

HD2IP Series **IP55**

AC Variable Speed Inverters



Technical Datasheet

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 ($\leq 37\text{kW}$)
- Integral DC reactor (18.5~110Kw)
- Integral C3 filter



Ordering Information

Series

HD2IP Inverter Drive (IP55 Rated)

HD2IP

HD2IP

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75A

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43

Input

380/440V

Three Phase

Output Power kW

4.0kW	9.5A	15kW	32A	37kW	75A	90kW	180A
5.5kW	14A	18.5kW	38A	45kW	92A	110kW	215A
7.5kW	18.5A	22kW	45A	55kW	115A		
11kW	25A	30kW	60A	75kW	150A		

Technical Specifications

Model	Power (kW)	Constant Torque (HD)			Variable Torque (ND)			Carrier Frequency (kHz)	Net Weight (kg)	Gross Weight (kg)	Dimensions (mm)
		Input Current (A)	Output Current (A)	Carrier Frequency (kHz)	Power (kW)	Input Current (A)	Output Current (A)				
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			
HD2IP-45A-43	22.0	51.0	45.0	4	30.0	64.0	60.0	2	21.0	23.6	274.0 x 522.0 x 279.5
HD2IP-60A-43	30.0	64.0	60.0	4	37.0	80.0	75.0	2			
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	26.5	29.5	318.0 x 587.0 x 290.0
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			
HD2IP-180A-43	90.0	168.0	180.0	2	110.0	201.0	215.0	2	48.2	52.0	338.0 x 800.0 x 336.7
HD2IP-215A-43	110.0	201.0	215.0	2	-	-	-	-			
									64.0	82.8	370.0 x 788.0 x 380.0

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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
		Multifunction Incremental PG card
	Programmable Card	PLC card, 1x AI, 6x DI, 1x AO, 2x Relay, 1x RS485
	Wireless Communication	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

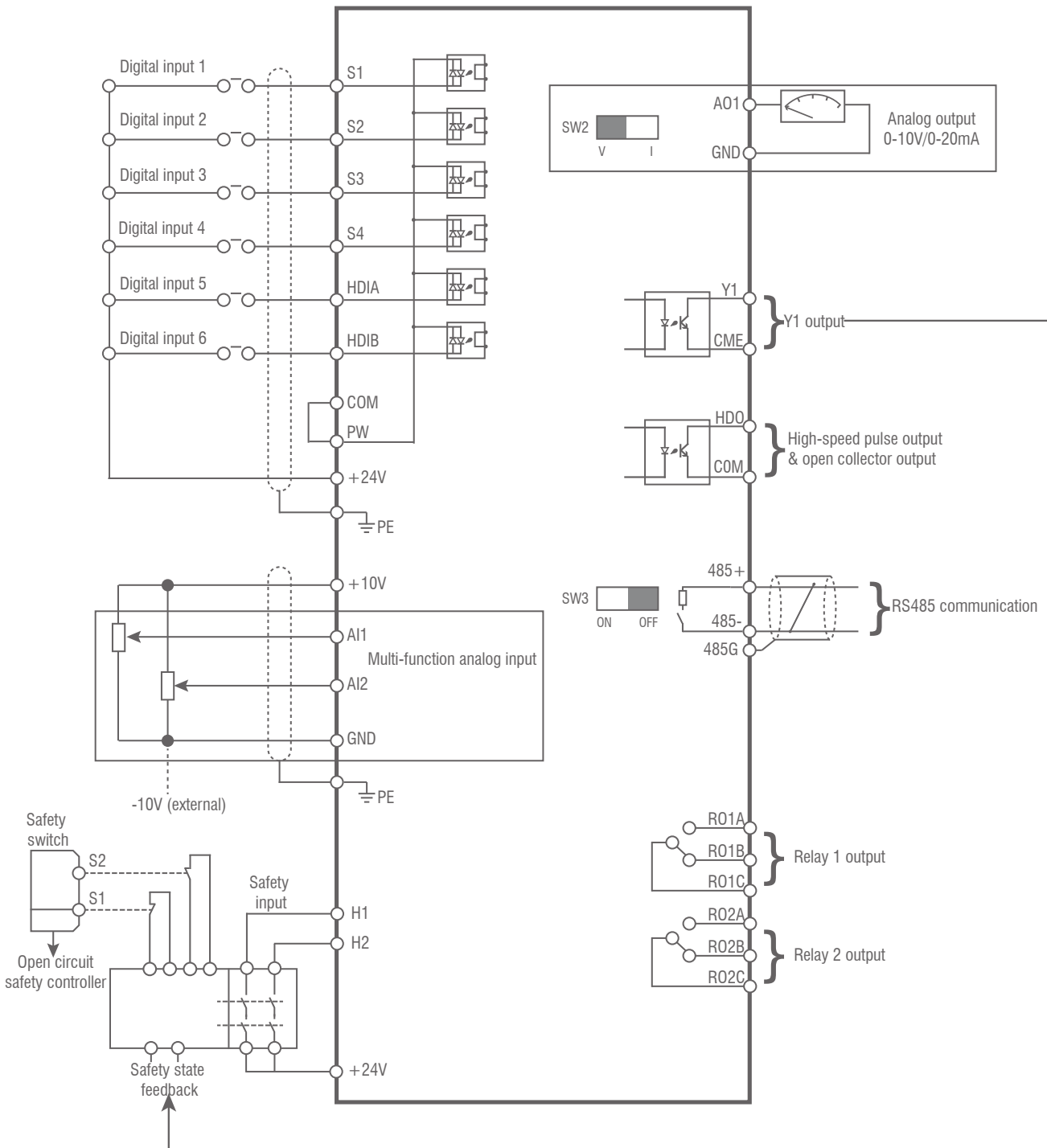
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Control Connections



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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