



HIGH VOLTAGE DC RELAY SERIES SELECTION GUIDE

Series	EVR SERIES							EVC SERIES							
Model	EVR20	EVR40	EVR100	EVR120	EVR150	EVR200/250	EVR300	EVC50	EVC100	EVC135/150	EVC250	EVC350/400			
Product Photo															
								UL/CUL File #492594					PENDING		
Current Rating	600														
	400														
	200														
	100														
	50														
	0														
Minimum Switching Capacity	1A 12V DC	1A 12V DC	1A 12V DC	1A 12V DC	1A 12V DC	1A 12V DC	1A 12V DC	1A 12V DC	1A 12V DC	1A 12V DC	1A 12V DC	1A 12V DC			
Rated Switching Capacity	20A 750VDC	40A 750VDC	100A 750VDC	120A 750VDC	150A 750VDC	200/250A 750VDC	300A 450VDC	50A 750VDC	100A 750VDC	135/150A 750VDC	250A 750VDC	350/500A 750VDC			
Maximum Cut Off	1000VDC 200A 1000VDC (1 Ops) 15KW	1000VDC 400A 300VDC (1 Ops) 30KW	1000VDC 1000A 300VDC (1 Ops) 75KW	1000VDC 1200A 450VDC (1 Ops) 90KW	1000VDC 1500A 450VDC (1 Ops) 112KW	1000VDC 2000A/2500A 450VDC (1 Ops) 150KW	1000VDC 1800A 450VDC	1000VDC 100A 250VDC (1 Ops) 12KW	1000VDC 1000A 300VDC (1 Ops) 75KW	1000VDC 1000A 450VDC (1 Ops) 112KW	1000VDC 2000A 450VDC (1 Ops) 150KW	1000VDC 3000A 450VDC (1 Ops) 260KW			
Short Term Current	30A 1h 50A 20min (≥4mm ²)	60A 1h 80A 20min (≥10mm ²)	150A 2h 200A 10min (≥135mm ²)	150A 2h 200A 10min (≥50mm ²)	180A 2h 225A 15min (≥50mm ²)	300A 15min/375A 10min 400A 240s/500A 120s (≥60mm ²)	450A 1hr	80A 10min 120A 60s (≥10mm ²)	200A 90s 300A 30s (≥35mm ²)	200A 90s/200A 10min 300A 30s/300A 1min (≥50mm ²)	320A 10min 500A 1min (≥100mm ²)	450A 60min 600A 20min (≥100mm ²)			
Contact Arrangement	1A	1A	1A	1A	1A	1A	1A	1A	1A	1A	1A	1A			
Auxiliary Contact	/	/	/	/	/	/	/	Optional (wire + quickplug)	Optional (wire + quickplug)	Optional (wire + quickplug)	Optional (wire + quickplug)	Optional (wire + quickplug)			
Coil Rating Voltage	12VDC / 24VDC	12VDC / 24VDC	12VDC / 24VDC	12VDC / 24VDC	12VDC / 24VDC	12VDC / 24VDC	12VDC / 24VDC	12VDC / 24 VDC 9-36V DC	12VDC / 24 VDC 9-36V DC	9-36V DC	9-36V DC	19-36V DC			
Coil Power Consumption	3.6W	3W	4.5W	4.5W	6W	Connected 34W (0.1s) Keep 4W	Connected 45W (0.2s) Keep 3.8W	5.5W Connected 18W (0.12s) Keep 1.5W	5.5W Connected 18W (0.12s) Keep 1.5W	5.5W Connected 43.2W(0.12s) Keep 1.7W	Connected 43.2W (0.12s) Keep 1.7W	Connected 45.6W (0.12s) Keep 3.4W			
Insulation Resistance	Min. 100Ω 500VDC	Min. 100Ω 500VDC	Min. 100Ω 500VDC	Min. 100Ω 500VDC	Min. 100Ω 500VDC	Min. 100Ω 500VDC	Min. 100Ω 500VDC	Min. 100Ω 500VDC	Min. 100Ω 500VDC	Min. 100Ω 500VDC	Min. 100Ω 500VDC	Min. 100Ω 500VDC			
Lifespan	Mechanical	2x10 ⁸ Ops	2x10 ⁸ Ops	2x10 ⁸ Ops	2x10 ⁸ Ops	2x10 ⁸ Ops	2x10 ⁸ Ops	2x10 ⁸ Ops	2x10 ⁸ Ops	2x10 ⁸ Ops	2x10 ⁸ Ops	2x10 ⁸ Ops			
	Electrical	450V	10,000 Ops	6,000 Ops	6,000 Ops	6,000 Ops	6,000 Ops	3,000 Ops	6,000 Ops	6,000 Ops	6,000 Ops	6,000 Ops	3,000 Ops		
		750V	1,000 Ops	1,000 Ops	1,000 Ops	1,000 Ops	1,000 Ops	1,000 Ops	1,000 Ops	1,000 Ops	1,000 Ops	1,000 Ops	1,000 Ops		
Dielectric Strength	Between Open Contacts	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA			
	Between Contact and Coil	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	2500V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA			
Vibration	49 ^m / _z (5G)10 to 200Hz (10μS)	49 ^m / _z (5G)10 to 200Hz (10μS)	49 ^m / _z (5G)10 to 200Hz (10μS)	49 ^m / _z (5G)10 to 200Hz (10μS)	49 ^m / _z (5G)10 to 200Hz (10μS)	49 ^m / _z (5G)10 to 200Hz (10μS)	43 ^m / _z (5G)10 to 200Hz	49 ^m / _z (5G)10 to 200Hz (10μS)	49 ^m / _z (5G)10 to 200Hz (10μS)	49 ^m / _z (5G)10 to 200Hz (10μS)	49 ^m / _z (5G)10 to 200Hz (10μS)	49 ^m / _z (5G)10 to 200Hz (10μS)			
Humidity and Temperature Range	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C			
Outline Size DWH (mm)	78x39.2x46	72x32.6x57.7	79.8x40.4x76.2 75.8x41x71.2	79.8x40.4x76.2	81.7x41.1x84.3	96x45x82	114x59x84	55x39.5 x57.8	55x41.2 x57.8	55x39.5 x57.8	55x41.2 x57.8	55x39.5 x57.8	80.4x56 x73	80.4x60.8 x73	70.7x62.5x77.6

APPLICATIONS

- Clean Energy Vehicles (BEV, HEV, FCEV)
- Charging Station and Charging Pile
- Renewable Energy: Solar Energy / Wind Power Generation System
- Construction Vehicles
- Cloud Server Commercial Vehicles / Transport
- Ground Heating System; Quick / Rapid Charging Stations
- Battery Charging and Discharging System

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HIGH VOLTAGE DC RELAY SERIES SELECTION GUIDE

COMPLETE PRODUCT LINE

Series	* EVC NEW FOR 2019 *	LEV SERIES				HEV SERIES	
Model	EVC600	LEV100	LEV150	LEV200	LEV250	HEV20D	HEV20W
Product Photo							

Current Rating	600							
	400							
	200							
	100							
	50							
	20							
0								
Minimum Switching Capacity	1A 12V DC	1A 12V DC	1A 12V DC	1A 12V DC	1A 12V DC	1A 12V DC	1A 12V DC	
Rated Switching Capacity	600A 750VDC	100A 750VDC	150A 750VDC	200A 750VDC	250A 750VDC	20A 750VDC	20A 750VDC	
Maximum Cut Off	1000VDC	450VDC	450VDC	450VDC	450VDC	450VDC	450VDC	
	3500A 450VDC 1 Ops	100A 45KW	150A 67KW	200A 90KW	250A 112KW	20A 9KW	20A 9KW	
Short Term Current	800A 20min	200A 20min	200A 20min	300A 5 min	300A 5 min	/	/	
	1000A 5 min 3000A 4s	400A 30s 1000A 0.6s	400A 30s 1000A 0.6s	400A 30s 800A 100s 1000A 1s	400A 30s 800A 100s 1000A 1s	/	/	
Contact Arrangement	1A	1A	1A	1A	1A	1A	1A	
Auxiliary Contact	Optional (wire + quickplug)	/	/	/	/	/	/	
Coil Rating Voltage	9-36V DC	12VDC / 24VDC	12VDC / 24VDC	12VDC / 24VDC	12VDC / 24VDC	12VDC / 24VDC	12VDC / 24VDC	
Coil Power Consumption	Connected 45.6W (0.12s) Keep 3.4W	& I	& I	& I	& I	3W	3W	
Insulation Resistance	Min. 100MΩ 500V DC	Min. 100MΩ 500V DC	Min. 100MΩ 500V DC	Min. 100MΩ 500V DC	Min. 100MΩ 500V DC	Min. 100MΩ 500V DC	Min. 100MΩ 500V DC	
Lifespan	Mechanical	2x10 ⁶ Ops	2x10 ⁶ Ops	2x10 ⁶ Ops	2x10 ⁶ Ops	2x10 ⁶ Ops	2x10 ⁶ Ops	
	Electrical	450V	3,000 Ops	1,000 Ops	1,000 Ops	400 Ops	300 Ops	10,000 Ops
		750V	1,000Ops	/	/	/	/	1,000 Ops
Dielectric Strength	Between Open Contacts	3000V AC 60 Sec. 1mA	2500V AC 60 Sec. 1mA	2500V AC 60 Sec. 1mA	2500V AC 60 Sec. 1mA	2500V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	
	Between Contact and Coil	3000V AC 60 Sec. 1mA	2500V AC 60 Sec. 1mA	2500V AC 60 Sec. 1mA	2500V AC 60 Sec. 1mA	2500V AC 60 Sec. 1mA	3000V AC 60 Sec. 1mA	
Vibration	49 ^{m/s} (5G) 10 to 200Hz (10μS)	49 ^{m/s} (5G) 10 to 200Hz (10μS)	49 ^{m/s} (5G) 10 to 200Hz (10μS)	49 ^{m/s} (5G) 10 to 200Hz (10μS)	49 ^{m/s} (5G) 10 to 200Hz (10μS)	Min 43m/s ² (5G) 10-200Hz	Min 43m/s ² (5G) 10-200Hz	
Humidity and Temperature Range	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 95% R.H. -40°C to +85°C	5% to 85% R.H. -40°C to +85°C	5% to 85% R.H. -40°C to +85°C	
Outline Size DWH (mm)	140.6x71.1x75	75.8x41x79.8	75.8x41x79.8	75.8x41x79.8	75.8x41x79.8	44x30x41.1	44x30x41.1	



Charging Connector



HV Connector



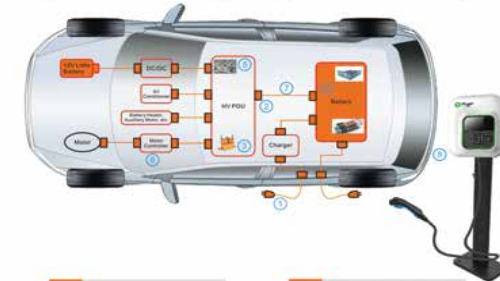
HV Relay



Power Battery Box



Flexibar



Laminated Busbar



HV Power Distribution Products



Motor Driver and Integrated Products



Vehicle HV Wire Harness Products



Electric Vehicle Charging Products



APPLICATIONS

- Clean Energy Vehicles (BEV, HEV, FCEV)
- Charging Station and Charging Pile
- Renewable Energy: Solar Energy / Wind Power Generation System

- Construction Vehicles
- Cloud Server Commercial Vehicles / Transport
- Ground Heating System; Quick / Rapid Charging Stations
- Battery Charging and Discharging System

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