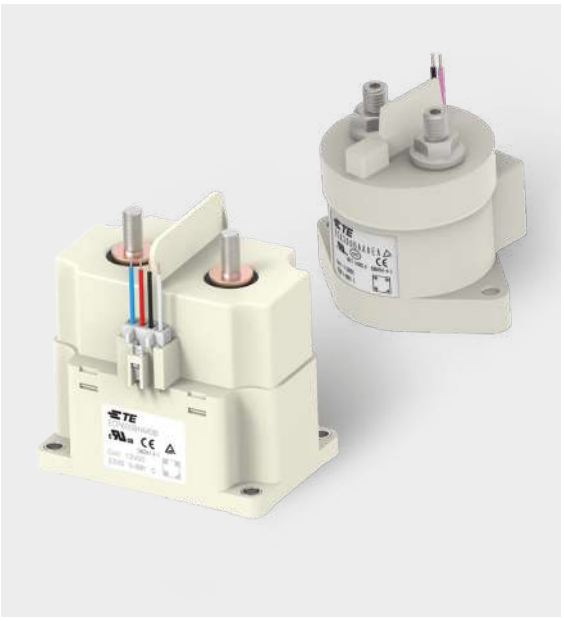


HIGH VOLTAGE DC CONTACTORS

Quick Reference Guide

CHOOSE TE CONNECTIVITY (TE)'S HIGH VOLTAGE DC CONTACTORS, BECAUSE WE OFFER...

Safer and Reliable

These DC contactors are hermetically sealed with ceramic technology making it reliable and safer.

Equipped with Superior Contacts

- Bi-directional contacts providing for bi-directional load
- Nomal open auxiliary contacts for smart monitoring of contact status

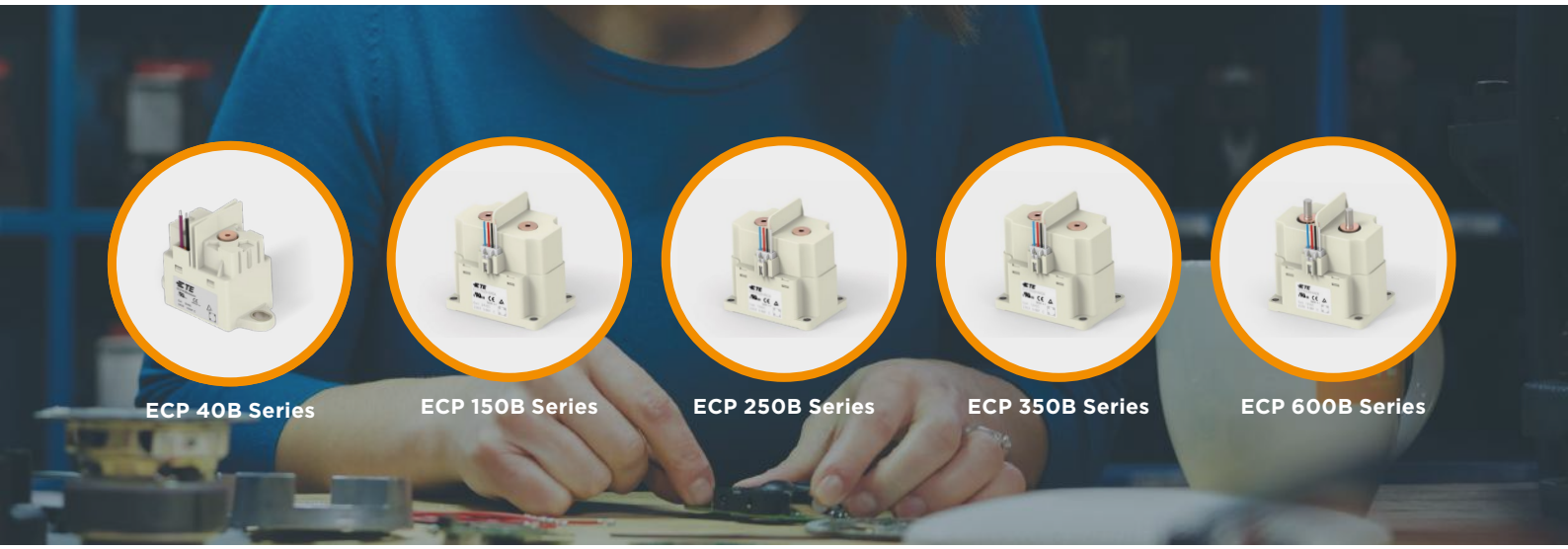
Designed for varied usage

- The variations made available under ECP and ECK series are suitable for multiple high voltage applications
- Suitable for use in battery energy storage systems, photovoltaic inverters, warehouse automation, EV charging, DC converter, battery testing equipment, power distribution units and magawatt chargers

High Voltage DC Contactors ECP Series

ECP series high voltage contactors are designed for battery energy storage systems, photovoltaic inverters, and EV chargers. With the hydrogen gas filling and ceramic hermetically sealing technology, they can achieve excellent art extinguishing, making them safer and reliable, applicable in 1500 VDC voltage system.

Product Offerings:



Key benefits:

- Hermetically sealed with ceramic technology helping ensure high reliability
- Continuous current carrying capability of 800A
- High performance in electrical endurance with maximum breaking capacity up to 1500VDC at 1000A
- Supports bi-directional load
- Dual coil design withholding 5.0W of power
- Equipped with auxiliary contact and smart monitoring for main contact status
- Complies with DC-1 utilization category in IEC60947-4

Focus Applications:

- Battery energy storage system
- Photovoltaic inverters
- Super EV charger
- Magawatt charger

Technical Information

Relay Type		ECP 40B	ECP 150B	ECP 250B	ECP 350B	ECP 600B
Features		• Gas filled, ceramic hermetically sealed • Maximum breaking voltage up to 1500 VDC • Supports bi-directional load • Low coil power of 3 W • Comply with DC-1 acc. to IEC60947-4-1	• Gas filled, ceramic hermetically sealed • Maximum breaking capacity up to 1500 VDC at 1000 A • Supports bi-directional load • Dual coil design with hold power 5.0 W • Comply with DC-1 acc. to IEC60947-4-1 • Equipped with auxiliary contact			
Contacts						
Contact arrangement		1 Form X (SPST-NO-DM)				
Continuous carry current DC [A]		40 A	350 A	500 A	500 A	800 A
Rated current [A]		40 A	150 A	250 A	350 A	600 A
Max. switching voltage [V]		1500 VDC				
Main contact polarity		non-polarity				
Mechanical life		Upto 200,000 cycles				
Auxiliary Contact Data						
Contact form		No auxiliary contact	1 Form A (SPST-NO)			
Contact current, Max			2 A, 24VDC			
Contact current, Min			10 mA, 24 VDC			
Coil Data						
Coil type		Single Coil	Dual Coil			
Coil voltages DC [V]		12, 24	12, 24			
Steady coil power [W] or Startup/ Holding power [W/W]		3	50 / 5			
Max operate voltage DC [V]		16, 32	16, 32			
Min release voltage DC [V]		1, 2	1.2, 2.4			
Initial Dielectric Strength						
Breakdown voltage [Vrms]	**Opened main contacts**	5400 Vrms				
	Main contacts-coil					
	Main contact-aux contacts					
General Data						
Ambient temperature [°C]		-40°C to 85°C				
Termination		Screw				
Mounting		Panel mount				
Certifications		UL, TUV, CE				
Learn More		DATA SHEET	DATA SHEET	DATA SHEET	DATA SHEET	DATA SHEET

High Voltage DC Contactors ECK Series

The ECK series is designed for control in new energy applications. The ECK product line is an advanced and reliable solution for EV charging stations, solar inverters, battery energy storage systems, automated-guided vehicles (AGV) and e-Forklifts, they provide for bi-directional loads, With the hydrogen gas filling and ceramic hermetically sealing technology, they can achieve excellent art extinguishing, making them safer and reliable. These contactors can be used in 1000VDC system applications.

Product Offerings:

Key benefits:

- Hermetically sealed with ceramic technology
- Switching voltage up to 1000VDC
- Equipped with optional auxiliary contact and smart monitoring for main contact status
- Complies with DC-1 utilization category
- Meets the system upgrade requirement
- High performance in electrical endurance making it suitable for high voltage applications
- Equipped with bi-directional contacts that supports bi-directional load
- CE approved, serving as a global solution for customer projects

Focus Applications:

- Electric Forklifts
- EV charging
- DC converter
- Battery Test Equipment
- Power Distribution Unit

Technical Information

Relay Type	ECK 50B	ECK 100B	ECK 150B	ECK 200B	ECK 250B	ECK 150	ECK 200	ECK 250
Features	• Gas filled, ceramic hermitically sealed • Supports bi-directional load • Maximum breaking voltage upto 1000 VDC • Auxiliary contact optional • Comply with DC-1 acc. to IEC60947-1	• Gas filled, ceramic hermitically sealed • Supports bi-directional load • Maximum breaking voltage upto 1000 VDC • Auxiliary contact optional • Comply with DC-1 acc. to IEC60947-1	• Gas filled, ceramic hermetically sealed • Supports bi-directional load • Built-in economizer, hold power of 1.7 W • Maximum DC breaking current at 1500 A • Auxiliary contact optional • Comply with DC-1 acc. to IEC60947-4-1	• Gas filled, ceramic hermetically sealed • Supports bi-directional load • Built-in economizer, hold power of 1.7 W • Maximum DC breaking current at 2000 A • Auxiliary contact optional • Comply with DC-1 acc. to IEC60947-4-1	• Gas filled, ceramic hermetically sealed • Supports bi-directional load • Built-in economizer, hold power of 1.7 W • Maximum DC breaking current at 2000 A • Auxiliary contact optional • Comply with DC-1 acc. to IEC60947-4-1	• Gas filled, ceramic hermetically sealed • Built-in economizer, hold power 1.7 W • Maximum DC breaking current at 1500 A • Maximum breaking voltage upto 1000 VDC • Auxiliary contact optional • Comply with DC-1 acc. to IEC60947-4-1	• Gas filled, ceramic hermetically sealed • Built-in economizer, hold power 1.7 W • Maximum DC breaking current at 2000 A • Maximum breaking voltage upto 1000 VDC • Auxiliary contact optional • Comply with DC-1 acc. to IEC60947-4-1	• Gas filled, ceramic hermetically sealed • Built-in economizer, hold power 1.7 W • Maximum DC breaking current at 2000 A • Maximum breaking voltage upto 1000 VDC • Auxiliary contact optional • Comply with DC-1 acc. to IEC60947-4-1
Contacts								
Contact arrangement	1 Form X (SPST-NO-DM)							
Continuous carry current DC [A]	100 A	150 A	200 A	500 A	500 A	200 A	500 A	500A
Rated current [A]	50 A	100 A	150 A	200 A	250 A	150 A	200 A	250A
Max. switching voltage [V]	1000 VDC							
Contact resistance max [mΩ]	1.2 mΩ (50 A, after 1min)	0.8 mΩ (100 A, after 1min)	0.4 mΩ (150 A, after 1min)	0.4 mΩ (200 A, after 1min)	0.4 mΩ (250 A, after 1min)	0.4 mΩ (150 A, after 1min)	0.4 mΩ (200 A, after 1min)	0.4 mΩ (250A, after 1min)
Main contact polarity	non-polarity					polarity		
Mechanical life	Upto 200,000 cycles		Upto 500,000 cycles					
Auxiliary Contact Data								
Contact form	1 Form A (SPST-NO)							
Contact current, Max	2A, 30VDC							
Contact current, Min	10 mA, 24 VDC							
Coil Data								
Coil type	Single Coil		PWM control					
Coil voltages DC [V]	12, 24, 48		9 - 36					
Steady coil power [W] or Startup/ Holding power [W/W]	5.5, 6, 6		43.2 / 1.7					
Max operate voltage DC [V]	16, 32, 63.8		36					
Min release voltage DC [V]	10% Un		3					
Initial Dielectric Strength								
Breakdown voltage [Vrms] – **Opened main contacts**	4300 Vrms							
Breakdown voltage [Vrms] – **Main contacts-coil**	4300 Vrms							
Breakdown voltage [Vrms] – **Main contact-aux contacts**	4300 Vrms							
General Data								
Ambient temperature [°C]	-40°C to 85°C							
Termination	Screw							
Mounting	Panel mount							
Certifications	UL, TUV, CE, CCC							
Learn More	DATA SHEET	DATA SHEET	DATA SHEET	DATA SHEET	DATA SHEET	DATA SHEET	DATA SHEET	DATA SHEET

High Voltage DC Contactors Part List

Product Name	Part Number	Description
ECP 40B series	2071591-1	ECP40BAAAAA
	2071591-2	ECP40BABAAA
ECP 600B series	1-2071582-1	ECP600BHAADB
	1-2071582-2	ECP600BHBADB
ECP 150B series	2071568-1	ECP150BHAADA
	2071568-2	ECP150BHBADA
ECP 250B series	1-2071568-1	ECP250BHAADA
	1-2071568-2	ECP250BHBADA
ECP 350B series	2-2071568-1	ECP350BHAADA
	2-2071568-2	ECP350BHBADA

Product Name	Part Number	Description
ECK 100B series	2071583-1	ECK100BH4AAA
	2071583-2	ECK100BH5AAA
	2071583-3	ECK100BH6AAA
	2071583-4	ECK100BA4AAA
	2071583-5	ECK100BA5AAA
	2071583-6	ECK100BA6AAA
ECK 50B series	2071584-1	ECK50BH4AAA
	2071584-2	ECK50BH5AAA
	2071584-3	ECK50BH6AAA
	2071584-4	ECK50BA4AAA
	2071584-5	ECK50BA5AAA
	2071584-6	ECK50BA6AAA
ECK 150B series	2071576-1	ECK150BAAAEA
	2071576-2	ECK150BHAAEA
ECK 200B series	1-2071576-1	ECK200BAAAEA
	1-2071576-2	ECK200BHAAEA
ECK 250B series	2-2071576-1	ECK250BAAAEA
	2-2071576-2	ECK250BHAAEA
ECK 150 series	2071567-1	ECK150HAAPA
	2071567-2	ECK150AAAPA
ECK 200 series	1-2071567-1	ECK200HAAPA
	1-2071567-2	ECK200AAAPA
ECK 250 series	2-2071567-1	ECK250HAAPA
ECK 250 series	2-2071567-2	ECK250AAAPA

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Optimizing Operations with Warehouse Automation

Gas filling in sealed DC contactor white paper

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TE Connectivity is a global industrial technology leader creating a safer, sustainable, productive, and connected future. Our broad range of connectivity and sensor solutions, highly reliable in the harshest environments, enable advancements in transportation, industrial applications, medical technology, energy, data communications, and the home. With more than 85,000 employees, including over 8,000 engineers, working alongside customers in approximately 140 countries, TE ensures that EVERY CONNECTION COUNTS. Learn more at LinkedIn, Facebook, WeChat and Twitter.

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