

Applications

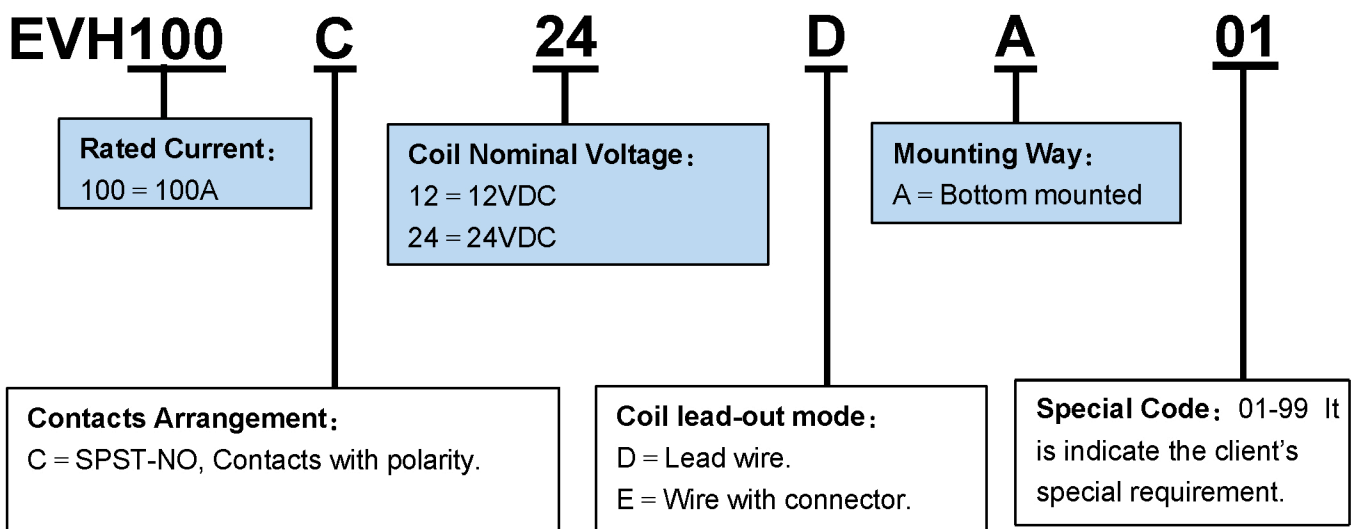
1. Industry machinery power/motor control, Circuit insulation, Circuit protection and safety.
2. Vehicle battery distribution and back-up.
3. Inverter power control.
4. Power charging systems control.
5. Solar power plant.
6. Other DC high-voltage power control.



Product Factors

1. **Ceramic sealed** with brazing technology, contacts are sealed inside of contactor room, avoid arc leaking then assurance good safety.
2. **Hydrogen protection**, filled with hydrogen gas inside of contactor room which could protect the contacts from oxidation or melting loss, that could assurance **contact resistance keep lower and more steady**. Contacts part is meet IP67 level of protection.
3. **Carry current 40A long time at 85°C**.
4. **Insulation Resistance** reach 1000M Ω (at 1000VDC),
Insulation Strength between contacts and coil reach 4000VAC, it is meet IEC 60664-1 standard.

Part Number System



Note: The different connectors can be installed on the coil according to the client's requirement.

Coil Parameters

Nominal Voltage	Pick-up Voltage (at 20°C)	Drop-out Voltage (at 20°C)	Coil power consumption	Coil Polar
12Vdc (Us)	Us75% Max.	Us10% Min.	6W	√
24Vdc (Us)	Us75% Max.	Us10% Min.	6W	√

Functional Data

Electric Types	Type		Contactors
	Contact Arrangement		SPST-NO-DM
	Current Type		DC
	Media type when cutting-off		Inactive gas
	Operation method		Electric driven
	Rating operation system		Uninterrupted Working System
Contact Parameters	Contact Polar		Polarity
	Rating Voltage		12-1500Vdc
	Rating Current		1-150A (▲2)
	Current Endurance		300A 600S 600A 120S
	Break Current, Max, only 1 time		1500A (1000Vdc, more than 1 time)
	Contact Resistance (initial)		0.2mΩ Max. (at 40A)
	Operate Time (at 20°C)		30ms Max. (▲3)
	Release Time (at 20°C)		10ms Max. (▲4)
Life	Mechanical Life		2×10 ⁵ cycles (▲6)
	Electrical Life (▲2,▲5)		Graph-1
Dielectric Parameters	Insulation Resistance		Initial state: 1000MΩ Min. (▲1)
	Dielectric Strength	Between open contacts	AC 3000 Vrms/1mA/1min. (Sea Level)
		Between Contacts and Coil	AC 4000 Vrms/1mA/1min. (Sea Level)
Mechanical Parameters	Shock	Stability	196 m/s ²
		Strength	490 m/s ²
	Vibration ,sine,10~500Hz		49 m/s ²
Condition	Operating Ambient Temperature		-40°C ~ +85°C
	Operating Ambient Humidity		5% ~ 95% RH.
Weight			370±10g
Security Certification			CCC

▲1: Measurement voltage DC1000V with the same test position as dielectric withstand voltage.

▲2: Resistive Load, L/R≤1ms.

▲3: Coil nominal voltage, includes bounce.

▲4: Coil nominal voltage, without diode.

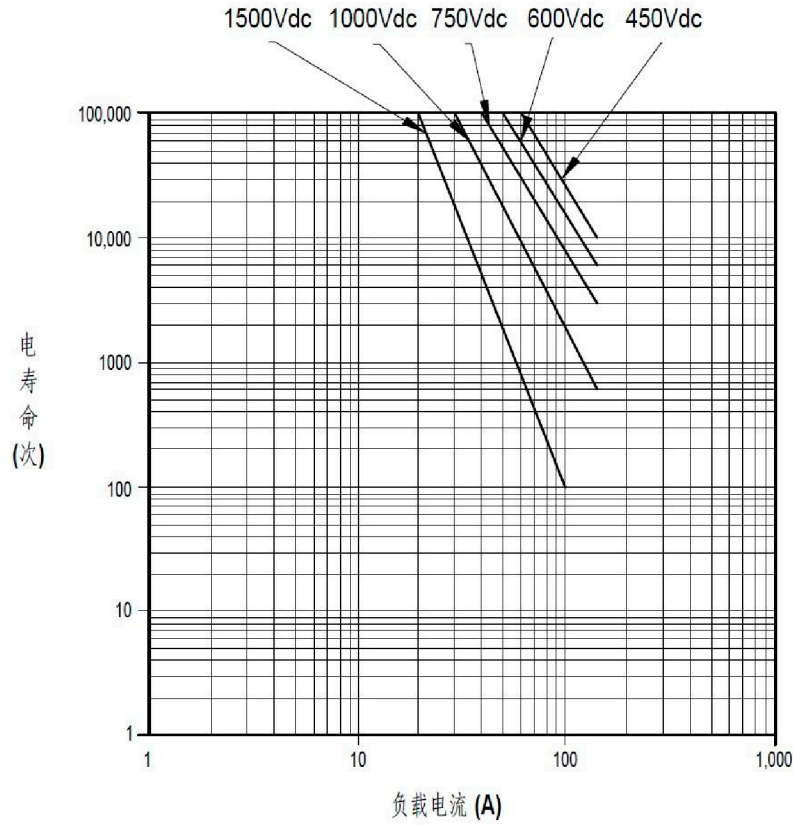
▲5: Switching Rating, ON : OFF=0.6s : 5.4s.

▲6: Switching Rating, ON : OFF=0.5s : 0.5s.

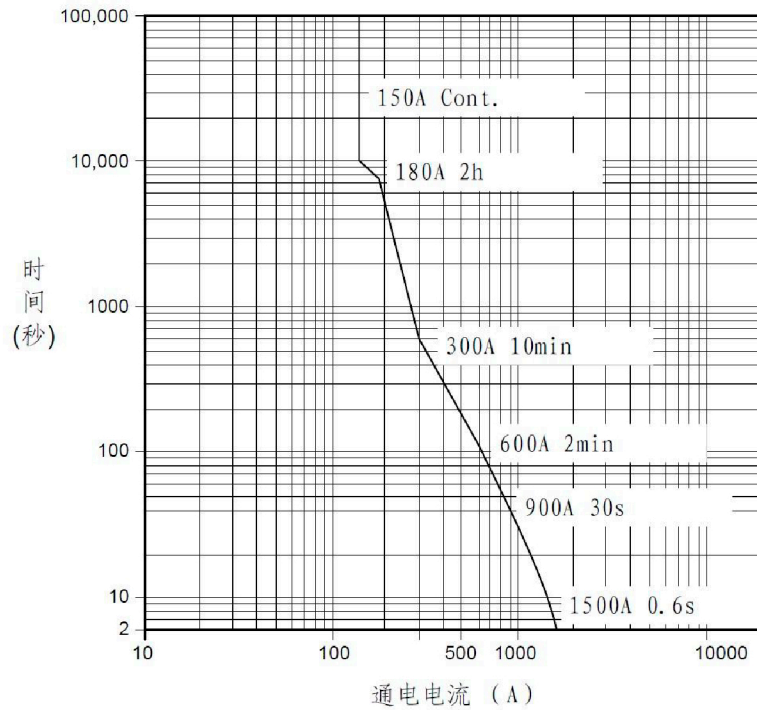
Estimated Electrical Life

Make & Break Switching Rating (Resistive Load L/R≤1ms, ON: OFF=1Sec:9Sec)

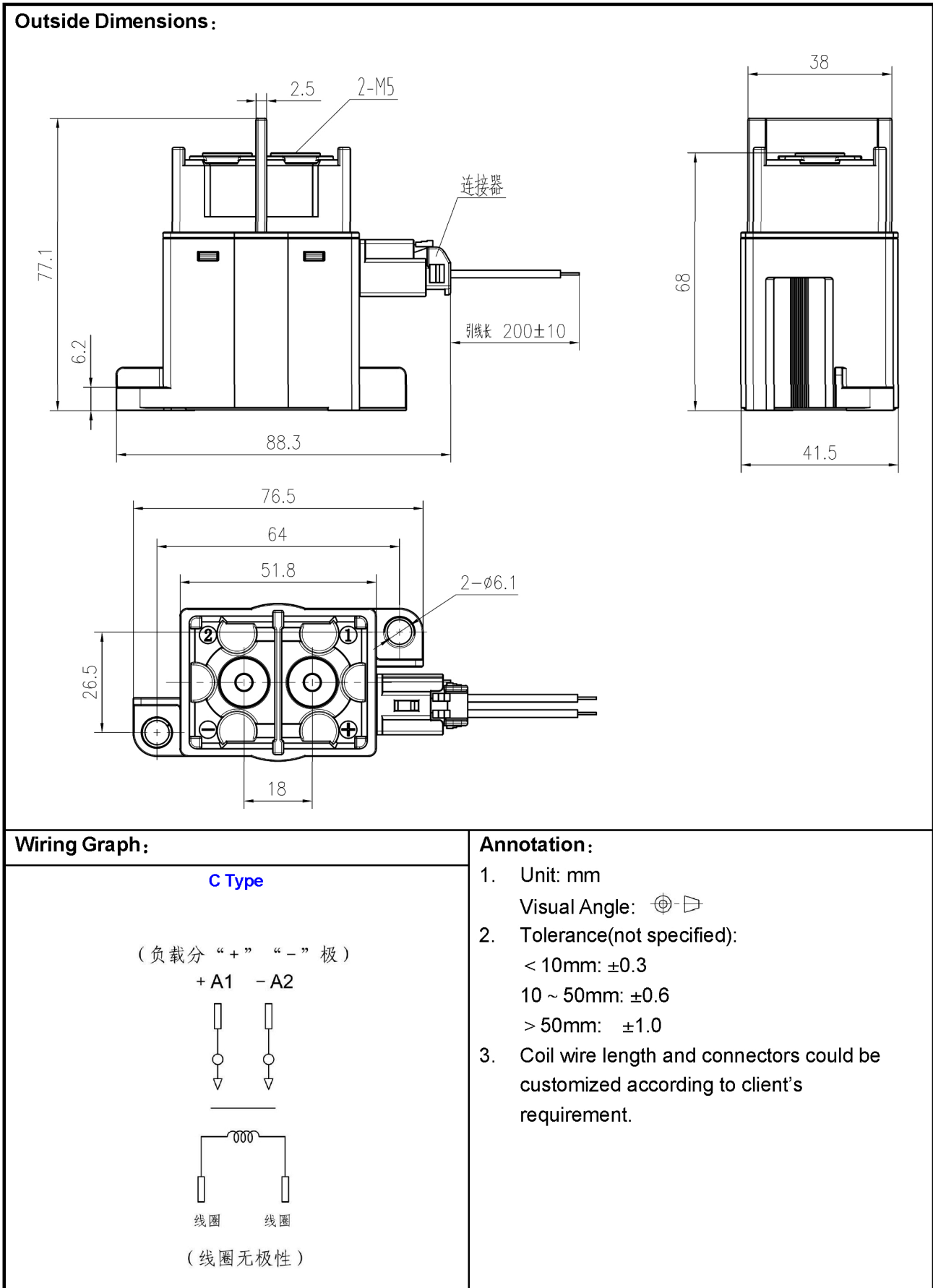
Graph-1, EVH150 Series (Polarity)




Estimated carrying current endurance



Dimensions

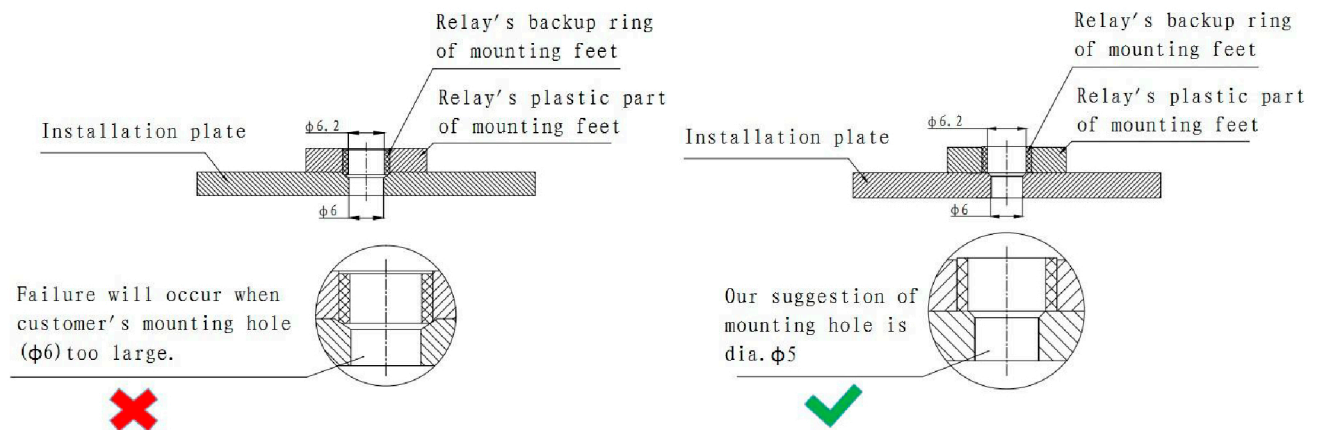


Installation

Fastener on main contacts	Specification Unit: mm	 M5x12
	Provide or not	√
Torque range	Bottom of contactor	3.0-4.0Nm
	Main contacts	3.0-4.0Nm
Nominal section area of conductor		40mm ² Min.

Notes

1. Please use the washer to prevent loosening when contact installation. Screw locking torque should in specified range, damage may occur when it is beyond.
2. Please note that could be abnormal fever when using condition is beyond the specified rating value like coil rated, contacts rated and life and so on.
3. Please do not use the product when it has fallen down.
4. The product built-in power-saving circuit board, coil will switching after 0.2s, but < 0.2s repeat on & off operating could cause relay malfunction. Driving this product should use step power supply, otherwise, it will not operating.
5. Please avoid installation in strong magnetic field (around the transformers or the magnets) and the heating objects nearby.
6. The coil resistance will be increased due to the coil temperature goes up if the rated voltage(or current)setup continuously on the coil and the contacting point, thus, the operating and breaking voltage of the product go up, and the rated voltage may be exceeded or released. Under this condition, the following measurements can be taken: decrease the loading current and limit the continuous power setup time or, adopts the coil voltage higher than the rated ones.
7. The rating load of contact is resistive load. Please assure the surge absorption device together with inductive load when using the $L/R \geq 1\text{ms}$ inductive load(L Load),otherwise it may lead to the decrease of electrical life and defective switch.
8. Please avoid grease or other foreign matter on the terminal, and make sure conductors are reliable contact with product's main terminals, otherwise, abnormal heating may occur at terminals.
9. When using capacitive load, it is need a pre-charge circuit to assure the impulse current less than contact's rating current, otherwise, it may cause main contacts welding.
10. Product installing tips:



Special Claim:

Because the performance is different from each other when it used in different applications, customer could choose the appropriate product according to the specific using conditions. If there is any queries, please contact HOTSON for technical support.