HITACHI INVERTER

HITACHI
Inspire the Next

Ps-H100 Series

High Performance Vector Drive

(This image shown here is indicative only. Please refer to the actual product for details.)

High Driving Performance with Explosive Power and Fluency

Driving Performance 1

Powerful and Stable Drive

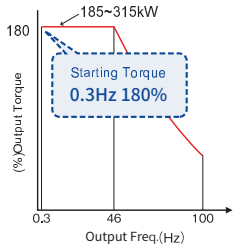
A variety of motors(IM/PM) can be adjustable to drive stable and powerful operation

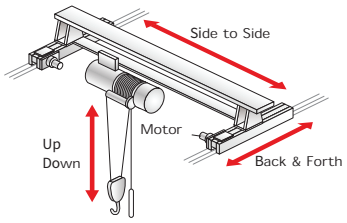
Stable Operation in Critical Moment

■ High starting torque at low speed range while in control of heavy loadings.

[Sensor less vector control(SLV)]
[0Hz sensor less vector control]

Overload Ability:150% 60s,200% 3s

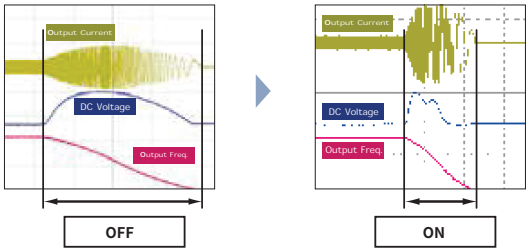




※Sensorless Vector Control With ND Rating

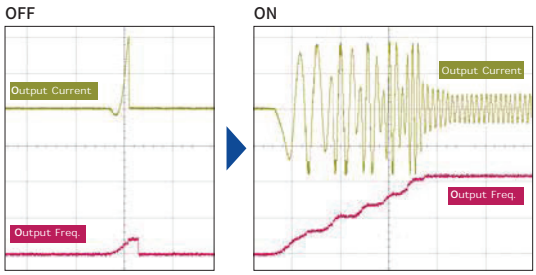
Over Magnetize Function

■ Automatic speed adjustment manages ideal accleration /deceleration speed to reduce the trip possibility from over-current, over-voltage and impact load.



"Smooth Running" As Always

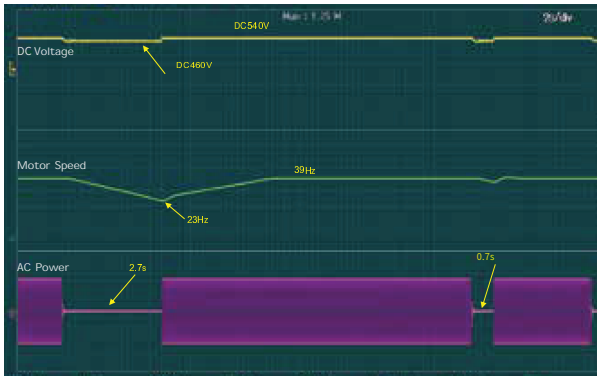
■ Over-current suppress function



※Please turn off this function for lifting equipment.

Low Voltage, No Problem!

■ Offer a reliable solution when supply voltage tripped down unexpectedly.



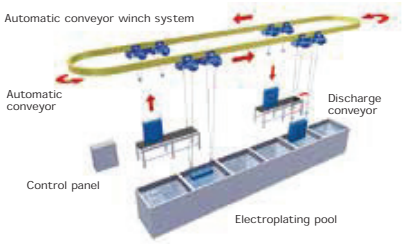
2 Accessibility

Easy Access to All Functions

New Features、New Functions, More Convenient!

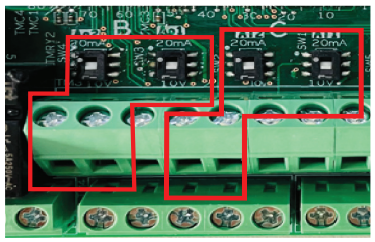
2 Channel Pulse Feedback(Maximum 32kpps)

■Pulse train input could be used to achieve closed loop control, without additional feedback plug-in, which would reduce the system cost tremondously



0～10V/4～20mA Analog Inputs

■2 analog inputs(3 inputs in total) as well as outputs are easily selected via DIP switch.
Meet the needs of control and monitoring



4-path independent PID control

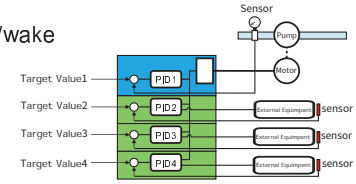
■4-path PID can be freely used as the external PID controller. No additional PID controller is needed to save cost and space.

■PID soft start

Pressure boost dormancy/wake

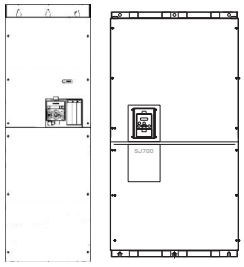
PID velocity stack

PID target & feedback value calculation



Saving Space

■Book structure, save installed space.
(Saving at most 36% installed space compared with SJ700 series)



PsH100-3050HFCD~ with DCL inside

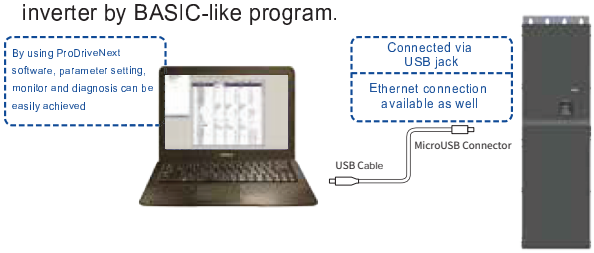
3 Flexibility

Flexible and Wide Applicability

Ps-H100 series meets a wide range of needs in various fields

Programmable(EzSQ) Function

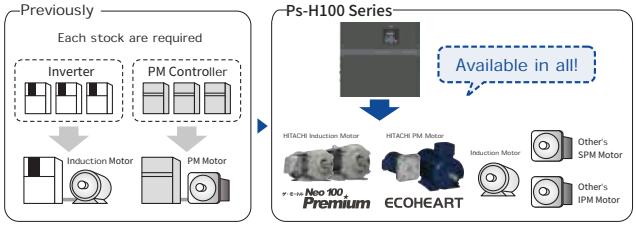
■Easy customization to your own inverter.
Specific behavior can be easily programmed into the inverter by BASIC-like program.



Compatible with PM Motor

■Compatible with PM motor, make full use of PM motor, reduce power, increase efficiency.

■Sensorless magenetic pole detection function available

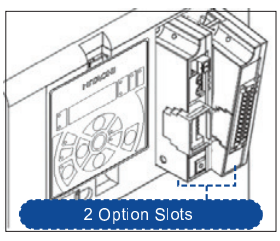


"Slot-in" Option Cards

■ Cassette type installation, building a smart factory.

- Option type is visually to see;
- Communication setting knob, setting easily;
- Status LED, monitoring easily;

List of communication options	
Profinet	P1-PN
Profibus-DP	P1-PB
EtherCAT	P1-ECT
Ethernet	P1-EN
DeviceNet	P1-DN
CANopen	P1-CO
CC-Link	P1-CCL
Others	



IM/SPM Motor: Two Modes

■Select based on your needs, reduce cost.

Rated	LD(Light Load)	ND(Normal Load)
Induction Motor	◄———	———►
PM Motor	◄———	———►
Applications	Fan·Pump	
	Metal tooling·Conveyer	
		Crane·Mixer
Overload Ability	120% 60sec, 150% 3sec	150% 60sec, 200% 3sec
E.g. PsH100-3800HFCD	380.0A	350.0A

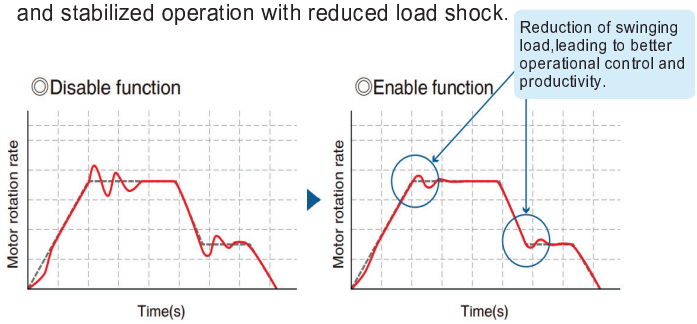
3 Flexibility

Flexible and Wide Applicability

Ps-H100 series meets a wide range of needs in various fields

Gain Mapping Function

■ Decreasing overshoot and undershoot contributes to smooth and stabilized operation with reduced load shock.



Different Operators, Meet Different Needs.

■ Three Different Types of Operators,

Digital operator with volume(MOP(VR))

Digital operator (MOP)

Color LCD operator(VOP)

400V Class Specification

Model			PsH100-****HFC											
Standard Capacity			055	075	110	150	185	220	300	370	450	550	750	900	1100
Applicable Motor Capacity(kW)			5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110
Output	Rated Output Current(A)		14.8	19.0	25.0	32.0	39.0	48.0	61.0	75.0	91.0	112.0	150.0	180.0	217.0
	Overload Ability		150% 60sec / 200% 3sec												
	Rated Output Voltage(V)		Three-phase(3 wire)380 to 460V (Corresponding to supply voltage)												
	Rated Capacity (kVA)	400V	10.3	13.2	17.3	22.2	27.0	33.3	42.3	52.0	63.0	77.6	103.9	124.7	150.3
		460V	11.8	15.1	19.9	25.5	31.1	38.2	48.6	59.8	72.5	89.2	119.5	143.4	172.9
Input	Rated Input Current (A) *1)		17.6	22.6	29.8	38.1	46.4	57.1	72.6	89.3	108.3	133.3	178.6	214.3	258.3
	Rated Input AC Voltage		Main circuit power supply: Three-phase(3 wire) 380 to 460V , 50Hz/60Hz (±5%)												
	Power Supply Capacity(kVA) *2)		13.0	17.2	22.7	29.0	35.4	43.5	55.3	68.0	82.5	101.6	136.0	163.2	196.8
Starting Torque *3)			200% / 0.3Hz										180% / 0.3Hz		
Braking	Regenerative		Internal BRD circuit (external discharge resistor value)								Optional			Ext. regen. braking unit	
	Minimum Resistance Value(Ω)		70	35	35	24	24	20	15	15	10	10	-	-	-
Environment	Temperature		-10 ～ 50℃ *4)												
	Humidity		20~90%RH(No condensation area)												
	Altitude		Maximum 1000m(No corrosive gas or dust)												
Protection Class			IP20 UL Open Type												

*1)Rated input current refers to the value when the inverter is working in the rated output current; this value may affected by the impedance at supply side(the change of DCL, brake, wiring,etc.).
*2)Power supply capacity refers to the value when the inverter is working in the rated output voltage; this value may affected by the mpedance at supply side(the change of DCL, brake, wiring,etc.).
*3)The value is specified for the Hitachi standard motor controlled by the sensorless vector control in ND rating, torque characteristics may vary depending on the control system or motor.
*4)40~50℃:Using in a derated way.

Specification

Model			PsH100-****HFCD*						
LD Mode Rated Capacity			3050	3450	3800	4250	4810	5600	6600
Applicable Motor(4 Pole)Capacity(kW)		ND Mode	132	160	185	200	220	250	315
		LD Mode	160	185	200	220	250	315	355
Output	Rated Output Current(A)	ND Mode	260	310	350	380	430	480	600
		LD Mode	305	345	380	425	481	560	660
	Overload Ability	ND Mode	150% 60sec / 200% 3sec						
		LD Mode	120% 60sec / 150% 3sec						
	Rated Output Voltage(V)		Three-phase(3 wire)380~440V (Corresponding to supply voltage)						
	Rated Capacity (kVA) 400V	ND Mode	180.1	214.7	242.0	263.0	294.4	332.5	415.7
		LD Mode	211.3	239.0	263.0	294.4	333.2	388.0	457.2
	Rated Capacity (kVA) 440V	ND Mode	198.1	236.2	266.7	289.6	327.7	365.8	457.2
		LD Mode	232.4	262.9	289.6	323.9	366.6	426.8	503.0
Input	Rated Input Current(A) *1)	ND Mode	286.0	325.5	367.5	399.0	451.5	504.0	630.0
		LD Mode	320.3	362.3	399.0	446.3	506.0	586.5	690.5
	Rated Input AC Voltage		Main circuit power supply: Three-phase(3 wire) 380~460V(+10%~-15%)° 50Hz/60Hz(±5%)						
	Power Supply Capacity(kVA) *2)	ND Mode	220.0	248.1	280.0	304.1	344.1	384.1	480.1
		LD Mode	244.1	276.1	304.1	340.1	385.6	447.0	526.2
DCL			Internal						
Starting Torque *3)			180%/0.3Hz						
Braking	Regenerative		External regenerative braking unit						
	Minimum Resistance Value(Ω)		-						
Environment	Operating Temperature		-10 ～ 50°C *4)						
	Humidity		20～ 90%RH(No condensation area)						
	Altitude		Maximum altitude 1000m (without corrisive gas or dust).						
Protection Class			IP00						

*1)Rated input current refers to the value when the inverter is working in the rated output current; this value may affected by the impedance at supply side(the change of DCL, brake, wiring,etc.).
*2)Power supply capacity refers to the value when the inverter is working in the rated output voltage; this value may affected by the mpedance at supply side(the change of DCL, brake, wiring,etc.).
*3)The value is specified for the Hitachi standard motor controlled by the sensorless vector control in ND rating, torque characteristics may vary depending on the control system or motor.
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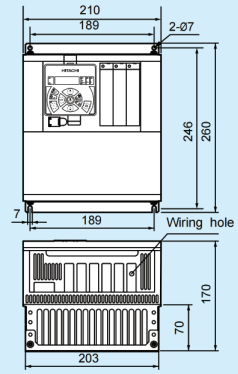
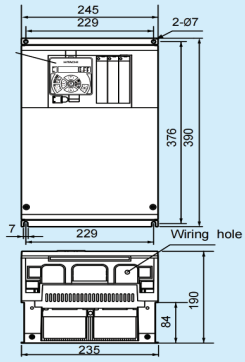
Outlook & Dimensions

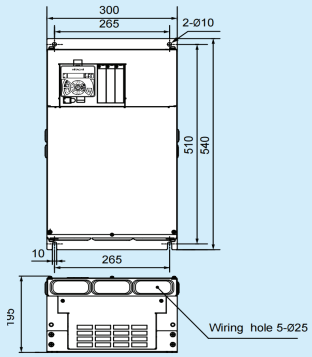
PsH100-0148~0250HFC



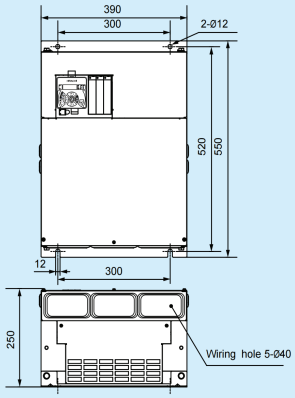
PsH100-0320~0480HFC



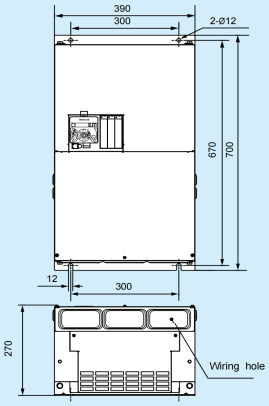
PsH100-0610~0750HFC



PsH100-0910~1500HFC

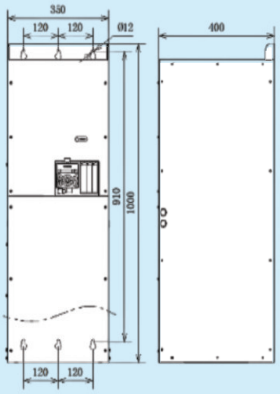


PsH100-1800~2170HFC

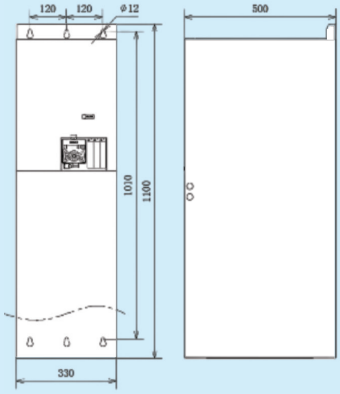


Outlook & Dimensions

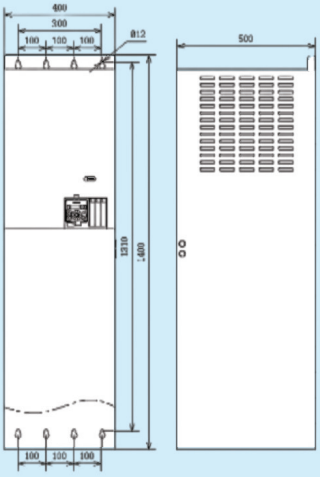
PsH100-3050~3800HFCD



PsH100-4250~4810HFCD



PsH100-5600~6600HFCD



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