KOHLER®

Power Reserve Energy Storage System

Residential Energy Storage
AC and DC-Coupled

10 kWh Model

20 kWh Model

Residential Energy Storage System

The Kohler® Power Reserve energy storage system can maintain power to critical items such as refrigerators, computers, TVs, lights, and garage doors when the grid goes down or for autonomous off- grid applications. The system can also provide automated cost saving through energy rate arbitrage and system power flow control.

Models

- KOH10DC-7600
- KOH10AC-7600
- KOH15DC-7600
- KOH15AC-7600
- KOH20DC-7600
- KOH20AC-7600

Standard Features

- $LiFePO_4$ battery chemistry
- Up to 11.4 kW solar DC input, 80- 500 VDC. 4 MPPTs †
- Up to 7.6 kW of continuous power output off- grid
- Outdoor-rated NEMA 3R rated enclosures
- Always connected, cellular (included) and WiFi
- 10-Year limited warranty, industry best throughput, 70% SOC

Operating Modes

- Backup
- Time- of- Use
- Self- Supply

Communication

- WiFi, LTE- M

† MPPT = Maximum Power Point Tracking

Performance Specifications, AC Models

Model	KOH10AC	KOH15AC	KOH20AC
Battery Input Data			
Usable Capacity(kWh)	10	15	20
Battery Type	$LiFePO_4$ (LFP)		
Battery Voltage Range (V)	102.4 (89.6- 115.2)	153.6 (134.4- 172.8)	204.8 (179.2- 230.4)
Max. Charging Current (A)	50		
Max. Discharging Current (A)	50		
AC Output Data (On- Grid)			
Output Voltage Range (VAC)	211 to 264 @ 240		
Nominal Output Frequency (Hz)	60		
Max Output to Grid (W)	5760	7600	7600
Max Output from Grid (W)	5760	9120	9120
Continuous Output @240V (W)	5120	7600	7600
Continuous Output to Grid (A)	20.8	31.7	31.7
AC Output Data (Back-Up)			
Nominal Output Voltage	120/240		
Continuous Output @240V (W)	5120	7600	7600
Peak Output @240V (W)	5760, 60 sec.	8460, 60 sec.	9120, 60 sec.
PV String Input Data			
Max AC Input Power (W)	7600		
Efficiency			
PV Max. Efficiency	97.6%		
CEC Efficiency	96.1%		
Battery Charged by PV, Max. Efficiency	98.1%		
Battery Charge/Discharge to AC, Max. Efficiency	96.6%		
General Data			
Operating Temperature Range	- 20° to 55° C (- 4° to 131° F) §		
Optimal Temperature Range	0° to 30° C (32° to 86° F) §		
Relative Humidity Operating	0- 95%		
Altitude	3000m		
Noise (dB)	<45		
Operating Modes	Backup, TOU, Self- Supply		
Rating	NEMA 3R		
Standby Self- Consumption (W)	<20		
Communication Protocol	Modbus / CAN		
Cycle Life	6,000 at 100% DOD		
DC Protection	Main Contactor / Fuse		
Mounting	Wall and Floor Mount (battery enclosure feet must rest on the floor)		

§ Indoor installation is recommended to ensure Power Reserve operates in the optimal temperature range. Do not install outdoors in climates where the temperature drops below 0°C (32°F) for extended periods. Do not install in direct sunlight.

Performance Specifications, DC Models

Model	KOH10DC	KOH15DC	KOH20DC
Battery Input Data			
Usable Capacity(kWh)	10	15	20
Battery Type	$LiFePO_4$ (LFP)		
Battery Voltage Range (V)	102.4 VDC (89.6- 115.2 VDC	153.6 VDC (134.4- 172.8 VDC)	204.8 VDC (179.2- 230.4 VDC)
Max. Charging Current (A)	50		
Max. Discharging Current (A)	50		
AC Output Data (On- Grid)			
Output Voltage Range (VAC)	211 to 264 @ 240		
Nominal Output Frequency (Hz)	60		
Max Output to Grid (W)	7600 *	7600	7600
Max Output from Grid (W)	9120 *	9120	9120
Continuous Output to Grid (A)	20.8	31.7	31.7
AC Output Data (Back-Up)			
Nominal Output Voltage, L- N, L1- L2 (VAC)	120/240		
Continuous Output @240V (W)	5120	7600	7600
Peak Output @240V (W)	5760, 60 sec	8640, 60 sec	9120, 60 sec
PV String Input Data			
Max DC Input Power (W)	11400		
Max DC Input Voltage (V)	600		
MPPT Range (V) †	80- 550		
Start- up Voltage (V)	95		
MPPT Range for Full Load (V) †	230- 500		
Nominal DC Input Voltage (V)	380		
Max. Input Current (A)	12.5		
Max. Short Current (A)	15.2		
MPP Trackers (quantity)	4		
Efficiency			
PV Max. Efficiency	97.6%		
PV CEC Efficiency	97.2%		
Battery Charged by PV, Max. Efficiency	98.1%		
Battery Charge/Discharge to AC, Max. Efficiency	96.6%		
General Data			
Operating Temperature Range	- 20° to 55° C (- 4° to 131° F) §		
Optimal Temperature Range	0° to 30° C (32° to 86° F) §		
Relative Humidity Operating	0- 95%		
Altitude	3000m		
Noise (dB)	<45		
Communication (Built- in)	4G Cellular Communication, WiFi		
Operating Modes	Backup, TOU, Self- Supply		
Rating	NEMA 3R		
Standby Self- Consumption (W)	<20		
Communication Protocol	Modbus / CAN		
Cycle Life	6,000 at 100% DOD		
DC Protection	Main Contactor / Fuse		
Mounting	Wall and Floor Mount (battery enclosure feet must rest on the floor)		

* For the 10DC model, limits without PV (nighttime) are equal to the limits shown for AC10.

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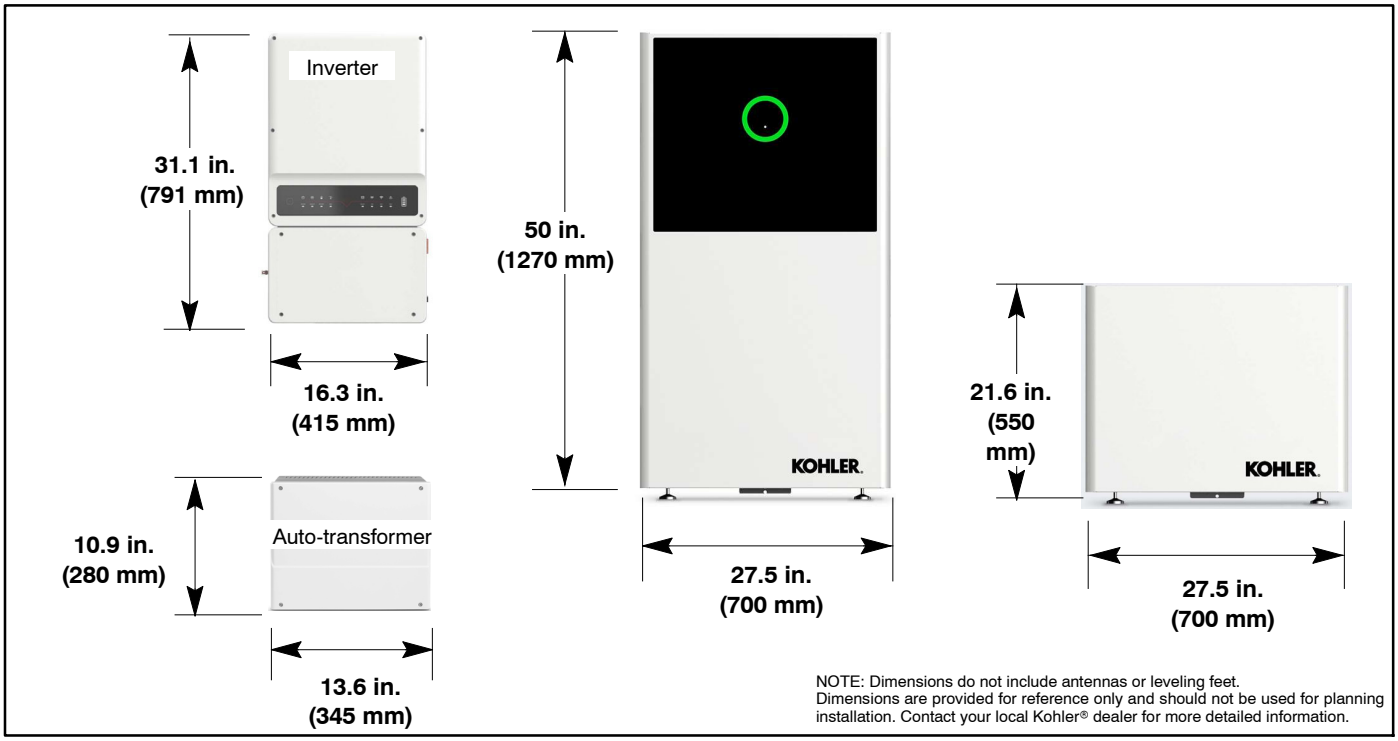
Product Specifications

Weights and Dimensions (AC and DC)			
Model, kWh	**10**	**15**	**20**
Weight	240 kg (530 lb)	329 kg (725 lb)	420 kg (925 lb)
Size, Battery Enclosure	700 x 1270 x 230 mm (27.5 x 50 x 9 in.)	1524 x 1270 x 230 mm (60 x 50 x 9 in.)	1524 x 1270 x 230 mm (60 x 50 x 9 in.)
Size, Inverter	415 x 791 x 175 mm (16.3 x 31.1 x 6.9 in.)		
Size, Auto-transformer	345 x 275 x 175 mm (13.6 x 10.9 x 6.9 in.)		



NOTE: Dimensions do not include antennas or leveling feet. Dimensions are provided for reference only and should not be used for planning installation. Contact your local Kohler® dealer for more detailed information.

Compliance

Inverter	
Grid Regulation	UL1741 SA (CA Rule 21), UL9540, HECO Rule 14, IEEE 1547, IEEE 1547.1, CSA 22.2
Safety Regulation	UL 1741, CSA 22.2 No. 107- 01, UL 1998, UL1699B
EMC	FCC Part 15 Class B
Battery	
Battery	UL 1973, UL 1642
Energy Storage System	UL9540
Communication Protocol	Open ADR 2.0b, Open ADR

Battery Performance Specifications

Battery Input Data	
Usable Capacity	10, 15, 20 kWh
Initial Capacity (nominal)	2.56 kWh per pack
Battery Chemistry	LiFePO4 (LFP)
Max Charge Current	50 A
Max Discharge Current	50 A
Efficiency	
Battery Charged by PV Efficiency	98.10%
Battery Round Trip Efficiency	96.60%

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