

50.4 V

NOMINAL VOLTAGE

48 Ah

CAPACITY

2419 Wh

ENERGY

480 A

 CELL BLOCK,
 CONTINUOUS (75
 °C CUT-OFF)

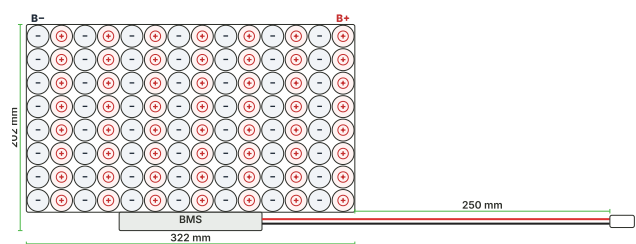
1280 A

 CELL BLOCK,
 PULSE ≤3 S

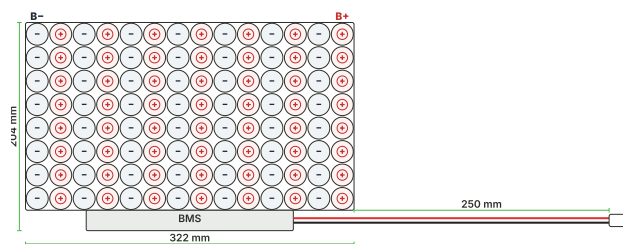
8.62–9.41

WEIGHT, KG

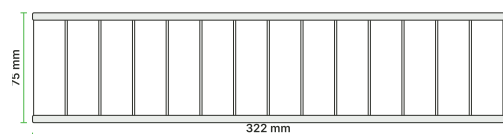
1 DIMENSIONS



TOP VIEW, WITH 60A OR 80A BMS · + positive up - negative up



TOP VIEW, WITH 150A OR 200A BMS



SIDE VIEW

BUILD	L x W x H	WEIGHT
No BMS	322 x 184 x 75 mm	8.62 kg
60A or 80A BMS	322 x 202 x 75 mm	9.41 kg
150A or 200A BMS	322 x 204 x 75 mm	9.41 kg

Tolerance ±3 mm. Main leads exit along the long side; lead length is measured from the pack end to the connector. Weight is calculated, not measured.

2 ELECTRICAL

Configuration	14S8P, 112 cells
Cell	Tenpower INR21700-60XG
Nominal voltage	50.4 V
Maximum charge voltage	58.8 V
Minimum discharge voltage	35 V
Capacity	48 Ah
Energy	2419 Wh
Maximum charge current	128 A
Charge temperature (cell)	0 to 45 °C
Discharge temperature (cell)	-20 to 60 °C

3 INTERFACES

Main leads	8 AWG silicone, red / black
Lead length	250 mm
Balance lead (no-BMS builds)	Molex 16-pin, 250 mm
Connector options	XT90, MPC60, MPC30, AS150U
BMS options	60A, 80A, 150A, 200A or none
BMS communication	UART, RS485 (60A); UART, RS485/CAN optional (80A and up)
Interconnects	Nickel-copper stamp, 0.15 + 0.3 mm

4 CURRENT LIMITS BY CONFIGURATION

BMS	CONNECTOR	CONTINUOUS	PEAK, 30 S	SHORT PULSE
No BMS	XT90	90 A Connector	90 A Connector	90 A Connector
No BMS	MPC60	90 A Connector	90 A Connector	90 A Connector
No BMS	MPC30	60 A Connector	60 A Connector	60 A Connector
60A Smart BMS	AS150U	60 A BMS	80 A BMS	150 A Connector
60A Smart BMS	MPC60	60 A BMS	80 A BMS	90 A Connector
60A Smart BMS	MPC30	60 A BMS	60 A Connector	60 A Connector
80A Smart BMS	AS150U	80 A BMS	90 A BMS	150 A Connector
80A Smart BMS	MPC60	80 A BMS	90 A BMS	90 A Connector
80A Smart BMS	MPC30	60 A Connector	60 A Connector	60 A Connector
150A Smart BMS	AS150U	150 A BMS	150 A Connector	150 A Connector
150A Smart BMS	MPC60	90 A Connector	90 A Connector	90 A Connector
150A Smart BMS	MPC30	60 A Connector	60 A Connector	60 A Connector
200A Smart BMS	AS150U	150 A Connector	150 A Connector	150 A Connector
200A Smart BMS	MPC60	90 A Connector	90 A Connector	90 A Connector

Each limit is the lowest of the cell block, the BMS and the connector (lead wire is sized to the connector); the limiting part is named next to each value. Cell block: 8 × 60 A continuous, 8 × 160 A pulse (160 A for 3 s, manufacturer rating). Cell continuous rating: 60 A when discharge is cut off at 75 °C cell temperature, 40 A without a temperature cut-off. A limit above the 40 A-per-cell figure is shown as the 40 A figure with the cut-off value in brackets. Values are at 25 °C.

5 BMS OPTIONS

BMS	CONTINUOUS	30 S	SHORT PULSE	COMMUNICATION	SIZE
60A Smart BMS	60 A	80 A	180 A (2 s)	UART, RS485	140 × 65 × 18 mm
80A Smart BMS	80 A	90 A	260 A (0.5 s)	UART (RS485, CAN optional)	140 × 65 × 18 mm
150A Smart BMS	150 A	170 A	560 A (0.3 s)	UART (RS485, CAN optional)	203 × 75 × 20 mm
200A Smart BMS	200 A	220 A	560 A (32 ms)	UART (RS485, CAN optional)	203 × 75 × 20 mm

All BMS options provide cell over- and under-voltage, over-current, short-circuit and temperature protection, with passive cell balancing.

6 BUILD

Cells	112 × Tenpower INR21700-60XG
Interconnects	Nickel-copper stamps
Main leads	8 AWG silicone wire
Balance lead	Molex 16-pin harness (no-BMS builds)
Protection	Smart BMS (optional)
Connector	Per selected option

7 HANDLING

- Charge with a CC/CV charger set to 58.8 V, at or below 128 A.
- Packs without BMS need external cell protection; balance them through the Molex 16-pin lead.
- Keep within the temperature ranges above. Do not charge unattended.
- Store at 30–50% charge, dry and away from heat.
- Ship as UN 3480 lithium-ion battery.