

## High Voltage Contactors IHV250 Series

- Hermetically sealed. Operates in explosive/harsh environments without oxidation or contamination of contacts, including long periods of non-operation
- Inert gases in contact chamber, and arc-blow magnet, allow contact works in 900VDC condition
- Optional auxiliary contact for easy monitoring of power contact position
- Built-in coil economizer, only 1.7W hold power @ 12VDC and it limits back EMF to 0V. Models requiring external economizer also available
- Designed accordance to AIAG QS9000
- Not position sensitive, can be mounted in any orientation
- RoHS compliance

### Typical applications

DC Charging, Solar Inverter, Energy Store Station, Test Equipment  
Battery Management System, Electric Forklift, AGV, Rail Transit  
Motor Control Circuit Isolation, Circuit Protection and Safety in Industrial Machinery

Approvals  
cULus E58304

### Main Contact Data

Contact arrangement	1 Form X (SPST-NO-DM)
Switching voltage (Max)	12-900VDC <sup>1)</sup>
Rated current	250A (Continuous)
Break current (Max)	2500A, 450VDC
Initial voltage drop	< 60mV (250A after 1 minute)
Operate time max.	25ms
Operate bounce time max.	7ms
Release time, (Include arc time), under 2,500A, Max.	12ms
Mechanical life	Without Aux. contact = 500,000 cycles With Aux. contact = 300,000 cycles

### Contact ratings

Load	Cycles
250A, +450VDC, make / break	3,000
250A, +750VDC <sup>1)</sup> , make / break	500 <sup>2)</sup>
250A, -450VDC, make / break	50 <sup>2)</sup>
2500A, +450VDC, break only	3 <sup>2)</sup>
650A, make only	26

1) Please contact TE engineers for above 450VDC high voltage switching application.

2) Without auxiliary contact.

### Auxiliary Contact Data

Contact Form	1 Form A (SPST-NO)
Contact Current, Max.	2A, 30VDC / 3A, 125VAC
Contact Current, Min.	100mA, 8VDC
Contact Resistance, Max.	0.5Ω @ 30VDC / 0.15Ω @ 125VAC

### Coil versions, DC coil

Nominal Voltage	Operate Voltage	Maximum Voltage	Hold Voltage	Release Voltage	Inrush Current	Holding Current	Inrush Time
	Max.		(Min.)		(Max.)	(Avg.)	(Max.)
9-36VDC	9VDC	36VDC	7.5VDC	6VDC	3.8A	0.13A @ 12V; 0.07A @ 24V	130ms

All figures are given for coil without pre-energization, at ambient temperature +20°C



### Insulation Data

Dielectric withstand voltage (leakage current <1mA)	
between open contacts	2,200Vrms
between contact and coil	2,200Vrms
Initial resistance @ 500VDC	
between open contacts	> 1×10 <sup>8</sup> Ω
between contact and coil	> 1×10 <sup>8</sup> Ω

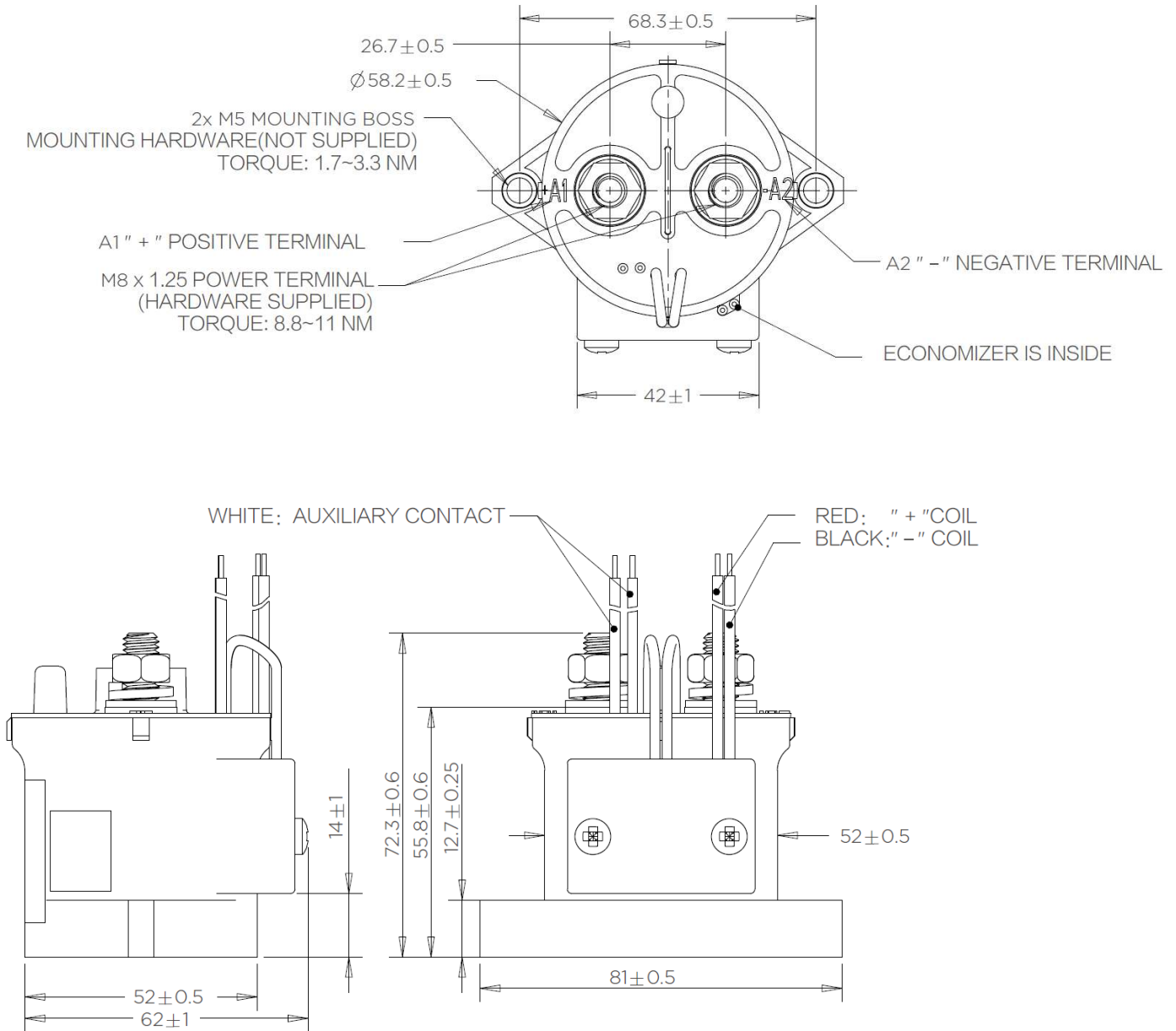
### Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at [www.te.com/customer-support/rohssupportcenter](http://www.te.com/customer-support/rohssupportcenter)

Ambient temperature	
DC coil	-40°C to 85°C
Vibration resistance (functional),	Sine, 80 – 2000Hz, 18G
Shock resistance (functional)	11ms 1/2 Sine, Peak 20G
Terminal type	Screw for contact, wire for coil
Weight	About 430g
Packaging/unit	20pcs/carton

**High Voltage Contactors IHV250 Series** (Continued)

**Dimension**



Tolerances are shown for reference purposes only

**High Voltage Contactors IHV250 Series** (Continued)

<b>Product code structure</b>	IHV250	A	A	A	N	A	XX
<b>Product series</b> IHV250 = 250 Amp, 12 - 900VDC Contactor							
<b>Contact form</b> A = 1 Normally Open H = 1 Normally Open + NO Aux Contacts							
<b>Coil Voltage</b> A = 12~24VDC (Coil with the Economizer)							
<b>Coil Wire Length</b> A = 15.3 inch / 390mm							
<b>Coil Terminal Connection</b> N = None							
<b>Mounting &amp; Power Terminal</b> A = Bottom Mount & Male 10mm X M8 Threaded Terminal							
<b>Customer Special Designator</b> XX = 2 Digits or Letters Specified by Manufacturer							

Product code	Contact form	Mounting position	Coil	Part number
IHV250AAANA	Normally Open	Bottom	12-24VDC	2071411-1
IHV250HAANA	Normally Open + NO Aux Contact			2-2071411-1