

AC Variable Speed Inverter Drives Range

Quick Start Guide



Scan for latest HD2 Drive Studio
Programming Software

Quick Start Guide for IMO Inverter Drives

This guide briefly describes the external wiring, terminals, keypads, quick running, common function parameter settings, and common faults and solutions of IMO variable-frequency inverter drives (VFD) including XKL, SD1, HD2, HD2-UL and HD2IP. This document can be used as a guide, but please refer to the specific User Manual for the drive you are using.

Visit www.imopc.com for more information (including energy efficiency data) and source download.

Warning

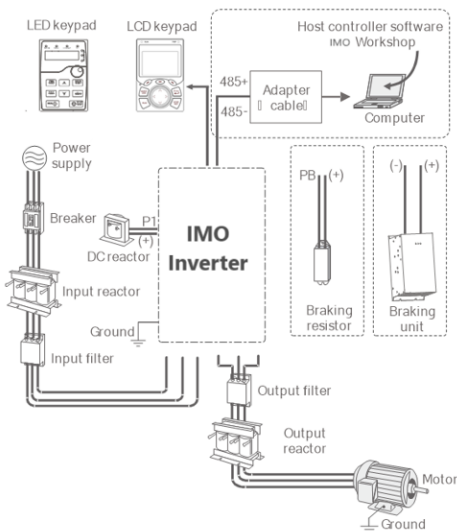
- This guide only provides the basic installation and commissioning information. Failure to comply with the safety instructions and installation and commissioning instructions in the relevant documentation may result in accidents such as equipment damage, personal injury, or even death.
- Only trained and qualified professionals are allowed to carry out related operations.

Danger

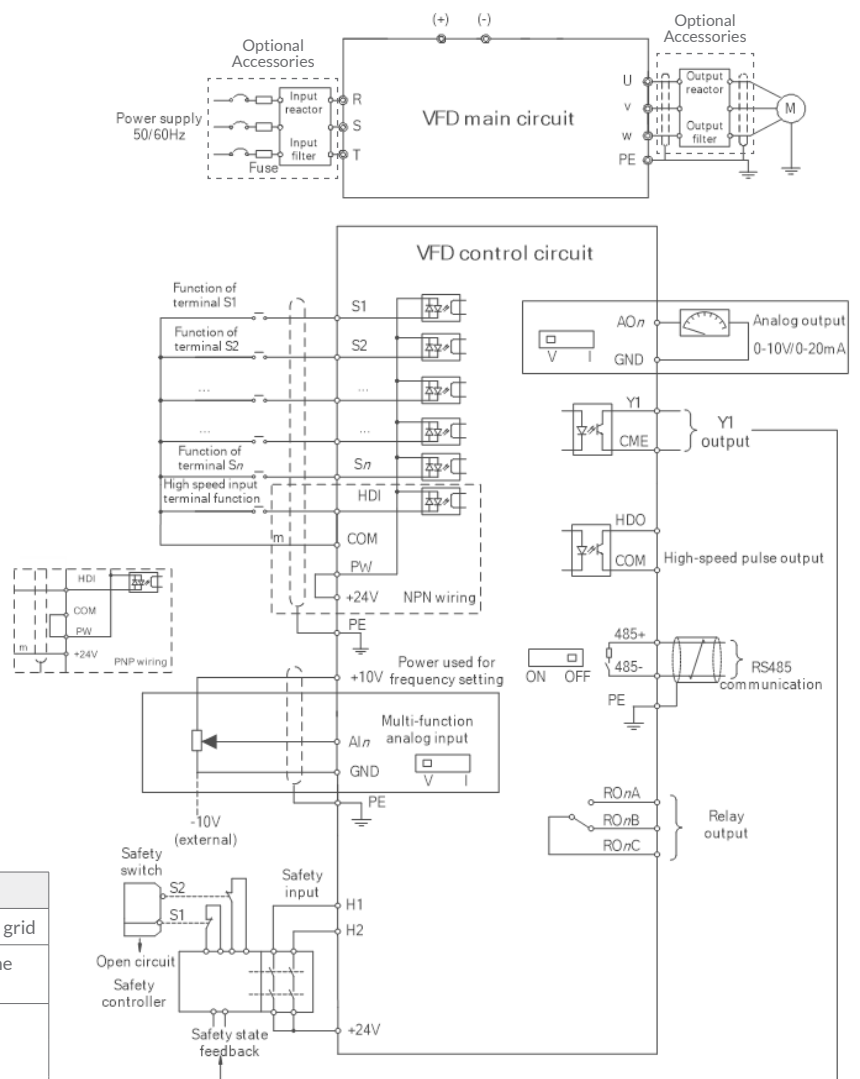
- Do not perform any operations including wiring, inspection, or component replacement when power supply is applied. Before performing these operations, ensure all the input power supplies have been disconnected, and wait for at least the time designated on the inverter or until the DC bus voltage is less than 36V.

Minimum Waiting Time	Inverter Drive Model
5 minutes	1PH 110-120V 0.4-1.1kW; 1PH 200-240V 0.4-2.2kW 3PH 220-240V 0.4-55kW; 3PH 380-440V 0.75-110kW
15 minutes	3PH 380-480V 132-315kW
20 minutes	3PH 380-480V ≥350kW

1. External Wiring



2. Terminals



Power Terminals

Terminal	Description
R, S, T (or L, N)	3PH (or 1PH) AC input terminals, connected to the grid
U, V, W	3PH (or 1PH) AC output terminals, connected to the motor usually
P1	<ul style="list-style-type: none"> • P1 and (+) connect to external DC reactor terminals.
(+)	<ul style="list-style-type: none"> • (+) and (-) connect to external braking unit terminals or shared DC bus terminals.
(-)	
PB	<ul style="list-style-type: none"> • PB and (+) connect to external braking resistor terminals.
⊕	PE terminal. The PE terminals of each machine must be grounded reliably.

Control Circuit Terminals

Terminal	Description
AIn	Analog input. Range: 0-10V or 0-20mA
GND	Reference ground of +10V
AOn	Analog output. Range: 0-10V or 0-20mA
ROnA	Relay output. ROnA: NO; ROnB: NC; ROnC: common
ROnB	
ROnC	
HDO	Switch capacity: 50mA/30V. Output frequency range: 0-50kHz
COM	Reference ground of +24V
CME	Common terminal of open collector output; short connected to COM by default
Y1-Yn	Switch capacity: 50mA/30V. Output frequency range: 0-1kHz
485+	RS485 differential signal communication port. The standard communication interface should use shielded twisted pair. Determine whether to connect the 120Ω terminal matching resistor of RS485 communication through the DIP switch or jumper.
485-	
PE	Grounding terminal
PW	External power input terminal for digital input circuits. In NPN mode, short connect PW and +24V. In PNP mode, short connect PW and COM.

Terminal	Description
+24V	User power supply provided by the inverter. Max. output current: 200mA
S1-Sn	Digital input <ul style="list-style-type: none"> Internal impedance: 3.3kΩ 12-30V voltage input is acceptable Bidirectional input terminals, supporting both NPN and PNP connection methods Max. input frequency: 1kHz Programmable digital input terminals, the functions of which can be set through the related parameters
HDIA	<ul style="list-style-type: none"> Channels for both high frequency pulse input and digital input Max. input frequency: 50kHz Duty ratio: 30%-70% Support for quadrature encoder input when both HDIA and HDIB are available, with the speed measurement function
HDIB	
+24V-H1	Safe Torque Off (STO) inputs <ul style="list-style-type: none"> STO redundant input, connected to the external NC contact. When the contact opens, STO acts, and the inverter stops output. Safety input signal wires use shielded wires whose length is within 25m. The H1 and H2 terminals are short connected to +24V by default. Remove the jumper from the terminals before using the STO function.

Note:

- n is a neutral number.
- The terminals of different series may be different. For detailed terminal wiring, see the User Manual of the product you have.

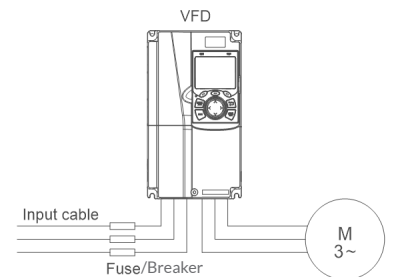
3. Wiring Protection

3.1 Protecting the inverter and input power cable in short circuit

Protect the inverter and input power cable during short-circuit to avoid thermal overload.


Carry out protective measures according to the following requirements.

Note: Select the fuse according to operation manual. During short-circuit, the fuse will protect input power cables to avoid damage to the inverter; when internal short-circuit occurred to the inverter, it can protect neighbouring equipment from being damaged.



3.1.1 Protecting the motor and motor cable in short circuit

If the motor cable is selected based on rated inverter current, the inverter will be able to protect the motor cable and motor during short circuit without other protective devices.

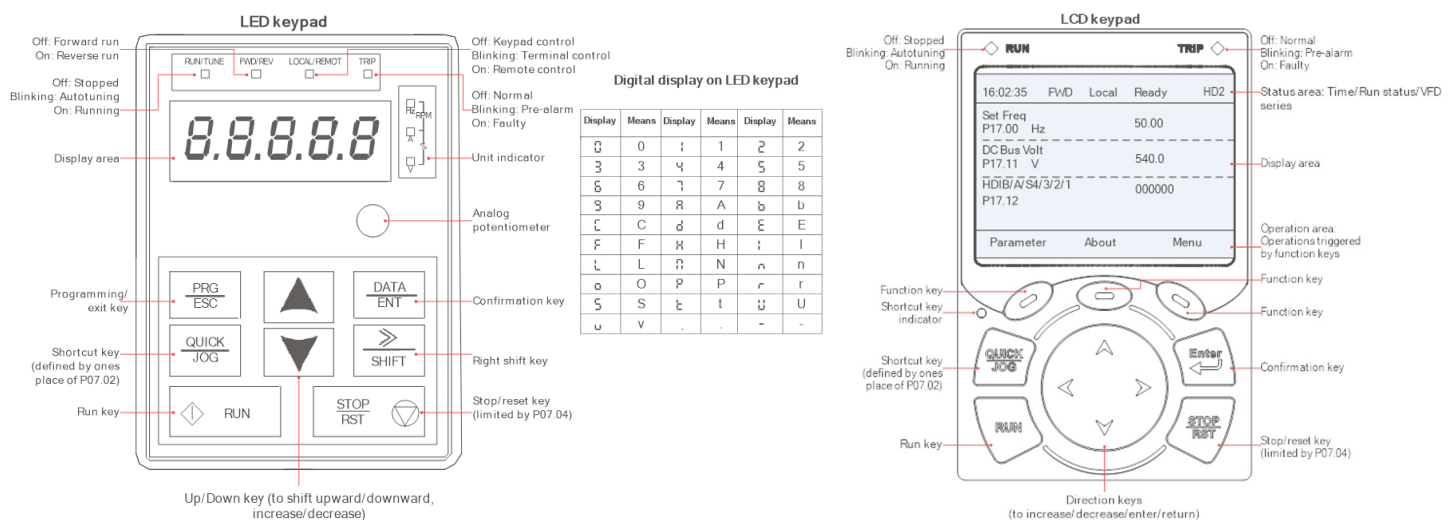
 If the inverter is connected to multiple motors, it is a must to use a separated thermal overload switch or breaker to protect the cable and motor, which may require the fuse to cut off the short circuit current.

3.1.2 Protecting the motor and preventing thermal overload

According to the requirements, the motor must be protected to prevent thermal overload. Once overload is detected, you must cut off the current. The inverter is equipped with motor thermal overload protection function, which will block output and cut off the current (if necessary) to protect the motor.

4. Keypad

The keypad may vary depending on the product. Some products may support optional LCD keypads.



5. Quick Running

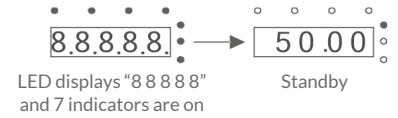
5.1 Check before power-on



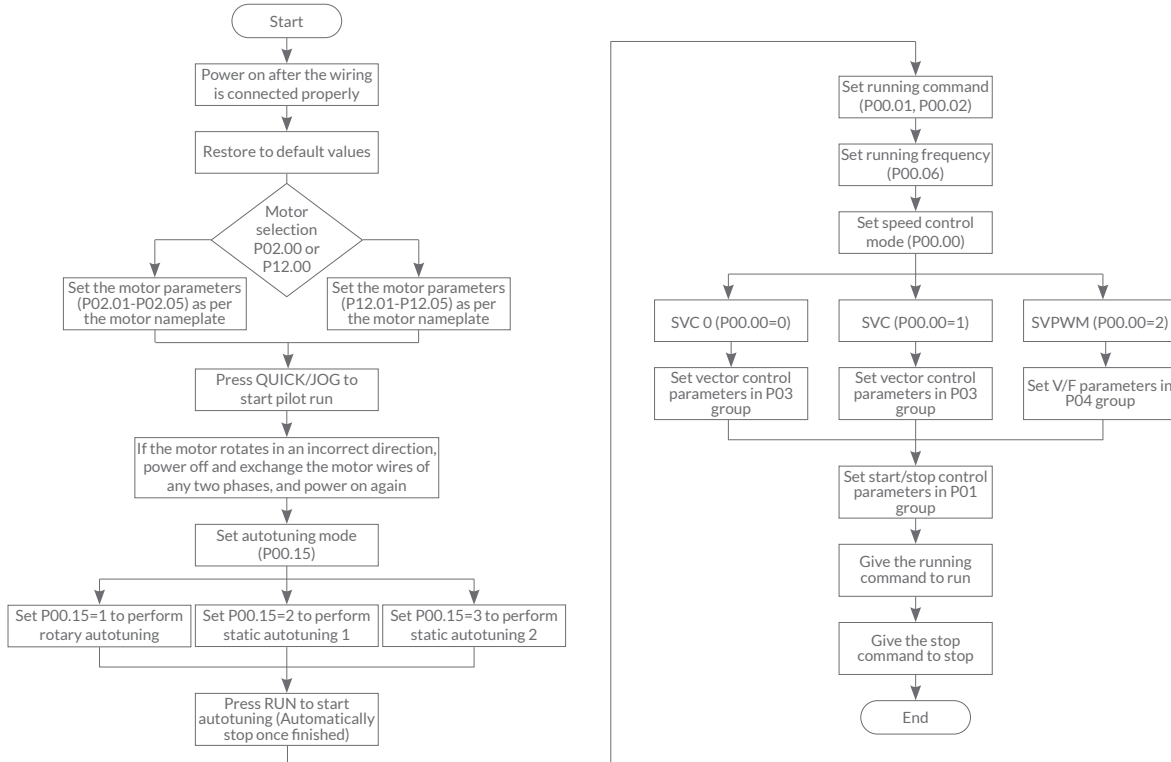
Ensure the all terminals have been securely connected
Ensure that the motor power matches the inverter power

5.2 Operating upon first power-on

After confirming the wiring and power are correct, close the air switch of the AC power at the inverter input side to power on the inverter. Using a LED keypad for example, the keypad displays 8.8.8.8.8 upon power-on and then the set frequency (50.00 in the example), indicating the inverter is initialized and ready to run. (For details about other types of keypad, see the full version of corresponding product user manual.)



The quick start-up flowchart is as follows:



6. Common Functions Parameter Setup

The following briefly describes only some common function parameters and typical values.

“○” indicates that the value of the parameter can be modified when the inverter is in stopped or running state.

“●” indicates that the value of the parameter cannot be modified when the inverter is in running state.

“◎” indicates that the value of the parameter is detected and recorded and cannot be modified.

(The inverter automatically checks and constrains the modification of parameters, which helps prevent incorrect modifications.)

Note: Function parameters may vary with product. For details, see the full version of corresponding product user manual.

Before running your application, it is a mandatory requirement to programme ALL highlighted function codes.

Function Code	Name	Description	Default	Modify
P00.00	Speed control mode	0: Sensorless vector control (SVC) mode 0 1: SVC 1 2: Space voltage vector control mode Note: For HD2-UL, option 3: Closed-loop vector control mode is available.	Model dependant	◎
P00.01	Set Run Command	0: Keypad 1: Terminal 2: Communication	0	○
P00.03	Max. output frequency	P00.04–400.00Hz	Model dependant	◎
P00.04	Upper limit of running frequency	P00.05–P00.03 (Max. output frequency)	Model dependant	◎
P00.05	Lower limit of running frequency	0.00Hz–P00.04 (Upper limit of running frequency)	0.00Hz	◎
P00.06	Set Speed Command Method A	0: Keypad 1: AI1 (Corresponding to the keypad potentiometer) 2: AI2 (Corresponding to the AI terminal) 3: AI3 4: High-speed pulse HDI	0	○
P00.07	Set Speed Command Method B	5: Simple PLC program 6: Multi-step speed running 7: PID control 8: Modbus communication	Model dependant	○
P00.10	Frequency set through keypad	0.00 Hz–P00.03 (Max. output frequency)	Model dependant	○
P00.11	ACC time 1	0.0–3600.0s	Model dependant	○
P00.12	DEC time 1		Model dependant	○

Function Code	Name	Description	Default	Modify
P00.13	Running direction	0: Run at the default direction. 1: Run at the opposite direction. 2: Disable reverse running	Model dependant	○
P00.15	Motor parameter autotuning	0: No operation 1: Rotary autotuning 2: Static autotuning 1 3: Static autotuning 2	0	⊗
P00.18	Function parameter restore	0: No operation 1: Restore default values 2: Clear fault records 3: Lock all function codes	0	⊗
P01.00	Start mode	0: Direct start 1: Start after DC braking 2: Start after speed tracking 1 2: Start after speed tracking 2	0	⊗
P01.08	Stop mode	0: Decelerate to stop 1: Coast to stop	0	○
P01.09	Starting frequency of DC braking for stop	0.00Hz-P00.03 (Max. output frequency)	0.00Hz	○
P01.11	DC braking current for stop	0.0-100.0%	0.0%	○
P01.12	DC braking time for stop	0.00-50.00s	0.00s	○
P01.18	Terminal-based running command protection at power-on	0: The terminal running command is invalid at power-on 1: The terminal running command is valid at power-on	0	⊗
P02.00	Type of motor 1	0: Asynchronous motor (AM) 1: Synchronous motor (SM)	0	⊗
P02.01	Rated power of AM 1	0.1-3000.0kW	Model dependant	⊗
P02.02	Rated frequency of AM 1	0.01Hz-P00.03 (Max. output frequency)	Model dependant	⊗
P02.03	Rated speed of AM 1	1-60000rpm	Model dependant	⊗
P02.04	Rated voltage of AM 1	0-1200V	Model dependant	⊗
P02.05	Rated current of AM 1	0.8-6000.0A	Model dependant	⊗
P02.15	Rated power of SM 1	0.1-3000.0kW Note: This function code is for HD2 and HD2-UL.	Model dependant	⊗
P02.16	Rated frequency of SM 1	0.01Hz-P00.03 (Max. output frequency) Note: This function code is for HD2 and HD2-UL.	Model dependant	⊗
P02.17	Number of pole pairs of SM 1	0-1200V Note: This function code is for HD2 and HD2-UL.	2	⊗
P02.18	Rated voltage of SM 1	0-1200V Note: This function code is for HD2 and HD2-UL.	Model dependant	⊗
P02.19	Rated current of SM 1	0.8-6000.0A Note: This function code is for HD2 and HD2-UL.	Model dependant	⊗
P02.23	Counter-emf of SM 1	0-10000 Note: This function code is for HD2 and HD2-UL.	300	○
P03.00	Speed-loop proportional gain 1	0.0-200.0	20.0	○
P03.01	Speed-loop integral time 1	0.000-10.000s	0.200s	○
P03.03	Speed-loop proportional gain 2	0.0-200.0	20.0	○
P03.04	Speed-loop integral time 2	0.000-10.000s	0.200s	○
P03.09	Current-loop proportional coefficient P	0-65535	1000	○
P03.11	Torque setting method	0: Torque control is invalid 1: Keypad (P03.12) 2: AI1 3: AI2 4: AI3 5: Pulse frequency HDI 6: Multi-step torque 7: Modbus communication	0	○
P04.01	Torque boost of motor 1	0.0%: (Automatic torque boost), 0.1%-10.0%	0	○
P04.09	V/F slip compensation gain of motor 1	0.0-200.0%	100.0%	○
P04.10	Low-frequency oscillation control factor of motor 1	0-100	10	○
P04.11	High-frequency oscillation control factor of motor 1	0-100	10	○
P05.01	Function of S1	0: No function 1: Run forward 2: Run reversely	1	⊗
P05.02	Function of S2	3: Three-wire running control (SIN) 4: Jog forward 5: Jog reversely	4	⊗
P05.03	Function of S3	6: Coast to stop 7: Reset faults	7	⊗
P05.04	Function of S4	9: External fault input 10: Increase frequency setting (UP) 11: Decrease frequency setting (DOWN)	0	⊗

Function Code	Name	Description	Default	Modify
P06.01	Y1 output	0: Invalid 1: Running 2: Running forward 3: Running reversely 4: Jogging 5: Inverter in fault 6: Frequency level detection FDT1 8: Frequency reached Note: STO action is available for SD1 (27: STO action) and HD2-UL (29: STO action).	0	○
P06.03	Relay output		1	○
P06.04			5	○
P06.14- P06.15	Analog output	0: Running frequency 1: Set frequency 3: Rotation speed (Relative to twice the motor synchronous rotation speed) 4: Output current (Relative to twice the inverter rated current) 5: Output current (Relative to twice the motor rated current) 6: Output voltage (Relative to 1.5 times the inverter rated voltage) 7: Output power (Relative to twice the motor rated power)	0	○
P06.16	HDO high-speed pulse output		0	○
P06.14- P06.26	AO output upper/lower limit settings	For details, see the full version of corresponding product user manual.	Model dependant	○
P07.00	User password	0-65535	0	○
P14.00	Local communication address	1-247 Note: The communication address of a slave cannot be set to 0.	1	○
P14.01	Communication baud rate	0: 1200BPS 1: 2400BPS 2: 4800BPS 3: 9600BPS 4: 19200BPS 5: 38400BPS 6: 57600BPS Note: For HD2 and HD2-UL, option 7: 115200BPS is available.	4	○
P14.02	Data bit check	0: No check (N, 8, 1) for RTU 1: Even check (E, 8, 1) for RTU 2: Odd check (O, 8, 1) for RTU 3: No check (N, 8, 2) for RTU 4: Even check (E, 8, 2) for RTU 5: Odd check (O, 8, 2) for RTU Note: For SD1 options 6-17 are available. For details, see the full version of corresponding product e-manual.	1	○

7. Common Faults and Solutions

Note: Our fault code scheme is being upgraded. Some products use the old scheme and the others use the new one, which are listed in "Fault code display".

Fault Code Display		Fault Type	Possible Cause	Solution
OUt1	E1	Inverter unit U-phase protection	<ul style="list-style-type: none"> ACC/DEC is too fast; IGBT module is damaged. Misoperation caused by interference. Drive wires are poorly connected. To-ground short circuit occurred. Sparks occurred inside due to poor use environment conditions. 	<ul style="list-style-type: none"> Increase ACC/DEC time. Change the inverter unit. Check whether the devices and system are grounded reliably. Check whether drive wires are loose. Check whether the motor wiring is normal and the motor-to-ground is short circuited. Remove the dust or oil stain inside the inverter regularly.
OUt2	E2	Inverter unit V-phase protection		
OUt3	E3	Inverter unit W-phase protection		
OC1	E4	Overcurrent during ACC	<ul style="list-style-type: none"> ACC/DEC too fast. Grid voltage too low. Inverter power too small. Load sudden change or exception. 3PH output current imbalance. Strong external interference sources (contactor switchover or improper grounding). 	<ul style="list-style-type: none"> Increase ACC/DEC time. Increase grid input voltage. Select an inverter with larger power. Check for motor stalling, short connection, and load device exceptions. Check for abnormal inverter 3PH output voltage and motor 3PH resistance imbalance. Check for strong interference (whether motor cable far away from contactor and system grounded reliably).
OC2	E5	Overcurrent during deceleration		
OC3	E6	Overcurrent during constant speed running		
OV1	E7	Overvoltage during ACC	<ul style="list-style-type: none"> ACC/DEC time too short. Abnormal input voltage. Motor started during rotating. Load energy regeneration too large. Dynamic braking disabled. 	<ul style="list-style-type: none"> Increase ACC/DEC time. Check the input power. Use the speed tracking start function. Add dynamic braking devices or regenerative units. Set dynamic braking function parameters.
OV2	E8	Overvoltage during deceleration		
OV3	E9	Overvoltage during constant speed running		
UV	E10	Bus undervoltage fault	<ul style="list-style-type: none"> Grid voltage too low. Abnormal voltage display. Abnormal buffer contactor closing. 	<ul style="list-style-type: none"> Increase grid input voltage. Contact us.
OL1	E11	Motor overload	<ul style="list-style-type: none"> Grid voltage too low. Incorrect motor rated current. Motor stalling or load sudden change too great. 	<ul style="list-style-type: none"> Increase grid input voltage. Reset the motor rated current in the motor parameter group. Check the load and adjust the torque boost value.

Fault Code Display		Fault Type	Possible Cause	Solution
OL2	E12	Inverter overload	<ul style="list-style-type: none"> R/S/T input phase loss or violent fluctuation. Input-side screws loosened. 	<ul style="list-style-type: none"> Check for abnormal input power and loose input cables. Set parameters to screen out the fault.
SPI	E13	Input phase loss	<ul style="list-style-type: none"> Output cables broken or short connected to the ground. U/V/W output phase loss or seriously asymmetrical 3PH loads. 	<ul style="list-style-type: none"> Check for loose or broken output cables. Check for sharp load fluctuation and motor 3PH resistance imbalance.
SPO	E14	Output phase loss	<ul style="list-style-type: none"> Air duct blocked or fan damaged. Ambient temperature too high. Long-time overload running. 	<ul style="list-style-type: none"> Ventilate the air duct or replace the fan. Keep good ventilation to lower ambient temperature. Select an inverter with larger power.
OH2	E16	Inverter module overheat	<ul style="list-style-type: none"> Improper baud rate. Communication line fault. Incorrect communication address. Communication suffers from strong interference. 	<ul style="list-style-type: none"> Set a proper baud rate. Check the communication port wiring. Set the communication address correctly. Replace or change wiring to enhance anti-interference.
CE	E18	RS485 communication fault	<ul style="list-style-type: none"> Motor capacity and inverter capacity mismatched. Improper motor parameter setting. Autotuned parameter settings deviate sharply from the standard ones. Autotuning timeout. 	<ul style="list-style-type: none"> Change the inverter model. Set the motor type and nameplate parameters correctly. Empty the motor load and re-perform autotuning. Check motor wiring and parameter settings. Check whether the upper limit frequency is greater than 2/3 of the rated frequency.
tE	E20	Motor autotuning fault	<ul style="list-style-type: none"> R/S/T input phase loss or violent fluctuation. Input-side screws loosened. 	<ul style="list-style-type: none"> Check for abnormal input power and loose input cables. Set parameters to screen out the fault.
PIDE	E22	PID feedback offline fault	<ul style="list-style-type: none"> PID feedback offline. PID feedback source disappears. 	<ul style="list-style-type: none"> Check PID feedback signal wires. Check PID feedback source.
dEu	E34	Speed deviation fault	<ul style="list-style-type: none"> Load too heavy or stalled. 	<ul style="list-style-type: none"> Check for overload, increase speed deviation detection time, or prolong ACC/DEC time. Check motor parameter settings and re-perform motor parameter autotuning. Check speed loop control parameter settings.
STo	E35	Mal-adjustment fault	<ul style="list-style-type: none"> Load exception. Incorrect SM parameter settings. Autotuned motor parameters inaccurate. Inverter disconnected from the motor. Flux weakening application. 	<ul style="list-style-type: none"> Check for overload or stalling. Check motor parameter and counter EMF settings. Re-perform motor parameter autotuning. Increase maladjustment detection time. Adjust flux weakening coefficient and current loop parameters.
STO	E40	Safe torque off	<ul style="list-style-type: none"> Safe torque off function is enabled by external forces. 	<ul style="list-style-type: none"> /
STL1	E41	Exception occurred to safe circuit of channel H1	<ul style="list-style-type: none"> The wiring of STO is improper. Fault occurred to external switch of STO. Hardware fault occurred to safety circuit of channel H1/H2. 	<ul style="list-style-type: none"> Check whether terminal wiring of STO is proper and firm enough. Check whether external switch of STO can work properly. Replace the control board.
STL2	E42	Exception occurred to channel H2 safe circuit		
STL3	E43	Exception occurred to channel H1 and channel H2		

Appendix A - Optional Peripheral Accessories

A.1 Power Supply



Ensure that the voltage class of the inverter is consistent with that of the grid

A.2 Cables

The sizes of the input power cable, and motor cables must meet the local regulation.

- The input power cables, and motor cables must be able to carry the corresponding load currents.
- The maximum temperature margin of the motor cables in continuous operation cannot be lower than 70°C.
- The conductivity of the PE grounding conductor is the same as that of the phase conductor, that is, the cross-sectional areas are the same.

Check the insulation conditions of the input power cable of an inverter according to the local regulations before connecting it.

Table A 1 Cable Specifications (SD1 Models only)

Model	Recommended Cable Size (mm ²)		Size of Connectable Cable (mm ²)			Terminal Screw	Terminal Torque (Nm)
	RST	PE	RST	PE, (+)	PE		
	UVW		UVW				
SD1-2.5A-21	1.5	1.5	1~4	1~4	1~4	M3	0.8
SD1-4.2A-21	1.5	1.5	1~4	1~4	1~4	M3	0.8
SD1-7.5A-21	2.5	2.5	1~4	1~4	1~4	M3	0.8
SD1-10A-21	2.5	2.5	1~4	1~4	1~4	M3	0.8

Model	Recommended Cable Size (mm ²)		Size of Connectable Cable (mm ²)			Terminal Screw	Terminal Torque (Nm)
	RST	PE	RST	PE, (+)	PE		
	UVW		UVW				
SD1-2.5A-23	1.5	1.5	1-1.5	1-1.5	1-1.5	M3	0.8
SD1-4.2A-23	1.5	1.5	1-1.5	1-1.5	1-1.5	M3	0.8
SD1-7.5A-23	2.5	2.5	1.5~6	2.5~6	2.5~6	M4	1.13
SD1-10A-21	2.5	2.5	1~4	1~4	1~4	M3	0.8
SD1-10A-23	2.5	2.5	1.5~6	2.5~6	2.5~6	M4	1.13
SD1-16A-23	2.5	2.5	1.5~6	2.5~6	2.5~6	M4	1.13
SD1-20A-23	4	4	4~10	4~10	4~10	M5	2.3
SD1-30A-23	6	6	4~10	4~10	4~10	M5	2.3
SD1-2.5A-43	1.5	1.5	1~1.5	1~1.5	1~1.5	M3	0.8
SD1-4.2A-43	1.5	1.5	1~1.5	1~1.5	1~1.5	M3	0.8
SD1-5.5A-43	1.5	1.5	1~1.5	1~1.5	1~1.5	M3	0.8
SD1-9.5A-43	2.5	2.5	2.5~6	2.5~6	2.5~6	M4	1.13
SD1-14A-43	2.5	2.5	2.5~6	2.5~6	2.5~6	M4	1.13
SD1-18.5A-43	4	4	4~10	4~10	4~10	M5	2.3
SD1-25A-43	6	6	4~10	4~10	4~10	M5	2.3
SD1-32A-43	6	6	4~10	4~10	4~10	M5	2.3
SD1-38A-43	10	10	10~16	10~16	10~16	M5	2.3
SD1-45A-43	16	16	10~16	10~16	10~16	M5	2.3
SD1-60A-43	25	16	25~50	25~50	16~25	M6	2.5
SD1-75A-43	25	16	25~50	25~50	16~25	M6	2.5
SD1-92A-43	35	16	35~70	35~70	16~35	M8	10
SD1-115A-43	50	25	35~70	35~70	16~35	M8	10
SD1-150A-43	70	35	35~70	35~70	16~35	M8	10
SD1-180A-43	95	50	70~120	70~120	50~70	M12	35
SD1-215A-43	120	70	70~120	70~120	50~70	M12	35

Note:

- Cables of the sizes recommended for the main circuit can be used in scenarios where the ambient temperature is lower than 40°C, the wiring distance is shorter than 100 m, and the current is the rated current.
- Terminals P1, (+), PB and (-) are used to connect to the DC reactor options and parts.

Table A 2 Cable Specifications (HD2-UL Models only)

Model	Recommended Cable Size (AWG)		Required Torque (in-lbs)		Wire Connector (##)
	R, S, T; U, V, W; P1, (+), PB, (-)	PE	R, S, T; U, V, W; P1, (+), PB, (-)	PE	
HD2-4.5A-23	14	12	11	10	Optional
HD2-7A-23	8	12	11	10	Required
HD2-10A-23	8	12	11	10	Required
HD2-16A-23	8	10	20 or 25 @@	15	Optional
HD2-20A-23	8	10	20 or 25 @@	15	Optional
HD2-30A-23	6	15	20	8	Required
HD2-42A-23	3	8	25.5	18	Required
HD2-55A-23	3	6	25.5	18	Required
HD2-70A-23	2/0	6	25.5	75	Required
HD2-80A-23	2/0	6	25.5	75	Required
HD2-110A-23	2/0	6	25.5	75	Required
HD2-130A-23	2/0AWG	1AWG	60	10	Required
HD2-160A-23	1/0 AWG x 2	1AWG	90	10	Required
HD2-200A-23	1/0 AWG x 2	1AWG	90	10	Required
HD2-3.7A-43-UL	14AWG	12AWG	11	10	Optional
HD2-5A-43-UL	14AWG	12AWG	11	10	Optional
HD2-9.5A-43-UL	8AWG	12AWG	11	10	Required
HD2-14A-43-UL	8AWG	10AWG	11	10	Required
HD2-18.5A-43-UL	8AWG	10AWG	20	15	Optional
HD2-25A-43-UL	8AWG	10AWG	20	15	Optional
HD2-32A-43-UL	6AWG	10AWG	20	15	Required

Model	Recommended Cable Size (AWG)		Required Torque (in-lbs)		Wire Connector (##)
	R, S, T; U, V, W; P1, (+), PB, (-)	PE	R, S, T; U, V, W; P1, (+), PB, (-)	PE	
HD2-38A-43-UL	6AWG	8AWG	20	15	Required
HD2-45A-43-UL	3AWG	8AWG	25.5	18	Required
HD2-60A-43-UL	3AWG	6AWG	25.5	18	Required
HD2-75A-43-UL	2/0	6AWG	25.5	75	Required
HD2-92A-43-UL	2/0	6AWG	25.5	75	Required
HD2-115A-43-UL	2/0	6AWG	25.5	75	Required
HD2-150A-43-UL	3/0AWG	1AWG	60	10	Required
HD2-180A-43-UL	1/0 AWG x 2	1AWG	90	10	Required
HD2-215A-43-UL	1/0 AWG x 2	1AWG	90	10	Required
HD2-260A-43	350kcmil x 2	4/0AWG	338.2	338.2	Optional
HD2-305A-43					
HD2-340A-43					
HD2-380A-43					
HD2-425A-43	350kcmil x 3	4/0AWG	338.2	338.2	Optional
HD2-480A-43					
HD2-530A-43					
HD2-600A-43					
HD2-650A-43	350kcmil x 2	4/0AWG	338.2	338.2	Optional
HD2-720A-43					
HD2-860A-43					

- Note:
- It is appropriate to use the recommended cable size at 40°C and rated current. The wiring distance cannot be more than 100m.
 - Terminals P1, (+), PB and (-) connect the DC reactor options and parts.
 - Use 75°C CU wire only for field input and output wire.

Table A 3 Cable Specifications (HD2 Models only)

Model	Recommended Cable Size (mm ²)				Screw	
	R, S, T U, V, W	PE	P1, (+)	PB, (+), (-)	Terminal Screw	Fastening Torque (Nm)
HD2-3.7A-43	1.0	1.0	1.0	1.0	M4	1.2-1.5
HD2-5A-43	1.0	1.0	1.0	1.0	M4	1.2-1.5
HD2-9.5A-43	1.5	1.5	1.5	1.5	M4	1.2-1.5
HD2-14A-43	1.5	1.5	1.5	1.5	M5	2-2.5
HD2-18.5A-43	2.5	2.5	2.5	2.5	M5	2-2.5
HD2-25A-43	4	4	4	4	M5	2-2.5
HD2-32A-43	6	6	6	6	M5	2-2.5
HD2-38A-43	10	10	10	10	M6	4-6
HD2-45A-43	10	10	10	10	M6	4-6
HD2-60A-43	16	16	16	16	M8	9-11
HD2-75A-43	25	16	25	25	M8	9-11
HD2-92A-43	25	16	25	25	M8	9-11
HD2-115A-43	35	16	35	35	M10	18-23
HD2-150A-43	50	25	50	50	M10	18-23
HD2-180A-43	70	35	70	70	M10	18-23
HD2-215A-43	95	50	95	95	M12	31-40

A.3 Fuse, Breaker and Electromagnetic Contactor

You need to add a fuse to prevent overload.

You need to configure a manually manipulated moulded case circuit breaker (MCCB) between the AC power supply and inverter. The breaker must be locked in the open state to facilitate installation and inspection. The capacity of the breaker needs to be 1.5 to 2 times the rated current of the inverter.



According to the working principle and structure of breakers, if the manufacturer's regulation is not followed, hot ionized gases may escape from the breaker enclosure when a short-circuit occurs. To ensure safe use, exercise extra caution when installing and placing the breaker. Follow the manufacturer's instructions.

To ensure safety, you can configure an electromagnetic contactor on the input side to control the switch-on and switch-off of the main circuit power, so that the input power supply of the inverter can be effectively cut off when a system fault occurs.

Table A 1 Fuse, breaker, and electromagnetic contactor (SD1 models only)

Model	Fuse (A)	Breaker (A)	Contactor Rated Current (A)
SD1-2.5A-21	10	10	9
SD1-4.2A-21	16	16	12
SD1-7.5A-21	25	25	25
SD1-10A-21	50	40	32
SD1-2.5A-23	6	6	9
SD1-4.2A-23	10	10	9
SD1-7.5A-23	16	16	12
SD1-10A-23	25	25	18
SD1-16A-23	35	32	25
SD1-20A-23	35	32	32
SD1-30A-23	50	63	50
SD1-2.5A-43	6	6	9
SD1-4.2A-43	10	10	9
SD1-5.5A-43	10	10	9
SD1-9.5A-43	25	25	25
SD1-14A-43	35	32	25
SD1-18.5A-43	50	40	38
SD1-25A-43	63	63	50
SD1-32A-43	63	63	50
SD1-38A-43	100	100	65
SD1-45A-43	100	100	80
SD1-60A-43	125	125	95
SD1-75A-43	150	160	115
SD1-92A-43	150	200	170
SD1-115A-43	200	200	170
SD1-150A-43	250	250	205
SD1-180A-43	325	315	245
SD1-215A-43	350	350	300

Table A 3 Fuse specifications (HD2 models only)

Model	Breaker Rated Current (A)	Fast-acting Fuse Rated Current (A)	Contactor Rated Current (A)
HD2-3.7A-43	6	10	9
HD2-5A-43	10	10	9
HD2-9.5A-43	20	20	18
HD2-14A-43	25	35	25
HD2-18.5A-43	32	40	32
HD2-25A-43	50	50	38
HD2-32A-43	63	60	50
HD2-38A-43	63	70	65
HD2-45A-43	80	90	80
HD2-60A-43	100	125	80
HD2-75A-43	125	125	98
HD2-92A-43	140	150	115
HD2-115A-43	180	200	150
HD2-150A-43	225	250	185
HD2-180A-43	250	300	225
HD2-215A-43	315	350	265

Table A 2 Fuse specifications (HD2-UL models only)

Model	Max. Prospective Line Isc	Fuse Class Type	Fuse Current Rating
HD2-4.5A-23	10kA	CC	20A; 600V
HD2-7A-23	10kA	CC	20A; 600V
HD2-10A-23	10kA	CC	20A; 600V
HD2-16A-23	10kA	T	40A; 600V
HD2-20A-23	10kA	T	50A; 600V
HD2-30A-23	10kA	T	50A; 600V
HD2-42A-23	10kA	T	90A; 600V
HD2-55A-23	10kA	T	125A; 600V
HD2-70A-23	10kA	T	150A; 600V
HD2-80A-23	10kA	T	150A; 600V
HD2-110A-23	10kA	T	200A; 600V
HD2-130A-23	10kA	T	250A; 600V
HD2-160A-23	10kA	T	250A; 600V
HD2-200A-23	10kA	T	250A; 600V
HD2-3.7A-43-UL	5kA	CC	20A; 600V
HD2-5A-43-UL	5kA	CC	20A; 600V
HD2-9.5A-43-UL	5kA	CC	20A/30A; 600V
HD2-14A-43-UL	5kA	CC	30A/40A; 600V
HD2-18.5A-43-UL	5kA	T	40A/50A; 600V
HD2-25A-43-UL	5kA	T	50A/50A; 600V
HD2-32A-43-UL	5kA	T	50A/80A; 600V
HD2-38A-43-UL	5kA	T	80A/90A; 600V
HD2-45A-43-UL	10kA	T	90A/125A; 600V
HD2-60A-43-UL	10kA	T	125A/150A; 600V
HD2-75A-43-UL	10kA	T	150A/200A; 600V
HD2-92A-43-UL	10kA	T	200A/200A; 600V
HD2-115A-43-UL	10kA	T	200A; 600V
HD2-150A-43-UL	10kA	T	400A; 600V
HD2-180A-43-UL	10kA	T	400A; 600V
HD2-215A-43-UL	10kA	T	400A; 600V
HD2-260A-43	100kA	/	600A; 600V
HD2-305A-43	100kA	/	600A; 600V
HD2-340A-43	100kA	/	600A; 600V
HD2-380A-43	100kA	/	600A; 600V
HD2-425A-43	100kA	/	900A; 600V
HD2-480A-43	100kA	/	900A; 600V
HD2-530A-43	100kA	/	900A; 600V
HD2-600A-43	100kA	/	1500A; 600V
HD2-650A-43	100kA	/	1500A; 600V
HD2-720A-43	100kA	/	1500A; 600V
HD2-860A-43	100kA	/	1500A; 600V

Appendix B - Energy Efficiency Data

Table B 1 Power loss and IE class (SD1 Models Only)

Model	Relative Loss (%)								Standby Loss (W)	IE Class
	(0;25)	(0;50)	(0;100)	(50;25)	(50;50)	(50;100)	(90;50)	(90;100)		
SD1-2.5A-21	2.00	2.00	2.41	1.90	1.70	2.10	1.20	2.10	5	IE2
SD1-4.2A-21	1.37	1.61	2.33	1.31	1.13	2.09	0.65	2.27	7	IE2
SD1-7.5A-21	1.17	1.47	2.20	1.00	1.27	1.94	0.93	2.61	8	IE2
SD1-10A-21	1.05	1.28	1.83	1.25	1.70	1.73	2.10	3.94	8	IE2
SD1-2.5A-23	2.30	2.30	2.61	2.00	1.90	2.10	1.30	1.50	8	IE2
SD1-4.2A-23	1.43	1.73	2.51	0.59	1.37	2.21	0.92	1.91	8	IE2
SD1-7.5A-23	1.03	1.40	2.10	1.00	1.53	2.54	1.20	2.71	8	IE2
SD1-10A-23	1.07	1.43	2.25	1.00	1.50	2.43	1.25	2.15	8	IE2
SD1-16A-23	1.19	1.49	2.76	1.22	1.55	2.39	1.27	1.93	8	IE2
SD1-20A-23	0.82	1.19	2.27	0.85	1.27	2.38	1.05	2.02	8	IE2
SD1-30A-23	0.89	1.43	2.23	1.07	1.51	2.48	0.95	2.26	8	IE2
SD1-2.5A-43	1.79	2.07	2.54	2.02	2.13	2.94	1.55	2.36	7	IE2
SD1-4.2A-43	1.23	1.47	1.99	0.96	1.30	1.99	1.13	2.09	7	IE2
SD1-5.5A-43	1.26	1.44	2.07	1.28	1.68	2.25	1.62	2.49	8	IE2
SD1-9.5A-43	0.97	1.18	1.64	1.04	1.35	1.73	1.21	2.12	9	IE2
SD1-14A-43	0.96	1.10	1.94	1.04	1.37	2.28	1.28	2.66	9	IE2
SD1-18.5A-43	0.72	0.83	1.47	0.80	0.98	2.13	1.10	1.77	9	IE2
SD1-25A-43	0.57	0.79	1.46	0.57	0.98	1.86	0.93	2.05	6	IE2
SD1-32A-43	0.39	0.49	1.20	0.54	0.69	1.38	0.74	1.57	7	IE2
SD1-38A-43	0.51	0.70	1.15	0.72	0.98	1.61	0.91	1.56	11	IE2
SD1-45A-43	0.44	0.63	1.15	0.64	0.85	1.46	0.82	1.31	11	IE2
SD1-60A-43	0.50	0.67	1.18	0.68	0.85	1.37	0.80	1.41	13	IE2
SD1-75A-43	0.45	0.65	1.32	0.59	0.83	1.52	0.94	1.63	14	IE2
SD1-92A-43	0.46	0.65	1.32	0.73	0.94	1.42	0.92	1.57	21	IE2
SD1-115A-43	0.48	0.65	1.19	0.67	0.84	1.40	0.83	1.32	22	IE2
SD1-150A-43	0.41	0.58	1.06	0.48	0.65	1.22	0.72	1.35	22	IE2
SD1-180A-43	0.39	0.56	1.09	0.44	0.61	1.22	0.85	1.40	25	IE2
SD1-215A-43	0.41	0.59	1.23	0.5	0.70	1.55	0.75	1.69	28	IE2

Table B 2 Power loss and IE class (HD2-UL Models Only)

Model	Relative Loss (%)								Standby Loss (W)	IE Class
	(0;25)	(0;50)	(0;100)	(50;25)	(50;50)	(50;100)	(90;50)	(90;100)		
HD2-4.5A-23	1.45	1.64	2.45	1.33	1.83	2.22	2.16	2.58	8	IE2
HD2-7A-23	0.71	0.86	1.80	0.79	1.07	1.90	1.61	2.22	8	IE2
HD2-10A-23	1.26	1.42	2.09	1.29	1.62	2.25	1.62	2.49	10	IE2
HD2-16A-23	1.05	1.37	1.59	1.35	1.48	1.98	1.65	2.68	11	IE2
HD2-20A-23	1.20	0.89	2.44	1.35	1.56	2.58	1.64	3.05	10	IE2
HD2-30A-23	0.77	0.94	1.69	0.81	1.18	2.19	1.40	2.16	12	IE2
HD2-42A-23	0.63	1.04	1.66	0.66	1.37	2.41	1.38	2.71	14	IE2
HD2-55A-23	0.55	0.67	1.42	0.64	0.87	1.51	0.95	1.67	14	IE2
HD2-70A-23	0.79	0.89	1.49	1.22	1.60	2.04	1.71	2.35	15	IE2
HD2-80A-23	0.98	1.17	1.73	1.09	1.43	1.90	1.49	2.03	16	IE2
HD2-110A-23	0.79	1.00	1.03	0.80	1.24	1.40	1.31	1.69	21	IE2
HD2-130A-23	0.63	0.89	1.49	0.82	1.28	1.79	1.37	2.01	21	IE2
HD2-160A-23	0.63	0.74	1.38	1.08	1.25	1.79	1.28	1.97	24	IE2
HD2-200A-23	0.56	0.81	1.39	0.73	1.03	1.60	1.09	1.80	25	IE2
HD2-3.7A-43-UL	1.25	1.22	1.35	0.91	0.84	1.18	0.74	1.18	3	IE2
HD2-5A-43-UL	1.00	1.60	2.01	0.65	0.82	1.23	0.67	1.18	5	IE2
HD2-9.5A-43-UL	0.92	1.15	1.69	0.93	1.17	1.75	1.16	1.87	6	IE2
HD2-14A-43-UL	0.77	1.04	1.70	0.82	1.13	1.91	1.15	2.14	8	IE2
HD2-18.5A-43-UL	0.63	0.72	1.28	0.70	0.85	1.85	0.96	1.54	7	IE2
HD2-25A-43-UL	0.49	0.69	1.27	0.50	0.85	1.62	0.81	1.78	9	IE2

Model	Relative Loss (%)								Standby Loss (W)	IE Class
	(0;25)	(0;50)	(0;100)	(50;25)	(50;50)	(50;100)	(90;50)	(90;100)		
HD2-32A-43-UL	0.34	0.42	1.04	0.47	0.60	1.20	0.64	1.37	9	IE2
HD2-38A-43-UL	0.44	0.61	1.00	0.62	0.85	1.40	0.79	1.36	11	IE2
HD2-45A-43-UL	0.38	0.54	1.00	0.55	0.74	1.27	0.71	1.14	11	IE2
HD2-60A-43-UL	0.43	0.58	1.02	0.59	0.74	1.19	0.69	1.23	13	IE2
HD2-75A-43-UL	0.39	0.57	1.14	0.51	0.72	1.32	0.82	1.42	14	IE2
HD2-92A-43-UL	0.40	0.57	1.15	0.64	0.82	1.35	0.80	1.36	21	IE2
HD2-115A-43-UL	0.42	0.56	1.04	0.58	0.73	1.21	0.73	1.15	22	IE2
HD2-150A-43-UL	0.36	0.50	0.92	0.41	0.57	1.06	0.62	1.17	22	IE2
HD2-180A-43-UL	0.34	0.49	0.95	0.39	0.53	1.06	0.74	1.22	25	IE2
HD2-215A-43-UL	0.35	0.51	1.07	0.39	0.61	1.35	0.66	1.47	28	IE2
HD2-260A-43	0.39	0.49	0.87	0.50	0.58	1.05	0.70	1.18	55	IE2
HD2-305A-43	0.48	0.58	1.12	1.00	0.80	1.54	0.82	1.52	55	IE2
HD2-340A-43	0.51	0.63	0.99	0.96	0.92	1.40	0.88	1.33	55	IE2
HD2-380A-43	0.43	0.58	1.16	0.60	0.78	1.49	0.82	1.51	55	IE2
HD2-425A-43	0.27	0.34	0.56	0.70	0.78	1.09	0.91	0.97	80	IE2
HD2-480A-43	0.31	0.49	1.00	0.53	0.76	1.37	0.76	1.43	80	IE2
HD2-530A-43	0.32	0.48	0.90	0.52	0.73	1.30	0.92	1.11	80	IE2
HD2-600A-43	0.46	0.28	0.64	0.77	0.77	1.34	1.12	1.83	80	IE2
HD2-650A-43	0.30	0.38	0.81	0.75	0.91	1.60	1.17	2.01	80	IE2
HD2-720A-43	0.14	0.21	0.34	0.22	0.33	0.61	0.38	0.75	80	IE2
HD2-860A-43	0.26	0.45	0.80	0.37	0.50	0.84	0.54	0.68	80	IE2

Table B 3 Power loss and IE class (HD2 Models Only)

Model	Relative Loss (%)								Standby Loss (W)	IE Class
	(0;25)	(0;50)	(0;100)	(50;25)	(50;50)	(50;100)	(90;50)	(90;100)		
HD2-3.7A-43	1.25	1.22	1.35	0.91	0.84	1.18	0.74	1.18	3	IE2
HD2-5A-43	1.00	1.60	2.01	0.65	0.82	1.23	0.67	1.18	5	IE2
HD2-9.5A-43	0.92	1.15	1.69	0.93	1.17	1.75	1.16	1.87	6	IE2
HD2-14A-43	0.77	1.04	1.70	0.82	1.13	1.91	1.15	2.14	8	IE2
HD2-18.5A-43	0.63	0.72	1.28	0.70	0.85	1.85	0.96	1.54	7	IE2
HD2-25A-43	0.49	0.69	1.27	0.50	0.85	1.62	0.81	1.78	9	IE2
HD2-32A-43	0.34	0.42	1.04	0.47	0.60	1.20	0.64	1.37	9	IE2
HD2-38A-43	0.44	0.61	1.00	0.62	0.85	1.40	0.79	1.36	11	IE2
HD2-45A-43	0.38	0.54	1.00	0.55	0.74	1.27	0.71	1.14	11	IE2
HD2-60A-43	0.43	0.58	1.02	0.59	0.74	1.19	0.69	1.23	13	IE2
HD2-75A-43	0.39	0.57	1.14	0.51	0.72	1.32	0.82	1.42	14	IE2
HD2-92A-43	0.40	0.57	1.15	0.64	0.82	1.35	0.80	1.36	21	IE2
HD2-115A-43	0.42	0.56	1.04	0.58	0.73	1.21	0.73	1.15	22	IE2
HD2-150A-43	0.36	0.50	0.92	0.41	0.57	1.06	0.62	1.17	22	IE2
HD2-180A-43	0.34	0.49	0.95	0.39	0.53	1.06	0.74	1.22	25	IE2
HD2-215A-43	0.35	0.51	1.07	0.39	0.61	1.35	0.66	1.47	28	IE2

Table B 4 Rated specifications (SD1 Models Only)

Model	Apparent Power (kVA)	Rated Output Power (kW)	Rated Output Current (A)	Max. Working Temperature (°C)	Rated Power Frequency (Hz)	Rated Power Voltage (V)	
SD1-2.5A-21	0.99	0.4	2.5	50°C Derate by 1% for every increase of 1°C when the temperature exceeds 40°C.	50Hz/60Hz Allowed range: 47-63Hz	1PH 230V	
SD1-4.2A-21	1.67	0.75	4.2				
SD1-7.5A-21	2.98	1.5	7.5				
SD1-10A-21	3.98	2.2	10				
SD1-2.5A-23	0.99	0.4	2.5			3PH 230V	
SD1-4.2A-23	1.67	0.75	4.2				
SD1-7.5A-23	2.98	1.5	7.5				
SD1-10A-23	3.98	2.2	10				
SD1-16A-23	6.37	4	16				
SD1-20A-23	7.96	5.5	20				
SD1-30A-23	11.95	7.5	30				
SD1-2.5A-43	1.73	0.75	2.5				3PH 400V
SD1-4.2A-43	2.90	1.5	4.2				
SD1-5.5A-43	3.81	2.2	5.5				
SD1-9.5A-43	6.58	4	9.5				
SD1-14A-43	9.69	5.5	14				
SD1-18.5A-43	12.81	7.5	18.5				
SD1-25A-43	17.32	11	25				
SD1-32A-43	22.17	15	32				
SD1-38A-43	26.32	18.5	38				
SD1-45A-43	31.17	22	45				
SD1-60A-43	41.56	30	60				
SD1-75A-43	51.96	37	75				
SD1-92A-43	63.73	45	92				
SD1-115A-43	79.67	55	115				
SD1-150A-43	103.92	75	150				
SD1-180A-43	124.70	90	180				
SD1-215A-43	148.95	110	215				

Table B 5 Rated specifications (HD2-UL Models Only)

Model	Apparent Power (kVA)	Rated Output Power (kW)	Rated Output Current (A)	Max. Working Temperature (°C)	Rated Power Frequency (Hz)	Rated Power Voltage (V)
HD2-4.5A-23	1.7	0.75	4.5	50°C Derate by 1% for every increase of 1°C when the temperature exceeds 40°C.	50Hz/60Hz Allowed range: 47-63Hz	3PH 220V
HD2-7A-23	2.7	1.5	7			
HD2-10A-23	3.8	2.2	10			
HD2-16A-23	6.1	4.0	16			
HD2-20A-23	7.6	5.5	20			
HD2-30A-23	11.4	7.5	30			
HD2-42A-23	16	11	42			
HD2-55A-23	21	15	55			
HD2-70A-23	26.7	18.5	70			
HD2-80A-23	30.5	22	80			
HD2-110A-23	41.9	30	110			
HD2-130A-23	50.3	37	130			
HD2-160A-23	61	45	160			
HD2-200A-23	76.2	55	200			
HD2-3.7A-43-UL	2.9	1.5	3.7			
HD2-5A-43-UL	3.9	2.2	5			
HD2-9.5A-43-UL	7.5	4.0	9.5			
HD2-14A-43-UL	11.1	5.5	14			
HD2-18.5A-43-UL	14.7	7.5	18.5			
HD2-25A-43-UL	19.9	11	25			

Model	Apparent Power (kVA)	Rated Output Power (kW)	Rated Output Current (A)	Max. Working Temperature (°C)	Rated Power Frequency (Hz)	Rated Power Voltage (V)
HD2-32A-43-UL	25.5	15	32	50°C Derate by 1% for every increase of 1°C when the temperature exceeds 40°C.	50Hz/60Hz Allowed range: 47-63Hz	3PH 460V
HD2-38A-43-UL	30.2	18.5	38			
HD2-45A-43-UL	35.8	22	45			
HD2-60A-43-UL	47.8	30	60			
HD2-75A-43-UL	59.7	37	75			
HD2-92A-43-UL	73.3	45	92			
HD2-115A-43-UL	91.6	55	115			
HD2-150A-43-UL	119.5	75	150			
HD2-180A-43-UL	143.4	90	180			
HD2-215A-43-UL	171.3	110	215			
HD2-260A-43	207.1	132	260			
HD2-305A-43	243.0	160	305			
HD2-340A-43	270.8	185	340			
HD2-380A-43	302.7	200	380			
HD2-425A-43	338.6	220	425			
HD2-480A-43	382.4	250	480			
HD2-530A-43	422.2	280	530			
HD2-600A-43	478.8	315	600			
HD2-650A-43	517.8	355	650			
HD2-720A-43	573.6	400	720			
HD2-860A-43	685.1	500	860			

Table B 6 Rated specifications (HD2 Models Only)

Model	Apparent Power (kVA)	Rated Output Power (kW)	Rated Output Current (A)	Max. Working Temperature (°C)	Rated Power Frequency (Hz)	Rated Power Voltage (V)
HD2-3.7A-43	2.9	1.5	3.7	50°C Derate by 1% for every increase of 1°C when the temperature exceeds 40°C.	50Hz/60Hz Allowed range: 47-63Hz	3PH 460V
HD2-5A-43	3.9	2.2	5			
HD2-9.5A-43	7.5	4.0	9.5			
HD2-14A-43	11.1	5.5	14			
HD2-18.5A-43	14.7	7.5	18.5			
HD2-25A-43	19.9	11	25			
HD2-32A-43	25.5	15	32			
HD2-38A-43	30.2	18.5	38			
HD2-45A-43	35.8	22	45			
HD2-60A-43	47.8	30	60			
HD2-75A-43	59.7	37	75			
HD2-92A-43	73.3	45	92			
HD2-115A-43	91.6	55	115			
HD2-150A-43	119.5	75	150			
HD2-180A-43	143.4	90	180			
HD2-215A-43	171.3	110	215			

Appendix C - User Manuals



 XKL (iDrive2) User Manual
(English)



 SD1 User Manual
(English)



 SD1 User Manual
(French)




 SD1 User Manual
(Italian)



 HD2 User Manual
(English)



 HD2-UL User Manual
(English)



 HD2IP User Manual
(English)

IMO Worldwide Offices

IMO Precision Controls Limited

The Interchange
Frobisher Way
Hatfield, Herts AL10 9TG
United Kingdom

Tel: 01707 414 444

Email: imo@imopc.com
Web: www.imopc.com

IMO Jeambrun Automation SAS

Parc de la Broye
14 rue du Chauffour
59710 ENNEVELIN
France

Tel: 0800 912 712 (n° gratuit)

Email: imo-fr@imopc.com
Web: www.imojeambrun.fr

IMO Automazione

Via Belfiore 10,
50144 Firenze (FI)
Italia

Tel: 800 930 872 (toll free)

Email: imo-it@imopc.com
Web: www.imopc.it

IMO Canada

1B-701 Rossland Road East
Suite #608
Whitby, Ontario L1N 9K3
Canada

Tel: 416 639 0709

Email: sales-ca@imopc.com
Web: www.imopc.com

IMO Automation LLC

Suite 112,
5910 Shiloh Road East
Alpharetta, GA 30005
USA

Tel: 404 476 8810

Email: sales-na@imopc.com
Web: www.imoautomation.com

IMO South Africa (Pty) Ltd

Unit 5 Osdam Business Park
Columbus Crescent, Rivergate
Parklands, Cape Town 7441
South Africa

Tel: 021 551 1787

Fax: 021 555 0676

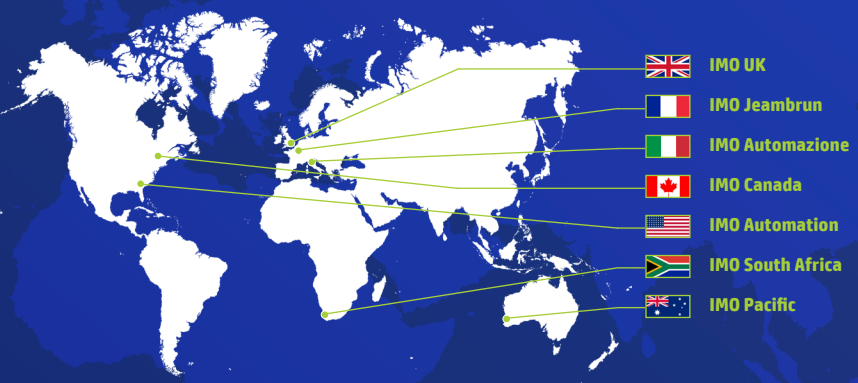
Email: info@imopc.co.za
Web: www.imopc.co.za

IMO Pacific Pty Ltd

Unit 9, Dillington Pass
Landsdale
Perth WA 6065
Australia

Tel: 1300 34 21 31

Email: sales@imopacific.com.au
Web: www.imopacific.com.au



LinkedIn
Connect with us and follow
IMO Precision Controls for the
latest news, views and reviews



Errors and omissions excepted. Subject to change without notice. Information correct at time of print.