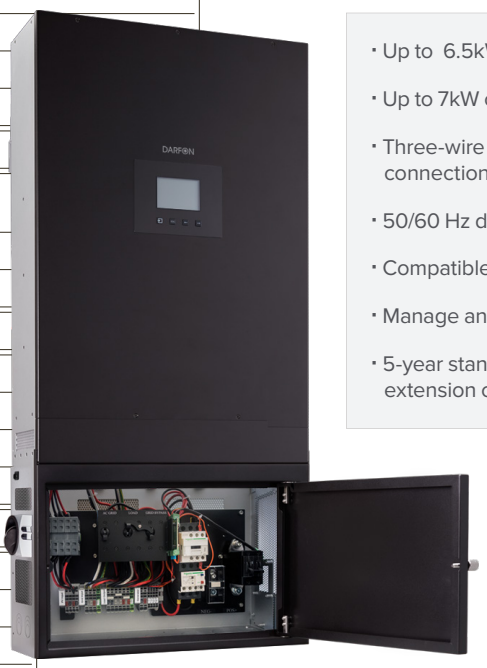
DARFON

H5001 Hybrid Inverter

SPECIFICATIONS

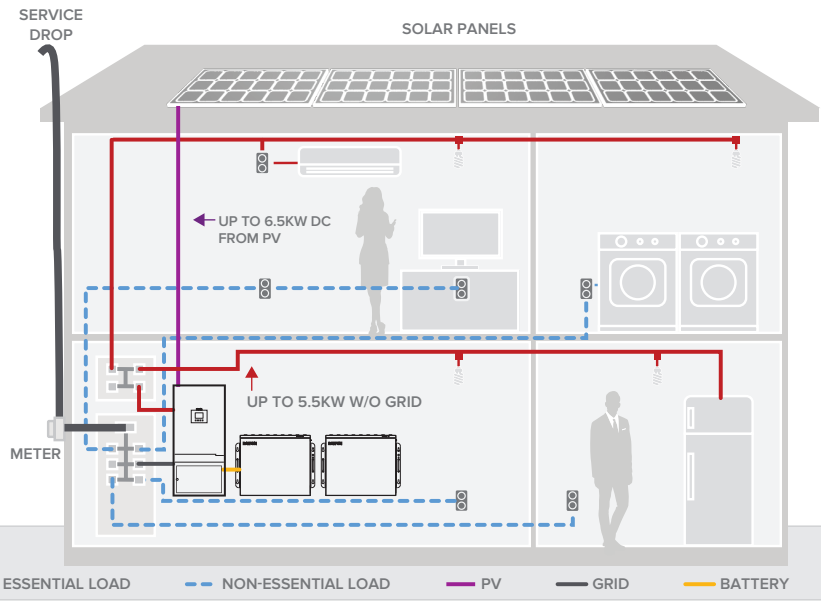
SOLAR DC INPUT		
Maximum Power	6500W	
Operation/MPPT Voltage Range	120 to 500VDC / 250 to 430VDC	
Minimum Start Voltage	150VDC	
Maximum Input Current	13A / 13A (Two String Input)	
AC OUTPUT TO LOAD	**WITH GRID ABSENT**	**WITH GRID PRESENT**
Output Power (Continuous) @25°C	5500W	7000W
Overload 40/30/5/1s @25°C & 240V	5500/--/6500/7500W	--/7500/--/--W
Overload 40/5/1s @25°C & 120V	2750/3250/3750W	NA
Rated Output Current (RMS)	23A (@120V and 240V)	29A (@120V and 240V)
Output Frequency (Auto Sensing)	50/60 Hz	
Output Voltage and Accuracy	L-N: 120V ± 3%; L-L: 240V ± 3%	
Output Voltage Limits	L-L: 180 to 280V (240V Nominal)	
Total Harmonic Distortion (THD)	< 5% at rated power	
Power Factor	>99%	
AC INPUT FROM GRID		
Automatic Transfer Power Rating / Typical Transfer Time	7000W / 20ms	
Input Voltage Range	L-L: 180 to 280V (240V Nominal)	
Input Frequency Range	45 to 54.9Hz / 55 to 65Hz	
AC OUTPUT TO GRID (GRID SUPPORT)		
Output Power (Continuous) @25°C	5000W	
Grid Feed-In Current Range	0 to 24A (@240V)	
Grid Feed-In Voltage Range	L-L: 211 to 264V ± 3.0V	
Grid Feed-In Frequency Range	49.3 to 50.5Hz / 59.3 to 60.5Hz	
EFFICIENCY		
Peak/CEC Weighted (PV to Grid)	96%/95.5%	
System Standby Power	20W	
System Idle Power	< 8W	
DC BATTERY CHARGER		
Max Charge/Discharge Current	60A/150A	
Output Voltage Range	44 to 58V (48V Nominal)	
Compatible Battery Types	AGM, Gel, Li-ion, $LiFePO_4$, Custom	
GENERAL SPECIFICATIONS		
Weight	39.4kg (86.8 lb)	
Dimensions (HxWxD)	990x448x150mm (39x17.6x5.9in)	
Protection Rating	NEMA 1 Indoor / IP20	
Operating Temperature	-20 to 50°C (-4 to 122°F)	
Minimum Startup Temperature	0°C (32°F)	
Storage Temperature	-25 to 70°C (-13 to 158°F)	
Compliances	UL 1741 SA, CSA C22.2, IEEE 1547A, IEEE 1547.1, FCC Class B	

Darfon's H5001 hybrid inverter is designed to make installs easier and be versatile enough to be used off-grid, grid-tied or even as a string inverter. The H5001 can support loads up to 5.5kW off-grid and 7kW grid-tied. To facilitate a smooth installation process, the H5001 is transformerless and has a built-in distribution box that includes breakers, disconnect switches and generator support circuitry. The Darfon H5001 supports a wide range of applications, including off-grid, self-consumption, net-metering, backup and time-of-use optimization.



- Up to 6.5kW PV with dual MPPT
- Up to 7kW continuous output to load
- Three-wire inverter for 240V and 120V direct connection
- 50/60 Hz dual-frequency auto sensing
- Compatible with lithium or lead-acid batteries
- Manage and monitor system via control panel
- 5-year standard warranty with 5-year extension option

Generator kit [JQ.D3C01.D01] available and sold separately



DARFON

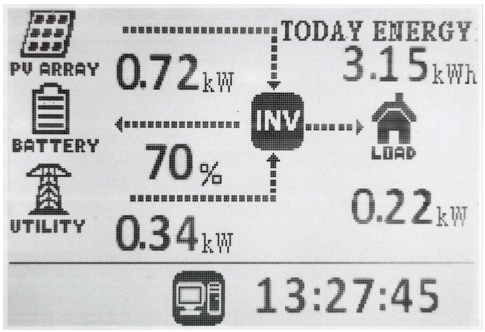
H5001 Hybrid Inverter

MODE DEFINITION

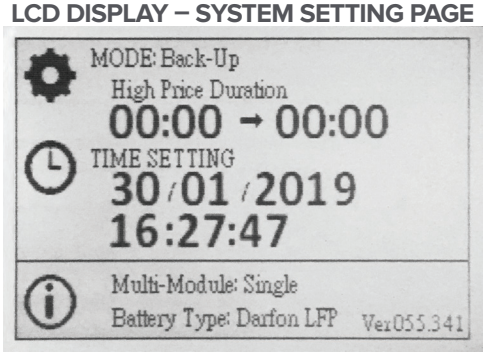
		CHARGE FROM[1]	FEED GRID FROM	PV USE PRIORITY			LOAD PRIORITY		
				1	2	3	1	2	3
1. Back-up (default)		PV or Grid	PV Only	Batt.	Load	Grid	PV	Grid	Batt.
2. Residential		PV Only	PV Only	Load	Batt.	Grid	PV	Batt.	Grid
3. Back-up w/o Feed-in		PV or Grid	None[2]	Batt.	Load	--[2]	PV	Grid	Batt.
4. Residential w/o Feed-in		PV Only	None[2]	Load	Batt.	--[2]	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
7. String Inverter		--	PV Only	Load	Grid	--	PV	Grid	--
8. Remote Control[3]		PV or Grid	PV or Batt.	--	--	--	--	--	--

1. In modes 2, 4, 5 and 6, the battery will charge from the grid under certain conditions. Please refer to the manual.
2. The inverter may feed into or draw from the grid within a tolerance of ±200W.
3. Remote Control mode is for charging and discharging the battery on demand. Please refer to the manual.

LCD DISPLAY – POWER FLOWS PAGE



LCD DISPLAY – SYSTEM SETTING PAGE



BUNDLED SYSTEMS

		H302	H312	H313	H321	H322	H323	H331	H332
Battery Model		B05LM	B07LF	B07LF	B10LF	B10LF	B10LF	B12LF	B12LF
Battery Quantity		2	2	3	1	2	3	1	2
Capacity @ 25°C		9.8kWh	14kWh	21kWh	9.7kWh	19.4kWh	29kWh	12kWh	24kWh
AC Output Power from Battery	Min. Cont.	2.7kW	5.5kW	5.5kW	5.5kW	5.5kW	5.5kW	5.5kW	5.5kW
	Max. Cont.	3.5kW	5.5kW	5.5kW	5.5kW	5.5kW	5.5kW	5.5kW	5.5kW

BATTERY SPECIFICATIONS FOR BUNDLED SYSTEMS

	B05LM	B07LF	B10LF / B12LF
Capacity@ 25°C	4.88kWh (95.4Ah)	7kWh (136.8Ah)	9.7kWh (201.6Ah) / 12kWh (250Ah)
Battery Chemistry	LNMC	LFP	LFP
Nominal Voltage	51.1V	51.2V	48V
Cont. Charge/Discharge Power	3kW/3kW (with Two Stacked)	3kW / 3kW	5kW / 9.6kW
Peak Discharge Power	3.7kW (with Two Stacked)	3.6kW	15kW
Cont. Charge/Discharge Current	66A/66A (with Two Stacked)	65A/65A	100A/200A
Depth of Discharge (DOD)	80%	100%	100%
Cycle Life [80%DOD, @25°C]	2500 Cycles	6000 cycles	6000 cycles
Communication Interface	RJ45	RS485	RS485
Battery Management System	OVP/UVP/OTP/UTP/OCP/SCP	OVP/UVP/OTP/UTP/OCP/SCP	OVP/UVP/OTP/UTP/OCP/SCP
Scalable	Up to 2 units	Up to 4 units	Up to 3 units / Up to 2 units
Product Weight	45.2kg (99.6 lbs)	87kg (192 lbs)	180kg (396.8 lbs) / 220kg (485.0 lbs)
Product Dimensions (W*H*D)	71x61x16.7cm (28x24x6.6in)	65x69.4x22cm (25.4x27.3x8.7in)	60x110x60cm (23.6x43.3x23.6in)
Installation Method	Wall-mount	Wall-mount	Free-Standing
Protection Rating	NEMA 1 / IP20	NEMA 4 / IP54	NEMA 1 / IP20
Operating Temperature	-10 to 45°C (14 to 113°F)	-20 to 60 °C (-4 to 140°F)	-20 to 60 °C (-4 to 140°F)
Min. Cold Charge Temperature	0°C (32°F)	0°C (32°F)	0°C (32°F)
Storage Temperature	-40 to 60°C (-40 to 140°F)	-40 to 60°C (-40 to 140°F)	-40 to 60°C (-40 to 140°F)
Compliance	UL1642, UN38.3, CE	EN 61000 [ch 4.2, 4.3, 4.5, 4.6], EN55022, EMC (CE), UL1642, UN38.3	EN 61000 [ch 4.2, 4.3, 4.5, 4.6], EN55022, EMC (CE), UL1642, UN38.3

For more product information, visit us at www.darfonsolar.com