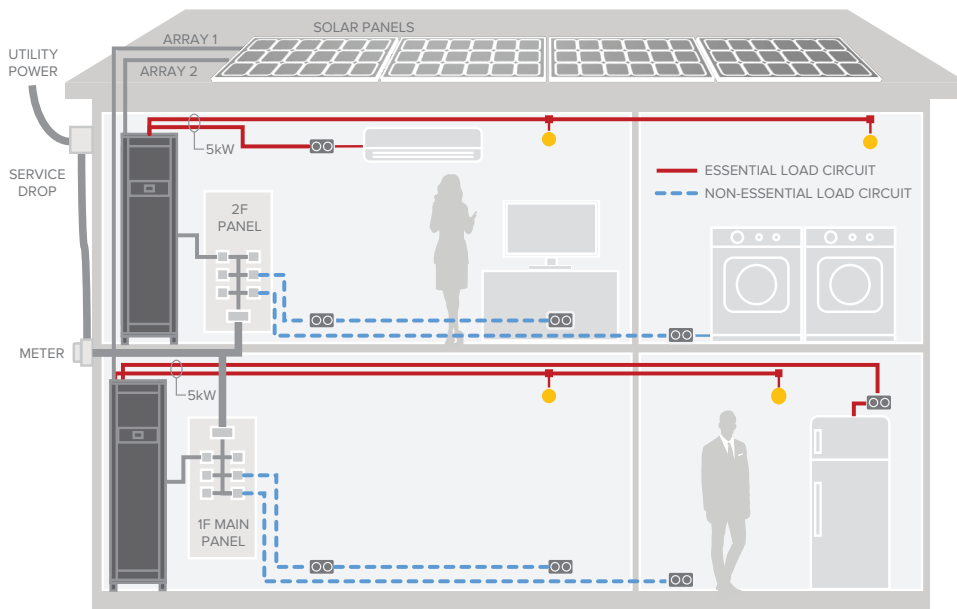


## INTEGRATED HYBRID STORAGE SYSTEM

With true power-sharing design

Darfon's H200 hybrid energy storage system integrates lithium batteries, the H5000 hybrid inverter and a communication interface into a 19" industrial enclosure. This storage system prioritizes the energy flow and direction from the batteries, PV modules and utility.

Conventional backup systems, like uninterruptible power supplies, cannot handle solar power directly, and conventional solar inverters cannot directly store energy into batteries. Darfon's advanced hybrid storage system solves both problems in one integrated package with direct solar DC input in conjunction with AC charging capabilities. Additionally, the H200 is available in multiple lithium battery configurations to suit your site's demand.



### FEATURES

- Nominal 6.5kW PV with dual MPPT
- Up to 7kW continuous output to load
- Transformerless inverter design with true sine-wave AC output and auxiliary port for generator support
- Monitor/manage system via the control panel
- 5-year standard warranty with 5-year extension option

### SIX MODES TO SUIT THE SITUATION



How do you want to use your solar power and battery storage? When deciding, there are many factors to consider like the weather, utility rates and grid stability. No matter the situation or need, Darfon's H200 hybrid storage solution has you covered with six (6) preset modes, so energy flow is optimized and savings on your power bill is maximized.

		CHARGE FROM	FEED GRID FROM	PV USE PRIORITY			LOAD PRIORITY		
				1	2	3	1	2	3
1. Back-up (default)		PV or Grid	PV Only	Batt.	Load	Grid	PV	Grid	Batt.
2. Residential		PV Only	PV Only	Load	Batt.	Grid	PV	Batt.	Grid
3. Back-up w/o Feed-in		PV or Grid	None	Batt.	Load	-	PV	Grid	Batt.
4. Residential w/o Feed-in		PV Only	None	Load	Batt.	-	PV	Batt.	Grid
5. Time-of-Use (TOU)	Off-Peak	PV or Grid	PV Only	Batt.	Load	Grid	PV	Grid	Batt.
	Peak	PV Only	PV Only	Load	Batt.	Grid	PV	Batt.	Grid
6. TOU w/Batt. Feed-in	Off-Peak	PV or Grid	PV Only	Batt.	Load	Grid	PV	Grid	Batt.
	Peak	PV Only	PV or Batt.	Load	Grid	Batt.	PV	Batt.	Grid

## HYBRID INVERTER SPECIFICATIONS

DC INPUT FROM SOLAR		AC INPUT FROM GRID	
Maximum Power	6500W	Automatic Transfer Power Rating	7000W
Operation/MPPT Voltage Range	120 to 500VDC / 250 to 430VDC	Automatic Typical Transfer Time	20ms
Minimum Start Voltage	150 VDC	Input Voltage Range	L-L: 180 to 280V (240V <sub>nom</sub> )
Maximum Input Current	13A / 13A (Two string input)	Input Frequency Range	45 to 54.9Hz / 55 to 65 Hz
AC OUTPUT TO GRID		EFFICIENCY AND COMPLIANCES	
Output Power (Continuous) @ 25°C	5000W	Peak (PV to Grid)	96%
Grid Feed-In Current Range	0 to 24A (@240V)	CEC Weighted (PV to Grid)	95.5%
Grid Feed-In Voltage Range	L-L: 211 to 264V ± 3.0V	System Standby Power	20W
Grid Feed-In Frequency Range	49.3 to 50.5Hz / 59.3 to 60.5Hz ± 0.05Hz	System Idle Power	< 8W
AC OUTPUT TO LOAD		GENERAL SPECIFICATIONS	
	WITH GRID ABSENT	WITH GRID PRESENT	
Output Power (Continuous) @25°C	5500W	7000W	Weight (w/o Batteries)
Overload 40/20/5/1s @25°C & 240V	5500/--/6500/7500W	--/9600/--/--W	Dimensions (W x D x H)
Overload 40/5/1s @25°C & 120V	2750/3250/3750W	NA	556 x 902 x 1768mm (21.9 x 35.5 x 69.6in)
Rated Output Current (RMS)	23A (@120V & 240V)	29A (@120V & 240V)	Protection Rating
Output Frequency (Auto Sensing)	50/60 Hz		NEMA 1 / IP20
Output Voltage and Accuracy	L-N: 120V ± 3%; L-L: 240V ± 3%		Operating Temperature
Output Voltage Limits	L-L: 180 to 280V (240V Nominal)		0 to 55°C (32 to 131°F), power derated > 40°C/104°F
Total Harmonic Distortion (THD)	< 5% at rated power		Storage Temperature
Power Factor	>99%		-25 to 70°C (-13 to 158°F)
			Safety Compliance
			UL 1741-SA, CSA C22.2, IEEE 1547A, IEEE 1547.1, FCC Part 15 Class B

## BATTERY SPECIFICATIONS

Model	Panasonic DCB-105ZK 	Dragonfly DF10012 
Battery Nominal Voltage	46.8V	12.8V
Battery Type	Lithium nickel manganese cobalt oxide	Lithium ferrite phosphate
Capacity @ 25°C (77°F)	56.7Ah @ 1hr-rate to 3V/cell	100Ah @ 1hr-rate to 2.5V/cell
Bulk Voltage	4V/cell (52V per 13-cell unit)	3.6V/cell (14.4V per 4-cell unit)
Charge Current	25A	50A
Peak/Cont. Discharge Current	35A in 10 seconds / 25A	200A in 30 seconds / 100A
Terminal Type / Location	M6 / Front	Flag terminal (3/8") / Top
Weight	25kg (55.12lb)	13.15kg (29 lb)
Dimensions (W x H x D)	450 x 440 x 84mm (17.7 x 17.3 x 3.3in)	175 x 229 x 318mm (6.9 x 9 x 12.5in)
Safety Vent	Explosion relief valve for cell	Explosion relief valve for cell
Depth of Discharge (DOD) / Complete Cycle Life	100% / 2800 cycles at 100% DOD	100% / 3000 cycles at 100% DOD
Communication Interface	RS485	None
Battery Management System	Over/under voltage protection Over current protection Over temperature protection Short circuit protection Battery capacity indicated (SOC %)	Over/under voltage protection Over current protection Over temperature protection Short circuit protection

## SYSTEM PART NUMBERS

	10kWh	20kWh	30kWh
H250 Series (Panasonic Batteries)	H252 (JK.Q3C11.D71)	H254 (JK.Q3C11.D91)	H256 (JK.Q3C11.DA1)
H230 Series (Dragonfly Batteries)	H232 (JK.Q3C11.DC2)	H234 (JK.Q3C11.DE2)	--

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