Encoder Cables

- 3 m, 5 m, 10 m and 20 m standard cables available*[*A3 Series]
- Independent connector accessories possible on demand





Power Cables

- 3 m, 5 m 10 m and 20 m standard cables available[*A3 Series]
- Independent connector accessories possible on demand
- Available in two types: with / without brake.





Regenerative Resistor

- Refer to Chapter 2.8 of the ASDA-A3-EP User Manual for model selection





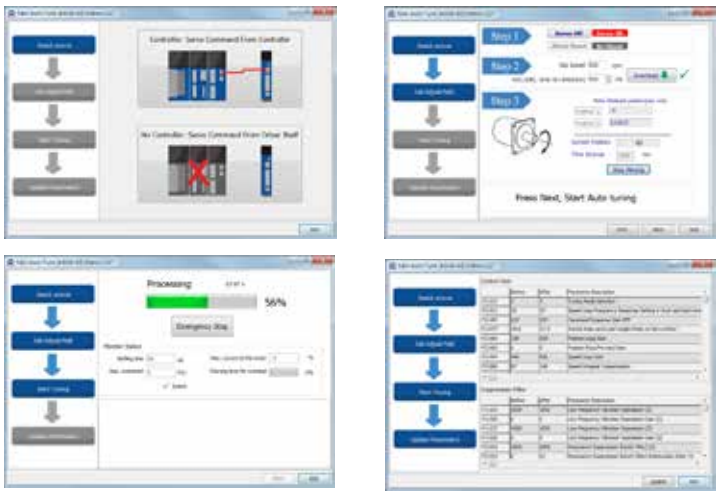
Quick Connectors

- For 100 W to 1.5 kW servo drives
- Operating lever available for easy wiring



Product Information

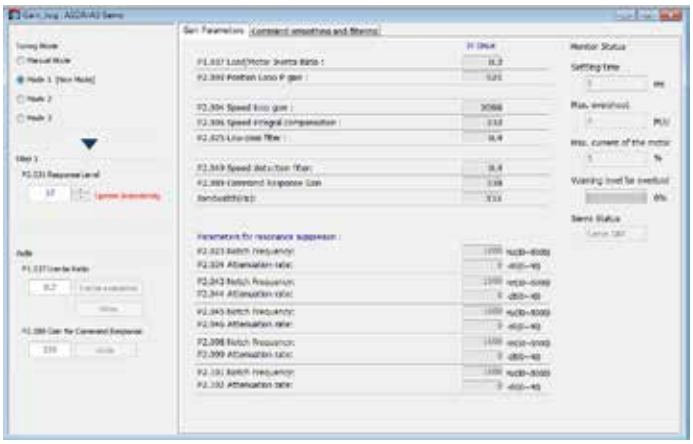
ASDA-Soft Configuration Software



Auto-Tuning

- Step-to-step instructions
- Supports external commands and internal point-to-point commands
- Flow chart of the setting procedure and tuning progress
- Compare the tuninig results (before & after)
- Downloadable gain parameters

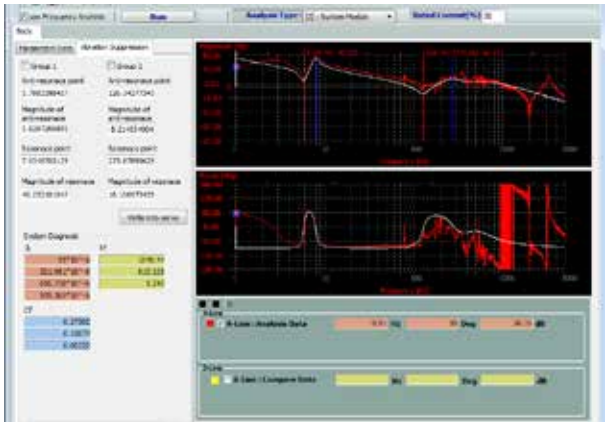




Advanced Tuning

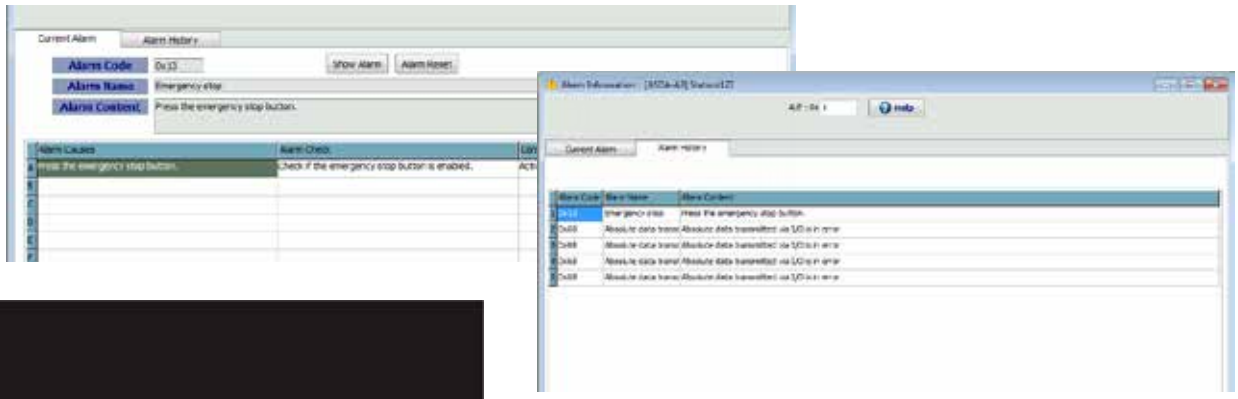
Four advanced tuning modes:

- Manual mode: All gains tuned manually, ideal for experienced users
- Mode 1: For fine-tuning the bandwidth response level
- Mode 2: For fine-tuning the inertia and bandwidth response level
- Mode 3: For fine-tuning the inertia, bandwidth response level and command responsiveness



System Module and Low Frequency Analysis

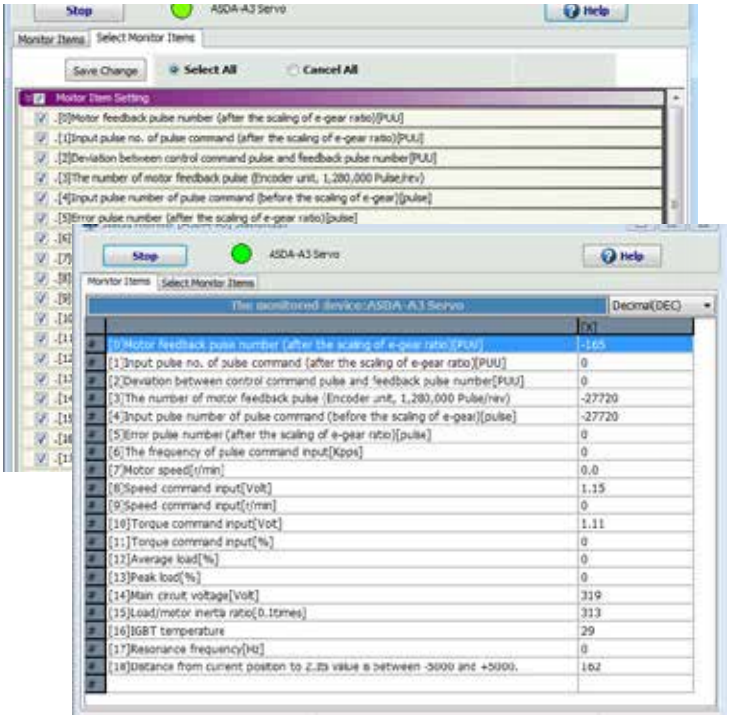
- Analyze system rigidity
- Acquire the low-frequnecy resonance data and automatically set the relevant parameters to eliminate the vibration
- Collect data such as inertia, elasticity and vicousfriction coefficient indicating the mechanism's features and wear condition



Alarm Information

- Display current alarm and alarm log
- Provide simple corrective actions for quick troubleshooting





Condition Monitoring

- Real-time display of servo motor operation status via the monitoring list



Speed Open-Loop Mode

- Determine if the current system is the most optimized and thus improves the design
- Comparing between before-tuned and after-tuned control bandwidth to see the Gain Margin and Phase Margin differences.

Ordering Information

Servo System Combination Table (200V)

Motor Frame Size 40~220						Drive	Power Cable		Power C
Frame Size	Output (W)	Model Name	Rotational Inertia (x10-4kg.m2) Standard / With Brake	Rated / Max. Speed (rpm)	Rated / Max. Current (A)	Model Name	Standard	Torsion-Resistant	Standard
40	100	ECM-B3H-C ① 0401R ② 1 ECM-B3H-C ① 0401S ② 1	0.064 / 0.0651	3000 / 6700	0.781 / 3.68	ASD-A3-0121-EP ASD-A3-0221-EP	ACS3-AFPWSRXX ACS3-ABPWSRXX ACS3-AFPWSR0C~0J ACS3-ABPWSR0C~0J	ACS3-AFPRSRXX ACS3-ABPRSRXX ACS3-AFPRSR0C~0J ACS3-ABPRSR0C~0J	ACS3-AFPWSSX ACS3-ABPWSSX ACS3-AFPWSS0C ACS3-ABPWSS0C
40	100	ECM-B3L-C ① 0401R ② 1 ECM-B3L-C ① 0401S ② 1	0.0299 / 0.0315	3000 / 6000	0.857 / 3.44	ASD-A3-0121-EP			
60	200	ECM-B3H-C ① 0602R ② 1 ECM-B3H-C ① 0602S ② 1	0.265 / 0.280	3000 / 6700	1.51 / 6.12	ASD-A3-0221-EP			
60	200	ECM-B3M-C ① 0602R ② 1 ECM-B3M-C ① 0602S ② 1	0.141 / 0.151	3000 / 6000	1.42 / 6.62	ASD-A3-0221-EP			
60	400	ECM-B3G-C ① 0604R ② 1 ECM-B3G-C ① 0604S ② 1	0.881 / 0.888	3000 / 6000	2.40 / 9.47	ASD-A3-0421-EP			
60	400	ECM-B3H-C ① 0604R ② 1 ECM-B3H-C ① 0604S ② 1	0.523 / 0.538	3000 / 6700	2.21 / 8.46	ASD-A3-0421-EP			
60	400	ECM-B3M-C ① 0604R ② 1 ECM-B3M-C ① 0604S ② 1	0.254 / 0.264	3000 / 6000	2.40 / 9.47	ASD-A3-0421-EP			
80	400	ECM-B3M-C ① 0804R ② 1 ECM-B3M-C ① 0804S ② 1	0.648 / 0.695	3000 / 6000	2.53 / 9.42	ASD-A3-0421-EP			
80	750	ECM-B3G-C ① 0807R ② 1 ECM-B3G-C ① 0807S ② 1	2.91 / 2.96	3000 / 6000	4.27 / 15.8	ASD-A3-0721-EP	ACS3-AFPWSTXX ACS3-ABPWSTXX	ACS3-AFPRSTXX ACS3-ABPRSTXX	ACS3-AFPWSUX ACS3-ABPWSUX
80	750	ECM-B3H-C ① 0807R ② 1 ECM-B3H-C ① 0807S ② 1	1.55 / 1.62	3000 / 6700	4.19 / 16.3	ASD-A3-0721-EP ASD-A3-1021-EP			
80	750	ECM-B3M-C ① 0807R ② 1 ECM-B3M-C ① 0807S ② 1	1.07 / 1.13	3000 / 6000	4.27 / 15.8	ASD-A3-0721-EP			
80	1000	ECM-B3M-C ① 0810R ② 1 ECM-B3M-C ① 0810S ② 1	1.37 / 1.40	3000 / 6000	5.00 / 18.2	ASD-A3-1021-EP			
100	1000	ECM-B3M-C ① 1010R ② 1 ECM-B3M-C ① 1010S ② 1	2.78 / 3.06	3000 / 6000	6.05 / 18.4	ASD-A3-1021-EP	ACS3-CAPWA2XX ACS3-CRPWA2XX	ACS3-CAPFA2XX ACS3-CRPFA2XX	
100	1500	ECM-B3M-C ① 1015R ② 1 ECM-B3M-C ① 1015S ② 1	3.69 / 3.97	3000 / 6000	7.48 / 22.8	ASD-A3-1521-EP			
100	2000	ECM-B3M-C ① 1020R ② 1 ECM-B3M-C ① 1020S ② 1	4.68 / 4.95	3000 / 6000	9.96 / 30.7	ASD-A3-2023-EP			
130	850	ECM-B3H-F ① 1308R ② 1 ECM-B3H-F ① 1308S ② 1	12.44 / 12.62	1500 / 4000	6.65 / 20.0	ASD-A3-1021-EP	ACS3-CAPWA2XX ACS3-CRPWA2XX	ACS3-CAPFA2XX ACS3-CRPFA2XX	
130	1000	ECM-B3M-E ① 1310R ② 1 ECM-B3M-E ① 1310S ② 1	7.79 / 7.94	2000 / 3000	5.96 / 19.9	ASD-A3-1021-EP			
130	1300	ECM-B3H-E ① 1313R ② 1 ECM-B3H-E ① 1313S ② 1	18.00 / 18.14	1500 / 4000	7.70 / 23.9	ASD-A3-1521-EP			
130	1500	ECM-B3M-E ① 1315R ② 1 ECM-B3M-E ① 1315S ② 1	11.22 / 11.37	2000 / 3000	8.17 / 26.82	ASD-A3-1521-EP			
130	1800	ECM-B3H-E ① 1318R ② 1 ECM-B3H-E ① 1318S ② 1	22.60 / 22.80	1500 / 4000	11.5 / 36.1	ASD-A3-2023-EP	ACS3-CAPWA3XX ACS3-CRPWA3XX	ACS3-CAPFA3XX ACS3-CRPFA3XX	ACS3-CABRA1X ACS3-CRBRA1X
130	2000	ECM-B3M-E ① 1320R ② 1 ECM-B3M-E ① 1320S ② 1	14.65 / 14.8	2000 / 3000	10.59 / 34.20	ASD-A3-2023-EP			
180	2000	ECM-B3M-E ① 1820R ② 1 ECM-B3M-E ① 1820S ② 1	29.11 / 30.38	2000 / 3000	11.43 / 36.21	ASD-A3-2023-EP	ACS3-CAPWC4XX ACS3-CRPWC4XX	ACS3-CAPFC4XX ACS3-CRPFC4XX	
180	3000	ECM-B3M-F ① 1830R ② 1 ECM-B3M-F ① 1830S ② 1	53.63 / 54.9	1500 / 3000	18.21 / 58.9	ASD-A3-3023-EP			
180	4500	ECM-B3M-F ① 1845R ② 1 ECM-B3M-F ① 1845S ② 1	67.73 / 69.15	1500 / 4000	26.6 / 70.7	ASD-A3-4523-EP	ACS3-CAPWC5XX ACS3-CRPWC5XX	ACS3-CAPFC5XX ACS3-CRPFC5XX	
180	5500	ECM-B3M-F ① 1855R ② 1 ECM-B3M-F ① 1855S ② 1	98.88 / 100.1	1500 / 4000	30.7 / 98.6	ASD-A3-5523-EP	ACS3-CAPWE6XX ACS3-CRPWE6XX	ACS3-CAPFE6XX ACS3-CRPFE6XX	
180	7500	ECM-B3M-F ① 1875R ② 1 ECM-B3M-F ① 1875S ② 1	134.95 / 136.24	1500 / 4000	44.2 / 113.4	ASD-A3-7523-EP	ACS3-CAPWE7XX ACS3-CRPWE7XX	ACS3-CAPFE7XX ACS3-CRPFE7XX	
220	11000	ECM-B3M-F ① 221BR ② 1 ECM-B3M-F ① 221BS ② 1	302.2 / 303.1	1500 / 4000	45.1 / 120.0	ASD-A3-1B23-EP			
220	15000	ECM-B3M-F ① 221FR ② 1 ECM-B3M-F ① 221FS ② 1	400 / 400.09	1500 / 4000	72.8 / 192.4	ASD-A3-1F23-EP	ACS3-CAPWE8XX ACS3-CRPWE8XX	ACS3-CAPFE8XX ACS3-CRPFE8XX	

Notes:
1.Cable model name: The "XX" stands for cable length. 03 = 3 m, 05 = 5 m, 10 = 10 m, 20 = 20 m.
2.Servo motor model name: 2 = encoder type.
3.Servo drive model name: 1 = product series, 2 = model code.
4.Cables are divided into standard, torsion-resistant, angle connector.
For details, please refer to the ordering information.

Connector & Cable						Single Connector, No Wires		
able with Brake		Incremental Type / Battery-free Type		Absolute Encoder Cable				
	Torsion-Resistant	Standard	Torsion-Resistant	Standard	Torsion-Resistant	Power Connector	Power Connector (with Brake) / Brake Connector	Encoder Connector
X X ~0J ~0J	ACS3-AFPRSSXX ACS3-ABPRSSXX ACS3-AFPRSS0C~0J ACS3-ABPRSS0C~0J	ACS3-AFEASIXX ACS3-ABEASIXX ACS3-AFEASI0C~0J ACS3-ABEASI0C~0J	ACS3-AFERSIXX ACS3-ABERSIXX ACS3-AFERSI0C~0J ACS3-ABERSI0C~0J	ACS3-AFEASAXX ACS3-ABEASAXX ACS3-AFEASA0C~0J ACS3-ABEASA0C~0J	ACS3-AFERSAXX ACS3-ABERSAXX ACS3-AFERSA0C~0J ACS3-ABERSA0C~0J	ACS3-AFPWSS00 ACS3-ABPWSS00	ACS3-AFPWSS00 ACS3-ABPWSS00	ACS3-CNENC200 + ACS3-AFEASA00
X X	ACS3-AFPRSUXX ACS3-ABPRSUXX	ACS3-AFEASIXX ACS3-ABEASIXX ACS3-AFEASI0C~0J ACS3-ABEASI0C~0J	ACS3-AFERSIXX ACS3-ABERSIXX ACS3-AFERSI0C~0J ACS3-ABERSI0C~0J	ACS3-AFEASAXX ACS3-ABEASAXX ACS3-AFEASA0C~0J ACS3-ABEASA0C~0J	ACS3-AFERSAXX ACS3-ABERSAXX ACS3-AFERSA0C~0J ACS3-ABERSA0C~0J	ACS3-AFPWSS00 ACS3-ABPWSS00	ACS3-AFPWSS00 ACS3-ABPWSS00	ACS3-CNENC200 + ACS3-AFEASA00
X X	ACS3-CABFA1XX ACS3-CRBFA1XX	ACS3-CAENA1XX ACS3-CRENA1XX ACS3-CAENM1XX ACS3-CRENM1XX	ACS3-CAEFA1XX ACS3-CREFA1XX ACS3-CAEFM1XX ACS3-CREFM1XX	ACS3-CAEAA1XX ACS3-CREAA1XX ACS3-CAEAM1XX ACS3-CREAM1XX	ACS3-CAEBA1XX ACS3-CREBA1XX ACS3-CAEBM1XX ACS3-CREBM1XX	ACS3-CAPWA000 ACS3-CRPWA000 ACS3-CAPWC000 ACS3-CRPWC000 ACS3-CAPWE000 ACS3-CRPWE000	ACS3-CABRA100 ACS3-CRBRA100	ACS3-CNENC200 + ACS3-CAENA100 ACS3-CAENM100 ACS3-CRENA100 ACS3-CRENM100

Ordering Information

Servo System Combination Table (400V)

Motor Frame Size 60~220						Drive	Power Cable		Power Cable
Frame Size	Output (W)	Model Name	Rotational Inertia (x10-4kg.m2) Standard / With Brake	Rated / Max. Speed (rpm)	Rated / Max. Current (A)	Model Name	Standard	Torsion-Resistant	Standard
60	400	ECM-B3G-J ① 0604R ② 1 ECM-B3G-J ① 0604S ② 1	0.881 / 0.888	3000 / 6000	1.35 / 5.2	ASD-A3①-0443-EP	ACS3-AFPWSAXX ACS3-ABPWSAXX	ACS3-AFPRSAXX ACS3-ABPRSAXX	ACS3-AFPWSBXX ACS3-ABPWSBXX
60	400	ECM-B3M-J ① 0604R ② 1 ECM-B3M-J ① 0604S ② 1	0.254 / 0.264	3000 / 6000	1.35 / 5.2	ASD-A3①-0443-EP			
80	750	ECM-B3G-J ① 0807R ② 1 ECM-B3G-J ① 0807S ② 1	2.91 / 2.96	3000 / 6000	2.4 / 8.4	ASD-A3①-0743-EP			
80	750	ECM-B3H-J ① 0807R ② 1 ECM-B3H-J ① 0807S ② 1	1.55 / 1.62	3000 / 6700	2.1 / 8.15	ASD-A3①-0743-EP			
80	750	ECM-B3M-J ① 0807R ② 1 ECM-B3M-J ① 0807S ② 1	1.07 / 1.13	3000 / 6000	2.15 / 7.9	ASD-A3①-0743-EP			
100	1000	ECM-B3M-J ① 1010R ② 1 ECM-B3M-J ① 1010S ② 1	2.78 / 3.06	3000 / 6000	3.03 / 9.21	ASD-A3①-1043-EP			ACS3-CABRA1XX ACS3-CRBRA1XX
100	1500	ECM-B3M-J ① 1015R ② 1 ECM-B3M-J ① 1015S ② 1	3.69 / 3.97	3000 / 6000	3.73 / 11.4	ASD-A3①-1543-EP			
100	2000	ECM-B3M-J ① 1020R ② 1 ECM-B3M-J ① 1020S ② 1	4.68 / 4.95	3000 / 6000	5 / 15.3	ASD-A3①-1543-EP			
130	850	ECM-B3H-L ① 1308R ② 1 ECM-B3H-L ① 1308S ② 1	12.44 / 12.62	1500 / 4000	3.35 / 10	ASD-A3①-1043-EP			
130	1000	ECM-B3M-K ① 1310R ② 1 ECM-B3M-K ① 1310S ② 1	7.79 / 7.94	2000 / 3000	3 / 9.95	ASD-A3①-1043-EP	ACS3-CAPWA2XX ACS3-CRPWA2XX	ACS3-CAPFA2XX ACS3-CRPFA2XX	
130	1300	ECM-B3H-L ① 1313R ② 1 ECM-B3H-L ① 1313S ② 1	18 / 18.14	1500 / 4000	3.85 / 12	ASD-A3①-1543-EP			
130	1500	ECM-B3M-K ① 1315R ② 1 ECM-B3M-K ① 1315S ② 1	11.22 / 11.37	2000 / 3000	4.09 / 13.37	ASD-A3①-1543-EP			
130	1800	ECM-B3H-L ① 1318R ② 1 ECM-B3H-L ① 1318S ② 1	22.6 / 22.8	1500 / 4000	5.75 / 18.1	ASD-A3①-2043-EP			
130	2000	ECM-B3M-K ① 1320R ② 1 ECM-B3M-K ① 1320S ② 1	14.65 / 14.8	2000 / 3000	5.3 / 17.1	ASD-A3①-2043-EP			
180	2000	ECM-B3M-K ① 1820R ② 1 ECM-B3M-K ① 1820S ② 1	29.11 / 30.38	2000 / 3000	5.7 / 18.1	ASD-A3①-2043-EP			
180	3000	ECM-B3M-L ① 1830R ② 1 ECM-B3M-L ① 1830S ② 1	53.63 / 54.9	1500 / 3000	9.1 / 29.45	ASD-A3①-3043-EP	ACS3-CAPWC4XX ACS3-CRPWC4XX	ACS3-CAPFC4XX ACS3-CRPFC4XX	
180	4500	ECM-B3M-L ① 1845R ② 1 ECM-B3M-L ① 1845S ② 1	67.73 / 69.15	1500 / 4000	13.3 / 35.35	ASD-A3①-4543-EP			
180	5500	ECM-B3M-L ① 1855R ② 1 ECM-B3M-L ① 1855S ② 1	98.88 / 100.1	1500 / 4000	15.3 / 49.29	ASD-A3①-5543-EP	ACS3-CAPWE6XX ACS3-CRPWE6XX	ACS3-CAPFE6XX ACS3-CRPFE6XX	
180	7500	ECM-B3M-L ① 1875R ② 1 ECM-B3M-L ① 1875S ② 1	134.95 / 136.24	1500 / 4000	22.1 / 56.68	ASD-A3①-7543-EP			
220	11000	ECM-B3M-L ① 221BR ② 1 ECM-B3M-L ① 221BS ② 1	302.2 / 303.1	1500 / 4000	21.2 / 56.5	ASD-A3①-1B43-EP			
220	15000	ECM-B3M-L ① 221FR ② 1 ECM-B3M-L ① 221FS ② 1	400 / 400.09	1500 / 4000	29.2 / 77	ASD-A3①-1F43-EP			

Notes:
1.Cable model name: The "XX" stands for cable length. 03 = 3 m, 05 = 5 m, 10 = 10 m, 20 = 20 m.
2.Servo motor model name: 2 = encoder type.
3.Servo drive model name: 1 = product series, 2 = model code.
4.Cables are divided into standard, torsion-resistant, angle connector.
For details, please refer to the ordering information.

Connector & Cable					Single Connector, No Wires		
e with Brake	Incremental Type / Battery-free Type		Absolute Encoder Cable				
Torsion-Resistant	Standard	Torsion-Resistant	Standard	Torsion-Resistant	Power Connector	Power Connector (with Brake) / Brake Connector	Encoder Connector
ACS3-AFPRSBXX ACS3-ABPRSBXX	ACS3-AFEASIXX ACS3-ABEASIXX ACS3-AFEASI0C~0J ACS3-ABEASI0C~0J	ACS3-AFERSIXX ACS3-ABERSIXX ACS3-AFERSI0C~0J ACS3-ABERSI0C~0J	ACS3-AFEASAXX ACS3-ABEASAXX ACS3-AFEASA0C~0J ACS3-ABEASA0C~0J	ACS3-AFERSAXX ACS3-ABERSAXX ACS3-AFERSA0C~0J ACS3-ABERSA0C~0J	ACS3-AFPWSS00 ACS3-ABPWSS00	ACS3-AFPWSS00 ACS3-ABPWSS00	ACS3-CNENC200 + ACS3-AFEASA00
ACS3-CABFA1XX ACS3-CRBFA1XX	ACS3-CAENA1XX ACS3-CRENA1XX ACS3-CAENM1XX ACS3-CRENM1XX	ACS3-CAEFA1XX ACS3-CREFA1XX ACS3-CAEFM1XX ACS3-CREFM1XX	ACS3-CAEAA1XX ACS3-CREAA1XX ACS3-CAEAM1XX ACS3-CREAM1XX	ACS3-CAEBA1XX ACS3-CREBA1XX ACS3-CAEBM1XX ACS3-CREBM1XX	ACS3-CAPWA000 ACS3-CRPWA000	ACS3-CABRA100 ACS3-CRBRA100	ACS3-CNENC200 + ACS3-CAENA100 ACS3-CAENM100 ACS3-CRENA100 ACS3-CRENM100
					ACS3-CAPWC000 ACS3-CRPWC000		
					ACS3-CAPWE000 ACS3-CRPWE000		

Product Information

Model Description

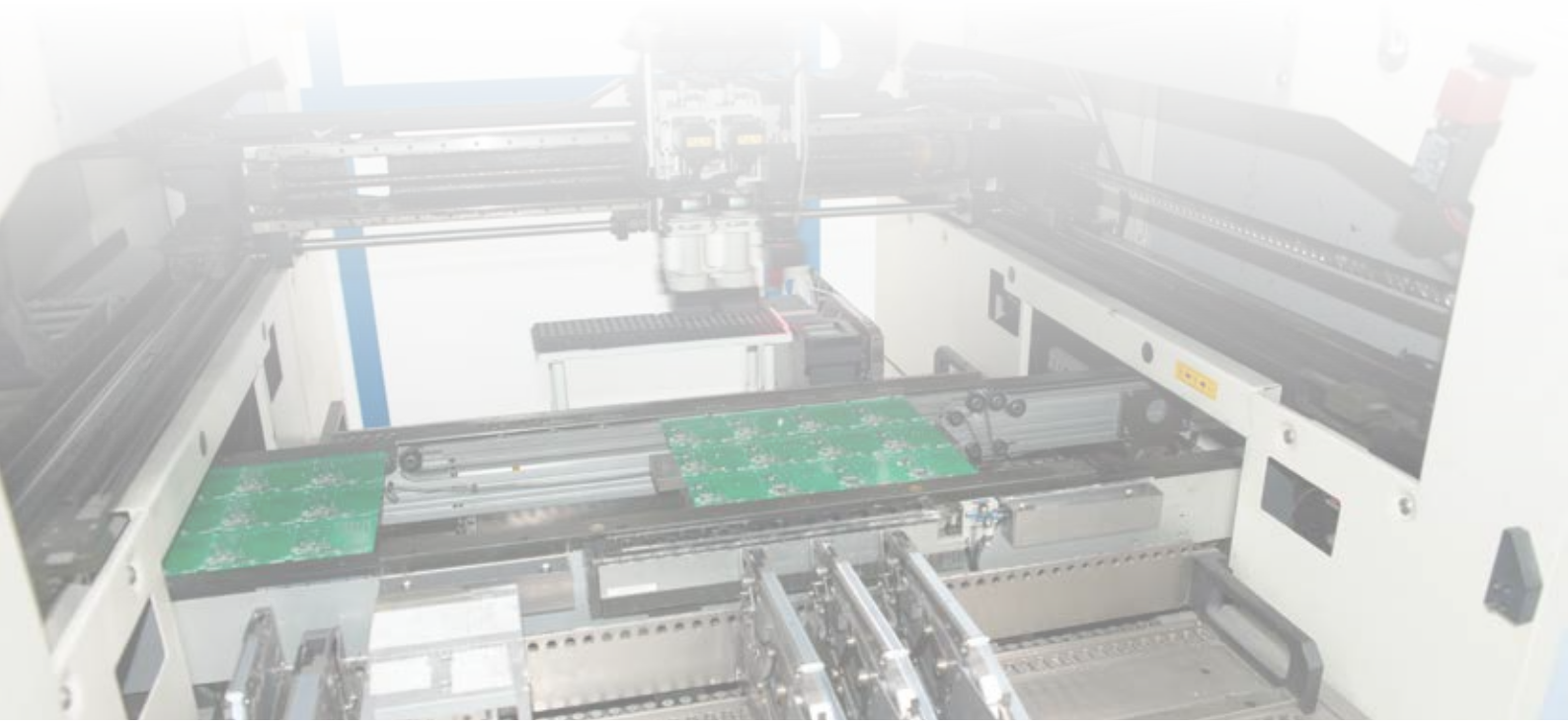
ASDA-A3-EP Series AC Servo Drive

ASD - A3 - 04 21 - EP

- **ASD** — Product Name: AC Servo Drive
- **A3** — Product Series: A3 Series
- **04** — Rated Power Input

01: 100 W	20: 2 kW	65: 6.5 kW
02: 200 W	30: 3 kW	75: 7.5 kW
04: 400 W	45: 4.5 kW	1B: 11 kW
07: 750 W	55: 5.5 kW	1F: 15 kW
10: 1 kW		
15: 1.5 kW		

- **21** — Input Voltage and Phase
  - 21: 220V single / three-phase
  - 23: 220V three-phase
  - 43: 440V three-phase
- **EP** — Supports STO, EtherCAT and full closed-loop



Ordering Information

Servo Drive Specifications 220 V

ASDA-A3		100 W	200 W	400 W	750 W	1 kW	1.5 kW	2 kW	3 kW
		01	02	04	07	10	15.0	20	30
Power Supply	Phase / Voltage	Single / Three-phase 220 VAC						Three-phase 220 VAC	
	Permissible Voltage	Single / Three-phase 200 ~ 230 VAC, -15% ~ +10%						Three-phase 200 ~ 230 VAC, -15% ~ +10%	
	Input Current (3PH) (Unit: Arms)	0.81	1.23	1.95	3.80	5.24	5.91	12.3	14.9
	Input Current (1PH) (Unit: Arms)	1.43	2.19	3.5	7.12	9.93	11.14	-	-
	Continuous Output Current (Unit: Arms)	0.9	1.55	2.6	5.10	7.30	8.30	13.4	19.40
	Max. Instantaneous Output Current (Unit: Arms)	3.54	7.07	10.6	21.21	24.75	27.00	53.03	58.90
	Final Power Dissipation (W)	11.4	14.8	21.90	39.80	65.90	73.80	139.70	207.10
Cooling Method		Natural cooling			Fan cooling				
Drive Resolution		24-bit (16,777,216 p / rev)							
Main Circuit Control		SVPW Mcontrol							
Tuning Mode		Auto / Manual							
Regenerative Resistor		NO		Built-in 100 Ohm, 40W				Built-in 20 Ohm 80 W	
Digital Input/ Output	Input	4 DI inputs. Please refer to Chapter 7 of the manual for function settings.							
	Output	2 DO outputs. Please refer to Chapter 7 of the manual for function settings.							
Protective Function		Overcurrent, Overvoltage, Undervoltage, Overheat, Regeneration error, Overload, Excessive speed deviation, Excessive position deviation, Encoder error, Adjustment error, Emergency stop, Forward / reverse limit error, Serial communication error, RST leak phase, Serial communication timeout, Short-circuit protection for terminals U, V, W							
Supported Communication Interfaces		Ethernet / EtherCAT							
Environment	Installation Site	Indoors (avoid direct sunlight), no corrosive vapor (avoid fumes, flammable gases, and dust)							
	Altitude	Altitude 2,000 m or lower above sea level							
	Atmospheric Pressure	86 kPa ~ 106 kPa							
	Operating Temperature	0 °C ~ 55 °C (If operating temperature is above 45°C, forced cooling is required)							
	Storage Temperature	-20 °C ~ 65 °C							
	Humidity	0 to 90 % RH (non-condensing)							
	Vibration	10 Hz ~ 57 Hz: 0.075 mm amplitude; 58 Hz ~ 150 Hz: 1 G							
	IP Rating	IP20[*1]							
	Power System	TN system							
	Certifications	IEC / EN / UL 61800-5-1[*2], IEC / EN 61800-5-2[*3]							

Note:

1. The terminal blocks are not IP20 rated.
2. This equipment does not have functions of thermal memory for shutdown, thermal memory for loss of power, and speed sensitivity in accordance with EN 61800-5-1:2007/A1:2017.
3. The product is certified by TÜV SÜD according to IEC/EN 61800-5-2:2016 and EN IEC 62061:2021 for functional safety. Compliance with EN 61800-5-1:2007/A11:2021 is addressed through design verification and testing, although not separately certified.
4. To meet the functional safety requirement, install the servo drive in the control cabinet with a rating of IP54 or higher.
5. The short circuit rating (SCCR) complies with UL 61800-5-1 requirement of 5kA.

Ordering Information

Servo Drive Specifications 220 V

ASDA-A3		4.5 kW	5.5 kW	7.5 kW	11 kW	15 kW
		45.0	55.0	75.0	1B	1F
Power Supply	Phase / Voltage	Three-phase 220 VAC				
	Permissible Voltage	Three-phase 200 ~ 230 VAC, -15% ~ +10%				
	Input Current (3PH) (Unit: Arms)	19.3	23.8	29	50.3	64.7
	Continuous Output Current (Unit: Arms)	32.5	40.00	47.5	58.6	72.8
	Max. Instantaneous Output Current (Unit: Arms)	70.71	95.60	106.10	120	192.4
	Final Power Dissipation (W)	284	329.4	379.80	419.1	553.7
Cooling Method		Fan cooling				
Drive Resolution		24-bit (16777216 p / rev)				
Main Circuit Control		SVPW Mcontrol				
Tuning Mode		Auto / Manual				
Regenerative Resistor		Built-in 20 Ohm 100 W	NO			
Digital Input/ Output	Input	4 DI inputs. Please refer to Chapter 7 of the manual for function settings.				
	Output	2 DO outputs. Please refer to Chapter 7 of the manual for function settings.				
Protective Functions		Overcurrent, Overvoltage, Undervoltage, Overheat, Regeneration error, Overload, Excessive speed deviation, Excessive position deviation, Encoder error, Adjustment error, Emergency stop, Forward / reverse limit error, Serial communication error, RST leak phase, Serial communication timeout, Short-circuit protection for terminals U, V, W				
Supported Communication Interfaces		Ethernet / EtherCAT				
Environment	Installation Site	Indoors (avoid direct sunlight), no corrosive vapor (avoid fumes, flammable gases, and dust)				
	Altitude	Altitude 2,000 m or lower above sea level				
	Atmospheric Pressure	86 kPa ~ 106 kPa				
	Operating Temperature	0 °C ~ 55 °C (If operating temperature is above 45°C, forced cooling is required)				
	Storage Temperature	-20 °C ~ 65 °C				
	Humidity	0 to 90 % RH (non-condensing)				
	Vibration	10 Hz ~ 57 Hz: 0.075 mm amplitude ; 58 Hz ~ 150 Hz: 1 G				
	IP Rating	IP20				
	Power System	TN / TT system[*3*4]				
	Certifications	IEC / EN / UL 61800-5-1[*2], IEC / EN 61800-5-2[*3]				

Note:

1. The terminal blocks are not IP20 rated.
2. This equipment does not have functions of thermal memory for shutdown, thermal memory for loss of power, and speed sensitivity in accordance with EN 61800-5-1:2007/A1:2017.
3. The product is certified by TÜV SÜD according to IEC/EN 61800-5-2:2016 and EN IEC 62061:2021 for functional safety. Compliance with EN 61800-5-1:2007/A11:2021 is addressed through design verification and testing, although not separately certified.
4. To meet the functional safety requirement, install the servo drive in the control cabinet with a rating of IP54 or higher.
5. The short circuit rating (SCCR) complies with UL 61800-5-1 requirement of 5kA.

Ordering Information

Servo Drive Specifications 400 V

ASDA-A3		400 W	750 W	1 kW	1.5 kW	2 kW	3 kW
		04	07	10	15	20	30
Power Supply	Phase / Voltage	Three-phase 400 VAC					
	Permissible Voltage	Three-phase 380 ~ 480 VAC, -10% ~ +10%					
	Input Current (3PH) (unit: Arms)	0.90	1.8	2.4	3.4	4.5	6.3
	Continuous Output Current (Unit: Arms)	1.60	3.12	3.52	5.06	6.6	9.11
	Instantaneous Maximum Output Current (unit: Arms)	5.40	9.70	10.54	16.35	19.88	29.45
	Final Power Loss (W)	49	72	86	105	125	195
Cooling Method		Fan cooling					
Drive Resolution		24-bit (16,777,216 p / rev)					
Main Circuit Control		SVPW Mcontrol					
Tuning Mode		Auto / Manual					
Regenerative Resistor		Built-in 80 Ohm 60 W				NO	
Digital Input/ Output	Input	Four DI inputs. Please refer to Chapter 7 of the manual for function settings.					
	Output	Two DO outputs. Please refer to Chapter 7 of the manual for function settings.					
Protective Functions		Overcurrent, Overvoltage, Undervoltage, Overheat, Regeneration error, Overload, Excessive speed deviation, Excessive position deviation, Encoder error, Adjustment error, Emergency stop, Forward / reverse limit error, Serial communication error, RST leak phase, Serial communication timeout, Short-circuit protection for terminals U, V, W					
Supported Communication Interfaces		Ethernet / EtherCAT					
Environment	Installation Site	Indoors (avoid direct sunlight), no corrosive vapor (avoid fumes, flammable gases, and dust)					
	Altitude	Altitude 2,000 m or lower above sea level					
	Atmospheric Pressure	86 kPa ~ 106 kPa					
	Operating Temperature	0 °C ~ 55 °C (If operating temperature is above 45°C, forced cooling is required)					
	Storage Temperature	-20 °C ~ 65 °C					
	Humidity	0 to 90 % RH (non-condensing)					
	Vibration	10 Hz ~ 57 Hz: 0.075 mm amplitude ; 58 Hz ~ 150 Hz: 1 G					
	IP Rating	IP20[*1]					
	Power System	TN system					
	Certifications	IEC / EN / UL 61800-5-1[*2], IEC / EN 61800-5-2[*3]					

Note:

1. The terminal blocks are not IP20 rated.
2. This equipment does not have functions of thermal memory for shutdown, thermal memory for loss of power, and speed sensitivity in accordance with EN 61800-5-1:2007/A1:2017.
3. The product is certified by TÜV SÜD according to IEC/EN 61800-5-2:2016 and EN IEC 62061:2021 for functional safety. Compliance with EN 61800-5-1:2007/A11:2021 is addressed through design verification and testing, although not separately certified.
4. To meet the functional safety requirement, install the servo drive in the control cabinet with a rating of IP54 or higher.
5. The short circuit rating (SCCR) complies with UL 61800-5-1 requirement of 5kA.

Ordering Information

Servo Drive Specifications 400 V

ASDA-A3		4.5 kW	5.5 kW	6.5 kW	7.5 kW	11 kW	15 kW
		45	55	65	75	1B	1F
Power Supply	Phase / Voltage	Three-phase 400 VAC					
	Permissible Voltage	Three-phase 380 ~ 480 VAC, -10% ~ +10%					
	Input Current (3PH) (unit: Arms)	8.7	10.7	11.8	14.1	21.8	29.6
	Continuous Output Current (Unit: Arms)	13.3	15.34	17.5	22.4	27.3	31
	Instantaneous Maximum Output Current (unit: Arms)	35.35	49.29	49.29	56.68	68.25	80.2
	Final Power Loss (W)	220	310	330	400	465	530
Cooling Method		Fan cooling					
Drive Resolution		24-bit (16,777,216 p / rev)					
Main Circuit Control		SVPW Mcontrol					
Tuning Mode		Auto / Manual					
Regenerative Resistor		NO					
Digital Input/ Output	Input	Four DI inputs. Please refer to Chapter 7 of the manual for function settings.					
	Output	Two DO outputs. Please refer to Chapter 7 of the manual for function settings.					
Protective Functions		Overcurrent, Overvoltage, Undervoltage, Overheat, Regeneration error, Overload, Excessive speed deviation, Excessive position deviation, Encoder error, Adjustment error, Emergency stop, Forward / reverse limit error, Serial communication error, RST leak phase, Serial communication timeout, Short-circuit protection for terminals U, V, W					
Supported Communication Interfaces		Ethernet / EtherCAT					
Environment	Installation Site	Indoors (avoid direct sunlight), no corrosive vapor (avoid fumes, flammable gases, and dust)					
	Altitude	Altitude 2,000 m or lower above sea level					
	Atmospheric Pressure	86 kPa ~ 106 kPa					
	Operating Temperature	0 °C ~ 55 °C (If operating temperature is above 45°C, forced cooling is required)					
	Storage Temperature	-20 °C ~ 65 °C					
	Humidity	0 to 90 % RH (non-condensing)					
	Vibration	10 Hz ~ 57 Hz: 0.075 mm amplitude ; 58 Hz ~ 150 Hz: 1 G					
	IP Rating	IP20[*1]					
	Power System	TN system					
	Certifications	IEC / EN / UL 61800-5-1[*2], IEC / EN 61800-5-2[*3]					

Note:

1. The terminal blocks are not IP20 rated.
2. This equipment does not have functions of thermal memory for shutdown, thermal memory for loss of power, and speed sensitivity in accordance with EN 61800-5-1:2007/A1:2017.
3. The product is certified by TÜV SÜD according to IEC/EN 61800-5-2:2016 and EN IEC 62061:2021 for functional safety. Compliance with EN 61800-5-1:2007/A11:2021 is addressed through design verification and testing, although not separately certified.
4. To meet the functional safety requirement, install the servo drive in the control cabinet with a rating of IP54 or higher.
5. The short circuit rating (SCCR) complies with UL 61800-5-1 requirement of 5kA.

Ordering Information

Safety Module Model Description

ACS3 - SF - 03 01

- ACS3: Product Name: ASDA-A3 Series Accessory
- SF: Product Series: Safety Functions Module
- 03: External Interface: 03=Standard (Supports FSoE and I/O trigger)
- 01: Classification: General type



Safety Module Standard Specifications

Item		Certification Standards	I/O Type		Communication	
HFT	Hardware fault tolerance	IEC/EN61508	1		1	
Type	Subsystem type	IEC/EN61508	Type B		Type B	
SIL	Safety integrity level	IEC/EN61508	SIL 3		SIL 3	
		IEC/EN62061	Maximum SIL 3		Maximum SIL 3	
PFH	Dangerous failure rate	IEC/EN62061	Refer to the table below.			
Response Time	Response time	IEC/EN61508	STO, SBC	10 ms	STO, SBC	15 ms
			Others	25 ms	Others	25 ms
Fault Reaction Time	Failure reaction time	IEC/EN61800-5-2	STO stop	10 ms	STO stop	10 ms
			SS1 stop	25 ms	SS1 stop	25 ms
Category	Category	EN ISO13849-1: 2023	Type 3		Type 3	
PL	Performance level	EN ISO13849-1: 2023	PL e		PL e	
MTTFd	Mean dangerous failure time	EN ISO13849-1: 2023	High (≥ 100 years)		High (≥ 100 years)	
DC	Diagnostic range	EN ISO13849-1: 2023	DC ≥ 98[%]		DC ≥ 98[%]	
Mission Time	Mission time	EN ISO13849-1: 2023	20 years		20 years	

Dangerous Failure Rate (PFH)
PFH varies by input type and safety functions.

Safety Functions	I/O Type	Communication Type
STO	PFH < 1.4 x 10^{-8} (1/h)	PFH < 1.5 x 10^{-8} (1/h)
SS1/SS2/SOS/SLS/SLI/SDI/SLP	PFH < 1.7 x 10^{-8} (1/h)	PFH < 1.8 x 10^{-8} (1/h)
SMS	PFH < 1.7 x 10^{-8} (1/h)	PFH < 1.7 x 10^{-8} (1/h)
SSM	PFH < 1.9 x 10^{-8} (1/h)	PFH < 1.8 x 10^{-8} (1/h)
SBC	PFH < 1.6 x 10^{-8} (1/h)	PFH < 1.6 x 10^{-8} (1/h)

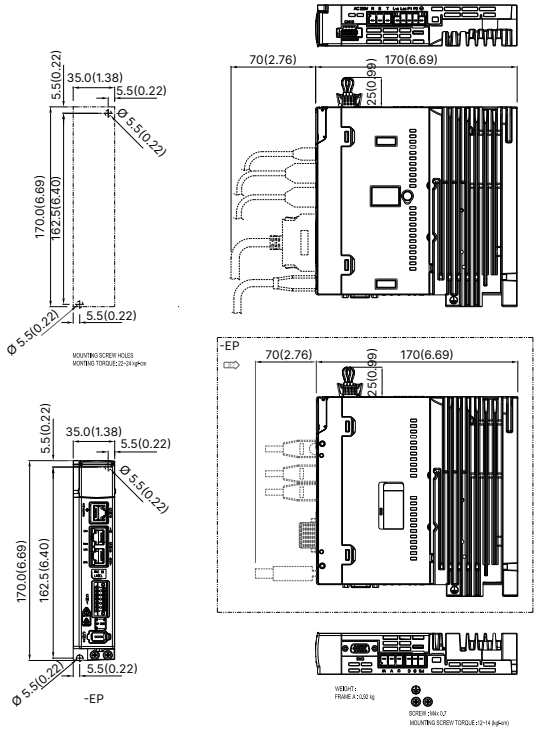
Ordering Information

Servo Drive Dimensions - 200 V

Frame B

100 W / 200 W / 400 W

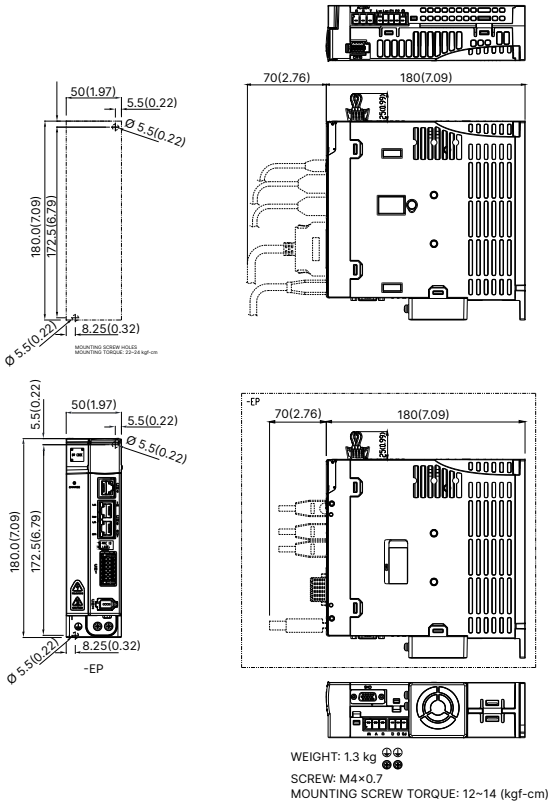
Weight
0.92 kg



Frame C2

750 W / 1 kW / 1.5 kW

Weight
1.3 kg



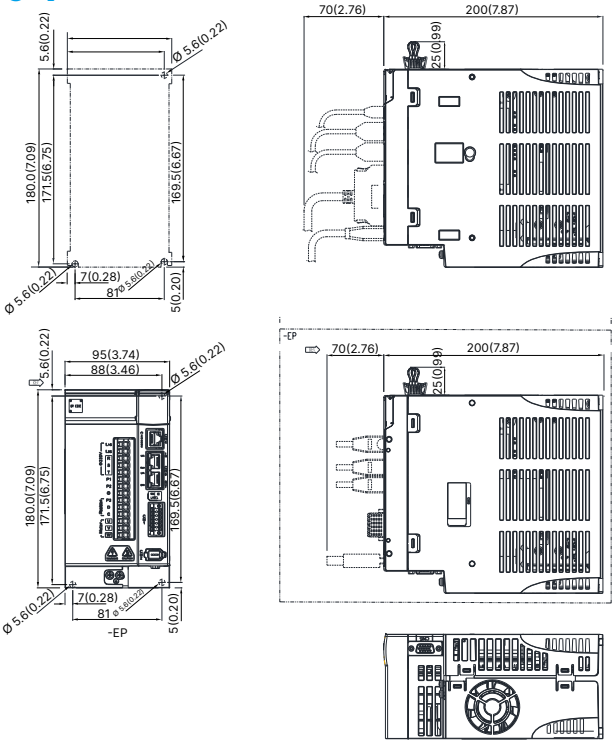
Ordering Information

Servo Drive Dimensions - 200 V

Frame D2

2 kW / 3 kW

Weight
2.3 kg



WEIGHT: 2.3 kg

SCREW: M4×0.7

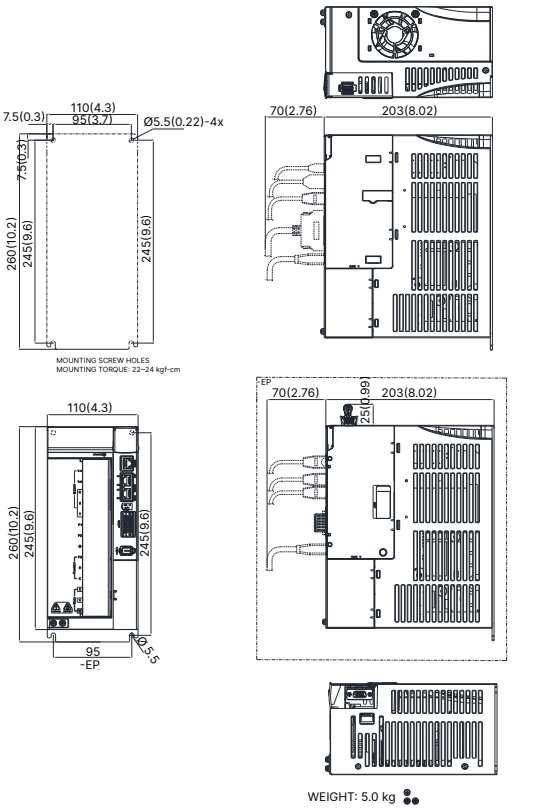
MOUNTING SCREW TORQUE: 12~14 (kgf-cm)

Units : mm

Frame E

4.5 kW

Weight
5 kg



WEIGHT: 5.0 kg

SCREW: M4×0.7

MOUNTING SCREW TORQUE: 14 (kgf-cm)

Ordering Information

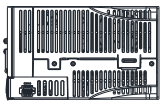
Servo Drive Dimensions - 200 V

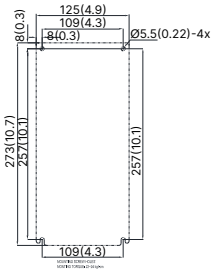
Frame F

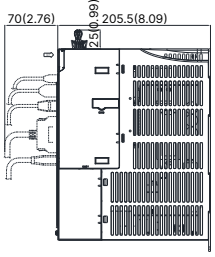
5.5 kW / 7.5 kW

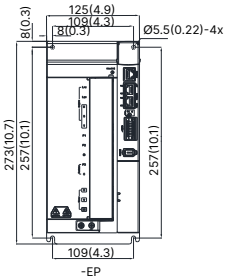
Weight
5.5 kg

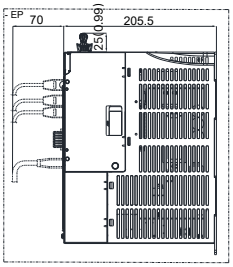
Units：mm

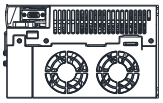












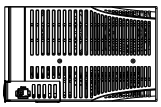
WEIGHT: 5.5 kg
SCREW: M4×0.7
MOUNTING SCREW TORQUE: 14 (kgf-cm)

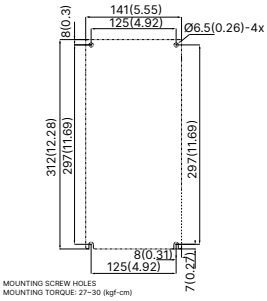
Frame G

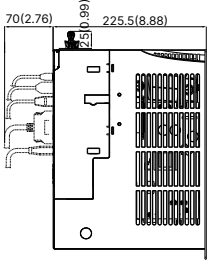
11 kW

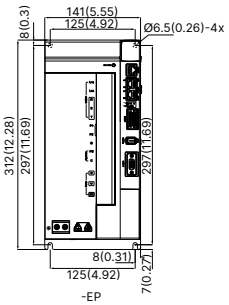
Weight
7.5 kg

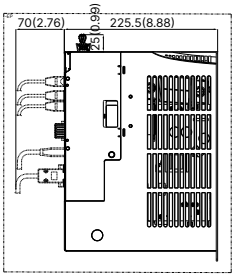
Units：mm

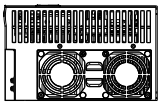












WEIGHT: 7.5 kg
SCREW: M4×0.7
MOUNTING SCREW TORQUE: 14 (kgf-cm)

Ordering Information

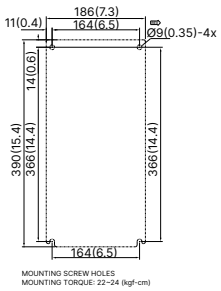
Servo Drive Dimensions - 200 V

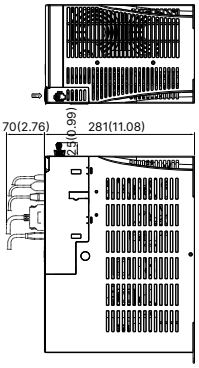
Units : mm

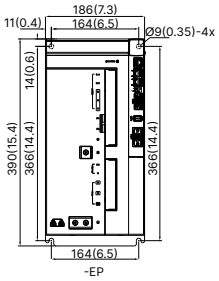
Frame H

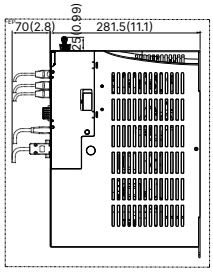
15 kW

Weight
13.5 kg











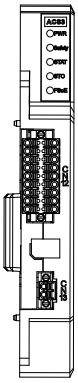
WEIGHT: 13.5 kg

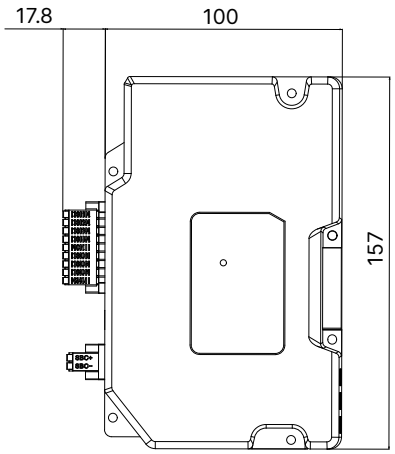
SCREW: M5×0.8
MOUNTING SCREW TORQUE: 14 (kgf-cm)

Safety Module

ACS3-SF0301

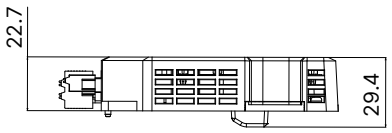
PHYCICAL DIMENSIONS
UNITS: mm (inch)







SCREW: M3× 0.5
MONTING SCREW TORQUE: 6~8 (kgf-cm)



WEIGHT: 0.18 kg

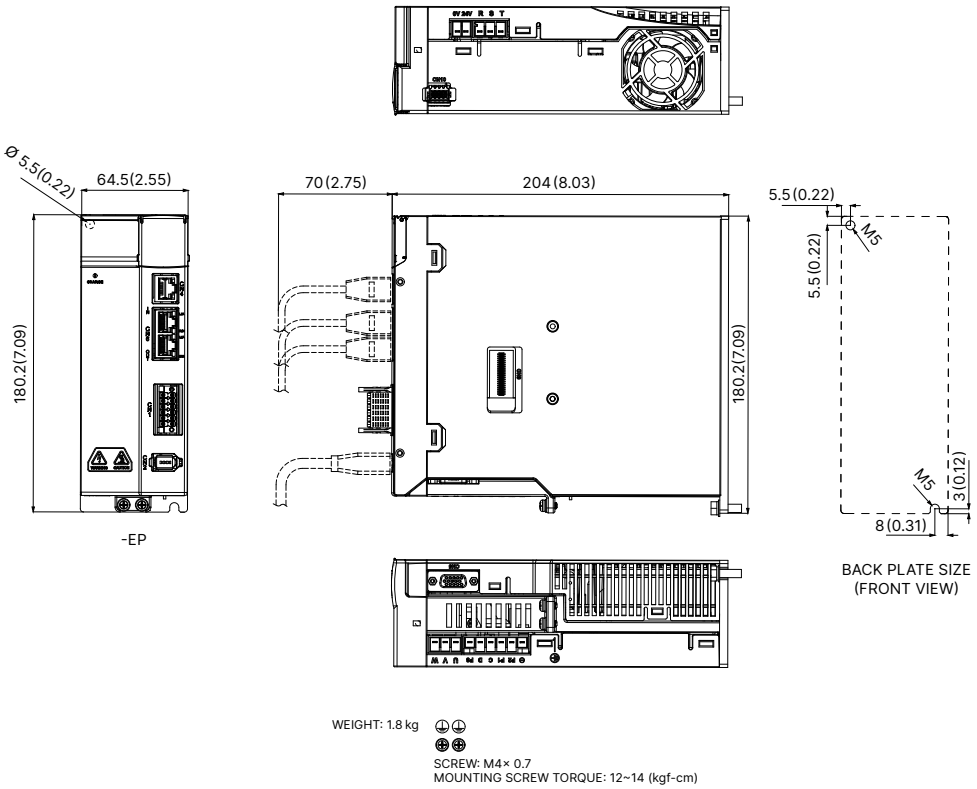
Ordering Information

Servo Drive Dimensions - 400 V

Frame D

400 W / 750 W / 1 kW / 1.5 kW

Weight
1.8 kg



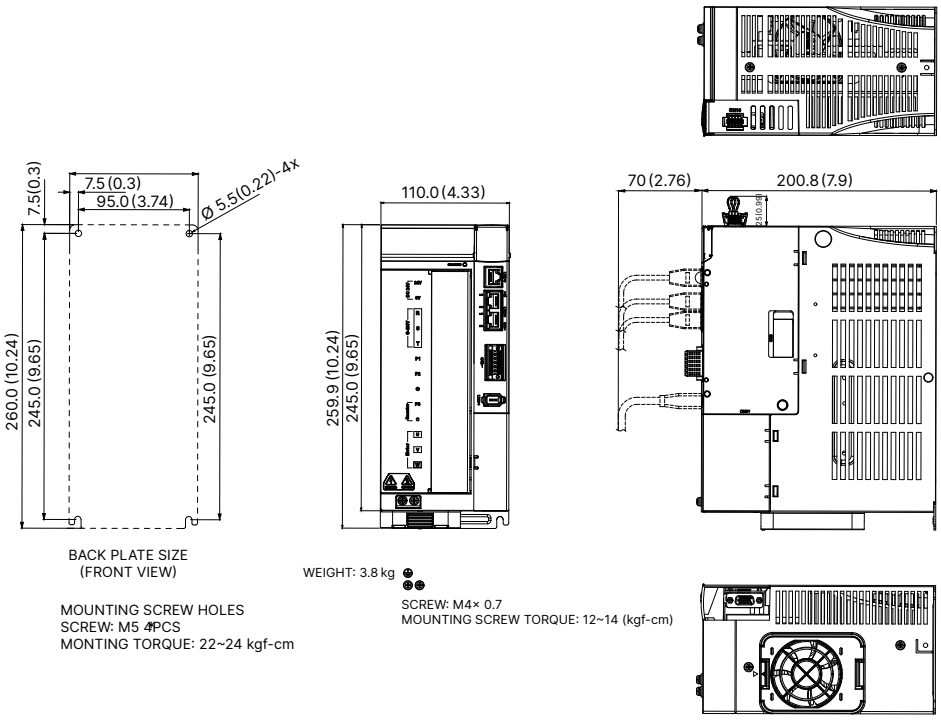
WEIGHT: 1.8 kg

SCREW: M4× 0.7
MOUNTING SCREW TORQUE: 12~14 (kgf-cm)

Frame E

2 kW / 3 kW / 4.5 kW / 5.5 kW

Weight	
2 kW / 3 kW	3.45 kg
4.5 kW / 5.5 kW	4 kg



MOUNTING SCREW HOLES
SCREW: M5 4PCS
MONTING TORQUE: 22~24 kgf-cm

WEIGHT: 3.8 kg

SCREW: M4× 0.7
MOUNTING SCREW TORQUE: 12~14 (kgf-cm)

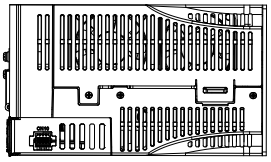
Ordering Information

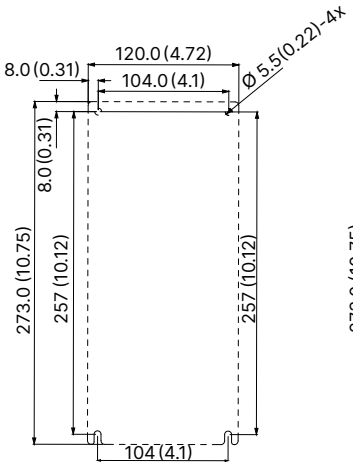
Servo Drive Dimensions - 400 V

Frame F

6.5 kW / 7.5 kW

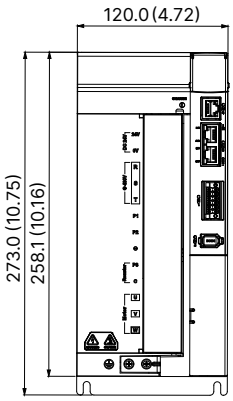
Weight
5.5 kg





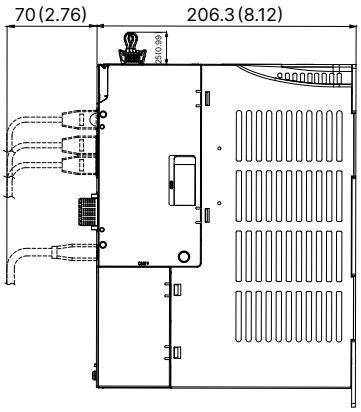
BACK PLATE SIZE
(FRONT VIEW)

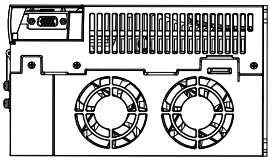
MOUNTING SCREW HOLES
SCREW: M5*4PCS
MONTING TORQUE: 22~24 kgf-cm



WEIGHT: 5.5 kg

SCREW: M4× 0.7
MOUNTING SCREW TORQUE: 12~14 (kgf-cm)

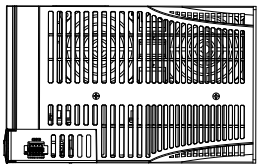


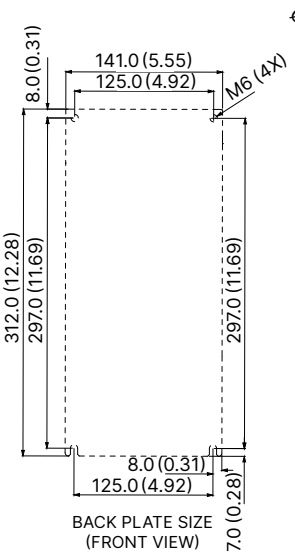


Frame G

11 kW / 15 kW

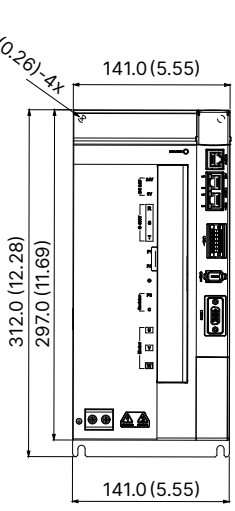
Weight
7.5 kg





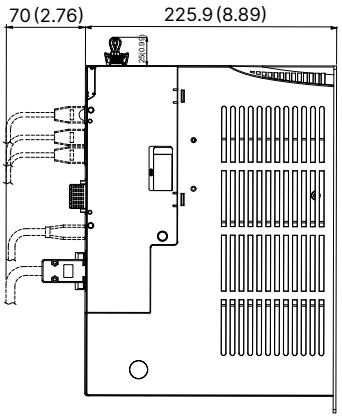
BACK PLATE SIZE
(FRONT VIEW)

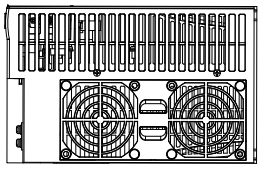
MOUNTING SCREW HOLES
SCREW: M6*4PCS
MONTING TORQUE: 27~30 kgf-cm



WEIGHT: 7.5 kg

SCREW: M4× 0.7
MOUNTING SCREW TORQUE: 12~14 (kgf-cm)





Ordering Information

Servo Motor Model Information ECM-B3 Series

ECM - B3 M - C A 06 04 R B 1

Product Name

ECM：
Electronic Commutation Motor

Series

B3 Series

Inertia

H: High inertia
M: Medium inertia
L: Low inertia
G: Ultra-High inertia

Rated Voltage and Speed

C: 220 V / 3,000 rpm
E: 220 V / 2,000 rpm
F: 220 V / 1,500 rpm
J: 400 V / 3,000 rpm
K: 400 V / 2,000 rpm
L: 400 V / 1,500 rpm

Encoder Type

A: Absolute optical encoder
Resolution of single turn: 24-bit
Resolution of multiple turns: 16-bit
B: 24-bit absolute magnetic / optical battery-less encoder
2: 24-bit incremental optical encoder

Motor Frame Size

04: 40 mm	06: 60 mm
08: 80 mm	10: 100 mm
13: 130 mm	18: 180 mm
22: 220 mm	

Rated Power Output

01: 100 W	02: 200 W
04: 400 W	07: 750 W
08: 850 W	10: 1 kW
13: 1.3 kW	15: 1.5 kW
18: 1.8 kW	20: 2 kW
30: 3 kW	45: 4.5 kW
55: 5.5 kW	75: 7.5 kW
1B: 11 kW	1F: 15 kW

Special Code

1: Standard products

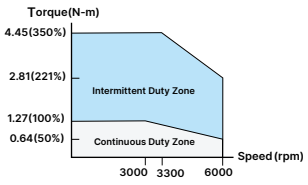
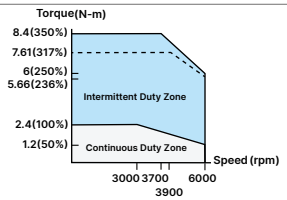
Shaft Diameter	40 / 60 / 80	100 / 130 / 180 / 220
B	IP67 Built-in connector. Standard shaft diameter	
S	Standard connector with wire + standard shaft diameter	Mil-spec connector + standard shaft diameter
7	Standard connector with wire + special shaft diameter (14 mm)* *Suitable for F80 400 W models	
3		Mil-spec connector + special shaft diameter (42 mm)
4		Mil-spec connector + special shaft diameter (24 mm)
9		Mil-spec connector + special shaft diameter (19 mm)

Type of Shaft and Oil Seal	w/o Brake with Oil Seal	with Brake with Oil Seal
Keyway (with fixed screw holes)	R	S

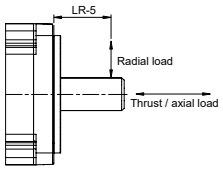
Note: The part numbers here are for illustrative purposes only and are not available for all combinations.
Please contact your distributor for a detailed list of available models.

ECM-B3G Ultra-High Inertia Servo Motor Specifications

Electrical Specifications - 220 V

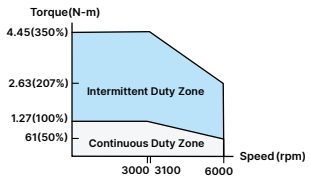
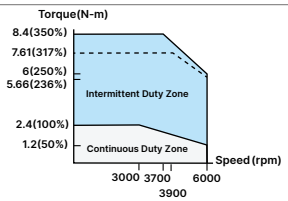
	ECM-B3G-C ☐2 0604	ECM-B3G-C ☐2 0807
Rated Power (kW)	0.4	0.75
Rated Torque (N-m)*2	1.27	2.4
Maximum Torque (N-m)	4.45	8.4
Rated Speed (rpm)	3,000	
Maximum Speed (rpm)	6,000	
Rated Current (Arms)	2.4	4.27
Max. Instantaneous Current (Arms)	9.47	15.8
Rated Power Rate (kW / s)	18.3	19.8
Rated Power Rate (kW / s) with brake	18.2	19.5
Rotor Inertia ($\times 10^{-4}$kg.m^2)	0.881	2.91
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	0.888	2.96
Mechanical Time Constant (ms)	1.8	1.48
Mechanical Time Constant (ms) with brake	1.81	1.51
Torque Constant -KT (N-m/A)	0.53	0.56
Voltage Constant -KE (mV/(rpm))	19.76	20.17
Armature Resistance (Ohm)	2.04	0.55
Armature Inductance (mH)	6.5	2.81
Electrical Time Constant (ms)	3.19	5.11
Weight – without brake (kg)	1.46	2.88
Weight – with brake (kg)	1.89	3.66
Max. Radial Loading (N)*5	245	392
Max. Axial Loading (N)*5	74	147
Brake Working Voltage	24 V_{DC} ±10%	
Brake Power Consumption (at 20°C)[W]	7.6	8.5
Brake Holding Torque [Nt-m (min)] *3	≧ 1.3	≧ 2.5
Brake Release Time [ms (Max)]	≦ 20	≦ 40
Brake Pull-In Time [ms (Max)]	≦ 50	≦ 60
Derating (%) (with oil seal)	5	5
Torque Feature (T-N Curve)		
Insulation Class	Class A (UL), Class B (CE)	
Insulation Resistance	> 100 MΩ, DC 500 V	
Insulation Strength	1.8 k V_{AC}, 1 sec	
Vibration Level (μm)	V15	
Operating Temperature	-20°C ~ 60°C*4	
Storage Temperature	-20°C ~ 80°C	
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)	
Vibration Capacity	2.5 G	
IP Rating	IP67 (Models using waterproof connectors and shaft seals (or oil seals))	
Certifications		

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

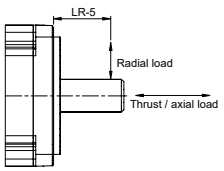


ECM-B3G Ultra-High Inertia Servo Motor Specifications

Electrical Specifications - 400 V

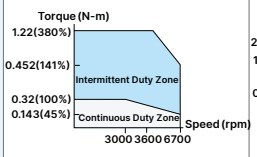
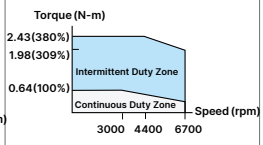
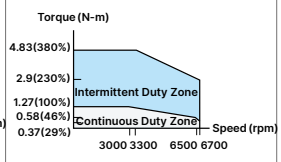
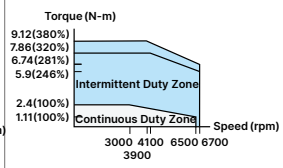
	ECM-B3G-J 2 0604	ECM-B3G-J 2 0807
Rated Power (kW)	0.4	0.75
Rated Torque (N-m)*2	1.27	2.4
Maximum Torque (N-m)	4.45	8.4
Rated Speed (rpm)	3,000	
Maximum Speed (rpm)	6,000	
Rated Current (Arms)	1.35	2.15
Max. Instantaneous Current (Arms)	5.2	7.9
Rated Power Rate (kW / s)	18.3	19.8
Rated Power Rate (kW / s) with brake	18.2	19.5
Rotor Inertia ($\times 10^{-4}$kg.m^2)	0.881	2.91
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	0.888	2.96
Mechanical Time Constant (ms)	1.83	1.49
Mechanical Time Constant (ms) with brake	1.84	1.51
Torque Constant -KT (N-m/A)	0.94	1.12
Voltage Constant -KE (mV/(rpm))	34.66	40.34
Armature Resistance (Ohm)	6.47	2.2
Armature Inductance (mH)	20.6	11.2
Electrical Time Constant (ms)	3.18	5.09
Weight – without brake (kg)	1.46	2.88
Weight – with brake (kg)	1.89	3.66
Max. Radial Loading (N)*5	245	392
Max. Axial Loading (N)*5	74	147
Brake Working Voltage	24 V_{DC} ±10%	
Brake Power Consumption (at 20°C)[W]	7.6	8.5
Brake Holding Torque [Nt-m (min)] *3	≧ 1.3	≧ 2.5
Brake Release Time [ms (Max)]	≦ 20	≦ 40
Brake Pull-In Time [ms (Max)]	≦ 50	≦ 60
Derating (%) (with oil seal)	5	5
Torque Feature (T-N Curve)		
Insulation Class	Class F (UL), Class F (CE)	
Insulation Resistance	> 100 MΩ, DC 500 V	
Insulation Strength	1.8 k V_{AC}, 1 sec	
Vibration Level (μm)	V15	
Operating Temperature	-20°C ~ 60°C*4	
Storage Temperature	-20°C ~ 80°C	
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)	
Vibration Capacity	2.5 G	
IP Rating	IP67 (Models using waterproof connectors and shaft seals (or oil seals))	
Certifications		

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.



ECM-B3H High Inertia Servo Motor Specifications

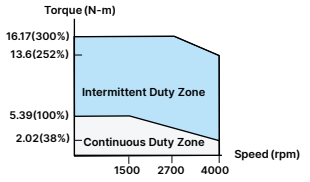
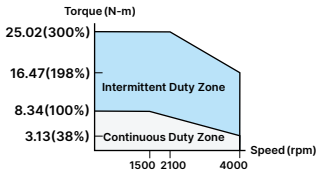
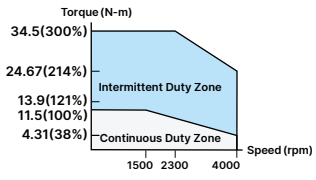
Electrical Specifications - 200 V

	ECM-B3H-C ☐2 0401	ECM-B3H-C ☐2 0602	ECM-B3H-C ☐2 0604	ECM-B3H-C ☐2 0807
Rated Power (kW)	0.1	0.2	0.4	0.75
Rated Torque (N-m)*2	0.32	0.64	1.27	2.4
Maximum Torque (N-m)	1.22	2.43	4.83	9.12
Rated Speed (rpm)	3,000			
Maximum Speed (rpm)	6,700			
Rated Current (Arms)	0.781	1.51	2.21	4.19
Max. Instantaneous Current (Arms)	3.68	6.12	8.46	16.3
Rated Power Rate (kW/s)	16.0	15.5	30.8	37.2
Rated Power Rate (kW/s) with brake	15.70	14.6	30.0	35.6
Rotor Inertia ($\times 10^{-4}$kg.m^2)	0.064	0.265	0.523	1.55
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	0.0651	0.280	0.538	1.62
Mechanical Time Constant (ms)	1.18	1.78	1.31	0.825
Mechanical Time Constant (ms) with brake	1.20	1.88	1.34	0.862
Torque Constant -KT (N-m/A)	0.410	0.424	0.575	0.573
Voltage Constant -KE (mV/(rpm))	14.60	15.3	20.8	20.2
Armature Resistance (Ohm)	10.50	4.17	2.85	0.588
Armature Inductance (mH)	10.70	2	3.5	1.00
Electrical Time Constant (ms)	1.02	0.48	1.23	1.7
Weight – without brake (kg)	0.50	0.7	1.05	2.15
Weight – with brake (kg)	0.70	1.23	1.6	2.95
Max. Radial Loading (N)*5	78	245	245	392
Max. Axial Loading (N)*5	54	74	74	147
Brake Working Voltage	24 V_{DC} ±10%			
Brake Power Consumption (at 20°C)[W]	6.1W	7.6	7.6	10
Brake Holding Torque [Nt-m (min)] *3	≧ 0.3	1.3	1.3	3.8
Brake Release Time [ms (Max)]	≦ 20	20	20	40
Brake Pull-In Time [ms (Max)]	≦ 35	50	50	80
Derating (%) (with oil seal)	10	10	5	5
Torque Feature (T-N Curve)				
Insulation Class	Class A (UL), Class B (CE)			
Insulation Resistance	> 100 MΩ, DC 500 V			
Insulation Strength	1.8 k V_{AC}, 1 sec			
Vibration Level (μm)	V15			
Operating Temperature	-20°C ~ 60°C*4			
Storage Temperature	-20°C ~ 80°C			
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)			
Vibration Capacity	2.5 G			
IP Rating	IP67 (Models using waterproof connectors and shaft seals (or oil seals))			
Certifications	CE cULus			

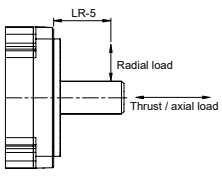
Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink).
   The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.

ECM-B3H High Inertia Servo Motor Specifications

Electrical Specifications - 200 V

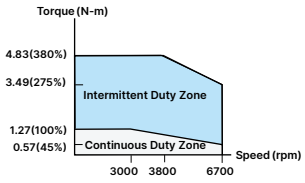
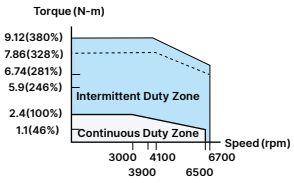
	ECM-B3H-F ☐2 1308	ECM-B3H-F ☐2 1313	ECM-B3H-F ☐2 1318
Rated Power (kW)	0.85	1.3	1.8
Rated Torque (N-m)*2	5.39	8.34	11.5
Maximum Torque (N-m)	16.17	25.02	34.5
Rated Speed (rpm)	1,500		
Maximum Speed (rpm)	4,000		
Rated Current (Arms)	6.65	7.70	11.5
Max. Instantaneous Current (Arms)	20.0	23.9	36.1
Rated Power Rate (kW/s)	23.4	38.6	58.5
Rated Power Rate (kW/s) with brake	23.0	38.3	58.0
Rotor Inertia ($\times 10^{-4}$ kg.m^2)	12.44	18.00	22.60
Rotor Inertia ($\times 10^{-4}$ kg.m^2) with brake	12.62	18.14	22.80
Mechanical Time Constant (ms)	2.48	1.98	1.70
Mechanical Time Constant (ms) with brake	2.52	1.99	1.71
Torque Constant -KT (N-m/A)	0.811	1.08	1.00
Voltage Constant -KE (mV/(rpm))	29.8	38.8	35.3
Armature Resistance (Ohm)	0.460	0.440	0.253
Armature Inductance (mH)	2.50	2.76	1.70
Electrical Time Constant (ms)	5.43	6.27	6.72
Weight – without brake (kg)	6.0	7.0	8.0
Weight – with brake (kg)	7.5	8.5	9.5
Max. Radial Loading (N)*5	490	686	980
Max. Axial Loading (N)*5	98	343	392
Brake Working Voltage	24 V_{DC} ±10%		
Brake Power Consumption (at 20°C)[W]	24	24	24
Brake Holding Torque [Nt-m (min)] *3	16	16	16
Brake Release Time [ms (Max)]	60	60	60
Brake Pull-In Time [ms (Max)]	120	120	120
Derating (%) (with oil seal)	5	5	5
Torque Feature (T-N Curve)			
Insulation Class	Class F (UL), Class F (CE)		
Insulation Resistance	> 100 MΩ, DC 500 V		
Insulation Strength	1.8 k V_{AC}, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	-20°C ~ 60°C*4		
Storage Temperature	-20°C ~ 80°C		
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67		
Certifications			

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

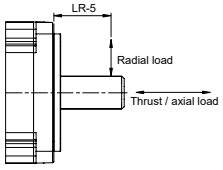


ECM-B3H High Inertia Servo Motor Specifications

Electrical Specifications - 400 V

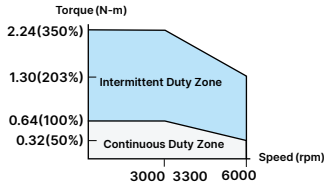
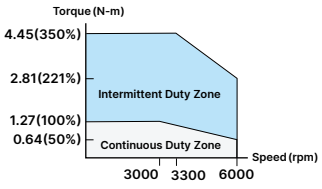
	ECM-B3H-J 2 0604	ECM-B3H-J 2 0807
Rated Power (kW)	0.4	0.75
Rated Torque (N-m)*2	1.27	2.4
Maximum Torque (N-m)	4.83	9.12
Rated Speed (rpm)	3,000	
Maximum Speed (rpm)	6,700	
Rated Current (Arms)	1.41	2.1
Max. Instantaneous Current (Arms)	5.38	8.15
Rated Power Rate (kW / s)	30.8	37.2
Rated Power Rate (kW / s) with brake	30.0	35.6
Rotor Inertia ($\times 10^{-4}$kg.m^2)	0.523	1.55
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	0.538	1.62
Mechanical Time Constant (ms)	1.28	0.828
Mechanical Time Constant (ms) with brake	1.31	0.866
Torque Constant -KT (N-m/A)	0.901	1.14
Voltage Constant -KE (mV/(rpm))	32.7	40.4
Armature Resistance (Ohm)	6.86	2.35
Armature Inductance (mH)	9.01	6.18
Electrical Time Constant (ms)	1.31	2.63
Weight – without brake (kg)	1.05	2.15
Weight – with brake (kg)	1.6	2.95
Max. Radial Loading (N)*5	245	392
Max. Axial Loading (N)*5	74	147
Brake Working Voltage	24 V_{DC} ±10%	
Brake Power Consumption (at 20°C)[W]	7.6 W	8.5W
Brake Holding Torque [Nt-m (min)] *3	≧ 1.5 N.m	≧ 3.8 N.m
Brake Release Time [ms (Max)]	≦ 50 ms	≦ 60 ms
Brake Pull-In Time [ms (Max)]	≦ 20 ms	≦ 30 ms
Derating (%) (with oil seal)	5	5
Torque Feature (T-N Curve)		
Insulation Class	Class A (UL), Class B (CE)	
Insulation Resistance	> 100 MΩ, DC 500 V	
Insulation Strength	1.8 k V_{AC}, 1 sec	
Vibration Level (μm)	V15	
Operating Temperature	-20°C ~ 60°C*4	
Storage Temperature	-20°C ~ 80°C	
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)	
Vibration Capacity	2.5 G	
IP Rating	IP67 (Models using waterproof connectors and shaft seals (or oil seals))	
Certifications		

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

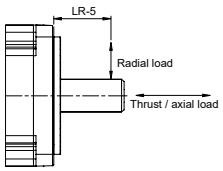


ECM-B3M Medium Inertia Series Specifications

Electrical Specifications - 220 V

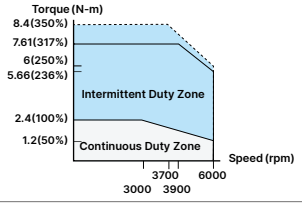
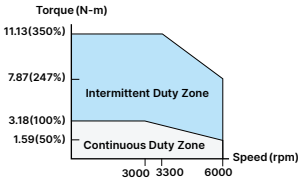
	ECM-B3M-C☐0602	ECM-B3M-C☐0604
Rated Power (kW)	0.2	0.4
Rated Torque (N-m)*2	0.64	1.27
Maximum Torque (N-m)	2.24	4.45
Rated Speed (rpm)	3,000	
Maximum Speed (rpm)	6,000	
Rated Current (Arms)	1.42	2.40
Max. Instantaneous Current (Arms)	6.62	9.47
Rated Power Rate (kW/s)	29.05	63.50
Rated Power Rate (kW/s) with brake	27.13	61.09
Rotor Inertia ($\times 10^{-4}$ kg.m^2)	0.141	0.254
Rotor Inertia ($\times 10^{-4}$ kg.m^2) with brake	0.151	0.264
Mechanical Time Constant (ms)	0.91	0.52
Mechanical Time Constant (ms) with brake	0.97	0.54
Torque Constant -KT (N-m/A)	0.45	0.53
Voltage Constant -KE (mV/(rpm))	16.96	19.76
Armature Resistance (Ohm)	4.71	2.04
Armature Inductance (mH)	12.18	6.50
Electrical Time Constant (ms)	2.59	3.19
Weight – without brake (kg)	0.9	1.2
Weight – with brake (kg)	1.3	1.6
Max. Radial Loading (N)*5	245	245
Max. Axial Loading (N)*5	74	74
Brake Working Voltage	24 V_{DC} ±10%	
Brake Power Consumption (at 20°C) [W]	7.6	7.6
Brake Holding Torque [Nt-m (min)] *3	1.3	1.3
Brake Release Time [ms (Max)]	20	20
Brake Pull-In Time [ms (Max)]	50	50
Derating (%) (with oil seal)	10	5
Torque Feature (T-N Curve)		
Insulation Class	Class F (UL), Class F (CE)	
Insulation Resistance	>100 MΩ, DC 500 V	
Insulation Strength	2.3 k V_{AC}, 1 sec	
Vibration Level (μm)	V15	
Operating Temperature	-20°C ~ 60°C*4	
Storage Temperature	-20°C ~ 80°C	
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)	
Vibration Capacity	2.5 G	
IP Rating	IP67	
Certifications		

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

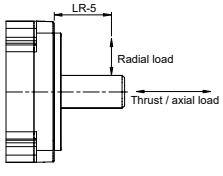


ECM-B3M Medium Inertia Series Specifications

Electrical Specifications - 220 V

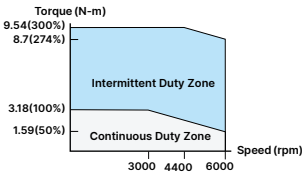
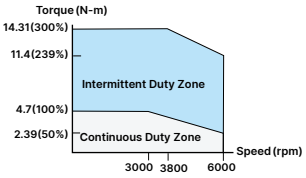
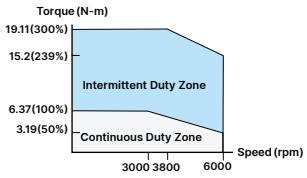
	ECM-B3M-C ☐2 0807	ECM-B3M-C ☐2 0810
Rated Power (kW)	0.75	1
Rated Torque (N-m)*2	2.4	3.18
Maximum Torque (N-m)	8.4	11.13
Rated Speed (rpm)	3,000	
Maximum Speed (rpm)	6,000	
Rated Current (Arms)	4.27	5.00
Max. Instantaneous Current (Arms)	15.8	18.2
Rated Power Rate (kW/s)	53.83	73.8
Rated Power Rate (kW/s) with brake	50.97	72.2
Rotor Inertia ($\times 10^{-4}$ kg.m^2)	1.07	1.37
Rotor Inertia ($\times 10^{-4}$ kg.m^2) with brake	1.13	1.40
Mechanical Time Constant (ms)	0.54	0.48
Mechanical Time Constant (ms) with brake	0.57	0.49
Torque Constant -KT (N-m/A)	0.56	0.64
Voltage Constant -KE (mV/(rpm))	20.17	23.15
Armature Resistance (Ohm)	0.55	0.495
Armature Inductance (mH)	2.81	2.63
Electrical Time Constant (ms)	5.11	5.31
Weight – without brake (kg)	2.34	2.82
Weight – with brake (kg)	3.15	3.60
Max. Radial Loading (N)*5	392	392
Max. Axial Loading (N)*5	147	147
Brake Working Voltage	24 V_{DC} ±10%	24 V_{DC} ±10%
Brake Power Consumption (at 20°C) [W]	8.5	8.5
Brake Holding Torque [Nt-m (min)] *3	3.2	3.8
Brake Release Time [ms (Max)]	30	30
Brake Pull-In Time [ms (Max)]	60	60
Derating (%) (with oil seal)	5	5
Torque Feature (T-N Curve)		
Insulation Class	Class A (UL), Class B (CE)	
Insulation Resistance	> 100 MΩ, DC 500 V	
Insulation Strength	1.8 k V_{AC}, 1 sec	
Vibration Level (μm)	V15	
Operating Temperature	-20°C ~ 60°C*4	
Storage Temperature	-20°C ~ 80°C	
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)	
Vibration Capacity	2.5 G	
IP Rating	IP67	
Certifications		

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

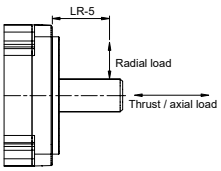


ECM-B3M Medium Inertia Series Specifications

Electrical Specifications - 220 V

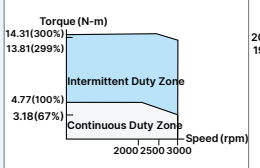
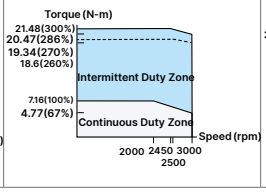
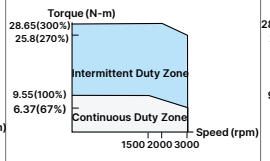
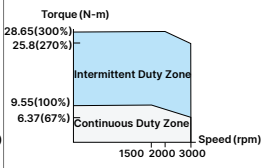
	ECM-B3M-C ☐2 1010	ECM-B3M-C ☐2 1015	ECM-B3M-C ☐2 1020
Rated Power (kW)	1	1.5	2
Rated Torque (N-m)*2	3.18	4.77	6.37
Maximum Torque (N-m)	9.54	14.31	19.11
Rated Speed (rpm)	3,000		
Maximum Speed (rpm)	6,000		
Rated Current (Arms)	6.05	7.48	9.96
Max. Instantaneous Current (Arms)	18.4	22.8	30.7
Rated Power Rate (kW/s)	36.4	61.7	86.7
Rated Power Rate (kW/s) with brake	33.0	57.3	82.0
Rotor Inertia ($\times 10^{-4}$kg.m^2)	2.78	3.69	4.68
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	3.06	3.97	4.95
Mechanical Time Constant (ms)	0.741	0.552	0.523
Mechanical Time Constant (ms) with brake	0.815	0.594	0.554
Torque Constant -KT (N-m/A)	0.526	0.638	0.640
Voltage Constant -KE (mV/(rpm))	19.8	23.8	23.7
Armature Resistance (Ohm)	0.265	0.217	0.162
Armature Inductance (mH)	1.86	1.71	1.23
Electrical Time Constant (ms)	7.02	7.88	7.59
Weight – without brake (kg)	3.56	4.37	5.09
Weight – with brake (kg)	4.88	5.68	6.51
Max. Radial Loading (N)*5	490	490	490
Max. Axial Loading (N)*5	196	196	196
Brake Working Voltage	24 V_{DC} ±10%		
Brake Power Consumption (at 20˚C)[W]	17.6	17.6	17.6
Brake Holding Torque [Nt-m (min)] *3	9.5	9.5	9.5
Brake Release Time [ms (Max)]	50	50	50
Brake Pull-In Time [ms (Max)]	110	110	110
Derating (%) (with oil seal)	5	5	5
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		
Insulation Resistance	> 100 MΩ, DC 500 V		
Insulation Strength	1.8 k V_{AC}, 1 sec		
Vibration Level (μm)	V 15		
Operating Temperature	-20˚C ~ 60˚C*4		
Storage Temperature	-20˚C ~ 80˚C		
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67 (Models using waterproof connectors and shaft seals (or oil seals))		
Certifications			

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40ºC operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40ºC, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

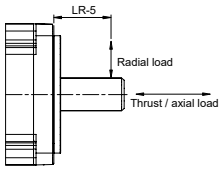


ECM-B3M Medium Inertia Series Specifications

Electrical Specifications - 220 V

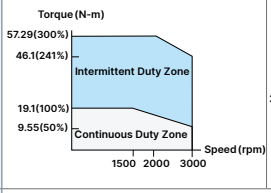
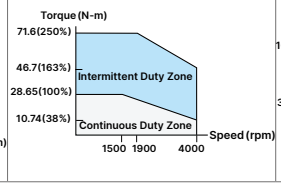
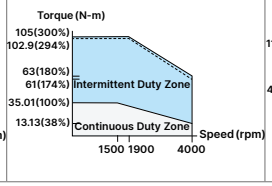
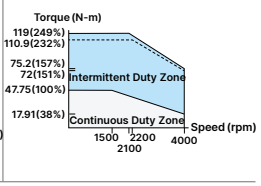
	ECM-B3M-E ☐2 1310	ECM-B3M-E ☐2 1315	ECM-B3M-E ☐2 1320	ECM-B3M-E ☐2 1820
Rated Power (kW)	1	1.5	2	2
Rated Torque (N-m)*2	4.77	7.16	9.55	9.55
Maximum Torque (N-m)	14.3	21.48	28.65	28.65
Rated Speed (rpm)	2,000			
Maximum Speed (rpm)	3,000			
Rated Current (Arms)	5.96	8.17	10.59	11.43
Max. Instantaneous Current (Arms)	19.9	26.82	34.20	36.21
Rated Power Rate (kW/s)	29.21	45.69	62.25	31.33
Rated Power Rate (kW/s) with brake	28.66	45.09	61.62	30.02
Rotor Inertia ($\times 10^{-4}$ kg.m^2)	7.79	11.22	14.65	29.11
Rotor Inertia ($\times 10^{-4}$ kg.m^2) with brake	7.94	11.37	14.8	30.38
Mechanical Time Constant (ms)	1.46	1.10	1.03	1.83
Mechanical Time Constant (ms) with brake	1.49	1.12	1.04	1.91
Torque Constant -KT (N-m/A)	0.80	0.88	0.90	0.836
Voltage Constant -KE (mV/(rpm))	29.30	31.69	32.70	31.6
Armature Resistance (Ohm)	0.419	0.26	0.198	0.159
Armature Inductance (mH)	4	2.81	2.18	2.34
Electrical Time Constant (ms)	9.55	10.81	11.01	14.72
Weight – without brake (kg)	4.9	6.0	7.0	10
Weight – with brake (kg)	6.3	7.4	8.5	13.7
Max. Radial Loading (N)*5	490	686	980	1470
Max. Axial Loading (N)*5	98	343	392	490
Brake Working Voltage	24 V_{DC} ±10%			
Brake Power Consumption (at 20°C)[W]	21.5	21.5	21.5	31
Brake Holding Torque [Nt-m (min)] *3	10	10	10	25
Brake Release Time [ms (Max)]	50	50	50	30
Brake Pull-In Time [ms (Max)]	110	110	110	120
Derating (%) (with oil seal)	5	5	5	0
Torque Feature (T-N Curve)				
Insulation Class	Class A (UL), Class B (CE)			
Insulation Resistance	>100 MΩ, DC 500 V			
Insulation Strength	2.3 k V_{AC}, 1 sec			
Vibration Level (μm)	V15			
Operating Temperature	-20°C ~ 60°C*4			
Storage Temperature	-20°C ~ 80°C			
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)			
Vibration Capacity	2.5 G			
IP Rating	IP67 (Models using waterproof connectors and shaft seals (or oil seals))			
Certifications	CE cULus			

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

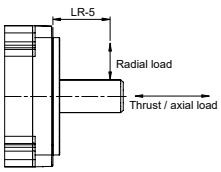


ECM-B3M Medium Inertia Series Specifications

Electrical Specifications - 220 V

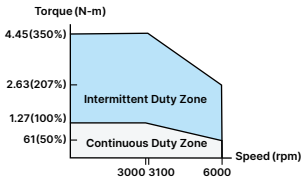
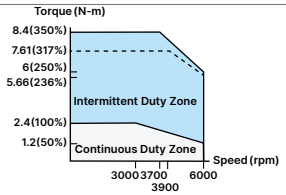
	ECM-B3M-F ☐ 1830	ECM-B3M-F ☐ 1845	ECM-B3M-F ☐ 1855	ECM-B3M-F ☐ 1875
Rated Power (kW)	3	4.5	5.5	7.5
Rated Torque (N-m)[*2]	19.1	28.65	35.01	47.75
Maximum Torque (N-m)	57.29	71.6	105	119
Rated Speed (rpm)	1,500		1,500	
Maximum Speed (rpm)	3,000		4,000	
Rated Current (Arms)	18.21	26.6	30.7	44.2
Max. Instantaneous Current (Arms)	58.9	70.7	98.6	113.4
Rated Power Rate (kW/s)	68.02	121	124	169
Rated Power Rate (kW/s) with brake	66.45	119	122	167
Rotor Inertia ($\times 10^{-4}$kg.m^2)	53.63	67.73	98.88	134.95
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	54.9	69.15	100.1	136.24
Mechanical Time Constant (ms)	1.21	1.06	1.01	1.01
Mechanical Time Constant (ms) with brake	1.24	1.08	1.02	1.02
Torque Constant -KT (N-m/A)	1.05	1.08	1.14	1.08
Voltage Constant -KE (mV/(rpm))	37.9	39.4	40.9	38.7
Armature Resistance (Ohm)	0.086	0.0637	0.0454	0.03
Armature Inductance (mH)	1.52	1.17	0.867	0.568
Electrical Time Constant (ms)	17.67	18.4	19.1	18.9
Weight – without brake (kg)	13.9	16.5	21.2	27.2
Weight – with brake (kg)	17.6	20.2	24.9	30.9
Max. Radial Loading (N)[*5]	1470	1470	1764	1764
Max. Axial Loading (N)[*5]	490	490	588	588
Brake Working Voltage				
Brake Power Consumption (at 20˚C)[W]	31	55	55	55
Brake Holding Torque [Nt-m (min)] [*3]	25	31	31	31
Brake Release Time [ms (Max)]	30	50	50	50
Brake Pull-In Time [ms (Max)]	120	150	150	150
Derating (%) (with oil seal)	5	0	0	0
Torque Feature (T-N Curve)				
Insulation Class	Class A (UL), Class B (CE)			
Insulation Resistance	> 100 MΩ, DC 500 V			
Insulation Strength	2.3 k V_{AC}, 1 sec			
Vibration Level (μm)	V15			
Operating Temperature	-20˚C ~ 60˚C*[4]			
Storage Temperature	-20˚C ~ 80˚C			
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)			
Vibration Capacity	2.5 G			
IP Rating	IP67			
Certifications				

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90˚ C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40ºC operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40ºC, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

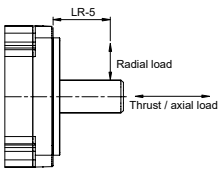


ECM-B3M Medium Inertia Series Specifications

Electrical Specifications - 400 V

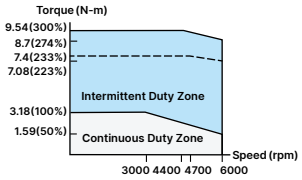
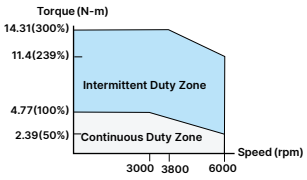
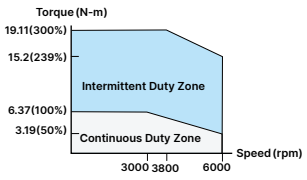
	ECM-B3M-J ☐ 0604	ECM-B3M-J ☐ 0807
Rated Power (kW)	0.4	0.75
Rated Torque (N-m)*2	1.27	2.4
Maximum Torque (N-m)	4.45	8.4
Rated Speed (rpm)	3,000	
Maximum Speed (rpm)	6,000	
Rated Current (Arms)	1.35	2.15
Max. Instantaneous Current (Arms)	5.20	7.90
Rated Power Rate (kW/s)	63.5	53.83
Rated Power Rate (kW/s) with brake	61.09	50.97
Rotor Inertia ($\times 10^{-4}$kg.m^2)	0.254	1.07
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	0.264	1.13
Mechanical Time Constant (ms)	0.53	0.55
Mechanical Time Constant (ms) with brake	0.55	0.58
Torque Constant -KT (N-m/A)	0.94	1.12
Voltage Constant -KE (mV/(rpm))	34.66	40.34
Armature Resistance (Ohm)	6.47	2.20
Armature Inductance (mH)	20.6	11.2
Electrical Time Constant (ms)	3.18	5.09
Weight – without brake (kg)	1.2	2.34
Weight – with brake (kg)	1.6	3.15
Max. Radial Loading (N)*5	245	392
Max. Axial Loading (N)*5	74	147
Brake Working Voltage	24 V_{DC} ±10%	
Brake Power Consumption (at 20°C)[W]	7.6	8.5
Brake Holding Torque [Nt-m (min)] *3	1.3	3.8
Brake Release Time [ms (Max)]	20	30
Brake Pull-In Time [ms (Max)]	50	60
Derating (%) (with oil seal)	5	5
Torque Feature (T-N Curve)		
Insulation Class	Class A (UL), Class B (CE)	
Insulation Resistance	>100 MΩ, DC 500 V	
Insulation Strength	2.3 k V_{AC}, 1 sec	
Vibration Level (μm)	V15	
Operating Temperature	-20°C ~ 60°C*4	
Storage Temperature	-20°C ~ 80°C	
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)	
Vibration Capacity	2.5 G	
IP Rating	IP67	
Certifications		

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

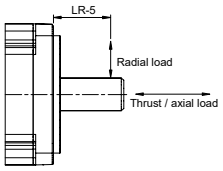


ECM-B3M Medium Inertia Series Specifications

Electrical Specifications - 400 V

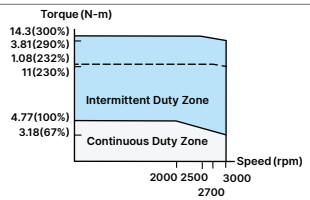
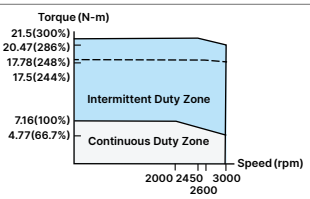
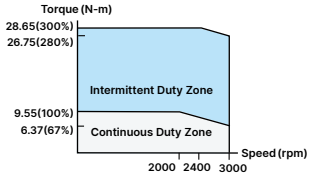
	ECM-B3M-J 2 1010	ECM-B3M-J 2 1015	ECM-B3M-J 2 1020
Rated Power (kW)	1	1.5	2
Rated Torque (N-m)*2	3.18	4.77	6.37
Maximum Torque (N-m)	9.54	14.31	19.11
Rated Speed (rpm)	3,000		
Maximum Speed (rpm)	6,000		
Rated Current (Arms)	3.03	3.73	5.00
Max. Instantaneous Current (Arms)	9.21	11.4	15.3
Rated Power Rate (kW/s)	36.4	61.7	86.7
Rated Power Rate (kW/s) with brake	33	57.3	82.0
Rotor Inertia ($\times 10^{-4}$kg.m^2)	2.78	3.69	4.68
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	3.06	3.97	4.95
Mechanical Time Constant (ms)	0.737	0.546	0.528
Mechanical Time Constant (ms) with brake	0.811	0.587	0.559
Torque Constant -KT (N-m/A)	1.05	1.28	1.27
Voltage Constant -KE (mV/(rpm))	39.5	47.8	47.2
Armature Resistance (Ohm)	1.05	0.864	0.646
Armature Inductance (mH)	7.14	6.63	4.89
Electrical Time Constant (ms)	7.50	7.67	7.57
Weight – without brake (kg)	3.56	4.37	5.09
Weight – with brake (kg)	4.88	5.68	6.505
Max. Radial Loading (N)*5	490	490	490
Max. Axial Loading (N)*5	196	196	196
Brake Working Voltage	24 V_{DC} ±10%		
Brake Power Consumption (at 20°C) [W]	17.6	17.6	17.6
Brake Holding Torque [Nt-m (min)] *3	9.5	9.5	9.5
Brake Release Time [ms (Max)]	50	50	50
Brake Pull-In Time [ms (Max)]	110	110	110
Derating (%) (with oil seal)	5	5	5
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		
Insulation Resistance	>100 MΩ, DC 500 V		
Insulation Strength	2.3 k V_{AC}, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	-20°C ~ 60°C*4		
Storage Temperature	-20°C ~ 80°C		
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67 (Models using waterproof connectors and shaft seals (or oil seals))		
Certifications			

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

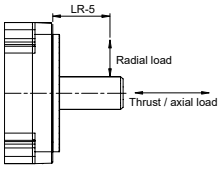


ECM-B3M Medium Inertia Series Specifications

Electrical Specifications - 400 V

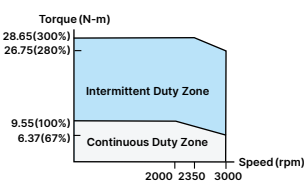
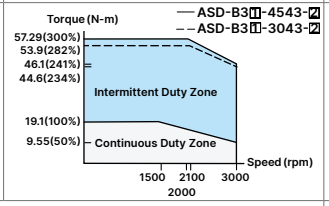
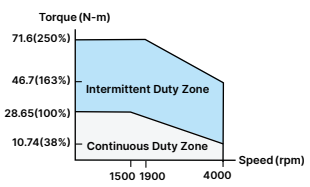
	ECM-B3M-K ☐2 1310	ECM-B3M-K ☐2 1315	ECM-B3M-K ☐2 1320
Rated Power (kW)	1	1.5	2
Rated Torque (N-m)*2	4.77	7.16	9.55
Maximum Torque (N-m)	14.3	21.48	28.65
Rated Speed (rpm)	2,000		
Maximum Speed (rpm)	3,000		
Rated Current (Arms)	3.00	4.09	5.30
Max. Instantaneous Current (Arms)	9.95	13.37	17.1
Rated Power Rate (kW/s)	29.21	45.69	62.25
Rated Power Rate (kW/s) with brake	28.66	45.09	61.62
Rotor Inertia ($\times10^{-4}$kg.m^2)	7.79	11.22	14.65
Rotor Inertia ($\times10^{-4}$kg.m^2) with brake	7.94	11.37	14.80
Mechanical Time Constant (ms)	1.47	1.10	1.03
Mechanical Time Constant (ms) with brake	1.50	1.12	1.04
Torque Constant -KT (N-m/A)	1.59	1.75	1.80
Voltage Constant -KE (mV/(rpm))	58.60	63.38	65.40
Armature Resistance (Ohm)	1.68	1.04	0.792
Armature Inductance (mH)	16.0	11.2	8.72
Electrical Time Constant (ms)	9.52	10.8	11.0
Weight – without brake (kg)	4.9	6.0	7.0
Weight – with brake (kg)	6.3	7.4	8.5
Max. Radial Loading (N)*5	490	686	980
Max. Axial Loading (N)*5	98	343	392
Brake Working Voltage	24 V_{DC} ±10%		
Brake Power Consumption (at 20°C)[W]	21.5	21.5	21.5
Brake Holding Torque [Nt-m (min)] *3	10	10	10
Brake Release Time [ms (Max)]	50	50	50
Brake Pull-In Time [ms (Max)]	110	110	110
Derating (%) (with oil seal)	5	5	5
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		
Insulation Resistance	>100 MΩ, DC 500 V		
Insulation Strength	2.3k V_{AC}, 1sec		
Vibration Level (μm)	V15		
Operating Temperature	-20°C ~ 60°C*4		
Storage Temperature	-20°C ~ 80°C		
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)		
Vibration Capacity	2.5G		
IP Rating	IP67 (Models using waterproof connectors and shaft seals (or oil seals))		
Certifications			

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300mm x 300mm x 12mm
   F130: 400mm x 400mm x 20mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

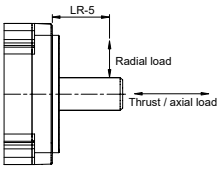


ECM-B3M Medium Inertia Series Specifications

Electrical Specifications - 400 V

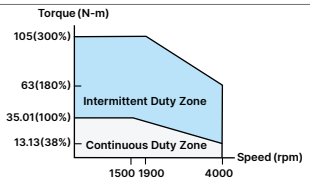
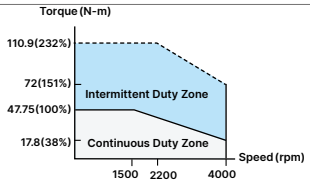
	ECM-B3M-K ☐2 1820	ECM-B3M-L ☐2 1830	ECM-B3M-L ☐2 1845
Rated Power (kW)	2	3	4.5
Rated Torque (N-m)*2	9.55	19.1	28.65
Maximum Torque (N-m)	28.65	57.29	71.6
Rated Speed (rpm)	2,000	1,500	1,500
Maximum Speed (rpm)	3,000	3,000	4,000
Rated Current (Arms)	5.7	9.1	13.3
Max. Instantaneous Current (Arms)	18.1	29.45	35.35
Rated Power Rate (kW/s)	31.33	68.02	121
Rated Power Rate (kW/s) with brake	30.02	66.45	119
Rotor Inertia ($\times 10^{-4}$kg.m^2)	29.11	53.63	67.73
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	30.38	54.9	69.15
Mechanical Time Constant (ms)	1.83	1.21	1.07
Mechanical Time Constant (ms) with brake	1.91	1.24	1.09
Torque Constant -KT (N-m/A)	1.68	2.10	2.15
Voltage Constant -KE (mV/(rpm))	63.2	75.8	78.8
Armature Resistance (Ohm)	0.636	0.344	0.255
Armature Inductance (mH)	9.36	6.08	4.68
Electrical Time Constant (ms)	14.72	17.67	18.4
Weight – without brake (kg)	10	13.9	16.5
Weight – with brake (kg)	13.7	17.6	20.2
Max. Radial Loading (N)*5	1,470	1,470	1,470
Max. Axial Loading (N)*5	490	490	490
Brake Working Voltage	24 V_{DC} ±10%		
Brake Power Consumption (at 20°C)[W]	31	31	31
Brake Holding Torque [Nt-m (min)] *3	25	25	55
Brake Release Time [ms (Max)]	30	30	50
Brake Pull-In Time [ms (Max)]	120	120	150
Derating (%) (with oil seal)	5	5	0
Torque Feature (T-N Curve)			
Insulation Class	ass A (UL), Class B (CE)		Class F (UL), Class F(CE)
Insulation Resistance	>100 MΩ, DC 500 V		
Insulation Strength	2.3 k V_{AC}, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	-20°C ~ 60°C*4		
Storage Temperature	-20°C ~ 80°C		
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67		
Certifications			

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

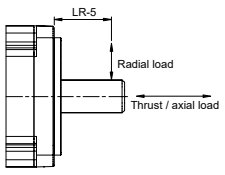


ECM-B3M Medium Inertia Series Specifications

Electrical Specifications - 400 V

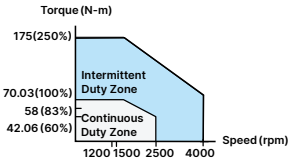
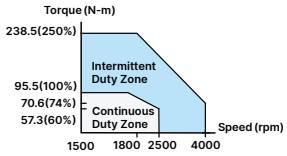
	ECM-B3M-L ☐ 1855	ECM-B3M-L ☐ 1875
Rated Power (kW)	5.5	7.5
Rated Torque (N-m)*2	35.01	47.75
Maximum Torque (N-m)	105	119
Rated Speed (rpm)	1,500	
Maximum Speed (rpm)	4,000	
Rated Current (Arms)	15.3	22.1
Max. Instantaneous Current (Arms)	49.29	56.68
Rated Power Rate (kW/s)	124	169
Rated Power Rate (kW/s) with brake	122	167
Rotor Inertia ($\times 10^{-4}$ kg.m^2)	98.88	134.95
Rotor Inertia ($\times 10^{-4}$ kg.m^2) with brake	100.1	136.24
Mechanical Time Constant (ms)	1.01	1.01
Mechanical Time Constant (ms) with brake	1.02	1.02
Torque Constant -KT (N-m/A)	2.29	2.16
Voltage Constant -KE (mV/(rpm))	81.8	77.4
Armature Resistance (Ohm)	0.182	0.120
Armature Inductance (mH)	3.48	2.27
Electrical Time Constant (ms)	19.1	18.9
Weight – without brake (kg)	21.2	27.2
Weight – with brake (kg)	24.9	30.9
Max. Radial Loading (N)*5	1764	1764
Max. Axial Loading (N)*5	588	588
Brake Working Voltage	24 V_{DC} ±10%	
Brake Power Consumption (at 20°C) [W]	31	31
Brake Holding Torque [Nt-m (min)] *3	55	55
Brake Release Time [ms (Max)]	50	50
Brake Pull-In Time [ms (Max)]	150	150
Derating (%) (with oil seal)	0	0
Torque Feature (T-N Curve)		
Insulation Class	Class F (UL), Class F (CE)	
Insulation Resistance	> 100 MΩ, DC 500 V	
Insulation Strength	2.3 k V_{AC}, 1 sec	
Vibration Level (μm)	V 15	
Operating Temperature	-20°C ~ 60°C*4	
Storage Temperature	-20°C ~ 80°C	
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)	
Vibration Capacity	2.5 G	
IP Rating	IP67	
Certifications		

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

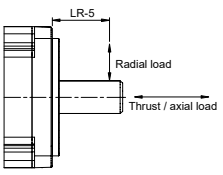


ECM-B3M Medium Inertia Series Specifications

Electrical Specifications - 400 V

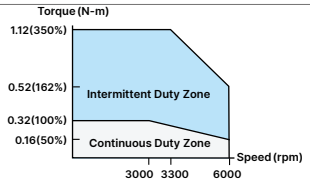
	ECM-B3M-L2221B	ECM-B3M-L2221F
Rated Power (kW)	11	15
Rated Torque (N-m)*2	70.03	95.49
Maximum Torque (N-m)	175	238.5
Rated Speed (rpm)	1,500	
Maximum Speed (rpm)	4,000	
Rated Current (Arms)	21.2	29.2
Max. Instantaneous Current (Arms)	56.5	77
Rated Power Rate (kW/s)	162	228
Rated Power Rate (kW/s) with brake	162	227
Rotor Inertia ($\times 10^{-4}$ kg.m^2)	302.2	400
Rotor Inertia ($\times 10^{-4}$ kg.m^2) with brake	303.1	400.9
Mechanical Time Constant (ms)	1.03	0.94
Mechanical Time Constant (ms) with brake	1.04	0.94
Torque Constant -KT (N-m/A)	3.3	3.27
Voltage Constant -KE (mV/(rpm))	118	118
Armature Resistance (Ohm)	0.127	0.0862
Armature Inductance (mH)	3.69	2.43
Electrical Time Constant (ms)	29.1	28.2
Weight – without brake (kg)	50.9	62.1
Weight – with brake (kg)	58.2	69.4
Max. Radial Loading (N)*5	3300	3300
Max. Axial Loading (N)*5	1100	1100
Brake Working Voltage	24 V_{DC} ±10%	
Brake Power Consumption (at 20°C)[W]	32	32
Brake Holding Torque [Nt-m (min)] *3	115	115
Brake Release Time [ms (Max)]	100	100
Brake Pull-In Time [ms (Max)]	300	300
Derating (%) (with oil seal)	0	0
Torque Feature (T-N Curve)		
Insulation Class	Class F (UL), Class F (CE)	
Insulation Resistance	> 100 MΩ, DC 500 V	
Insulation Strength	2.3 k V_{AC}, 1 sec	
Vibration Level (μm)	V15	
Operating Temperature	-20°C ~ 60°C*4	
Storage Temperature	-20°C ~ 80°C	
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)	
Vibration Capacity	2.5 G	
IP Rating	IP67	
Certifications		

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

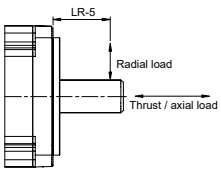


ECM-B3L Low Inertia Series Specifications

Electrical Specifications - 220 V

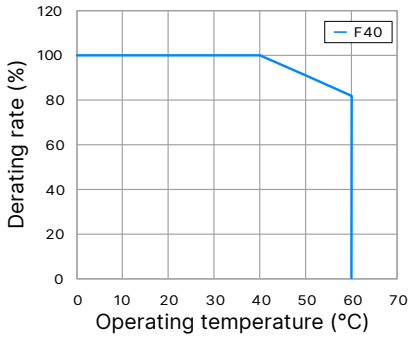
	ECM-B3L-C ☐ 0401
Rated Power (kW)	0.1
Rated Torque (N-m)*2	0.32
Maximum Torque (N-m)	1.12
Rated Speed (rpm)	3,000
Maximum Speed (rpm)	6,000
Rated Current (Arms)	0.857
Max. Instantaneous Current (Arms)	3.44
Rated Power Rate (kW/s)	34.25
Rated Power Rate (kW/s) with brake	32.51
Rotor Inertia ($\times 10^{-4}$ kg.m^2)	0.0299
Rotor Inertia ($\times 10^{-4}$ kg.m^2) with brake	0.0315
Mechanical Time Constant (ms)	0.50
Mechanical Time Constant (ms) with brake	0.53
Torque Constant -KT (N-m/A)	0.374
Voltage Constant -KE (mV/(rpm))	13.8
Armature Resistance (Ohm)	8.22
Armature Inductance (mH)	19.1
Electrical Time Constant (ms)	2.32
Weight – without brake (kg)	0.5
Weight – with brake (kg)	0.7
Max. Radial Loading (N)*5	78
Max. Axial Loading (N)*5	54
Brake Working Voltage	24 V_{DC} ± 10%
Brake Power Consumption (at 20˚C)[W]	6.1
Brake Holding Torque [Nt-m (min)] *3	0.3
Brake Release Time [ms (Max)]	20
Brake Pull-In Time [ms (Max)]	35
Derating (%) (with oil seal)	10
Torque Feature (T-N Curve)	
Insulation Class	Class F (UL), Class F (CE)
Insulation Resistance	> 100 MΩ, DC 500 V
Insulation Strength	2.3 k V_{AC}, 1 sec
Vibration Level (μm)	V 15
Operating Temperature	-20˚C ~ 60˚C*4
Storage Temperature	-20˚C ~ 80˚C
Storage & Operation Humidity	0 ~ 90% RH (non-condensing)
Vibration Capacity	2.5 G
IP Rating	IP67
Certifications	

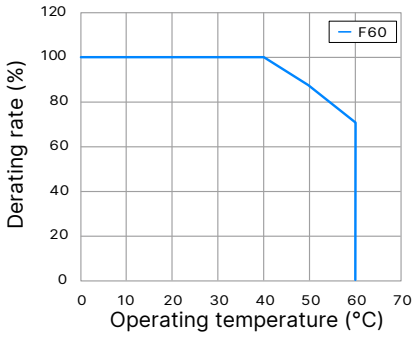
Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. If the motor frame temperature exceeds 90° C, please enhance heat dissipation (e.g., install a heat sink). The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 54.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation.

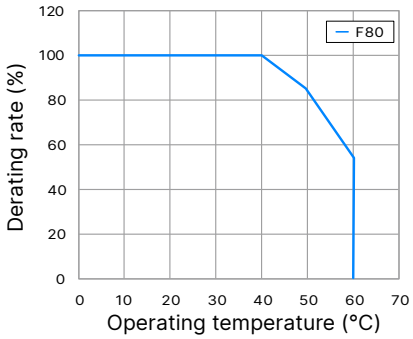


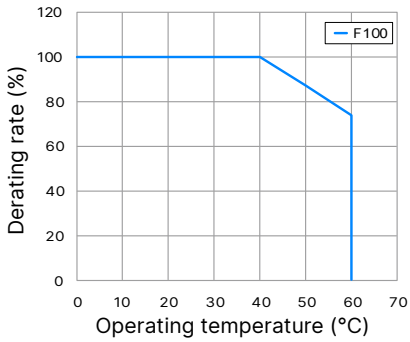
Ordering Information

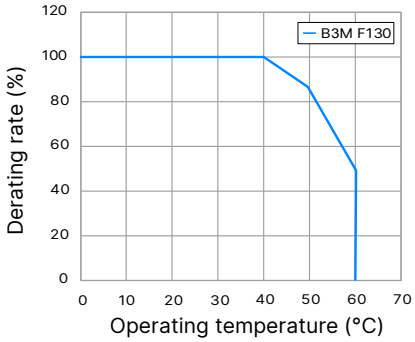
ECM-B3 Series Servo Motor Specifications Power Derating Curves

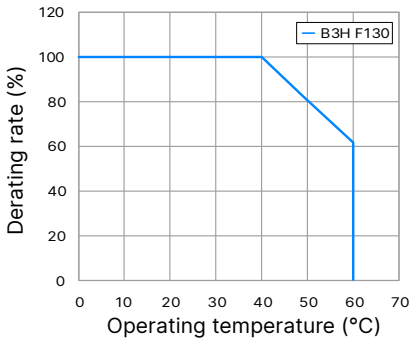


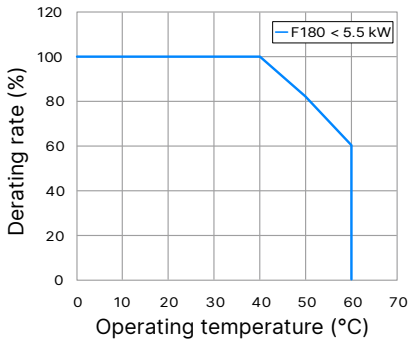


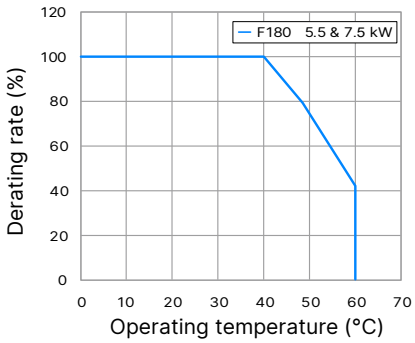


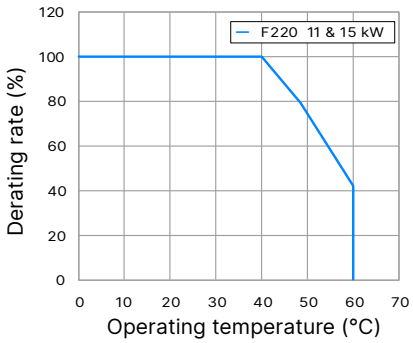








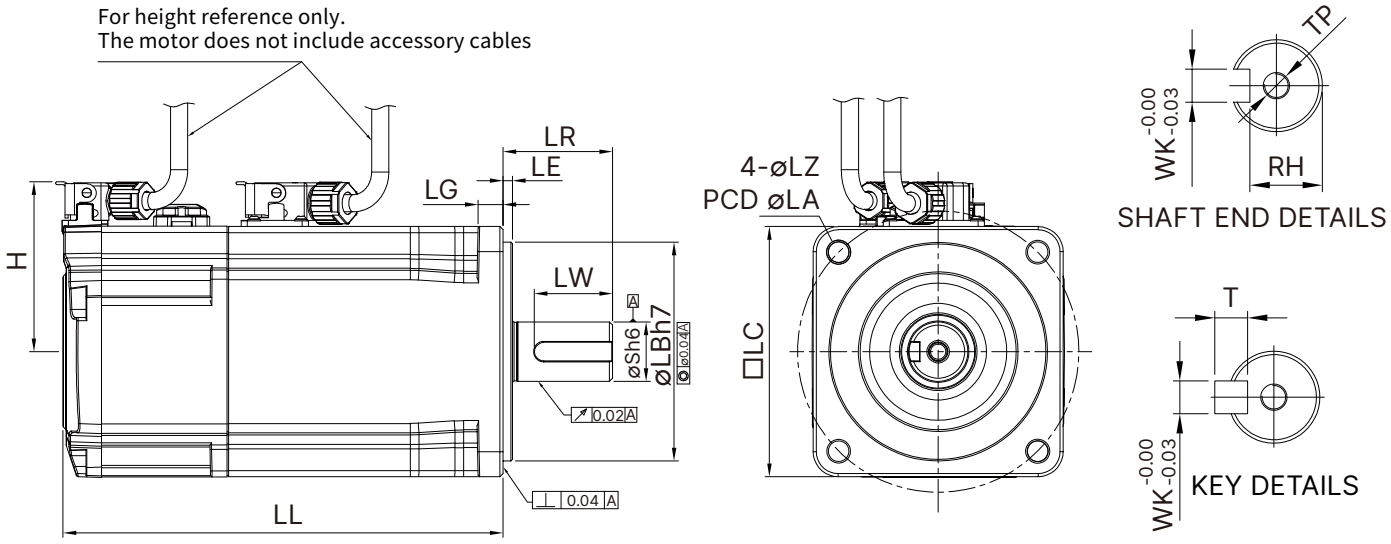




Note: Applicable for 220V and 400V models.

ECM-B3 Built-in Series Servo Motor Specifications

External dimensions of frame size 80 and below



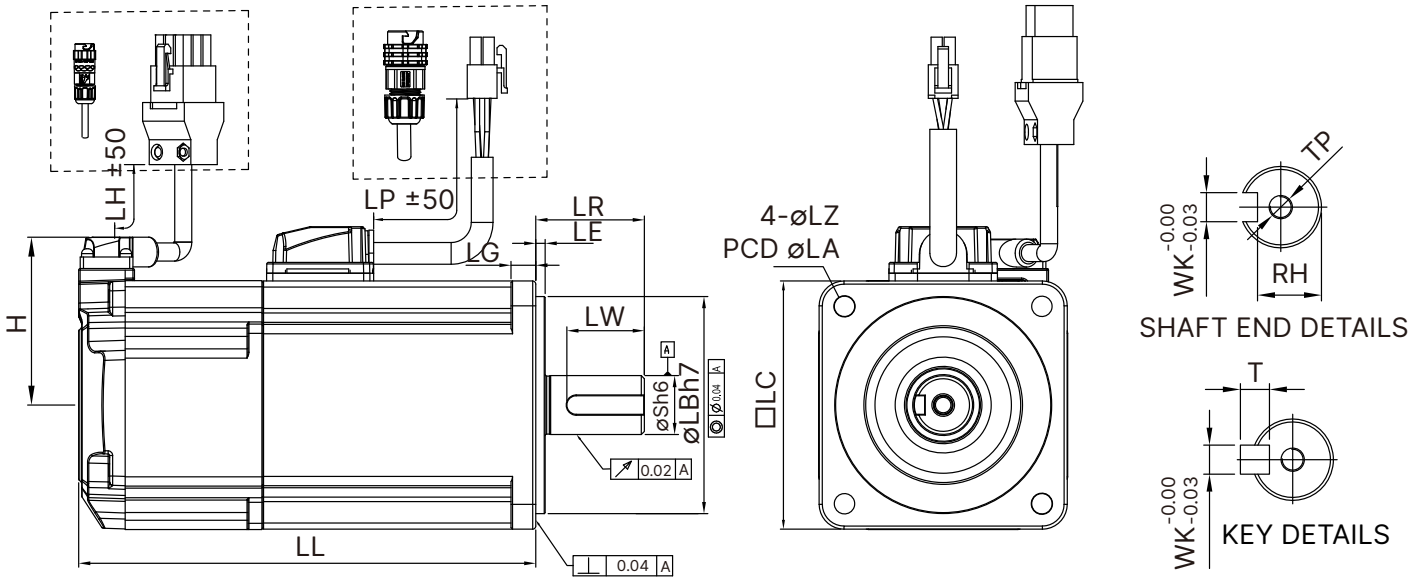
200 V	B3L-C*0401	B3H-C*0401	B3H-C*0602	B3M-C*0602	B3G-C*0604	B3H-C*0604	B3M-C*0604
400 V					B3G-J*0604	B3H-J*0604	B3M-J*0604
LC	40	40	60	60	60	60	60
LZ	4.5	4.5	5.5	5.5	5.5	5.5	5.5
LA	46	46	70	70	70	70	70
S	8($^{+0}_{-0.009}$)	8($^{+0}_{-0.009}$)	14($^{+0}_{-0.011}$)	14($^{+0}_{-0.011}$)	14($^{+0}_{-0.011}$)	14($^{+0}_{-0.011}$)	14($^{+0}_{-0.013}$)
LB	30($^{+0}_{-0.021}$)	30($^{+0}_{-0.021}$)	50($^{+0}_{-0.025}$)	50($^{+0}_{-0.025}$)	50($^{+0}_{-0.025}$)	50($^{+0}_{-0.025}$)	50($^{+0}_{-0.030}$)
LL (w/o brake)	76.2	77.6	72.5	72.5	118.1	91	91
LL (with brake)	107.7	111.7	104.4	109.4	155	122.9	127.9
LH	34	300	300	300	300	300	300
LP	300	300	300	300	300	300	300
H	34	40	44	48.5	48.5	44	48.5
LR	25	25	30	30	30	30	30
LE	2.5	2.5	3	3	3	3	3
LG	5	5	7.5	7.5	34.6	7.5	7.5
LW	16	16	20	20	20	20	20
RH	6.2	6.2	11	11	11	11	11
WK	3	3	5	5	5	5	5
W	3	3	5	5	5	5	5
T	3	3	5	5	5	5	5
TP	M3 Depth 8	M3 Depth 8	M4 Depth 15	M4 Depth 15	M4 Depth 15	M4 Depth 15	M4 Depth 15

Note: 1. Servo motor model name: ② = encoder type.
2. The length of battery-less encoder frame LL increases as shown below:

F40	F60	F80
+5.8 mm	+6.4 mm	+6 mm

ECM-B3 Built-in Series Servo Motor Specifications

External dimensions of frame size 80 and below



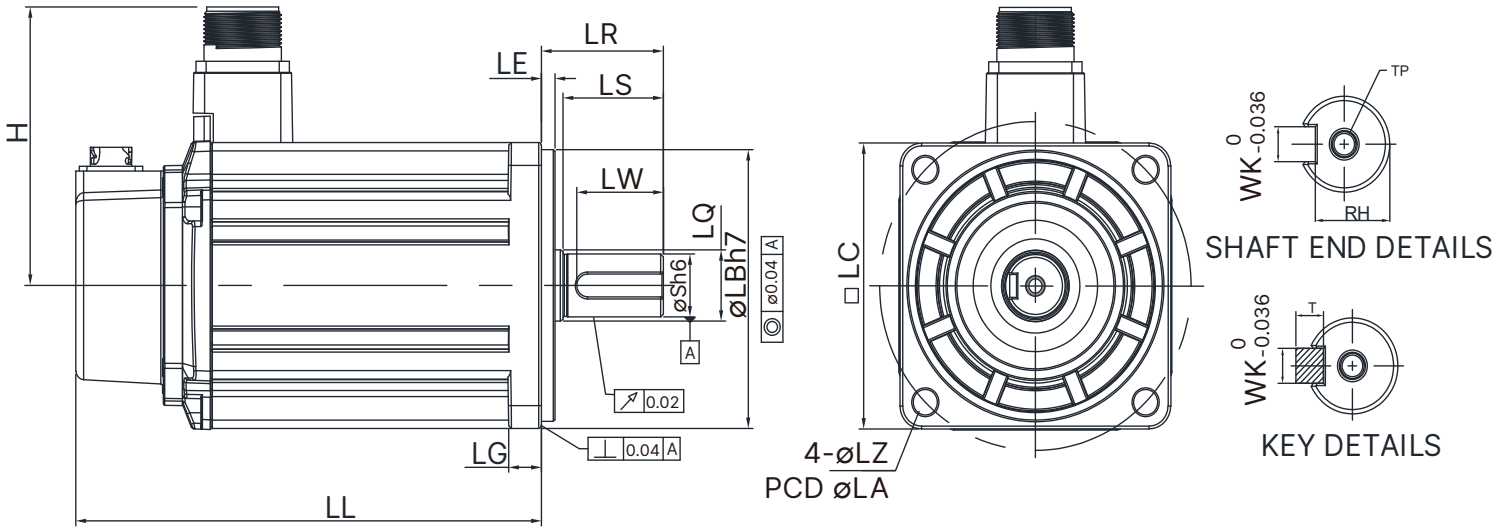
200 V	B3G-C*0807	B3H-C*0807	B3M-C*0807	B3M-C*0810
400 V	B3G-J*0807	B3H-J*0807	B3M-J*0807	B3M-J*0810
LC	80	80	80	80
LZ	6.6	6.6	6.6	6.6
LA	90	90	90	90
S	19($^{+0}_{-0.013}$)	19($^{+0}_{-0.013}$)	19($^{+0}_{-0.013}$)	19($^{+0}_{-0.013}$)
LB	70($^{+0}_{-0.030}$)	70($^{+0}_{-0.030}$)	70($^{+0}_{-0.030}$)	70($^{+0}_{-0.030}$)
LL (w/o brake)	167.3	105.2	95.4	118.7
LL (with brake)		135	131	158.3
LH	300	300	300	300
LP	300	300	300	300
H	58.5	58.5	54	58.5
LR	35	35	35	35
LE	3	3	3	3
LG	30.5	8	8	8
LW	25	25	25	25
RH	15.5	15.5	15.5	15.5
WK	6	6	6	6
W	6	6	6	6
T	6	6	6	6
TP	M6 Depth 20	M4 Depth 20	M4 Depth 20	M6 Depth20

Note: 1. Servo motor model name: ② = encoder type.
2. The length of battery-less encoder frame LL increases as shown below:

F40	F60	F80
+5.8 mm	+6.4 mm	+6 mm

ECM-B3 Series Servo Motor Specifications

100 series frame size dimensions



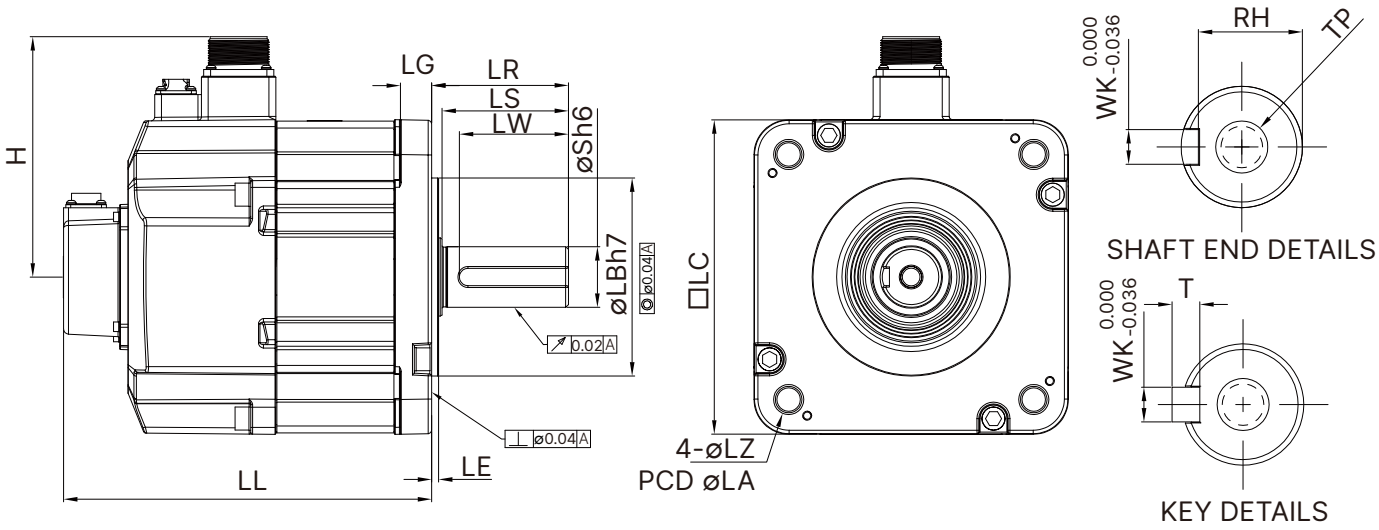
200 V	B3M-C*1010	B3M-C*1015	B3M-C*1020
400 V	B3M-J*1010	B3M-J*1015	B3M-J*1020
LC	100	100	100
LZ	9	9	9
LA	115	115	115
S	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)
LB	95($^{+0}_{-0.03}$)	95($^{+0}_{-0.03}$)	95($^{+0}_{-0.03}$)
LL (w/o brake)	141.8	156.8	171.8
LL (with brake)	179.9	194.9	209.9
LH	97.4	97.4	97.4
LP	37	37	37
H	45	45	45
LR	25	25	25
LE	5	5	5
LG	12	12	12
LW	32	32	32
RH	18	18	18
WK	8	8	8
W	8	8	8
T	7	7	7
TP	M6 Depth 12	M6 Depth 12	M6 Depth 12

Note: 1. Servo motor model name: ② = encoder type.
2. The length of battery-less encoder frame LL increases as shown below:

F100 / F130 / F180
+6.5 mm

ECM-B3 Built-in Series Servo Motor Specifications

130 frame series external dimensions



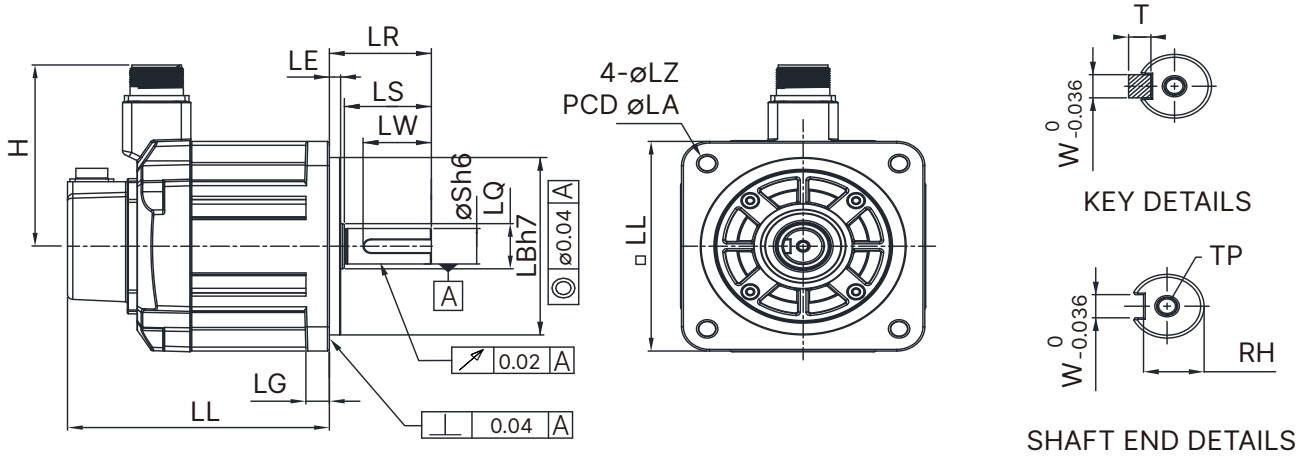
200 V	B3M-E*1310	B3M-E*1315	B3M-E*1320	B3M-F*1308	B3M-F*1313	B3H-F*1318
400 V	B3M-K*1310	B3M-K*1315	B3M-K*1320	B3M-L*1308	B3M-L*1313	B3M-L*1318
LC	130	130	130	130	130	130
LZ	9	9	9	9	9	9
LA	145	145	145	145	145	145
S	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)
LB	110($^{+0}_{-0.035}$)	110($^{+0}_{-0.035}$)	110($^{+0}_{-0.035}$)	110($^{+0}_{-0.035}$)	110($^{+0}_{-0.035}$)	110($^{+0}_{-0.035}$)
LL (w/o brake)	127.9	139.9	151.9	127.9	139.9	151.9
LL (with brake)	168.5	180.5	192.5	168.5	180.5	192.5
LH	115	115	115	115	115	115
LP	47	47	47	47	47	47
H	55	55	55	55	55	55
LR	28	28	28	28	28	28
LE	6	6	6	6	6	6
LG	12.5	12.5	12.5	12.5	12.5	12.5
LW	36	36	36	36	36	36
RH	18	18	18	18	18	18
WK	8	8	8	8	8	8
W	8	8	8	8	8	8
T	7	7	7	7	7	7
TP	M6 Depth 12	M6 Depth 12	M6 Depth 12	M6 Depth 12	M6 Depth 12	M6 Depth 12

Note: 1. Servo motor model name: ② = encoder type.
2. The length of battery-less encoder frame LL increases as shown below:

F100/F130/F180
+6.5mm

ECM-B3 Series Servo Motor Specifications

180 frame series external dimensions



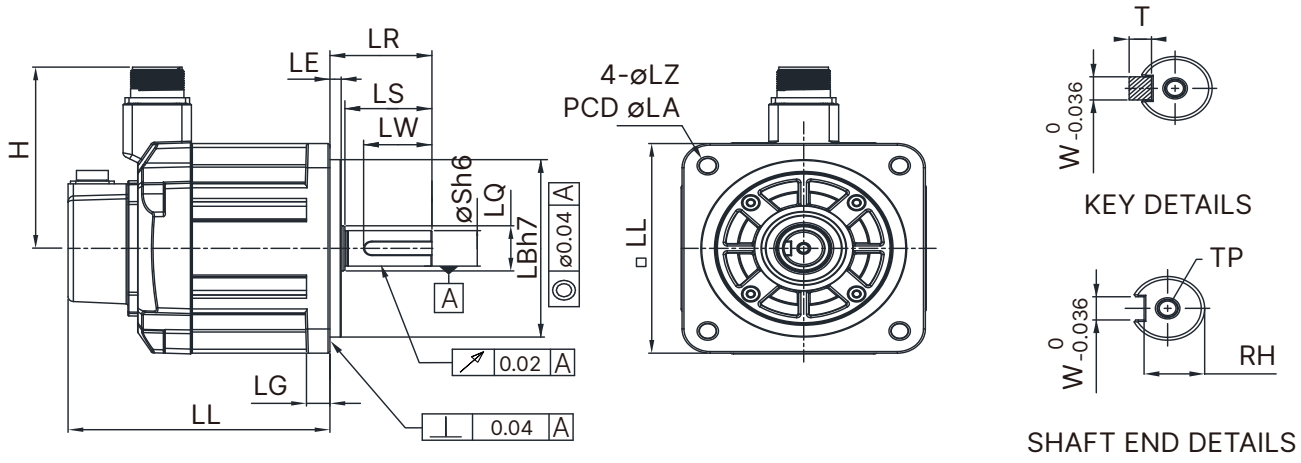
200 V	B3M-E*1820	B3M-F*1830	B3M-L*1845
400 V	B3M-K*1820	B3M-L*1830	
LC	180	180	180
LZ	13.5	13.5	13.5
LA	200	200	200
S	35($^{+0}_{-0.016}$)	35($^{+0}_{-0.016}$)	35($^{+0}_{-0.016}$)
LB	114.3($^{+0}_{-0.035}$)	114.3($^{+0}_{-0.035}$)	114.3($^{+0}_{-0.035}$)
LL (w/o brake)	137.5	160.5	174
LL (with brake)	189.5	212.5	226
LH	139	139	139
LP	73	73	73
H	79	79	79
LR	45	45	45
LE	4	4	4
LG	18	18	18
LW	63	63	63
RH	30	30	30
WK	10	10	10
W	10	10	10
T	8	8	8
TP	M12 Depth 25	M12 Depth 25	M12 Depth 25

Note: 1. Servo motor model name: ② = encoder type.
2. The length of battery-less encoder frame LL increases as shown below:

F100/F130/F180
+6.5mm

ECM-B3 Built-in Series Servo Motor Specifications

400 V 180 frame series external dimensions



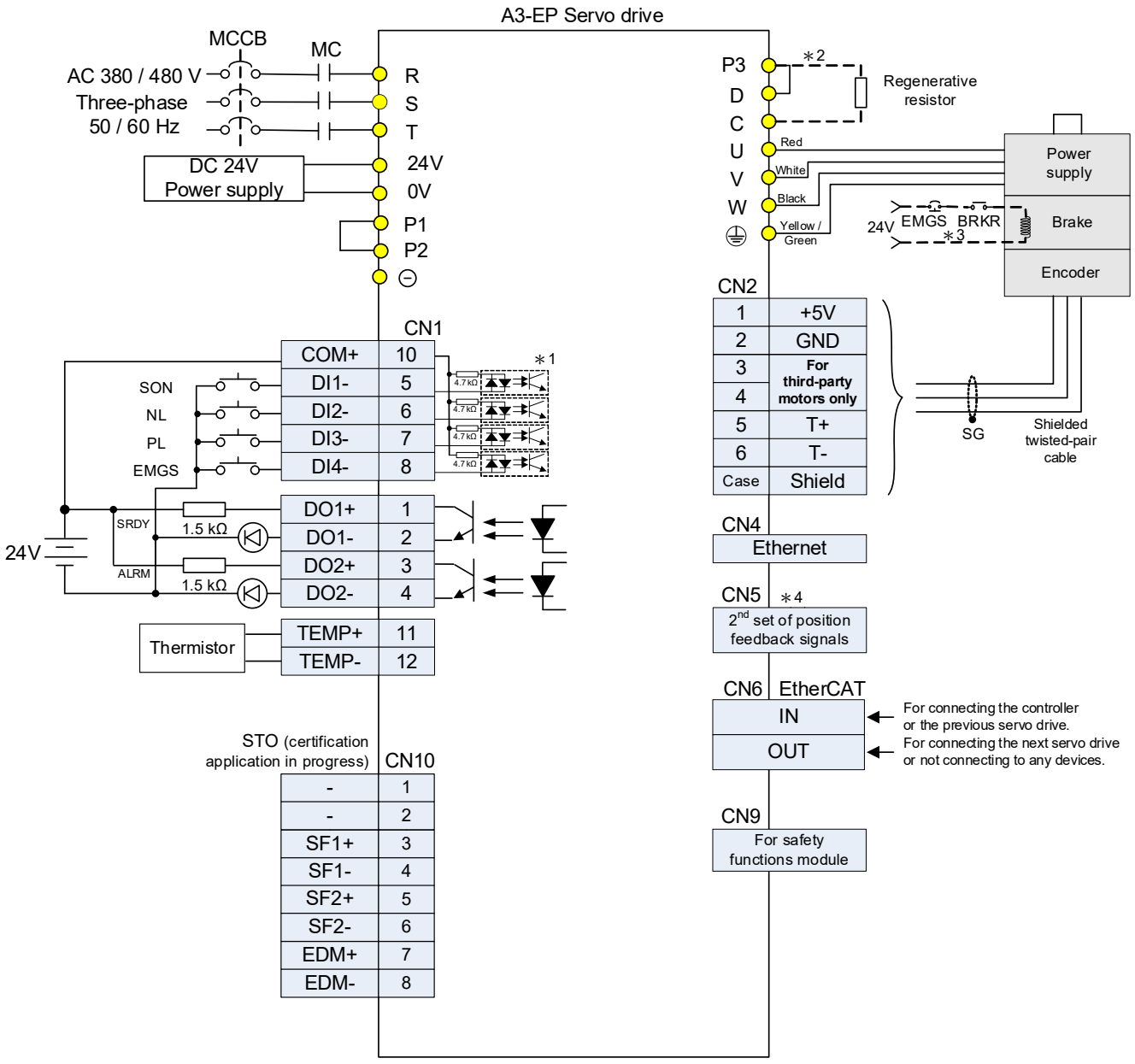
Model	B3M-L ② 1855	B3M-L ② 1875
LC	180	180
LZ	13.5	13.5
LA	200	200
S	42($^{+0}_{-0.016}$)	42($^{+0}_{-0.016}$)
LB	114.3($^{+0}_{-0.035}$)	114.3($^{+0}_{-0.035}$)
LL (w/o brake)	218	260.1
LL (with brake)	265	307.1
LH	144.5	144.5
LP	108.5	108.5
H	113	113
LR	45	45
LE	4	4
LG	18	18
LW	90	90
RH	37	37
WK	12	12
W	12	12
T	8	8
TP	M16 Depth 32	M16 Depth 32

Note: 1. Servo motor model name: ② = encoder type.
2. The length of battery-less encoder frame LL increases as shown below:

F100/F130/F180
+6.5mm

Ordering Information

EtherCAT Communication Mode Standard Wiring



Notes:
*1: Refer to Section 3.3 in the ASDA-A3-EP user manual for wiring
*2: Models of 2 kW and above have no built-in regenerative resistor
*3: The brake coil has no polarity
*4: Please refer to Section 3.6 for the pin assignment of the CN5 connector (second set of position feedback signals).

Ordering Information

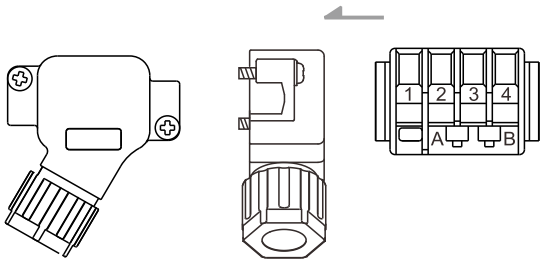
Accessories

Built-in Motor with Frame Size of 80 mm or Below

Power Connector

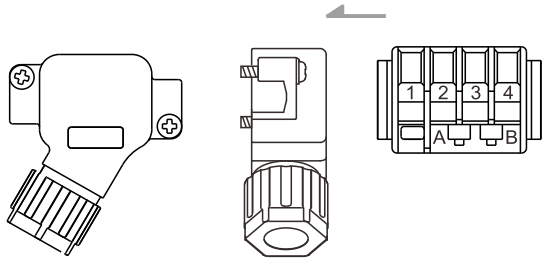
ACS3-AFPWSS00

With or w/o brake
Cable exit direction towards motor shaft



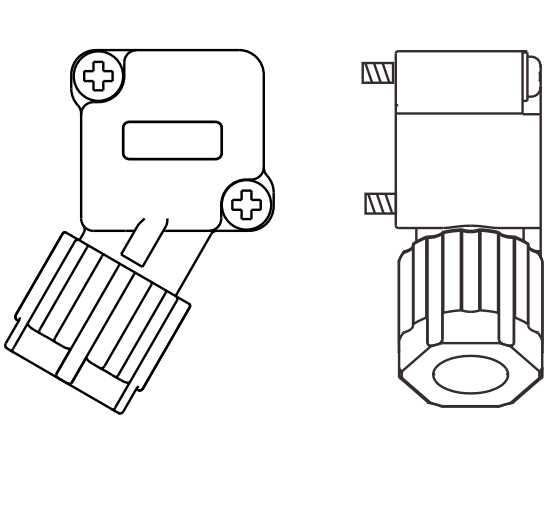
ACS3-ABPWSS00

With or w/o brake
Cable exit direction towards encoder



Encoder Connector

ACS3-AFEASA00



Cable exit direction towards motor shaft

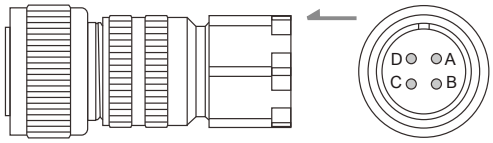
Cable exit direction towards encoder

Ordering Information

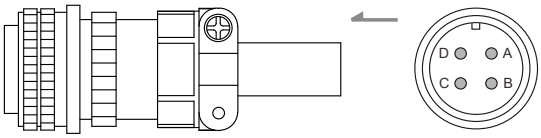
Accessories

Power Connector
(For models F100 and above)

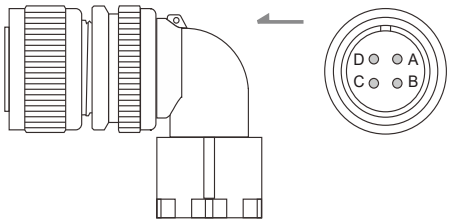
ACS3-CAP WA000
(for F100~F130 models)
Mil-Spec: MIL 3106A18-10S



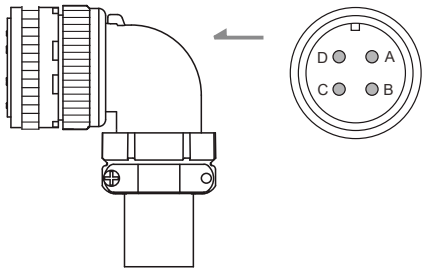
ACS3-CAP WE000
(for models F180 5.5 kW and above)
Mil-Spec: MIL 3106A32-17S



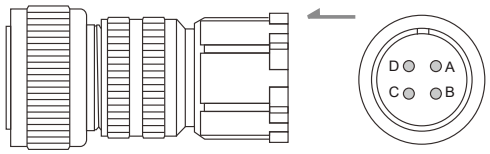
ACS3-CRP WA000
(for F100~F130 models)
Mil-Spec: MIL 3108A18-10S



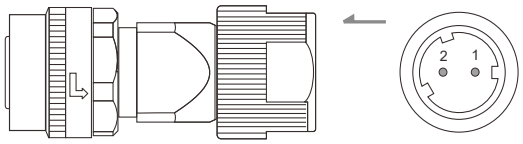
ACS3-CRP WE000
(for models F180 5.5 kW and above)
Mil-Spec: MIL 3108A32-17S



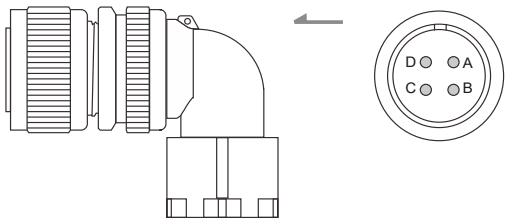
ACS3-CAP WC000
(for models F180 2 / 3 / 4.5 kW)
Mil-Spec: MIL 3106A22-22S



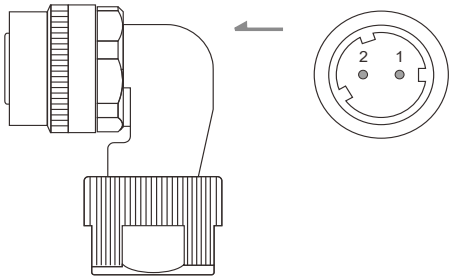
ACS3-CABRA000
(for models F100 ~ F220 with brake)
Mil-Spec: CM V1-SP2S



ACS3-CRP WC000
(for models F180 2 / 3 / 4.5 kW)
Mil-Spec: MIL 3108A22-22S



ACS3-CRBRA000
(for models F100 ~ F220 with brake)
Mil-Spec: CM V1-AP2S

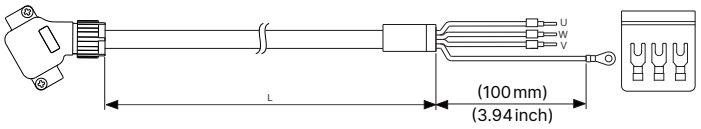


Ordering Information

Accessories for 200V F80 (inclusive) and below locking coupling motors

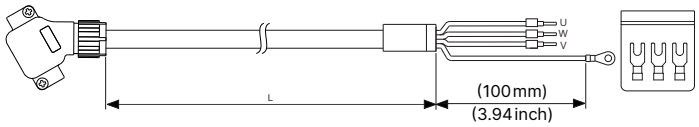
Power Cable

Cable exit direction towards motor shaft



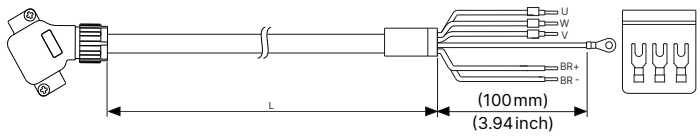
Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-AFPWSR03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-AFPWSR05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-AFPWSR10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-AFPWSR20	20 (0.5)	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-AFPRSR03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-AFPRSR05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-AFPRSR10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-AFPRSR20	20 (0.5)	20,000 ± 50	787 ± 4

Cable exit direction towards encoder



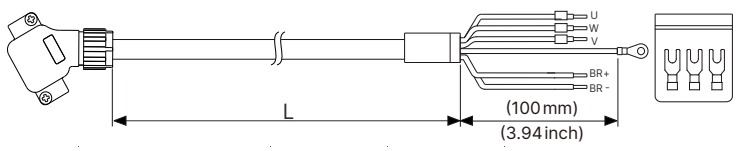
Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-ABPWSR03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-ABPWSR05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-ABPWSR10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-ABPWSR20	20 (0.5)	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-ABPRSR03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-ABPRSR05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-ABPRSR10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-ABPRSR20	20 (0.5)	20,000 ± 50	787 ± 4

Cable exit direction towards motor shaft



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-AFPWSS03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-AFPWSS05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-AFPWSS10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-AFPWSS20	20 (0.5)	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-AFPRSS03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-AFPRSS05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-AFPRSS10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-AFPRSS20	20 (0.5)	20,000 ± 50	787 ± 4

Cable exit direction towards encoder



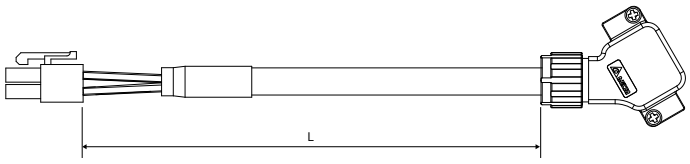
Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-ABPWSS03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-ABPWSS05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-ABPWSS10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-ABPWSS20	20 (0.5)	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-ABPRSS03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-ABPRSS05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-ABPRSS10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-ABPRSS20	20 (0.5)	20,000 ± 50	787 ± 4

Ordering Information

Accessories for 200V F80 (inclusive) and below locking coupling motors

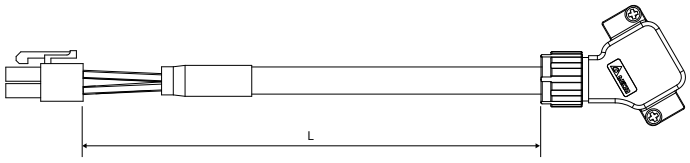
Power Adapter Cable w/o Brake

Cable exit direction towards motor shaft



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-AFPWSR0C	20 (0.5)	300 ± 30	11.8 ± 1.18
	ACS3-AFPWSR0E	20 (0.5)	500 ± 30	19.7 ± 1.18
	ACS3-AFPWSR0G	20 (0.5)	700 ± 30	27.5 ± 1.18
	ACS3-AFPWSR0J	20 (0.5)	900 ± 30	35.4 ± 1.18
Torsion-Resistant	ACS3-AFPRSR0C	20 (0.5)	300 ± 30	11.8 ± 1.18
	ACS3-AFPRSR0E	20 (0.5)	500 ± 30	19.7 ± 1.18
	ACS3-AFPRSR0G	20 (0.5)	700 ± 30	27.5 ± 1.18
	ACS3-AFPRSR0J	20 (0.5)	900 ± 30	35.4 ± 1.18

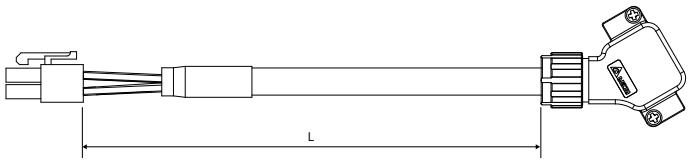
Cable exit direction towards encoder



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-ABPWSR0C	20 (0.5)	300 ± 30	11.8 ± 1.18
	ACS3-ABPWSR0E	20 (0.5)	500 ± 30	19.7 ± 1.18
	ACS3-ABPWSR0G	20 (0.5)	700 ± 30	27.5 ± 1.18
	ACS3-ABPWSR0J	20 (0.5)	900 ± 30	35.4 ± 1.18
Torsion-Resistant	ACS3-ABPRSR0C	20 (0.5)	300 ± 30	11.8 ± 1.18
	ACS3-ABPRSR0E	20 (0.5)	500 ± 30	19.7 ± 1.18
	ACS3-ABPRSR0G	20 (0.5)	700 ± 30	27.5 ± 1.18
	ACS3-ABPRSR0J	20 (0.5)	900 ± 30	35.4 ± 1.18

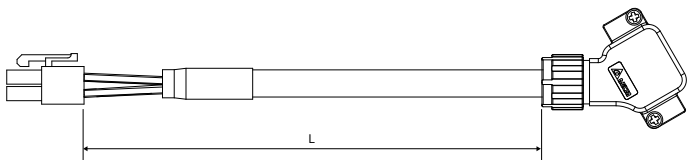
Power Cable with Brake

Cable exit direction towards motor shaft



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-AFPWSS0C	20 (0.5) + 24 (0.2)	300 ± 30	11.8 ± 1.18
	ACS3-AFPWSS0E	20 (0.5) + 24 (0.2)	500 ± 30	19.7 ± 1.18
	ACS3-AFPWSS0G	20 (0.5) + 24 (0.2)	700 ± 30	27.5 ± 1.18
	ACS3-AFPWSS0J	20 (0.5) + 24 (0.2)	900 ± 30	35.4 ± 1.18
Torsion-Resistant	ACS3-AFPRSS0C	20 (0.5) + 24 (0.2)	300 ± 30	11.8 ± 1.18
	ACS3-AFPRSS0E	20 (0.5) + 24 (0.2)	500 ± 30	19.7 ± 1.18
	ACS3-AFPRSS0G	20 (0.5) + 24 (0.2)	700 ± 30	27.5 ± 1.18
	ACS3-AFPRSS0J	20 (0.5) + 24 (0.2)	900 ± 30	35.4 ± 1.18

Cable exit direction towards encoder



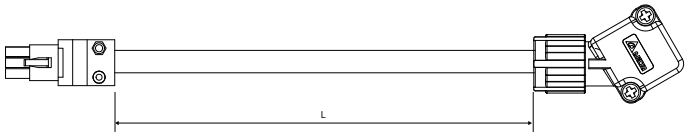
Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-ABPWSS0C	20 (0.5) + 24 (0.2)	300 ± 30	11.8 ± 1.18
	ACS3-ABPWSS0E	20 (0.5) + 24 (0.2)	500 ± 30	19.7 ± 1.18
	ACS3-ABPWSS0G	20 (0.5) + 24 (0.2)	700 ± 30	27.5 ± 1.18
	ACS3-ABPWSS0J	20 (0.5) + 24 (0.2)	900 ± 30	35.4 ± 1.18
Torsion-Resistant	ACS3-ABPRSS0C	20 (0.5) + 24 (0.2)	300 ± 30	11.8 ± 1.18
	ACS3-ABPRSS0E	20 (0.5) + 24 (0.2)	500 ± 30	19.7 ± 1.18
	ACS3-ABPRSS0G	20 (0.5) + 24 (0.2)	700 ± 30	27.5 ± 1.18
	ACS3-ABPRSS0J	20 (0.5) + 24 (0.2)	900 ± 30	35.4 ± 1.18

Ordering Information

Accessories for 200 V & 400 V F80 (inclusive) and below locking couplingmotors

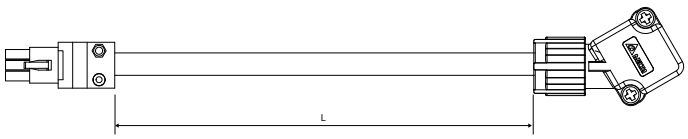
Signal Adapter Cable - Battery-Less / Incremental

Cable exit direction towards motor shaft



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-AFEASI0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-AFEASI0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-AFEASI0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-AFEASI0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18
Torsion-Resistant	ACS3-AFERSI0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-AFERSI0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-AFERSI0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-AFERSI0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18

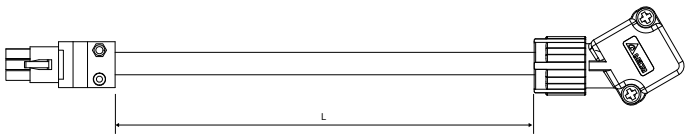
Cable exit direction towards encoder



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-ABEASI0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-ABEASI0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-ABEASI0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-ABEASI0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18
Torsion-Resistant	ACS3-ABERSI0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-ABERSI0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-ABERSI0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-ABERSI0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18

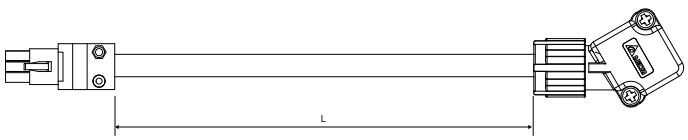
Signal Adapter Cable - Absolute

Cable exit direction towards motor shaft



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-AFEASA0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-AFEASA0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-AFEASA0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-AFEASA0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18
Torsion-Resistant	ACS3-AFERSA0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-AFERSA0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-AFERSA0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-AFERSA0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18

Cable exit direction towards encoder



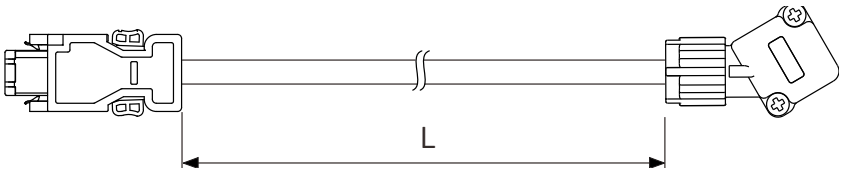
Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-ABEASA0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-ABEASA0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-ABEASA0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-ABEASA0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18
Torsion-Resistant	ACS3-ABERSA0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-ABERSA0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-ABERSA0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-ABERSA0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18

Ordering Information

Accessories for 200V F80 (inclusive) and below locking coupling motors

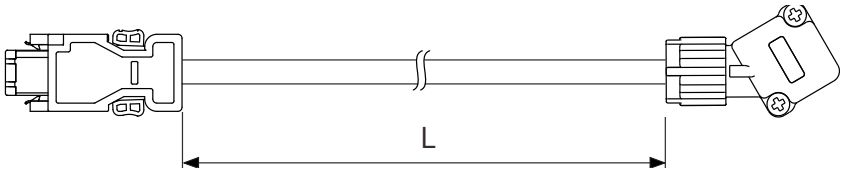
Battery-Less / Incremental Encoder Connection Cable

Cable exit direction towards motor shaft



Cable	Model Name	L	
		mm	inch
Standard	ACS3-AFEASI03	3,000 ± 50	118 ± 2
	ACS3-AFEASI05	5,000 ± 50	197 ± 2
	ACS3-AFEASI10	10,000 ± 50	394 ± 4
	ACS3-AFEASI20	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-AFERSI03	3,000 ± 50	118 ± 2
	ACS3-AFERSI05	5,000 ± 50	197 ± 2
	ACS3-AFERSI10	10,000 ± 50	394 ± 4
	ACS3-AFERSI20	20,000 ± 50	787 ± 4

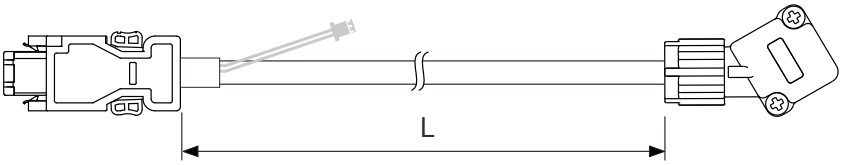
Cable exit direction towards encoder



Cable	Model Name	L	
		mm	inch
Standard	ACS3-ABEASI03	3,000 ± 50	118 ± 2
	ACS3-ABEASI05	5,000 ± 50	197 ± 2
	ACS3-ABEASI10	10,000 ± 50	394 ± 4
	ACS3-ABEASI20	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-ABERSI03	3,000 ± 50	118 ± 2
	ACS3-ABERSI05	5,000 ± 50	197 ± 2
	ACS3-ABERSI10	10,000 ± 50	394 ± 4
	ACS3-ABERSI20	20,000 ± 50	787 ± 4

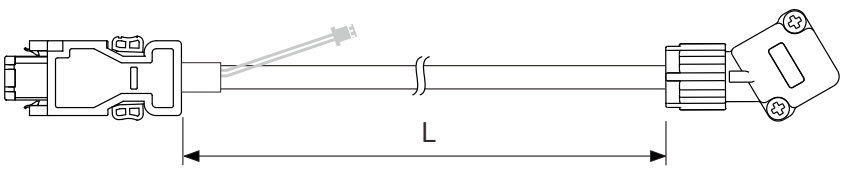
Absolute Encoder Connection Cable

Cable exit direction towards motor shaft



Cable	Model Name	L	
		mm	inch
Standard	ACS3-AFEASA03	3,000 ± 50	118 ± 2
	ACS3-AFEASA05	5,000 ± 50	197 ± 2
	ACS3-AFEASA10	10,000 ± 50	394 ± 4
	ACS3-AFEASA20	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-AFERSA03	3,000 ± 50	118 ± 2
	ACS3-AFERSA05	5,000 ± 50	197 ± 2
	ACS3-AFERSA10	10,000 ± 50	394 ± 4
	ACS3-AFERSA20	20,000 ± 50	787 ± 4

Cable exit direction towards encoder



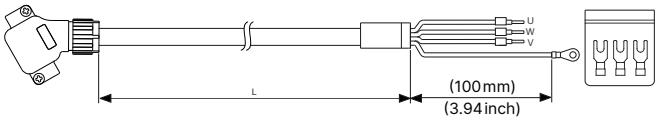
Cable	Model Name	L	
		mm	inch
Standard	ACS3-ABEASA03	3,000 ± 50	118 ± 2
	ACS3-ABEASA05	5,000 ± 50	197 ± 2
	ACS3-ABEASA10	10,000 ± 50	394 ± 4
	ACS3-ABEASA20	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-ABERSA03	3,000 ± 50	118 ± 2
	ACS3-ABERSA05	5,000 ± 50	197 ± 2
	ACS3-ABERSA10	10,000 ± 50	394 ± 4
	ACS3-ABERSA20	20,000 ± 50	787 ± 4

Ordering Information

Accessories for 400V F80 (inclusive) and below locking coupling motor

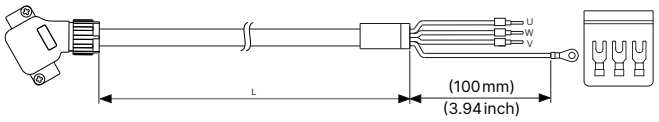
Power Cable w/o Brake

Cable exit direction towards motor shaft



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-AFPWSA03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-AFPWSA05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-AFPWSA10	20 (0.5)	10,000 ± 100	394 ± 4
	ACS3-AFPWSA20	20 (0.5)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-AFPRSA03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-AFPRSA05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-AFPRSA10	20 (0.5)	10,000 ± 100	394 ± 4
	ACS3-AFPRSA20	20 (0.5)	20,000 ± 100	787 ± 4

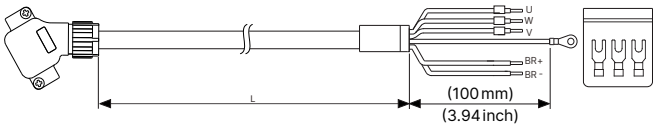
Cable exit direction towards encoder



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-ABPWSA03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-ABPWSA05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-ABPWSA10	20 (0.5)	10,000 ± 100	394 ± 4
	ACS3-ABPWSA20	20 (0.5)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-ABPRSA03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-ABPRSA05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-ABPRSA10	20 (0.5)	10,000 ± 100	394 ± 4
	ACS3-ABPRSA20	20 (0.5)	20,000 ± 100	787 ± 4

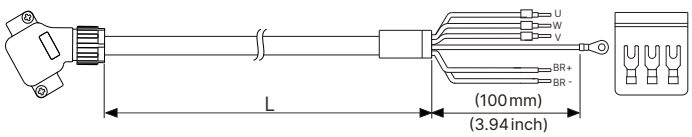
Power Cable with Brake

Cable exit direction towards motor shaft



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-AFPWSB03	20 (0.5) + 24 (0.2)	3,000 ± 50	118 ± 2
	ACS3-AFPWSB05	20 (0.5) + 24 (0.2)	5,000 ± 50	197 ± 2
	ACS3-AFPWSB10	20 (0.5) + 24 (0.2)	10,000 ± 100	394 ± 4
	ACS3-AFPWSB20	20 (0.5) + 24 (0.2)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-AFERSA0C	20 (0.5) + 24 (0.2)	3,000 ± 50	118 ± 2
	ACS3-AFERSA0E	20 (0.5) + 24 (0.2)	5,000 ± 50	197 ± 2
	ACS3-AFERSA0G	20 (0.5) + 24 (0.2)	10,000 ± 100	394 ± 4
	ACS3-AFERSA0J	20 (0.5) + 24 (0.2)	20,000 ± 100	787 ± 4

Cable exit direction towards encoder



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-ABPWSB03	20 (0.5) + 24 (0.2)	3,000 ± 50	118 ± 2
	ACS3-ABPWSB05	20 (0.5) + 24 (0.2)	5,000 ± 50	197 ± 2
	ACS3-ABPWSB10	20 (0.5) + 24 (0.2)	10,000 ± 100	394 ± 4
	ACS3-ABPWSB20	20 (0.5) + 24 (0.2)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-ABPSSB03	20 (0.5) + 24 (0.2)	3,000 ± 50	118 ± 2
	ACS3-ABPSSB05	20 (0.5) + 24 (0.2)	5,000 ± 50	197 ± 2
	ACS3-ABPSSB10	20 (0.5) + 24 (0.2)	10,000 ± 100	394 ± 4
	ACS3-ABPSSB20	20 (0.5) + 24 (0.2)	20,000 ± 100	787 ± 4

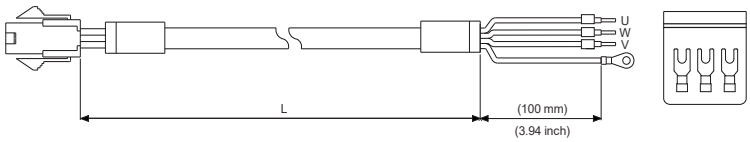
Ordering Information

Accessories

Power Cable

F40 ~ F80 models

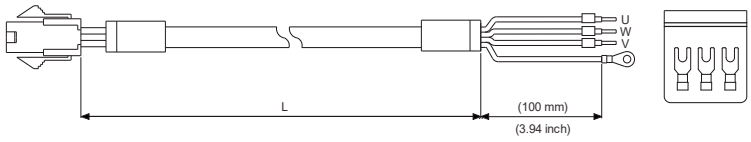
A3 / B3 motor, w/o brake, 220V



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-CAPW1103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPW1105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPW1110	18 (0.82)	10,000 ± 50	394 ± 4
	ACS3-CAPW1120	18 (0.82)	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-CAPF1103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPF1105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPF1110	18 (0.82)	10,000 ± 50	394 ± 4
	ACS3-CAPF1120	18 (0.82)	20,000 ± 50	787 ± 4

F40 ~ F80 models

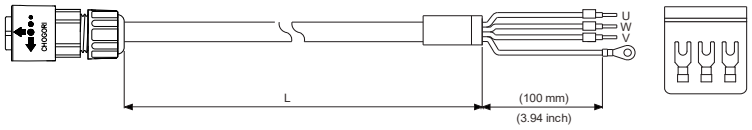
A3 / B3 motor, w/o brake, 400V



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-CAPW3103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPW3105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPW3110	18 (0.82)	10,000 ± 50	394 ± 4
	ACS3-CAPW3120	18 (0.82)	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-CAPF3103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPF3105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPF3110	18 (0.82)	10,000 ± 50	394 ± 4
	ACS3-CAPF3120	18 (0.82)	20,000 ± 50	787 ± 4

F40 ~ F80 models

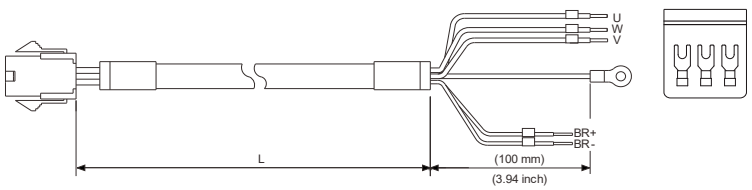
A3 / B3 motor, w/o brake, IP67 waterproof connector, for 200V only



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-CAPW5103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPW5105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPW5110	18 (0.82)	10,000 ± 100	394 ± 4
	ACS3-CAPW5120	18 (0.82)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAPF5103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPF5105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPF5110	18 (0.82)	10,000 ± 100	394 ± 4
	ACS3-CAPF5120	18 (0.82)	20,000 ± 100	787 ± 4

F40 ~ F80 models

A3 / B3 motors a, with brake (220 V & 400 V)



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-CAPW2103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPW2105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPW2110	18 (0.82)	10,000 ± 100	394 ± 4
	ACS3-CAPW2120	18 (0.82)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAPF2103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPF2105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPF2110	18 (0.82)	10,000 ± 100	394 ± 4
	ACS3-CAPF2120	18 (0.82)	20,000 ± 100	787 ± 4

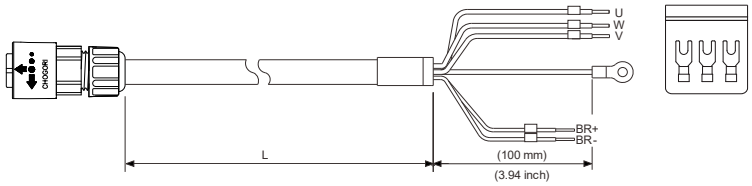
Ordering Information

Accessories

Power Cable

F40 ~ F80 models

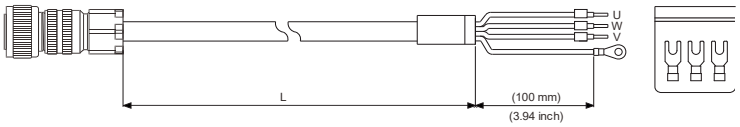
A3 / B3 motor, with brake, IP67 waterproof connector, for 200V only



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-CAPW6103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPW6105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPW6110	18 (0.82)	10,000 ± 100	394 ± 4
	ACS3-CAPW6120	18 (0.82)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAPF6103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPF6105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPF6110	18 (0.82)	10,000 ± 100	394 ± 4
	ACS3-CAPF6120	18 (0.82)	20,000 ± 100	787 ± 4

F100 ~ F130 models

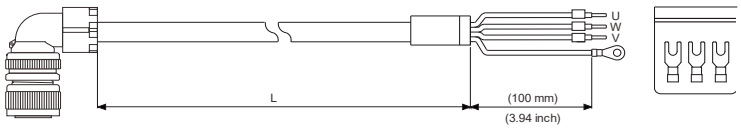
B3 motor, w/o brake, straight connector



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-CAPWA203	16 (1.3)	3,000 ± 50	118 ± 2
	ACS3-CAPWA205	16 (1.3)	5,000 ± 50	197 ± 2
	ACS3-CAPWA210	16 (1.3)	10,000 ± 100	394 ± 4
	ACS3-CAPWA220	16 (1.3)	20,000 ± 100	787 ± 4
	ACS3-CAPWA303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CAPWA305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CAPWA310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CAPWA320	14 (2.1)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAPFA203	16 (1.3)	3,000 ± 50	118 ± 2
	ACS3-CAPFA205	16 (1.3)	5,000 ± 50	197 ± 2
	ACS3-CAPFA210	16 (1.3)	10,000 ± 100	394 ± 4
	ACS3-CAPFA220	16 (1.3)	20,000 ± 100	787 ± 4
	ACS3-CAPFA303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CAPFA305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CAPFA310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CAPFA320	14 (2.1)	20,000 ± 100	787 ± 4

F100 ~ F130 models

B3 motor, w/o brake, right-angle connector



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-CRPWA203	16 (1.3)	3,000 ± 50	118 ± 2
	ACS3-CRPWA205	16 (1.3)	5,000 ± 50	197 ± 2
	ACS3-CRPWA210	16 (1.3)	10,000 ± 100	394 ± 4
	ACS3-CRPWA220	16 (1.3)	20,000 ± 100	787 ± 4
	ACS3-CRPWA303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CRPWA305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CRPWA310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CRPWA320	14 (2.1)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CRPFA203	16 (1.3)	3,000 ± 50	118 ± 2
	ACS3-CRPFA205	16 (1.3)	5,000 ± 50	197 ± 2
	ACS3-CRPFA210	16 (1.3)	10,000 ± 100	394 ± 4
	ACS3-CRPFA220	16 (1.3)	20,000 ± 100	787 ± 4
	ACS3-CRPFA303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CRPFA305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CRPFA310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CRPFA320	14 (2.1)	20,000 ± 100	787 ± 4

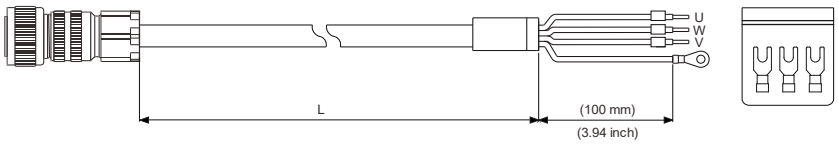
Ordering Information

Accessories

Power Cable

200 V F180 models 2 kW，400 V F180 models 4.5 kW

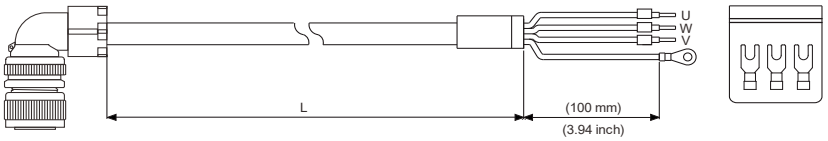
B3 motor, w/o brake, straight connector



Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Standard	ACS3-CAPWC403	12 (3.3)	3,000 ± 50	118 ± 2
	ACS3-CAPWC405	12 (3.3)	5,000 ± 50	197 ± 2
	ACS3-CAPWC410	12 (3.3)	10,000 ± 100	394 ± 4
	ACS3-CAPWC420	12 (3.3)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Torsion-Resistant	ACS3-CAPFC403	12 (3.3)	3,000 ± 50	118 ± 2
	ACS3-CAPFC405	12 (3.3)	5,000 ± 50	197 ± 2
	ACS3-CAPFC410	12 (3.3)	10,000 ± 100	394 ± 4
	ACS3-CAPFC420	12 (3.3)	20,000 ± 100	787 ± 4

B3 motor, w/o brake, right-angle connector

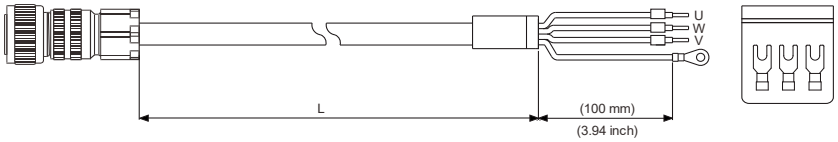


Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Standard	ACS3-CRPWC403	12 (3.3)	3,000 ± 50	118 ± 2
	ACS3-CRPWC405	12 (3.3)	5,000 ± 50	197 ± 2
	ACS3-CRPWC410	12 (3.3)	10,000 ± 100	394 ± 4
	ACS3-CRPWC420	12 (3.3)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Torsion-Resistant	ACS3-CRPFC403	12 (3.3)	3,000 ± 50	118 ± 2
	ACS3-CRPFC405	12 (3.3)	5,000 ± 50	197 ± 2
	ACS3-CRPFC410	12 (3.3)	10,000 ± 100	394 ± 4
	ACS3-CRPFC420	12 (3.3)	20,000 ± 100	787 ± 4

200 V F180 models 3 kW / 4.5 kW

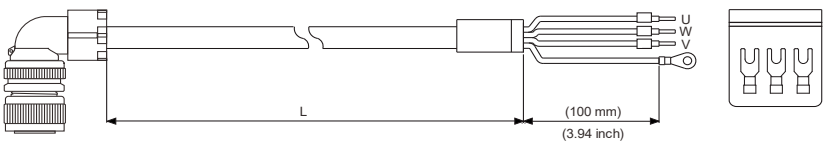
B3 motor, w/o brake, straight connector



Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Standard	ACS3-CAPWC503	10 (5.3)	3,000 ± 50	118 ± 2
	ACS3-CAPWC505	10 (5.3)	5,000 ± 50	197 ± 2
	ACS3-CAPWC510	10 (5.3)	10,000 ± 100	394 ± 4
	ACS3-CAPWC520	10 (5.3)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Torsion-Resistant	ACS3-CAPFC503	10 (5.3)	3,000 ± 50	118 ± 2
	ACS3-CAPFC505	10 (5.3)	5,000 ± 50	197 ± 2
	ACS3-CAPFC510	10 (5.3)	10,000 ± 100	394 ± 4
	ACS3-CAPFC520	10 (5.3)	20,000 ± 100	787 ± 4

B3 motor, w/o brake, right-angle connector



Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Standard	ACS3-CRPWC503	10 (5.3)	3,000 ± 50	118 ± 2
	ACS3-CRPWC505	10 (5.3)	5,000 ± 50	197 ± 2
	ACS3-CRPWC510	10 (5.3)	10,000 ± 100	394 ± 4
	ACS3-CRPWC520	10 (5.3)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Torsion-Resistant	ACS3-CRPFC503	10 (5.3)	3,000 ± 50	118 ± 2
	ACS3-CRPFC505	10 (5.3)	5,000 ± 50	197 ± 2
	ACS3-CRPFC510	10 (5.3)	10,000 ± 100	394 ± 4
	ACS3-CRPFC520	10 (5.3)	20,000 ± 100	787 ± 4

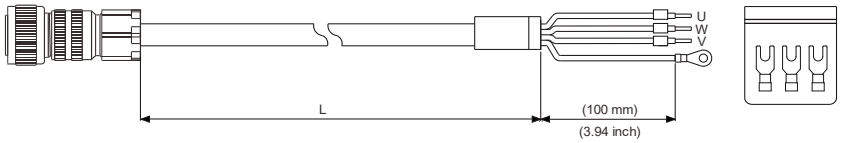
Ordering Information

Accessories

Power Cable

400 V F180 models 2 kW / 3 kW

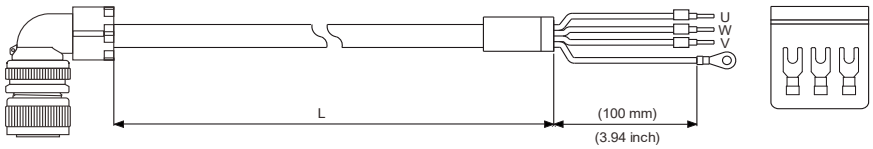
B3 motor, w/o brake, straight connector



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-CAPWC303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CAPWC305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CAPWC310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CAPWC320	14 (2.1)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Torsion-Resistant	ACS3-CAPFC303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CAPFC305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CAPFC310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CAPFC320	14 (2.1)	20,000 ± 100	787 ± 4

B3 motor, w/o brake, right-angle connector

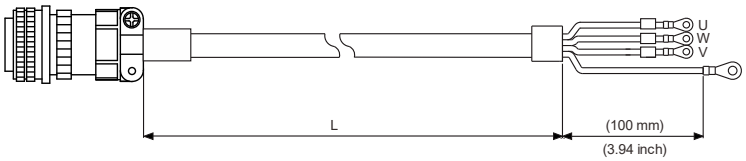


Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-CRPWC303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CRPWC305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CRPWC310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CRPWC320	14 (2.1)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Torsion-Resistant	ACS3-CRPFC303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CRPFC305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CRPFC310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CRPFC320	14 (2.1)	20,000 ± 100	787 ± 4

200 V F180 models 5.5 kw，400 V F180 models 5.5 kw / 7.5 kw

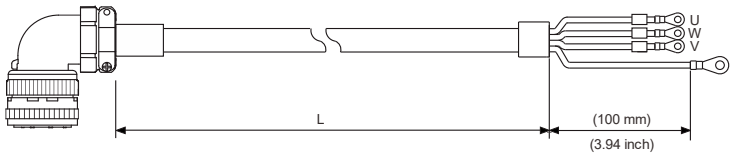
B3 motor, w/o brake, straight connector



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-CAPWE603	8 (8.4)	3,000 ± 50	118 ± 2
	ACS3-CAPWE605	8 (8.4)	5,000 ± 50	197 ± 2
	ACS3-CAPWE610	8 (8.4)	10,000 ± 100	394 ± 4
	ACS3-CAPWE620	8 (8.4)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Torsion-Resistant	ACS3-CAPFE603	8 (8.4)	3,000 ± 50	118 ± 2
	ACS3-CAPFE605	8 (8.4)	5,000 ± 50	197 ± 2
	ACS3-CAPFE610	8 (8.4)	10,000 ± 100	394 ± 4
	ACS3-CAPFE620	8 (8.4)	20,000 ± 100	787 ± 4

B3 motor, w/o brake, right-angle connector



Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Standard	ACS3-CRPWE603	8 (8.4)	3,000 ± 50	118 ± 2
	ACS3-CRPWE605	8 (8.4)	5,000 ± 50	197 ± 2
	ACS3-CRPWE610	8 (8.4)	10,000 ± 100	394 ± 4
	ACS3-CRPWE620	8 (8.4)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW AWG (mm2)	L mm	L inch
Torsion-Resistant	ACS3-CRPFE603	8 (8.4)	3,000 ± 50	118 ± 2
	ACS3-CRPFE605	8 (8.4)	5,000 ± 50	197 ± 2
	ACS3-CRPFE610	8 (8.4)	10,000 ± 100	394 ± 4
	ACS3-CRPFE620	8 (8.4)	20,000 ± 100	787 ± 4

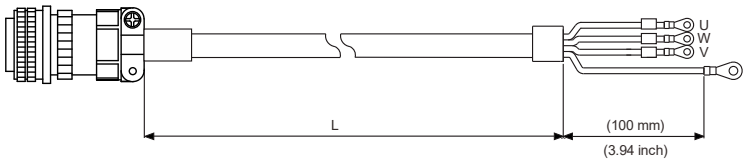
Ordering Information

Accessories

Power Cable

200 V F180 models 7.5 kw

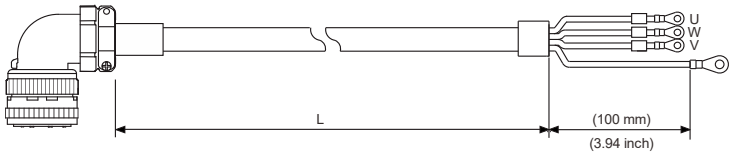
B3 motor, w/o brake, straight connector



Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Standard	ACS3-CAPWE703	6 (13.3)	3,000 ± 50	118 ± 2
	ACS3-CAPWE705	6 (13.3)	5,000 ± 50	197 ± 2
	ACS3-CAPWE710	6 (13.3)	10,000 ± 100	394 ± 4
	ACS3-CAPWE720	6 (13.3)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Torsion-Resistant	ACS3-CAPFE703	6 (13.3)	3,000 ± 50	118 ± 2
	ACS3-CAPFE705	6 (13.3)	5,000 ± 50	197 ± 2
	ACS3-CAPFE710	6 (13.3)	10,000 ± 100	394 ± 4
	ACS3-CAPFE720	6 (13.3)	20,000 ± 100	787 ± 4

B3 motor, w/o brake, right-angle connector

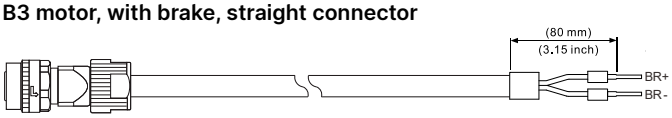


Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Standard	ACS3-CRPWE703	6 (13.3)	3,000 ± 50	118 ± 2
	ACS3-CRPWE705	6 (13.3)	5,000 ± 50	197 ± 2
	ACS3-CRPWE710	6 (13.3)	10,000 ± 100	394 ± 4
	ACS3-CRPWE720	6 (13.3)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Torsion-Resistant	ACS3-CRPFE703	12 (3.3)	3,000 ± 50	118 ± 2
	ACS3-CRPFE705	12 (3.3)	5,000 ± 50	197 ± 2
	ACS3-CRPFE710	12 (3.3)	10,000 ± 100	394 ± 4
	ACS3-CRPFE720	12 (3.3)	20,000 ± 100	787 ± 4

F100 ~ F220 model brake cable

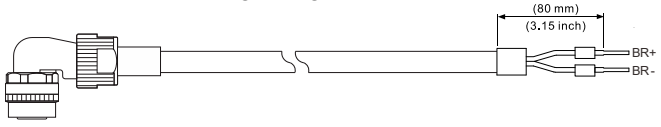
B3 motor, with brake, straight connector



Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Standard	ACS3-CABRA103	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-CABRA105	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-CABRA110	20 (0.5)	10,000 ± 100	394 ± 4
	ACS3-CABRA120	20 (0.5)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CABFA103	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-CABFA105	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-CABFA110	20 (0.5)	10,000 ± 100	394 ± 4
	ACS3-CABFA120	20 (0.5)	20,000 ± 100	787 ± 4

F100 ~ F220 model brake cable

B3 motor, with brake, right-angle connector



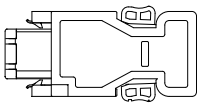
Cable	Model Name	UVW	L	
		AWG (mm2)	mm	inch
Standard	ACS3-CRBRA103	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-CRBRA105	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-CRBRA110	20 (0.5)	10,000 ± 100	394 ± 4
	ACS3-CRBRA120	20 (0.5)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CRBFA103	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-CRBFA105	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-CRBFA110	20 (0.5)	10,000 ± 100	394 ± 4
	ACS3-CRBFA120	20 (0.5)	20,000 ± 100	787 ± 4

Ordering Information

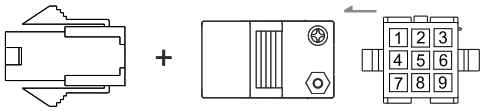
Accessories

Encoder Connector

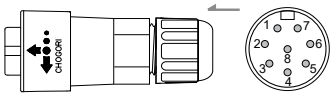
ACS3-CNENC200 (Driver end)



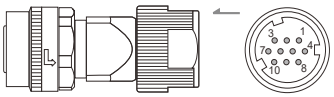
ACS3-CAEN0000
(Applicable to models F80 and below)



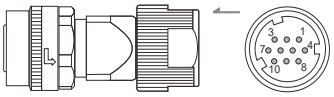
ACS3-CNEN2A00
(Applicable to models F80 and below)
IP67 waterproof connector



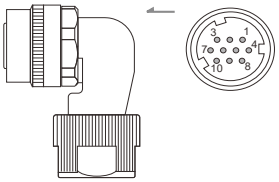
ACS3-CAENA000
(Applicable to F100~F180 models)
Military-grade connector: CM V1-SP10S
Clip type



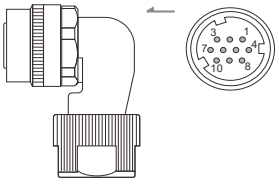
ACS3-CAENM000
(Applicable to F100~F180 models) Military grade model: CM1-SP10S
Threaded type (for high vibration requirements)



ACS3-CRENA000
(Applicable to F100~F180 models)
Military-grade connector: CM V1-AP10S
Clip type



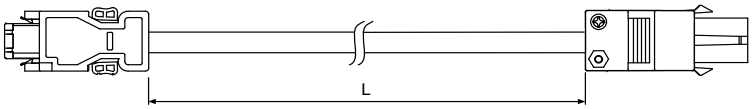
ACS3-CRENM000
(Applicable to F100~F180 models)
Military grade model: CM1-SP10S
Threaded type (for high vibration requirements)



Incremental Encoder Connection Cable

F40 ~ F80 models

B3 motor, straight connector



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CAEN0103	3,000 ± 50	118 ± 2
	ACS3-CAEN0105	5,000 ± 50	197 ± 2
	ACS3-CAEN0110	10,000 ± 100	394 ± 4
	ACS3-CAEN0120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEF0103	3,000 ± 50	118 ± 2
	ACS3-CAEF0105	5,000 ± 50	197 ± 2
	ACS3-CAEF0110	10,000 ± 100	394 ± 4
	ACS3-CAEF0120	20,000 ± 100	787 ± 4

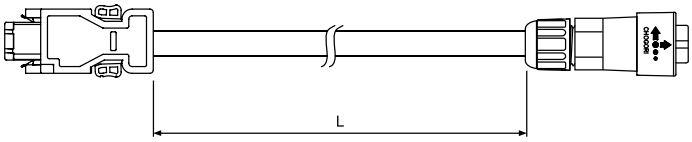
Ordering Information

Accessories

Incremental Encoder Connection Cable

F40 ~ F80 models

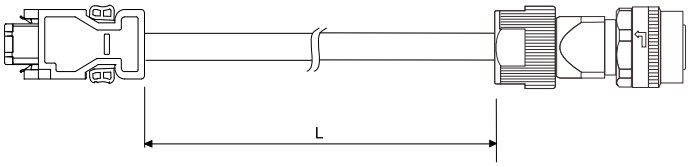
A3 / B3 motor, IP67 waterproof connector



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CAEN1103	3,000 ± 50	118 ± 2
	ACS3-CAEN1105	5,000 ± 50	197 ± 2
	ACS3-CAEN1110	10,000 ± 100	394 ± 4
	ACS3-CAEN1120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEF1103	3,000 ± 50	118 ± 2
	ACS3-CAEF1105	5,000 ± 50	197 ± 2
	ACS3-CAEF1110	10,000 ± 100	394 ± 4
	ACS3-CAEF1120	20,000 ± 100	787 ± 4

F100 ~ F180 models

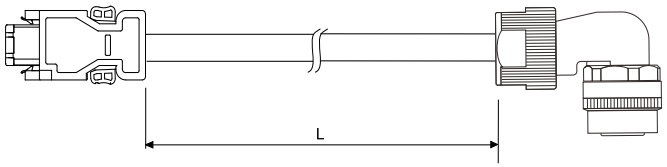
B3 motor, straight connector



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CAENA103	3,000 ± 50	118 ± 2
	ACS3-CAENA105	5,000 ± 50	197 ± 2
	ACS3-CAENA110	10,000 ± 100	394 ± 4
	ACS3-CAENA120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEFA103	3,000 ± 50	118 ± 2
	ACS3-CAEFA105	5,000 ± 50	197 ± 2
	ACS3-CAEFA110	10,000 ± 100	394 ± 4
	ACS3-CAEFA120	20,000 ± 100	787 ± 4

F100 ~ F180 models

A3 / B3 motor, right-angle connector

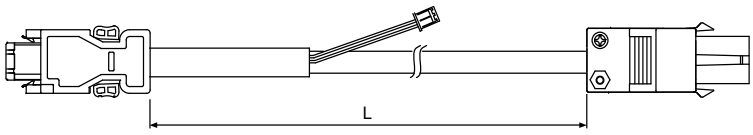


Cable	Model Name	L	
		mm	inch
Standard	ACS3-CRENA103	3,000 ± 50	118 ± 2
	ACS3-CRENA105	5,000 ± 50	197 ± 2
	ACS3-CRENA110	10,000 ± 100	394 ± 4
	ACS3-CRENA120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CREFA103	3,000 ± 50	118 ± 2
	ACS3-CREFA105	5,000 ± 50	197 ± 2
	ACS3-CREFA110	10,000 ± 100	394 ± 4
	ACS3-CREFA120	20,000 ± 100	787 ± 4

Absolute Encoder Connection Cable

F40 ~ F80 models

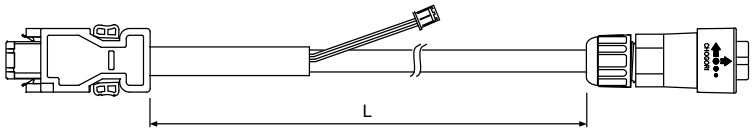
A3 / B3 motor



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CAEA0103	3,000 ± 50	118 ± 2
	ACS3-CAEA0105	5,000 ± 50	197 ± 2
	ACS3-CAEA0110	10,000 ± 100	394 ± 4
	ACS3-CAEA0120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEB0103	3,000 ± 50	118 ± 2
	ACS3-CAEB0105	5,000 ± 50	197 ± 2
	ACS3-CAEB0110	10,000 ± 100	394 ± 4
	ACS3-CAEB0120	20,000 ± 100	787 ± 4

F40 ~ F80 models

A3 / B3 motor, IP67 waterproof connector



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CAEA1103	3,000 ± 50	118 ± 2
	ACS3-CAEA1105	5,000 ± 50	197 ± 2
	ACS3-CAEA1110	10,000 ± 100	394 ± 4
	ACS3-CAEA1120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEB1103	3,000 ± 50	118 ± 2
	ACS3-CAEB1105	5,000 ± 50	197 ± 2
	ACS3-CAEB1110	10,000 ± 100	394 ± 4
	ACS3-CAEB1120	20,000 ± 100	787 ± 4

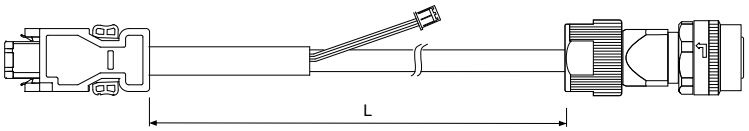
Ordering Information

Accessories

Absolute Encoder Connection Cable

F100 ~ F180 models

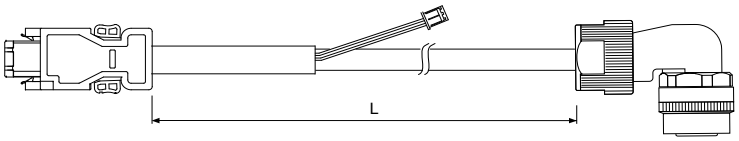
A3 / B3 motor, straight connector



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CAEAA103	3,000 ± 50	118 ± 2
	ACS3-CAEAA105	5,000 ± 50	197 ± 2
	ACS3-CAEAA110	10,000 ± 100	394 ± 4
	ACS3-CAEAA120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEBA103	3,000 ± 50	118 ± 2
	ACS3-CAEBA105	5,000 ± 50	197 ± 2
	ACS3-CAEBA110	10,000 ± 100	394 ± 4
	ACS3-CAEBA120	20,000 ± 100	787 ± 4

F100 ~ F180 models

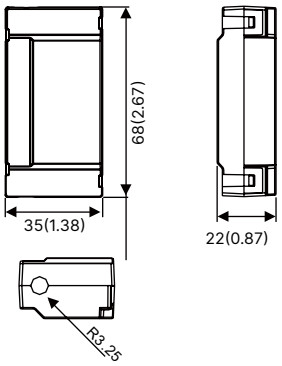
A3 / B3 motor, right-angle connector



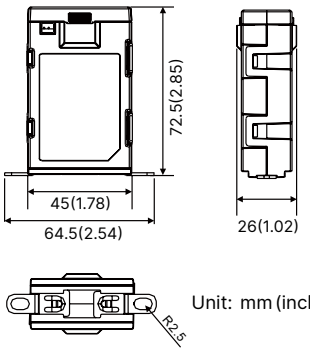
Cable	Model Name	L	
		mm	inch
Standard	ACS3-CREAA103	3,000 ± 50	118 ± 2
	ACS3-CREAA105	5,000 ± 50	197 ± 2
	ACS3-CREAA110	10,000 ± 100	394 ± 4
	ACS3-CREAA120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CREBA103	3,000 ± 50	118 ± 2
	ACS3-CREBA105	5,000 ± 50	197 ± 2
	ACS3-CREBA110	10,000 ± 100	394 ± 4
	ACS3-CREBA120	20,000 ± 100	787 ± 4

Absolute Battery Box

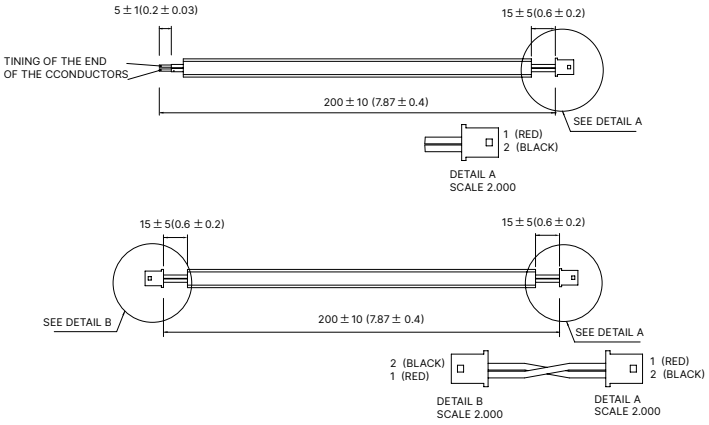
Single Battery Box
ASD-MDBT0100



Double Battery Box
ASD-MDBT0200



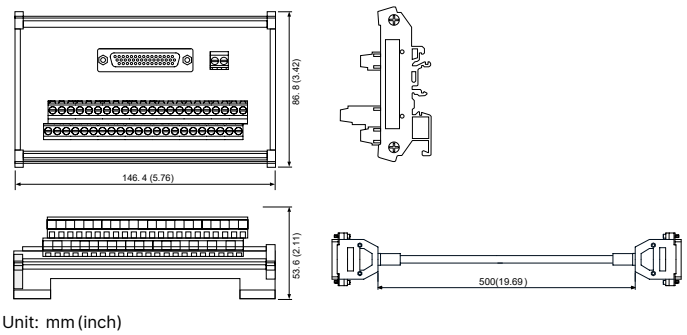
Unit: mm (inch)



Note: Contact Delta Global Service team if ordering battery box cord only

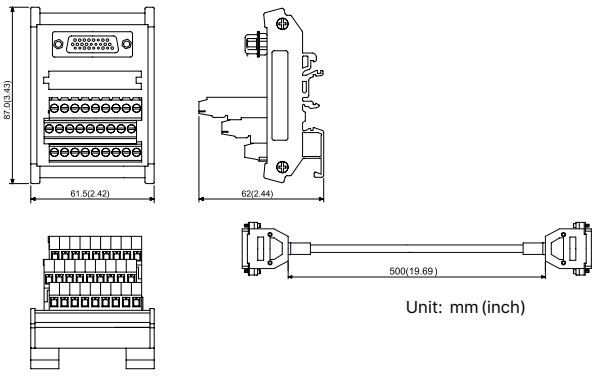
CN1 Terminal Block Module

ACS3-MDTB4400 (Applicable to B3-L models)



Unit: mm (inch)

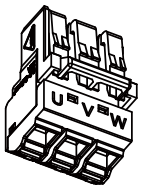
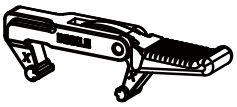
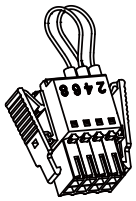
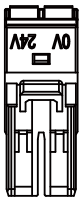
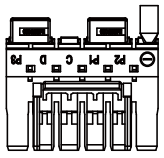
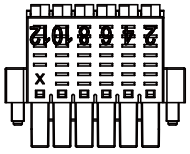
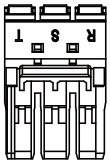
ACS3-MDTD2600 (Applicable to B3-M, F and E models)



Unit: mm (inch)

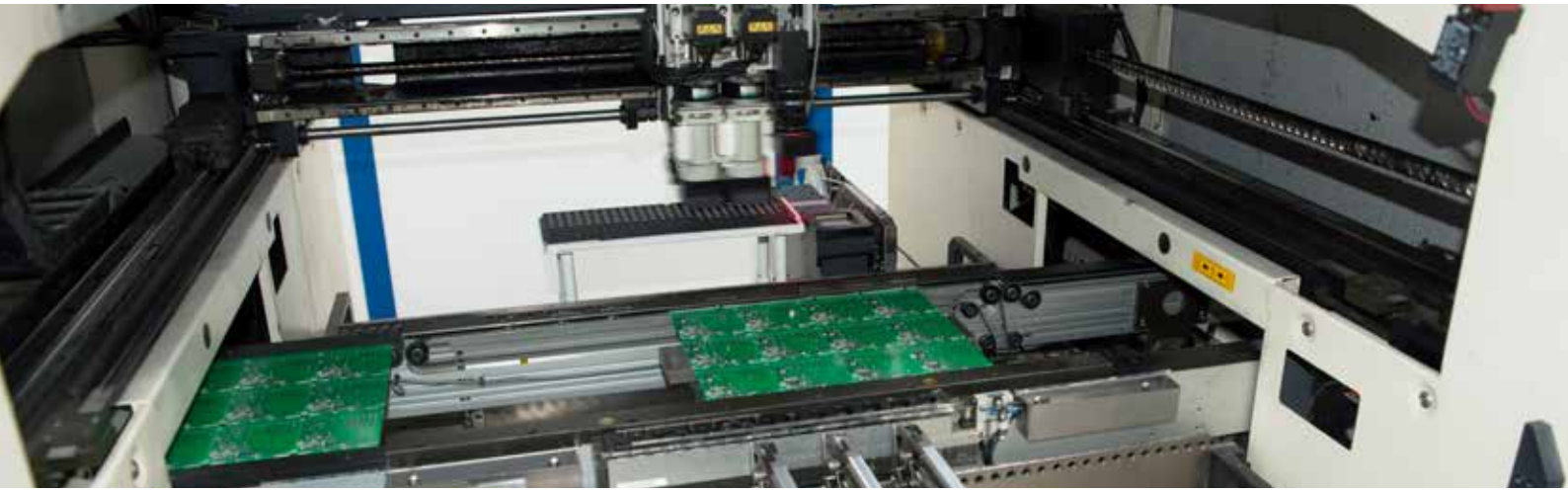
Ordering Information

A3-EP Accessory

Item	P/N	Picture
D	3050605646	
E	3479065500	
F	3050027000	
G	3050606846	
H	3050609246	
I	3050611946	
J	3050609346	

Servo Drive Standards

Standard	ASD-A3-EP servo drive conforms to the highest standards and recommendations for electrical industrial control equipment (IEC, EN)
EMC Immunity	EN61000-4-6 Level 3
	EN61000-4-3 Level 3
	EN61000-4-2 Level 2 & 3
	EN61000-4-4 Level 3
	EN61000-4-8 Level 4
	EN61000-4-5 Level 3
Conducted and Radiated EMC Interference of Servo Driv	EN61800-3 Level 3, with external EMC filter
CE Marking	Servo Drive with CE marking and conform to the European Union Low Voltage Directive (2014/35/EU) and EMC Directive (2014/30/EU)
Product Certification	UL (USA), KC (Korea), cUL (Canada)
STO	EN 61800-5-2:2007
	EN 61800-5-2:2017
	EN 61800-5-1:2007 + A1:2017, 4.3, 5.2.3.8, 5.2.6
	EN IEC 61800-3:2018
	EN 62061:2005 + AC:2010 + A1:2013 + A2:2015
	EN ISO 13849-1:2015
	EN 61508 Parts 1-7:2010
Product Certification	IEC/EN50178, IP20
Vibration Resistance Protection	20 Hz and below (1G), 20 ~ 50 Hz (0.6 G) conforms to IEC/EN50178
Shock Resistance Protection	15 gn 11 ms conforms to IEC/EN600028-2-27
Pollution Degree	Degree 2 conforms to IEC/EN61800-5-1
CE	EN 60034-1
Certification	UL, CE, cRUus
Protection Level	IP67
Vibration Resistance Protection	30 Hz ≦ f ≦ 2,000 Hz Fix Acceleration: 5 G
Energy Efficiency Certification	CHINA ENERGY (Power > 550 W)
Safety Card	IEC 61800-5-2/IEC 61508 /IEC 62061/ISO 13849-1/IEC 61800-5-2



Smarter. Greener. Together.

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