H2 SERIES - MULTI-PURPOSE DRIVE

The Benshaw H2 Series sets the new standard for variable frequency drives. It can be used as a general purpose industrial drive with V/hz or Vector control (with ratings for normal or heavy duty applications from 5-800HP). For fan and pumps applications, simply use the built-in macros designed to meet the basic requirements of the water/wastewater, irrigation and HVAC industries.

This multi-purpose drive complies with industries standards including UL/cUL, CE and has built-in EMC filters (standard in all 480V models). Compact, yet full-featured...the H2 Series is the ideal choice for OEMs, panel builders and end users.

STANDARD FEATURES - HARDWARE

- Dual rating - Normal and Heavy Duty
- 240V: 7.5HP~125HP (ND), 5HP~100HP (HD)
- 480V: 7.5HP~800HP (ND), 5HP~600HP (HD)
- 575V: 7.5HP~125HP (ND), 5HP~100HP (HD)
- Protected Chassis IP20
- LCD Display/Keypad
- EMC Filter
- Internal Brake IGBT (240V all, 480V ≤ 40HP)
- Single Phase Input (derating required)
- Plenum Rated (with Conduit Option)
- Built in DC Reactor

STANDARD FEATURES - SOFTWARE

- Quick Start Menu on Power Up
- Control - V/Hz, Sensorless Vector Control, Slip Compensation
- Auto Tuning
- Macro Selection - Pump, Fan, or Constant Torque
- Torque Limits
- PID Control
- Regen Avoidance
- Kinetic Energy Buffering(KEB), Ride Through
- Decel Brake Control

H2 SERIES PUMP / FAN SOFTWARE - STANDARD FEATURES

- PID control with sleep and wake-up, broken pipe and under load detection
- Multi Motor Control - One drive to control the starting and stopping of up to 5 auxiliary motors
- Lead/lag and alternating control
- Pre-fill and Soft-fill
- Standard BACnet and Metasys-N2
- Fire mode input
- Start and End Ramp - settings for quicker accel/decel times when below minimum speeds
- Decel Valve Ramp - Separate decel ramp frequency and time settings when stopping
- Time Event Scheduling - Program run times for 7 days operation
- Flow Compensation - Compensate for losses in long pipe lengths
- Backspin Timer
- Pump Clean Operation
- Load Tuning
- Drive Output Level Detection - Set warning/trip limits (current, power, others) to detect drive operation beyond limits
- Energy Saving Operation
- Oil Pump Starter Control (compressor systems)

COMMUNICATIONS

Standard: RS-485 Modbus-RTU, BACnet, Metasys-N2

Options: Ethernet/IP, Modbus-TCP, Lonworks

WinDRIVE - PC Based Software for Commissioning and Monitoring

H2 SERIES - INPUT AND OUTPUT SPECIFICATIONS

240V, 7.5HP - 25HP (5.5 - 18.5 kW)

RSI-XXX-H2-2C			007	010	015	020	025
240V, w/3Ø Input	Normal Duty 120% OL	HP	7.5	10	15	20	25
		kW	5.5	7.5	11	15	18.5
		Amps	22	30	42	56	69
	Heavy Duty 150% OL	HP	5	7.5	10	15	20
		kW	3.7	5.5	7.5	11	15
		Amps	17	24	32	46	60
240V, w/1Ø Input	Normal Duty 120% OL	HP	3.0	5.0	7.5	10.0	-
		Amps	11	16	23	30	37
	Rated Capacity (kVA)		8.4	11.4	16.0	21.3	26.3
	Output frequency		0-400Hz (V/Hz, Slip Compensation) 0-120Hz (IM Sensorless) 0-180Hz (PM Sensorless)				
	Output voltage (V)		3-Phase 0-240 V				
Rated Input	Voltage (V)	Three-Phase	3-Phase 200-240 VAC (- 15% -+ 10%)				
		Single-Phase	1-Phase 240 VAC (- 5% -+ 10%)				
	Input frequency	Three-Phase	50-60Hz (+/- 5%)				
		Single-Phase	60Hz (+/- 5%) only				
	Rated Current (A)		23.7	32.7	46.4	62.3	77.2
Weight lbs (kg)		lbs	7.3	7.3	7.3	10.1	15.6
		(kg)	(3.3)	(3.3)	(3.3)	(4.6)	(7.1)
Heat Dissipation (W)			180	248	330	451	600
Degree of Protection			UL Open Type (IP20), UL Type 1 achieved with optional conduit box				

240V, 30HP -125HP (22 kW - 90 kW)

RSI-XXX-H2-2C			030	040	050	060	075*	100*	125*
240V, w/3Ø Input	Normal Duty 110%* / 120% OL	HP	30	40	50	60	75	100	125
		kW	22	30	37	45	55	75	90
		Amps	82	110	142	169	223	264	325
	Heavy Duty 150% OL	HP	25	30	40	50	60	75	100
		kW	18.5	22	30	37	45	55	75
		Amps	68	81	106	136	169	195	255
240V, w/1Ø Input	Normal Duty 110%* / 120% OL	HP	15	20	25	30	40	50	60
		Amps	45	58	78	92	122	145	178
	ND Rated Capacity (kVA)		31.2	41.9	54.1	64.4	85	100.6	123.8
	Output frequency		0-400Hz (V/Hz, Slip Compensation)						
	Output voltage (V)		3-Phase 0-240 V						
Rated Input	Voltage (V)	Three-Phase	3-Phase 200-240 VAC (- 15% -+ 10%)						
		Single-Phase	1-Phase 240 VAC (- 5% -+ 10%)						
	Input frequency	Three-Phase	50-60Hz (+/- 5%)						
		Single-Phase	60Hz (+/- 5%) only						
	Rated Current (A)		74.8	101	131.2	159	211.1	251.4	313.2
Weight lbs (kg)		lbs	55.8	72.5	86.4	90.6	118.2	121.9	159.2
		(kg)	(25.3)	(32.9)	(39.2)	(41.1)	(53.6)	(55.3)	(72.2)
Heat Dissipation (W)			893	1245	1480	1814	2150	2963	3438
Degree of Protection			UL Open Type (IP20), UL Type 1 achieved with optional conduit box						

H2 SERIES - INPUT AND OUTPUT SPECIFICATIONS

480V, 7.5HP - 30HP (5.5 - 22 kW)

RSI-XXX-H4-4C			007	010	015	020	025	030
480V, w/3Ø Input	Normal Duty 120% OL	HP	7.5	10	15	20	25	30
		kW	5.5	7.5	11	15	18.5	22
		Amps	12	16	24	30	38	45
	Heavy Duty 150% OL	HP	5.0	7.5	10	15	20	25
		kW	3.7	5.5	7.5	11	15	18.5
		Amps	8	12	15	22	28	35
480V, w/1Ø Input	Normal Duty 120% OL	HP	3-5	5	10	10	15	20
		Amps	6.8	9.2	14	17	22	26
	Rated Capacity (kVA)		9.1	12.2	18.3	23.0	29.0	34.3
	Output frequency		0-400Hz (V/Hz, Slip Compensation) 0-120Hz (IM Sensorless) 0-180Hz (PM Sensorless)					
	Output voltage (V)		3-Phase 0-480 V					
Rated Input	Voltage (V)	Three-Phase	3-Phase 380-480 VAC (- 15% - + 10%)					
		Single-Phase	1-Phase 480 VAC (- 5% - + 10%)					
	Input frequency	Three-Phase	50-60Hz (+/- 5%)					
		Single-Phase	60Hz (+/- 5%) only					
	Rated Current (A)		12.2	17.5	26.5	33.4	42.5	50.7
Weight lbs (kg)		lbs	7.3	7.3	7.5	10.1	10.6	16.5
		(kg)	(3.3)	(3.3)	(3.4)	(4.6)	(4.8)	(7.5)
Heat Dissipation (W)			172	237	322	451	615	740
Degree of Protection			UL Open Type (IP20), UL Type 1 achieved with optional conduit box					

H2 SERIES - INPUT AND OUTPUT SPECIFICATIONS

480V, 40 HP -125 HP (30 - 90 kW)

RSI-XXX-H2-4C			040	050	060	075	100	125
480V, w/3Ø Input	Normal Duty 120% OL	HP	40	50	60	75	100	125
		kW	30	37	45	55	75	90
		Amps	61	75	91	107	142	169
	Heavy Duty 150% OL	HP	30	40	50	60	75	100
		kW	22	30	37	45	55	75
		Amps	41	55	67	81	106	136
480V, w/1Ø Input	Normal Duty 120% OL	HP	25	30	30	40	50-60	60
		Amps	36	39	47	55	73	86
	Rated Capacity (kVA)		46.5	57.1	69.4	82.0	108.2	128.8
	Output frequency		0-400Hz (V/Hz, Slip Compensation) 0-120Hz (IM Sensorless) 0-180Hz (PM Sensorless)					
	Output voltage (V)		3-Phase 0-480V					
Rated Input	Voltage (V)	Three-Phase	3-Phase 380-480 VAC (- 15% - + 10%)					
		Single-Phase	1-Phase 480 VAC (- 5% - + 10%)					
	Input frequency	Three-Phase	50-60Hz (+/- 5%)					
		Single-Phase	60Hz (+/- 5%) only					
	Rated Current (A)		69.1	69.3	84.6	100.1	133.6	160.0
Weight lbs (kg)		lbs	16.5	57.3	77.2	77.2	94.8	94.8
		(kg)	(7.5)	(26)	(35)	(35)	(43)	(43)
Heat Dissipation (W)			880	1170	1443	1710	2090	2775
Degree of Protection			UL Open Type (IP20), UL Type 1 achieved with optional conduit box					

480V, 150 HP -800 HP (110 - 500 kW)

RSI-XXX-H2-4C			150	200	250	300	400	500	650	800
480V, w/3Ø Input	Normal Duty 110% OL	HP	150	200	250	300	400	500	650	800
		kW	110	132	160	185	250	315	400	500
		Amps	223	264	325	370	481	613	770	962
	Heavy Duty 150% OL	HP	125	150	200	250	300	400	500	600
		kW	90	110	132	160	185	250	315	375
		Amps	169	195	255	303	375	478	591	740
	Rated Capacity (kVA)		170	201	248	282	367	467	587	733
	Output frequency		0-400Hz (V/Hz, Slip Compensation) 0-120Hz (IM Sensorless)							
	Output voltage (V)		3-Phase 0-480V							
Rated Input	Voltage (V)	Three-Phase	3-Phase 380-480 VAC (- 15% - + 10%)							
	Input frequency	Three-Phase	50-60Hz (+/-5%)							
	Rated Current (A)		215.1	254.6	315.3	358.9	469.3	598.1	751.3	938.6
Weight lbs (kg)		lbs	123	123	164.7	164.7	264.6	409	409	584
		(kg)	(55.8)	(55.8)	(74.7)	(74.7)	(120)	(185.5)	(185.5)	(265)
Heat Dissipation (W)			3960	4752	5600	6475	8500	10.4k	13.2k	16k
Degree of Protection			7.5HP~300HP (0.75 kW~185 kW): UL Open (IP20), UL Type 1 achieved with optional conduit box 400HP~800HP (250 kW~500 kW): UL Open (IP00), UL Type 1 achieved with optional conduit box							

H2 SERIES - INPUT AND OUTPUT SPECIFICATIONS

575V, 7.5HP -30HP (5.5 kW - 22 kW)

VFD-RSI-XXX-H2-61			007	010	015	020	025	030
575V, w/3Ø Input	Normal Duty 110% OL	HP	7.5	10	15	20	25	30
		kW	5.5	7.5	11	15	18.5	22
		Amps	9	12	17	23	27	34
	Heavy Duty 150% OL	HP	5	7.5	10	15	20	25
		kW	3.7	5.5	7.5	11	15	18.5
		Amps	6.6	9	12	17	23	27
Rated Output	ND Rated Capacity (kVA)		9	12	16.9	22.9	26.9	33.9
	Output frequency		0–120 Hz (V/Hz, Slip Comp., IM Sensorless)					
	Output voltage (V)		3-Phase 0–600 V					
Rated Input	Voltage (V)	Three-Phase	3-Phase 525-600 VAC (-15%–+10%)					
	Input frequency	Three-Phase	60 Hz (+/-5%)					
	ND Rated Current (A)		8	10.7	15.3	20.9	25	30.8
	HD Rated Current (A)		6.5	8.9	12	17.2	23.5	27
Weight lbs (kg)		lbs	20.86	21.21	21.87	22.09	22.35	31.53
		(kg)	(9.46)	(9.62)	(9.92)	(10.02)	(10.14)	(14.3)
Heat Dissipation (W)			224	282	376	527	644	773
Degree of Protection			UL Type 1 with installed conduit box					

- The horse power rating is based on a standard 4-pole motor rating.
- The KVA rating is based on the Normal Duty rating and 575 V for 575 V inverters.
- The rated output current is limited based on the carrier frequency set at CON-04.

575V, 40HP -125HP (30 kW - 90 kW)

VFD-RSI-XXX-H2-6C			040	050	060	075	100	125
575V, w/3Ø Input	Normal Duty 110% OL	HP	40	50	60	75	100	125
		kW	30	37	45	55	75	90
		Amps	43	55	64	80	104	128
	Heavy Duty 150% OL	HP	30	40	50	60	75	100
		kW	22	30	37	45	55	75
		Amps	34	43	55	64	80	104
Rated Output	ND Rated Capacity (kVA)		42.8	54.8	63.7	79.7	103.6	127.5
	Output frequency		0–120 Hz (V/Hz, Slip Comp., IM Sensorless)					
	Output voltage (V)		3-Phase 0–600 V					
Rated Input	Voltage (V)	Three-Phase	3-Phase 525-600 VAC (-15%–+10%)					
	Input frequency	Three-Phase	60 Hz (+/-5%)					
	ND Rated Current (A)		40.2	52	60	74	102	123
	HD Rated Current (A)		35.2	45	57	65	87	110
Weight lbs (kg)		lbs	32.32	55.07	74.12	74.25	96.12	96.43
		(kg)	(14.66)	(24.98)	(33.62)	(33.68)	(43.60)	(43.74)
Heat Dissipation (W)			992	1245	1496	1848	2553	2942
Degree of Protection			UL Open (IP20), UL Type 1 achieved with optional conduit box					

- The horse power rating is based on a standard 4-pole motor rating.
- The KVA rating is based on the Normal Duty rating and 575 V for 575 V inverters.
- The rated output current is limited based on the carrier frequency set at CON-04.

H2 SERIES - PRODUCT SPECIFICATION DETAILS

Items		Description	
Control	Control method	V/F control, Slip Compensation, Sensorless Vector (IM* and PM**) with Torque Limits (240V and 480V only) * IM Sensorless does not apply to 240V, 30HP~125HP. ** PM Sensorless does not apply to 240V, 30HP~125, 480V, 150HP~800HP and all 575V inverters.	
	Frequency setting	Digital command: 0.01 Hz	
	Frequency accuracy	1% of maximum output frequency	
	V/F pattern	Linear, Square Reduction, User V/F	
	Overload capacity (Normal Duty)	240V, 7.5 HP ~ 60HP	120% / 1 min.
		240V, 75 HP ~ 125 HP	110% / 1 min.
		480V, 7.5 HP ~ 125 HP	120% / 1 min.
		480V, 150 HP ~ 800 HP	110% / 1 min.
		575V, 7.5 HP ~ 125 HP	110% / 1 min.
	Overload Capacity (Heavy Duty)	240V, 5.0 HP ~ 100 HP	150% / 1 min.
		480V, 5.0 HP ~ 600 HP	150% / 1 min.
		575V, 5.0 HP ~ 100 HP	150% / 1 min.
	Torque boost	Manual torque boost, automatic torque boost	
Operation	**Operation Type**		
	Start/Stop	Keypad, Terminal strip, Communications	
	Frequency (Speed) settings	Analog Input: (1) 0–10 V, (1) 0/4–20 mA, Switch selectable to 0–10 Vdc	
		Digital Inputs: Keypad, Fixed Speed, Pulse Train	
		Communication: RS-485 (Modbus), Metasys-N2, BACnet, Fieldbus Options	
	Functions	**Basic**	**Advanced**
		Quick Start Menu	Sensorless Vector Control*
		Start/Stop Operation	IM* and PM** motors
		Start/Stop Modes	Auto Tuning
		Frequency Reference Sources	Torque Limits
		Auxiliary Frequency Reference	PID Control
		Multi-Step Speeds	Slip Compensation
		Multi-Step Accel/Decel Times	Event Timer (RTC)
		2nd Source (HOA)	Energy Save Mode
		Accel/Decel Times	Regen Avoidance
		Accel/Decel Patterns	VFD Fan Control
		Dwell Frequency Operation	
		Jog	**Other**
		Auto Start	Timer Relay Input/Output Function
		Auto Reset/Restart	Pre Heat
		Jog and Jog Start	Oil Pump Starter Control
		FWD/REV Run Prevention	Damper Monitor and Control
		Frequency Limits	
		Jump Frequencies	**Loss of Power**
		3-Wire Control	Ride Through (KEB)
		Fire Mode	Safe Stop
			Speed Search

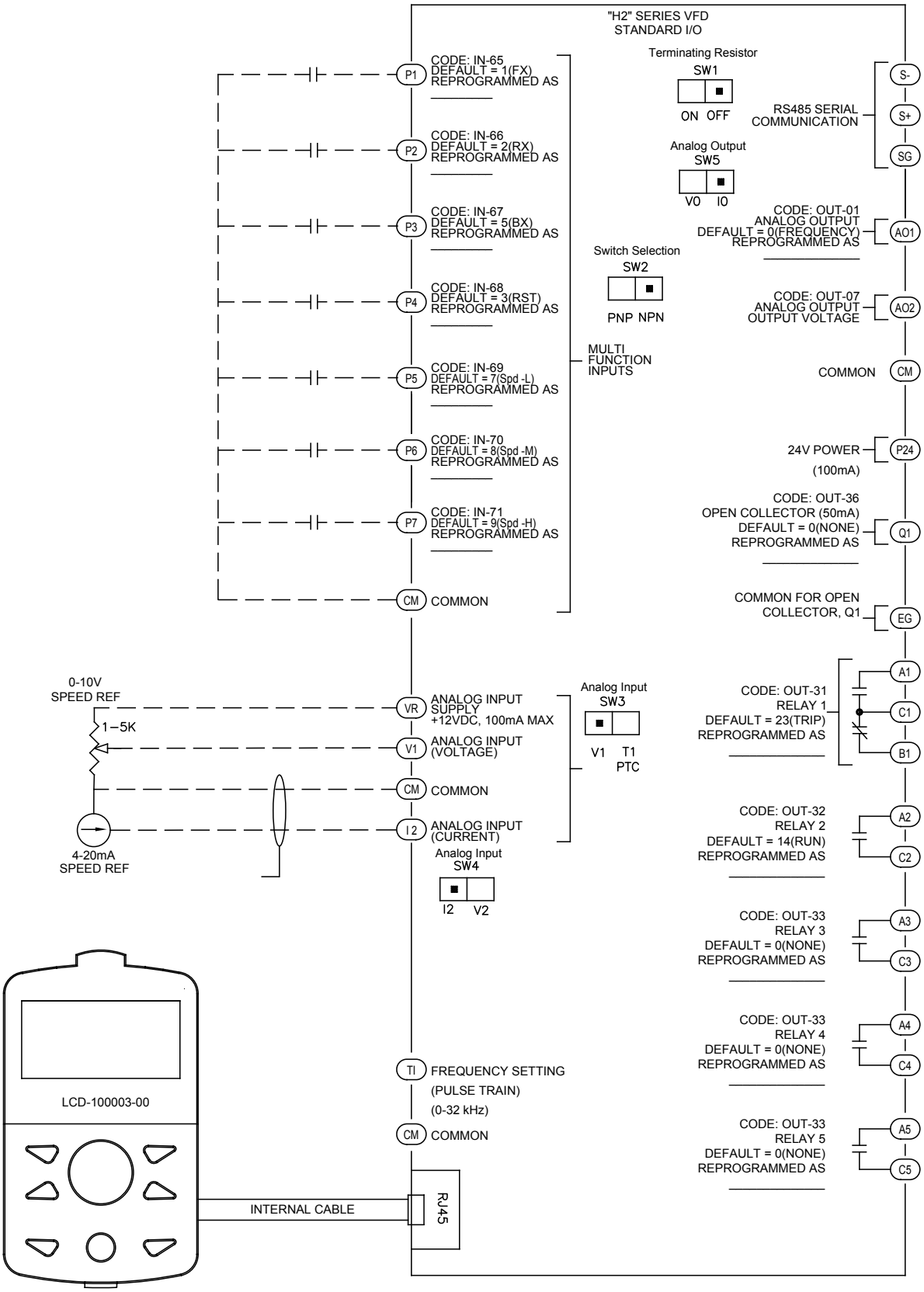
H2 SERIES - PRODUCT SPECIFICATION DETAILS

Items			Description	
Operation	Functions		**V/Hz. Control Pattern**	**Braking**
			Linear, Squared, User V/Hz	DC Injection Braking
			Torque Boost	Stall Prevention
				Power Breaking
				Flux Breaking
				External Brake Control
			H2 Pump Software	
			Lead/Lag and Alternating	Broken Pipe Detection
			Jockey Pump Control	BACnet and Metasys-N2
			MMC - Multi-Motor Control	Pump Load Tuning
			Pre-Fill, Soft Fill	Decel Valve Ramp
			Start and End Ramp	Time Event Scheduling
			Backspin Timer	Flow Compensation
			Pump Clean Operation	Energy Saving Operation
		Analog	(1) 0-10 V, (1) 0/4-20 mA, Switch selectable to 0-10 Vdc	
	Input	Digital inputs	(7), Select PNP (Source) or NPN (Sink) mode. NO/NC selectable. Functions of the digital inputs are set with parameters IN-65 through IN-71.	
		Functions	Forward/Reverse Operation	2nd Source - HOA/LOR
			Reset	Up/Down Operation
			External Trip	Analog Hold
			Emergency Stop	PID Disable
			Output Disable (Bx)	Jog Start FWD/REV
			Jog	Pre-Excite
			Fixed Speed - Step Freq's	Timer Input
			Run Enable/Disable (Safety)	Fire Mode
			3-Wire Control Select	Event Timer
			Damper Monitor and Control	Pre-Heat
		Pulse train	0-30 kHz, Low Level: 0-0.8 V, High Level: 3.5-12 V	
	Output	(1) Fault relay (Form C)	N.O. : Less than AC 250V, 2A, DC 30V, 3A N.C.: Less than AC 250V, 1A, DC 30V, 1A	
		(4) Programmable relays (Form A)	N.O. (A-C): Less than 250V, 5A Less than DC 30V, 5A	
		(1) Open collector terminal	Less than DC 26V, 50 mA	
		(2) Analog Outputs	AO1: 0(4) - 20mA, Switch selectable to 0-10 VDC	
			AO2: 0-10VDC	
		Pulse train	Maximum 32 kHz, 0-12V	

H2 SERIES - PRODUCT SPECIFICATION DETAILS

Items		Description	
Protection Functions	Trip	Motor Over Load	Fan Trip
		Under Load	Internal Fan Trip
		Over Current 1	Motor Over Heat (PTC Input)
		Over Voltage	Lost Keypad
		Low Voltage	Fuse Open
		Low Voltage 2	Pipe Broken
		Ground Fault	Broken Belt
		E-Thermal	Lost Speed Reference
		Out Phase Open	I/O Board Trip
		In Phase Open	
		Inverter Over Load	**Fan/Pump related trips**
		No Motor Trip	Damper Trip
		Inverter over Heat	Level Detect Trip
		Over Current 2	Pump Cleaning Trip
		External Trip	
		Hardware Diagnostic	
	Alarm	Overload/underload, Lost Command, Inverter overload, DB (braking) rate	
	Instantaneous Power	Less than 8 ms: Continue Operation	
Structure / working environ-ment	Cooling type	Force fan cooling structure	
	Protection structure	UL Open, IP 20: 7.5 HP ~ 300 HP (5.5 kW ~ 185 kW) UL Open, IP00: 400 HP ~ 800 HP (250 kW ~ 500kW) UL Type 1 with conduit box (option) installation (up to 800 HP).	
	Ambient temperature	14°F~104°F (- 10°C~40°C)	
	Ambient humidity	Relative humidity less than 95% RH (to avoid condensation)	
	Storage temperature	-4°F–149°F (-20 °C-65°C)	
	Environment	Prevent contact with corrosive gases, flammable gases, oil stains, dust, and other pollutants.	
		7.5 HP ~ 800 HP (5.5 kW ~ 500 kW) Pollution Degree 2	
	Altitude	Maximum 3,280 ft (1,000m) above see level for standard operation. Above derate the drive rated voltage and the rated output current by 1% for every 328 ft (100m) up to 13,123 ft (4,000) max.	
	Vibration	Less than 1.0 G (9.8m/sec^2).	
	Pressure	10 ~ 15 PSI (70-106 kPa)	

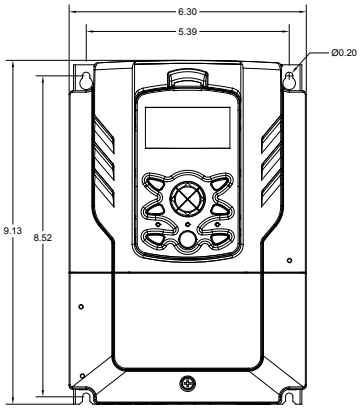
H2 SERIES - WIRING



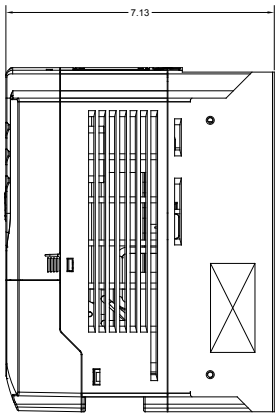
H2 SERIES - DRAWINGS

240V, 7.5 HP - 15 HP

480V, 7.5 HP - 15 HP



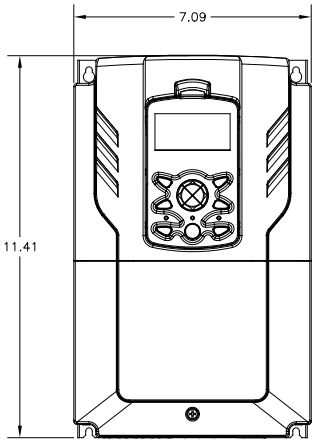
FRONT VIEW



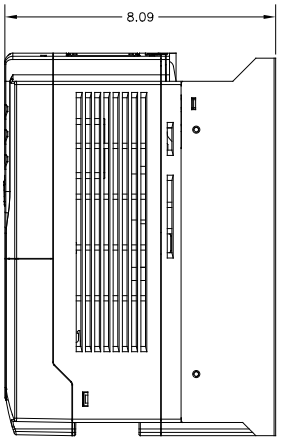
RIGHT SIDE VIEW

240V, 20 HP

480V, 20 HP - 25 HP



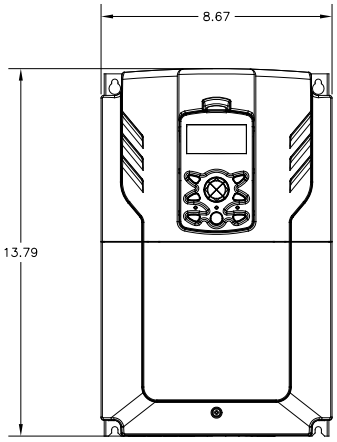
FRONT VIEW



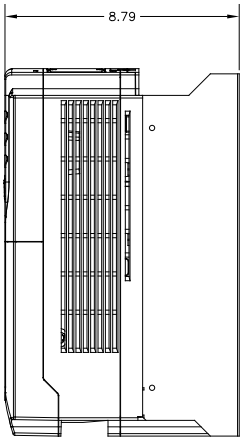
RIGHT SIDE VIEW

240V, 25 HP

480V, 30 HP - 40 HP



FRONT VIEW



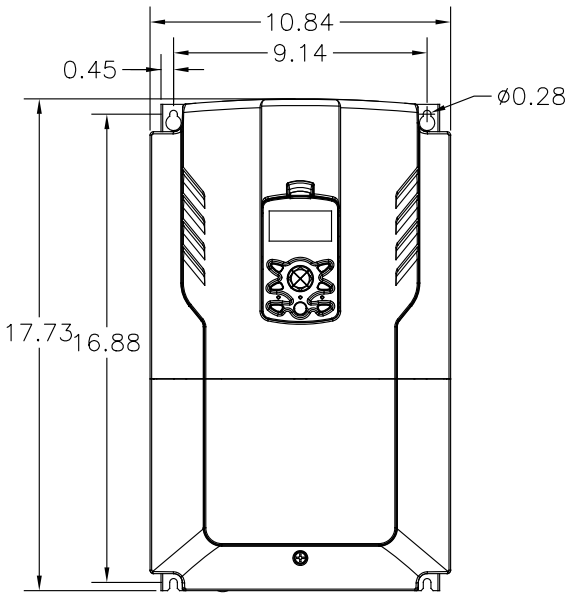
RIGHT SIDE VIEW

H2 SERIES - DRAWINGS

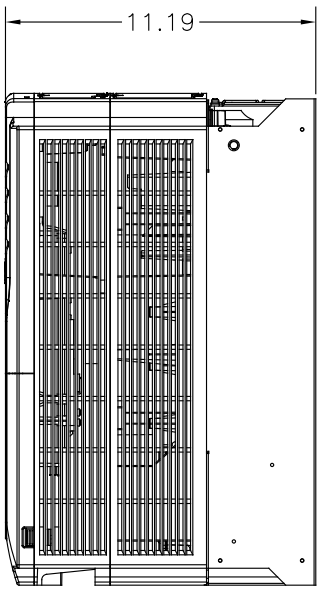
240V, 30HP

480V, 50 HP

575V, 50HP



FRONT VIEW

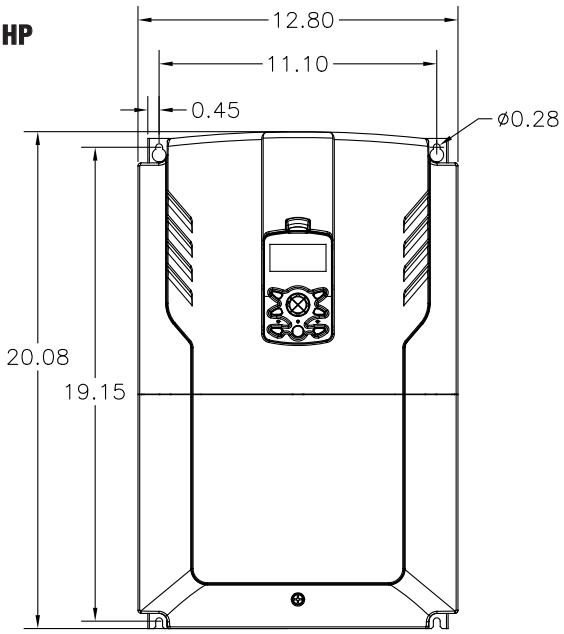


RIGHT SIDE VIEW

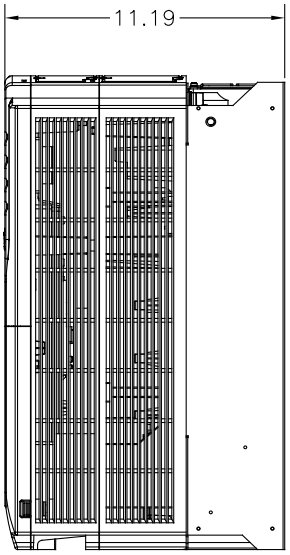
240V, 40 HP

480V, 60 HP - 75 HP

575V, 60 HP - 75 HP



FRONT VIEW



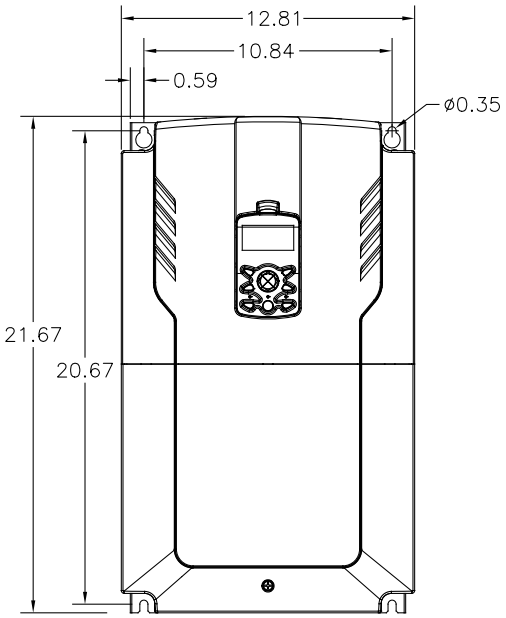
RIGHT SIDE VIEW

H2 SERIES - DRAWINGS

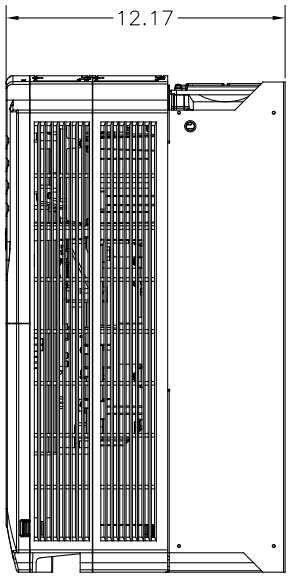
240V, 50 HP - 60 HP

480V, 100 HP - 125 HP

575V, 100 HP -125 HP



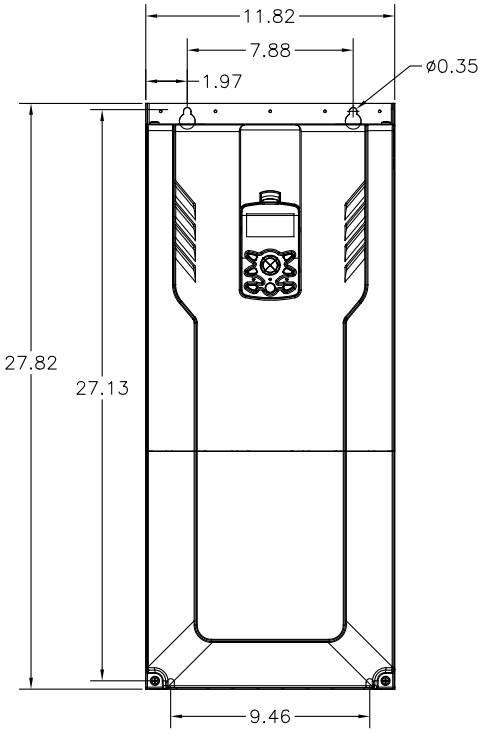
FRONT VIEW



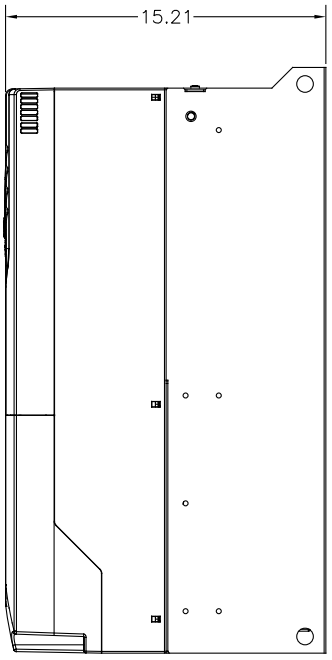
RIGHT SIDE VIEW

240V, 75 HP -100 HP

480V, 150 HP - 200 HP



FRONT VIEW

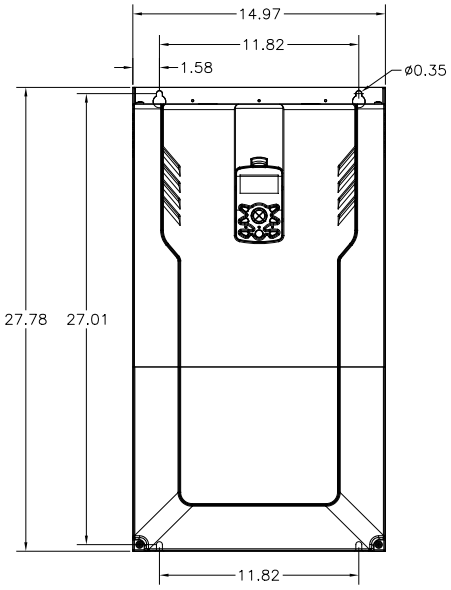


RIGHT SIDE VIEW

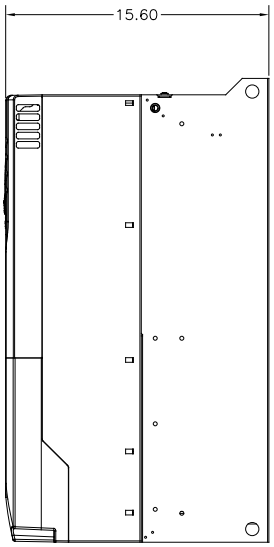
H2 SERIES - DRAWINGS

240V, 125 HP

480V, 250 HP - 300 HP

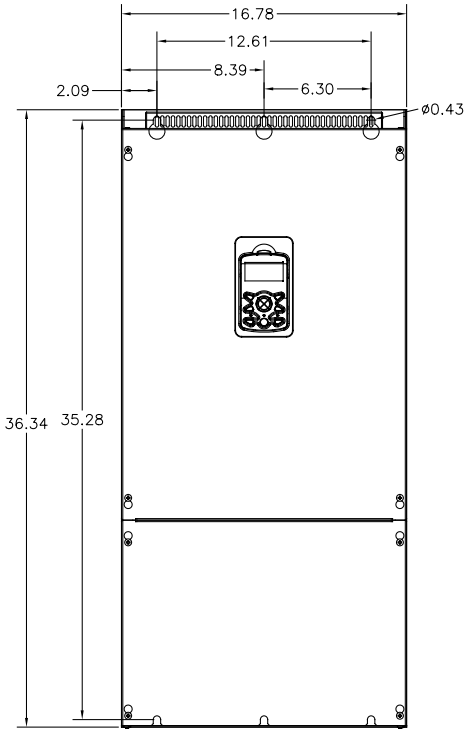


FRONT VIEW

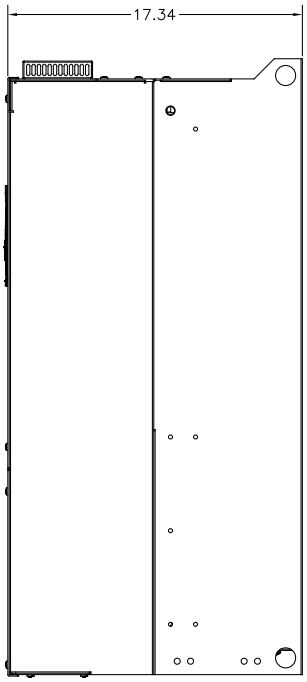


RIGHT SIDE VIEW

480V, 400 HP



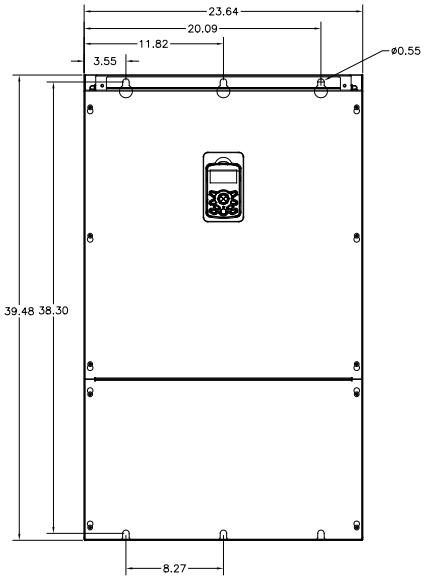
FRONT VIEW



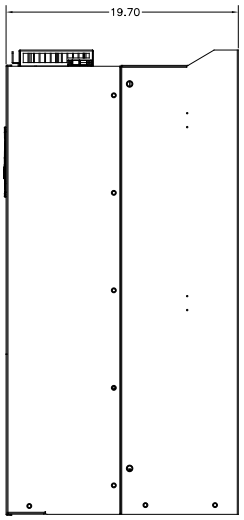
RIGHT SIDE VIEW

H2 SERIES - DRAWINGS

480V, 500 HP - 650 HP

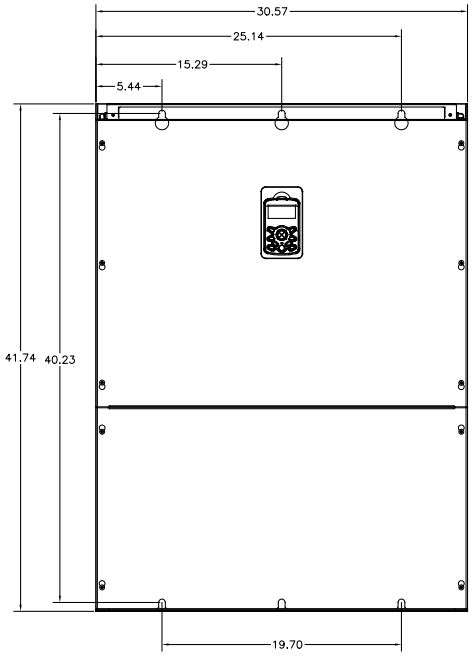


FRONT VIEW

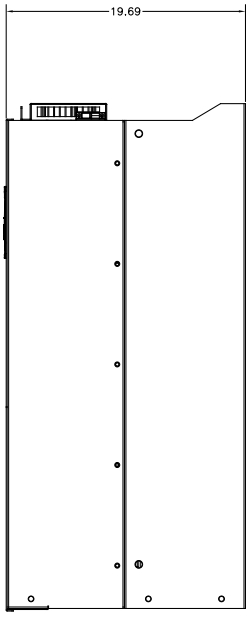


RIGHT SIDE VIEW

480V, 800 HP



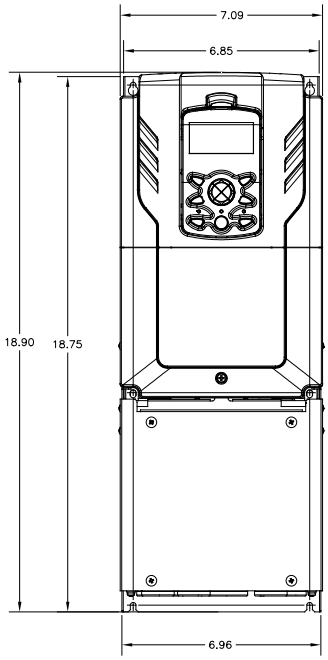
FRONT VIEW



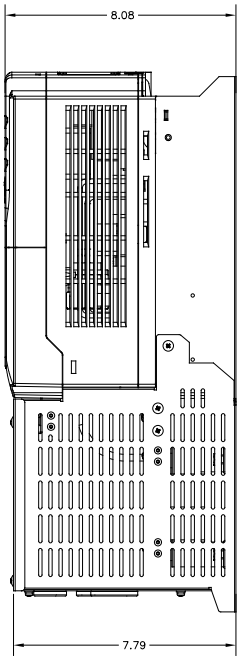
RIGHT SIDE VIEW

H2 SERIES - DRAWINGS

575V, 7.5 HP - 25 HP

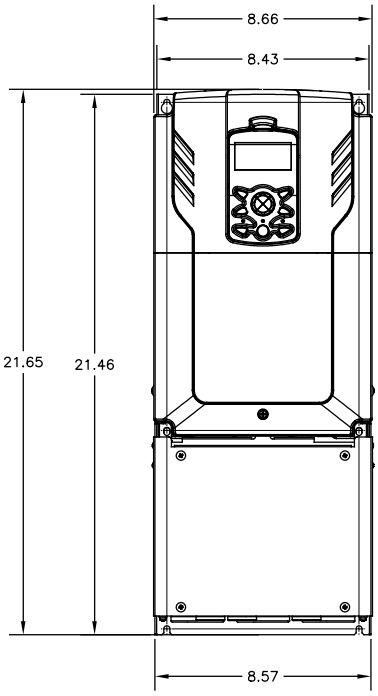


FRONT VIEW

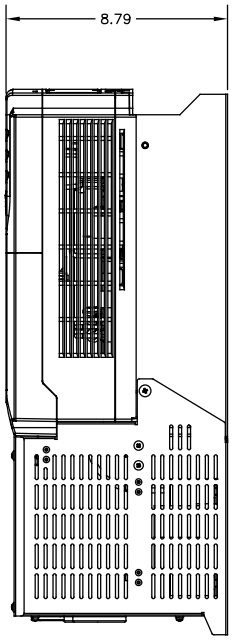


RIGHT SIDE VIEW

575V, 30 HP - 40 HP



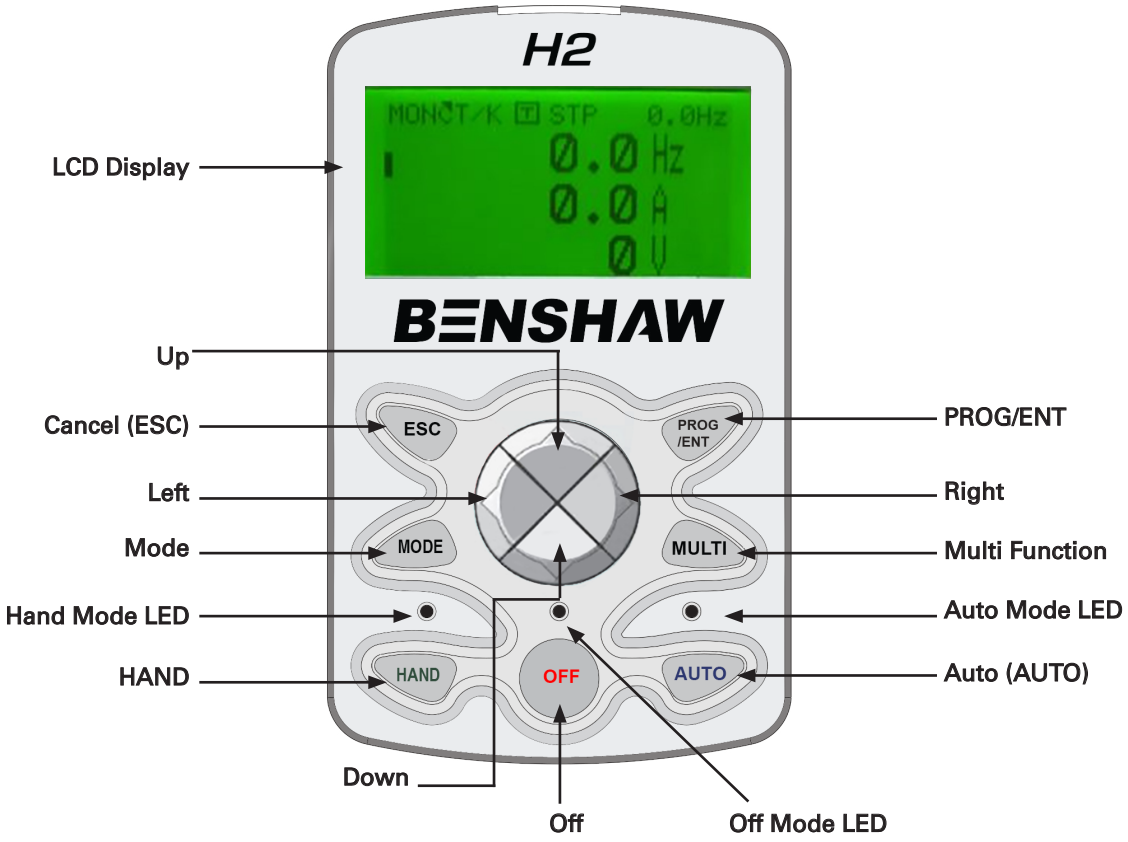
FRONT VIEW



RIGHT SIDE VIEW

H2 SERIES - PROGRAMMING

H2 Series - LCD Display/Keypad



Key	Description
LCD Display	• Displays Operating Modes and Parameter Groups • Command Source • Operating Status and four (4) monitor items
Cancel (ESC)	• While in the Edit state, reverts back to previously saved value • When pressed while switching codes within the group, it is switched to the first paramter of the group
Program (PROG/ENT)	• When pressed once, enter the Program mode (Parameter Edit mode). • When pressed again, after changes, changed data is saved.
Left/Right	• Move between PAR groups and move the cursor when in PROG Mode
Up/Down	• Move between parameters and increase/decrease parameter values when in PROG Mode
Hand (HAND)	• It is used to select Keypad (HAND) operation
OFF	• Off and Fault Reset
Multifunction (MULTI)	• Can be used to assign User Group parameters
Auto (AUTO)	• It is used to select AUTO operation
MODE	• Monitor Mode -> Parameter Mode - > Configure Mode

COMPARISON CHART - H2 SERIES AND H2 PUMP

Series	H2	H2 Pump
Features		
LCD Keypad with Hand/Auto/Off modes and Read/Write/Save	•	•
Quick Start Menu for easy basic commissioning	•	•
Constant Torque Macro for Quick Setup	•	
Pump and Fan Macros for Quick Setup	•	•
Single VFD, Multi-Motor/Pump Control (ATL Contactor based)		•
Multi-VFD, Multi-Motor/Pump Control (Lead/Lag, Alternating, Jockey Pump Control)		•
User Defined Parameter Lists for custom applications	•	•
PID Control	•	•
V/HZ control: Linear, Squared, or User Defined	•	•
Sensorless Vector for Induction* or PM** motors		
* SVC IM Motor Control 240 max. 25 HP	•	
** SVC PM Motor Control 240V max 25 HP 480V max 125 HP 575V not applicable	•	
Torque Limiting Functions	•	
Slip Compensation	•	
Auto-Tuning: Stationary and Rotating	•	
Auto and Manual Torque Boost	•	•
Dwell Operation	•	•
Motor Brake Control	•	•
On/Off Delay Timers for Digital Inputs	•	•
Regen Prevention for cyclical regenerative loads	•	•
Flow Compensation	•	•
Lube Pump Operation	•	•
Pump Clean Operation	•	•
Start and End Ramp Optimization	•	•
Load Tuning	•	•
Level Detection	•	•
Pipe Break Detection	•	•
Pre-Heating Function	•	•
Timed Event Scheduling	•	•
Kinetic Energy Buffering/Power Loss Ride Through	•	•
Anti-Resonance/Skip Frequency	•	•
Fire Mode	•	•
Energy Save Mode	•	•
Speed Search/Flying Start	•	•
Auto-Restart/Auto-Fault Reset	•	•
Backspin Delay Start	•	•

NOTE: H2 Pump does not apply to 575V inverters.