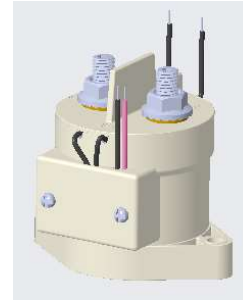


High Voltage Contactors ECK250B Series

- ☐ Hermetically sealed with ceramic technology
- ☐ Allow bi-directional load for main contact
- ☐ 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

Typical applications

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



Approvals

UL,CCC,TUV,CE – in progress

Main Contact Data

Contact Current	500A
Max. Switching Voltage	1000VDC
Contact Arrangement	1 Form X (SPST-NO-DM)
Initial Voltage Drop	≤ 0.4mΩ (250A, after 1 minute)
Operate Time, max. (at 23°C)	30ms
Release Time, max. (at 23°C)	10ms
Mechanical Life	500,000 cycles

Note: For 500Amp application, recommend >202mm² conductor size and please users select the appropriate connection conductor cross section or active cooling to control the temperature. Keep main contact terminals 130°C max for long-term continuous carry, 170°C max for two hours.

Contact Ratings

Load	Cycles
250A, 450VDC, make/break, resistive	>6,000
250A, 800VDC, make/break, resistive	>1,000
200A, 1000VDC, make/break, resistive	>1,000
250A, 1000VDC, make/break, resistive	>100
300A, 450VDC, make/break, resistive	>3,000

Note: Only typical rating are listed here, please consult with TE for other ratings.

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.	100mA, 8VDC
Contact Resistance, Max.	0.4Ω @ 30VDC

Coil versions, DC coil

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

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

Insulation Data

Dielectric Withstand Voltage (leakage current <1mA)

between open main contacts	3,500Vrms
between main contact and coil	3,500Vrms
between main contacts and aux contacts	3,500Vrms
between open aux contacts	750Vrms

Initial Insulation Resistance @ 1000VDC

between insulated elements	> 1x10 ⁹ Ω
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Other Data

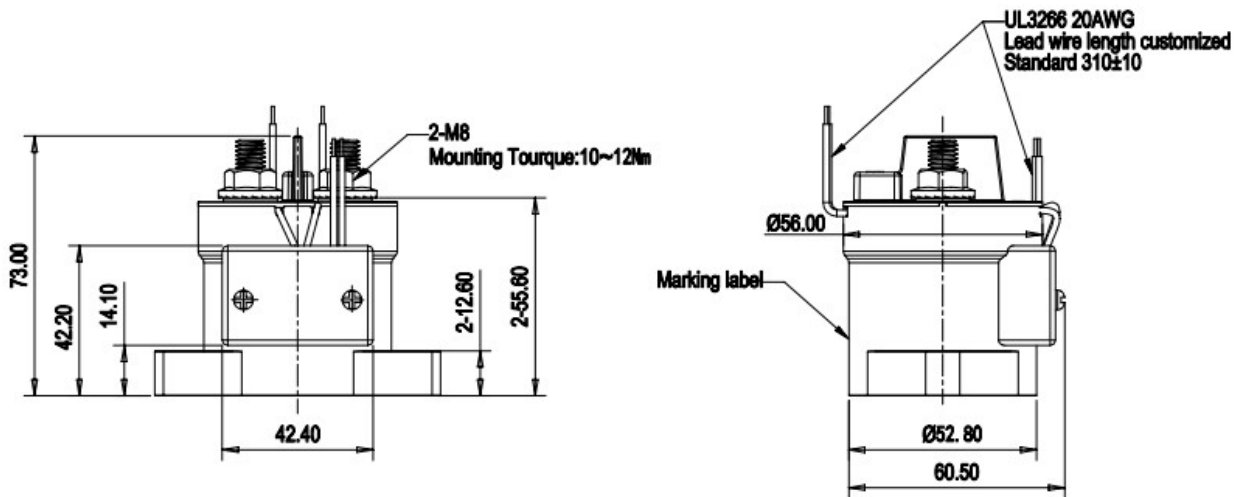
Material Compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the product Compliance Support Center at www.te.com/customer-support/rohssupportcenter

Ambient Temperature	-40°C to 85°C
Vibration Resistance (functional)	Sine, 10-2000Hz, 6G
Shock Resistance (functional)	11ms 1/2 Sine, Peak 20G
Terminal Type	Screw for contact, wire for coil
Weight	380g
Packaging/unit	box/24 pcs.

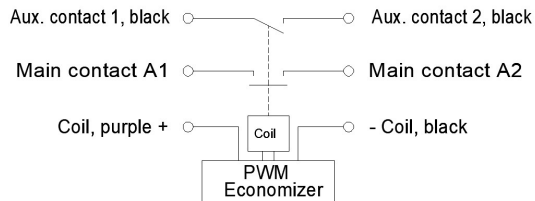
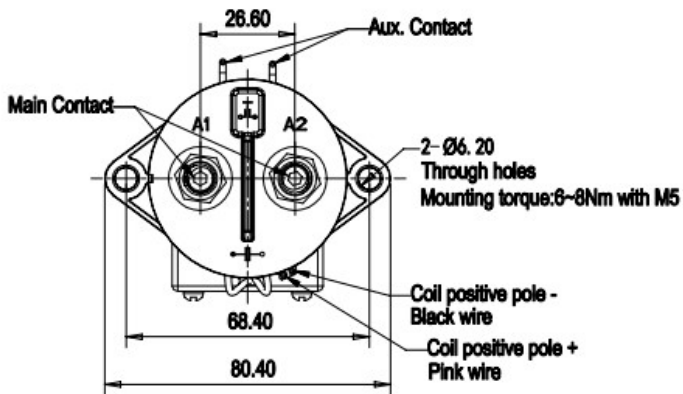
High Voltage Contactors ECK250B Series

Dimension

Unit: mm



CIRCUIT DIAGRAM



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

High Voltage Contactors ECK250B Series

Product Nomenclature

ECK250B H A A E A ,XX

Product series

ECK250B = ECK250B series, bi-directional

Contact form

A = Normally Open, without auxiliary contacts

H = Normally Open + Auxiliary Contact (N.O)

Coil Voltage

A = 9-36Vdc

Coil Termination

A = Flying leads

Coil Control Mode

E = External built-in PWM economizer

Mounting position

A = Bottom mount

Customer Special Designator

Blank = Standard version

XX = 2 digit or letter specified by manufacturer (E.g. wire can be terminated with connector, wire length can be customized.)

Product Part Number Table

Product Code	Contact Form	Mounting Position	Coil	Coil Control Mode
ECK250BAAAEA	Normally Open	Bottom	9-36VDC	External Built-in PWM economizer
ECK250BHAAEA	Normally Open + Auxiliary Contact (N.O)			

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

Cautions

1. Do not use the product when product is dropped or broken.
2. Avoid mounting the contactor with the main contact screw terminals in downward direction, otherwise the contactor performance will not be guaranteed.
3. Please drive the product coil through the fast rising (step type power supply mode), otherwise the contactors will not operate.
4. The product has PWM economizer built in for the coil drive, there is diode inside.
5. Please consider electromagnetic interference when using the product.
6. 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.
7. Suitable for applications under Uimp 6kV