H300 Hybrid Energy Storage System

If you have a limited budget, a light load to support and don’t have the floor space, then the H300 series is the solution for you. The H300 series of hybrid storage systems are wall-mountable pre-configured solutions consisting of a H5001 hybrid inverter and 5kWh Lithium batteries (LNMC).

In this series, the H301 has a storage capacity of 5kWh and the H302 has 10kWh. And if the need arises, the H301 can easily be upgraded into the H302.

### SPECIFICATIONS

#### H5001 HYBRID INVERTER
- Continuous AC Output Power @ 25°C: 5kW (PV), 2kW (1 Batt.), 3.3kW (2 Batt.)

#### B05LM LITHIUM BATTERY
- Nominal Voltage: 51.1V
- Battery Type: Lithium Nickel Manganese Cobalt
- Capacity @ 25°C: 95.4Ah (4.88kWh)
- Cont. Charge/Discharge Current: 44A
- Peak Discharge Current: 58A
- Terminal Type / Location: Connector / Side
- Depth or Discharge (DOD): 80%
- Complete Cycle Life: 2500 Cycles at 80% DOD
- Battery Management System: OCP/OVP/SCP/OTP
- Weight: 45.2kg (99.6 lb)
- Dimensions (HxWxD): 610x710x167mm (24x28x6.6in)
- Protection Rating: NEMA 1 Indoor / IP20
- Operating Temperature: -10 to 45°C (14 to 113°F)
- Storage Temperature: -40 to 60°C (-40 to 140°F)
- Compliances: UL1642, UN38.3, CE

#### MASTER BOX
- Number of Power Ports: One Inverter, Two Batteries
- Communication Ports (Modbus): One RJ45 (Inverter), Two RJ45 (Battery)
- Max. Charge/Discharge Power: 2kW (1 Battery), 3.3kW (2 Batteries)
- Charge/Discharge Operation Voltage: 57.4 VDC / 45.5 VDC
- Weight: 0.6kg (1.4 lb)
- Dimensions (HxWxD): 181x151x53mm (7.1x5.9x2.1in)
- Protection Rating: NEMA 1 Indoor / IP20

### DISTRIBUTED BY

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The Darfon H5001 hybrid transformerless inverter is integrated with a distribution box to facilitate easy installation. The distribution box includes quick disconnect terminals, PV and battery disconnects, AC breakers, battery connectors and generator contactor.

The H5001 supports a wide range of applications, including off-grid, self-use, net-metering, backup, time-of-use optimization and as a string inverter.

- Up to 6.5kW PV with dual MPPT
- Compatible with Lithium or lead-acid based batteries
- Manage and monitor system via control panel
- Five (5) year standard warranty

### H5001 Hybrid Inverter

<table>
<thead>
<tr>
<th>SPECIFICATIONS</th>
<th>Details</th>
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</thead>
</table>
| **SOLAR DC INPUT** | Max Power: 6500W  
Operation/MPPT Voltage Range: 120 to 500VDC / 250 to 430VDC  
Min Start Voltage: 150 VDC  
Max Input Current: 13A / 13A (Two String Input) |
| **INVERTER AC OUTPUT** | Continuous Output Power @ 25°C: 5000W  
Overload 40sec/5sec/1sec @ 25°C: 5500W/6500W/7500W  
Rated Output Current (RMS): 21A (@120V and 240V)  
Output Frequency (Auto Sensing): 50/60 Hz  
Output Voltage: L-N: 120V ± 3%; L-L: 240V ± 3% |
| **AC INPUT FROM GRID** | Automatic Transfer Relay Rating / Typical Transfer Time: 48A / 20ms  
AC Input Voltage Range: L-L: 180 to 280V (240V Nominal)  
AC Input Frequency Range: 55 to 65 Hz |
| **AC OUTPUT TO GRID** | 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: 59.4 to 60.4Hz ± 0.05Hz |
| **EFFICIENCY** | Peak/CEC Weighted (PV to Grid): 96%/95.5% |
| **DC BATTERY CHARGER** | Max Charge/Discharge Current: 60A/150A  
DC Voltage Range: 44 to 60V (48V Nominal)  
Compatible Battery Types: AGM (default), Gel, Li-ion, LiFePO4, Custom |
| **GENERAL SPECIFICATIONS** | Product Weight: 39.4kg (86.8 lb)  
Product Dimensions (HxWxD): 990x448x150mm (39x17.6x5.9in)  
Protection Rating: NEMA 1 Indoor / IP20  
Operating Temperature: 0 to 55°C (power derated above 40°C)  
Storage Temperature: -25 to 70°C (-13 to 158°F)  
Compliances: UL 1741 SA, CSA C22.2, IEEE 1547, FCC Class B |

### MODE DEFINITION

<table>
<thead>
<tr>
<th>MODE</th>
<th>CHARGE FROM</th>
<th>FEED GRID FROM</th>
<th>PV USE PRIORITY</th>
<th>LOAD PRIORITY</th>
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</thead>
<tbody>
<tr>
<td>1. Back-up (default)</td>
<td>PV or Grid</td>
<td>PV Only</td>
<td>1</td>
<td>1</td>
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<tr>
<td>2. Residential</td>
<td>PV Only</td>
<td>PV Only</td>
<td>2</td>
<td>2</td>
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<tr>
<td>3. Back-up w/o Feed-in</td>
<td>PV or Grid</td>
<td>None</td>
<td>3</td>
<td>3</td>
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<tr>
<td>4. Residential w/o Feed-in</td>
<td>PV Only</td>
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<tr>
<td>5. Time-of-Use (TOU)</td>
<td>Off-Peak</td>
<td>PV Only</td>
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<td>1</td>
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<tr>
<td></td>
<td>Peak</td>
<td>PV Only</td>
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<td>2</td>
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<tr>
<td>6. TOU w/Batt. Feed-in</td>
<td>Off-Peak</td>
<td>PV Only</td>
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<td>1</td>
</tr>
<tr>
<td></td>
<td>Peak</td>
<td>PV Only</td>
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