endurance ST 160kWh





()))))))

Storage Growth

All scenarios point to a significant economic deployment of battery driven energy storage; storage is highly competitive as a new source of managing peak capacity with many projections of significant growth.

Storage as a capacity resource

Battery arrays can absorb renewable energy input and balance energy output needs.

Storage and Renewable Energy

Storage is a key enabling technology for the deployment of clean electricity generation, with strong synergies with PV. Longer duration and lower cost storage will also offer more opportunities for wind and storage.



The Role of Seasonal Storage

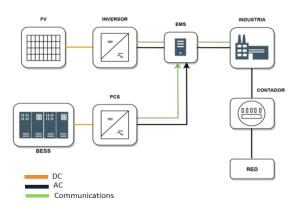
Storage will play an increasingly important role as electricity systems move towards 100% clean energy and will have multiple roles in the transformed electricity system.

) Evolving Storage Duration

Improvements in storage duration: we reduce costs by increasing and optimising capacity. Our products allow energy to be stored and used strategically at key moments to avoid fines associated with exceeding the contracted power and furthermore reduce costs during periods of high rates.

🙀 Technology Evolution

In the next years, lithium-ion batteries are expected to dominate the storage market.





2014/30/UE Inscripción RII-PYA: 1785 Rev 240323 C/ La Bernia 1, 46529 Canet de Berenguer - Valencia – España



www.endurancemotive.com

endurance ST 160kWh

TechnologyLFPConfiguration15*2P16SDC sideMax DC voltage864VNominal DC voltage768VMin DC voltage648VDC voltage range648V-864VMax DC current210AEfficiency99 %European efficiency99 %ProtectionDC input protection (fuse)400ALoad Break Switch250ASurge protectionT1+T2Visual monitoringYesOverheat protectionBMS ControlledGeneral DataDimensions (W"H'D)2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between -20°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°COling methodForced air coolingMax operating altitude (m)4000Derating operative altitude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*Warranty5**	Type Designation	Endurance ST 160 kWh
DC sideMax DC voltage864VNominal DC voltage768VMin DC voltage648VDC voltage range648V-864VMax DC current210AEfficiency99 %European efficiency99 %Protection00ADC input protection (fuse)400ALoad Break Switch250ASurge protectionT1+T2Visual monitoringYesOverheat protectionBMS ControlledGeneral Data1400 KgDimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between 0°C & 55°CDischarge between 0°C & 55°COoling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringComplianceCE / UN38.3*WarrantyCyclesCycles5000**	Technology	LFP
Max DC voltage864VNominal DC voltage768VMin DC voltage range648VDC voltage range648V-864VMax DC current210AEfficiency99 %European efficiency99 %European efficiency99 %DC input protection (fuse)400ALoad Break Switch250ASurge protectionT1+T2Visual monitoringYesOverheat protectionBMS ControlledGeneral Data1400 kgDimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 kgOperating temperature (°C)Charge between 0°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°COoling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyCyclesCycles5000**	Configuration	15*2P16S
Nominal DC voltage768VMin DC voltage648VDC voltage range648V-864VMax DC current210AEfficiency99 %European efficiency98,50%Protection100ADC input protection (fuse)400ALoad Break Switch250ASurge protectionT1+T2Visual monitoringYesOverheat protectionBMS ControlledGeneral Data100 KgDimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between -20°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MDD BUSComplianceCE / UN38.3*WarrantyYersCycles5000**	DC side	
Min DC voltage648VDC voltage range648V-864VMax DC current210AEfficiency99 %European efficiency99 %Protection0DC input protection (fuse)400ALoad Break Switch250ASurge protectionT1+T2Visual monitoringYesOverheat protection (MER)BMS ControlledGeneral Data1CDimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between 20°C & 55°CDischarge between 20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyCyclesCycles5000**	Max DC voltage	864V
DC voltage range648V-864VMax DC current210AEfficiency99 %European efficiency98,50%Protection00ADC input protection (fuse)400ALoad Break Switch250ASurge protectionT1+T2Visual monitoringYesOverheat protectionBMS ControlledGeneral Data1CDimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyVerlesCycles5000**	Nominal DC voltage	768V
Max DC current210AEfficiency99 %European efficiency98,50%Protection98,50%Protection00ALoad Break Switch250ASurge protection (fuse)400ALoad Break Switch250ASurge protectionT1+T2Visual monitoringYesOverheat protectionBMS ControlledGeneral Data0Dimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyCyclesCycles5000**	Min DC voltage	648V
Efficiency99 %Max efficiency98,50%Protection98,50%Protection100ALoad Break Switch250ASurge protectionT1+T2Visual monitoringYesOverheat protectionBMS ControlledGeneral Data10CDimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between 0°C & 55°CDischarge between 0°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyCyclesCycles5000**	DC voltage range	648V-864V
Max efficiency99 %European efficiency98,50%ProtectionDC input protection (fuse)400ALoad Break Switch250ASurge protectionT1+T2Visual monitoringYesOverheat protectionBMS ControlledGeneral DataDimensions (W"H'D)2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between 0°C & 55°CDischarge between 20°C & 55°COling methodForced air coolingMax operating altitude (m)2000DisplayPDMU + External Display + Remote MonitoringComunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyCyclesCycles5000**	Max DC current	210A
European efficiency98,50%ProtectionDC input protection (fuse)400ALoad Break Switch250ASurge protectionT1+T2Visual monitoringYesOverheat protectionBMS ControlledGeneral Data2420*990*700 mmDimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 kgOperating temperature (°C)Charge between °°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CColing methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyCyclesCycles5000**	Efficiency	
ProtectionDC input protection (fuse)400ALoad Break Switch250ASurge protectionT1+T2Visual monitoringYesOverheat protectionBMS ControlledGeneral Data2420*990*700 mmDimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyYeresCycles5000**	Max efficiency	99 %
DC input protection (fuse)400ALoad Break Switch250ASurge protectionT1+T2Visual monitoringYesOverheat protectionBMS ControlledGeneral Data2420*990*700 mmDimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between 0°C & 55°CDischarge between 0°C & 55°COling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringComplianceCE / UN38.3*WarrantyCyclesCycles5000**	European efficiency	98,50%
Load Break Switch250ASurge protectionT1+T2Visual monitoringYesOverheat protectionBMS ControlledGeneral DataDimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyS000**	Protection	
Surge protectionT1+T2Visual monitoringYesOverheat protectionBMS ControlledGeneral DataDimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyYesCycles5000**	DC input protection (fuse)	400A
Visual monitoringYesOverheat protectionBMS ControlledGeneral Data	Load Break Switch	250A
Overheat protectionBMS ControlledGeneral DataDimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*Warranty5000**	Surge protection	T1+T2
General DataDimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*Warranty5000**	Visual monitoring	Yes
Dimensions (W"H'D]2420*990*700 mmStandard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyYoursCycles5000**	Overheat protection	BMS Controlled
Standard charge and discharge1CSound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyS000**	General Data	
Sound emission (dBA)MAX 55Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyYourantyCycles5000**	Dimensions (W"H'D]	2420*990*700 mm
Weight1400 KgOperating temperature (°C)Charge between 0°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyYousCycles5000**	Standard charge and discharge	1C
Operating temperature (°C)Charge between 0°C & 55°CDischarge between -20°C & 55°CDischarge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyYouresCycles5000**	Sound emission (dBA)	MAX 55
Discharge between -20°C & 55°CAllowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyS000**	Weight	1400 Kg
Allowable relative humidity range0% - 90%Cooling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*Warranty5000**	Operating temperature (ºC)	Charge between 0°C & 55°C
Cooling methodForced air coolingMax operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyCyclesCycles5000**		Discharge between -20°C & 55°C
Max operating altitude (m)4000Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyCyclesCycles5000**	Allowable relative humidity range	0% - 90%
Derating operative altutude (m)2000DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyCyclesCycles5000**	Cooling method	Forced air cooling
DisplayPDMU + External Display + Remote MonitoringCommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyCyclesCycles5000**	Max operating altitude (m)	4000
CommunicationCAN BUS / MOD BUSComplianceCE / UN38.3*WarrantyCyclesCycles5000**	Derating operative altutude (m)	2000
ComplianceCE / UN38.3*WarrantyCycles5000**	Display	PDMU + External Display + Remote Monitoring
ComplianceCE / UN38.3*WarrantyCycles5000**	Communication	CAN BUS / MOD BUS
Cycles 5000**	Compliance	
	Warranty	
	Cycles	5000**
		5**

* In progress,

**This product is subject to specific warranty conditions. Please refer to the terms and conditions for detailed information on the applicable warranty.

*** Parallel batteries up to 16 Racks