

H2 Pump Drive 2021 Product Catalog

Rapid Rugged Global



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H2P SERIES - PUMP/FAN DRIVE

The Benshaw H2P Series sets the new standard for variable frequency drives for pump and fans applications. It includes application software designed to perform many functions including advanced PID functions, multiple pump or multistage pump control, lead lag, simplex, multiplex, triplex with the capacity of multiplexing up to 8 drives. Cost saving result by reducing PLC's and peripherals typically required to achieve these functions that are now integral to the drive... The results are reduced maintenance cost, better system control, and improved pump and pipe monitoring and protection. If you have one or multiple motors in a system that require constant pressure or flow, then this is the drive for you.

STANDARD FEATURES - HARDWARE

- 240V: 7.5HP~25HP (ND), 5HP~20HP (HD)
- 480V: 7.5HP~800HP (ND), 5HP~600HP (HD)
- Protected Chassis IP20, 7.5~300HP / Open Chassis IP00, 400~800HP UL EnclosedType 1 with optional conduit box (7.5HP~800HP)
- LCD Display/Keypad
- EMC Filter Compliant Category C3 (480V, 7.5HP-800HP)
- Single Phase Input (derating required)
- Plenum Rated (conduit option required)
- Built in DC Reactor (480V, 50HP~800HP)

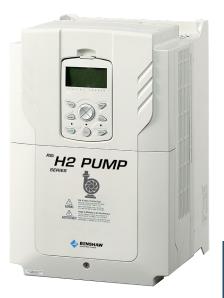
COMMUNICATIONS

Standard: RS-485 Modbus - RTU, BACnet, Metasys-N2 Options: Ethernet/IP, Modbus -TCP, Lonworks

H2P SERIES PUMP / FAN SOFTWARE

- PID Control with Sleep Mode and Wake Up Boost, Broken Pipe and Under Load Detection
- Multi Motor Control One drive to control the starting and stopping of up to 5 auxiliary motors up to 8 with option card
- Multiplex mode, Simplex, duplex, triplex up to 8 motors
- Master-follower
- Multiplex via RS-485
- · Lead/Lag load share
- Pre-Fill and Soft-Fill
- 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
- Oil Pump Starter Control
- Damper Control and Monitoring
- Broken Pipe Detection
- Under Load Detection
- Pre-Heat Function (Condensation Control)

WinDRIVE - PC Based Software for Commissioning and Monitoring





H2P SERIES - LEAD LAG OPERATION

MULTI-STAGE PUMP CONTROL

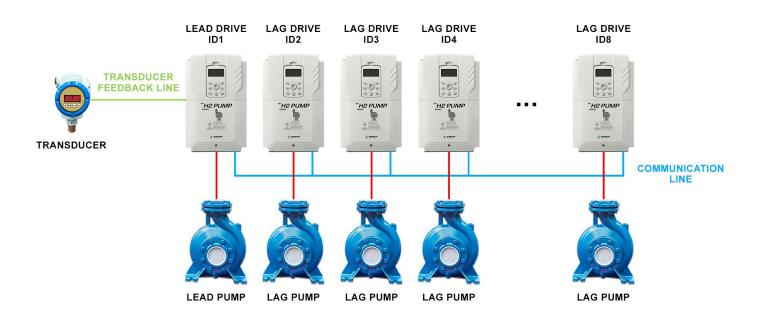
This mode is also referred to as "Master-Follower" or Lead-Lag/ Loadshare:

The system can be configured without using a controller (such as a PLC) by connecting the drives via communications. Wiring is minimized with the use of communications, which eliminates the need for additional options by using the Modbus RTU communications. Running order and alterations are based upon operation time. If a failure occurs to the master drive, the next drive will run as the master.

FEATURES:

- Pumps are individually connected to AC drives, and a master drive controls the entire system
- The pump is controlled by the unique PID function of AC drive, so external devices such as PLCs or contactors are not required
- The speed of each pump is controlled by individual AC drives to save energy
- Since the operating time of each pump is evenly distributed, the life expectancy of the pumping equipment is extended, reducing the total system operating cost
- If the master AC drive malfunctions, the next AC drive takes over as the master, and continuously controls the system without failure





H2P SERIES - PRICING

230V		Normal Duty		Heavy Duty							
		120%	OL/1 min.	150% (OL/1min.	Dime	nsions (in	ches)			
Model N	lumber	ΗP	Amps	HP	Amps	Н	W	D	Degree of Protection	Weight	List Price
VFD-RSI	I-007-H2P-2C	7.5	22	5	17	9.13	6.30	7.13	IP20	7.3	\$1,260
VFD-RSI	I-010-H2P-2C	10	30	7.5	24	9.13	6.30	7.13	IP20	7.3	\$1,400
VFD-RSI	I-015-H2P-2C	15	42	10	32	9.13	6.30	7.13	IP20	7.3	\$1,580
VFD-RSI	I-020-H2P-2C	20	56	15	46	11.42	7.09	8.08	IP20	10.1	\$2,200
VFD-RSI	I-025-H2P-2C	25	69	20	60	13.78	8.66	8.79	IP20	15.7	\$2,700

460V	Normal Duty 120% OL/1 min.		Heavy Duty 150% OL/1min.		Dimensions (inches)					
Model Number	HP	Amps	HP	Amps	Н	W	D	Degree of Protection	Weight	List Price
VFD-RSI-007-H2P-4C	7.5	12	5	8	9.13	6.30	7.13	IP20	7.3	\$1,200
VFD-RSI-010-H2P-4C	10	16	7.5	12	9.13	6.30	7.13	IP20	7.3	\$1,220
VFD-RSI-015-H2P-4C	15	24	10	15	9.13	6.30	7.13	IP20	7.4	\$1,460
VFD-RSI-020-H2P-4C	20	30	15	22	11.42	7.09	8.08	IP20	10.1	\$2,000
VFD-RSI-025-H2P-4C	25	38	20	28	11.42	7.09	8.08	IP20	10.6	\$2,400
VFD-RSI-030-H2P-4C	30	45	25	35	13.78	8.66	8.79	IP20	16.5	\$2,780
VFD-RSI-040-H2P-4C	40	61	30	41	13.78	8.66	8.79	IP20	16.5	\$2,900
VFD-RSI-050-H2P-4C	50	75	40	55	17.72	10.83	11.18	IP20	57	\$4,180
VFD-RSI-060-H2P-4C	60	91	50	67	20.08	12.80	11.18	IP20	77	\$5,200
VFD-RSI-075-H2P-4C	75	107	60	81	20.08	12.80	11.18	IP20	77	\$5,580
VFD-RSI-100-H2P-4C	100	142	75	106	21.67	12.80	12.17	IP20	95	\$6,990
VFD-RSI-125-H2P-4C	125	169	100	136	21.67	12.80	12.17	IP20	95	\$7,800
VFD-RSI-150-H2P-4C	150	223**	125	169	27.80	11.81	15.20	IP20	123	\$10,480
VFD-RSI-200-H2P-4C	200	264**	150	195	27.80	11.81	15.20	IP20	123	\$11,100
VFD-RSI-250-H2P-4C	250	325**	200	255	27.76	14.96	15.59	IP20	165	\$13,600
VFD-RSI-300-H2P-4C	300	370**	250	303	27.76	14.96	15.59	IP20	165	\$15,700
VFD-RSI-400-H2P-4C	400	481**	300	375	36.34	16.77	17.32	IP20	265	\$23,100
VFD-RSI-500-H2P-4C	500	613**	400	478	39.37	23.62	19.69	IP20	409	\$37,300
VFD-RSI-650-H2P-4C	650	770**	500	591	39.37	23.62	19.69	IP20	409	\$41,700
VFD-RSI-800-H2P-4C	800	962**	600	740	41.50	30.55	19.67	IP20	584	\$50,100

Units with ** rated for 110% current for 60 seconds.



H2P SERIES - INPUT AND OUTPUT SPECIFICATIONS

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

	RSI-XXX-H2F	-2C	(007	010	015	020	025	
		HP		7.5	10	15	20	25	
240V,	Normal Duty 120% OL	kW		5.5	7.5	11	15	18.5	
	120 % OL	Amps		22	30	42	56	69	
Ø Input		HP		5	7.5	10	15	20	
	Heavy Duty	kW	;	3.7	5.5	7.5	11	15	
	150% OL	Amps		17	24	32	46	60	
240V,	Normal Duty	HP	:	3.0	5.0	7.5	10.0	-	
Ø Input	120% OL	Amps		11	16	23	30	37	
		Rated Capacity	r (kVA)	8.4	11.4	16.0	21.3	26.3	
			0-400H	0-400Hz (V/Hz, Slip Compensation)					
	Output frequence	У	0-120⊢	Iz (IM Sensorless))				
			0-180	Iz (PM Sensorless	5)				
	Output voltage (/)	3-Phas	e 0-240 V					
	Voltage (V)	Three-Phase	e 3-Phas	e 200-400 VAC (-1	15% -+10%)				
	voitage (v)	Single-Phase	e 1-Phas	e 240 VAC (-5%	+10%)				
Rated Input	Input frequency	Three-Phase		łz (+/-5%)					
		Single-Phase	e 60Hz (-	+/-5%) only					
	Rated Current (A)	2	3.7	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)	
Hea	t Dissipation (W)			180 248		330	451	600	
Deg	gree of Protection		IP20, f	or UL type 1 a	add conduit	box option.			
30V, 7.5HP -	30HP (5.5 - 22 kW)							,	
	RSI-XXX-H2P-4C		007	010	015	020	025	030	
	Newslo	HP	7.5	10	15	20	25	30	
	Normal Duty 120% OL	kW	5.5	7.5	11	15	18.5	22	
			10	1.0					
		Amps	12	16	24	30	38	45	
		Amps HP	5.0	16 7.5	24 10	30 15	38 20	45 25	
180V, 3Ø Input	Heavy Duty								
		HP	5.0	7.5	10	15	20	25	
3Ø Input 240V,	Heavy Duty	HP kW	5.0 3.7	7.5 5.5	10	15 11	20 15	25 18.5	
9Ø Input 240V,	Heavy Duty 150% OL	HP kW Amps	5.0 3.7 8	7.5 5.5 12	10 7.5 15	15 11 22	20 15 28	25 18.5 35	
3Ø Input 240V,	Heavy Duty 150% OL Normal Duty 120% OL	HP kW Amps HP	5.0 3.7 8 3-5	7.5 5.5 12 5	10 7.5 15 10	15 11 22 10	20 15 28 15	25 18.5 35 20	
	Heavy Duty 150% OL Normal Duty 120% OL Rate	HP kW Amps HP Amps	5.0 3.7 8 3-5 6.8 9.1 0-400Hz (V/Hz	7.5 5.5 12 5 9.2 12.2 ; Slip Compensat	10 7.5 15 10 14 18.3	15 11 22 10 17	20 15 28 15 28 15 22	25 18.5 35 20 26	
3Ø Input 240V,	Heavy Duty 150% OL Normal Duty 120% OL	HP kW Amps HP Amps	5.0 3.7 8 3-5 6.8 9.1 0-400Hz (V/Hz 0-120Hz (IM S	7.5 5.5 12 5 9.2 12.2 c, Slip Compensat ensorless)	10 7.5 15 10 14 18.3	15 11 22 10 17	20 15 28 15 28 15 22	25 18.5 35 20 26	
3Ø Input 240V,	Heavy Duty 150% OL Normal Duty 120% OL Rate Output frequency	HP kW Amps HP Amps	5.0 3.7 8 3-5 6.8 9.1 0-400Hz (V/Hz 0-120Hz (IM S 0-180Hz (PM S	7.5 5.5 12 5 9.2 12.2 ; Slip Compensat ensorless) Sensorless)	10 7.5 15 10 14 18.3	15 11 22 10 17	20 15 28 15 28 15 22	25 18.5 35 20 26	
3Ø Input 240V,	Heavy Duty 150% OL Normal Duty 120% OL Rate	HP kW Amps HP Amps d Capacity (kVA)	5.0 3.7 8 3-5 6.8 9.1 0-400Hz (V/Hz 0-120Hz (IM S 0-180Hz (PM S 3-Phase 0-480	7.5 5.5 12 5 9.2 12.2 ;, Slip Compensat ensorless) Sensorless)	10 7.5 15 10 14 18.3 ion)	15 11 22 10 17	20 15 28 15 28 15 22	25 18.5 35 20 26	
Ø Input 40V,	Heavy Duty 150% OL Normal Duty 120% OL Rate Output frequency	HP kW Amps HP Amps d Capacity (kVA)	5.0 3.7 8 3-5 6.8 9.1 0-400Hz (V/Hz 0-120Hz (IM S 0-180Hz (PM S 0-180Hz (PM S 3-Phase 0-480 3-Phase 380-4	7.5 5.5 12 5 9.2 12.2 ; Slip Compensat ensorless) Sensorless) V 80 VAC (-15% -+1	10 7.5 15 10 14 18.3 ion)	15 11 22 10 17	20 15 28 15 28 15 22	25 18.5 35 20 26	
Ø Input 40V, Ø Input	Heavy Duty 150% OL Normal Duty 120% OL Rate Output frequency Output voltage (V)	HP kW Amps HP Amps d Capacity (kVA) d Capacity (kVA)	5.0 3.7 8 3-5 6.8 9.1 0-400Hz (V/Hz 0-120Hz (IM S 0-120Hz (IM S 0-180Hz (PM S 3-Phase 0-480 3-Phase 380-4 1-Phase 480 V	7.5 5.5 12 5 9.2 12.2 5, Slip Compensat ensorless) Sensorless) VV 80 VAC (-15% -+1 AC (-5% -+10%)	10 7.5 15 10 14 18.3 ion)	15 11 22 10 17	20 15 28 15 28 15 22	25 18.5 35 20 26	
Ø Input 40V, Ø Input	Heavy Duty 150% OL Normal Duty 120% OL Rate Output frequency Output voltage (V)	HP kW Amps HP Amps d Capacity (kVA) d Capacity (kVA)	5.0 3.7 8 3-5 6.8 9.1 0-400Hz (V/Hz 0-120Hz (IM S 0-180Hz (PM 3 3-Phase 0-480 3-Phase 380-4 1-Phase 480 V 50-60Hz (+/-5)	7.5 5.5 12 5 9.2 12.2 c, Slip Compensat ensorless) Sensorless) VV 80 VAC (-15% -+1 AC (-5% -+10%) %)	10 7.5 15 10 14 18.3 ion)	15 11 22 10 17	20 15 28 15 28 15 22	25 18.5 35 20 26	
Ø Input 40V, Ø Input	Heavy Duty 150% OL Normal Duty 120% OL Rate Output frequency Output voltage (V) Voltage (V) Input frequency	HP kW Amps HP Amps d Capacity (kVA) d Capacity (kVA)	5.0 3.7 8 3-5 6.8 9.1 0-400Hz (V/Hz 0-120Hz (IM S 0-120Hz (IM S 0-180Hz (PM S 3-Phase 0-480 3-Phase 380-4 1-Phase 480 V 50-60Hz (+/-5%)	7.5 5.5 12 5 9.2 12.2 5, Slip Compensat ensorless) 5 80 VAC (-15% -+1 AC (-5% -+10%) %) only	10 7.5 15 10 14 18.3 ion)	15 11 22 10 17 23.0	20 15 28 15 22 29.0	25 18.5 35 20 26 34.3	
Ø Input 40V, Ø Input	Heavy Duty 150% OL Normal Duty 120% OL Rate Output frequency Output voltage (V) Voltage (V) Input frequency Rated Current (A)	HP kW Amps HP Amps d Capacity (kVA) d Capacity (kVA)	5.0 3.7 8 3-5 6.8 9.1 0-400Hz (V/Hz 0-120Hz (IM S 0-120Hz (IM S 0-180Hz (PM S 3-Phase 0-480 3-Phase 380-4 1-Phase 480 V 50-60Hz (+/-5%) 12.2	7.5 5.5 12 5 9.2 12.2 5, Slip Compensat ensorless) Sensorless) VV 80 VAC (-15% -+1 AC (-5% -+10%) %) only 17.5	10 7.5 15 10 14 18.3 ion)	15 11 22 10 17 23.0	20 15 28 15 22 29.0	25 18.5 35 20 26 34.3	
3Ø Input 240V, Ø Input	Heavy Duty 150% OL Normal Duty 120% OL Rate Output frequency Output voltage (V) Voltage (V) Input frequency	HP kW Amps HP Amps d Capacity (kVA) d Capacity (kVA)	5.0 3.7 8 3-5 6.8 9.1 0-400Hz (V/Hz 0-120Hz (IM S 0-120Hz (IM S 0-180Hz (PM 3 3-Phase 0-480 3-Phase 380-4 1-Phase 480 V 50-60Hz (+/-5%) 12.2 7.3	7.5 5.5 12 5 9.2 12.2 ; Slip Compensat ensorless) Sensorless) V 80 VAC (-15% -+1 AC (-5% -+10%) %) only 17.5 7.3	10 7.5 15 10 14 18.3 ion) 10%)	15 11 22 10 17 23.0 23.0 33.4 10.1	20 15 28 15 22 29.0 29.0 42.5 10.6	25 18.5 35 20 26 34.3 50.7 16.5	
Kated Input	Heavy Duty 150% OL Normal Duty 120% OL Rate Output frequency Output voltage (V) Voltage (V) Input frequency Rated Current (A) ght lbs (kg)	HP kW Amps HP Amps d Capacity (kVA) d Capacity (kVA)	5.0 3.7 8 3-5 6.8 9.1 0-400Hz (V/Hz 0-120Hz (IM S 0-120Hz (IM S 0-180Hz (PM S 3-Phase 0-480 3-Phase 380-4 1-Phase 480 V 50-60Hz (+/-5%) 12.2 7.3 (3.3)	7.5 5.5 12 5 9.2 12.2 5, Slip Compensat ensorless) 5 80 VAC (-15% -+1 AC (-5% -+10%) %) only 17.5 7.3 (3.3)	10 7.5 15 10 14 18.3 ion) 10%) 26.5 7.5 (3.4)	15 11 22 10 17 23.0 33.4 10.1 (4.6)	20 15 28 15 22 29.0 42.5 10.6 (4.8)	25 18.5 20 26 34.3 34.3 50.7 16.5 (7.5)	
Kated Input	Heavy Duty 150% OL Normal Duty 120% OL Rate Output frequency Output voltage (V) Voltage (V) Input frequency Rated Current (A)	HP kW Amps HP Amps d Capacity (kVA) d Capacity (kVA) d Capacity (kVA)	5.0 3.7 8 3-5 6.8 9.1 0-400Hz (V/Hz 0-120Hz (IM S 0-120Hz (IM S 0-180Hz (PM S 3-Phase 0-480 3-Phase 380-4 1-Phase 480 V 50-60Hz (+/-5%) 12.2 7.3 (3.3) 172	7.5 5.5 12 5 9.2 12.2 ; Slip Compensat ensorless) Sensorless) V 80 VAC (-15% -+1 AC (-5% -+10%) %) only 17.5 7.3	10 7.5 15 10 14 18.3 ion) 26.5 7.5 (3.4) 322	15 11 22 10 17 23.0 33.4 10.1 (4.6) 451	20 15 28 15 22 29.0 29.0 42.5 10.6	25 18.5 35 20 26 34.3 50.7 16.5	

H2P SERIES - INPUT AND OUTPUT SPECIFICATIONS

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

	RSI-XXX-H2P-4C		040	050	060	075	100	125				
		HP	40	50	60	75	100	125				
480V,	Normal Duty 120% OL	kW	30	37	45	55	75	90				
		Amps	61	75	91	107	142	169				
3Ø Input		HP	30	40	50	60	75	100				
	Heavy Duty 150% OL	kW	22	30	37	45	55	75				
	130 % 02	Amps	41	55	67	81	106	136				
240V,	Normal Duty	HP	25	30	30	40	50-60	60				
1Ø Input	120% OL	Amps	36	39	47	55	73	86				
	Rate	ed Capacity (kVA)	46.5	57.1	69.4	82.0	108.2	128.8				
			0-400Hz (V/Hz, Slip Compensation)									
	Output frequency		0-120Hz (IM Sensorless)									
			0-180Hz (PM Sensorless)									
	Output voltage (V)		3-Phase 0-480V									
	Voltage (V)	Three-Phase	3-Phase 380-480 VAC (-15% -+10%)									
		Single-Phase	1-Phase 480 VAC (-5% -+10%)									
Rated Input	Input frequency	Three-Phase	50-60Hz (+/-5%)									
	mput nequency	Single-Phase	60Hz (+/-5%) only									
	Rated Current (A)		69.1	69.3	84.6	100.1	133.6	160.0				
Weig	ght lbs (kg)	lbs	16.5	57.3	77.2	77.2	94.8	94.8				
		kg	(7.5)	(26)	(35)	(35)	(43)	(43)				
Hea	at Dissipation (W)		880	1170	1443	1710	2090	2775				
Deg	gree of Protection		IP20, UL Type	1 achieved with op	otional conduit bo	x						

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

	RSI-XXX-H2P-4	4C	150	200	250	300	400	500	650	800		
		HP	150	200	250	300	400	500	650	800		
	Normal Duty 110% OL	kW	110	132	160	185	250	315	400	500		
	11070 02	Amps	223	264	325	370	481	613	770	962		
180V, 3Ø Input		HP	125	150	200	250	300	400	500	600		
oo mpar	Heavy Duty 150% OL	kW	90	110	132	160	185	250	315	375		
	150 % OL	Amps	169	195	255	303	375	478	591	740		
	Rate	d Capacity (kVA)	170	201	248	282	367	467	587	733		
	Output freque	,		Hz, Slip Comp 1 Sensorless)	pensation)							
	U	Voltage (V) Three-Phase		3-Phase 380-480 VAC (-15% -+10%)								
Rated Input	Input frequency			-5%)								
	Rated Current (A)		215.1	254.6	315.3	358.9	469.3	598.1	751.3	938.6		
Weigh	t 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)		
Hea	at Dissipation (V	V)	3960	4752	5600	6475	8500	10.4k	13.2k	16k		
Degree of Protection			ion 1HP~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									



H2P SERIES - SPECIFICATION DETAILS

	ltems		Description					
	Control method	V/F control						
		Digital command: 0.01Hz						
Control	Frequency settings resolution	Analog command: 0.06Hz (60Hz stan	dard)					
	Frequency	1% of maximum output frequency						
	V/F pattern	Linear, Square Reduction, User V/F						
	Overload capacity (Normal Duty)	1HP~125HP (0.75~90 kW)		Rated current: 120% 1 min.				
		150HP~800HP (110~500kW)		Rated current: 110% 1 min.				
	Torque boost	Manual torque boost, automatic torqu	ue boost					
	Operation Type							
	Start/Stop	Keypad, Terminal strip, Communicatio	ons					
		Analog type: -10 - 10V, 0-10 V, 0-20 m.	A (Main and Auxiliary)					
	Frequency settings	Digital type: keypad, pulse train input						
		Communication: RS-485 (Modbus), Fieldbus Options						
		H2 Pump Software	BACnet and Metasys-N2	2				
			Load Tuning					
		MMC - Multi-Motor Control	Decel Valve Ramp					
		Lead/Lag and Alternating						
		Pre-Fill, Soft Fill	Flow Compensation	Flow Compensation				
		Start and End Ramp	Energy Saving Operation	n				
		Backspin Timer						
		Flow Compensation						
		Pump Clean Operation						
		Basic	Advanced	Advanced				
Operation		Quick Start	Auto Tuning					
		Accel/Decel Times						
		Start/Stop Operation	Torque Limits					
		Frequency Reference						
		Sources						
		Jog and Jog Start	Event Timer (RTC)					
		Torque Boost	Energy Save Mode					
	Functions	2nd Source (HOA)	Multi-Stage Accel/Decel	Times				
		Auxiliary Frequency	Dwell Frequency Operation					
		Auxiliary Frequency Dwell Frequency Operation Reference Regen Avoidance						
		Negen Avoidance V/Hz. Control VFD Fan Control						
		V/Hz. Pattern	Timer					
		Step Frequencies/ Fixed Speed						
		Accel/Decel Pattern	Pre-Heat Loss of Power					
		Accel/Decel Pattern Loss of Power Start Modes KEB (Ride Through)						
		Start Hodes KEB (Hide Hilodgi) Stop Modes Safe Stop						
		FWD/REV Run Prevention	Speed Search					

H2P SERIES - SPECIFICATION DETAILS

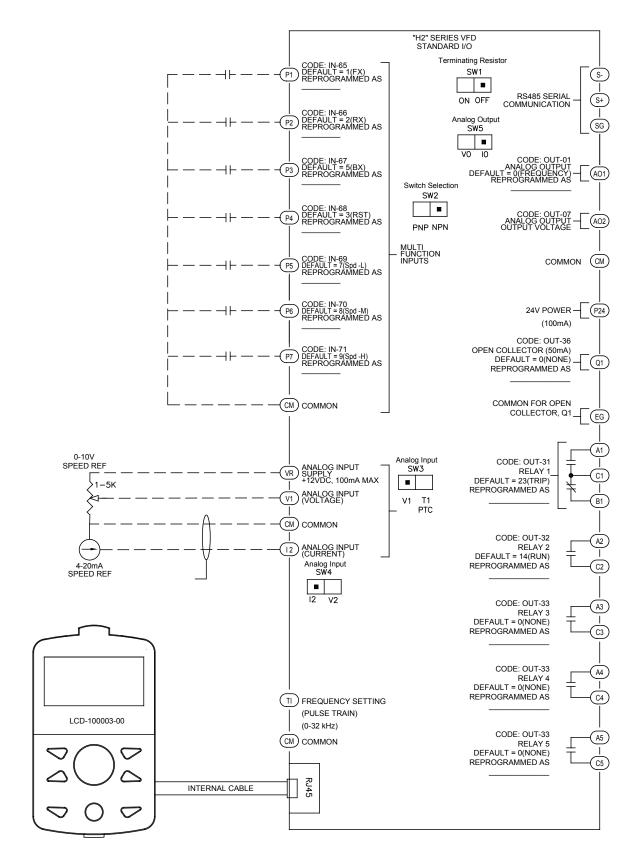
	l	tems		Description				
			Auto Start	Braking				
			Auto Reset/Restart	Power Braking				
			Frequency Limits	DC Injection Braking				
	Functions		Jump Frequencies	Flux Braking				
			3-Wire Control	Stall Prevention				
			Fire Mode	External Brake Control				
		Digital input terminals P1-P7	Select PNP (Source) or NPN (Sink) mode. Functions of the digital inputs are set with parame IN-65 through IN-71					
				2nd Source - HOA/LOR				
			Forward/Reverse Operation	Up/Down Operation				
			Reset	Analog Hold				
			External Trip	PID Disable				
	Input		Emergency Stop	Jog Start FWD/REV				
Operation	linput	Functions	Output Disable (Bx)	Pre-Excite				
			Jog	Timer Input				
			Fixed Speed - Step	Fire Mode				
			Frequency	Event Timer				
			Run Enable/Disable (Safety)	Pre-Heat				
		Pulse train	0-30 kHz, Low Level: 0-0.8 V, High Level: 3.5-12 V					
			N.O. : Less than AC 250V 2A, DC 30V 3A					
		(1) Fault relay (Form C)	N.O.: Less than AC 250V 1A, DC 30V	/ 1A				
	Output	(4) Programmable relays	N.O. (A-C): Less than 250V, 5A					
		(Form A)	Less than DC 30V, 5A					
		(1) Open collector terminal	Less than DC 26V, 50 mA					
		Analog output	0-12 Vdc (0-20 mA): Selectable Frequency, output current, output voltage, DC bus voltage, others					
		Pulse train	Maximum 32 kHz					
			Motor Over Load	Fan Trip				
			Under Load	Internal Fan Trip				
			Over Current 1	Motor Over Heat				
			Over Voltage	Lost Keypad				
			Low Voltage	Fuse Open				
			Low Voltage 2	Pipe Broken				
			Ground Fault	Broken Belt				
Protection	Trip		E-Thermal	Lost Command (Speed Ref)				
Function			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 Detected Trip				
			Over Current 2	MMC Interlock Trip				
			External Trip	Pump Cleaning Trip				
			Hardware Diagnostic					



H2P SERIES - SPECIFICATION DETAILS

	Items	Description
	Alarm	Command loss, Motor overload/under load, Broken Belt, Inverter overload, DB (braking) rate alarm, Pump Clean, Pipe Broken, Fire Mode, Level Detection (LDT)
Protection Function		Less than 8 ms: Continue Operation
	Instantaneous Power Loss	More than 8 ms: KEB and/or Auto restart operation
	Cooling type	Forced fan cooling structure
		UL Open, IP20: 1HP~7.5HP (0.75kW~5.5kW)
	Protection structure	UL Open, IP00: 400HP~800HP (250kW~500kW)
		UL Type 1 with conduit box (option) installation (up to 800 HP)
	Ambient temperature	-10°C to 50°C. 2.5% current derate per degree C above 40°C (25% derate at 50°C ambient).
		No ice or frost should be present
	Ambient humidity	Relative humidity less than 95% RH (to avoid condensation)
Structure / working	Storage temperature	-4°F~149°F (-20°C~65°C)
environment	Surrounding environment	Prevent contact with corrosive gases, inflammable gases, oil stains, dust and other pollutants. 1HP~800HP (0.75 kW ~ 500 kW) Pollution Degree 2
		Maximum 3,280 ft (1,000m) above sea level for standard operation.
	Operation altitude	Above derate the drive rated voltage and the rated output current by 1% for every 328 ft (100m) up to 13,123 ft (4,000m) max.
	Operation oscillation	Less than 1.0 G (9.8 m/sec ²)
	Pressure	10~15 PSI (70-106 kPa)

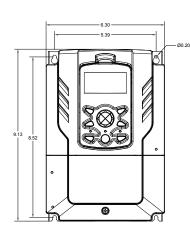
H2P SERIES - WIRING

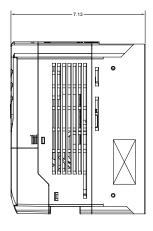




240V, 7.5 HP - 15 HP

480V, 7.5 HP - 15 HP



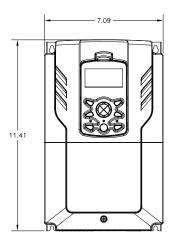


FRONT VIEW

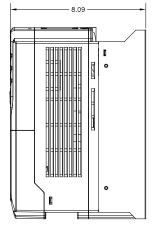
RIGHT SIDE VIEW

240V, 20 HP

480V, 20 HP - 25 HP



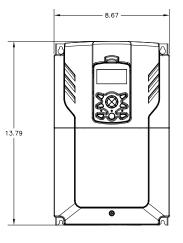
FRONT VIEW

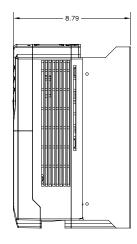


RIGHT SIDE VIEW

240V, 25 HP

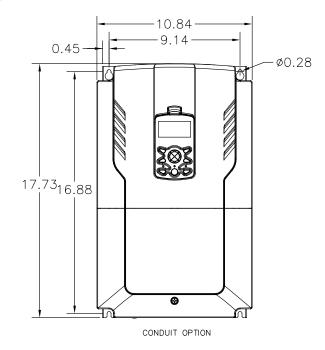
480V, 30 HP - 40 HP

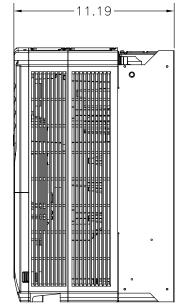




FRONT VIEW

480V, 50 HP

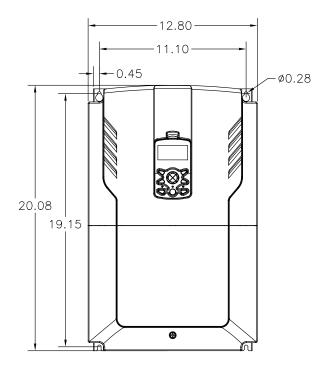




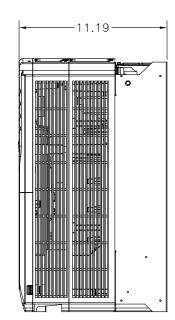
FRONT VIEW

RIGHT SIDE VIEW

480V, 60 HP - 75 HP

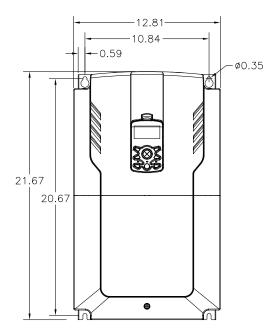


FRONT VIEW





480V, 100 HP - 125 HP



FRONT VIEW

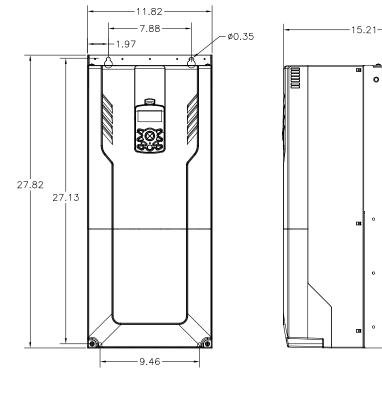
RIGHT SIDE VIEW

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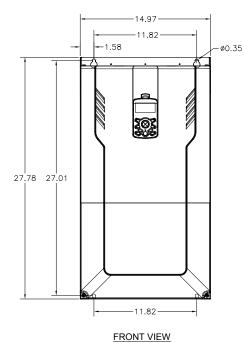
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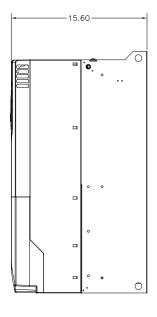
480V, 150 HP - 200 HP



FRONT VIEW

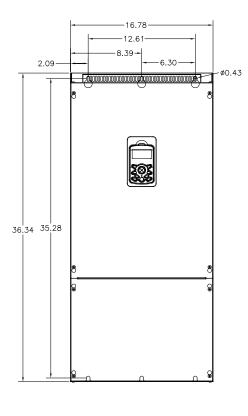
480V, 250 HP - 300 HP

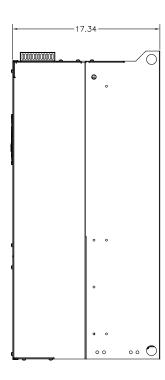




RIGHT SIDE VIEW

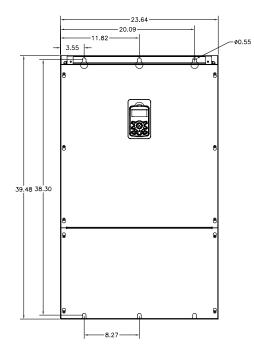
480V, 400 HP



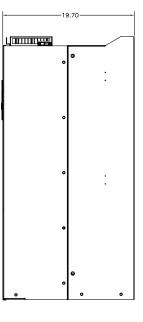


FRONT VIEW

480V, 500 HP - 650 HP

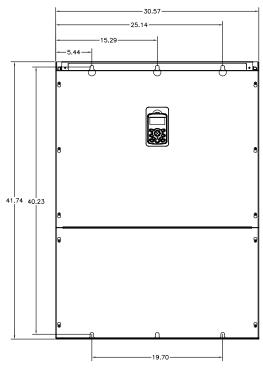


FRONT VIEW

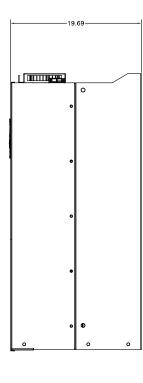


RIGHT SIDE VIEW

480V, 800 HP



FRONT VIEW





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