Cat® XES60 (60 Hz)
Compact Energy Storage System

Image shown may not reflect actual configuration.

Cat® Compact Energy Storage System

24 kW (30 kVA)
56.8 kWh
60 Hz 208/120V

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 remotecontrol and equipment monitoring
- Customer-defined, equipment-based, real-time status updates and alerts
- Flexible and customer-configurable user interface
- Fleet management

Technical Data

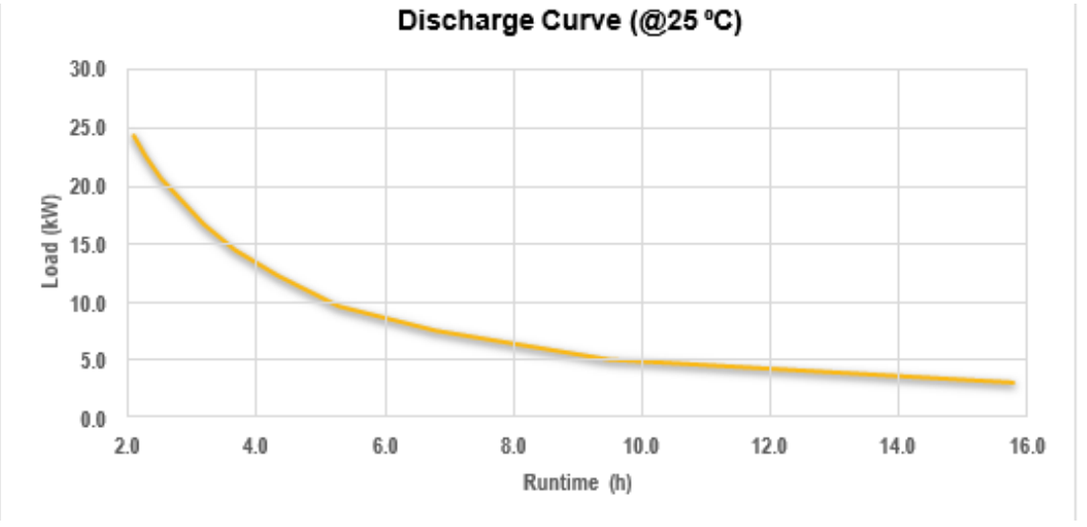
Inverter	
Nominal Rating @ 25ºC	24 kW (30 kVA)
Frequency	60 Hz
Voltage	208/120V
Passthrough current (Genset only)	200A
Max combined current (Genset+XES)	250A
Max load before genset start (fast)	Configurable 19.2 – 21.6 kW / delay 0 – 30s
Max load before genset start (slow)	Configurable 18.0 – 20.4 kW / 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 @25ºC	56.8 kWh
Typical charge time @25ºC	3.5 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)

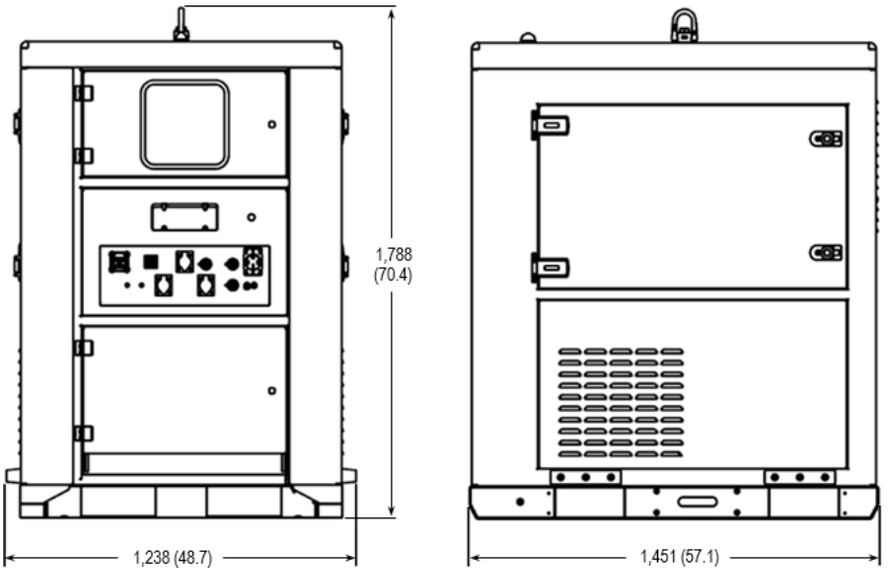
Options	
Solar MPPT charger (4.9 kWp)	Yes
Battery space heater	Yes
Overvoltage protection	Standard on 60 Hz models

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)	1,360 (2,998)

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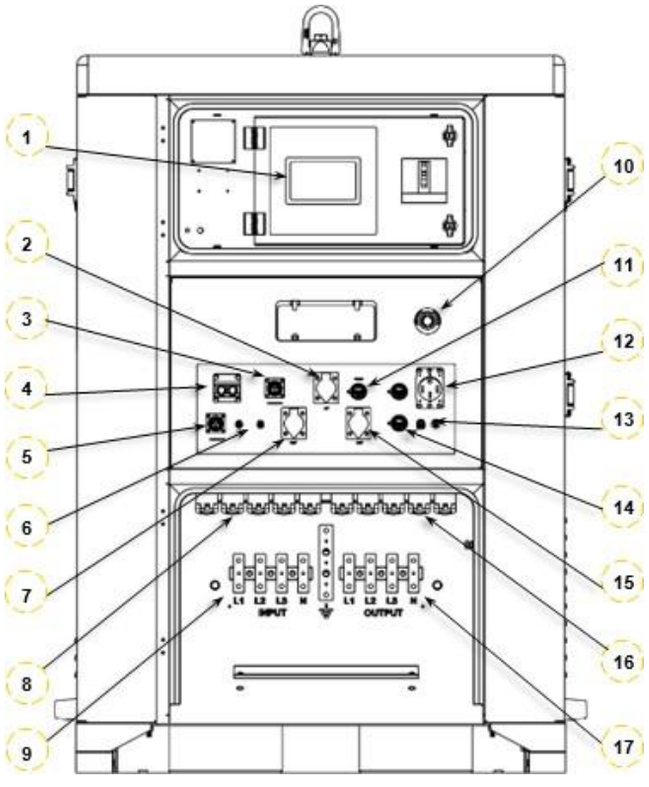
Control Panel and Power Distribution Layout

Item	Description
1	ESS Controller
2	NEMA 5-15P Maintenance Charge Inlet
3	Cascade Connector
4	DC Connector
5	RS485
6	Remote Genset Start
7	NEMA 5-20R Outlet
8	Cam Type Input Connectors
9	Input Busbars
10	Emergency Stop
11	RJ45 Connector (WAN)
12	NEMA 14-50R Outlet
13	Solar Input Connectors
14	RJ45 Connectors (for Inverter)
15	NEMA 5-20R Outlet (Auxiliary)
16	Cam Type Output Connectors
17	Output Busbars



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