

HD2IP Series **IP55**

AC Variable Speed Inverters



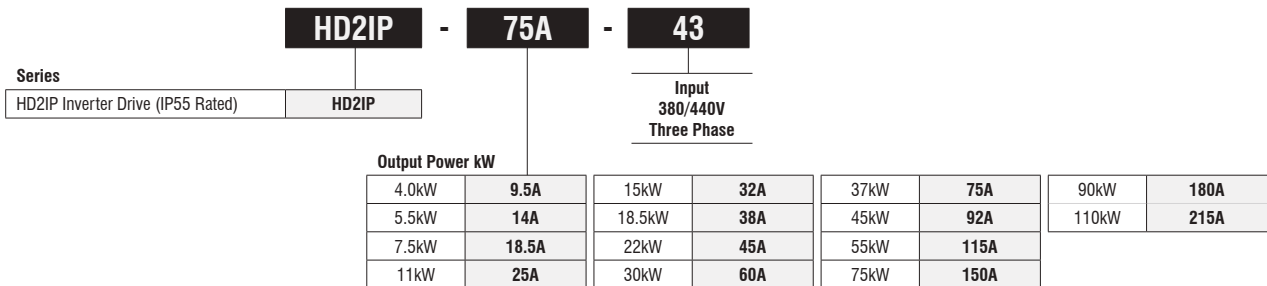
3-Phase 380/440V 50/60Hz

4.0~110kW (Heavy Duty) / 5.5~110kW (Normal Duty)

- Torque Vector control
- Up to 200% starting torque
- Dual rated for HD & ND applications
- Multi pump control function
- Fire mode
- Asynchronous & synchronous motor control
- Permanent magnet motor control
- DC Injection braking
- PID Control as standard
- Built-in AC switch
- Multi-protocol support
- Advanced LCD keypad
- STO (Safe Torque Off) as standard
- Modbus RTU/RS485 built in
- PG Encoder control
- Integral brake chopper ($\leq 37kW$)
- Integral DC reactor (18.5~110Kw)
- Integral C3 filter
- 3 year warranty



Ordering Information



Technical Specifications

Model	Constant Torque (HD)				Variable Torque (ND)				Net Weight (kg)	Gross Weight (kg)	Dimensions (mm)
	Power (kW)	Input Current (A)	Output Current (A)	Carrier Frequency (kHz)	Power (kW)	Input Current (A)	Output Current (A)	Carrier Frequency (kHz)			
HD2IP-9.5A-43	4.0	13.5	9.5	8	5.5	19.5	12.5	4	7.0	8.5	196.0 x 403.0 x 260.5
HD2IP-14A-43	5.5	19.5	14.0	8	7.5	23.0	17.0	4			
HD2IP-18.5A-43	7.5	25.0	18.5	8	11.0	30.0	23.0	4			
HD2IP-25A-43	11.0	32.0	25.0	8	15.0	40.0	32.0	4	13.0	15.4	223.0 x 475.0 x 289.4
HD2IP-32A-43	15.0	40.0	32.0	4	18.5	45.0	38.0	2			
HD2IP-38A-43	18.5	45.0	38.0	4	22.0	51.0	45.0	2	21.0	23.6	274.0 x 522.0 x 279.5
HD2IP-45A-43	22.0	51.0	45.0	4	30.0	64.0	60.0	2			
HD2IP-60A-43	30.0	64.0	60.0	4	37.0	80.0	75.0	2	26.5	29.5	318.0 x 587.0 x 290.0
HD2IP-75A-43	37.0	80.0	75.0	4	45.0	98.0	92.0	2			
HD2IP-92A-43	45.0	98.0	92.0	4	55.0	128.0	115.0	2	48.2	52.0	338.0 x 800.0 x 336.7
HD2IP-115A-43	55.0	128.0	115.0	4	75.0	139.0	150.0	2			
HD2IP-150A-43	75.0	139.0	150.0	2	90.0	168.0	170.0	2	64.0	82.8	370.0 x 788.0 x 380.0
HD2IP-180A-43	90.0	168.0	180.0	2	110.0	201.0	215.0	2			
HD2IP-215A-43	110.0	201.0	215.0	2	-	-	-	-			

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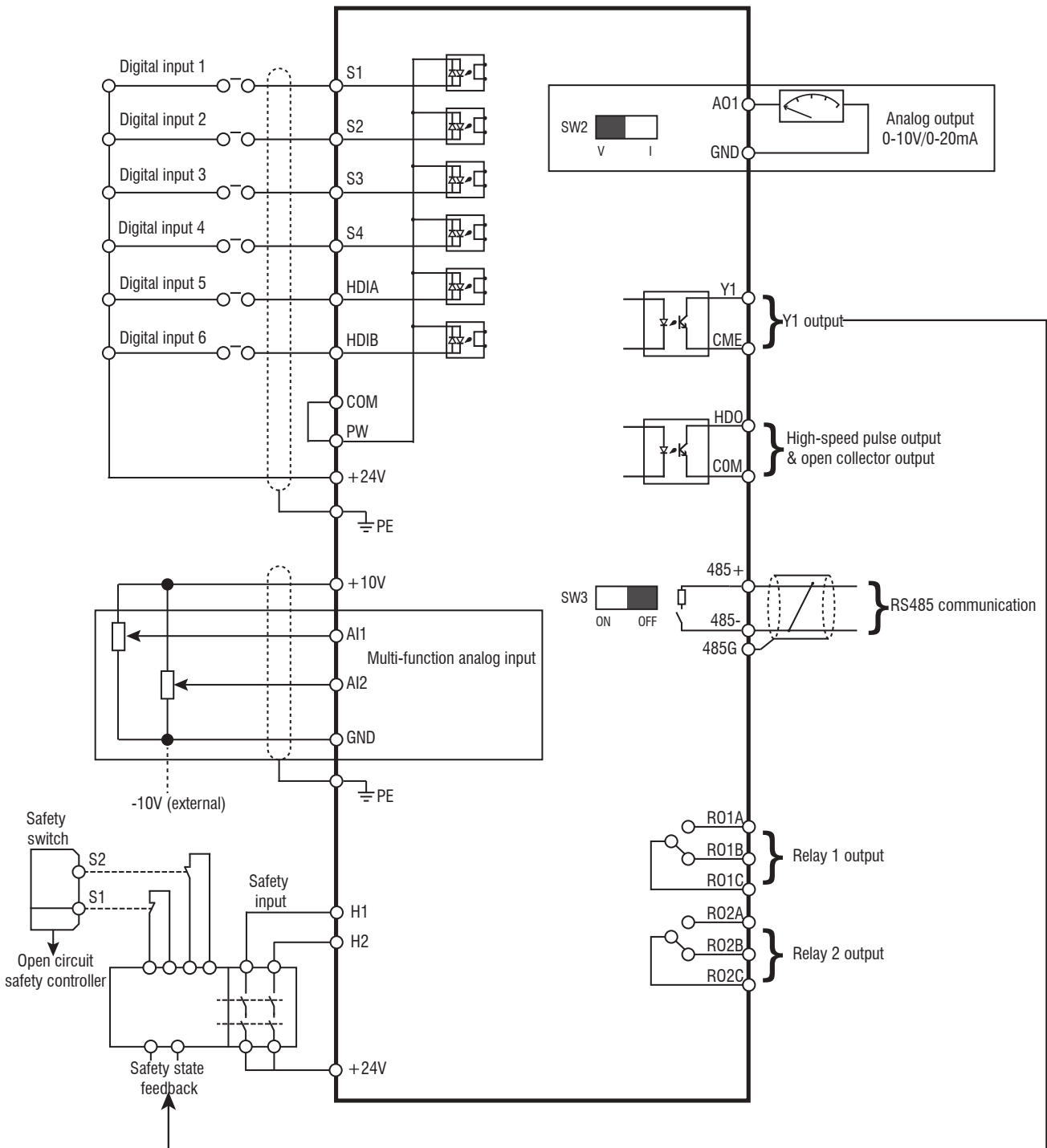
Technical Specifications continued

Function Description		Specification	
Power Input	Input Voltage (V)	3PH 380V (-15%) - 440V (+10%)	
	Input Current (A)	50Hz/60Hz, allowable range: 47-63Hz	
Power Output	Output Voltage (V)	0-Input voltage	
	Output Frequency (Hz)	0-400Hz	
Technical Control Performance	Control Mode	SVPWM control, SVC, VC	
	Motor Type	Asynchronous motor, permanent-magnet synchronous motor	
	Speed Regulation Ratio	Asynchronous motor 1:200 (SVC); Synchronous motor 1:20 (SVC); 1:1000 (VC)	
	Speed Control Precision	±0.2% (SVC), ±0.02% (VC)	
	Speed Fluctuation	±0.3 (SVC)	
	Torque Response	<20ms (SVC), <10ms (VC)	
	Torque Control Precision	10% (SVC), 5% (VC)	
	Starting Torque	Asynchronous motor: 0.25Hz / 150% (SVC) Synchronous motor: 2.5Hz / 150% (SVC) 0Hz / 200% (VC)	
	Overload Capacity	Constant Torque: 150%: 1 min; 180%:10s; 200%: 1s Variable Torque: 120%: 1 min	
Running Control Performance	Frequency Setup Mode	Digital, analog, pulse frequency, multi-step speed running, simple PLC, PID, Modbus communication, PROFIBUS communication, etc. Realize switch-over between the set combination and the set channel	
	Automatic Voltage Regulation Function	Keep the output voltage constant when grid voltage changes	
	Fault Protection Function	Provide over 30 kinds of fault protection functions: overcurrent, overvoltage, undervoltage, over-temperature, phase loss and overload, etc.	
	Speed Tracking Restart	Realise impact-free starting of the motor in rotating	
Peripheral Interface	Analog Input	2	
	Analog Output	1	
	Digital Input	4x DI, 2x High Speed Inputs	
	Digital Output	1x DO, 1x Pulse Output	
	Relay Output	2x programmable relay output, NO/NC contact	
	Communication Interface	1x RS485 (non-isolated), 1x USB	
	STO Input	2x redundant input	
Optional Cards	Expansion Interface	Maximum 3 expansion interfaces: SLOT1, SLOT2, SLOT3	
	Expansion I/O Card	4x DI, 1x AI, 1x AO, 1x DO, 2x RO	
	Communication Card	Optional Profibus-DP, CANopen, Profinet, EtherCAT, Ethernet/IP, Modbus TCP etc.	
	PG Card		5V Differential Incremental (H2)
			E Resolver type PG card (D1)
			5V/12V Multifunctional Incremental (H1)
			24V Incremental PG card
			SIN/COS PG card
Programmable Card	Multifunction Incremental PG card		
Wireless Communication	PLC card, 1x AI, 6x DI, 1x AO, 2x Relay, 1x RS485		
Bluetooth, WiFi: to realise wireless communication			
Other	Installation Mode	Wall mounting, Flange mounting	
	Temperature	-10°C to +50°C (Derating is required if the ambient temperature exceeds 40°C)	
	Protection Level	IP55	
	Cooling Mode	Forced air cooling	
	Braking Unit	37kW or below: standard built-in	
	STO Level	SIL2	
	EMC Filter	380V models fulfill the requirements of IEC61800-3 C3, up to 30m cable length shielded	

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Control Connections



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Accessories

Inverter	Input Reactor	DC Reactor	Output Reactor	Braking unit
HD2IP-9.5A-43	ACLC-4.0-4	N/C	OLC-4.0-4	Integral
HD2IP-14A-43	ACLC-5.5-4	N/C	OLC-5.5-4	Integral
HD2IP-18.5A-43	ACLC-7.5-4	N/C	OLC-7.5-4	Integral
HD2IP-25A-43	ACLC-11-4	N/C	OLC-11-4	Integral
HD2IP-32A-43	ACLC-15-4	N/C	OLC-15-4	Integral
HD2IP-38A-43	ACLC-18-4	Integral	OLC-18-4	Integral
HD2IP-45A-43	ACLC-22-4	Integral	OLC-22-4	Integral
HD2IP-60A-43	ACLC-37-4	Integral	OLC-37-4	Integral
HD2IP-75A-43	ACLC-37-4	Integral	OLC-37-4	Integral
HD2IP-92A-43	ACLC-45-4	Integral	OLC-45-4	DBU45/75-4
HD2IP-115A-43	ACLC-55-4	Integral	OLC-55-4	DBU45/75-4
HD2IP-150A-43	ACLC-75-4	Integral	OLC-75-4	DBU45/75-4
HD2IP-180A-43	ACLC-110-4	Integral	OLC-110-4	DBU90/110-4
HD2IP-215A-43	ACLC-110-4	Integral	OLC-110-4	DBU90/110-4

Expansion Card Selection

Expansion Card Type	Part Number	Part Description
I/O Card	HD2-E-IO	IO Expansion Card
PLC Card	HD2-E-PLC	Programmable Expansion Card (CODESYS)
Communication Card	HD2-E-BTP	Bluetooth Communication Card (Internal Antenna)
	HD2-E-BTM	Bluetooth Communication Card (External Antenna)
	HD2-E-ENET	PC-Ethernet Communication Card
	HD2-E-WFP	WiFi Communication Card (Internal Antenna)
	HD2-E-WFM	WiFi Communication Card (External Antenna)
	HD2-E-COP	CANopen Communication Card
	HD2-E-CAN	CAN Master-Slave Communication Card
	HD2-E-PDP	PROFIBUS-DP Communication Card
	HD2-E-PRF	PROFINET Communication Card
	HD2-E-MTCP	Modbus TCP/IP Communication Card
PG Card	HD2-E-PGIM	Multi-Function Incremental PG Card
	HD2-E-PGI	5V Differential PG Card
	HD2-E-PGR	Rotary Transformer PG Card
Accessories	HD2-KP	LCD Multi-function keypad
	HD2-KP-MB	Keypad mounting bracket



HD2-E-IO



HD2-E-PLC



HD2-E-WFP



HD2-E-MTCP



HD2-E-CAN



HD2-E-PDP



HD2-E-PGIM



HD2-E-PGI



HD2-E-PGR



HD2-E-PRF