



# 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	EVC350/500	
Product Photo													
								UL/CUL File #492594					PENDING
Current Rating	500												
	400												
	300												
	200												
	100												
	50												
	20												
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 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 <sup>2</sup> )	60A 1h 80A 20min (≥10mm <sup>2</sup> )	150A 2h 200A 10min (≥135mm <sup>2</sup> )	150A 2h 200A 10min (≥50mm <sup>2</sup> )	180A 2h 225A 15min (≥50mm <sup>2</sup> )	300A 15min 400A 240s (≥60mm <sup>2</sup> )	450A 1hr	90A 12min 180A 15s (≥10mm <sup>2</sup> )	150A 2h 200A 10min (≥35mm <sup>2</sup> )	200A 10min 300A 1min (≥50mm <sup>2</sup> )	320A 10min 500A 1min (≥100mm <sup>2</sup> )	500A 10min 500A 1min (≥100mm <sup>2</sup> )	
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 (0.4s) Keep 4W	Connected 34W (0.4s) Keep 4W	5.5W Connected 18W (0.12s) Keep 1.5W	5.5W Connected 18W (0.12s) Keep 1.5W	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	≤10mΩ (DC 20A)	≤10mΩ (DC 40A)	≤5mΩ (DC 100A)	≤1.5mΩ (DC 120A)	≤1.5mΩ (DC 150A)	≤0.5mΩ (DC 200A)	Min. 100Ω 500VDC	≤1.5mΩ (DC 50A)	≤1.5mΩ (DC 100A)	≤0.5mΩ (DC 150A)	≤0.5mΩ (DC 250A)	≤0.4mΩ (DC 350A)	
Lifespan	Mechanical	2x10 <sup>8</sup> Ops	2x10 <sup>8</sup> Ops	2x10 <sup>8</sup> Ops	2x10 <sup>8</sup> Ops	2x10 <sup>8</sup> Ops	2x10 <sup>8</sup> Ops	2x10 <sup>8</sup> Ops	2x10 <sup>8</sup> Ops	2x10 <sup>8</sup> Ops	2x10 <sup>8</sup> Ops	2x10 <sup>8</sup> Ops	
	Electrical	450V	10,000 Ops	6,000 Ops	6,000 Ops	6,000 Ops	6,000 Ops	6,000 Ops	6,000 Ops	6,000 Ops	6,000 Ops	6,000 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	
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	2500V AC 60 Sec. 1mA	2500V AC 60 Sec. 1mA	2500V AC 60 Sec. 1mA	2500V AC 60 Sec. 1mA	2500V AC 60 Sec. 1mA	2500V 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	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	
Vibration	49"/g(5G)10 to 500Hz (10μS)	49"/g(5G)10 to 500Hz (10μS)	49"/g(5G)10 to 500Hz (10μS)	49"/g(5G)10 to 500Hz (10μS)	49"/g(5G)10 to 500Hz (10μS)	49"/g(5G)10 to 500Hz (10μS)	43"/g(5G)10 to 200Hz	49"/g(5G)10 to 500Hz (10μS)	49"/g(5G)10 to 500Hz (10μS)	49"/g(5G)10 to 500Hz (10μS)	49"/g(5G)10 to 500Hz (10μS)	49"/g(5G)10 to 500Hz (10μS)	
Humidity and Temperature Range	5% to 85% 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	5% to 85% 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	5% to 85% 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	5% to 85% 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)	78x39.2x46	72x32.6x57.7	79.8x40.4x76.2 75.8x41x71.2	79.8x40.4x76.2	81.7x41.1x84.3	96x45x82	80.4x56x73	55x39.5 x58.5	55x41.3 x57.8	55x39.5 x58.5	55x41.3 x57.8	80.4x56x73 80.4x56x73 80.4x60.8 x73	

## APPLICATIONS

- New Energy Vehicles (BEV, HEV, FCEV)
- Charging Station and Charging Pile
- Clean Energy: Solar Energy / Wind Power Generation System
- AGV (unmanned delivery vehicles), Gold Cart
- Medical Devices
- Construction Equipment
- Cloud Server and Driving Power Supply - UPS
- Ground Heating System; Quick Charge Power Supply
- Battery Charging and Discharge System

World Products Inc.® is the Exclusive Agent in North America for Ebusbar® High Voltage High Current Relays  
[www.worldproducts.com](http://www.worldproducts.com)  
[sales@worldproducts.com](mailto:sales@worldproducts.com)



# Ebusbar<sup>®</sup> COMPLETE PRODUCT LINE



Charging Connector



HV Connector



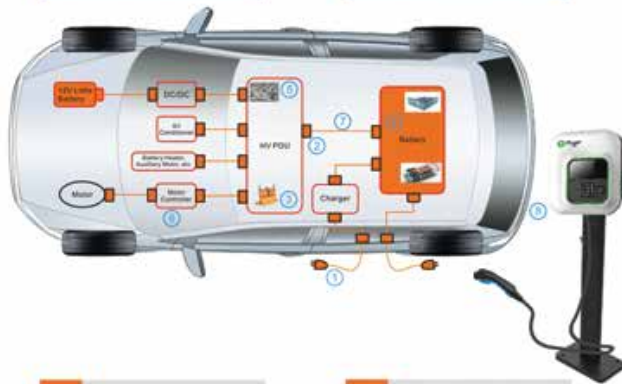
HV Relay



Power Battery Box



Flexibar



Laminated Busbar



HV Power Distribution Products



Motor Driver and Integrated Products



Vehicle HV Wire Harness Products



Electric Vehicle Charging Products



**WORLD PRODUCTS INC.<sup>®</sup>**  
 is the Exclusive Agent in North America  
 for **Ebusbar<sup>®</sup>** High Voltage High Current Relays.




**CRAIG HUBER**  
 Automotive Business Unit Manager

19654 Eighth Street East  
 P.O. Box 1608  
 Sonoma, CA 95476-0517 USA

chuber@worldproducts.com

Direct Dial 707.931.7605  
 Cell 248.794.9834  
 FAX 707.996.3380  
 Office 707.996.5201 (Ext. 205)