

HD2 Series

AC Variable Speed Inverters

3 Phase 380/440V 50/60Hz 1.5~500kW

- Torque Vector control
- Up to 150% starting torque
- HD rated for demanding applications
- Asynchronous & synchronous motor control
- Advanced LCD keypad (16 lines of text)
- Motor Auto-tune (static and dynamic)
- Safe Torque Off (STO)
- 2 motor parameter sets.
- DC Injection braking
- Flux braking
- Integral brake chopper (<37kW)
- Integral AC reactor (>220kW)
- Integral DC reactor (18.5~110kW)
- PID Control as standard
- Modbus RTU/RS485 built in
- PG Encoder control
- IP20 (all models)
- Wifi card
- Bluetooth card
- Profibus DP card
- CANopen card
- Profinet card.
- Multi I/O card
- 6 Digital Inputs
- 2 Analogue Inputs
- 1 Analogue Output
- 2 Relay Outputs
- 2 Digital Outputs
- Integral C3 filter
- Category C1 & C2 filter options
- CE & RCM Marked
- 3 Year warranty



Ordering Information

HD2 - 75A - 43		
Series		Input
HD2 Inverter Drive	HD2	440V
		Three Phase
Output Power kW (HP)		
1.5kW (2HP)	3.7A	90kW (125HP)
2.2kW (3HP)	5A	110kW (150HP)
4.0kW (5.5HP)	9.5A	132kW* (175HP)
5.5kW (7.5HP)	14A	160kW* (215HP)
7.5kW (10HP)	18.5A	185kW* (250HP)
11kW (15HP)	25A	200kW* (270HP)
15kW (20HP)	32A	220kW* (300HP)
18.5kW (25HP)	38A	250kW* (335HP)
22kW (30HP)	45A	280kW* (375HP)
30kW (40HP)	60A	315kW* (420HP)
37kW (50HP)	75A	355kW* (475HP)
45kW (60HP)	92A	400kW* (535HP)
55kW (75HP)	115A	450kW* (600HP)
75kW (90HP)	150A	500kW* (670HP)

* All models 132kW and above are UL/cUL approved

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Technical Specifications

Three Phase 440V

	Function Description	Specification
Power Input	Input Voltage (V)	AC 3PH Rated Voltage - 460V;
	Allowable Voltage Fluctuation	-15% to +10%
	Input Frequency (Hz)	50Hz/60Hz, allowable range: 47 to 63Hz
Power Output	Output Voltage (V)	0 to Input voltage
	Output Frequency (Hz)	0 to 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; 150%: 10s; 180%: 1s
Running Control Performance	Frequency Setup Mode	Digital, analog, pulse frequency, multi-step speed running, simple PLC, PID, Modbus & multiple Ethernet-based communication
	Auto. Voltage Regulation Function	Keep the output voltage constant when grid voltage changes
	Fault Protection Function	Over 30 fault protection functions: overcurrent, overvoltage, undervoltage, over-temperature, phase loss & overload, etc.
	Speed Tracking Restart	Realise impact-free starting of the motor in rotating
Peripheral Interface	Analog Input	2 (AI1: 0-10V/4-20mA; AI2: -10V to +10V)
	Analog Output	1 (AO1: 0-10V/4-20mA)
	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
Other	Installation Mode	Wall mounting, Flange mounting, Floor mounting
	Temperature	-10°C to +50°C (Derating is required if the ambient temperature exceeds 40°C)
	Protection Level	IP20
	Cooling Mode	Forced air cooling
	Braking Unit	15kW or below built-in (220V models); 30kW or below built-in (460V models)
	STO Level	SIL2
	EMC Filter	All models fulfill the requirements of IEC61800-3 C3, up to 30m cable length shielded

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Technical Specifications

Three Phase 440V

Three Phase 440V	Model	Rated Power kW (HP)	Carrier Frequency (kHz)	Input Current (A)	Output Current (A)	Contactor (A)	Fuse/ MCCB (A)
	HD2-3.7A-43	1.5 (2)	8	5	3.7	10	17.4/16
	HD2-5A-43	2.2 (3)	8	5.8	5	10	17.4/16
	HD2-9.5A-43	4 (5.5)	8	13.5	9.5	16	30/25
	HD2-14A-43	5.5 (7.5)	8	19.5	14	16	45/25
	HD2-18.5A-43	7.5 (10)	8	25	18.5	25	60/40
	HD2-25A-43	11 (15)	8	32	25	32	78/63
	HD2-32A-43	15 (20)	4	40	32	50	105/63
	HD2-38A-43	18.5 (25)	4	47	38	63	114/100
	HD2-45A-43	22 (30)	4	56	45	80	138/100
	HD2-60A-43	30 (40)	4	70	60	95	186/125
	HD2-75A-43	37 (50)	4	80	75	120	228/160
	HD2-92A-43	45 (60)	4	94	92	135	270/200
	HD2-115A-43	55 (75)	4	128	115	170	315/200
	HD2-150A-43	75 (90)	2	160	150	230	420/250
	HD2-180A-43	90 (125)	2	190	180	280	480/315
	HD2-215A-43	110 (150)	2	225	215	315	630/400
	HD2-260A-43	132 (175)	2	265	260	380	720/400
	HD2-305A-43	160 (215)	2	310	305	450	870/630
	HD2-340A-43	185 (250)	2	345	340	580	1110/630
	HD2-380A-43	200 (270)	2	385	380	580	1110/630
	HD2-425A-43	220 (300)	2	430	425	630	1230/800
	HD2-480A-43	250 (335)	2	485	480	700	1380/800
	HD2-530A-43	280 (375)	2	545	530	780	1500/1000
	HD2-600A-43	315 (420)	2	610	600	900	1740/1200
	HD2-650A-43	355 (475)	2	625	650	960	1860/1280
	HD2-720A-43	400 (535)	2	715	720	1035	2010/1380
	HD2-820A-43	450 (600)	2	840	820	1222	2445/1630
	HD2-860A-43	500 (670)	2	890	860	1290	2505/1720

Dimensions (mm) & Frame Sizes

Model	Width	Height	Depth	Frame Size	Weight
HD2-3.7A-43	126	186	184.4	1	2kg
HD2-5A-43	126	186	185		
HD2-9.5A-43	126	186	200.9	2	2.5kg
HD2-14A-43	126	186	200.9		
HD2-18.5A-43	146	256	191.9	3	3kg
HD2-25A-43	170	320	219.2	4	6kg
HD2-32A-43	170	320	219.2		
HD2-38A-43	200	340.6	207.2	5	8.5kg
HD2-45A-43	200	340.6	207.2		
HD2-60A-43	250	400	222.4	6	16kg
HD2-75A-43	250	400	222.4		
HD2-92A-43	282	560	257.1	7	25kg
HD2-115A-43	282	560	257.1		
HD2-150A-43	282	560	257.1		

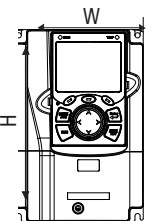
Model	Width	Height	Depth	Frame Size	Weight
HD2-180A-43	338	554	329.2	8	41kg
HD2-215A-43	338	554	329.2		
HD2-260A-43	500	870	360	9	85kg
HD2-305A-43	500	870	360		
HD2-340A-43	500	870	360		
HD2-380A-43	500	870	360	10	135kg
HD2-425A-43	750	1410	380		
HD2-480A-43	750	1410	380		
HD2-530A-43	750	1410	380		
HD2-600A-43	750	1410	380	11	350kg
HD2-650A-43	620	1700	560		
HD2-720A-43	620	1700	560		
HD2-820A-43	620	1700	560		
HD2-860A-43	620	1700	560		

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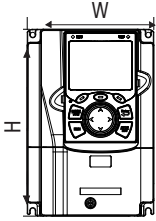
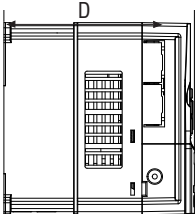
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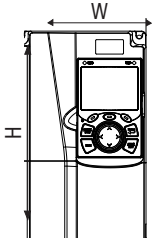
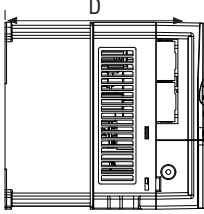
Dimensions (mm) & Frame Sizes



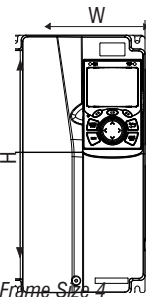
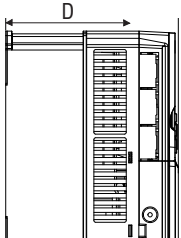
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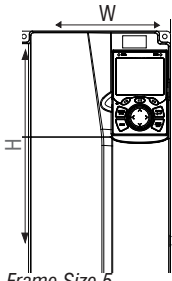
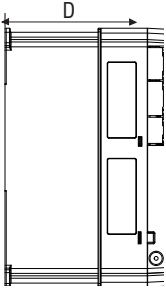
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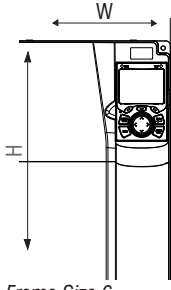
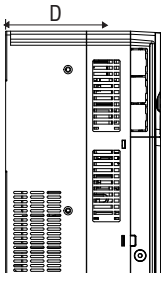
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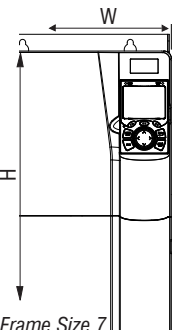
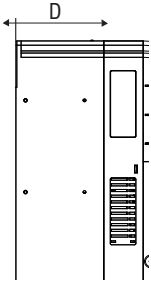
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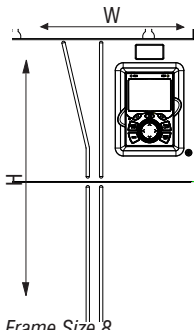
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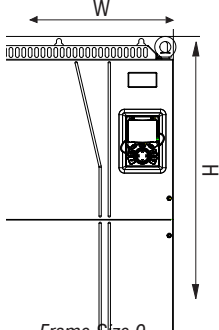
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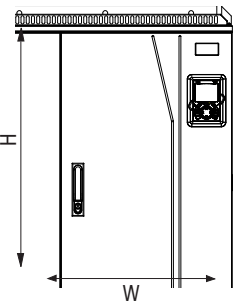
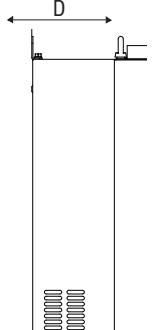
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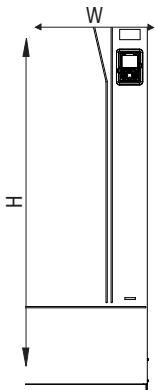
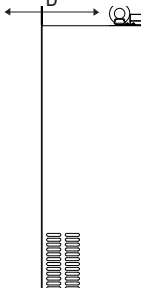
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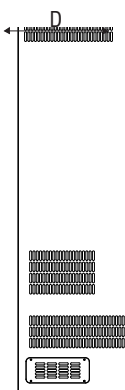
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Frame Size 10



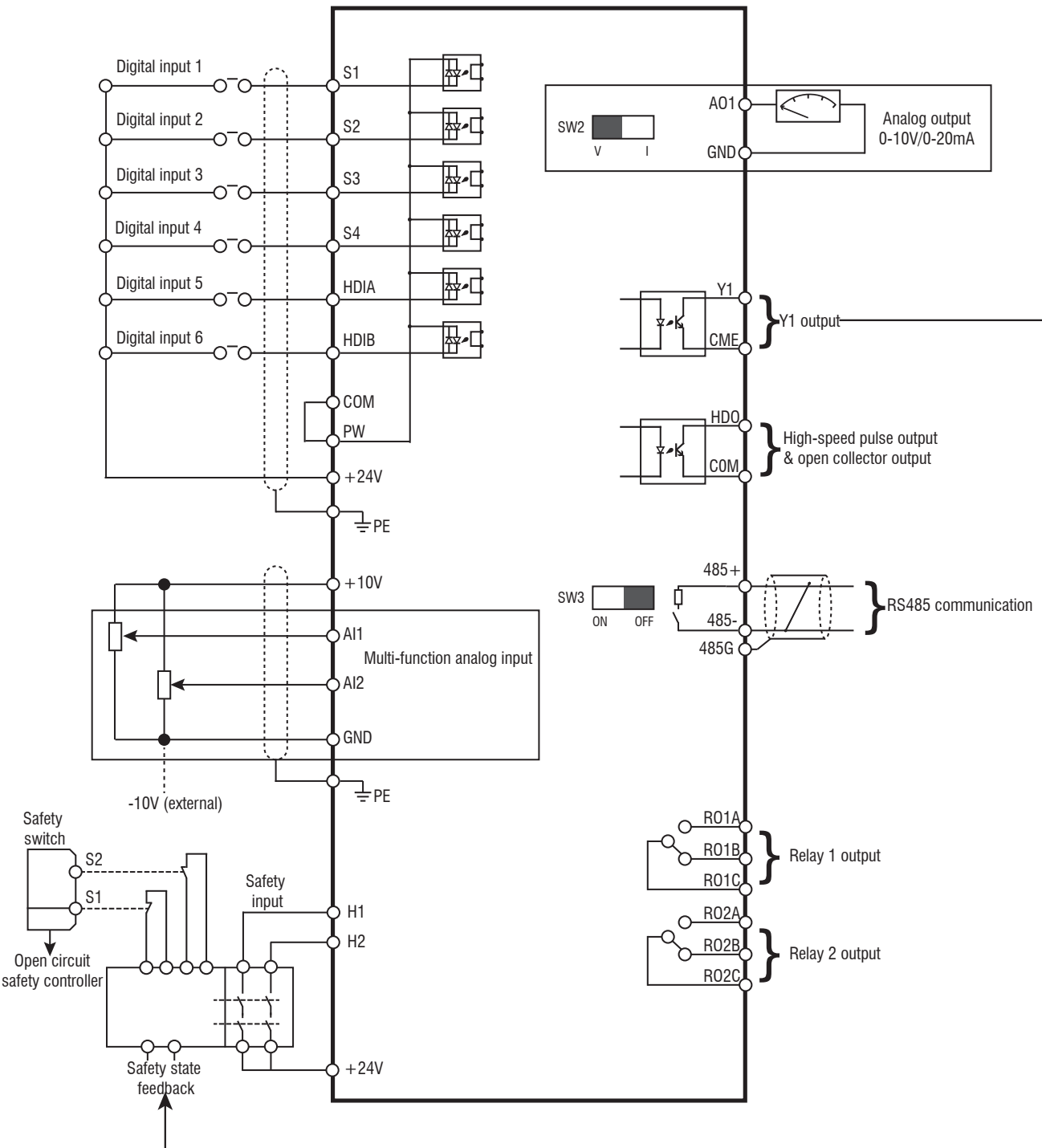
Frame Size 11



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Control Connections



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Accessories

Model	Input Reactor	Output Reactor	DC Reactor	Braking Unit
HD2-3.7A-43	ACLC-1.5-4	OCLC-1.5-4	N/C	Integral
HD2-5A-43	ACLC-2.2-4	OCLC-2.2-4	N/C	Integral
HD2-9.5A-43	ACLC-4.0-4	OCLC-4.0-4	N/C	Integral
HD2-14A-43	ACLC-5.5-4	OCLC-5.5-4	N/C	Integral
HD2-18.5A-43	ACLC-7.5-4	OCLC-7.5-4	N/C	Integral
HD2-25A-43	ACLC-11-4	OCLC-11-4	N/C	Integral
HD2-32A-43	ACLC-15-4	OCLC-15-4	N/C	Integral
HD2-38A-43	ACLC-18-4	OCLC-18-4	Integral	Integral
HD2-45A-43	ACLC-22-4	OCLC-22-4	Integral	Integral
HD2-60A-43	ACLC-37-4	OCLC-37-4	Integral	Integral
HD2-75A-43	ACLC-37-4	OCLC-37-4	Integral	Integral
HD2-92A-43	ACLC-45-4	OCLC-45-4	Integral	DBU45/75-4
HD2-115A-43	ACLC-55-4	OCLC-55-4	Integral	DBU45/75-4
HD2-150A-43	ACLC-75-4	OCLC-75-4	Integral	DBU45/75-4
HD2-180A-43	ACLC-110-4	OCLC-110-4	Integral	DBU90/110-4
HD2-215A-43	ACLC-110-4	OCLC-110-4	Integral	DBU90/110-4
HD2-260A-43	ACLC-132-4	OCLC-132-4	DCLC-132-4	DBU132-4
HD2-305A-43	ACLC-160-4	OCLC-200-4	DCLC-160-4	DBU160/200-4
HD2-340A-43	ACLC-200-4	OCLC-200-4	DCLC-220-4	DBU160/200-4
HD2-380A-43	ACLC-200-4	OCLC-200-4	DCLC-220-4	DBU160/200-4
HD2-425A-43	ACLC-280-4	OCLC-280-4	DCLC-220-4	DBU220/250-4
HD2-480A-43	ACLC-280-4	OCLC-280-4	DCLC-280-4	DBU220/250-4
HD2-530A-43	ACLC-280-4	OCLC-280-4	DCLC-280-4	DBU160/200-4 (x2)
HD2-600A-43	ACLC-350-4	OCLC-350-4	DCLC-315-4	DBU160/200-4 (x2)
HD2-650A-43	Integral	OCLC-350-4	DCLC-400-4	DBU160/200-4 (x2)
HD2-720A-43	Integral	OCLC-400-4	DCLC-400-4	DBU160/200-4 (x2)
HD2-820A-43	Integral	OCLC-500-4	DCLC-500-4	DBU220/250-4 (x2)
HD2-860A-43	Integral	OCLC-500-4	DCLC-500-4	DBU220/250-4 (x2)

Expansion Card Selection

Expansion Card Type	Part Number	Part Description
I/O Card	HD2-E-IO	IO Expansion Card (4DI, 1 DO, 1 AI, 1 AO, 2RO)
	HD2-E-IO2	IO Expansion Card (1 PT100, 1 PT1000, 4 DI, 2 RO)
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	Ethernet Communication Card
	HD2-E-EIP	Ethernet/IP Communication Card
	HD2-E-ECAT	EtherCAT 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 Communication Card
PG Card	HD2-E-PGIM	Multi-Function Incremental PG Card
	HD2-E-PGIM-24	24V Multi-Function Incremental PG Card
	HD2-E-PGI	5V Differential PG Card
	HD2-E-PGR	Rotary Transformer PG Card
Power Supply Card	HD2-E-APS	24V DC Aux. Power Supply Card
Accessories	HD2-KP	LCD Multi-function keypad
	HD2-KP-MB	Keypad mounting bracket