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LITHIUM-ION BATTERY PACKS

Solar Stand Alone | E-Mobility | Energy Storage

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LITHIUM-ION BATTERY PACKS

Solar Stand Alone (12.8v 6Ah-12.8v 100Ah LiFePO4 Battery packs)

- 10x Life Cycle
- 3x Energy Density
- 50% Lighter
- 3x Faster Recovery
- High Performance
- More than 2000 Cycles of Operation AT 80% DOD.

BATTERY MODEL: 12.8V 6AH LI-FE-PO4

Description	Technical Specification	Remark
Nominal Capacity	6Ah	Capacity according to standard charge and Discharge
Nominal Voltage	12.8V	The average value of working voltage during the whole discharge process.
Nominal Wattage	77Wh	
Internal Impedance of Pack	≤32mΩ	Internal Impedance calculated after series and parallel configuration
Type of Cell	Cylindrical	**Part No. 32650**
Capacity of Individual Cell	≤3.2V – 6000mAh	A Grade Cell with IR < 10mΩ
Configuration	4S-1P	4 in Series and 1 in Parallel
Charge Current	3-5A	Constant Charge
Discharge Current	10A	Constant Discharge
Charge Cut-Off Voltage	14.6V	Protected with Balancing BMS
Discharge Cut-Off Voltage	10.5V	Protected with Balancing BMS
Working Temperature (Charging)	0-45˚C	Under constant charge
Working Temperature (Discharging)	20-55˚C	Under constant discharge
Weight	0.64kG	Approx
Dimension	Length (mm)	35mm
	Width (mm)	130mm
	Height (mm)	70mm
Cycle Life	≥2000	With 80% DOD
Storage Temperature	1 – 3 Month	20 - 60˚C
	1 – 6 Month	20 - 45˚C
Battery (LCV)	Provided	
Battery (HCV)	Provided	
Battery Reverse Protection	Provided	

BATTERY MODEL: 12.8V 12AH LI-FE-PO4

Description	Technical Specification	Remark
Nominal Capacity	12Ah	Capacity according to standard charge and Discharge
Nominal Voltage	12.8V	The average value of working voltage during the whole discharge process.
Nominal Wattage	154Wh	
Internal Impedance of Pack	≤16mΩ	Internal Impedance calculated after series and parallel configuration
Type of Cell	Cylindrical	**Part No. 32650**
Capacity of Individual Cell	≤3.2V – 6000mAh	A Grade Cell with IR < 8mΩ
Configuration	4S-2P	4 in Series and 2 in Parallel
Charge Current	3-5A	Constant Charge
Discharge Current	10A	Constant Discharge
Charge Cut-Off Voltage	14.6V	Protected with Balancing BMS
Discharge Cut-Off Voltage	10.5V	Protected with Balancing BMS
Working Temperature (Charging)	0-45˚C	Under constant charge
Working Temperature (Discharging)	20-55˚C	Under constant discharge
Weight	1.28kG	Approx
Dimension	Length (mm)	70mm
	Width (mm)	130mm
	Height (mm)	70mm
Cycle Life	≥2000	With 80% DOD
Storage Temperature	1 – 3 Month	20 - 60˚C
	1 – 6 Month	20 - 45˚C
Battery (LCV)	Provided	
Battery (HCV)	Provided	
Battery Reverse Protection	Provided	

BATTERY MODEL: 12.8V 18AH LI-FE-PO4

Description	Technical Specification	Remark
Nominal Capacity	18Ah	Capacity according to standard charge and Discharge
Nominal Voltage	12.8V	The average value of working voltage during the whole discharge process.
Nominal Wattage	230Wh	
Internal Impedance of Pack	≤11mΩ	Internal Impedance calculated after series and parallel configuration
Type of Cell	Cylindrical	**Part No. 32650**
Capacity of Individual Cell	≤3.2V – 6000mAh	A Grade Cell with IR < 8mΩ
Configuration	4S-3P	4 in Series and 3 in Parallel
Charge Current	5-8A	Constant Charge
Discharge Current	10A	Constant Discharge
Charge Cut-Off Voltage	14.6V	Protected with Balancing BMS
Discharge Cut-Off Voltage	10.5V	Protected with Balancing BMS
Working Temperature (Charging)	0-45˚C	Under constant charge
Working Temperature (Discharging)	20-55˚C	Under constant discharge
Weight	1.92kG	Approx
Dimension	Length (mm)	105mm
	Width (mm)	130mm
	Height (mm)	70mm
Cycle Life	≥2000	With 80% DOD
Storage Temperature	1 – 3 Month	20 - 60˚C
	1 – 6 Month	20 - 45˚C
Battery (LCV)	Provided	
Battery (HCV)	Provided	
Battery Reverse Protection	Provided	

BATTERY MODEL: 12.8V 24AH LI-FE-PO4

Description	Technical Specification	Remark
Nominal Capacity	24Ah	Capacity according to standard charge and Discharge
Nominal Voltage	12.8V	The average value of working voltage during the whole discharge process.
Nominal Wattage	307Wh	
Internal Impedance of Pack	≤8mΩ	Internal Impedance calculated after series and parallel configuration
Type of Cell	Cylindrical	**Part No. 32650**
Capacity of Individual Cell	≤3.2V – 6000mAh	A Grade Cell with IR < 8mΩ
Configuration	4S-4P	4 in Series and 4 in Parallel
Charge Current	5-8A	Constant Charge
Discharge Current	10A	Constant Discharge
Charge Cut-Off Voltage	14.6V	Protected with Balancing BMS
Discharge Cut-Off Voltage	10.5V	Protected with Balancing BMS
Working Temperature (Charging)	0-45˚C	Under constant charge
Working Temperature (Discharging)	20-55˚C	Under constant discharge
Weight	2.6kG	Approx
Dimension	Length (mm)	135mm
	Width (mm)	130mm
	Height (mm)	70mm
Cycle Life	≥2000	With 80% DOD
Storage Temperature	1 – 3 Month	20 - 60˚C
	1 – 6 Month	20 - 45˚C
Battery (LCV)	Provided	
Battery (HCV)	Provided	
Battery Reverse Protection	Provided	

BATTERY MODEL: 12.8V 30AH LI-FE-PO4

Description	Technical Specification	Remark
Nominal Capacity	30Ah	Capacity according to standard charge and Discharge
Nominal Voltage	12.8V	The average value of working voltage during the whole discharge process.
Nominal Wattage	384Wh	
Internal Impedance of Pack	≤6.4mΩ	Internal Impedance calculated after series and parallel configuration
Type of Cell	Cylindrical	**Part No. 32650**
Capacity of Individual Cell	3.2V – 6000mAh	A Grade Cell with IR < 8mΩ
Configuration	4S-5P	4 in Series and 5 in Parallel
Charge Current	5-8A	Constant Charge
Discharge Current	10A	Constant Discharge
Charge Cut-Off Voltage	14.6V	Protected with Balancing BMS
Discharge Cut-Off Voltage	10.5V	Protected with Balancing BMS
Working Temperature (Charging)	0-45˚C	Under constant charge
Working Temperature (Discharging)	20-55˚C	Under constant discharge
Weight	3.2kG	Approx
Dimension	Length (mm)	170mm
	Width (mm)	130mm
	Height (mm)	70mm
Cycle Life	≥2000	With 80% DOD
Storage Temperature	1 – 3 Month	20 - 60˚C
	1 – 6 Month	20 - 45˚C
Battery (LCV)	Provided	
Battery (HCV)	Provided	
Battery Reverse Protection	Provided	

BATTERY MODEL: 12.8V 36AH LI-FE-PO4

Description	Technical Specification	Remark
Nominal Capacity	36Ah	Capacity according to standard charge and Discharge
Nominal Voltage	12.8V	The average value of working voltage during the whole discharge process.
Nominal Wattage	461Wh	
Internal Impedance of Pack	≤5.3mΩ	Internal Impedance calculated after series and parallel configuration
Type of Cell	Cylindrical	**Part No. 32650**
Capacity of Individual Cell	3.2V – 6000mAh	A Grade Cell with IR < 8mΩ
Configuration	4S-6P	4 in Series and 6 in Parallel
Charge Current	5-8A	Constant Charge
Discharge Current	8A	Constant Discharge
Charge Cut-Off Voltage	14.6V	Protected with Balancing BMS
Discharge Cut-Off Voltage	10.5V	Protected with Balancing BMS
Working Temperature (Charging)	0-45˚C	Under constant charge
Working Temperature (Discharging)	20-55˚C	Under constant discharge
Weight	3.84kG	Approx
Dimension	Length (mm)	200mm
	Width (mm)	130mm
	Height (mm)	70mm
Cycle Life	≥2000	With 80% DOD
Storage Temperature	1 – 3 Month	20 - 60˚C
	1 – 6 Month	20 - 45˚C
Battery (LCV)	Provided	
Battery (HCV)	Provided	
Battery Reverse Protection	Provided	

BATTERY MODEL: 12.8V 42AH LI-FE-PO4

Description	Technical Specification	Remark
Nominal Capacity	42Ah	Capacity according to standard charge and Discharge
Nominal Voltage	12.8V	The average value of working voltage during the whole discharge process.
Nominal Wattage	537Wh	
Internal Impedance of Pack	≤4.6mΩ	Internal Impedance calculated after series and parallel configuration
Type of Cell	Cylindrical	**Part No. 32650**
Capacity of Individual Cell	3.2V – 6000mAh	A Grade Cell with IR < 8mΩ
Configuration	4S-7P	4 in Series and 7 in Parallel
Charge Current	5-8A	Constant Charge
Discharge Current	10A	Constant Discharge
Charge Cut-Off Voltage	14.6V	Protected with Balancing BMS
Discharge Cut-Off Voltage	10.5V	Protected with Balancing BMS
Working Temperature (Charging)	0-45˚C	Under constant charge
Working Temperature (Discharging)	20-55˚C	Under constant discharge
Weight	4.48kG	Approx
Dimension	Length (mm)	245mm
	Width (mm)	130mm
	Height (mm)	70mm
Cycle Life	≥2000	With 80% DOD
Storage Temperature	1 – 3 Month	20 - 60˚C
	1 – 6 Month	20 - 45˚C
Battery (LCV)	Provided	
Battery (HCV)	Provided	
Battery Reverse Protection	Provided	

BATTERY MODEL: 12.8V 48AH LI-FE-PO4

Description	Technical Specification	Remark
Nominal Capacity	48Ah	Capacity according to standard charge and Discharge
Nominal Voltage	12.8V	The average value of working voltage during the whole discharge process.
Nominal Wattage	615Wh	
Internal Impedance of Pack	≤4.2mΩ	Internal Impedance calculated after series and parallel configuration
Type of Cell	Cylindrical	**Part No. 32700**
Capacity of Individual Cell	3.2V – 6000mAh	A Grade Cell with IR < 8mΩ
Configuration	4S-7P	4 in Series and 8 in Parallel
Charge Current	8-10A	Constant Charge
Discharge Current	15A	Constant Discharge
Charge Cut-Off Voltage	14.6V	Protected with Balancing BMS
Discharge Cut-Off Voltage	10.5V	Protected with Balancing BMS
Working Temperature (Charging)	0-45˚C	Under constant charge
Working Temperature (Discharging)	20-55˚C	Under constant discharge
Weight	5.30kG	Approx
Dimension	Length (mm)	140mm
	Width (mm)	280mm
	Height (mm)	70mm
Cycle Life	≥2000	With 80% DOD
Storage Temperature	1 – 3 Month	20 - 60˚C
	1 – 6 Month	20 - 45˚C
Battery (LCV)	Provided	
Battery (HCV)	Provided	
Battery Reverse Protection	Provided	

BATTERY MODEL: 12.8V 54AH LI-FE-PO4

Description	Technical Specification	Remark
Nominal Capacity	54Ah	Capacity according to standard charge and Discharge
Nominal Voltage	12.8V	The average value of working voltage during the whole discharge process.
Nominal Wattage	692Wh	
Internal Impedance of Pack	≤4.6mΩ	Internal Impedance calculated after series and parallel configuration
Type of Cell	Cylindrical	**Part No. 32700**
Capacity of Individual Cell	≤3.2V – 6000mAh	A Grade Cell with IR < 8mΩ
Configuration	4S-9P	4 in Series and 7 in Parallel
Charge Current	15A	Constant Charge
Discharge Current	20A	Constant Discharge
Charge Cut-Off Voltage	14.6V	Protected with Balancing BMS
Discharge Cut-Off Voltage	10.5V	Protected with Balancing BMS
Working Temperature (Charging)	0-45˚C	Under constant charge
Working Temperature (Discharging)	20-55˚C	Under constant discharge
Weight	5.95kG	Approx
Dimension	Length (mm)	160mm
	Width (mm)	130mm
	Height (mm)	70mm
Cycle Life	≥2000	With 80% DOD
Storage Temperature	1 – 3 Month	20 - 60˚C
	1 – 6 Month	20 - 45˚C
Battery (LCV)	Provided	
Battery (HCV)	Provided	
Battery Reverse Protection	Provided	

BATTERY MODEL: 12.8V 60AH LI-FE-PO4

Description	Technical Specification	Remark
Nominal Capacity	60Ah	Capacity according to standard charge and Discharge
Nominal Voltage	12.8V	The average value of working voltage during the whole discharge process.
Nominal Wattage	768Wh	
Internal Impedance of Pack	≤2.5mΩ	Internal Impedance calculated after series and parallel configuration
Type of Cell	Cylindrical	**Part No. 32650**
Capacity of Individual Cell	≤3.2V – 6000mAh	A Grade Cell with IR < 8mΩ
Configuration	4S-10P	4 in Series and 10 in Parallel
Charge Current	5-8A	Constant Charge
Discharge Current	20A	Constant Discharge
Charge Cut-Off Voltage	14.6V	Protected with Balancing BMS
Discharge Cut-Off Voltage	10.5V	Protected with Balancing BMS
Working Temperature (Charging)	0-45˚C	Under constant charge
Working Temperature (Discharging)	20-55˚C	Under constant discharge
Weight	4.48kG	Approx
Dimension	Length (mm)	170mm
	Width (mm)	140mm
	Height (mm)	150mm
Cycle Life	≥2000	With 80% DOD
Storage Temperature	1 – 3 Month	20 - 60˚C
	1 – 6 Month	20 - 45˚C
Battery (LCV)	Provided	
Battery (HCV)	Provided	
Battery Reverse Protection	Provided	

BATTERY MODEL: 12.8V 80AH LI-FE-PO4

Description	Technical Specification	Remark
Nominal Capacity	80Ah	Capacity according to standard charge and Discharge
Nominal Voltage	12.8V	The average value of working voltage during the whole discharge process.
Nominal Wattage	1024Wh	
Internal Impedance of Pack	≤4.6mΩ	Internal Impedance calculated after series and parallel configuration
Type of Cell	Prismatic	**Part No. 36130200**
Capacity of Individual Cell	3.2V – 80Ah	A Grade Cell with IR < 1mΩ
Configuration	4S-1P	4 in Series and 1 in Parallel
Charge Current	20A	Constant Charge
Discharge Current	20A	Constant Discharge
Charge Cut-Off Voltage	14.6V	Protected with Balancing BMS
Discharge Cut-Off Voltage	10.5V	Protected with Balancing BMS
Working Temperature (Charging)	0-45˚C	Under constant charge
Working Temperature (Discharging)	20-55˚C	Under constant discharge
Weight	14kG	Approx
Dimension	Length (mm)	120mm
	Width (mm)	140mm
	Height (mm)	200mm
Cycle Life	≥2000	With 80% DOD
Storage Temperature	1 – 3 Month	20 - 60˚C
	1 – 6 Month	20 - 45˚C
Battery (LCV)	Provided	
Battery (HCV)	Provided	
Battery Reverse Protection	Provided	

BATTERY MODEL: 12.8V 100AH LI-FE-PO4

Description	Technical Specification	Remark
Nominal Capacity	100Ah	Capacity according to standard charge and Discharge
Nominal Voltage	12.8V	The average value of working voltage during the whole discharge process.
Nominal Wattage	1280Wh	
Internal Impedance of Pack	≤4.6mΩ	Internal Impedance calculated after series and parallel configuration
Type of Cell	Prismatic	**Part No. 36130200**
Capacity of Individual Cell	3.2V – 100Ah	A Grade Cell with IR < 1mΩ
Configuration	4S-1P	4 in Series and 1 in Parallel
Charge Current	40A	Constant Charge
Discharge Current	40A	Constant Discharge
Charge Cut-Off Voltage	14.6V	Protected with Balancing BMS
Discharge Cut-Off Voltage	10.5V	Protected with Balancing BMS
Working Temperature (Charging)	0-45˚C	Under constant charge
Working Temperature (Discharging)	20-55˚C	Under constant discharge
Weight	14kG	Approx
Dimension	Length (mm)	140mm
	Width (mm)	160mm
	Height (mm)	220mm
Cycle Life	≥2000	With 80% DOD
Storage Temperature	1 – 3 Month	20 - 60˚C
	1 – 6 Month	20 - 45˚C
Battery (LCV)	Provided	
Battery (HCV)	Provided	
Battery Reverse Protection	Provided	

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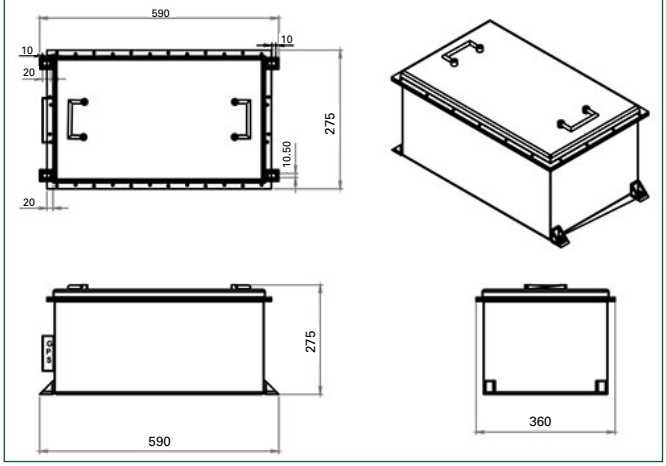
BATTERY MODEL: LIFEPO4 BATTERY IB LIEV- 5185

Electrical Characteristics	
Nominal Voltage	51.2V
Nominal Capacity	85Ah
Impedance (Max. at1000Hz)	≤ 35m ?
Expected Cycle Life	More than 2000 cycles

Operation Conditions	
Charge Method	Constant Current/Constant Voltage (CC-CV)
Max. Charge Voltage	58.4V
Standard Charge Current	25A
Charge Temperature	0°C ~ 45°C
Max. Continuous Discharge Current	50A
Peak Instant Discharge Current	85A
Peak Instant Discharge Time	10 seconds
Discharge Cut-off Voltage	42.4V
Discharge Temperature	-20°C ~ 65°C
Storage Temperature	-20°C ~ 45°C

Mechanical Characteristics	
Height	275±2mm
Width	360±2mm
Lenght	590±2mm
Weight	~42 kg



BATTERY MODEL: LIFEPO4 BATTERY IB LIEV- 5185

Item	Content	Criterion
Over charge Protection	Over charge detection voltage	3.900±025V
	Over charge release voltage	3.80±0.05V
	Maximum charge voltage	3.65±0.05V
	Maximum charge current	**≤50A**
Over discharge Protection	Over discharge detection voltage	2.5V±0.05V
	Over discharge detection delay time	≤115~173mS
	Over discharge release voltage	2.8±0.01V
Over discharge Current Protection	Over current detection current	**/**
	Detection delay time	32 ± 1 6ms
	Release condition	Cut load
	Maximum continuous current	**≤ 50A**
Short circuit protection	Detection condition	Exterior Short Circuit (579A)
	Detection delay time	200uS
	Release condition	Cut short circuit

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BATTERY MODEL: IB-TDS-3608

36V
(8 Ah)

Technical Data Sheet for 36V 8Ah battery for E-Mobility Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
NMC - Cylindrical	3.6 V	4 Ah	C/3	3C

Battery

Voltage (V)	36
Capacity(Ah)	8
Max Voltage(V)	42
Min Voltage (V)	28
Max Continuous Current(A)	4
Size(mm)*	220x44x85
Weight**(Kgs)	1.5
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	1000 cycles or 2 years whichever is earlier

Caution: It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity

Disclaimer: This datasheet is a standard version of a pre-manufactured battery pack. Customization/Prototyping will change these mentioned parameters. This TDS is for informative purposes only and should not be used for any technical/commercial or legal claims.

BATTERY MODEL: IB-TDS-3610

36V
(10 Ah)

Technical Data Sheet for 36V 10.4Ah battery for E-Mobility Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
NMC - Cylindrical	3.6 V	2.6 Ah	C/3	3C

Battery

Voltage (V)	36
Capacity(Ah)	10.4
Max Voltage(V)	42
Min Voltage (V)	28
Max Continuous Current(A)	4
Size(mm)*	220x76x85
Weight**(Kgs)	2.2
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	1000 cycles or 2 years whichever is earlier

Caution: It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity.

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BATTERY MODEL: IB-TDS-3613

36V
(13 Ah)

Technical Data Sheet for 36V 13 Ah battery for E-Mobility Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
NMC - Cylindrical	3.6 V	2.6 Ah	C/3	3C

Battery

Voltage (V)	36
Capacity(Ah)	13
Max Voltage(V)	42
Min Voltage (V)	28
Max Continuous Current(A)	6.5
Size(mm)*	220x95x85
Weight**(Kgs)	2.8
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	1000 cycles or 2 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity

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BATTERY MODEL: IB-TDS-4824

48V
(24 Ah)

Technical Data Sheet for 48V 24Ah battery for E-Mobility Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
NMC - Cylindrical	3.6 V	4 Ah	C/3	3C

Battery

Voltage (V)	50.4
Capacity(Ah)	24
Max Voltage(V)	58.8
Min Voltage (V)	39.2
Max Continuous Current(A)	12
Size(mm)*	310x135x80
Weight**(Kgs)	6
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	1000 cycles or 2 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity

Disclaimer: This datasheet is a standard version of a pre-manufactured battery pack. Customization/Prototyping will change these mentioned parameters. This TDS is for informative purposes only and should not be used for any technical/commercial or legal claims.

BATTERY MODEL: IB-TDS-48200

48V
(200 Ah)

Technical Data Sheet for 48V 200Ah battery for E-Mobility Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
NMC - Cylindrical	3.2 V	100 Ah	C/5	3C

Battery

Voltage (V)	48
Capacity(Ah)	200
Max Voltage(V)	57.6
Min Voltage (V)	40
Max Continuous Current(A)	66.6
Size(mm)*	550x300x240
Weight**(Kgs)	68
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity

Disclaimer: This datasheet is a standard version of a pre-manufactured battery pack. Customization/Prototyping will change these mentioned parameters. This TDS is for informative purposes only and should not be used for any technical/commercial or legal claims.

BATTERY MODEL: IB-TDS-60824

60.8V
(24 Ah)

Technical Data Sheet for 60.8V 24Ah battery for E-Mobility Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
NMC - Cylindrical	3.2 V	6 Ah	C/5	3C

Battery

Voltage (V)	60.8
Capacity(Ah)	24
Max Voltage(V)	68.4
Min Voltage (V)	47.5
Max Continuous Current(A)	8
Size(mm)*	300x165x130
Weight**(Kgs)	12
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity

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BATTERY MODEL: IB-TDS-60880

60.8V
(80 Ah)

Technical Data Sheet for 60.8V 80Ah battery for E-Mobility Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
NMC - Cylindrical	3.2 V	80 Ah	C/5	3C

Battery

Voltage (V)	60.8
Capacity(Ah)	80
Max Voltage(V)	68.4
Min Voltage (V)	47.5
Max Continuous Current(A)	26.6
Size(mm)*	650x280x220
Weight**(Kgs)	40
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity

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BATTERY MODEL: IB-TDS-608200

60.8V
(200 Ah)

Technical Data Sheet for 60.8V 200Ah battery for E-Mobility Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
NMC - Cylindrical	3.2 V	100 Ah	C/5	3C

Battery

Voltage (V)	60.8
Capacity(Ah)	200
Max Voltage(V)	68.4
Min Voltage (V)	47.5
Max Continuous Current(A)	66.6
Size(mm)*	690x280x240
Weight**(Kgs)	78
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity

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BATTERY MODEL: IB-TDS-4880

48V
(80 Ah)

Technical Data Sheet for 48V 80Ah battery for Stationary energy storage Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
LFP-Prismatic	3.2 V	80 Ah	C/5	3C

Battery

Voltage (V)	48
Capacity(Ah)	80
Max Voltage(V)	54
Min Voltage (V)	37.5
Max Continuous Current(A)	24
Size(mm)*	520x240x145
Weight**(Kgs)	30
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing '"Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity.

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BATTERY MODEL: IB-TDS-48100

48V
(100 Ah)

Technical Data Sheet for 48V 100Ah battery for Stationary energy storage Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
LFP-Prismatic	3.2 V	100 Ah	C/5	3C

Battery

Voltage (V)	48
Capacity(Ah)	100
Max Voltage(V)	54
Min Voltage (V)	37.5
Max Continuous Current(A)	33.3
Size(mm)*	550x240x140
Weight**(Kgs)	30
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing '"Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity.

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BATTERY MODEL: IB-TDS-48200

48V
(200 Ah)

Technical Data Sheet for 48V 200Ah battery for Stationary energy storage Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
LFP-Prismatic	3.2 V	100 Ah	C/5	3C

Battery

Voltage (V)	48
Capacity(Ah)	200
Max Voltage(V)	54
Min Voltage (V)	37.5
Max Continuous Current(A)	66.6
Size(mm)*	550x300x245
Weight**(Kgs)	63
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing '"Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity.

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BATTERY MODEL: IB-TDS-60880

60.8V
(80 Ah)

Technical Data Sheet for 60.8V 80Ah battery for stationary energy storage Application

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
LFP-Prismatic	3.2 V	100 Ah	C/5	3C

Battery

Voltage (V)	60.8
Capacity(Ah)	80
Max Voltage(V)	68.4
Min Voltage (V)	47.5
Max Continuous Current(A)	26.6
Size(mm)*	350x280x230
Weight**(Kgs)	38
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing '"Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity.

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BATTERY MODEL: IB-TDS-608200

60.8V
(200 Ah)

Technical Data Sheet for 60.8V 200Ah battery for Stationary energy storage Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
LFP-Prismatic	3.2 V	100 Ah	C/5	3C

Battery

Voltage (V)	60.8
Capacity(Ah)	200
Max Voltage(V)	68.4
Min Voltage (V)	47.5
Max Continuous Current(A)	66.6
Size(mm)*	550x370x240
Weight**(Kgs)	41
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing '"Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity.

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BATTERY MODEL: IB-TDS-73680

73.6V
(80 Ah)

Technical Data Sheet for 73.6V 80Ah battery for Stationary energy storage Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
LFP-Prismatic	3.2 V	80 Ah	C/5	3C

Battery

Voltage (V)	73.6
Capacity(Ah)	80
Max Voltage(V)	82.8
Min Voltage (V)	57.5
Max Continuous Current(A)	24
Size(mm)*	415x280x220
Weight**(Kgs)	46
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing '"Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity.

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BATTERY MODEL: IB-TDS-736160

73.6V
(160 Ah)

Technical Data Sheet for 73.6V 160Ah battery for Stationery energy storage Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
LFP-Prismatic	3.2 V	80 Ah	C/5	3C

Battery

Voltage (V)	73.6
Capacity(Ah)	160
Max Voltage(V)	82.5
Min Voltage (V)	57.5
Max Continuous Current(A)	53.3
Size(mm)*	560x415x220
Weight**(Kgs)	92
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing '"Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity.

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BATTERY MODEL: IB-TDS-9680

96V
(80 Ah)

Technical Data Sheet for 96V 80Ah battery for Stationary energy storage Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
LFP-Prismatic	3.2 V	80 Ah	C/5	3C

Battery

Voltage (V)	96
Capacity(Ah)	80
Max Voltage(V)	105
Min Voltage (V)	75
Max Continuous Current(A)	24
Size(mm)*	520x300x220
Weight**(Kgs)	60
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing '"Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity.

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BATTERY MODEL: IB-TDS-96160

96V
(160 Ah)

Technical Data Sheet for 73.6V 160Ah battery for Stationery energy storage Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
LFP-Prismatic	3.2 V	80 Ah	C/5	3C

Battery

Voltage (V)	96
Capacity(Ah)	160
Max Voltage(V)	108
Min Voltage (V)	75
Max Continuous Current(A)	53.3
Size(mm)*	600x520x220
Weight**(Kgs)	120
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing '"Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity.

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BATTERY MODEL: IB-TDS--96200

96V
(200 Ah)

Technical Data Sheet for 73.6V 160Ah battery for Stationery energy storage Applications

Cell

Type	Nominal Voltage	Nominal Capacity	Nominal C-Rate	Maximum C-Rate
LFP-Prismatic	3.2 V	80 Ah	C/5	3C

Battery

Voltage (V)	96
Capacity(Ah)	200
Max Voltage(V)	108
Min Voltage (V)	75
Max Continuous Current(A)	66.6
Size(mm)*	550x550x240
Weight**(Kgs)	129
BMS features	Over Charge Protection, Over Current Protection, Short Circuit Protection, Under Voltage Protection, Over Temperature Cut-off, Cell Balancing '"Add to above" : Pre- Discharge Circuit, RS-485 communication with access to the following parameters: BMS Status, cell voltages, pack current, cell temperatures, MOSFET temperature, SOC, SOH, balancing status and cell DC resistance
Life***	2000 cycles or 3 years whichever is earlier

Caution: : It is recommended that the battery is charged only by a CC-CV charger approved by IB Energy

* Dimensions are subject to variations as per chosen orientation, enclosure and BMS.
**Approximate weights may vary depending upon chosen orientation, enclosure and BMS.
***Capacity at End-Of-Life will be 80% of Nominal capacity.

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