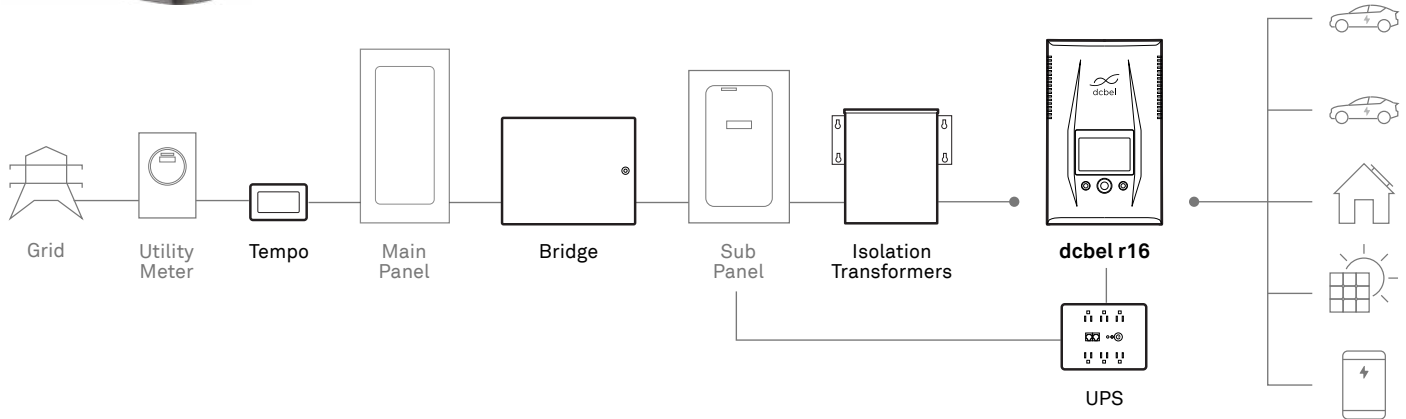




## dcbel r16 Datasheet

### A single dcbel replaces the following equipment:

- Hybrid solar inverter
- Home battery charger
- AC level 2 EV charger
- Smart home energy manager
- Fast DC bidirectional level 2.5 EV charger



## Solar Inverter

DC Inputs	
Max Peak Power (Wp)	10,000 / 20,000 <sup>*2</sup>
Open Circuit Voltage (Voc)	500
MPPT Operating Range (V)	50-450
Nominal Voltage (V)	400
Short Circuit Current (A)	28 per MPPT
Max Current (A)	19 per MPPT <sup>1</sup>
Number of MPPT Channels	2 <sup>*2</sup>
Max A rrays per MPPT	3 in parallel

AC Outputs	
Nominal Power (W)	7,600 / 15,200 <sup>*2</sup>
Nominal Voltage (V)	240 single phase or +120/-120 split phase
Voltage Range (V)	212-254
Nominal Current (A)	32
Nominal Frequency (Hz)	60 (50 capable)
Max Efficiency (%)	98.4
Power Factor (%)	> 99
THD (%)	< 3

## Home Battery Charger

Communication - RS-485 + Enable Signals

### Charging mode

AC Inputs	
Nominal Voltage (V)	240 single phase or +120/-120 split phase
Voltage Range (V)	212-254
Nominal Current (A)	32
Frequency (Hz)	60 (50 capable)

DC Outputs	
Nominal Power (W)	7,600
Nominal Voltage (V)	400
Voltage Range (V)	240-450
Nominal Current (A)	19
Max Efficiency (%)	96.3
Voltage Ripple (%)	< 3

<sup>\*1</sup> The inverter will limit its input current to the rated value if a higher current source is used.

<sup>\*2</sup> Available via upcoming update.

## Discharging mode

DC Inputs	
Nominal Voltage (V)	400
Voltage Range (V)	240-450
Nominal Current (A)	32

AC Outputs	
Nominal Power (W)	7,600
Nominal Voltage (V)	240 single phase or +120/-120 split phase
Voltage Range (V)	208-254
Nominal Current (A)	32 / 40
Nominal Frequency (Hz)	60 (50 capable)
Max Efficiency (%)	98.4
Power Factor (%)	> 99
THD (%)	< 3
Grid Forming	True sine wave

## Bidirectional Charger (V2H/V2G)\*3

Connectors - CHAdeMO or CCS

DC Inputs	
Nominal Voltage (V)	400
Voltage Range (V)	150-500
Nominal Current (A)	19

AC Outputs	
Nominal Power (W)	7,600 / 15,200*4
Nominal Voltage (V)	240 single phase or +120/-120 split phase
Voltage Range (V)	212-254
Nominal Current (A)	32/64*3
Frequency (Hz)	60 (50 capable)
Max Efficiency (%)	98.4
Power Factor (%)	> 99
THD (%)	< 3
Grid Forming	True sine wave

## DC Fast EV Charger

Connectors - CHAdeMO or CCS

AC Inputs	
Nominal Voltage (V)	240 single phase or +120/-120 split phase
Voltage Range (V)	212-254
Nominal Current (A)	64
Frequency (Hz)	60 (50 capable)

DC Outputs	
Nominal Power @400V (W)	15,200
Nominal Voltage (V)	400
Voltage Range (V)	150-500
Nominal Current (A)	19
Max Efficiency (%)	96.3
Voltage Ripple (%)	< 2.5

## AC Level 2 EV Charger

Connector - SAE J1772

Nominal Output Power (W)	9,600
Nominal Voltage (V)	240 single phase or +120/-120 split phase
Voltage Range (V)	212-254
Nominal Current (A)	40

\*3 dcbel r16 is V2G ready. Functionality may vary based on local utility regulations and V2G.

\*4 Available via upcoming update. Functionality may be limited by your EV's capabilities.

## Tempo (Home Energy Monitor)

AC Current Sensor	2 CT Clamps, accuracy class 0.5
AC Voltage Sensor	Isolated split-phase voltage sensing
Communication	RS-485
Rated Current (A)	200
Installation	Indoor / outdoor

Indoor Dimensions		Outdoor Dimensions	
Height (in / mm)	2.9 / 74	Height (in / mm)	3.1 / 79
Width (in / mm)	6.1 / 155	Width (in / mm)	5 / 127
Depth (in / mm)	1.5 / 40	Depth (in / mm)	1.4 / 35

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Height (in / mm)	31.5 / 800
Width (in / mm)	19.7 / 500
Depth (in / mm)	9.1 / 230
Total Weight (lbs / kg)	< 100 / 45
Communication	LAN - TCP/IP ready
Standby Monitoring Mode Consumption (W)	< 30

Certifications Granted	UL9741, UL2231-1, UL2231-2, NFPA 70 (NEC), CC TPM 2.0 at EAL4+ and FIPS
Certifications in Progress	FCC Title 47 Part 15, UL2594, UL1741, UL1741-SA, IEEE 1547.1 and IEEE 2030.5
Rating	NEMA 3R, IP54
Operating Temperature (°F / °C)	-40 to 104 / -40 to 40
Installation	Indoor / outdoor

## Blackout Power Kit

### Bridge (Smart Islanding Switch)

Communication	RS-485
Rated Current (A)	175
Height (in / mm)	24 / 610
Width (in / mm)	18.5 / 470
Depth (in / mm)	6 / 152
Installation	Indoor / outdoor

### Uninterruptible Power Supply (UPS)

Backup Time (Mins)	9
Height (in / mm)	4.3 / 110
Width (in / mm)	6.3 / 160
Depth (in / mm)	11.8 / 300
Installation	Indoor

## Supporting Hardware

### Isolation transformers

Power (VA)	10,000
Primary Voltage (V)	+120/-120 split phase
Secondary Voltage (V)	240 Isolated
Height (in / mm)	17 / 432
Width (in / mm)	14 / 356
Depth (in / mm)	9 / 229
Installation	Indoor / outdoor

dcbel is dedicated to solving hard scientific and engineering problems with breakthrough innovations. As such, we make incredible discoveries about our technologies every day and so it should be noted that information herein is for reference only and subject to change without notice.

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