

1500VDC Contactor ECP Series up to 500A

2023 May

EVERY CONNECTION COUNTS



ECP Series 1500VDC Contactor, up to 500A

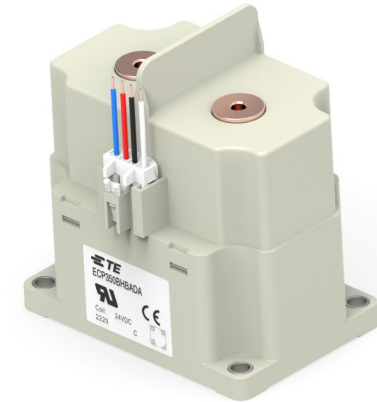
Specification

- Max. continuous carry current: **500A**
- Rated switch current: **150A, 250A, 350A**
- Max switch voltage: **1500VDC**
- Hermetically sealed with **ceramic technology**
- **Bi-directional**/No polarity design for contacts
- Dual coil design with hold power 5.0W
- Equipped with auxiliary contact
- Ambient temperature: -40°C~85 °C
- Comply with **DC-1 utilization category acc. EN60947-4-1.**

Value proposition

- High reliability with ceramic sealing and hydrogen arc blow.
- Allow for Bi-directional load to enhance reliability
- High breaking capability up to **1500VDC**
- **Creepage distance meet UL60947 requirement >25mm.**
- Auxiliary contact available allows for safety monitoring
- **Multiple approvals** for global solution

Profile



Application

- Battery Energy Storage System
- Solar inverter
- EV super charging

ECP Series Contactor Typical Specification

Electrical Ratings

- Typical rating (details see datasheet):

ECP150B

- 100A, 1500VDC, 6000 cycles
- 150A, 1500VDC, 1500 cycles

ECP250B

- 100A, 1500VDC, 6000 cycles
- 250A, 1500VDC, 1000 cycles
- 250A, 1000VDC, 1000 cycles

ECP350B

- 100A, 1500VDC, 6000 cycles
- 300A, 1500VDC, 500 cycles
- 350A, 1000VDC, 1000 cycles
- 350A, 1500VDC, 200 cycles
- 500A, 1000VDC, 100 cycles

Mechanical

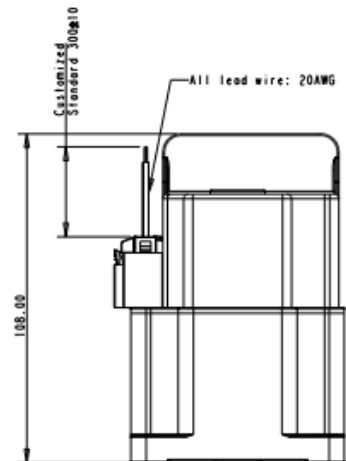
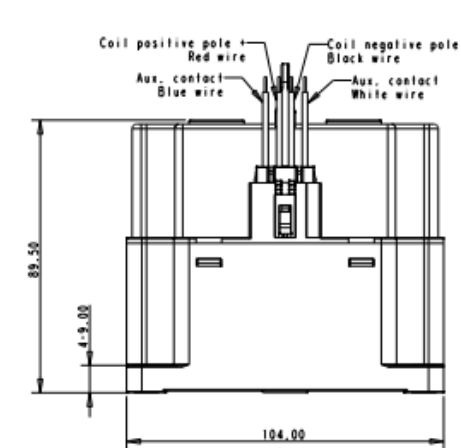
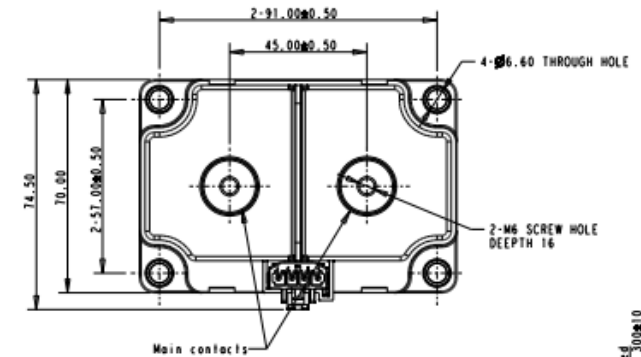
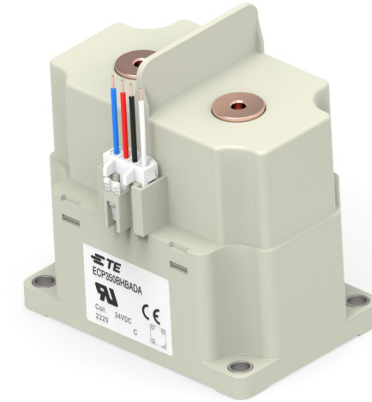
- Bottom mounted by flanged cover
- Size: 104mm × 75mm × 108mm
- Lead wire length customize option available

Others

- Dielectric Strength between open contacts: 4000Vrms
- Dielectric Strength between coil and contact: 4000Vrms
- Ambient Temperature: -40C-85C
- Humidity: 95% RH
- Vibration resistance (functional): Sine, 10-2000Hz, 5G
- Shock resistance (functional) : 11ms 1/2 Sine, Peak 20G
- Short Circuit Capability: 10KA, 2ms

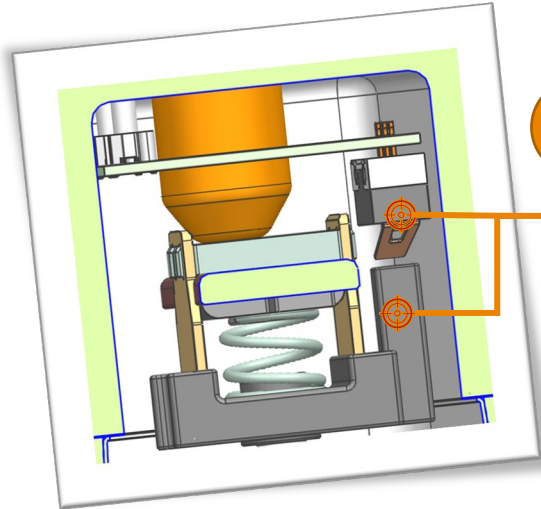
Approvals

- UL (UL60947-4-1)
- CE (IEC60947-4-1)
- TUV (IEC60947-4-1)



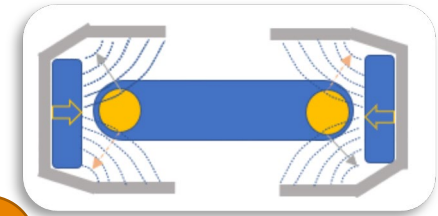
Product Code	Continuous Carry Current	Rated Switch Current	Contact Form	Mounting Position	Coil	Coil Control Mode	Part Number
ECP150BHAADA	500A	150A	Normally Open + N.O. Aux Contact	Bottom	12VDC	Dual coil	2071568-1
ECP150BHBADA		150A	Normally Open + N.O. Aux Contact	Bottom	24VDC	Dual coil	2071568-2
ECP250BHAADA		250A	Normally Open + N.O. Aux Contact	Bottom	12VDC	Dual coil	1-2071568-1
ECP250BHBADA		250A	Normally Open + N.O. Aux Contact	Bottom	24VDC	Dual coil	1-2071568-2
ECP350BHAADA		350A	Normally Open + N.O. Aux Contact	Bottom	12VDC	Dual coil	2-2071568-1
ECP350BHBADA		350A	Normally Open + N.O. Aux Contact	Bottom	24VDC	Dual coil	2-2071568-2

ECP Contactor Product Design Highlight



1 High reliability operate and release synchronicity between aux. contacts and main contacts with mechanical connecting.

6 Up to 12KA high short circuit current capability with additional short circuit ring design on the bridge.

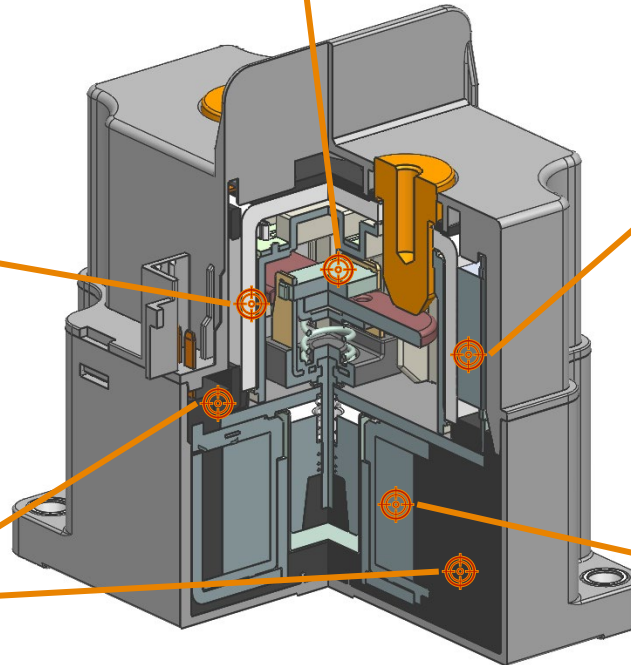


2 High reliability with ceramic sealing technology and hydrogen gas filling for main contacts chamber.

5 Bi-directional contacts with special arc extinguishing magnet design



3 High dielectric strength and enhanced creepage distance fully meeting UL standards, actual value >25mm



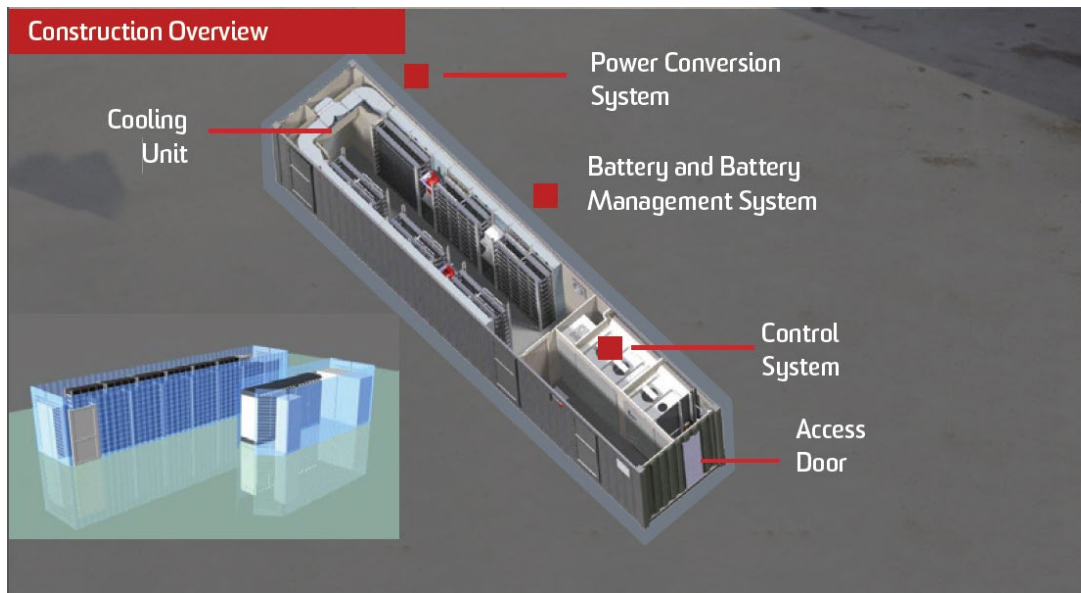
4 Economizer with double coil design

ECP150B_250B_350B Contactor Applications



Battery Energy Storage System

- Main Switch for Battery Management System (BMS)
- Main Switch for Power Conversion System (PCS)



Application Note:

- That same 280Ah battery being discharged at a C Rating of 0.5C will provide **140 Amps** over two hours, and if discharged at a 1C Rate it will provide **280 Amps** for 1 hour. The C Rating of a battery is important to know as with the majority of batteries the available stored energy depends on the speed of the charge and discharge currents.

Super EV Charger / Megawatt Charger

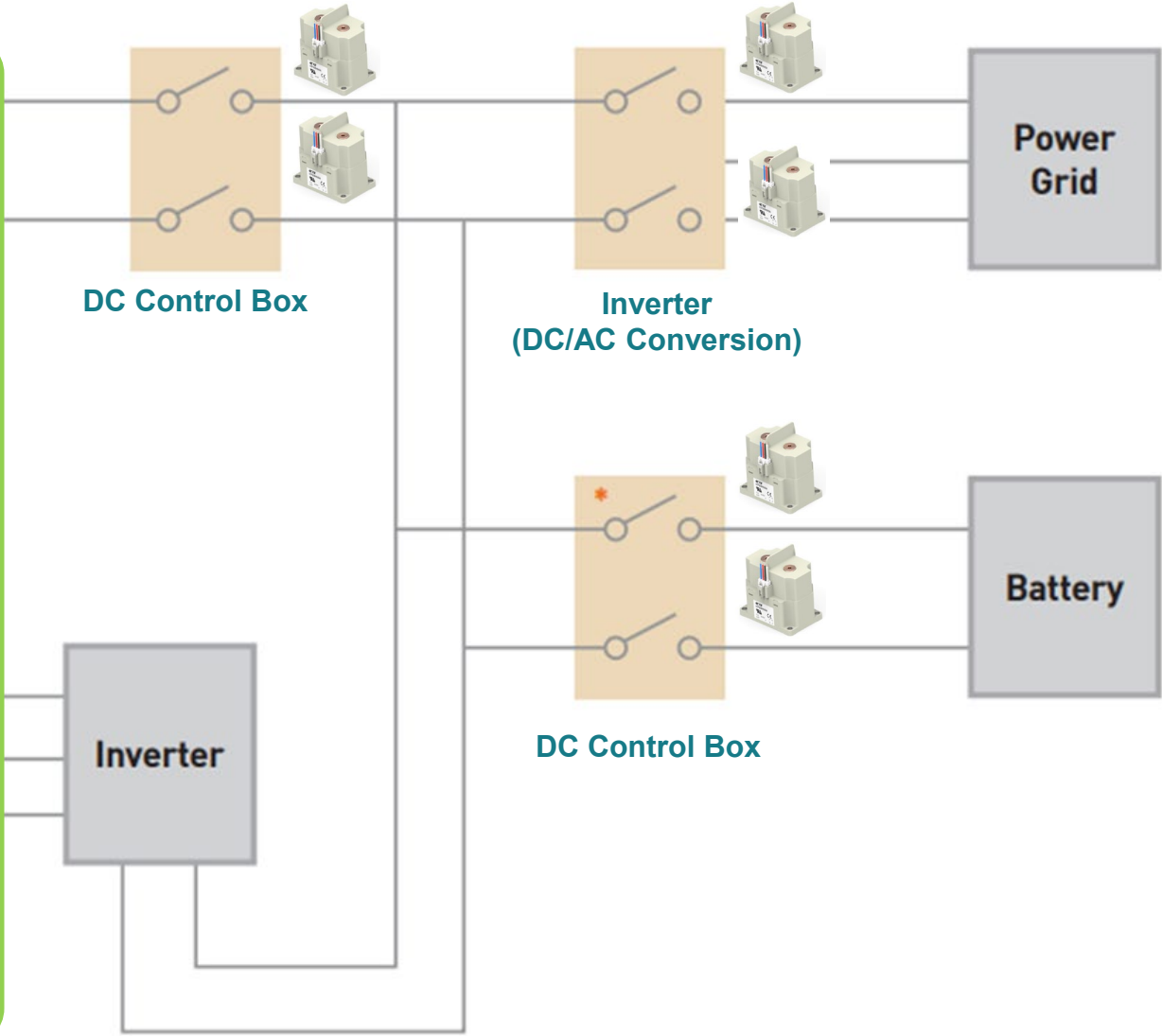
- Main Switch



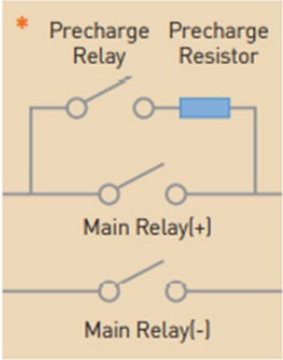
Application Note:

- ECP350B is suitable for **350A@1500VDC** charger and **500A@1000VDC** charger.

ECP Contactor Application Circuit in BESS



Pre-charge Circuit



Resources

Contact TE:

www.te.com.cn



TE Tech
Talks



Newsletter



24x7 Live Chat



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- **Documents**

Please download the documents from te.com including datasheets, 3D models and compliance files and so on.

- **Sample**

Please consult with the related TE Sales/FAE/PM to apply samples offline.

**ANY
CONNECTION
CAN CHANGE
THE WORLD**

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