HOPEWIND

HD2000-Plus Series Low Voltage

Engineering Single-Drive/Multi-Drive Variable Frequency System

www.hopewind.com

Corporate Profile

Shenzhen Hopewind Electric Co., Ltd. (Stock Code: 603063) focuses on the R&D, manufacturing, sales and services of renewable energy & electric drive products, including products for wind power generation, photovoltaic generation, energy storage, hydrogen production power supply, power quality and electric drive. Furthermore, Hopewind owns integrated independent R&D and testing platforms of high-power power electrical equipment and monitoring systems. Through innovation in technology and service, Hopewind continuously creates value for customers, and has become one of China's most competitive enterprises in the renewable energy field.

In the field of industrial drive, Hopewind provides a wide range of inverters with various voltage and power classes, mainly including HV350 series low-voltage general purpose inverter, HV510 series low-voltage high-performance inverter, HV610 series crane inverter, HV500 series low-voltage engineering single drive inverter, HD2000 series low-voltage engineering inverter, HD8000 series medium-voltage engineering inverter, etc., and also provides solutions for 0.75kW~22400kW low-voltage inverter and 4MVA~102MVA (single inverter) medium-voltage inverter. These products can be widely used in metallurgy, petroleum and petrochemical, mining machinery, port lifting, distributed energy generation, large-scale testing platforms, marine equipment, textiles, chemicals, cement, municipal and various other industrial applications.

6 R&D and manufacturing bases

Shenzhen, Suzhou, Xi'an, Heyuan, Wuhan, Hungary

30+ global service bases

Deployed worldwide to provide comprehensive services for global customers

Headquarter
Shenzhen

Variable Frequency Drive Products

01 HV350 Series General Purpose Inverter Selection Manual

02 HV510 Series High-Performance Inverter Selection Manual

03 HV610 Series Crane Inverter

04 HV500 Serise High Performance VFD

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HD2000-Plus Series Inverter

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HD2000-Plus-S Series Low Voltage Engineering Single-Drive Variable Frequency System

Product Overview

The **HD2000-Plus-S Low Voltage Engineering Single Drive System** is a product line launched by Hopewind for high-end industrial applications. This series offers a rich product portfolio, including Single Drive VFD Units (VFU), Motor Drive Units (MDU), and SiC-based single drive models.

It supports the drive control of both induction motors and permanent magnet synchronous motors (PMSMs) by adopting high-performance vector control technology. The system features excellent dynamic performance, robust overload capacity, extensive expandable functions, and stable control performance. Equipped with user-programmable functions, a background monitoring software suite, and diverse communication bus options, it fully meets the diversified application requirements in high-end industrial scenarios.

Type Designation

HD2000 - 36 B 1100 4 B -S -C +STO

Series Name:
HD2000: hopeDrive Series Low Voltage Engineering Drive

Topology / Function
36: VFD Unit (VFU)　　56: Motor Drive Unit (MDU)

Structure Type
B: Unit Product

Rated Current
1100: 1100 A

Voltage Class
4: 400 V (380 V ~ 480 V)　　6: 690 V (500 V ~ 690 V)

Brake Unit Option
B: Built-in Brake Unit　　Null: No Brake Unit

Unit Type
-S: Single Drive Type　　Null: Multi Drive Type

SiC Model Option
-C: SiC Series Model　　Null: Standard Model

STO Function Option
+STO: With Safe Torque Off (STO) Function　　Null: Without STO Function

HD2000-Plus-S Series Low Voltage Engineering Single-Drive Variable Frequency System

HD2000-S Product Features

▶ High Reliability

- Independent air duct design for the entire unit, with sensitive components fully isolated from the air channel.
- Meets 3M3 mechanical vibration rating during full-load operation.
- Automatic three-proof paint spraying, plus fully automated testing for single boards and the complete unit.

▶ Strong Adaptability

- Standard LCD display keypad for convenient on-site parameter setting and status information display.
- Supports speed and torque control for both induction motors and permanent magnet synchronous motors.
- Supports V/F control, open-loop vector control, and closed-loop vector control.
- Supports multiple voltage input class: 400V (380V ~ 480V) and 690V (500V ~ 690V).
- Book-style design for seamless side-by-side mounting, minimizing footprint.
- Optional bottom roller assembly (for F8~F11, 11U frames) are available for easy installation and maintenance.

▶ Rich Functions

- Supports external 24V power supply for communication and control, ensuring safe and efficient commissioning.
- Integrated brake unit design optimizes space utilization within the cabinet.
- Built-in DC reactor (for F5~F10 frames) is standard, improving power factor and reducing harmonic distortion.
- Supports STO (Safe Torque Off) function, complying with international safety standards.
- Standard Modbus RTU, with optional communication protocols including Profibus-DP, ProfiNet, CANopen, Modbus TCP, EtherCAT, and EtherNet/IP.
- Supports various expansion cards: communication cards, encoder cards, I/O expansion cards, etc.
- Supports hopelnsight Pro commissioning software, featuring real-time control and monitoring, batch parameter setting, fault data download and waveform analysis, 12-channel high-speed oscilloscope, event logging, and extensive editing functions.

▶ Outstanding Performance

- Master-slave communication interface is standard, supporting master-slave synchronous control.
- Supports low-speed speed detection and zero-speed holding control.
- Supports automatic online switching between CLVC and OLVC, minimizing unnecessary losses caused by encoder failure and unexpected downtime.
- Supports customizable function blocks and parameter source selection, enabling non-standard customer requirements without modifying software code.
- Control Performance Specifications:

  Speed control accuracy: OLVC 0.2%, CLVC 0.01%

  Speed response: ≤100 ms (under vector control)

  Torque control accuracy: ≤5% (under vector control)

  Torque response: ≤5 ms (under vector control)

  Equivalent dynamic speed drop: OLVC ≤0.5%*s, CLVC ≤0.3%*s

hopeInsight Pro Commissioning Software

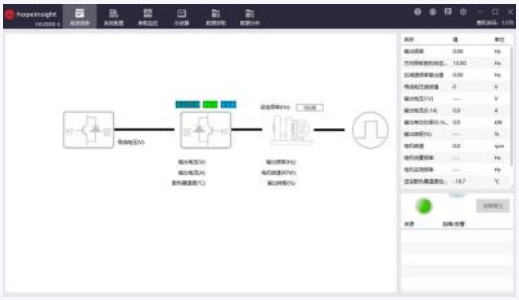
hopeInsight Pro is a rapid commissioning software tool developed by Hopewind for drive system design. It supports project-based engineering management, allowing users to easily manage files and data comprehensively through project import and export.

The HD2000-S connects to the PC backend via a serial port (HVCOM-USB communication adapter). This software supports both online and offline programming, with features including real-time online control and monitoring, batch parameter setting, fault data download and waveform analysis, a 12-channel high-speed oscilloscope, event logging, and extensive editing capabilities.

Its working diagram is shown below:

HD2000-Plus-S Low Voltage Engineering Single Drive System

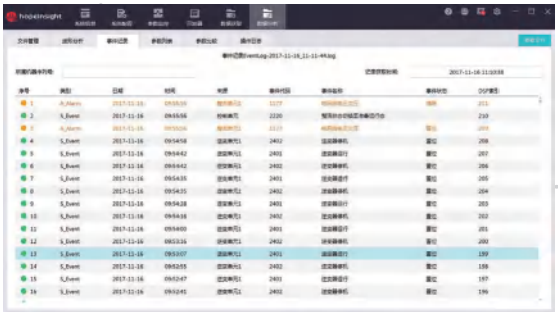
hopeInsight Pro Commissioning Software



Homepage of hopeInsight Pro Commissioning Software

▶ **Batch Parameter Setting Function**

▶ **12-channel High-Speed Software Oscilloscope – A Powerful Tool for Commissioning Engineers**



▶ **Powerful Fault Waveform Recording & Detailed Event Logging – Greatly Facilitates Fault Diagnosis**

Operator Panel

The HIC300-OP-30 is a new-generation intelligent operation keypad launched by Hopewind. It features fully upgraded functions and performance, rich display information, a user-friendly interface, and simple operation. It supports multiple functions including multi-language selection, large-capacity storage, online commissioning, maintenance and firmware upgrade via PC connection, keypad control, parameter setting, status monitoring, fault logging, and parameter cloning.

HD2000-Plus

Technical Specifications

Item		Specification & Description
Power Input & Output	Input Voltage	380Vac (-15%) ~ 480Vac (+10%) 3-phase 500Vac (-15%) ~ 690Vac (+10%) 3-phase 4: 410Vdc ~ 780Vdc 6: 560Vdc ~ 1100Vdc
	Input Power Frequency	50Hz/60Hz ±5%
	Input Voltage Unbalance	≤3%
	Output Voltage	0V ~ Input Voltage
	Output Frequency	0Hz ~ 500Hz
Main Control Performance	Motor Type	AC Induction Motor, Permanent Magnet Synchronous Motor (PMSM)
	Control Mode	V/F, OLVC (Open-Loop Vector Control), CLVC (Closed-Loop Vector Control)
	Speed Regulation Range	1:10 (V/F) 1:200 (OLVC) 1:1000 (CLVC)
	Starting Torque	V/F: 100% (0.5Hz) OLVC: 150% (0.5Hz) CLVC: 200% (0Hz)
	Torque Accuracy	≤5% under vector control
	Torque Ripple	≤5% under vector control
	Speed Stability	OLVC 0.2% CLVC 0.01%
	Torque Response	≤5ms under vector control
	Equivalent Dynamic Speed Drop	OLVC≤0.5%*s CLVC≤0.3%*s
	Acceleration/Deceleration Time	0.0s ~ 3200.0s, 0.0min ~ 3200.0min
	Overload Capacity	Heavy-duty application: 150% 1min/5min Light-duty application: 110% 1min/5min
	V/F Curve	Multiple modes: linear V/F curve, five torque reduction characteristic curves with different exponents (1.2, 1.4, 1.6, 1.8, 2.0), and user-defined V/F curve.
	Input Frequency Resolution	Digital setting: 0.01Hz, Analog setting: 0.01Hz
Main Control Functions	Acceleration/Deceleration Curves	Linear, S-curve
	Multi-speed Operation	Achieves 16-speed operation via control terminals
	Automatic Voltage Regulation (AVR)	Automatically maintains constant output voltage when grid voltage fluctuates within a certain range
	Fixed-length Control	Implements set-length control
	Built-in PID	Conveniently constructs a closed-loop control system
	Enhanced Functions	Free function blocks, parameter source selection
Input/Output Functions	Frequency Setting Modes	Keypad setting, UP/DOWN terminals, multi-speed setting, terminal pulse setting, communication, etc.
	24V Power Input	Standard external 24V DC input port
	Analog Input	AI1: 0V~10V / -10V~10V AI2: 0V~10V / (4) mA~20mA
	Analog Output	2-channel 0V~10V / (4) mA~20mA
	Digital Input	DI1~DI6: 6 programmable digital input terminals with optical isolation, compatible with sink/source input
	Digital Output	DIO1: Fast pulse output, general input / output DIO2: Fast pulse input, general input / output
	Relay Output	2-channel normally open or normally closed contact output; 250V AC/30V DC, 3A
	Motor Temperature Detection	Standard support type: PT100/PT1000/KTY84; Optional support for PTC
	Intelligent Operation Keypad	Standard LCD display keypad
	Safety Functions	Safe Torque Off (STO) (Optional)
Communication	Communication Protocols	Modbus RTU as standard; Optional support for Profibus-DP, Profinet, CANopen, Modbus TCP, EtherCAT, EtherNet/IP
Operating Environment	Altitude	No derating required at altitudes ≤2000m; For 2000m~4000m, current must be derated by 1% per 100m increase; 690V series supports up to 3000m altitude
	Ambient Temperature	No derating at -15°C ~ +40°C; Derating required at +40°C ~ +55°C, with current derated by 1% per 1°C increase
	Humidity	5% ~ 95%, non-condensing
	Vibration	3M3, IEC 60721-3-3
	Storage Temperature	-40°C ~ +70°C
	Installation Site	Indoor, no direct sunlight, free from flammable/corrosive gases, liquids and conductive particles
Optional Accessories		I/O terminal expansion card, encoder card, communication expansion card, voltage detection card, etc.
Protection Functions		Short circuit, overcurrent, overload, overvoltage, undervoltage, phase loss, overheating, external fault, etc.
Installation Method		Panel/cabinet mounting
Ingress Protection		IP20
Cooling Method		Forced air cooling

HD2000-Plus-S Single Drive VFD Selection

The HD2000-Plus-S low voltage engineering single drive series includes the VFD Unit (VFU), Motor Drive Unit (MDU), and SiC based models. The VFD Unit (VFU) is an AC DC AC drive, while the Motor Drive Unit (MDU) is a DC AC inverter. The series is equipped with an integrated controller. The controller and keypad are factory integrated into the unit, with no additional purchase required.

Frame Weight

Frame	Weight (kg)	Frame	Weight (kg)	Frame	Weight (kg)
F3	5.6	F9	130	6U	37
F4	7.7	F10	142	7U	53
F5	26.7	F11	224	8U	52
F6	50	3U	5.6	9U	69
F7	75	4U	7.7	10U	94
F8	105	5U	29.5	11U	224

VFD Unit (VFU)

Model	Rated		Light load		Heavy load		Frame	Dimensions W×H×D (mm)
	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)		
Three-Phase AC 400V (380V~480V)								
HD2000-36B00174B-S	17	7.5	16	7.5	15	5.5	F3	132*393*258
HD2000-36B00254B-S	25	11	24	11	22	7.5		
HD2000-36B00324B-S	32	15	31	15	28	11		
HD2000-36B00384B-S	38	18.5	37	18.5	34	15		
HD2000-36B00464B-S	46	22	45	22	41	18.5	F4	133*441*297
HD2000-36B00604B-S	60	30	58	30	53	22		
HD2000-36B00754-S	75	37	73	37	67	30	F5	240*501*334
HD2000-36B00914-S	91	45	88	45	81	37		
HD2000-36B01254-S	125	55	121	55	111	45	F6	295*593*386
HD2000-36B01564-S	156	75	151	75	139	55		
HD2000-36B01804-S	180	90	175	90	160	75		
HD2000-36B02144-S	214	110	208	110	191	90	F7	340*724*405
HD2000-36B02654-S	265	132	257	132	236	110		
HD2000-36B03124-S	312	160	303	160	278	132		
HD2000-36B03804-S	380	200	369	200	338	160	F8	300*880*450
HD2000-36B04154-S	415	220	403	220	369	200		
HD2000-36B04904-S	490	250	475	250	436	220	F9	300*980*545
HD2000-36B05804-S	580	315	563	315	516	280		
HD2000-36B06704-S	670	355	650	355	596	315	F10	300*1100*545
HD2000-36B07354-S	735	400	713	400	654	355		
HD2000-36B08204-S	820	450	795	450	730	400		
HD2000-36B08604-S	860	500	834	500	765	450	F11	330*1220*590
HD2000-36B09854-S	985	560	955	560	877	500		
HD2000-36B11004-S	1100	630	1067	630	979	560		
Three-Phase AC 690V (500V~690V)								
HD2000-36B00636-S	63	55	61	55	56	45	F6	295*593*386
HD2000-36B00866-S	86	75	83	75	77	55		
HD2000-36B01016-S	101	90	97	90	89	75		
HD2000-36B01216-S	121	110	117	110	108	90	F7	340*724*405
HD2000-36B01516-S	151	132	147	132	134	110		
HD2000-36B01766-S	176	160	171	160	157	132		
HD2000-36B02156-S	215	200	209	200	191	160	F8	300*880*450
HD2000-36B02606-S	260	250	252	250	231	200		
HD2000-36B03306-S	330	315	320	315	294	250	F9	300*980*545
HD2000-36B04106-S	410	400	398	400	365	355		
HD2000-36B04656-S	465	450	451	450	414	400	F10	300*1100*545
HD2000-36B05106-S	510	500	495	500	454	450		
HD2000-36B05756-S	575	560	558	560	512	500		
HD2000-36B06506-S	650	630	631	630	579	560	F11	330*1220*590
HD2000-36B07356-S	735	710	713	710	654	630		
HD2000-36B08106-S	810	800	786	800	721	710		

Notes:

1. Frame sizes F3 and F4 are factory-equipped with an integrated braking unit as standard.
2. Frame sizes F5 to F11 offer an optional integrated braking unit, indicated by appending a "B" suffix to the model number (e.g., HD2000-36B0B204B-S).
3. Frame sizes F5 to F10 are factory-equipped with an integrated DC reactor as standard. Frame sizes F3 and F4 do not include a DC reactor as standard, users may externally install a DC reactor or AC reactor per application requirements. Frame size F11 does not include a DC reactor, an AC input reactor must be externally installed for operation, refer to the product user manual for recommended input reactor specifications.

HD2000-Plus-S Single Drive VFD Selection

Motor Drive Unit (MDU)

Model	Rated		Light load		Heavy load		Frame	Dimensions W×H×D (mm)
	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)		
Three-Phase AC 400V (380V~480V), DC Link Voltage: 410V~780V								
HD2000-56B00174B-S	17	7.5	16	7.5	15	5.5	3U	132*393*258
HD2000-56B00254B-S	25	11	24	11	22	7.5		
HD2000-56B00324B-S	32	15	31	15	28	11		
HD2000-56B00384B-S	38	18.5	37	18.5	34	15		
HD2000-56B00464B-S	46	22	45	22	41	18.5	4U	132*441*298
HD2000-56B00604B-S	60	30	58	30	53	22		
HD2000-56B00754-S	75	37	73	37	67	30	5U	140*500*335
HD2000-56B00914-S	91	45	88	45	81	37		
HD2000-56B01254-S	125	55	121	55	111	45	6U	165*592*385
HD2000-56B01564-S	156	75	151	75	139	55		
HD2000-56B01804-S	180	90	175	90	160	75		
HD2000-56B02144-S	214	110	208	110	191	90	7U	175*724*407
HD2000-56B02654-S	265	132	257	132	236	110		
HD2000-56B03124-S	312	160	303	160	278	132		
HD2000-56B03804-S	380	200	369	200	338	160	8U	165*750*450
HD2000-56B04904-S	490	250	475	250	436	220	9U	170*825*545
HD2000-56B05804-S	580	315	563	315	516	280		
HD2000-56B07354-S	735	400	713	400	654	355	10U	210*1020*545
HD2000-56B08204-S	820	450	795	450	730	400		
HD2000-56B08604-S	860	500	834	500	765	450	11U	330*1220*590
HD2000-56B09854-S	985	560	955	560	877	500		
HD2000-56B11004-S	1100	630	1067	630	979	560		
HD2000-56B12604-S	1260	710	1222	710	1121	630		
Three-Phase AC 690V (500V~690V), DC Link Voltage: 560V~1100V								
HD2000-56B00636-S	63	55	61	55	56	45	6U	165*592*385
HD2000-56B00866-S	86	75	83	75	77	55		
HD2000-56B01016-S	101	90	97	90	89	75		
HD2000-56B01216-S	121	110	117	110	108	90	7U	175*724*407
HD2000-56B01516-S	151	132	147	132	134	110		
HD2000-56B01766-S	176	160	171	160	157	132		
HD2000-56B02156-S	215	200	209	200	191	160	8U	165*750*450
HD2000-56B02606-S	260	250	252	250	231	200		
HD2000-56B03306-S	330	315	320	315	294	250	9U	170*825*545
HD2000-56B04106-S	410	400	398	400	365	355		
HD2000-56B04656-S	465	450	451	450	414	400	10U	210*1020*545
HD2000-56B05106-S	510	500	495	500	454	450		
HD2000-56B05756-S	575	560	558	560	512	500		
HD2000-56B06506-S	650	630	631	630	579	560	11U	330*1220*590
HD2000-56B07356-S	735	710	713	710	654	630		
HD2000-56B08106-S	810	800	786	800	721	710		

Notes:

1. The single-drive motor unit features an integrated controller. The controller and keypad are factory-integrated into the unit, with no separate purchase required.
2. Frame sizes 3U and 4U are factory-equipped with an integrated braking unit as standard.
3. Frame sizes 5U to 11U offer an optional integrated braking unit, indicated by appending a "B" suffix to the model number (e.g., HD2000-36B0B304B-S).

HD2000-Plus-S Single Drive VFD Selection (SiC Series)

The SiC series VFD incorporates silicon carbide (SiC) power components, delivering higher switching frequency, lower conduction losses, enhanced voltage withstand capability, and improved thermal stability. These features make it particularly well-suited for high-output frequency and high-switching frequency applications.

VFD Unit (VFU)-SiC Series

Model	Rated		Light load		Heavy load		Frame	Dimensions W×H×D (mm)
	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)		
Three-Phase AC 400V (380V~480V)								
HD2000-36B03804-S-C	380	200	369	200	338	160	F8	300*880*450
HD2000-36B05804-S-C	580	315	563	315	516	280	F9	300*980*545
HD2000-36B07354-S-C	735	400	713	400	654	355	F10	300*1100*545
HD2000-36B08604-S-C	860	500	834	500	765	450	F11	330*1220*590
HD2000-36B11004-S-C	1100	630	1067	630	979	560		
Three-Phase AC 690V (500V~690V)								
HD2000-36B02606-S-C	260	250	252	250	231	200	F8	300*880*450
HD2000-36B04106-S-C	410	400	398	400	365	355	F9	300*980*545
HD2000-36B05756-S-C	575	560	558	560	512	500	F10	300*1100*545
HD2000-36B08106-S-C	810	800	786	800	721	710	F11	330*1220*590

Notes:
1. This series is designed for high-output frequency and high-carrier frequency applications.
2. All models support an optional integrated braking unit, indicated by appending a "B" suffix to the model number (e.g., HD2000-36B0B604B-S-C).
3. Frame sizes F8 to F10 come with a factory-integrated DC reactor as standard. Frame size F11 is not equipped with a DC reactor, an AC input reactor must be externally installed for operation, refer to the product user manual for recommended input reactor specifications.

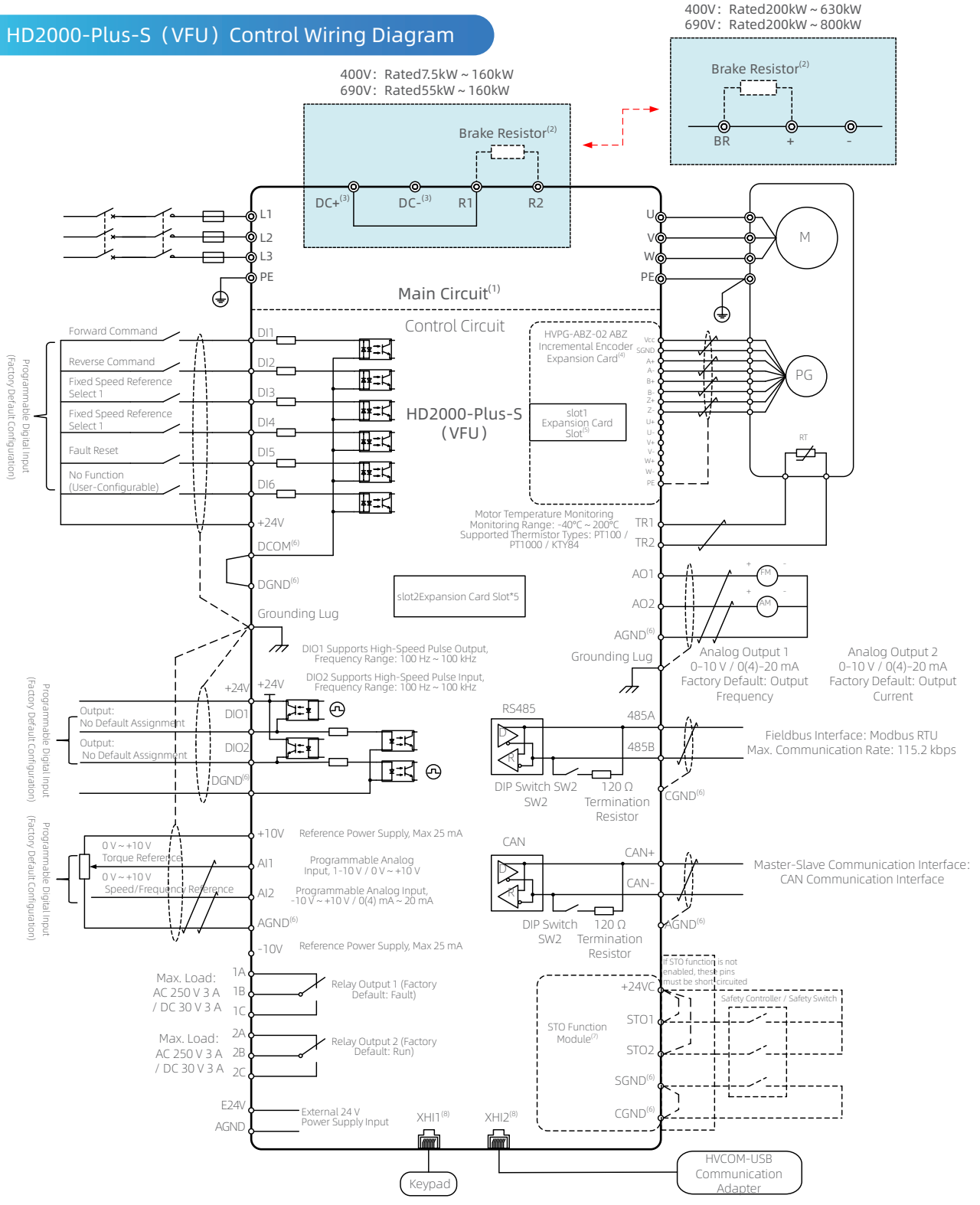
Motor Drive Unit (MDU)-SiC Series

Model	Rated		Light load		Heavy load		Frame	Dimensions W×H×D (mm)
	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)		
Three-Phase AC 400V (380V~480V), DC Link Voltage: 410V~780V								
HD2000-56B03804-S-C	380	200	369	200	338	160	8U	165*750*450
HD2000-56B05804-S-C	580	315	563	315	516	280	9U	170*825*545
HD2000-56B07354-S-C	735	400	713	400	654	355	10U	210*1020*545
HD2000-56B08604-S-C	860	500	834	500	765	450	11U	330*1220*590
HD2000-56B11004-S-C	1100	630	1067	630	979	560		
Three-Phase AC 690V (500V~690V), DC Link Voltage: 560V~1100V								
HD2000-56B02606-S-C	260	250	252	250	231	200	8U	165*750*450
HD2000-56B04106-S-C	410	400	398	400	365	355	9U	170*825*545
HD2000-56B05756-S-C	575	560	558	560	512	500	10U	210*1020*545
HD2000-56B08106-S-C	810	800	786	800	721	710	11U	330*1220*590

Notes:
1. The single-drive motor unit (SiC series) incorporates an integrated controller. The controller and keypad are factory-integrated into the unit, with no separate purchase required.
2. Frame sizes 8U to 11U offer an optional integrated braking unit, indicated by appending a "B" suffix to the model number (e.g., HD2000-36B0B804B-S-C).

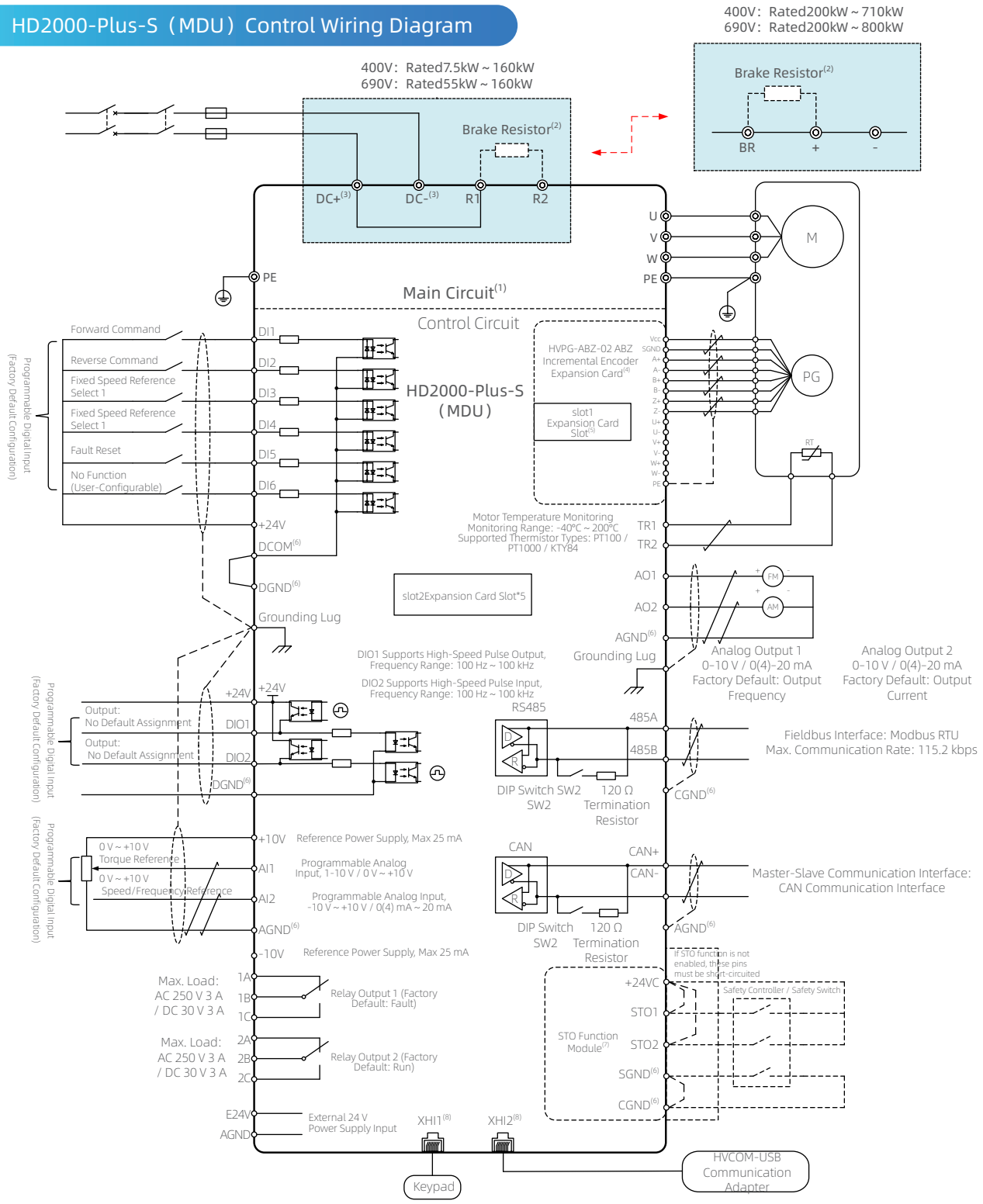
Control Wiring Diagram

HD2000-Plus-S（VFU）Control Wiring Diagram



1. F3 and F4 models come standard with a braking unit; F5 to F11 models support optional braking units.
2. Before using the braking unit, set the "Braking Unit Installation Enable" bit to 1 to activate the function.
3. No encoder control loop wiring is required when operating in encoderless control mode. The standard wiring diagram only shows connections for the commonly used ABZ incremental encoder card; different encoder expansion cards are available depending on the encoder type.
4. Expansion card slots support encoder expansion cards, communication expansion cards, and other types of expansion cards. Except for the CANopen communication card, other expansion cards have no installation position requirements for SLOT1 and SLOT2. The CANopen communication card can only be installed in SLOT2.
5. DCOM is the common terminal for DI inputs. DI terminals can be configured as source-type or sink-type inputs by connecting DCOM to +24 V, DGND, or other external power supplies.
6. The STO function module meets SIL 3 / PL e safety levels and is factory pre-configured as an option.
7. XHI1 is the keypad interface; XHI2 is the background commissioning software interface.

HD2000-Plus-S（MDU）Control Wiring Diagram



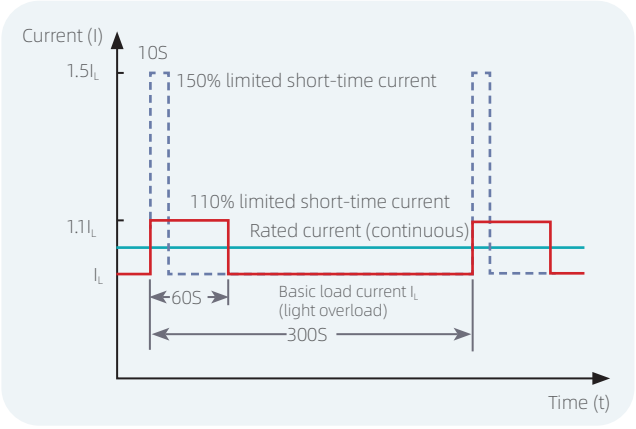
1. 3U and 4U models come standard with a braking unit; 8U~11U models support optional braking units.
2. Before using the braking unit, set the "Braking Unit Installation Enable" bit to 1 to activate the function.
3. For common DC bus applications, no integrated soft-start is provided for the downstream circuit. Soft-start functionality must be implemented by the customer.
4. Expansion card slots support encoder expansion cards, communication expansion cards, and other types of expansion cards. Except for the CANopen communication card, other expansion cards have no installation position requirements for SLOT1 and SLOT2. The CANopen communication card can only be installed in SLOT2.
5. DCOM is the common terminal for DI inputs. DI terminals can be configured as source-type or sink-type inputs by connecting DCOM to +24 V, DGND, or other external power supplies.
6. The STO function module meets SIL 3 / PL e safety levels and is factory pre-configured as an option.
7. XHI1 is the keypad interface; XHI2 is the background commissioning software interface.

HD2000-Plus-S Single Drive Optional Accessories

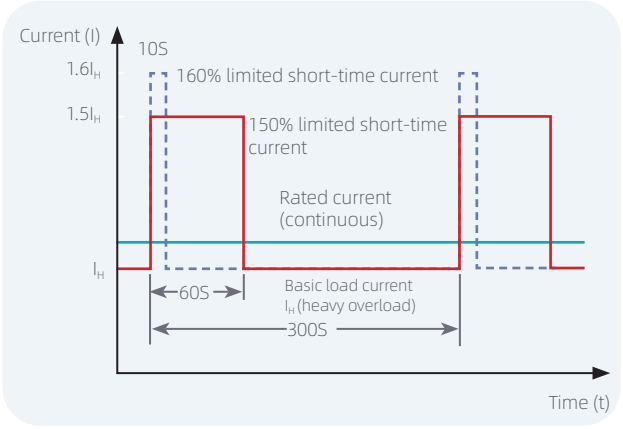
Item	Model	Description
Encoder Card	HVPG-ABZ-02	Supports TTL/HTL incremental encoders
	HVPG-ROT-02	Supports resolver-type encoders
I/O Expansion Card	HVIO-04	Provides 3 digital inputs, 1 digital output, 1 analog input (-10 V ~ 10 V), 2 analog outputs (0 ~ 10 V / 0 ~ 20 mA), 1 temperature input (PT100, PT1000, KTY84), and 1 relay output
	HVIO-05	Provides 1 analog input (0 ~ 20 mA), 2 analog outputs (0 ~ 20 mA), 1 temperature input (PT100, PT1000, PTC), and 1 relay output
Voltage Detection Card	HVVMU-20	Grid-side/motor-side voltage detection
Communication Card	HVCOM-DP-H	Supports Profibus DP communication
	HVCOM-PN-H	Supports ProfiNet IO communication
	HVCOM-CA	Supports CANopen communication
	HVCOM-TP-H	Supports Modbus TCP communication
	HVCOM-EC-H	Supports EtherCAT communication
	HVCOM-EN-H	Supports EtherNet/IP communication
Operator Panel	HIC300-OP-30	LCD panel (mounting base included as standard)
Keypad Mounting Base	HVKMB	Allows the base to be mounted at a designated location for controlling the drive via the keypad
Communication Adapter	HVCOM-USB	Enables serial communication with a PC, primarily for connection to Hopewind's proprietary hopinsight Pro commissioning software.

Overload Capability

- The basic load current (I_L) for light overload mode is defined based on either a 110% load cycle for 60s or a 150% load cycle for 10s.



- The basic load current (I_H) for heavy overload mode is defined based on either a 150% load cycle for 60s or a 160% load cycle for 10s.



HD2000-Plus Series Low Voltage Engineering Multi Drive Variable Frequency System

Product Overview

The HD2000-Plus is Hopewind's next-generation, high-end, modular multi-drive system, engineered for demanding industrial applications. It delivers outstanding performance, reliability, and power density in a single platform. With modular hardware and application-focused software design, it supports advanced control functions, including high-precision, high-response speed and torque regulation. Built for flexible system integration, it also features comprehensive protection, extensive expandability, and simplified maintenance, making it ideal for the diverse requirements of complex industrial environments.

- **Key Features:** Multi-drive, standalone unit, unit cabinet, 2/4-quadrant operation
- **Modular design:** for flexible application diversity and system integration integrity
- **Comprehensive rectifier:** Diode rectifier, smart rectifier, PWM rectifier
- **Voltage class:** 400 V, 690 V, 1140 V, 1380 V
- **Maximum single-unit power:** 1400 kW (air-cooled), 2800 kW (liquid-cooled
- **Maximum parallel power:** 11200 kW (air-cooled), 22400 kW (liquid-cooled)
- **Compatible motors:** Induction motors, permanent magnet synchronous motors
- **Control modes:** V/F control, Closed-loop Vector Control (CLVC), Open-loop Vector Control (OLVC)
- **Cooling methods:** Air-cooled (standard), liquid-cooled (L)

HD2000-Plus Series Low Voltage Engineering Multi Drive Variable Frequency System

Type Designation

HD2000 - 56 B 1260 4 B L-S-C +L +Q

Series Name:
HD2000: hopeDrive Series Low Voltage Engineering Drive

Code:
50: Basic rectifier (diode type) 51: Basic rectifier (thyristor type)
36: VFU 14: LCL filter (without built-in main contactor)
52: Smart rectifier 15: LCL filter (with built-in main contactor)
53: PWM rectifier 18: Centralized brake 19: Distributed brake
56: Motor drive 21: Output reactor (1 unit installed in cabinet)
30: Incoming control cabinet 35: DC/DC converter
22: Output reactor (2 units installed in cabinet)

Structure Type: B: Unit Product; D: Cabinet Product

Rated Current: 1260: 1260 A

Voltage Class: 4: 400 V (380 V ~ 480 V); 6: 690 V (500 V ~ 690 V); 9: 1140 V; A: 1380 V1380V

Braking Option: B: With built-in brake; NULL: Without built-in brake

Cooling Method: L: Liquid-cooled version; NULL: Air-cooled version

Motor Drive Unit Type: S: Single-drive type; NULL: Multi-drive type

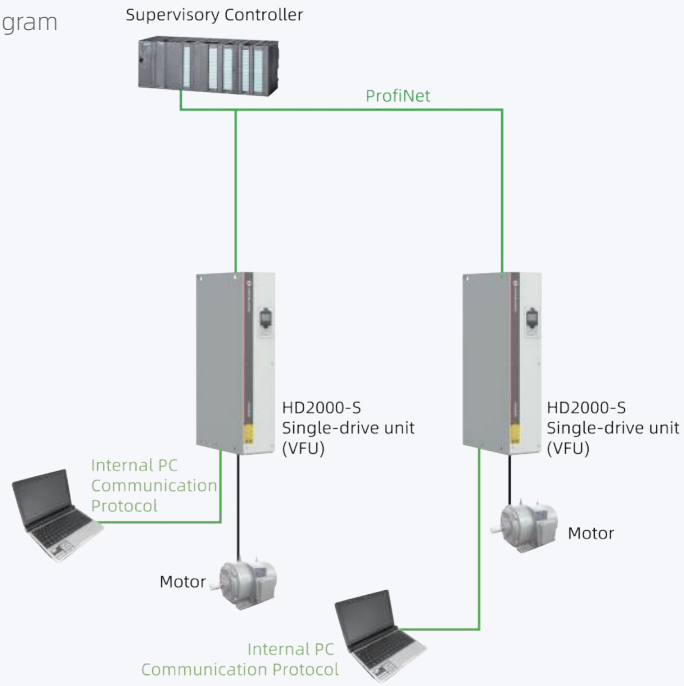
SiC Version: C: SiC series version; NULL: Standard version

Output Reactor Option: +L: Output reactor included in cabinet; NULL: Without output reactor

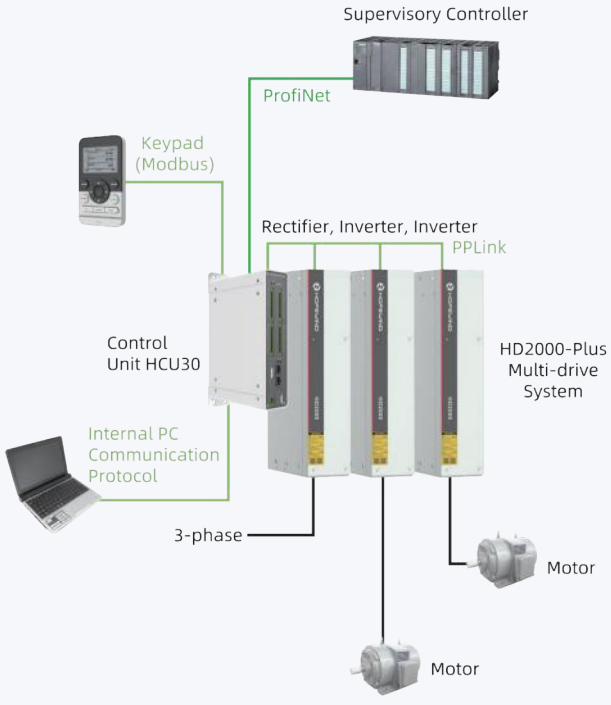
DC Bus Switch Option: +Q: DC switch included in cabinet; NULL: Without DC switch

Single-drive and Multi-drive Concept Diagram

Single-drive Concept Diagram



Multi-drive Concept Diagram



HD2000-Plus Series Low Voltage Engineering Multi Drive

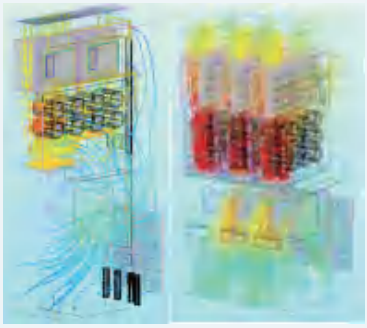
Product Features

▶ Engineering Reliability

- Cooling channels and internal components are isolated separately, effectively improving adaptability and reliability in harsh environments.
- Long-life thermal design optimizes the service life of consumable components such as fans and capacitors.
- High-thermal-capacity heat sinks ensure stable operation under transient high-load conditions.
- Compact, high-integration design saves space while maintaining superior performance.
- Fiber-optic communication between the control system and power unit significantly enhances EMI immunity.
- Modular design supports flexible application diversity and seamless system integration.

▶ Easy Maintenance

- Intelligent fault diagnosis system for fast troubleshooting.
- No special tools required, enabling simple and convenient maintenance.
- Modular components support quick assembly/disassembly, improving maintenance efficiency.



▶ High Adaptability

- High-altitude: no derating required up to 2000 m.
- Three rectifier options to meet diverse application requirements.
- Comprehensive product portfolio: available as standalone units or complete cabinet solutions.
- Supports single-drive and common DC bus multi-drive systems.
- Parallel operation of multiple power units for high-power applications.
- Supports multiple communication protocols: Modbus RTU, Profibus-DP, ProfiNet, CANopen, Modbus TCP, EtherCAT, EtherNet/IP, etc.

▶ High Seismic Performance

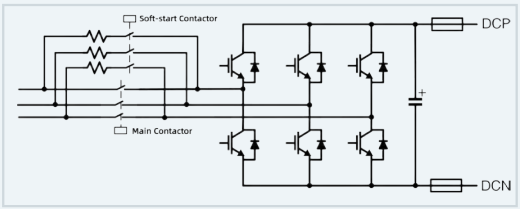
- Operates normally under IEC 60721 3M5 mechanical conditions
- Precision mechanical design ensures superior seismic resistance.

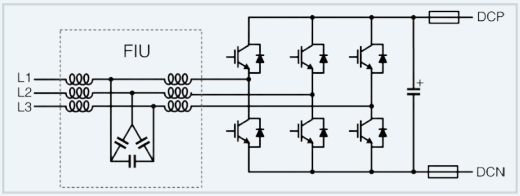
▶ Rich HMI Tools

- High-performance LCD keypad for on-site parameter setting, status display, etc.
- PC connectivity via hopeInsight Pro software enables intelligent fault recording, diagnostics, etc.

Performance Advantages

▶ Four-Quadrant Technology





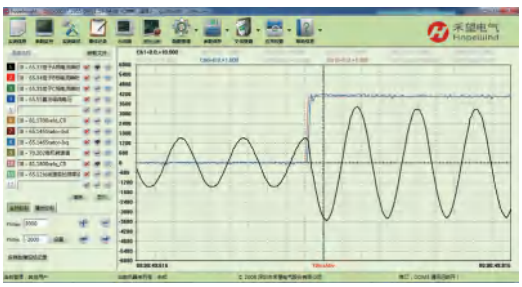
Key Technical Features

- Smart Regenerative Rectification Technology
- PWM-Controlled Rectification Technology

Technical Advantages

- Smart Regenerative Rectification Technology
  - ① Four-quadrant operation with fast energy regeneration response
  - ② Simple and reliable triggering scheme
- PWM-Controlled Rectification Technology
  - ① Low harmonic grid current, high power factor, and fast regeneration response
  - ② Independent positive/negative sequence current control with active damping hysteresis loop control significantly enhances grid adaptability, offering superior performance in unbalanced grids and weak grids (with harmonics and distortion)
  - ③ Controllable DC bus voltage for wider grid compatibility

▶ High Torque Response



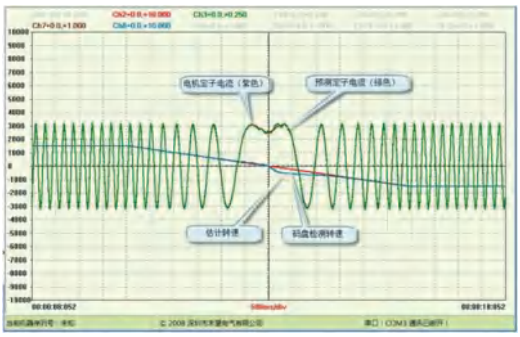
Key Technical Features

- Torque current response time of approx. 2 ms when rated torque is applied stepwise in torque control mode

Technical Advantages

- High decoupling of flux and torque currents delivers strong load capability, wide speed range, and superior dynamic performance

▶ Flux Observation and Speed Estimation



Key Technical Features

- A full-order closed-loop flux observer adaptively identifies motor speed and stator resistance based on stator current estimation errors and estimated rotor flux values. This overcomes errors caused by motor parameter variations and integral drift in open-loop speed estimation, reducing sensitivity to motor parameters.

Technical Advantages

- Accurate flux observation and speed estimation model ensures 150% high starting torque at 0.5 Hz in OLVC control mode.

HD2000-Plus Series Low Voltage Engineering Multi Drive

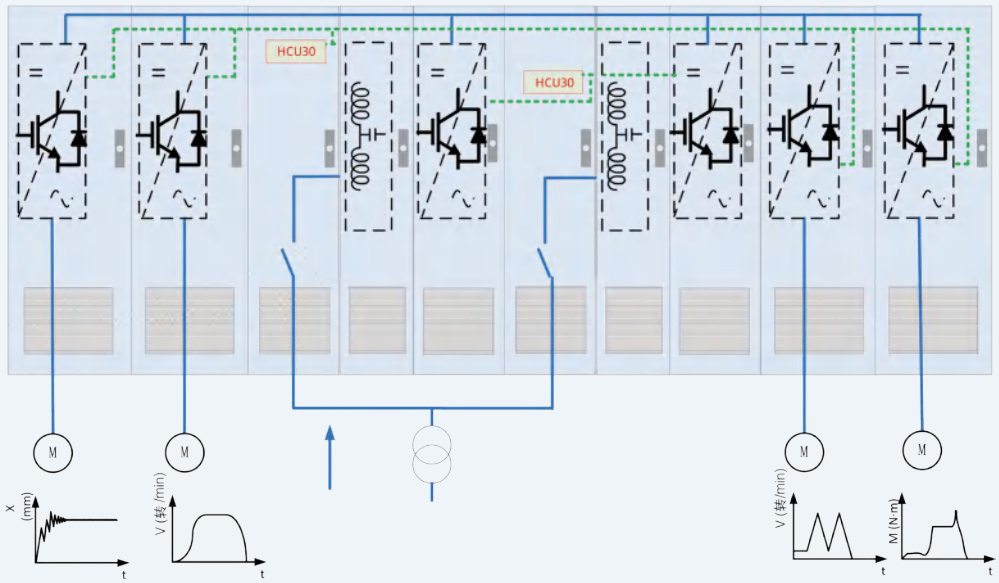
▶ Multi-Axis Composite Control

Key Technical Features

- The HCU30 control unit supports both vector and V/F control, and can simultaneously drive up to 4 vector axes or 4 V/F axes.

Technical Advantages

- Ideal for multi-axis composite control in large and complex drive systems.



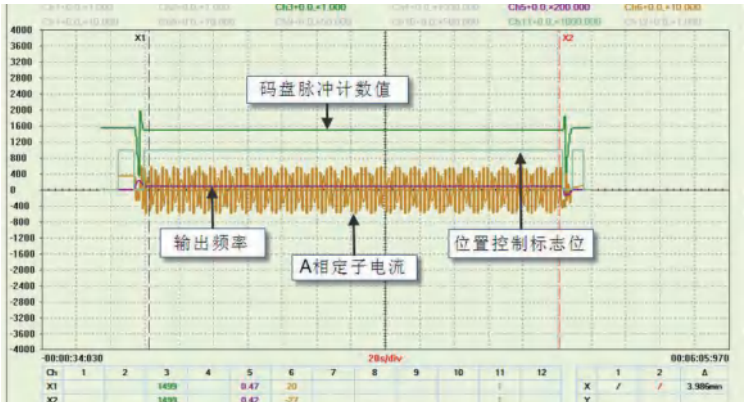
▶ Zero-Speed Holding Control

Key Technical Features

- Ultra-low speed detection with high torque control at zero speed

Technical Advantages

- FPGA-based ultra-low speed detection, combined with proprietary zero-speed holding control, delivers precise, reliable, safe and stable performance.



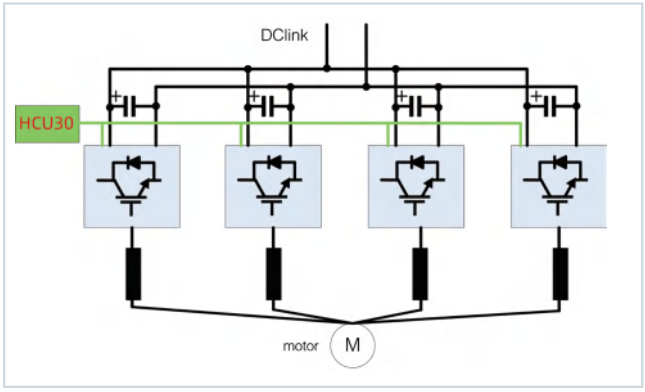
▶ Direct Parallel Technology

Key Technical Features

- In parallel operation, load current imbalance between units due to variations in drive systems or power hardware is addressed by control system synchronization and parallel current-sharing technology, which adjusts output currents in real time to achieve balanced load current control.

Technical Advantages

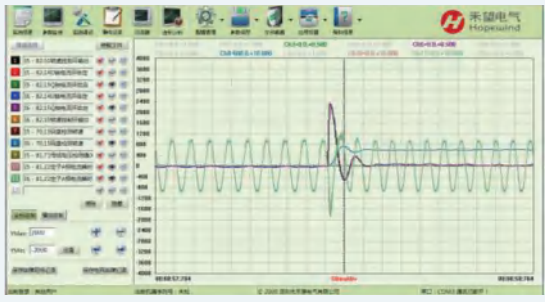
- System can operate in derated mode if one unit fails.
- Centralized control with distributed execution and fiber-optic communication enables reliable direct parallel connection of units.
- Nanosecond-level synchronization and parallel current-sharing technology support direct parallel connection of multiple rectifier and inverter units.



▶ Multi-Motor Synchronization and Load Balancing Control

Key Technical Features

- Multiple motors driving a common load achieve synchronous or proportional synchronization via bearings, gears, chains, conveyors, etc. Flexible parameter interlinking enables master/slave control, zero static error load balancing, and millisecond-level dynamic load balancing, with free switching between master/slave modes for special applications.



Technical Advantages

- Decentralized multi-axis controller and power modules connected via high-speed fiber-optic communication for optimal synchronization.
- Torsional vibration suppression, anti-slip control, and precise speed synchronization with load balancing.
  Droop control enables automatic speed and load balancing without encoders.

HD2000-Plus Series Low Voltage Engineering Multi Drive

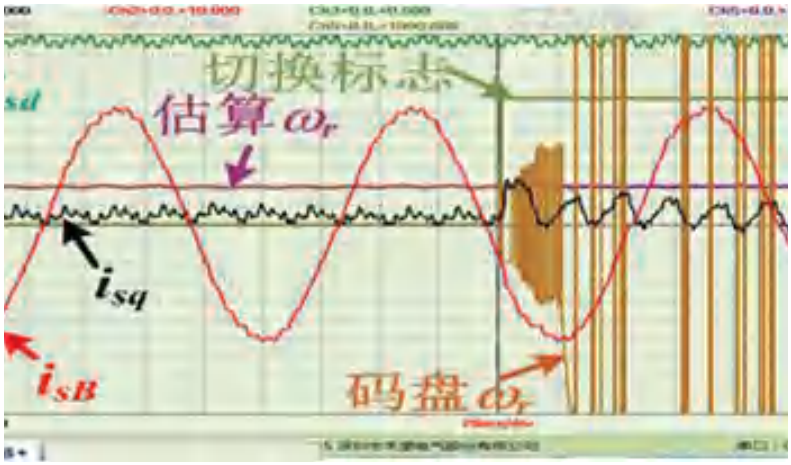
▶ CLVC and OLVC On-Line Automatic Switchover

Key Technical Features

- During CLVC operation, the motor speed is observed in real time using a precise motor model. The system automatically switches to OLVC mode if the encoder fails, and can switch back to CLVC mode once the encoder is restored.

Technical Advantages

- Reduces unplanned downtime and losses caused by encoder faults, meeting the requirements of special applications. In hoisting applications, combined with brake logic, it improves overhead crane safety.
- Smooth speed transition with no current inrush during mode switching.



Product Reliability Assurance

▶ R&D Capability

- Control algorithm simulation platform
- Industry-leading simulation and validation platform
- The industry's most comprehensive motor test platform
- FEA-based thermal, magnetic field, and mechanical
- Simulation platform

  Industry-leading high-power drive product development platform

▶ Standardized Production & Factory Testing

- Automated test control with full lifecycle traceability
- 100% rated voltage full-load burn-in test for all products prior to shipment
- Industry-leading dedicated test platform supports full-load testing of drives with different voltage levels and rectifier types, ensuring product quality

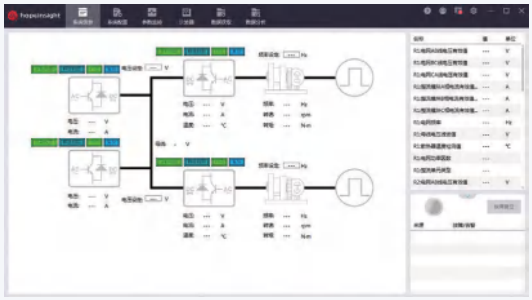
hopeInsight Pro Back-End Fast Commissioning Software

hopeInsight Pro is a fast commissioning software tool developed by Hopewind for drive system. It supports project-based engineering management, allowing users to easily manage files and data holistically by importing and exporting projects. The HD2000-Plus (HCU30) connects to the PC back-end via Ethernet using TCP/IP (wired connection), with the default IP address set to: 192.168.1.111.

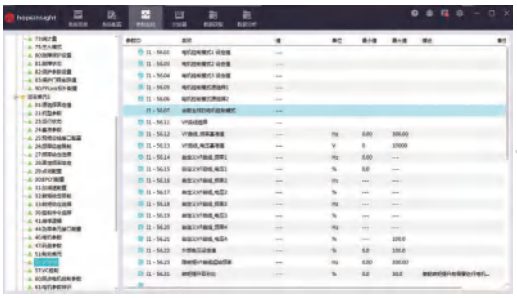
The software supports both online and offline programming, with functions including real-time online control and monitoring, batch parameter configuration, fault data download and waveform analysis, a 12-channel high-speed oscilloscope, event logging, and comprehensive editing tools. The working diagram is shown below:

HD2000-Plus Series Multi-Drive System

hopeInsight Pro Fast Commissioning Software

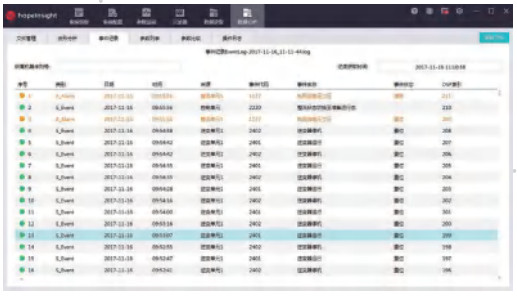


hopeInsight Pro Commissioning Software Working Diagram



▶ **Batch Parameter Configuration**

▶ **12-Channel High-Speed Software Oscilloscope, A Key Tool for Commissioning Engineers**



▶ **Powerful Fault Recording with Detailed Event Logging for Efficient Fault Diagnosis**

HCU30 Control Unit

Product Overview

The HCU30 control unit is the core component of the drive, providing the hardware platform for control software, as well as internal and external I/O and communication interfaces.

▶ Key Features

- Developed on the Zynq platform with fully upgraded functionality and performance.
- Supports both single-axis and multi-axis drive applications.
- Supports up to 12 fiber-optic ports.
- Back-end communication rate up to 100 MHz.
- 512 M memory capacity.
- Supports simultaneous connection of 2 encoder modules.
- Supports parallel connection of up to 8 units to a single control unit.
- Supports up to 10 000 event records.
- Data acquisition time < 10 s.

Type Designation

HCU30 - PN - 1 - 6

Controller Series Name:
HCU30

Fieldbus Type:

DP: Profibus DP	PN: ProfiNet IO
MR: Modbus RTU	TP: Modbus TCP
CA: CANopen	EC: EtherCAT
EN: EtherNet IP	NA: No communication

Function Type:

1: Standard firmware	3: DC-DC converter firmware
2: 3-level drive firmware	4: Shaft generator / power supply firmware

Fiber Optic Port:
3: 3 fiber ports 6: 6 fiber ports 12: 12 fiber ports

Main Functions

No.	Item	Description
1	Communication Functions	Communication with rectifier units or motor drive units
2		Communication with the supervisory control system
3		Communication with PC
4		Communication with the operation panel
5		Communication with expansion modules
6	Digital Interfaces	External digital input or output
7	Analog Interfaces	External analog input or output
8	Control	Control of rectifier units, inverter units, and interface units

Structural Dimensions

Maximum overall dimensions (W × H × D) (mm)	56 × 280 × 174
Weight	≤ 2 kg
Protection rating	IP20

HCU30 Control Unit

Technical Parameters

Item	Quantity	Specifications	Remarks
Digital Input	10	Electrical isolation: 5V Input voltage range: 0V ~ 30V Input current (typical): 10mA @ 24VDC Input high level: 15V ~ 30V Input low level: 0V ~ 5V Input delay (typical): 300μs	X1
Digital Input/ Output	8	Used as DI: Channel 2 supports fast pulse input Input voltage range: 0V ~ 30V Input current (typical): 10mA @ 24VDC Input high level: 15V ~ 30V Input low level: 0V ~ 5V Input delay (typical): 5μs Input frequency (fast): 1Hz ~ 100kHz Used as DO: Channel 1 is a fast pulse output interface Output high level: 22V ~ 24V Load capacity: 500mA (sum of currents for all DO loads shall not exceed 2A) Output delay (typical): 100μs (normal), 5μs (fast) Output frequency (fast): 0.1kHz ~ 100kHz	X2
Relay	3	Contact type: Form C Contact load capacity: 2A Contact voltage: 250VAC or 30VDC Mechanical life: 100,000 operations	X12
Analog Output	2	Output voltage: -12.5V ~ +12.5V Load capacity: 10mA Resolution: 12-bit Accuracy: 1% Others: Overcurrent protection (20mA)	X11 Input and output types are configurable via software
		Output current: -25mA ~ +25mA Load capacity: 500Ω Resolution: 12-bit Accuracy: 1%	
Analog Input	2	Input voltage: -12.5V ~ +12.5V Input impedance: 14kΩ Resolution: 12-bit Accuracy: 1%	
		Input current: -25mA ~ +25mA Input impedance: 100Ω Resolution: 12-bit Accuracy: 1% Others: Short-circuit protection	
Reference Voltage Output	1	Output voltage: -10V and +10V Load capacity: 10mA Accuracy: 1% Others: Short-circuit protection (20mA)	/
Fieldbus Communication	1	External interface: Profibus-DP, CANopen, Profinet IO, Modbus RTU, Modbus TCP, EtherCAT, EtherNet/IP (on-board, only one supported at a time) External baud rate: Compliant with specified communication protocol standards Internal interface: SCI Internal baud rate: < 625kbps	X3 Supported protocols can be selected by using different optional modules
PP-Link Fiber Interface	3 ~ 12	Interface: PP-Link Connector: Plastic optical fiber Baud rate: 10Mbps Communication distance: 50m	For master-slave control, 1 master-1 slave direct connection, multi-slave daisy chain connection via fiber; or for connecting power modules/expansion modules
Keyboard Interface	1	Interface: RS485/RS422 Baud rate: < 250kbps Communication distance: 50m	X28 RS485 is used for keypad connection
Back-end Commissioning Interface	1	External interface: Ethernet External baud rate: 10/100Mbps Internal interface: SCI Internal baud rate: 9600bps ~ 921600bps (dynamically switchable) Communication distance: 50m	X27
Input Power Supply	1	Input voltage: 24VDC (-15% ~ +20%) Input current: ≥1A Safety standard: SELV	X4
CAN Master/ Slave & RS485 Synchronization	2	Interface: CAN/485 Baud rate: < 1Mbps/16Mbps Communication distance: (1Mbps) 40m / 1200m Default termination: 240Ω (switchable to 360Ω via software)	X30、X31 Isolated communication; CAN master/slave and RS485 can be used simultaneously

Note: Interface modules and encoder modules are sold as accessories with the control unit.

Operator Panel

The HIC300-OP-30 is a new-generation intelligent operation keypad launched by Hopewind. It features fully upgraded functions and performance, rich display information, a user-friendly interface, and simple operation. It supports multiple functions including multi-language selection, large-capacity storage, online commissioning, maintenance and firmware upgrade via PC connection, keypad control, parameter setting, status monitoring, fault logging, and parameter cloning.

Encoder Module

The encoder module is mainly used to detect motor speed and temperature, and is used in conjunction with low-voltage engineering multi-drive units.

Application Scope	Multi-axis Motor Drive Unit	
Encoder Model	HIC300-EIM10	HIC300-EIM30
Resolver	Supported	-
Incremental Encoder (TTL/HTL)	-	Supported
Temperature Signal Detection	Supported	Supported
Maximum Overall Dimensions (W × H × D, mm)	34 × 188 × 118 (wall-mounted)	

Technical Specifications

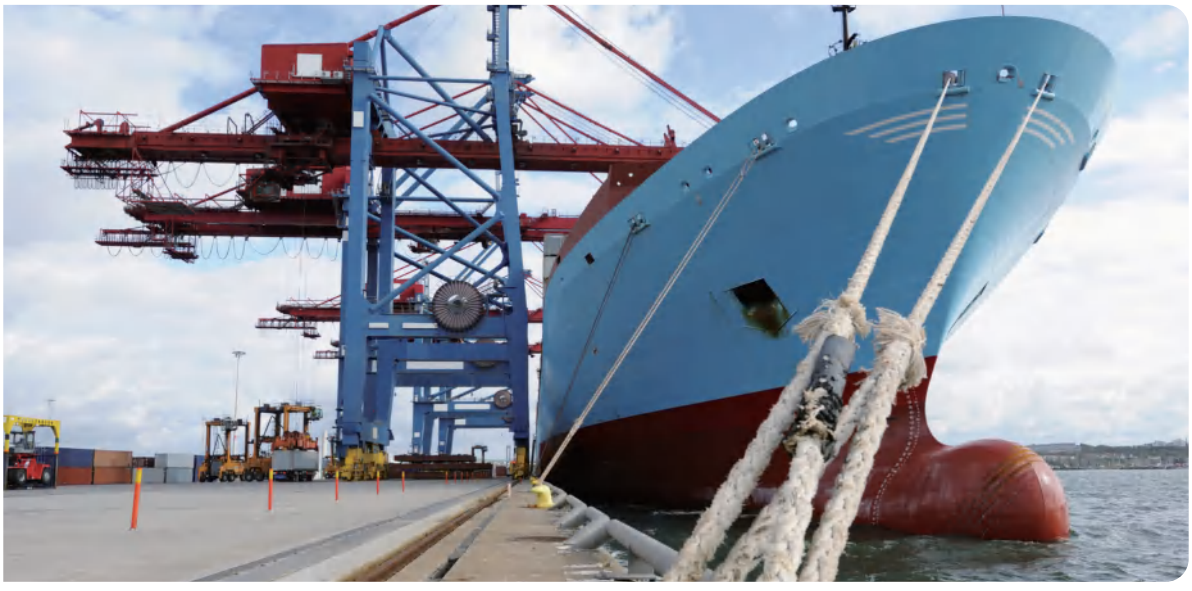
HD2000-Plus Series Low Voltage Engineering Multi Drive

Item		Specification & Description
Basic Rectifier	Input voltage	4：380V～480V，6：500V～690V
	Input frequency	（50Hz/60Hz）±6%
	Output voltage	Input voltage * 1.32 (Under full-load condition)
	Overload capacity	Relative overload at 150% of rated current for 60 seconds, maximum current (Imax), DC overload for 5 seconds
	Operating efficiency	≥99% Efficiency
	Protection eunctions	Protection functions: Overheating protection, soft-start protection, Interlock protection, and more.
Intelligent rectifier	Input voltage	4：380V～480V，6: 500V～690V
	Input frequency	47～63Hz
	Output voltage	Input voltage * 1.3 (Under full-load condition)
	Overload capacity	Relative overload at 150% of rated current for 60 Seconds, Maximum current (Imax), DC overload for 5 seconds, with a duty cycle of 300s.
	Operating efficiency	≥98.5% Efficiency
	Protection functions	Protection functions: Overheating protection, Overcurrent protection, IGBT pass-through protection, and more
PWM rectifier	Input voltage	4：380V~480V，6：500V~690V，9：1140V，A：1380V
	Input frequency	47～63Hz
	Output voltage	Input voltage * 1.5 (Under rated conditions)
	Overload capacity	Relative overload at 150% of rated current for 60 seconds, Maximum current (Imax), DC overload for 5 seconds
	Operating efficiency	≥98% Efficiency (Including LCL filter unit)
	Power factor	Adjustable (Factory setting at 1)
	Protection functions	Protection functions: Overheating protection, Overcurrent protection, Overload protection, IGBT pass-through protection, and more.
Inverter	Rated Input voltage	4：410Vdc～780Vdc，6：550Vdc～1100Vdc，9：1488Vdc～2200Vdc，A：1488Vdc~2200Vdc
	Output voltage	0～Rectifier AC input voltage
	Output frequency	0～500Hz
	Speed range	V/F：1:50 OLVC：1:200 CLVC：1:1000
	Speed stability	OLVC：0.2% CLVC：0.01%
	Speed fluctuation	OLVC：0.2% CLVC：0.1%
	Starting torque	OLVC：150%(0.5Hz) CLVC：200%(0Hz)
	Torque control	V/F: Unsupported OLVC：Supported CLVC: supported
	Torque accuracy	OLVC：5% CLVC：5%
	Torque response time	OLVC：5ms CLVC：5ms
	Speed response time	OLVC：100ms CLVC：100ms
	Dynamic speed drop equivalent	OLVC：0.5%*s CLVC：0.3%*s
Environmental conditions	Temperature	-15℃～+40℃ Without derating, +40℃～+55℃ derating applies
	Humidity	5%～95% Non-condensing
	Altitude	≤4000m, Derating applies from 2000m to 4000m
Mechanical data	Anti-vibration performance	Complies with IEC 60721-3-3:2002
	Protection level	IP00 / IP20 / IP40
	Protection Rating	Complies with UL 508C-2004
	Cooling method	Air-cooled, Liquid-cooled

DCDC

Item		Specification
Main Control Performance & Functions	High-side DC Voltage	4: 540 Vdc ~ 750 Vdc; 6: 750 Vdc ~ 1100 Vdc
	Low-side DC Voltage	4: 24 Vdc ~ 670 Vdc; 6: 24 Vdc ~ 1000 Vdc
	Overload Capability	Light Overload Duty: 150% of rated current In for 10 s every 300 s Heavy Overload Duty: 127.5% of rated current In for 60 s every 300 s
	Efficiency	≥ 98%
	Response Time	≤ 5 ms
	Control Modes	High-side Constant Voltage Mode, Low-side Constant Voltage Mode, Low-side Constant Current Mode
	Control Functions	Power/Current Limiting, Master-Slave Competition, Master-Slave Current Sharing, Droop Control
Communication	Communication Protocols	Modbus RTU, Profibus-DP, ProfiNet, CANopen, Modbus TCP, EtherCAT, EtherNet/IP
Operating Environment	Altitude	No derating required up to 2000 m; from 2000 m to 4000 m, derate current by 1% per 100 m increase
	Ambient Temperature	-15 °C ~ +40 °C (no derating); +40 °C ~ +55 °C (derated operation: derate current by 1% per 1 °C increase)
	Humidity	5% ~ 95%, non-condensing
	Vibration	3M5 (per IEC 60721-3-3)
	Storage Temperature	-40 °C ~ +70 °C
	Installation Location	Indoor use only; no direct sunlight; free of flammable/corrosive gases, liquids, and conductive particles
Installation Method		Cabinet-mounted
Protection Rating		IP00, IP20
Cooling Method		Air-cooled, liquid-cooled

Notes: 1. Ensure the high-side voltage is higher than the low-side voltage, with a voltage difference greater than 0.1 times the high-side voltage.
2. When the switching frequency is increased to 4 kHz (default: 3 kHz), derate the current by 20%.
3. If the high-side or low-side voltage is below 200 Vdc, non-standard parameters are required. Please consult our technical support for confirmation.



HD2000-Plus Unit Selection (Air-Cooled)

The HD2000-Plus series air-cooled units include AC-DC rectifiers, DC-AC motor drive units, and DC-DC converters. These air-cooled units require appropriate matching protection components and secondary integration by the user before commissioning.

Air-Cooled Unit Frame Weight Information

Frame	Weight (kg)	Frame	Weight (kg)	Frame	Weight (kg)
DU	100	6U	37	11U	224
EU	187	7U	53	IU	362
3U	5.6	8U	52	JU	452
4U	7.7	9U	69	KU	582
5U	29.5	10U	94	LU	117

Note: This weight refers only to the net weight of the unit. For detailed specifications, please refer to the actual product

Basic Rectifier Unit (BRU): Performs 2-quadrant rectification on the grid voltage. It does not support energy regeneration, so a braking unit and braking resistor must be used to dissipate braking energy. A line reactor must be installed on the input side.

Smart Rectifier Unit (SRU): Performs 4-quadrant rectification on the grid voltage and supports energy regeneration. The DC bus voltage is not adjustable and is determined by the input grid voltage and load. A line reactor must be installed on the input side.

PWM Rectifier Unit (PRU): Performs 4-quadrant PWM rectification on the grid voltage, supports energy regeneration, and features an adjustable DC bus voltage. The input side must be used with an LCL Filter Interface Unit (FIU).

Item	Basic Rectifier Unit (BRU)	Smart Rectifier Unit (SRU)	PWM Rectifier Unit (PRU)
Energy Regeneration	Not Supported	Supported	Supported
DC Bus Voltage	Non-adjustable	Non-adjustable	Adjustable (Sinusoidal)
Power Factor	Low	Low	High (Factory-set adjustable cosΦ=1)
Harmonics	High	High	Low

Multi-Drive Basic Rectifier Unit (BRU)

Model	Rated Power (kW)	AC input current(A)		DC output current(A)			Frame Type	Dimensions W*H*D (mm)
		Rated Current I_N (A)	Max. Current I_{max} (A)	Rated Current I_{N_DC} (A)	Basic Load Current I_{h_DC} (A)	Max. Current I_{max_DC} (A)		
Three-Phase AC 400V (380V~480V)								
HD2000-51B01624	90	162	244	193	151	290	DU	310*1260*405
HD2000-51B01984	110	198	298	236	184	354		
HD2000-51B02384	132	238	357	283	221	425		
HD2000-51B02894	160	289	433	343	268	515		
HD2000-51B03614	200	361	541	429	335	644		
HD2000-51B04514	250	451	677	536	418	804		
HD2000-51B07224	400	722	1083	858	669	1287		
HD2000-51B10104	560	1010	1516	1201	937	1802	EU	310*1640*543
HD2000-51B12814	710	1281	1922	1523	1188	2285		
HD2000-50B16244	900	1624	2436	1931	1506	2896		
Three-Phase AC 690V (500V~690V)								
HD2000-51B00946	90	94	141	112	87	168	DU	310*1260*405
HD2000-51B01156	110	115	173	137	107	205		
HD2000-51B01386	132	138	207	164	128	246		
HD2000-51B01676	160	167	251	199	155	298		
HD2000-51B02096	200	209	314	249	194	373		
HD2000-51B02616	250	261	392	311	243	466		
HD2000-51B03716	355	371	557	441	344	662		
HD2000-51B05866	560	586	879	696	543	1045		
HD2000-51B09416	900	941	1412	1119	873	1679	EU	310*1640*543
HD2000-51B11516	1100	1151	1726	1368	1067	2052		
HD2000-50B15696	1500	1569	2353	1865	1455	2798		

HD2000-Plus Unit Selection (Air-Cooled)

Multi-Drive Smart Rectifier Unit (SRU)

Model	Rated Power (kW)	AC input current(A)		DC output current(A)			Frame Type	Dimensions W*H*D (mm)
		Rated Current I_N (A)	Max. Current I_{max} (A)	Rated Current I_{N_DC} (A)	Basic Load Current I_{h_DC} (A)	Max. Current I_{max_DC} (A)		
Three-Phase AC 400V (380V~480V)								
HD2000-52B00344	18.5	34	51	40	36	60	3U	132*393*258
HD2000-52B00554	30	55	82	65	58	98	4U	132*441*298
HD2000-52B00824	45	82	123	98	87	146	5U	140*500*335
HD2000-52B01654	90	165	246	195	174	293	6U	165*592*385
HD2000-52B02934	160	293	440	348	310	522	7U	175*724*407
HD2000-52B04014	220	401	602	449	400	674	8U	165*750*450
HD2000-52B05744	315	574	861	643	572	964	9U	170*825*545
HD2000-52B07294	400	729	1094	816	727	1225	10U	210*1020*545
HD2000-52B08204	450	820	1230	918	817	1378		
HD2000-52B10214	560	1021	1532	1144	1018	1715	11U	330*1220*590
HD2000-52B11484	630	1148	1722	1286	1144	1929		
HD2000-52B12944	710	1294	1941	1449	1290	2174		
HD2000-52B14584	800	1458	2187	1734	1353	2254	IU	707*1487*545
Three-Phase AC 690V (500V~690V)								
HD2000-52B00966	90	96	143	113	101	170	6U	165*592*385
HD2000-52B01706	160	170	255	202	180	303	7U	175*724*407
HD2000-52B02646	250	264	396	296	263	444	8U	165*750*450
HD2000-52B03336	315	333	500	373	332	559	9U	170*825*545
HD2000-52B04236	400	423	635	474	422	711		
HD2000-52B05286	500	528	792	591	526	887	10U	210*1020*545
HD2000-52B05926	560	592	888	663	590	995		
HD2000-52B07506	710	750	1125	840	748	1260	11U	330*1220*590
HD2000-52B08456	800	845	1268	946	842	1420		
HD2000-52B10576	1000	1057	1585	1256	1118	1884	IU	707*1487*545
HD2000-52B14796	1400	1479	2219	1759	1372	2287		
HD2000-52B16906	1600	1690	2535	2009	1567	2612		

Multi-Drive PWM Rectifier Unit (PRU)

Model	Rated Power (kW)	AC input current(A)		DC output current(A)			Frame Type	Dimensions W*H*D (mm)
		Rated Current I_N (A)	Max. Current I_{max} (A)	Rated Current I_{N_DC} (A)	Basic Load Current I_{h_DC} (A)	Max. Current I_{max_DC} (A)		
Three-Phase AC 400V (380V~480V)								
HD2000-53B00354	22	35	53	40	35	59	3U	132*393*258
HD2000-53B00594	37	59	89	66	59	100	4U	132*441*298
HD2000-53B00884	55	88	132	99	88	148	5U	140*500*335
HD2000-53B01454	90	145	217	162	144	242	6U	165*592*385
HD2000-53B01774	110	177	265	198	176	296		
HD2000-53B02134	132	213	320	238	212	357	7U	175*724*407
HD2000-53B02584	160	258	387	288	256	432		
HD2000-53B03204	200	320	480	358	319	538	8U	165*750*450
HD2000-53B04004	250	400	600	448	399	672		
HD2000-53B05704	355	570	855	638	568	958	9U	170*825*545
HD2000-53B07224	450	722	1083	809	720	1213	10U	210*1020*545
HD2000-53B08024	500	802	1203	898	799	1347		
HD2000-53B10104	630	1010	1515	1131	1007	1697	11U	330*1220*590
HD2000-53B12834	800	1283	1925	1437	1279	2155		
HD2000-53B14434	900	1443	2165	1617	1439	2425	IU	707*1487*545
Three-Phase AC 690V (500V~690V)								
HD2000-53B00856	90	85	126	94	83	141	6U	165*592*385
HD2000-53B01036	110	103	153	115	102	172		
HD2000-53B01246	132	124	186	138	123	207	7U	175*724*407
HD2000-53B01506	160	150	225	167	149	251		
HD2000-53B01886	200	188	282	209	186	314		
HD2000-53B02326	250	232	348	260	231	390	8U	165*750*450
HD2000-53B03306	355	330	495	370	329	554	9U	170*825*545
HD2000-53B04186	450	418	627	468	417	702		
HD2000-53B05206	560	520	780	582	518	874	10U	210*1020*545
HD2000-53B06606	710	660	990	739	658	1109	11U	330*1220*590
HD2000-53B08306	900	830	1245	930	827	1394		
HD2000-53B10236	1100	1023	1534	1145	1019	1718	IU	707*1487*545
HD2000-53B13026	1400	1302	1952	1458	1297	2187		
HD2000-53B14886	1600	1488	2231	1667	1484	2501		

HD2000-Plus Unit Selection (Air-Cooled)

Multi-Drive LCL Filter Interface Unit (FIU)

Model	AC input current(A)		Matched Rectifier Unit Model	Frame Type	Dimensions W*H*D (mm)
	Rated Current I_N (A)	Max. Current I_{max} (A)			
Three-Phase AC 400V (380V~480V)					
HD2000-15B02134	213	318	HD2000-53B02134	FU	325*1400*405
HD2000-15B02584	258	386	HD2000-53B02584		
HD2000-15B03454	345	518	HD2000-53B03204	GU	325*1530*543
HD2000-15B04814	481	722	HD2000-53B04004		
HD2000-14B06094	609	914	HD2000-53B05704	JU	505*1575*544
HD2000-14B07224	722	1083	HD2000-53B07224		
HD2000-14B08024	802	1203	HD2000-53B08024		
HD2000-14B10104	1010	1515	HD2000-53B10104	KU	505*1750*544
HD2000-14B12834	1283	1925	HD2000-53B12834		
HD2000-14B14434	1443	2165	HD2000-53B14434		
Three-Phase AC 690V (500V~690V)					
HD2000-15B01036	103	153	HD2000-53B01036	FU	325*1400*405
HD2000-15B01246	124	184	HD2000-53B01246		
HD2000-15B01506	150	223	HD2000-53B01506		
HD2000-15B01886	188	279	HD2000-53B01886	GU	325*1530*543
HD2000-15B02326	232	349	HD2000-53B02326		
HD2000-15B03726	372	558	HD2000-53B03306		
HD2000-14B04656	465	697	HD2000-53B04186	JU	505*1575*544
HD2000-14B05756	575	862	HD2000-53B05206		
HD2000-14B07446	744	1116	HD2000-53B06606	KU	505*1750*544
HD2000-14B08306	830	1245	HD2000-53B08306		
HD2000-14B10236	1023	1534	HD2000-53B10236		
HD2000-14B13026	1302	1952	HD2000-53B13026		
HD2000-14B14886	1488	2231	HD2000-53B14886		

Note: Products with frame type JU, KU (marked as 14B in model number) require external main contactor.

HCU30 control unit and HIC300-OP-30 operator panel must be purchased as supporting accessories when ordering motor drive unit.

Motor Drive Unit (MDU)

Model	Rated		Light Load		Heavy Load		Frame Type	Dimensions W*H*D (mm)
	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)		
Three-Phase AC 400V (380V~480V)，DC Circuit Voltage 410V~780V								
HD2000-56B00174B	17	7.5	16	7.5	15	5.5	3U	132*393*258
HD2000-56B00254B	25	11	24	11	22	7.5		
HD2000-56B00324B	32	15	31	15	28	11		
HD2000-56B00384B	38	18.5	37	18.5	34	15		
HD2000-56B00464B	46	22	45	22	41	18.5	4U	132*441*298
HD2000-56B00604B	60	30	58	30	53	22		
HD2000-56B00754	75	37	73	37	67	30	5U	140*500*335
HD2000-56B00914	91	45	88	45	81	37		
HD2000-56B01254	125	55	121	55	111	45	6U	165*592*385
HD2000-56B01564	156	75	151	75	139	55		
HD2000-56B01804	180	90	175	90	160	75		
HD2000-56B02144	214	110	208	110	191	90	7U	175*724*407
HD2000-56B02654	265	132	257	132	236	110		
HD2000-56B03124	312	160	303	160	278	132		
HD2000-56B03804	380	200	369	200	338	160	8U	165*750*450
HD2000-56B04904	490	250	475	250	436	220	9U	170*825*545
HD2000-56B05804	580	315	563	315	516	280		
HD2000-56B07354	735	400	713	400	654	355	10U	210*1020*545
HD2000-56B08204	820	450	795	450	730	400		
HD2000-56B08604	860	500	834	500	765	450	11U	330*1220*590
HD2000-56B09854	985	560	955	560	877	500		
HD2000-56B11004	1100	630	1067	630	979	560		
HD2000-56B12604	1260	710	1222	710	1121	630		
HD2000-56B14054	1405	800	1363	800	1250	710	IU	707*1487*545
Three-Phase AC 690V (500V~690V)，DC Circuit Voltage 560V~1100V								
HD2000-56B00636	63	55	61	55	56	45	6U	165*592*385
HD2000-56B00866	86	75	83	75	77	55		
HD2000-56B01016	101	90	97	90	89	75		
HD2000-56B01216	121	110	117	110	108	90	7U	175*724*407
HD2000-56B01516	151	132	147	132	134	110		
HD2000-56B01766	176	160	171	160	157	132		
HD2000-56B02156	215	200	209	200	191	160	8U	165*750*450
HD2000-56B02606	260	250	252	250	231	200		
HD2000-56B03306	330	315	320	315	294	250	9U	170*825*545
HD2000-56B04106	410	400	398	400	365	355		
HD2000-56B04656	465	450	451	450	414	400	10U	210*1020*545
HD2000-56B05106	510	500	495	500	454	450		
HD2000-56B05756	575	560	558	560	512	500		
HD2000-56B06506	650	630	631	630	579	560	11U	330*1220*590
HD2000-56B07356	735	710	713	710	654	630		
HD2000-56B08106	810	800	786	800	721	710		
HD2000-56B10256	1025	1000	994	1000	912	900	IU	707*1487*545
HD2000-56B12706	1270	1200	1232	1200	1130	1000		
HD2000-56B14826	1482	1400	1438	1400	1319	1200		

Notes:
1. Products with frame types 3U and 4U come standard with a built-in braking unit.
2. Products with frame types 5U to IU support an optional built-in braking unit, indicated by the suffix B added to the end of model designation. Example: HD2000-500B204B. For these frame types, the model suffix B indicates one (1) built-in unit. If higher braking power is required, an additional decentralized braking unit must be specified in the order. A maximum of 3 built-in braking units is supported per frame size.

HD2000-Plus Unit Selection (Air-Cooled)

DC-DC Converter

Model	Voltage Range (Vdc)		Ratings			Frame	Dimensions W × H × D (mm)
	Low-Side Voltage Range	High-Side Voltage Range	Low-Side Rated Voltage (V)	Low-Side Rated Current (A)	Rated Power (kW)		
Air-Cooled Units – 400V Modified Series							
HD2000-35B01004	24~670	540~750	500	100	50	5U	140*500*335
HD2000-35B02004	24~670	540~750	500	200	100	6U	165*592*385
HD2000-35B04004	24~670	540~750	500	400	200	7U	175*724*407
HD2000-35B07004	24~670	540~750	500	700	350	9U	170*825*545
HD2000-35B09004	24~670	540~750	500	900	450		
HD2000-35B11004	24~670	540~750	500	1100	550	10U	210*1020*545
Air-Cooled Units – 690V Modified Series							
HD2000-35B01336	24~1000	750~1100	750	133	100	6U	165*592*385
HD2000-35B02676	24~1000	750~1100	750	267	200	9U	170*825*545
HD2000-35B03996	24~1000	750~1100	750	399	300		
HD2000-35B05336	24~1000	750~1100	750	533	400	10U	210*1020*545
HD2000-35B13336	24~1000	750~1100	750	1333	1000	IU	707*1487*545

Notes: 1. Ensure the high-side voltage is higher than the low-side voltage, with a voltage difference greater than 0.1 times the high-side voltage.
2. When the switching frequency is increased to 4 kHz (default: 3 kHz), derate the current by 20%.
3. If the high-side or low-side voltage is below 200 Vdc, non-standard parameters are required. Please consult our technical support for confirmation.

Power Brake Unit - Centralized

Model	Rated Power P_{DB} (kW)	Peak Power P_{15} (kW)	Min. Braking Resistance (Ω)	Braking Start Voltage (V)	Braking End Voltage (V)	Frame Type	Dimensions W*H*D (mm)
AC Input Voltage (380V~480V)							
HD2000-18B06504	200(480V) 151(380V)	730(480V) 552(380V)	0.82	774(480V) 673(380V)	735(480V) 639(380V)	LU	310*1300*543
HD2000-18B12004	370(480V) 280(380V)	1380(480V) 1043(380V)	0.43	774(480V) 673(380V)	735(480V) 639(380V)		
AC Input Voltage (500V~600V)							
HD2000-18B05806	220(600V) 166(500V)	830(600V) 628(500V)	1.13	967(600V) 841(500V)	919(600V) 799(500V)	LU	310*1300*543
HD2000-18B11006	420(600V) 318(500V)	1580(600V) 1195(500V)	0.59	967(600V) 841(500V)	919(600V) 799(500V		
AC Input Voltage (660V~690V)							
HD2000-18B05206	240(690V) 205(660V)	920(690V) 785(660V)	1.46	1158(690V) 1070(660V)	1100(690V) 1017(660V)	LU	310*1300*543
HD2000-18B10006	460(690V) 393(660V)	1700(690V) 1451(660V)	0.79	1158(690V) 1070(660V)	1100(690V) 1017(660V)		

Note: Higher braking power can be achieved by connecting braking units in parallel. A single control unit supports a maximum of 3 centralized braking units.

Power Brake Unit - Decentralized

Model	Rated Power P_{DB} (kW)	Peak Power P_{15} (kW)	Min. Braking Resistance (Ω)	Braking Start Voltage (V)	Braking End Voltage (V)	Frame Type	Dimensions W*H*D (mm)
AC Input Voltage (380V~480V)							
HD2000-19B01614	25(480V) 19(380V)	125(480V) 95(380V)	4.8	774(480V) 673(380V)	735(480V) 639(380V)	BU	107*130*330
HD2000-19B03234	50(480V) 38(380V)	250(480V) 189(380V)	2.4	774(480V) 673(380V)	735(480V) 639(380V)		
AC Input Voltage (500V~600V)							
HD2000-19B01296	25(600V) 19(500V)	125(600V) 95(500V)	7.5	967(600V) 841(500V)	919(600V) 799(500V)	BU	107*130*330
HD2000-19B02596	50(600V) 38(500V)	250(600V) 189(500V)	3.7	967(600V) 841(500V)	919(600V) 799(500V		
AC Input Voltage (660V~690V)							
HD2000-19B01086	25(690V) 21(660V)	125(690V) 107(660V)	10.7	1158(690V) 1070(660V)	1100(690V) 1017(660V)	BU	107*130*330
HD2000-19B02166	50(690V) 43(660V)	250(690V) 213(660V)	5.4	1158(690V) 1070(660V)	1100(690V) 1017(660V)		

Note: Decentralized braking units are only applicable to rectifier/motor drive units with IU frame type. Higher braking power can be achieved by connecting braking units in parallel, with a maximum of 3 units supported.

HD2000-Plus Cabinet Selection (Air-Cooled)

CC frame type is integrated with a single-axis VFU. DC frame type is a complete, standard product, consisting of an incoming control unit, basic rectifier unit, and motor drive unit.

Type Designation

HD2000 - 36 D 1482 6 B +L +PN

Series Name:
HD2000: hopeDrive series low-voltage engineering-type frequency converter

Topology / Function:
36: Variable Frequency Cabinet (VFC)

Structure Type:
D: Cabinet-mounted product

Rated Current:
1482: 1482 A

Voltage Class:
4: 400 V (380 V ~ 480 V)
6: 690 V (500 V ~ 690 V)

Braking Option:
B: With built-in braking unit
None: Without built-in braking unit

Output Inductor Option:
+L: With output inductor inside cabinet
None: Without output inductor

Controller Option (with keypad) :
+PN: With Profinet IO communication controller
+DP: With Profibus DP communication controller
+MR: With Modbus RTU communication controller
+EC: With EtherCAT communication controller
+TP: With Modbus TCP communication controller
+CA: With CANopen communication controller
+EN: With EtherNet/IP communication controller
+NA: Without communication controller

Variable Frequency Cabinet (VFC)

Model	Rated		Light Load		Heavy Load		Frame Type	Dimensions W*H*D (mm)
	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)		
Three-Phase AC 400V (380V~480V)								
HD2000-36D06704	670	355	650	355	596	315	CC	820*2000*650
HD2000-36D07354	735	400	713	400	654	355		
HD2000-36D08204	820	450	795	450	730	400		
HD2000-36D08604	860	500	834	500	765	450		
HD2000-36D09854	985	560	955	560	877	500		
HD2000-36D11004	1100	630	1067	630	979	560		
HD2000-36D12604	1260	710	1222	710	1121	560	DC	1320*2000*650
HD2000-36D14054	1405	800	1363	800	1250	710		
Three-Phase AC 690V (500V~690V)								
HD2000-36D04656	465	450	451	450	414	400	CC	820*2000*650
HD2000-36D05106	510	500	495	500	454	450		
HD2000-36D05756	575	560	558	560	512	500		
HD2000-36D06506	650	630	631	630	579	560		
HD2000-36D07356	735	710	713	710	654	630		
HD2000-36D08106	810	800	786	800	721	710		
HD2000-36D10256	1025	1000	994	1000	912	900	DC	1320*2000*650
HD2000-36D12706	1270	1200	1232	1200	1130	1000		
HD2000-36D14826	1482	1400	1438	1400	1319	1200		

Notes:
1. The integrated VFC is factory-fitted with a controller (including an operator keypad). When selecting a model, please specify the communication type. To configure Profinet communication, add +PN to the end of the cabinet model designation, indicating a Profinet communication controller; similarly, add +DP for a Profibus DP communication controller, and so on.
2. CC frame types support an optional built-in braking unit, indicated by adding the letter B to the model number. Example: HD2000-36D08106B+PN.
3. DC frame types support an optional built-in decentralized braking unit. The suffix B in the model indicates one (1) built-in braking unit with a continuous braking power of 50 kW. Example: HD2000-36D12706B+PN. For higher braking power, specify separate braking unit models during configuration. A maximum of three (3) units can be installed inside the VFC.
4. An optional output line reactor can be installed inside the cabinet, indicated by adding +L to the model number. Example: HD2000-36D14826+L+PN.

HD2000-Plus Cabinet Selection (Air-Cooled)

Air-cooled modular cabinet system consists of an incoming control cabinet, rectifier cabinet, motor drive unit cabinet, centralized braking cabinet (optional), and output inductor cabinet (optional). Configuration can be freely selected according to actual requirements. Different types of incoming control cabinets are provided based on the rectifier topology.

Incoming Control Cabinet (ICC) - Used for BRC

Model	Rated Current (A)	Frame Type	Dimensions W*H*D (mm)	Corresponding BRC
Three-Phase AC 400V (380V~480V)				
HD2000-30D04004+L104	400	AC	400*2200*650	HD2000-51D03614
HD2000-30D06304+L105	630			HD2000-51D04514
HD2000-30D12504+L106	1250	BC	600*2200*650	HD2000-51D07224
HD2000-30D12504+L107	1250			HD2000-51D10104
HD2000-30D16004+L108	1600			HD2000-51D12814
HD2000-30D20004+L109	2000			HD2000-50D16244
Three-Phase AC 690V (500V~690V)				
HD2000-30D02506+L114	250	AC	400*2200*650	HD2000-51D02096
HD2000-30D04006+L115	400			HD2000-51D02616
HD2000-30D04006+L116	400			HD2000-51D03716
HD2000-30D06306+L117	630			HD2000-51D05866
HD2000-30D12506+L118	1250	BC	600*2200*650	HD2000-51D09416
HD2000-30D12506+L119	1250			HD2000-51D11516
HD2000-30D16006+L120	1600			HD2000-50D15696

Incoming Control Cabinet (ICC) - Used for SRC

Model	Rated Current (A)	Frame Type	Dimensions W*H*D (mm)	Corresponding SRC
Three-Phase AC 400V (380V~480V)				
HD2000-30D06304+L205	630	AC	400*2200*650	HD2000-52D04014
				HD2000-52D05744
HD2000-30D12504+L206	1250	BC	600*2200*650	HD2000-52D07294
HD2000-30D12504+L207	1250			HD2000-52D08204
HD2000-30D12504+L208	1250			HD2000-52D10214
				HD2000-52D11484
HD2000-30D16004+L209	1600			HD2000-52D12944
				HD2000-52D14584
Three-Phase AC 690V (500V~690V)				
HD2000-30D04006+L215	400	AC	400*2200*650	HD2000-52D02646
HD2000-30D04006+L216	400			HD2000-52D03336
HD2000-30D06306+L217	630			HD2000-52D04236
				HD2000-52D05286
				HD2000-52D05926
HD2000-30D12506+L218	1250	BC	600*2200*650	HD2000-52D07506
				HD2000-52D08456
HD2000-30D12506+L219	1250			HD2000-52D10576
HD2000-30D16006+L220	1600			HD2000-52D14796
HD2000-30D20006+L221	2000			HD2000-52D16906

HD2000-Plus Cabinet Selection (Air-Cooled)

Incoming Control Cabinet (ICC) - Used for PRC

Model	Rated Current (A)	Frame Type	Dimensions W*H*D (mm)	Corresponding PRC	Corresponding FIC
Three-Phase AC 400V (380V~480V)					
HD2000-30D04004+L304	400	AC	400*2200*650	HD2000-53D03204	HD2000-15D03454
HD2000-30D06304+L305	630			HD2000-53D04004	HD2000-15D04814
HD2000-30D06304+L306	630			HD2000-53D05704	HD2000-14D06094
HD2000-30D12504+L307	1250	BC	600*2200*650	HD2000-53D07224	HD2000-14D07224
HD2000-30D12504+L308	1250			HD2000-53D08024	HD2000-14D08024
HD2000-30D12504+L309	1250			HD2000-53D10104	HD2000-14D10104
HD2000-30D16004+L310	1600			HD2000-53D12834	HD2000-14D12834
HD2000-30D16004+L311	1600			HD2000-53D14434	HD2000-14D14434
Three-Phase AC 690V (500V~690V)					
HD2000-30D02506+L316	250	AC	400*2200*650	HD2000-53D01886	HD2000-15D01886
				HD2000-53D02326	HD2000-15D02326
HD2000-30D04006+L317	400			HD2000-53D03306	HD2000-15D03726
HD2000-30D06306+L320	630			HD2000-53D04186	HD2000-14D04656
HD2000-30D06306+L321	630			HD2000-53D05206	HD2000-14D05756
HD2000-30D12506+L322	1250	BC	600*2200*650	HD2000-53D06606	HD2000-14D07446
				HD2000-53D08306	HD2000-14D10236
HD2000-30D12506+L323	1250			HD2000-53D10236	
HD2000-30D16006+L324	1600			HD2000-53D13026	HD2000-14D13026
HD2000-30D16006+L325	1600			HD2000-53D14886	HD2000-14D14886

Basic Rectifier Cabinet (BRC)

Model	Rated Power (kW)	AC input current(A)		DC output current(A)			Frame Type	Dimensions W*H*D (mm)
		Rated Current I_N (A)	Max. Current I_{max} (A)	Rated Current I_{N_DC} (A)	Basic Load Current I_{h_DC} (A)	Max. Current I_{max_DC} (A)		
Three-Phase AC 400V (380V~480V)								
HD2000-51D03614	200	361	541	429	335	644	AC	400*2200*650
HD2000-51D04514	250	451	677	536	418	804		
HD2000-51D07224	400	722	1083	858	669	1287		
HD2000-51D10104	560	1010	1516	1201	937	1802		
HD2000-51D12814	710	1281	1922	1523	1188	2285		
HD2000-50D16244	900	1624	2436	1931	1506	2896		
Three-Phase AC 690V (500V~690V)								
HD2000-51D02096	200	209	314	249	194	373	AC	400*2200*650
HD2000-51D02616	250	261	392	311	243	466		
HD2000-51D03716	355	371	557	441	344	662		
HD2000-51D05866	560	586	879	696	543	1045		
HD2000-51D09416	900	941	1412	1119	873	1679		
HD2000-51D11516	1100	1151	1726	1368	1067	2052		
HD2000-50D15696	1500	1569	2353	1865	1455	2798		

HD2000-Plus Cabinet Selection (Air-Cooled)

Smart Rectifier Cabinet (SRC)

Model	Rated Power (kW)	AC input current(A)		DC output current(A)			Frame Type	Dimensions W*H*D (mm)
		Rated Current I_N (A)	Max. Current I_{max} (A)	Rated Current I_{N_DC} (A)	Basic Load Current I_{h_DC} (A)	Max. Current I_{max_DC} (A)		
Three-Phase AC 400V (380V~480V)								
HD2000-52D04014	220	401	602	449	400	674	AC	400*2200*650
HD2000-52D05744	315	574	861	643	572	964		
HD2000-52D07294	400	729	1094	816	727	1225		
HD2000-52D08204	450	820	1230	918	817	1378		
HD2000-52D10214	560	1021	1532	1144	1018	1715		
HD2000-52D11484	630	1148	1722	1286	1144	1929		
HD2000-52D12944	710	1294	1941	1449	1290	2174		
HD2000-52D14584	800	1458	2187	1734	1353	2254	CC	800*2200*650
Three-Phase AC 690V (500V~690V)								
HD2000-52D02646	250	264	396	296	263	444	AC	400*2200*650
HD2000-52D03336	315	333	500	373	332	559		
HD2000-52D04236	400	423	635	474	422	711		
HD2000-52D05286	500	528	792	591	526	887		
HD2000-52D05926	560	592	888	663	590	995		
HD2000-52D07506	710	750	1125	840	748	1260		
HD2000-52D08456	800	845	1268	946	842	1420		
HD2000-52D10576	1000	1057	1585	1256	1118	1884	CC	800*2200*650
HD2000-52D14796	1400	1479	2219	1759	1372	2287		
HD2000-52D16906	1600	1690	2535	2009	1567	2612		

PWM Rectifier Cabinet (PRC)

Model	Rated Power (kW)	AC input current(A)		DC output current(A)			Frame Type	Dimensions W*H*D (mm)
		Rated Current I_N (A)	Max. Current I_{max} (A)	Rated Current I_{N_DC} (A)	Basic Load Current I_{h_DC} (A)	Max. Current I_{max_DC} (A)		
Three-Phase AC 400V (380V~480V)								
HD2000-53D03204	200	320	480	358	319	538	AC	400*2200*650
HD2000-53D04004	250	400	600	448	399	672		
HD2000-53D05704	355	570	855	638	568	958		
HD2000-53D07224	450	722	1083	809	720	1213		
HD2000-53D08024	500	802	1203	898	799	1347		
HD2000-53D10104	630	1010	1515	1131	1007	1697		
HD2000-53D12834	800	1283	1925	1437	1279	2155		
HD2000-53D14434	900	1443	2165	1617	1439	2425	CC	800*2200*650
Three-Phase AC 690V (500V~690V)								
HD2000-53D01886	200	188	282	209	186	314	AC	400*2200*650
HD2000-53D02326	250	232	348	260	231	390		
HD2000-53D03306	355	330	495	370	329	554		
HD2000-53D04186	450	418	627	468	417	702		
HD2000-53D05206	560	520	780	582	518	874		
HD2000-53D06606	710	660	990	739	658	1109		
HD2000-53D08306	900	830	1245	930	827	1394		
HD2000-53D10236	1100	1023	1534	1145	1019	1718	CC	800*2200*650
HD2000-53D13026	1400	1302	1952	1458	1297	2187		
HD2000-53D14886	1600	1488	2231	1667	1484	2501		

HD2000-Plus Cabinet Selection (Air-Cooled)

LCL Filter Interface Cabinet (FIC)

Model	AC input current(A)		Matched Rectifier Unit Model	Frame Type	Dimensions W*H*D (mm)
	Rated Current I_N (A)	Max. Current I_{max} (A)			
Three-Phase AC 400V (380V~480V)					
HD2000-15D03454	345	518	HD2000-53D03204	AC	400*2200*650
HD2000-15D04814	481	722	HD2000-53D04004		
HD2000-14D06094	609	914	HD2000-53D05704	BC	600*2200*650
HD2000-14D07224	722	1083	HD2000-53D07224		
HD2000-14D08024	802	1203	HD2000-53D08024		
HD2000-14D10104	1010	1515	HD2000-53D10104		
HD2000-14D12834	1283	1925	HD2000-53D12834		
HD2000-14D14434	1443	2165	HD2000-53D14434		
Three-Phase AC 690V (500V~690V)					
HD2000-15D01886	188	279	HD2000-53D01886	AC	400*2200*650
HD2000-15D02326	232	349	HD2000-53D02326		
HD2000-15D03726	372	558	HD2000-53D03306		
HD2000-14D04656	465	697	HD2000-53D04186	BC	600*2200*650
HD2000-14D05756	575	862	HD2000-53D05206		
HD2000-14D07446	744	1116	HD2000-53D06606		
HD2000-14D10236	1023	1534	HD2000-53D08306		
			HD2000-53D10236		
HD2000-14D13026	1302	1952	HD2000-53D13026		
HD2000-14D14886	1488	2231	HD2000-53D14886		

Motor Drive Cabinet (MDC)

Model	Rated		Light Load		Heavy Load		Frame Type	Dimensions W*H*D (mm)
	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)		
Three-Phase AC 400V (380V~480V)，DC Circuit Voltage 410V~780V								
HD2000-56D03804	380	200	369	200	338	160	AC	400*2200*650
HD2000-56D04904	490	250	475	250	436	220		
HD2000-56D05804	580	315	563	315	516	280		
HD2000-56D07354	735	400	713	400	654	355		
HD2000-56D08204	820	450	795	450	730	400		
HD2000-56D08604	860	500	834	500	765	450		
HD2000-56D09854	985	560	955	560	877	500		
HD2000-56D11004	1100	630	1067	630	979	560		
HD2000-56D12604	1260	710	1222	710	1121	630		
HD2000-56D14054	1405	800	1363	800	1250	710	CC	800*2200*650
Three-Phase AC 690V (500V~690V)，DC Circuit Voltage 560V~1100V								
HD2000-56D02156	215	200	209	200	191	160	AC	400*2200*650
HD2000-56D02606	260	250	252	250	231	200		
HD2000-56D03306	330	315	320	315	294	250		
HD2000-56D04106	410	400	398	400	365	355		
HD2000-56D04656	465	450	451	450	414	400		
HD2000-56D05106	510	500	495	500	454	450		
HD2000-56D05756	575	560	558	560	512	500		
HD2000-56D06506	650	630	631	630	579	560		
HD2000-56D07356	735	710	713	710	654	630		
HD2000-56D08106	810	800	786	800	721	710		
HD2000-56D10256	1025	1000	994	1000	912	900	CC	800*2200*650
HD2000-56D12706	1270	1200	1232	1200	1130	1000		
HD2000-56D14826	1482	1400	1438	1400	1319	1200		

Notes:
1. To include an output line reactor inside the cabinet, add +L to the end of the model number. Example: HD2000-56D12604+L
2. To include a DC busbar switch inside the cabinet, add +Q to the end of the model number. Example: HD2000-56D12604+Q
3. To include both an output line reactor and a DC busbar switch inside the cabinet, add both +L and +Q to the end of the model number. Example: HD2000-56D12604+L+Q
4. If a soft start circuit is required for the inverter unit, this must be clearly specified as a separate remark during ordering.

HD2000-Plus Cabinet Selection (Air-Cooled)

Output Filter Cabinet (OFC)

Model	Rated Current (A)	Frame Type	Dimensions W*H*D (mm)	Corresponding MDC
Three-Phase AC 400V (380V~480V)				
HD2000-21D03804	380	AC	400*2200*650	HD2000-56D03804
HD2000-21D04904	490			HD2000-56D04904
HD2000-21D06054	605			HD2000-56D05804
HD2000-21D07454	745			HD2000-56D07354
HD2000-21D08404	840	BC	600*2200*650	HD2000-56D08204
HD2000-21D09854	985			HD2000-56D09854
HD2000-21D12604	1260			HD2000-56D12604
HD2000-21D14054	1405			HD2000-56D14054
Three-Phase AC 400V (380V~480V)				
HD2000-22D03804	380	AC	400*2200*650	HD2000-56D03804
HD2000-22D04904	490			HD2000-56D04904
HD2000-22D06054	605			HD2000-56D05804
HD2000-22D07454	745			HD2000-56D07354
HD2000-22D08404	840	BC	600*2200*650	HD2000-56D08204
HD2000-22D09854	985			HD2000-56D09854
HD2000-22D12604	1260			HD2000-56D12604
HD2000-22D14054	1405			HD2000-56D14054
Three-Phase AC 690V (500V~690V)				
HD2000-21D02156	215	AC	400*2200*650	HD2000-56D02156
HD2000-21D02606	260			HD2000-56D02606
HD2000-21D03306	330			HD2000-56D03306
HD2000-21D04106	410			HD2000-56D04106
HD2000-21D04656	465			HD2000-56D04656
HD2000-21D05756	575			HD2000-56D05756
HD2000-21D07356	735	BC	600*2200*650	HD2000-56D06506
				HD2000-56D07356
HD2000-21D08106	810			HD2000-56D08106
HD2000-21D10256	1025			HD2000-56D10256
HD2000-21D12706	1270			HD2000-56D12706
HD2000-21D14826	1482			HD2000-56D14826
Three-Phase AC 690V (500V~690V)				
HD2000-22D02156	215	AC	400*2200*650	HD2000-56D02156
HD2000-22D02606	260			HD2000-56D02606
HD2000-22D03306	330			HD2000-56D03306
HD2000-22D04106	410			HD2000-56D04106
HD2000-22D04656	465			HD2000-56D04656
HD2000-22D05756	575			HD2000-56D05756
HD2000-22D07356	735	BC	600*2200*650	HD2000-56D06506
				HD2000-56D07356
HD2000-22D08106	810			HD2000-56D08106
HD2000-22D10256	1025			HD2000-56D10256
HD2000-22D12706	1270			HD2000-56D12706
HD2000-22D14826	1482			HD2000-56D14826

Notes:
1. The Output Filter Cabinet (OFC) is used for du/dt suppression in parallel-connected Motor Drive Unit Cabinets (MDC) or long-cable motor drive applications.
2. The designation "21D" indicates 1 output inductor installed in one cabinet.
3. The designation "22D" indicates 2 output inductors installed in one cabinet, primarily used for parallel operation of multiple motor drive units and applications with limited on-site installation space.

Power Brake Cabinet (PBC)

Model	Rated Power P_{DB} (kW)	Peak Power P_{15} (kW)	Min. Braking Resistance (Ω)	Braking Start Voltage (V)	Braking End Voltage (V)	Frame Type	Dimensions W*H*D (mm)
AC Input Voltage (380V~480V)							
HD2000-18D06504	200(480V) 151(380V)	730(480V) 552(380V)	0.82	774(480V) 673(380V)	735(480V) 639(380V)	AC	400*2200*650
HD2000-18D12004	370(480V) 280(380V)	1380(480V) 1043(380V)	0.43	774(480V) 673(380V)	735(480V) 639(380V)		
AC Input Voltage (500V~600V)							
HD2000-18D05806	220(600V) 166(500V)	830(600V) 628(500V)	1.13	967(600V) 841(500V)	919(600V) 799(500V)	AC	400*2200*650
HD2000-18D11006	420(600V) 318(500V)	1580(600V) 1195(500V)	0.59	967(600V) 841(500V)	919(600V) 799(500V		
AC Input Voltage (660V~690V)							
HD2000-18D05206	240(690V) 205(660V)	920(690V) 785(660V)	1.46	1158(690V) 1070(660V)	1100(690V) 1017(660V)	AC	400*2200*650
HD2000-18D10006	460(690V) 393(660V)	1700(690V) 1451(660V)	0.79	1158(690V) 1070(660V)	1100(690V) 1017(660V)		

Note: Higher braking power can be achieved by connecting braking units in parallel. A single control unit supports a maximum of 3 centralized braking units.

HD2000-Plus Unit Selection (Liquid-cooled)

The HD2000-Plus series liquid-cooled units include AC-DC rectifiers, DC-AC motor drive units, and DC-DC converters.

These liquid-cooled units require matching power distribution protection devices and secondary integration by the user before commissioning.

Unit Frame Weight Information

Frame	Weight (kg)	Frame	Weight (kg)	Frame	Weight (kg)
NU	55	OU	160	RU	126
TU	306	L4	54.5	L5	80
L6	93.5	L7	260	/	/

Note: This weight refers only to the net weight of the unit. For detailed specifications, please refer to the actual product.

Basic Rectifier Unit (BRU)

Model	Rated Power (kW)	AC input current(A)		DC output current(A)			Frame Type	Dimensions W*H*D (mm)
		Rated Current I_N (A)	Max. Current I_{max} (A)	Rated Current I_{N_DC} (A)	Basic Load Current I_{h_DC} (A)	Max. Current I_{max_DC} (A)		
Liquid-Cooled Model - Three-Phase AC 400V (380V~480V)								
HD2000-51B10104L	560	1010	1516	1201	937	1802	RU	245*1055*591
HD2000-51B12814L	710	1281	1922	1523	1188	2285		
HD2000-51B16244L	900	1624	2436	1931	1506	2896		
Liquid-Cooled Model - Three-Phase AC 690V (500V~690V)								
HD2000-51B09416L	900	941	1412	1119	837	1679	RU	245*1055*591
HD2000-51B11516L	1100	1151	1726	1368	1067	2052		
HD2000-51B15696L	1500	1569	2353	1865	1455	2798		
HD2000-50B20916L	2000	2091	3137	2486	1939	3729	OU	325*894*588
HD2000-50B23246L	2500	2324	3486	2763	2155	4145		

Smart Rectifier Unit (SRU)

Model	Rated Power (kW)	AC input current(A)		DC output current(A)			Frame Type	Dimensions W*H*D (mm)
		Rated Current I_N (A)	Max. Current I_{max} (A)	Rated Current I_{N_DC} (A)	Basic Load Current I_{h_DC} (A)	Max. Current I_{max_DC} (A)		
Liquid-Cooled Model - Three-Phase AC 400V (380V~480V)								
HD2000-52B03644L	200	364	547	433	386	650	L4	140*710*550
HD2000-52B04564L	250	456	683	542	482	813		
HD2000-52B06474L	355	647	970	769	685	1154	L5	175*835*590
HD2000-52B09114L	500	911	1367	1083	964	1625		
Liquid-Cooled Model - Three-Phase AC 690V (500V~690V)								
HD2000-52B03336L	315	333	499	396	352	594	L4	140*710*550
HD2000-52B04756L	450	475	713	565	503	848		
HD2000-52B05756L	560	575	862	684	609	1026	L5	175*835*590
HD2000-52B07506L	710	750	1125	892	794	1338		
HD2000-52B08456L	800	845	1268	1005	895	1508		
HD2000-52B10576L	1000	1057	1586	1257	1119	1886	L6	185*950*590
HD2000-52B12686L	1200	1268	1902	1508	1342	2262		
HD2000-52B14796L	1400	1479	2219	1759	1566	2639	L7	525*912*589
HD2000-52B16906L	1600	1690	2535	2009	1788	3014		
HD2000-52B21136L	2000	2113	3170	2512	2236	3768		

HD2000-Plus Unit Selection (Liquid-Cooled)

PWM Rectifier Unit (PRU)

Model	Rated Power (kW)	AC input current(A)		DC output current(A)			Frame Type	Dimensions W*H*D (mm)
		Rated Current I_N (A)	Max. Current I_{max} (A)	Rated Current I_{N_DC} (A)	Basic Load Current I_{h_DC} (A)	Max. Current I_{max_DC} (A)		
Liquid-Cooled Model - Three-Phase AC 400V (380V~480V)								
HD2000-53B03774L	235	377	565	422	376	633	L4	140*710*550
HD2000-53B04814L	300	481	722	539	480	808		
HD2000-53B07224L	450	722	1083	808	719	1212	L5	175*835*590
HD2000-53B08024L	500	802	1203	898	799	1347		
Liquid-Cooled Model - Three-Phase AC 690V (500V~690V)								
HD2000-53B02936L	315	293	439	328	292	492	L4	140*710*550
HD2000-53B04186L	450	418	627	468	417	702		
HD2000-53B05206L	560	520	780	582	518	874	L5	175*835*590
HD2000-53B06606L	710	660	990	739	658	1109		
HD2000-53B07446L	800	744	1116	833	742	1250		
HD2000-53B09306L	1000	930	1395	1042	927	1562	L6	185*950*590
HD2000-53B11166L	1200	1116	1674	1250	1113	1875		
HD2000-53B13026L	1400	1302	1953	1458	1298	2187	L7	525*912*589
HD2000-53B14886L	1600	1488	2232	1667	1484	2501		
HD2000-53B18596L	2000	1859	2789	2083	1854	3124		
Liquid-Cooled Model - Three-Phase AC 1140V (3 level)								
HD2000-53B15759L	2800	1575	2362	1760	1566	2640	TU	655*1102*604
Liquid-Cooled Model - Three-Phase AC 1380V (3 level)								
HD2000-53B1575AL	3400	1575	2362	1760	1566	2640	TU	655*1102*604

Motor Drive Unit (MDU)

Model	Rated		Light Load		Heavy Load		Frame Type	Dimensions W*H*D (mm)
	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)		
Liquid-Cooled Model - Three-Phase AC 400V (380V~480V)，DC Circuit Voltage 410V~780V								
HD2000-56B03124L	312	160	303	160	278	132	L4	140*710*550
HD2000-56B03804L	380	200	369	200	338	160		
HD2000-56B04904L	490	250	475	250	436	200		
HD2000-56B05804L	580	315	563	315	516	250	L5	175*835*590
HD2000-56B07354L	735	400	713	400	654	315		
HD2000-56B08204L	820	450	795	450	730	400		
HD2000-56B08604L	860	500	834	500	765	450		
Liquid-Cooled Model - Three-Phase AC 690V (500V~690V)，DC Circuit Voltage 565V~1100V								
HD2000-56B02606L	260	250	252	250	231	200	L4	140*710*550
HD2000-56B03306L	330	315	320	315	294	250		
HD2000-56B04106L	410	400	398	400	365	355		
HD2000-56B04656L	465	450	451	450	414	400	L5	175*835*590
HD2000-56B05756L	575	560	558	560	512	500		
HD2000-56B07356L	735	710	713	710	654	630		
HD2000-56B08106L	810	800	786	800	721	710		
HD2000-56B10256L	1025	1000	994	1000	912	900	L6	185*950*590
HD2000-56B12706L	1270	1200	1232	1200	1130	1000		
HD2000-56B14826L	1482	1400	1438	1400	1319	1200	L7	525*912*589
HD2000-56B17996L	1799	1700	1745	1700	1601	1400		
Liquid-Cooled Model - Three-Phase AC 1140V (3 level)								
HD2000-56B14899L	1489	2400	1444	2400	1325	2130	TU	655*1102*604
Liquid-Cooled Model - Three-Phase AC 1380V (3 level)								
HD2000-56B1489AL	1489	2800	1444	2800	1325	2490	TU	655*1102*604

HD2000-Plus Unit Selection (Liquid-Cooled)

Power Brake Unit - Centralized

Model	Rated Power P_{DB} (kW)	Peak Power P_{15} (kW)	Min. Braking Resistance (Ω)	Braking Start Voltage (V)	Braking End Voltage (V)	Frame Type	Dimensions W*H*D (mm)
Liquid-Cooled Model - AC Input Voltage (380V~480V)							
HD2000-18B12004L	370(480V) 280(380V)	1380(480V) 1043(380V)	0.43	774(480V) 673(380V)	735(480V) 639(380V)	NU	165*761*587
Liquid-Cooled Model - AC Input Voltage (500V~600V)							
HD2000-18B05806L	220(600V) 166(500V)	830(600V) 628(500V)	1.13	967(600V) 841(500V)	919(600V) 799(500V)	NU	165*761*587
HD2000-18B11006L	420(600V) 318(500V)	1580(600V) 1195(500V)	0.59	967(600V) 841(500V)	919(600V) 799(500V)		
Liquid-Cooled Model - AC Input Voltage (660V~690V)							
HD2000-18B05206L	240(690V) 205(660V)	920(690V) 785(660V)	1.46	1158(690V) 1070(660V)	1100(690V) 1017(660V)	NU	165*761*587
HD2000-18B10006L	460(690V) 393(660V)	1700(690V) 1451(660V)	0.79	1158(690V) 1070(660V)	1100(690V) 1017(660V)		

Note: Higher braking power can be achieved by connecting braking units in parallel. A single control unit supports a maximum of 3 centralized braking units.

DC-DC Converter

Model	Voltage Range (Vdc)		Ratings			Frame	Dimensions W × H × D (mm)
	Low-Side Voltage Range	High-Side Voltage Range	Low-Side Rated Voltage (V)	Low-Side Rated Current (A)	Rated Power (kW)		
Liquid-Cooled Model - 400V Modified Series							
HD2000-35B05004L	24~670	540~750	500	500	250	L4	140*710*550
HD2000-35B07004L	24~670	540~750	500	700	350	L5	175*835*590
HD2000-35B09004L	24~670	540~750	500	900	450		
HD2000-35B11004L	24~670	540~750	500	1100	550		
Liquid-Cooled Model - 690V Modified Series							
HD2000-35B02676L	24~1000	750~1100	750	267	200	L4	140*710*550
HD2000-35B05336L	24~1000	750~1100	750	533	400	L5	175*835*590
HD2000-35B08016L	24~1000	750~1100	750	801	600	L6	185*950*590
HD2000-35B10686L	24~1000	750~1100	750	1068	800		
HD2000-35B13336L	24~1000	750~1100	750	1333	1000	L7	525*912*589

Notes:
1. Ensure the high-side voltage is higher than the low-side voltage, with a voltage difference greater than 0.1 times the high-side voltage.
2. When the switching frequency is increased to 4 kHz (default: 3 kHz), derate the current by 20%.
3. If the high-side or low-side voltage is below 200 Vdc, non-standard parameters are required. Please consult our technical support for confirmation.

HD2000-Plus Cabinet Selection (Liquid-Cooled)

Liquid-cooled cabinet system consists of an incoming control cabinet, rectifier cabinet, motor drive unit cabinet, liquid-cooled cabinet, centralized braking cabinet (optional), and output inductor cabinet (optional). Configuration can be freely selected according to actual requirements. Different types of incoming control cabinets are provided based on the rectifier topology.

Incoming Control Cabinet (ICC) - Used for BRC

Model	Rated Current (A)	Frame Type	Dimensions W*H*D (mm)	Corresponding BRC
Liquid-Cooled Model - Three-Phase AC 400V (380V~480V)				
HD2000-30D12504L+L605	1250	BC	600*2200*650	HD2000-51D10104L
HD2000-30D16004L+606	1600			HD2000-51D12814L
HD2000-30D20004L+607	2000			HD2000-50D16244L
Liquid-Cooled Model - Three-Phase AC 690V (500V~690V)				
HD2000-30D12506L+L625	1250	BC	600*2200*650	HD2000-51D09416L
HD2000-30D12506L+L626	1250			HD2000-51D11516L
HD2000-30D16006L+L627	1600			HD2000-51D15696L
HD2000-30D25006L+L628	2500			HD2000-50D20916L
HD2000-30D25006L+L629	2500			HD2000-50D23246L

Incoming Control Cabinet (ICC) - Used for SRC

Model	Rated Current (A)	Frame Type	Dimensions W*H*D (mm)	Corresponding SRC
Liquid-Cooled Model - Three-Phase AC 400V (380V~480V)				
HD2000-30D04004L+L705	400	AC	400*2200*650	HD2000-52D03644L
HD2000-30D06304L+L706	630			HD2000-52D04564L
HD2000-30D12504L+L707	1250	BC	600*2200*650	HD2000-52D06474L
HD2000-30D12504L+L709	1250			HD2000-52D09114L
Liquid-Cooled Model - Three-Phase AC 690V (500V~690V)				
HD2000-30D04006L+L723	400	AC	400*2200*650	HD2000-52D03336L
HD2000-30D06306L+L724	630			HD2000-52D04756L
				HD2000-52D05756L
HD2000-30D12506L+L725	1250	BC	600*2200*650	HD2000-52D07506L
HD2000-30D12506L+L726	1250			HD2000-52D08456L
HD2000-30D12506L+L727	1250			HD2000-52D10576L
HD2000-30D16006L+L728	1600			HD2000-52D12686L
HD2000-30D16006L+L729	1600			HD2000-52D14796L
HD2000-30D20006L+L730	2000			HD2000-52D16906L
HD2000-30D25006L+L731	2500			HD2000-52D21136L

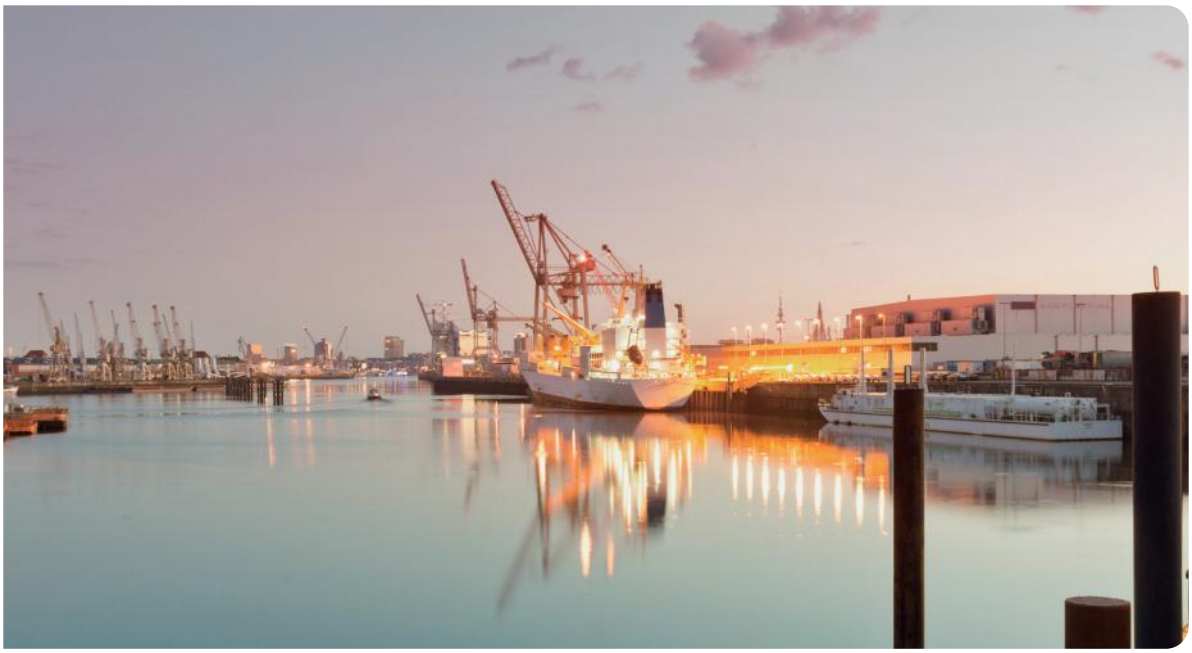
HD2000-Plus Cabinet Selection (Liquid-Cooled)

Incoming Control Cabinet (ICC) - Used for PRC

Model	Rated Current (A)	Frame Type	Dimensions W*H*D (mm)	Corresponding PRC	Corresponding FIC
Liquid-Cooled Model - Three-Phase AC 400V (380V~480V)					
HD2000-30D04004L+L805	400	AC	400*2200*650	HD2000-53D03774L	HD2000-14D03774L
HD2000-30D06304L+L806	630			HD2000-53D04814L	HD2000-14D04814L
HD2000-30D12504L+L808	1250	BC	600*2200*650	HD2000-53D07224L	HD2000-14D07224L
HD2000-30D12504L+L809	1250			HD2000-53D08024L	HD2000-14D08024L
Liquid-Cooled Model - Three-Phase AC 690V (500V~690V)					
HD2000-30D04006L+L825	400	AC	400*2200*650	HD2000-53D02936L	HD2000-14D02936L
HD2000-30D06306L+L826	630			HD2000-53D04186L	HD2000-14D04656L
HD2000-30D06306L+L827	630			HD2000-53D05206L	HD2000-14D05756L
HD2000-30D12506L+L828	1250	BC	600*2200*650	HD2000-53D06606L	HD2000-14D06606L
HD2000-30D12506L+L829	1250			HD2000-53D07446L	HD2000-14D07446L
HD2000-30D12506L+L830	1250			HD2000-53D09306L	HD2000-14D09306L
HD2000-30D12506L+L831	1250			HD2000-53D11166L	HD2000-14D11166L
HD2000-30D16006L+L832	1600			HD2000-53D13026L	HD2000-14D13026L
HD2000-30D16006L+L833	1600			HD2000-53D14886L	HD2000-14D14886L
HD2000-30D20006L+L834	2000			HD2000-53D18596L	HD2000-14D18596L
Liquid-Cooled Model - Three-Phase AC1140V					
HD2000-30D16009L+L853	1600	IC	750*2200*650	HD2000-53D15759L	HD2000-14D15759L
Liquid-Cooled Model - Three-Phase AC 1380V					
HD2000-30D16009L+L853	1600	IC	750*2200*650	HD2000-53D1575AL	HD2000-14D1575AL

Basic Rectifier Cabinet (BRC)

Model	Rated Power (kW)	AC input current(A)		DC output current(A)			Frame Type	Dimensions W*H*D (mm)
		Rated Current I_N (A)	Max. Current I_{max} (A)	Rated Current I_{N_DC} (A)	Basic Load Current I_{h_DC} (A)	Max. Current I_{max_DC} (A)		
Liquid-Cooled Model - Three-Phase AC 400V (380V~480V)								
HD2000-51D10104L	560	1010	1516	1201	937	1802	AC	400*2200*650
HD2000-51D12814L	710	1281	1922	1523	1188	2285		
HD2000-51D16244L	900	1624	2436	1931	1506	2896		
Liquid-Cooled Model - Three-Phase AC 690V (500V~690V)								
HD2000-51D09416L	900	941	1412	1119	837	1679	AC	400*2200*650
HD2000-51D11516L	1100	1151	1726	1368	1067	2052		
HD2000-51D15696L	1500	1569	2353	1865	1455	2798		
HD2000-50D20916L	2000	2091	3137	2486	1939	3729		
HD2000-50D23246L	2500	2324	3486	2763	2155	4145		



HD2000-Plus Cabinet Selection (Liquid-Cooled)

Smart Rectifier Cabinet (SRC)

Model	Rated Power (kW)	AC input current(A)		DC output current(A)			Frame Type	Dimensions W*H*D (mm)
		Rated Current I_N (A)	Max. Current I_{max} (A)	Rated Current I_{N_DC} (A)	Basic Load Current I_{h_DC} (A)	Max. Current I_{max_DC} (A)		
Liquid-Cooled Model - Three-Phase AC 400V (380V~480V)								
HD2000-52D03644L	200	364	547	433	386	650	AC	400*2200*650
HD2000-52D04564L	250	456	683	542	482	813		
HD2000-52D06474L	355	647	970	769	685	1154		
HD2000-52D09114L	500	911	1367	1083	964	1625		
Liquid-Cooled Model - Three-Phase AC 690V (500V~690V)								
HD2000-52D03336L	315	333	499	396	352	594	AC	400*2200*650
HD2000-52D04756L	450	475	713	565	503	848		
HD2000-52D05756L	560	575	862	684	609	1026		
HD2000-52D07506L	710	750	1125	892	794	1338		
HD2000-52D08456L	800	845	1268	1005	895	1508		
HD2000-52D10576L	1000	1057	1586	1257	1119	1886		
HD2000-52D12686L	1200	1268	1902	1508	1342	2262		
HD2000-52D14796L	1400	1479	2219	1759	1566	2639	BC	600*2200*650
HD2000-52D16906L	1600	1690	2535	2009	1788	3014		
HD2000-52D21136L	2000	2113	3170	2512	2236	3768		

PWM Rectifier Cabinet (PRC)

Model	Rated Power (kW)	AC input current(A)		DC output current(A)			Frame Type	Dimensions W*H*D (mm)
		Rated Current I_N (A)	Max. Current I_{max} (A)	Rated Current I_{N_DC} (A)	Basic Load Current I_{h_DC} (A)	Max. Current I_{max_DC} (A)		
Liquid-Cooled Model - Three-Phase AC 400V (380V~480V)								
HD2000-53D03774L	235	377	565	422	376	633	AC	400*2200*650
HD2000-53D04814L	300	481	722	539	480	808		
HD2000-53D07224L	450	722	1083	808	719	1212		
HD2000-53D08024L	500	802	1203	898	799	1347		
Liquid-Cooled Model - Three-Phase AC 690V (500V~690V)								
HD2000-53D02936L	315	293	439	328	292	492	AC	400*2200*650
HD2000-53D04186L	450	418	627	468	417	702		
HD2000-53D05206L	560	520	780	582	518	874		
HD2000-53D06606L	710	660	990	739	658	1109		
HD2000-53D07446L	800	744	1116	833	742	1250		
HD2000-53D09306L	1000	930	1395	1042	927	1562		
HD2000-53D11166L	1200	1116	1674	1250	1113	1875		
HD2000-53D13026L	1400	1302	1953	1458	1298	2187	BC	600*2200*650
HD2000-53D14886L	1600	1488	2232	1667	1484	2501		
HD2000-53D18596L	2000	1859	2789	2083	1854	3124		
Liquid-Cooled Model - Three-Phase AC 1140V (3 level)								
HD2000-53D15759L	2800	1575	2362	1760	1566	2640	IC	750*2200*650
Liquid-Cooled Model - Three-Phase AC 1380V (3 level)								
HD2000-53D1575AL	3400	1575	2362	1760	1566	2640	IC	750*2200*650

HD2000-Plus Cabinet Selection (Liquid-Cooled)

LCL Filter Interface Cabinet (FIC)

Model	AC input current(A)		Matched Rectifier Unit Model	Frame Type	Dimensions W*H*D (mm)
	Rated Current I_N (A)	Max. Current I_{max} (A)			
Three-Phase AC 400V (380V~480V)					
HD2000-14D03774L	377	567	HD2000-53D03774L	AC	400*2200*650
HD2000-14D04814L	481	722	HD2000-53D04814L		
HD2000-14D07224L	722	1083	HD2000-53D07224L	BC	600*2200*650
HD2000-14D08024L	802	1203	HD2000-53D08024L		
Three-Phase AC 690V (500V~690V)					
HD2000-14D02936L	293	439	HD2000-53D02936L	AC	400*2200*650
HD2000-14D04656L	465	697	HD2000-53D04186L	BC	600*2200*650
HD2000-14D05756L	575	862	HD2000-53D05206L		
HD2000-14D06606L	660	990	HD2000-53D06606L		
HD2000-14D07446L	744	1116	HD2000-53D07446L		
HD2000-14D09306L	930	1395	HD2000-53D09306L		
HD2000-14D11166L	1116	1674	HD2000-53D11166L		
HD2000-14D13026L	1302	1952	HD2000-53D13026L		
HD2000-14D14886L	1488	2231	HD2000-53D14886L		
HD2000-14D18596L	1859	2789	HD2000-53D18596L		
Three-Phase AC 1140V					
HD2000-14D15759L	1575	2363	HD2000-53D15759L	IC	750*2200*650
Three-Phase AC 1380V					
HD2000-14D1575AL	1575	2363	HD2000-53D1575AL	IC	750*2200*650

Motor Drive Cabinet (MDC)

Model	Rated		Light Load		Heavy Load		Frame Type	Dimensions W*H*D (mm)
	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)	Current (A)	Motor Power (kW)		
Liquid-Cooled Model - Three-Phase AC 400V (380V~480V)，DC Circuit Voltage 410V~780V								
HD2000-56D03124L	312	160	303	160	278	132	AC	400*2200*650
HD2000-56D03804L	380	200	369	200	338	160		
HD2000-56D04904L	490	250	475	250	436	200		
HD2000-56D05804L	580	315	563	315	516	250		
HD2000-56D07354L	735	400	713	400	654	315		
HD2000-56D08204L	820	450	795	450	730	400		
HD2000-56D08604L	860	500	834	500	765	450		
Liquid-Cooled Model - Three-Phase AC 690V (500V~690V)，DC Circuit Voltage 565V~1100V								
HD2000-56D02606L	260	250	252	250	231	200	AC	400*2200*650
HD2000-56D03306L	330	315	320	315	294	250		
HD2000-56D04106L	410	400	398	400	365	355		
HD2000-56D04656L	465	450	451	450	414	400		
HD2000-56D05756L	575	560	558	560	512	500		
HD2000-56D07356L	735	710	713	710	654	630		
HD2000-56D08106L	810	800	786	800	721	710		
HD2000-56D10256L	1025	1000	994	1000	912	900		
HD2000-56D12706L	1270	1200	1232	1200	1130	1000		
HD2000-56D14826L	1482	1400	1438	1400	1319	1200	BC	600*2200*650
HD2000-56D17996L	1799	1700	1745	1700	1601	1400		
Liquid-Cooled Model - Three-Phase AC 1140V (3 level)								
HD2000-56D14899L	1489	2400	1444	2400	1325	2130	IC	750*2200*650
Liquid-Cooled Model - Three-Phase AC 1380V (3 level)								
HD2000-56D1489AL	1489	2800	1444	2800	1325	2490	IC	750*2200*650

Notes:
1. To order the cabinet with built-in output reactor, add "+L" at the end of the model number. Example: HD2000-56D02606L+L
2. To order the cabinet with built-in DC bus switch, add "+Q" at the end of the model number.
Example: HD2000-56D02606L+Q; If a soft start circuit is required, please specify clearly.
3. To order the cabinet with both built-in output reactor and DC bus switch, add both "+L" and "+Q" at the end of the model number. Example: HD2000-16D02606L+L+Q

HD2000-Plus Cabinet Selection (Liquid-Cooled)

Power Brake Cabinet (PBC)

Model	Rated Power P_{DB} (kW)	Peak Power P_{15} (kW)	Min. Braking Resistance (Ω)	Braking Start Voltage (V)	Braking End Voltage (V)	Frame Type	Dimensions W*H*D (mm)
Liquid-Cooled Model - AC Input Voltage (380V~480V)							
HD2000-18D12004L	370(480V) 280(380V)	1380(480V) 1043(380V)	0.43	774(480V) 673(380V)	735(480V) 639(380V)	AC	400*2200*650
Liquid-Cooled Model - AC Input Voltage (500V~600V)							
HD2000-18D05806L	220(600V) 166(500V)	830(600V) 628(500V)	1.13	967(600V) 841(500V)	919(600V) 799(500V)	AC	400*2200*650
HD2000-18D11006L	420(600V) 318(500V)	1580(600V) 1195(500V)	0.59	967(600V) 841(500V)	919(600V) 799(500V)	AC	400*2200*650
HD2000-18D22006L	420(600V)*2 318(500V)*2	1580(600V)*2 1195(500V)*2	0.59*2（个）				
HD2000-18D33006L	420(600V)*3 318(500V)*3	1580(600V)*3 1195(500V)*3	0.59*3（个）			BC	600*2200*650
Liquid-Cooled Model - AC Input Voltage (660V~690V)							
HD2000-18D05206L	240(690V) 205(660V)	920(690V) 785(660V)	1.46	1158(690V) 1070(660V)	1100(690V) 1017(660V)	AC	400*2200*650
HD2000-18D10006L	460(690V) 393(660V)	1700(690V) 1451(660V)	0.79	1158(690V) 1070(660V)	1100(690V) 1017(660V)	AC	400*2200*650
HD2000-18D20006L	460(690V)*2 393(660V)*2	1700(690V)*2 1451(660V)*2	0.79*2（个）				
HD2000-18D30006L	460(690V)*3 393(660V)*3	1700(690V)*3 1451(660V)*3	0.79*3（个）			BC	600*2200*650
Liquid-Cooled Model - AC Input Voltage 1140V							
HD2000-18D05209L	480	1840	1.46*2	2140	2034	KC	450*2200*650
HD2000-18D10009L	920	3400	0.79*2				

Notes:
1. The liquid-cooled braking cabinet HD2000-18D20006L is equipped with two independent 460 kW braking units (460 kW × 2). When configuring braking resistors, two independent braking resistors with a resistance of no less than 0.79 Ω shall be provided accordingly. This configuration logic applies to other models, with the exception of 1140 V braking cabinets.
2. Higher braking power can be achieved by connecting braking units in parallel. A single control unit supports a maximum of three centralized braking units.

HD2000-Plus Liquid-Cooled Cabinet Selection

Type Designation

HD2000 - 40 D 0030 -WW

Series Name:
HD2000: hopeDrive low voltage engineering inverter

Topology/Function: 40: Liquid cooling system

Structure Type: D: Cabinet product

Heat Exchange Capacity: 0030: 30kW

Cooling Method: WW: Liquid-to-liquid cooling WA: Liquid-to-air cooling

Liquid-Cooled Cabinet + Air cooler

Model	Heat Exchange Capacity (kW)	Voltage (V)	Cooling Liquid Joint Size (DN)	Dimensions (W*H*D) (mm)	Corresponding Air Cooler Model
Liquid-to-air cooling					
HD2000-40D0030-WA	30	380	40	800*2200*650	HWKS-30
HD2000-40D0070-WA	70	380	40	800*2200*650	HWKS-70
HD2000-40D0120-WA	120	380	50	800*2200*650	HWKS-120
HD2000-40D0240-WA	240	380	50	1500*2200*650	HWKS-240
HD2000-40D0380-WA	380	380	50	1500*2200*650	HWKS-380
Liquid-to-liquid cooling					
HD2000-40D0030-WW	30	380	40	800*2200*650	/
HD2000-40D0070-WW	70	380	40	800*2200*650	/
HD2000-40D0120-WW	120	380	50	800*2200*650	/
HD2000-40D0240-WW	240	380	50	1500*2200*650	/
HD2000-40D0380-WW	380	380	50	1500*2200*650	/

Note: The air-water cooling unit must be used with an air cooler, which can be supplied by our company or procured by the customer.

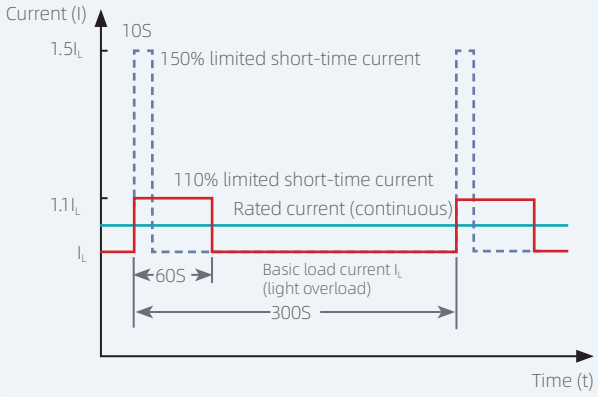
HD2000-Plus Multi Drive System Optional Accessories

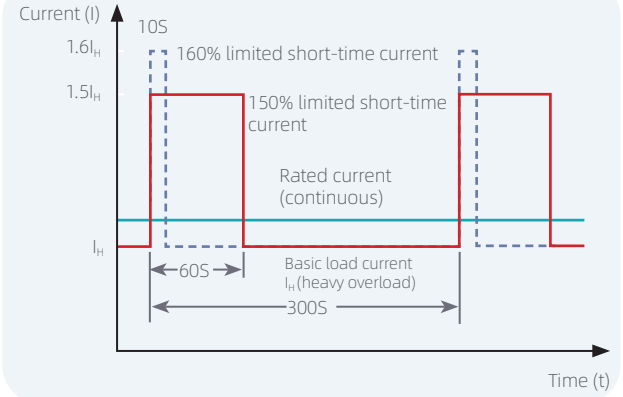
Item	Model	Description
Encoder Module (with temperature signal detection)	HIC300-EIM10	Supports resolver-type encoders and motor temperature sensors PT100, PT1000, KTY84
	HIC300-EIM30	Supports incremental encoders (TTL/HTL) and motor temperature sensors PT100, PT1000, KTY84
Control Unit*	HCU30-DP-1-6	Supports Profibus DP communication
	HCU30-PN-1-6	Supports Profinet IO communication
	HCU30-MR-1-6	Supports Modbus RTU communication
	HCU30-CA-1-6	Supports CANopen communication
	HCU30-EC-1-6	Supports EtherCAT communication
	HCU30-EN-1-6	Supports EtherNet/IP communication
	HCU30-TP-1-6	Supports Modbus TCP communication
	HCU30-NA-1-6	No communication interface
Operator Panel	HIC300-OP-30	LCD panel (standard with mounting base)
Keypad Mounting Base	HVKMB	The base can be installed at the required location according to site conditions, allowing keypad operation of the drive.

Note: *The above control units are listed with 6 fiber-optic ports and standard firmware. For other configurations, refer to the control unit type designation when selecting a model.

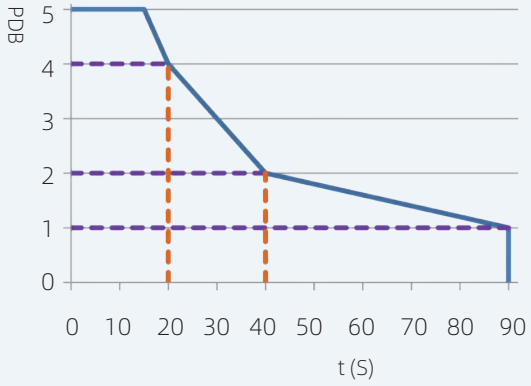
Overload Capacity

- The basic load current (I_L) for light overload mode is defined based on either a 110% load cycle for 60 s or a 150% load cycle for 10 s.
- The basic load current (I_H) for heavy overload mode is defined based on either a 150% load cycle for 60 s or a 160% load cycle for 10 s.

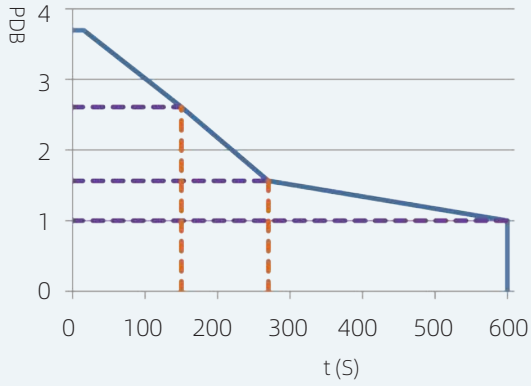




Overload Capacity (Brake Unit)



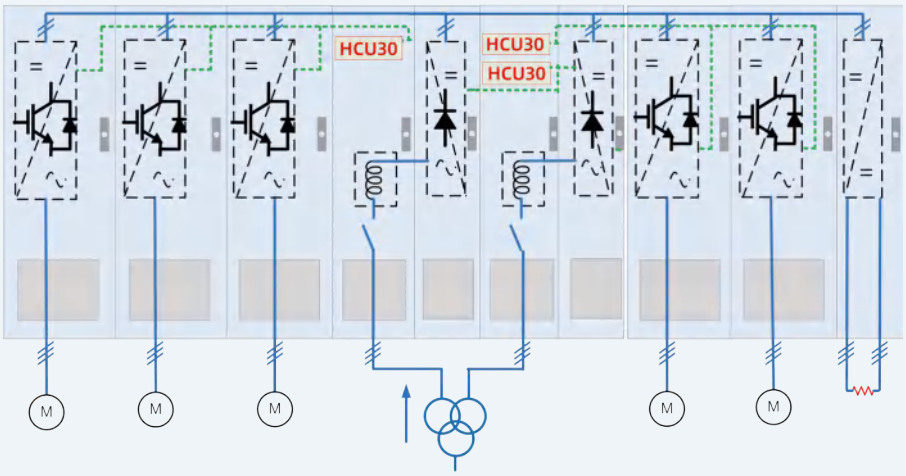
Distributed brake unit performance



Centralized Brake Unit Performance

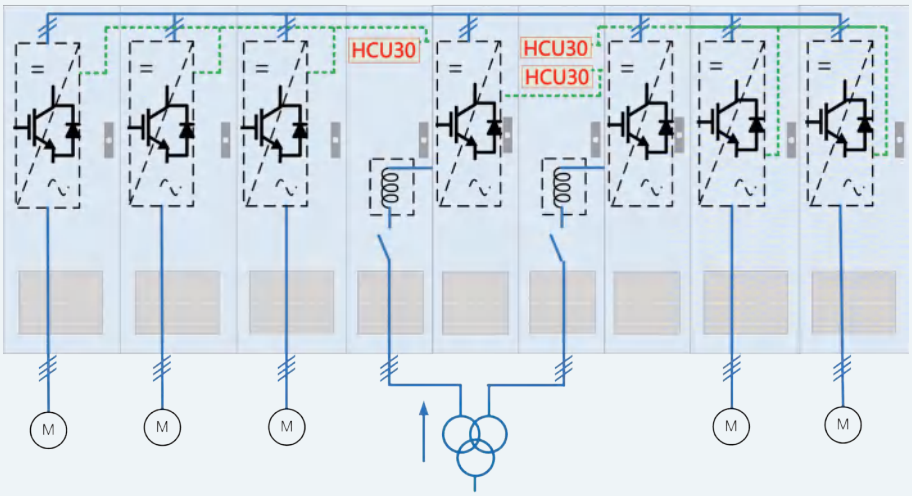
HD2000-Plus Series Product Configuration Methods

Basic Rectifier Cabinet in Parallel with Common Bus Drive System



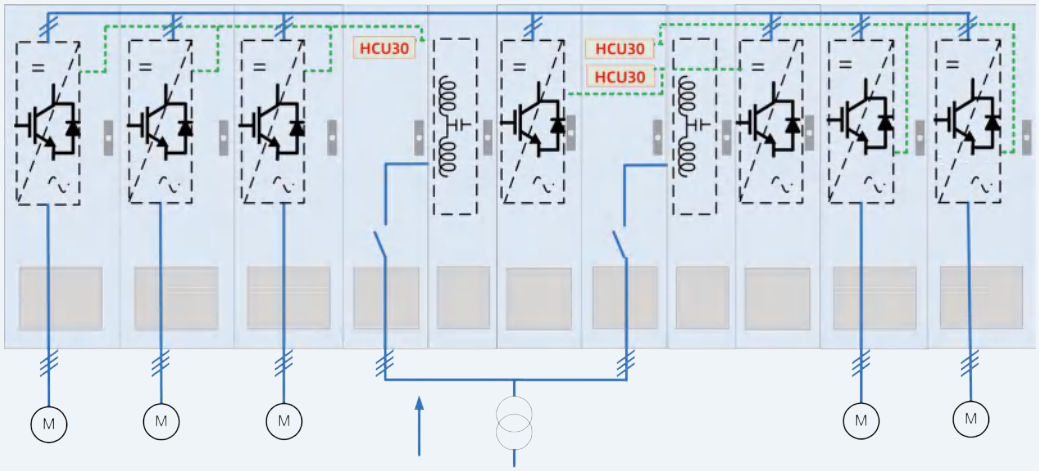
In this configuration mode, each basic rectifier unit cabinet is equipped with an independent incoming control cabinet. The rectifier cabinets form a common DC bus in parallel, and the power brake cabinet is connected to the common bus. The HUC30 control units are configured in incoming control cabinets respectively, and can be formed into 6-pulse or 12-pulse rectifier units according to different secondary winding and incoming modes of the power supply transformers.

Smart Rectifier Feedback Unit Cabinet in Parallel with Common Bus Drive System



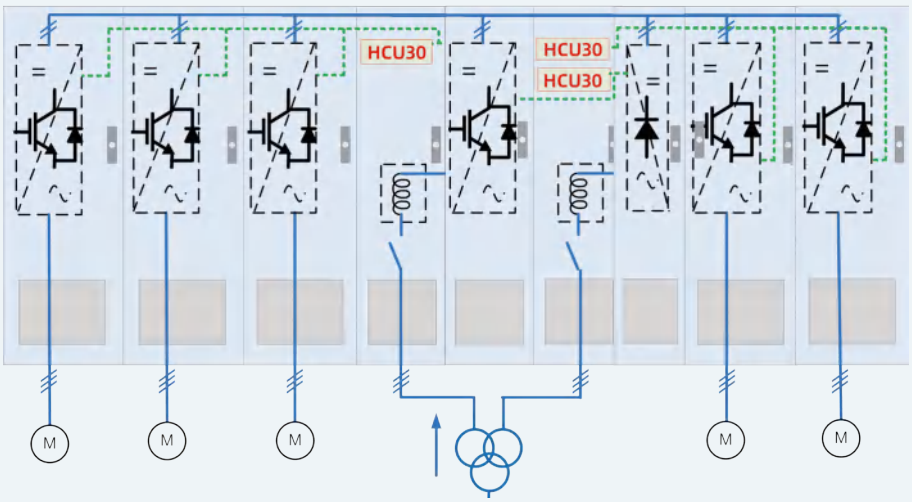
In this configuration mode, each smart rectifier cabinet is equipped with an independent incoming control cabinet. The rectifier cabinets form a common DC bus in parallel. The HUC30 control units are configured in incoming control cabinets respectively, and can be formed into 6-pulse or 12-pulse rectifier units according to different secondary winding and incoming modes of the power supply transformers.

PWM Rectifier Feedback Unit Cabinet in Parallel with Common DC Bus Drive System



In this configuration mode, each PWM rectifier cabinet is equipped with an independent LCL filter interface cabinet and incoming control cabinet. The rectifier cabinets form a common DC bus in parallel and the HUC30 control units are configured in incoming control cabinets respectively.

Hybrid Rectifier Unit in Parallel with Common Bus Drive System



In this configuration mode, basic rectifier cabinets and smart rectifier cabinets are used together. Generally, the capacity of the smart rectifier unit should not exceed 1/3 of that of the basic rectifier unit, and the capacity of the basic rectifier unit should meet requirements of the common DC bus motor drive unit. Each rectifier cabinet is equipped with an independent incoming control cabinet and the rectifier cabinets form a common DC bus. The feedback power is fed back to the grid through the smart rectifier cabinet and the HUC30 control units are configured in incoming control cabinets respectively.

To promote technological progress in the industry
and create a better life for mankind

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