IHV200 SERIES CONTACTORS

- Designed to be the smallest, lightest weight, lowest cost sealed contactor in the industry with the high current rating (carrying 500A above, break 320VDC, 2000A)
- Built-in coil economizer — only 1.7W hold power @ 12VDC and it limits back EMF to 0V. Models requiring external economizer also available
- Optional auxiliary contact for easy monitoring of power contact position
- Hermetically sealed— intrinsically safe, operates in explosive/harsh environments with no oxidation or contamination of coil or contacts, during long periods of non-operation
- Designed according to AIAG QS9000
- RoHS and REACH compliance

Applications

- DC Charging, Solar Inverter, Energy Store Station, Test Equipment;
- Power Management System, Rail Transit,
- Motor Control Circuit Isolation, Circuit Protection and Safety in Industrial Machinery;

Approval

cULus E208033

Coil Operating Voltage (Valid Over Temperature Range) [1]			
Voltage (Will Operate)	12-24VDC	48-72VDC	72-95VDC
Voltage (Max.)	36VDC	72VDC	95VDC
Pickup (Close) Voltage Max.	9VDC	32VDC	48VDC
Hold Voltage (Min.)	7.5VDC	22VDC	34VDC
Dropout (Open) Voltage (Min.)	6VDC	18VDC	27VDC
Inrush Current (Max.)	3.8A	1.3A	0.7A
Holding Current (Avg.)	0.13A@12V 0.07A@24V	0.03A@48V	0.02A@72V
Inrush Time (Max.)	130mS	130mS	130mS
Insulation Data			
Dielectric Withstand Voltage 2,200 Vrms @ sea level (leakage <1mA)			
Insulation Resistance, Terminal to Terminal / Terminals to Coil			
When New	100 megohms, min. @ 500Vdc		
At End of Life	50 megohms, min. @ 500Vdc		

1) The coil data applies to economizer versions only. For non-economizer versions, contact TE for parameters necessary to design an external economizer circuit.

High Voltage DC Contactors

Main Contact Data

Contact Form	SPST-NO-DM (1 Form X)
Rated Operating Voltage	12 - 900VDC
Load Current	Continuous — 200A (68 mm^2 conductor) 500A (202 mm^2 conductor) Current rating @85℃
Inintial Voltage Drop	< 0.2mΩ (200A after 1 minute)
Operate time @25°C	Close (includes bounce), Max.25ms Bounce (after close only), Max. 7 ms Release (includes arcing), Max @ 2000A — 12 ms
Release Time	<10mS
Mechanical Life	1000,000 cycles

Hot Switching Performance (Polarity Sensitive) —

See Below Chart For Estimated Power Switching Ratings

Auxiliary Contact Data

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

Environmental Data

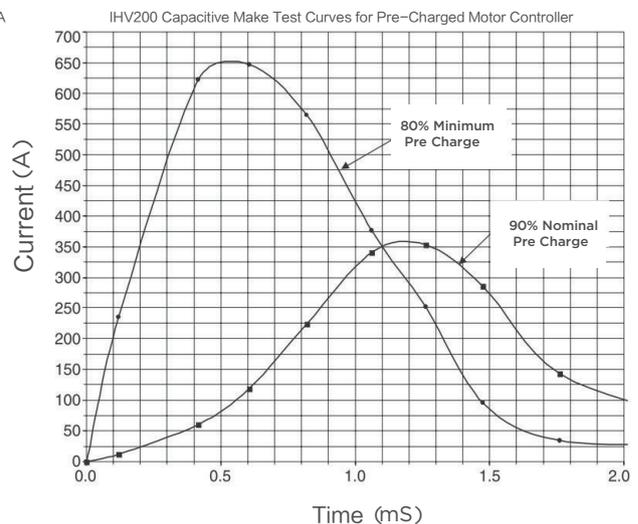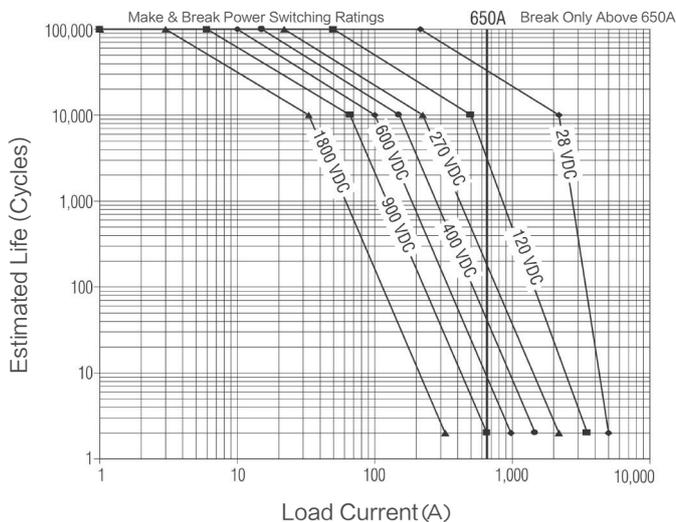Shock, 11ms 1/2 Sine, Operating — 20G Peak

Vibration, Sine, 80 - 2000Hz — 20G Peak

Operating Ambient Temperature: -40°C to +85°C

Weight : about 430g

Contact Ratings

Estimated Make & Break Power Switching Ratings

Notes（Upper left）:

1) For resistive loads with 300uH maximum inductance. Consult factory for inductive loads.

2) Estimates based on extrapolated data. User is encouraged to confirm performance in application

3) End of life when dielectric strength between terminals falls below 50 MΩ @ 500VDC.

4) The maximum make current is 650A to avoid contact welding.

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

High Voltage DC Contactors

Electrical Load Life for Rating for Typical EV Application （Upper right）

Make/Break Life Capacitive & Resistive Load at 320VDC (1)(2)

@90% capacitive pre-charge (make only) see chart below	Cycles	50,000
@80% capacitive pre-charge (make only) see chart below	Cycles	50
@200A make/break(2 consecutive, reverse polarity) (1)	Cycles	12
2,000 (Break only) (1)	Cycles	1*

(1) Resistive load includes inductance L=25uH. Load @2500A tested @200uH.

(2) Life based on projected Weibull Life with 95% reliability

* Does not meet dielectric and IR after test.

Naming Rules for Product Number

IHV 20 0   A   A   A   N   A   XX

Product Series
IHV200 = 200 Amp, 12 - 900VDC Contactor

Contact form
A = Normally Open
H = Normally Open + NO Aux Contacts

Coil Voltage
A = 12~24VDC, D = 48 ~ 72VDC, J = 72VDC (Economizer Attached)
1 = 12~24VDC, 2 = 48 ~ 72VDC, 3 = 72VDC (Requires external economizer)

Coil Wire Length
A = 15.3 inch / 390mm

Coil Terminal Connection
N = NONE

Mounting & Power Terminal
A = Bottom Mount & Male 10mm X M8 Threaded Terminal

Customer Special Designator
XX = 2 Digit or Letter Specified by Manufacture Factory

Dimensions (Unit: mm)
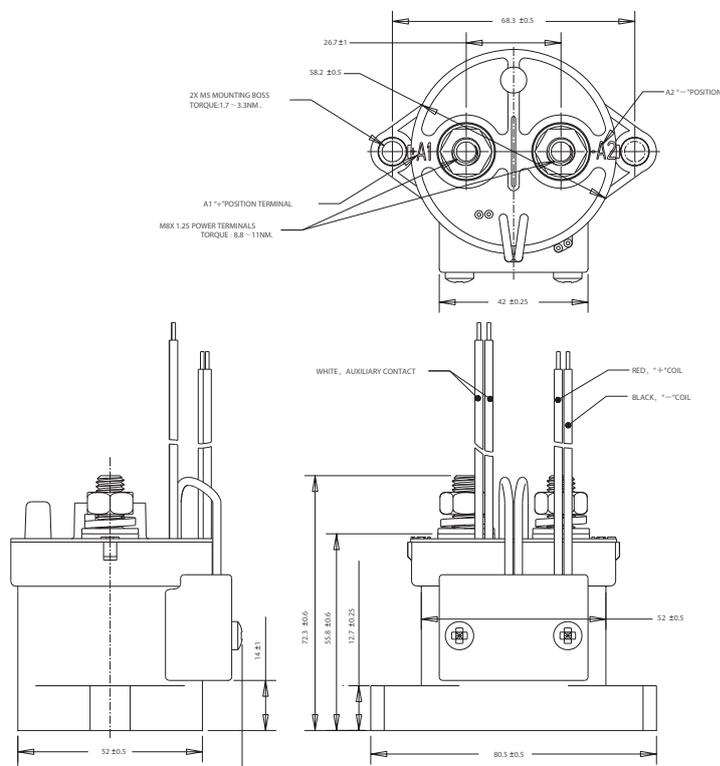
Note: The tolerance for reference only.

PART NUMBER	PRODUCT NAME	COIL VOLTAGE	AUX. CONTACT	ECONOMIZER
2071410-1	IHV200AAANA	12 - 24VDC	NONE	ATTACHED
2071410-2	IHV200ADANA	48 - 72VDC	NONE	ATTACHED
2071410-3	IHV200AJANA	72VDC	NONE	ATTACHED
1-2071410-1	IHV200A1ANA	12 - 24VDC	NONE	NONE
1-2071410-2	IHV200A2ANA	48 - 72VDC	NONE	NONE
1-2071410-3	IHV200A3ANA	72VDC	NONE	NONE
2-2071410-1	IHV200HAANA	12 - 24VDC	NORMALLY OPEN	ATTACHED
2-2071410-2	IHV200HDANA	48 - 72VDC	NORMALLY OPEN	ATTACHED
2-2071410-3	IHV200HJANA	72VDC	NORMALLY OPEN	ATTACHED
3-2071410-1	IHV200H1ANA	12 - 24VDC	NORMALLY OPEN	NONE
3-2071410-2	IHV200H2ANA	48 - 72VDC	NORMALLY OPEN	NONE
3-2071410-3	IHV200H3ANA	72VDC	NORMALLY OPEN	NONE