

Feature

- Hermetically sealed: Intrinsically safe, operates in harsh environments without oxidation or contamination of coil or contacts.
- Excellent switching performance: Adopt the design of magnetic-driving, fast extinguishing of arc gases and anti-welded contacts.
- Space saving: Outline structure miniaturization.
- Mounting simplification: No barrier around the main terminals.
- Optional auxiliary contact: Be easy monitoring of power contact position.
- Economized coil system: Energy saving by owned PWM design control.



Application

Battery Electric Vehicles(BEV), Fuel Cell Electric Vehicles(FCEV)
Hybrid Electric Vehicles(HEV), EV Charging Station, UPS

Coil

Series	Type	Coil voltage(VDC)	Coil Power(Max)
S/SA60	Standard	12, 24	6W
E/EA60	Economizes	12-24	Inrush: 42W ~ 100ms, Hold: 1.9W
S/SA120	Standard	12, 24	6W
E/EA120	Economizes	12-24	Inrush: 42W ~ 100ms, Hold: 1.9W
S/SA150	Standard	12, 24	6W
E/EA150	Economizes	12-24	Inrush: 42W ~ 100ms, Hold: 1.9W
S200	Standard	12, 24	6W
E/EA200	Economizes	12-24	Inrush: 42W ~ 100ms, Hold: 1.9W
E/EA250	Economizes	12-24	Inrush: 42W ~ 100ms, Hold: 1.9W
E/EA300	Economizes	12-24	Inrush: 55W ~ 100ms, Hold: 3.2W

Contact Data

Type	60A	120A	150A	200A	250A	300A
Contact arrangement	1 Form X					
Intital drop voltage(mV)	100mV					
Rated voltage(DC)	900VDC					
Max. break current (1 cycle)	360VDC/1000A		450VDC /1500A	450VDC/2000A		
Electrical endurance	See electrical endurance curve					
Mechanical endurance	200,000 ops Min.(no load)					
Aux.-contact voltage	30VDC / 125VAC					
Aux.-contact current	2A(DC) / 3A(AC)					
Minimum load(Main terminal)	48VDC 100mA					
Minimum load(Aux.contact)	9VDC 100mA					
Endurance Capacity (at 85°C)	See endurance capacity curve					

Coil Data(23°C)

Series	Type	Coil voltage (VDC)	Coil resistance (Ω)±10%	Operate voltage (VDC)Max	Max. Work voltage (VDC)	Release voltage (VDC)Min
S/SA60	Standard	12	26	9.0	14.4	0.6
	Standard	24	104	18.0	28.8	1.2
E/EA60	Economizes	12-24	4.6	9.0	36.0	4.0
S/SA120	Standard	12	26	9.0	14.4	0.6
	Standard	24	104	18.0	28.8	1.2
E/EA120	Economizes	12-24	4.6	9.0	36.0	4.0
S/SA150	Standard	12	26	9.0	14.4	0.6
	S200	Standard	24	104	18.0	28.8
E/EA150	Economizes	12-24	3.2	9.0	36.0	4.0
E/EA200	Economizes	12-24	3.2	9.0	36.0	4.0
E/EA250	Economizes	12-24	3.2	9.0	36.0	4.0
E/EA300	Economizes	12-24	2.8	9.0	36.0	4.0

Characteristics

Operate time	25ms max.	
Release time	25ms max.(E type); 10ms max.(S type)	
Insulation resistance	1000MΩ min.(at1000V DC)	
Dielectric strength	Coil-contact	4,000V AC, 50/60Hz (1min)
	Contact-contact	3,000V AC, 50/60Hz (1min)
Vibration resistance	Destruction	20G (10~2000Hz)
	Malfunction	20G (10~2000Hz)
Shock resistance	Destruction	50G
	Malfunction	ON: 40G(S type); 50G(E type) OFF:10G
Ambient temperature	- 40 ~ +85°C(with no icing or condensation)	
Ambient humidity	20% to 85%RH	
Mounting		M4 Screw(60~120A)
		M5 Screw(150~350A)
Weight		60~120A about 210g
		150~300A about 410g

Rating

Item	Voltage	S/SA60	E/EA60	S/SA120	E/EA120	S/SA150	E/EA150	S200	E/EA200	E/EA250	E/EA300
Electrical endurance (Making/Breaking) (cycles)	450VDC	35,000	35,000	6,000	6,000	4,000	6,000	2,000	3,000	3,000	3,000
	750VDC	4,000	6,000	1,000	1,500	1,000	2,000	1,000	1,000	700	500
Electrical endurance (only for Breaking) (cycles)	450VDC	40,000	40,000	8,000	10,000	8,000	10,000	2,500	6,000	5,000	4,000
	750VDC	5,700	8,500	1,400	2,000	1,400	2,800	1,200	1,400	1,000	700

Notes: The temperature of electric endurance is 23°C and the on-off ratio is 1s/9s

Ordering Information

CHEV	-1	12	S	A	60	H	,000
<p>1.Product family CHEV series</p> <p>2.Number of poles 1=1pole</p> <p>3.Rated coil voltage 12 =12VDC 24 =24VDC 12=12-24VDC(only for E-type)</p> <p>4.Coil type S = Standard, For 60/120/150/200A E = Economizes, For 60/120/150/200/250/300</p> <p>5.Aux.contact A = With aux. contact Blank = Without aux.contact</p> <p>6.Contact current 60=60A 120=120A 150=150A 200=200A 250=250A 300=300A</p> <p>7.Product type Blank = Standard H = H type P = P type W = W type</p> <p>8. Additional numbers and / or letters 000-999, AAA-ZZZ, aaa-zzz or blank,only for specific customer requirements</p>							

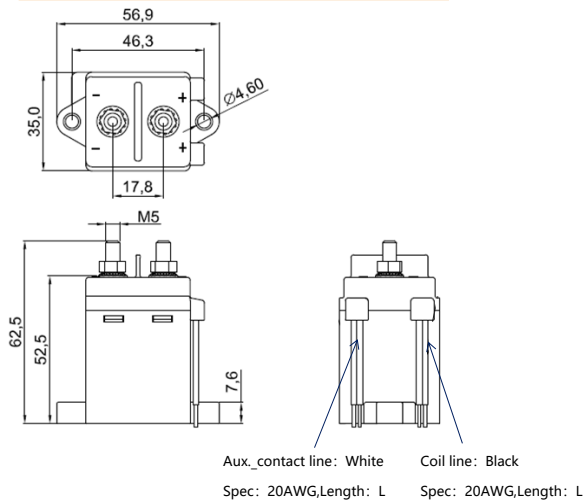
Typical Products

Product Description		Characteristic			
Product type	Code	Coil Voltage	Contact Load	Load Terminal form	Special Feature
CHEV-1**S*60	000	12V,24V	60A @750VDC	M5 Screw	
CHEV-112E*60	000	12-24V	60A @750VDC	M5 Screw	
CHEV-112E*60	001	12-24V	60A @750VDC	M5 Screw	JAE Connector
CHEV-1**S*120	000	12V,24V	120A @750VDC	M5 Screw	
CHEV-1**S*120	002	12V,24V	120A @750VDC	M5 Screw	Molex Connector
CHEV-112E*120	000	12-24V	120A @750VDC	M5 Screw	
CHEV-112EA120	500	12-24V	120A @750VDC	M5 Screw	5557 Connector
CHEV-1**S*150	000	12V,24V	150A @750VDC	M8 Screw	
CHEV-1**S*150	210	12V,24V	150A @750VDC	M8 Screw	Hulian Connector
CHEV-1**S*150	200	12V,24V	150A @750VDC	M8 Screw	Hulian Connector
CHEV-112E*150	000	12-24V	150A @750VDC	M8 Screw	
CHEV-112E*200	000	12-24V	200A @750VDC	M8 Screw	
CHEV-112E*200W	000	12-24V	200A @750VDC	M8 Screw	Mounting Type W
CHEV-112E*200H	000	12-24V	200A @750VDC	M6 internal Screw	Mounting Type H
CHEV-112E*200P	100	12-24V	200A @750VDC	M8 Screw	Mounting Type P
CHEV-112E*250	000	12-24V	250A @750VDC	M8 Screw	
CHEV-112E*300	000	12-24V	300A @750VDC	M8 Screw	
CHEV-112E300P	100	12-24V	300A @750VDC	M8 Screw	Mounting Type P

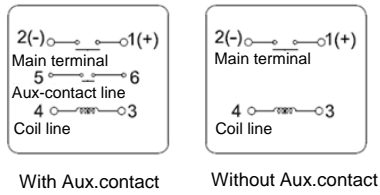
Notes:
1. Code description:
Coil line form
000--leads;
001--leads+JAE Connector;
002--leads+Molex Connector;
100/101--leads+yazaki Connector;
200/210--leads+hulian Connector;
500--leads+5557 Connector;
2. The length of the coil outgoing wire, aux. contact outgoing wire can be optional:
100mm, 300mm, 400mm, 1300mm,
The default length is 400mm.

Outside Dimension

S/SA60; E/EA60; S/SA120; E/EA120

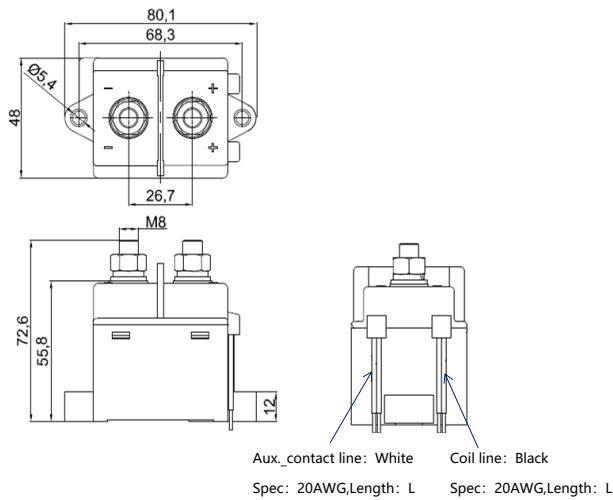


Wiring Diagram

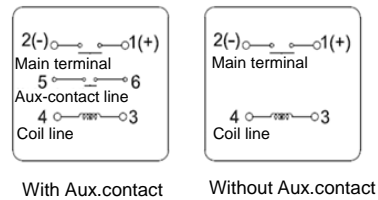


Outside Dimension

S/SA150; E/EA150; S200; E/EA200; E/EA250; E/EA300

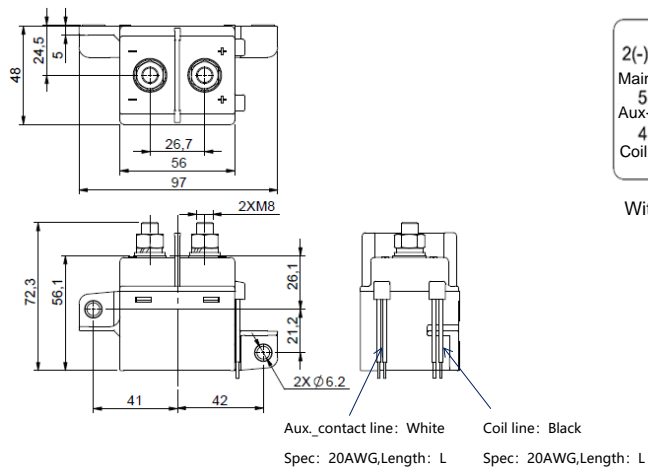


Wiring Diagram

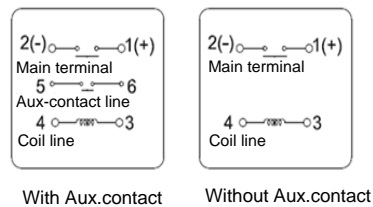


Outside Dimension

S200W; E/EA200W

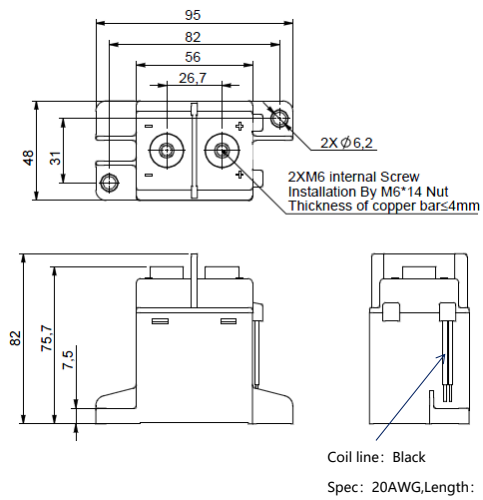


Wiring Diagram

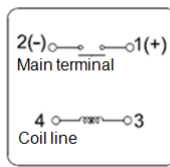


Outside Dimension

S200H; E/EA200H

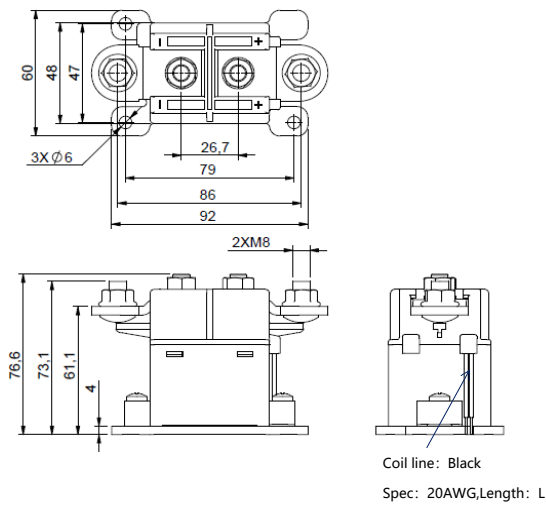


Wiring Diagram

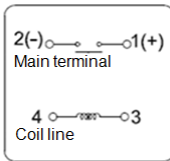


Outside Dimension

E200P/E300P



Wiring Diagram



Remarks:

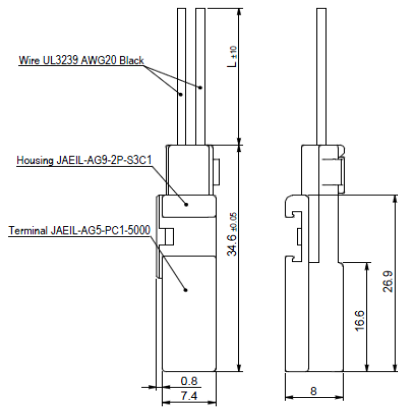
- The reference tolerance in outline dimension:
 - outline dimension ≤ 10 mm, reference tolerance is ± 0.3 mm;
 - outline dimension > 10 mm and ≤ 50 mm, reference tolerance is ± 0.6 mm;
 - outline dimension > 50 mm, reference tolerance is ± 1.0 mm;
- The torque requirement of Main Terminal:

CHEV-60~120A:	3.0~3.5 N · m
CHEV-150~350A:	8.0~9.0 N · m
- The torque requirement of Relay:

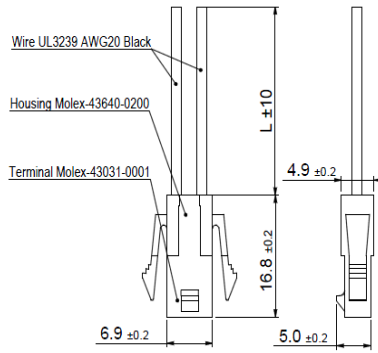
CHEV-60~120A:	2~2.4N · m
CHEV-150~350A:	3~4 N · m
- L See the Typical Products.

Connector Form

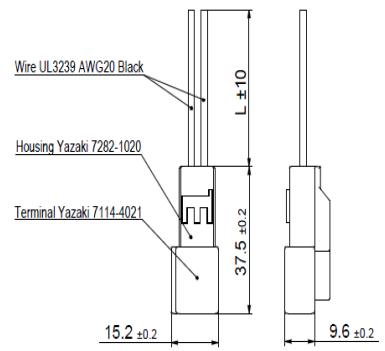
Code 001 JAE Connector



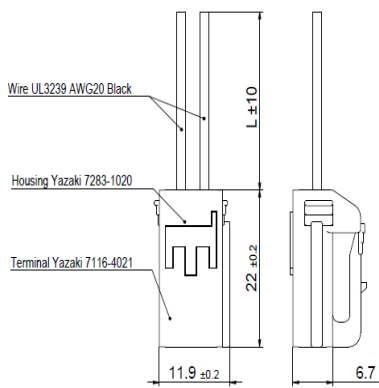
Code 002 Molex Connector



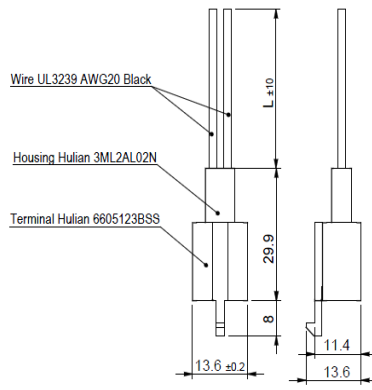
Code 100 Yazaki Connector



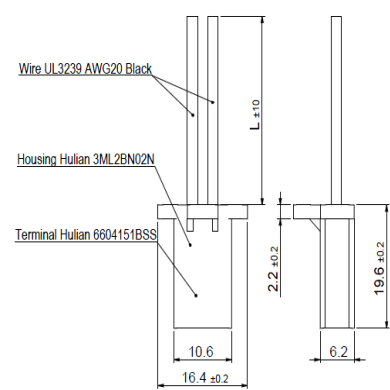
Code 101 Yazaki Connector



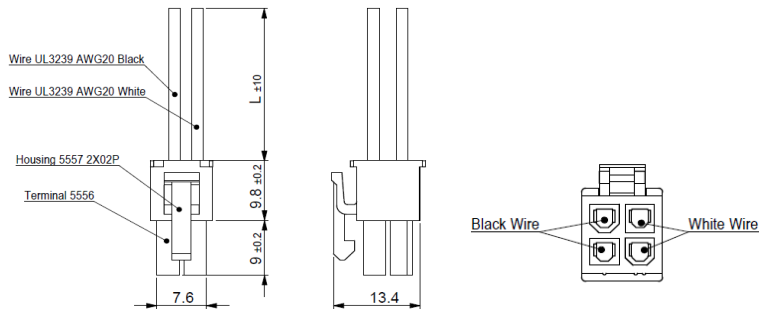
Code 200 Hulian Connector



Code 201 Hulian Connector

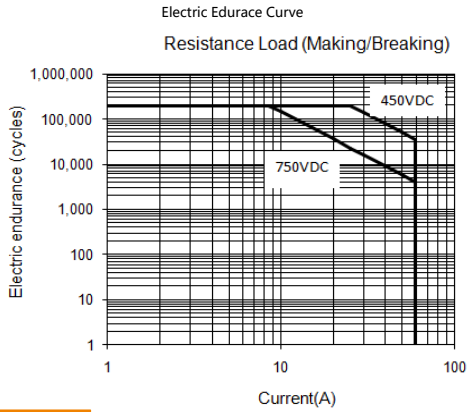


Code 500 5557 Connector

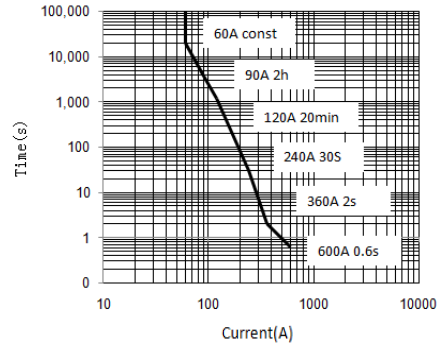


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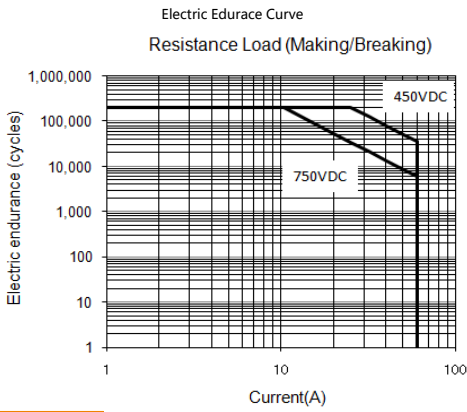
S/SA60



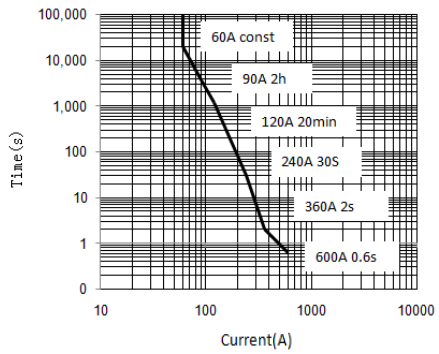
Endurance Capacity Curve
Notes: The environment temperature of test is 85°C; Cross section area of wire $\geq 15\text{mm}^2$



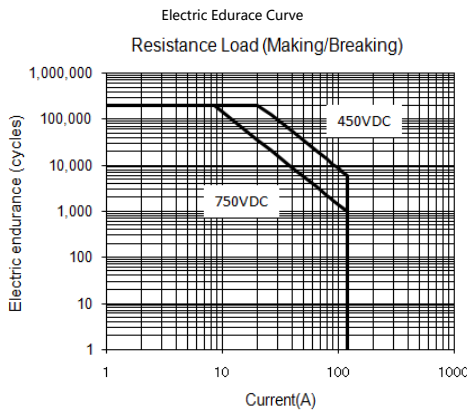
E/EA60



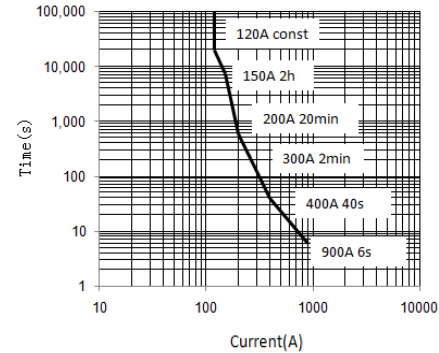
Endurance Capacity Curve
Notes: The environment temperature of test is 85°C; Cross section area of wire $\geq 15\text{mm}^2$



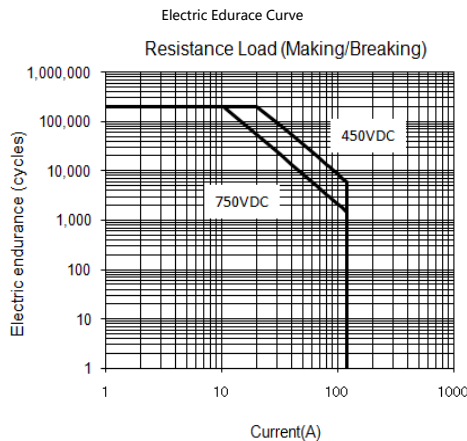
S/SA120



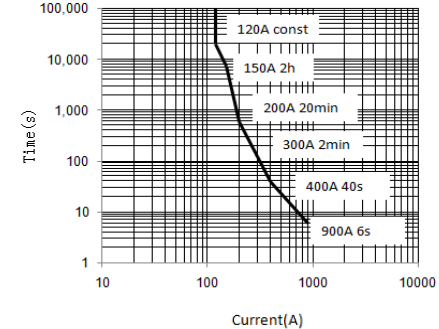
Endurance Capacity Curve
Notes: The environment temperature of test is 85°C; Cross section area of wire $\geq 50\text{mm}^2$



E/EA120

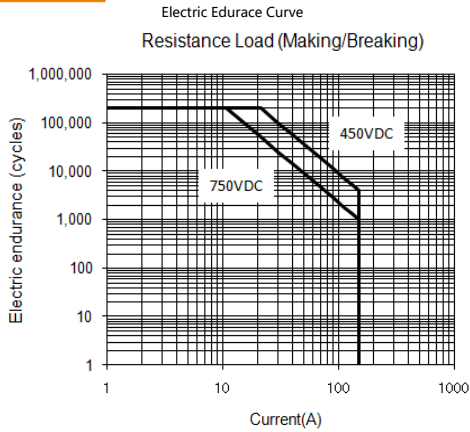


Endurance Capacity Curve
Notes: The environment temperature of test is 85°C; Cross section area of wire $\geq 50\text{mm}^2$

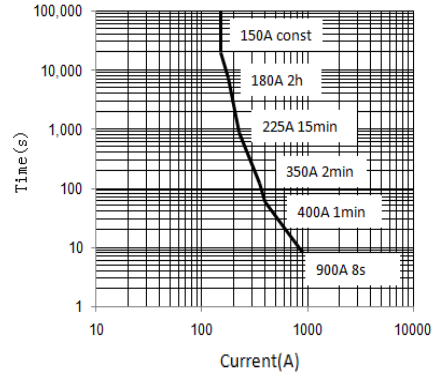


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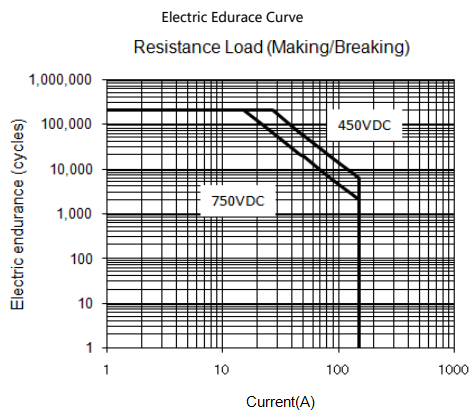
S/SA150



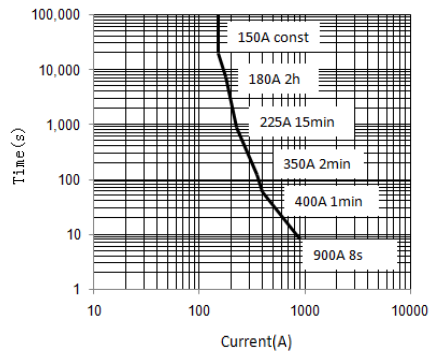
Endurance Capacity Curve
Notes: The environment temperature of test is 85°C; Cross section area of wire $\geq 50\text{mm}^2$



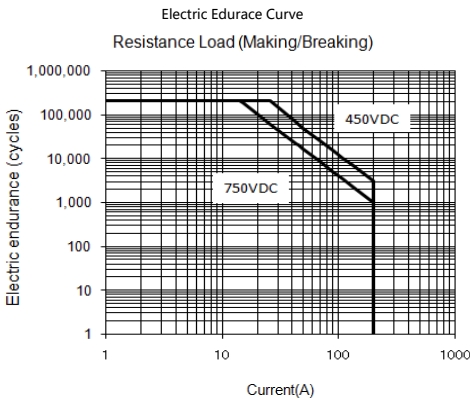
E/EA150



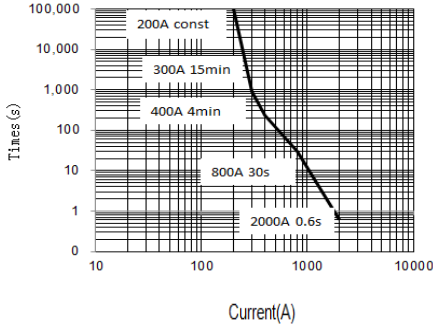
Endurance Capacity Curve
Notes: The environment temperature of test is 85°C; Cross section area of wire $\geq 50\text{mm}^2$



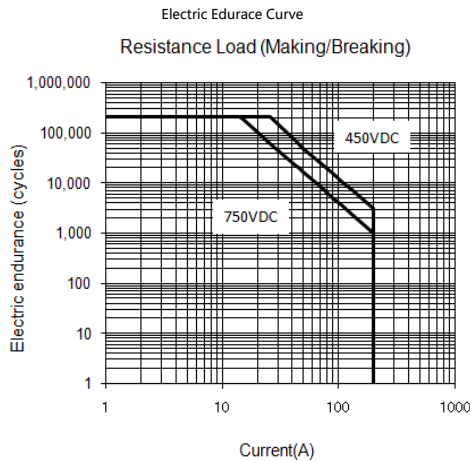
S200



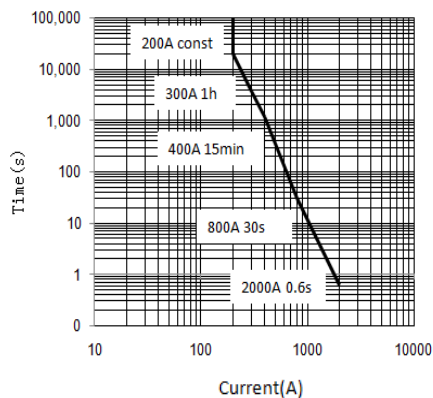
Endurance Capacity Curve
Notes: The environment temperature of test is 85°C; Cross section area of wire $\geq 60\text{mm}^2$



E/EA200

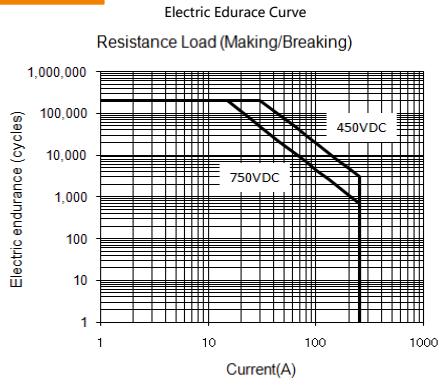


Endurance Capacity Curve
Notes: The environment temperature of test is 85°C; Cross section area of wire $\geq 60\text{mm}^2$

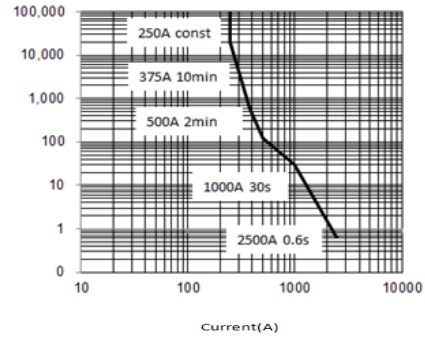


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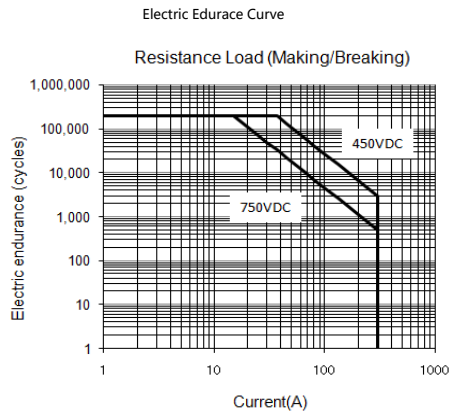
E/EA250



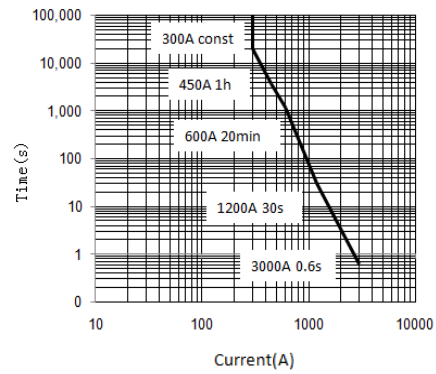
Endurance Capacity Curve
Notes: The environment temperature of test is 85°C; Cross section area of wire $\geq 100\text{mm}^2$



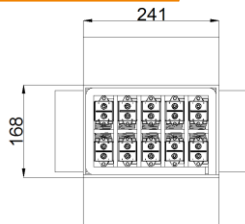
E/EA300



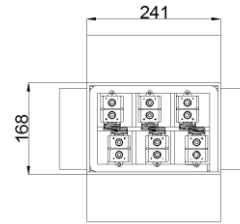
Endurance Capacity Curve
Notes: The environment temperature of test is 85°C; Cross section area of wire $\geq 100\text{mm}^2$



Packaging figure



S/SA60; E/EA60; S/SA120; E/EA120: one box: 10PCS.



S/SA150; E/EA150; S200; E/EA200; E/EA250; E/EA300: one box: 6PCS.

Disclaimer:

The specification is for reference only, if you need more detail information, please contact Churod. We could not evaluate all the performance and all parameters for every possible application. And the user should be in a right position to choose the suitable product for their own application. If there is any new need, please contact Churod for the technical service.