Cat® XES60 (50 Hz)

Compact Energy Storage System

Image shown may not reflect actual configuration.

Cat® Compact Energy Storage System

36 kW (45 kVA)
56.8 kWh
50 Hz 400/230V

Features & Benefits

Key Benefits

- Easy integration with standard genset to provide hybrid solution
- On-board controller works to optimize genset operation, seamlessly switching between genset set power and stored energy. This can lead to reduced fuel consumption and lower associated greenhouse gas emissions
- Prevents issues from low load genset operation by running the genset at a more efficient load point.
- Reduces genset runtime, extending the time between genset services
- Requires minimal maintenance
- Provides silent power
- Integrates with renewable energy sources

Control Panel

- Electronic control panel provides power metering and protective relaying
- Graphical display (7 in) denotes text alarm/event descriptions, set points, inverter and battery monitoring and is visible in all lighting conditions
- Simple, user-friendly interface and navigation
- Home screen displaying status and real time power distribution
- Generator set monitoring, remote control, and timer function (up to 3 per day)
- Battery monitor displaying historical and instantaneous information
- Load monitor displaying historical and instantaneous information
- Auxiliary load timer function (up to 3 per day)
- Solar and maintenance charge status
- System information and set-up
- Alarms and shutdowns

Weather-proof Enclosure

- Provides excellent weather protection
- Rugged galvanized steel baseframe
- Powder coated painted panels
- Lifting eye(s) and fork pockets for easy maneuverability
- Locks on all access doors
- Doors on each side of the enclosure provides clear access to routine service and maintenance needs
- Two front doors provide access to power distribution and control panel access
- Access panels on each side provide access to battery racks
- Exterior emergency stop (E-stop) button

Asset Monitoring and Management

- Requires data subscription
- Includes telematics hardware for remote monitoring across cellular network
- Two-way communication for remote control and equipment monitoring
- Customer-defined, equipment-based, real-time status updates and alerts
- Flexible and customer-configurable user interface
- Fleet management

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Technical Data

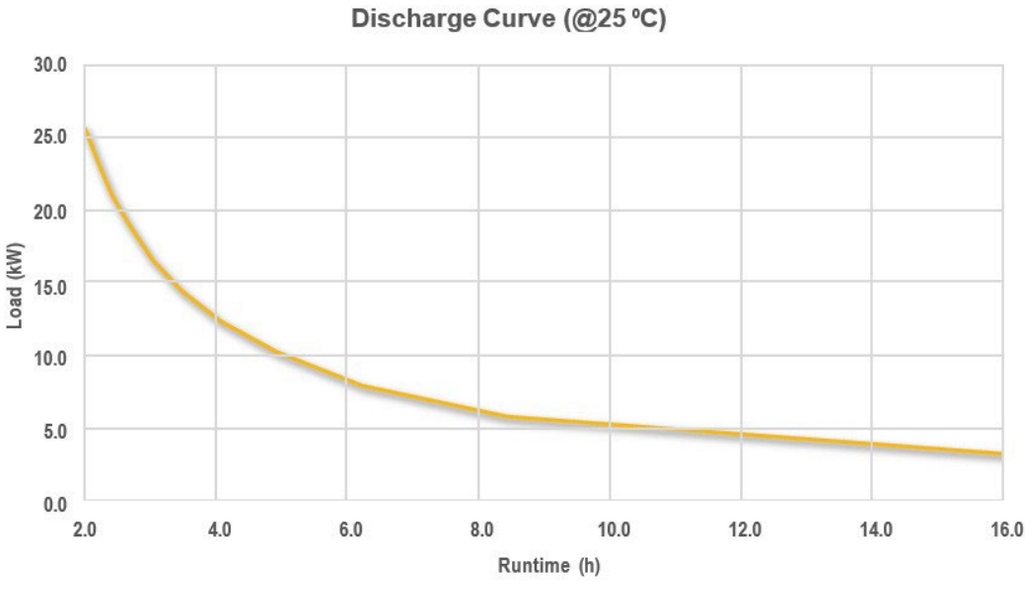
Inverter	
Nominal Rating @ 25ºC	36 kW (45 kVA)
Frequency	50 Hz
Voltage	400/230V
Passthrough current (Genset only)	100A
Max combined current (Genset+XES)	125A
Max load before genset start (fast)	Configurable 28.8 – 32.4 kW / delay 0 – 30s
Max load before genset start (slow)	Configurable 27.0 – 30.6 kW / delay 60 – 600s
Overload	1.5 x Rated for 30s
Short-circuit current	2 x Rated current
Inverter derate @ 30ºC	96%
Inverter derate @ 40ºC	90%
Inverter derate @ 50ºC	82%

Battery	
Nominal capacity @25 ºC	56.8 kWh
Typical charge time @25 ºC	3 h
Battery chemistry	Lithium Iron Phosphate (LFP)
Battery system voltage	48 Vdc
Cycle life (80% DoD)	6000 cycles
Maintenance charge interval	< 3 Weeks

Mechanical	
Cooling	Variable speed force air cooling
Ingress rating	IP55 / NEMA 3
Operating temperature range (charge)	0 to +50ºC (32 to 122ºF)
Operating temperature range (discharge)	-10 to +50ºC (14 to 122ºF)

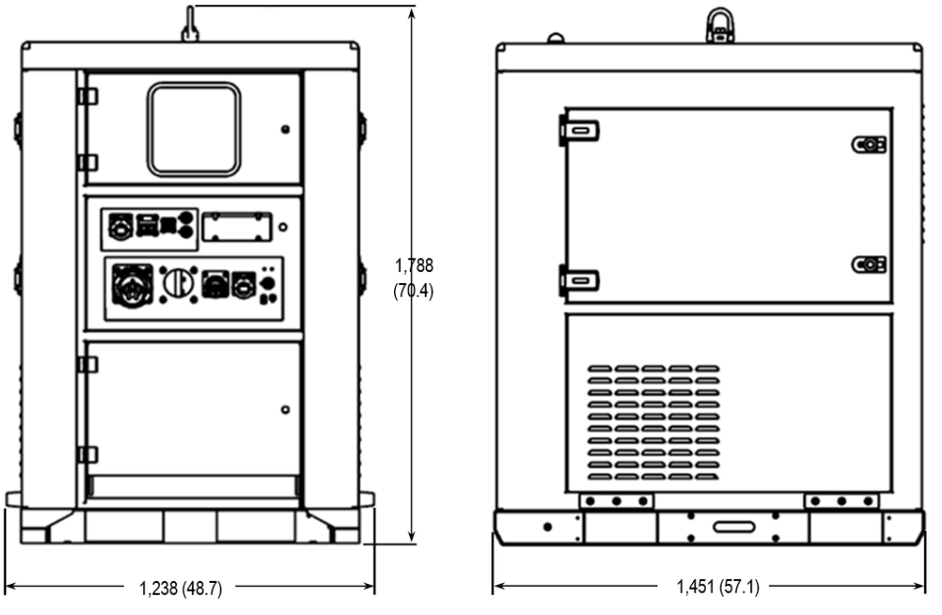
Options	
Solar MPPT charger (4.9 kWp)	Yes
Battery space heater	Yes
Overvoltage protection	Yes

Discharge Curve



Layout for General Dimensions

Dimensions in millimeters (inches)



Weight and Dimensions

Length mm (in)	Width mm (in)	Height mm (in)	Weight kg (lb)
1,451 (57.1)	1,238 (48.7)	1,788 (70.4)	1,440 (3,175)

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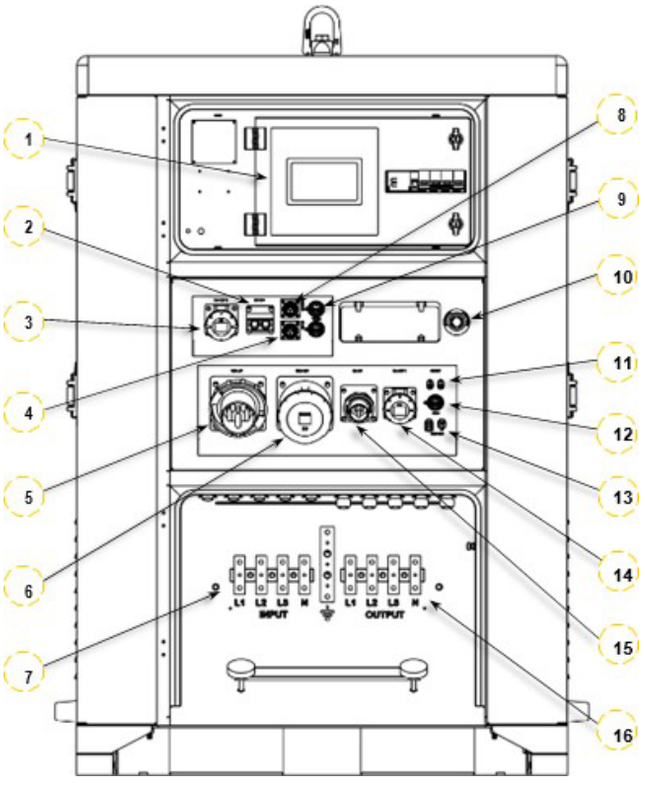
Control Panel and Power Distribution Layout

Item	Description
1	ESS Controller
2	DC Connector
3	16A, 230V CEE Outlet (Auxiliary)
4	RS485
5	125A, 400V CEE Inlet
6	125A, 400V CEE Outlet
7	Input Busbars
8	Cascade Connector
9	RJ45 Connectors (for Inverter)
10	Emergency Stop
11	Remote Genset Start
12	RJ45 Connector (WAN)
13	Solar Input Connectors
14	16A, 230V CEE Outlet
15	16A, 230V CEE Maintenance Charge Inlet
16	Output Busbars



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