

HIGH VOLTAGE CONTACTORS ECK200 SERIES

INTRODUCTION

ECK200 series high-voltage DC contactor is designed for control in new energy applications. The ECK200 product line is an innovative and reliable solution for EV charging stations, solar inverters, battery energy storage systems, automated-guided vehicles (AGV) and e-Forklifts. ECK200 is hermetically sealed with ceramic technology and enable high switching capability under 1000VDC. The built-in PWM module design makes it smaller to save space.



FEATURES

- Hermetically sealed with ceramic technology
- Designed with built-in economizer, hold power 1.7W
- Maximum DC breaking current at 2000A
- Maximum DC breaking voltage at 1000VDC
- Auxiliary contact version available
- Comply with DC-1 utilization category in IEC60947-4-1

APPLICATION

• DC Charging station, Electric vehicle, AGV, Electric forklift, Energy storage systems, Photovoltaic inverter

APPROVALS

• UL,CCC, CE - To be added.

High Voltage Contactors ECK200 Series

Contact Data

Continuous carry current	250A
Rated switching current	200A
Max. Switching voltage	1000VDC
Contact arrangement	1 Form X (SPST-NO-DM)
Initial voltage drop	≤ 0.4mΩ (200A, after 1 minute)
Operate time, max. (At 23°C)	30ms
Release time, max. (At 23°C)	10ms
Mechanical life	500,000 cycles

Contact Ratings

Load	Cycles
200A, 450VDC, make/break, resistive	6000
200A, 1000VDC, make/ break, resistive	1000
600A making, resistive	6000

Other Data

Terminal type

Weight

Material compliance:EU RoHS/ELV, China RoHS, REACH,				
Halogen content refer to the product Compliance Support				
Center at www.te.com/customersupport/rohssupportcenter				
Ambient temperature	-40°C to 85°C			
Vibration resistance (functional)	Sine, 10-2000Hz, 4.5G			
Charles and the second continue D	11ms 1/2 Sine, Peak 20G			

Packaging/Unit Coil versions, DC Coil

Shock resistance (functional)

Coil Code	Nominal Voltage	Nominal Operate Current	Max Starting Current	Operate Voltage	Maximum Operate Voltage	Release Voltage	Coil Power
А	9~36VDC	0.13A@12VDC 0.07A@24VDC	3.6A	≤9VDC	36VDC	≥3VDC	Start: 43.2W Hold: 1.7W

Screw for contact,

wire for coil

380g

Box/24 pcs.

All figures are given for coil without pre-energization, at ambient temperature +23°C.

CE Specification (IEC60947-4-1)

Rated Operational Current	Utilization Category	Switching Cycles
100A	DC-1	6,050

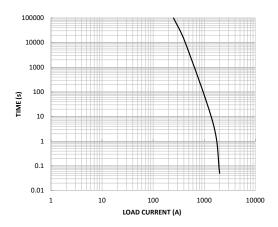
Auxiliary Contact Data

Contact form	1 Form A (SPST-NO)
Contact current, Max.	2A, 30VDC
Contact current, Min.	10mA, 8VDC
Contact resistance, Max.	0.4Ω @ 30VDC

Insulation Data

Dielectric Withstand Voltage (leakage current <1mA)	
Between open main contacts	2500Vrms
Between main contact and coil	3500Vrms
Between main contacts and aux	2500Vrms
contacts Between open aux contacts	750Vrms
Initial Insulation Resistance @ 1000VDC	
Between insulated elements	> 1x10 ⁹ Ω

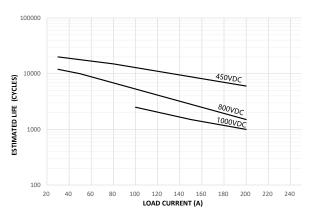
Current Carrying Capability Curve



NOT

 The data is measured at the environment temperature 85°C with cross section area of wire 150mm² min.

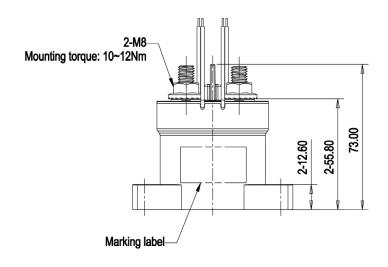
Estimated Make & Break Power Switching Ratings

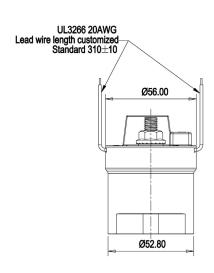


NOTE

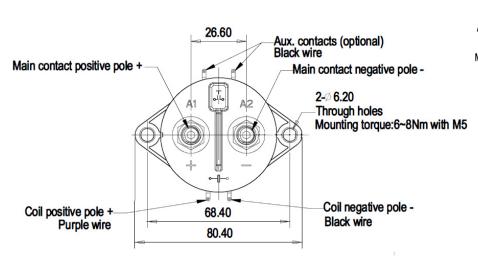
- The curve was created based on extrapolated data with few typical points, users are recommended to confirm performance in actual application.
- The typical data were estimated with resistive load at room temperature.

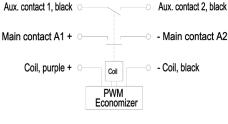
Dimension



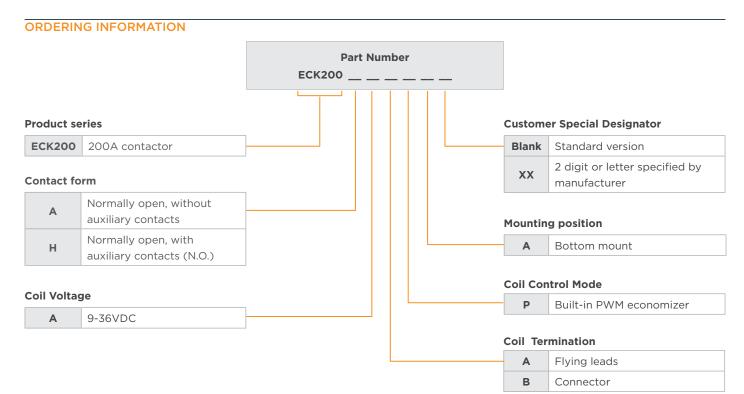


Circuit Diagram





General Tolerance			
Dimension Tolerance			
<10	±0.3		
10 ~ 50	±0.6		
>50	±1.0		



PRODUCT PART NUMBER TABLE

Product Code	Contact Form	Mounting Position	Coil	Coil Control Mode	Part Number
ECK200AAAPA	Normally open, without auxiliary contacts			Built-in PWM	1-2071567-2
ЕСК200НААРА	Normally open, with auxiliary contacts (N.O.)	Bottom 9-36VDC	economizer	1-2071567-1	

Note: Only typical part numbers are listed above, other types please contact TE engineer.

CAUTIONS

- Do not use the product when product is dropped or broken.
- Avoid mounting the contactor main contact terminals in downward direction, otherwise the contactor performance will not be guaranteed.
- Please use correctly according to the mark on the surface of the product. Main contact terminals and coil wires have polarity difference. When the connection polarity is reversed, the electrical characteristics promised in the datasheet will not be guaranteed.
- · Please drive the product coil through the fast rising (step type power supply mode), otherwise the contactors will not operate.
- If using with diodes for coil, it may lead to a decline in product switching performance.
- Please consider electromagnetic interference when using the product.
- Screw locking torque of main contact terminals should be 10-12 N·m for M8 screw. Screw locking torque of product bottom mounting should be 6-8 N·m for M5 screw.

te.com

©2022 TE Connectivity. All Rights Reserved.

TE Connectivity, TE Connectivity (logo) and Every Connection Counts are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will

TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale,

use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

08/22 T.

