

EZA2500W-32048

V010-01-01A

SPECIFICATIONS

P.1/4

Item		Model Name		EZA2500W-32048	
				LVDC (Battery side)	HVDC (Grid side)
1	Rated Voltage	-	-	48VDC	320VDC
2	Voltage Range	(*1,*2)	-	36VDC - 65VDC	260VDC - 400VDC
3	Rated Current	(*3)	-	±52A	±7.8A
4	Maximum Output Current	(*1,*4)	-	±52A	±8.3A
5	Constant Current Setting Range	(*1,*2)	-	2.4A - 56A	0.5A - 8.5A
6	Maximum Output Power	-	-	±2,496W	±2,496W
7	Efficiency (typ)	(*5)	-	90.5%	90.5%
8	Required Pre-charge Voltage	-	-	More than 36VDC	More than 260VDC (LVDC : 36V-58V) More than 280VDC (LVDC : more than 58V)
9	Inrush Current (typ)	(*6)	-	5.5A	3.6A
10	Maximum Line Regulation	-	-	240mV	1.52V
11	Maximum Load Regulation	-	-	480mV	3.04V
12	Maximum Temperature Regulation	-	-	300mV	1.9V
13	Output Ripple and Noise	-	-	Less than 480mVp-p	Less than 3.2Vp-p
14	Sink Current (typ)	(*7)	-	0.3A	0.05A
Protection					
1	Output Over Current Protection (typ) (*8,*9)	-	-	60A (Output shut down)	9.5A (Output shut down)
2	Over Power Protection (typ) (*8)	-	-	2,600W (Constant power)	2,600W (Constant power)
3	Over Voltage Protection	(*2)	-	Possible (Setting range : 32V - 70V)	Possible (Setting range : 240V - 410V)
4	Under Voltage Protection	(*2)	-	Possible (Setting range : 32V - 70V)	Possible (Setting range : 240V - 410V)
Function					
1	Remote ON/OFF	-	-	Possible (Control via RS-485 or Extra signal)	
2	Remote Reset	-	-	Possible (Latch off via RS-485, RESET SW or External Signal)	
3	External Signal	-	-	RUN : Operate at short, Stop at open STOP : Stop at rising edge CHRГ : Change function by Operation mode (*11) ALMCLR : Alarm clear and Run at rising edge ALM : Open under Alarm condition (Open Drain) PG : Short under Operation (Open Drain) IFRST : Communication MPU is reset when short. then, that MPU restart when open.	
4	Parallel operation	(*10)	-	Possible (Droop method)	
External Function (RS-485)					
1	Voltage Setting Accuracy	-	-	LVDC Less than ±0.6V, HVDC Less than ±4V	
2	Current Setting Accuracy	-	-	LVDC Less than ±0.8A, HVDC Less than ±0.125A	
3	Voltage Setting Resolution	-	-	LVDC Less than 60mV, HVDC Less than 0.4V	
4	Current Setting Resolution	-	-	LVDC Less than 50mA, HVDC Less than 8mA	
5	Voltage Reading Accuracy	-	-	LVDC Less than ±0.6V, HVDC Less than ±4V	
6	Current Reading Accuracy	-	-	LVDC Less than ±0.8A, HVDC Less than ±0.125A	
7	Voltage Reading Resolution	-	-	LVDC Less than 60mV, HVDC Less than 0.4V	
8	Current Reading Resolution	-	-	LVDC Less than 50mA, HVDC Less than 8mA	
9	RS-485 Baud Rate	-	-	9600bps / 19.2kbps / 38.4kbps / 57.6kbps (Set by DIP-SW)	
10	RS-485 Maximum Connection	-	-	14	

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Item		Model Name		EZA2500W-32048	
				LVDC (Battery side)	HVDC (Grid side)
Environmental					
1	Operating Temperature	(*1,*4)	-	-10°C - +50°C	
2	Operating Humidity		-	30 - 90%RH (No Condensing)	
3	Storage Temperature		-	-20°C - +70°C	
4	Storage Humidity		-	10 - 95%RH (No Condensing)	
5	Vibration		-	No Operation, 10-500Hz (Sweep 1min) 10.2m/s ² Constant, X, Y, Z Each Direction 1hour	
6	Shock		-	196.1m/s ² maximum	
7	Cooling		-	Forced Air Cooling by built-in FAN (Air Intake)	
8	Installation Location		-	Indoor use	
9	Altitude		-	Less than 2,000m	
Isolation					
1	Withstand Voltage		-	Primary (320V) - Secondary (48V) & Signals : 3kVAC(20mA) 1min Primary (320V) - Chassis : 2kVAC(20mA) 1min Secondary (48V) & Signals - Chassis : 707VDC 1min	
2	Insulation Resistance		-	Secondary (48V) & Signals - Chassis, More than 100MΩ at 500VDC 25°C, 70%RH	
Safety					
1	Safety		-	Approved by UL62368-1, CSA62368-1, EN62368-1. Approved by UL60950-1, CSA60950-1, EN60950-1. (Expire date of 60950-1 : 20/12/2020)	
Physical Characteristics					
1	Weight		-	Less than 8 kg	
2	Size (W x H x D)		mm	422.8 x 43.6 x 400 (Refer to outline drawing)	
Other					
1	PCB Coating materials		-	HumiSeal 1B51NSLU	
2	PCB Coating areas		-	Mounting surface and solder surface of six internal boards. (Excluding discrete parts,screw holes,and connectors)	
3	Cooling Fan		-	High speed, dustproof and long life	

Please read instruction manual Carefully, before using the unit.

=Notes=

- *1. Please refer to Derating Curve.
- *2. It can be set via RS-485.
- *3. When regeneration mode, Sometimes HVDC current is smaller than rated current (7.8A). It depends on LVDC voltage conditions.
- *4. Ta>40°C : Maximum LVDC current is limited to 48A. (Refer to Fig.1)
- *5. Ta=25°C, rated voltage and rated current.
- *6. Not applicable for the inrush current to Noise filter for less than 0.2ms.
- *7. Current sink appear when applied voltage is greater than output target voltage.
- *8. Parameter is fixed.
- *9. Shut down method, manual reset.(Latch off via RS-485, RESET SW or External Signal)
- *10. Droop ratio can be set via RS-485.
- *11. Heteronomy CV mode : Generate at short, Regenerate at open.
Grid Autonomy CV mode : Heteronomy Generate at Short, Autonomy at open.
Battery Autonomy mode : No function.

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Model Name		EZA2500W-32048	
Item		Operation Mode (*12)	
Heteronomy CV mode			
1	Operation mode	-	Output voltage control at Generation and Regeneration.
2	Power Conversion Direction State Method	-	External Signal CHRG or control via (RS-485)
3	LVDC CC at Regeneration (*13)	-	Possible (Control LVDC current constant).
4	HVDC 0V Ramp up (*14)	-	Possible
5	LVDC 0V Ramp up (*15)	-	Possible
6	Battery Over Charge Protection (*16)	-	Possible
7	Battery Over Discharge Protection (*16)	-	Possible
Grid Autonomy CV mode			
1	Power Conversion mode	-	Control HVDC voltage constant.
2	Dead Zone set (*16)	-	Possible
3	HVDC 0V Ramp up (*14)	-	Possible
4	LVDC 0V Ramp up (*15)	-	Possible
5	Battery CC mode (*16)	-	Possible (Control battery side current with constant current mode)
6	Forced Charge mode (*13)	-	Possible (Change to Heteronomy CV mode)
7	Battery Over Charge Protection (*16)	-	Possible
8	Battery Over Discharge Protection (*16)	-	Possible
Battery Autonomy CV mode			
1	Power Conversion mode	-	Control LVDC voltage constant.
2	LVDC 0V Ramp up	-	Possible

Please read instruction manual Carefully, before using.

=Note=

*12. Control mode can be set via RS-485 or DIP-SW setting.

*13. It can be changed by External Signal.

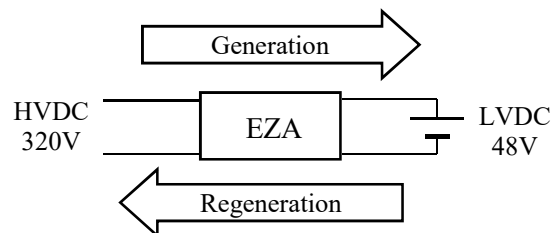
*14. Don't connect Load until ramp up complete when HVDC 0V ramp up. It can be connected Electric Capacitor only less than 30,000uF.

Ramp up time : 100 - 130s (8,000uF), 140 - 180s (30,000uF) (depend on the voltage conditions).

*15. It can start up under pre-charge voltage (less than 36V).

*16. It can be set via RS-485.

Follow below figure describes Generation and Regeneration.



Derating Curve

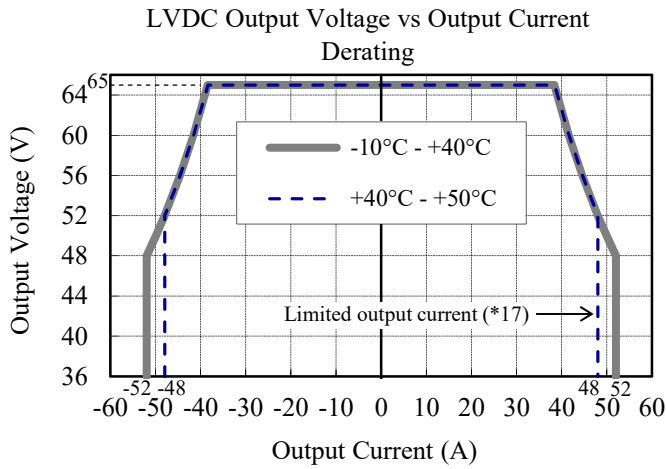


Fig. 1

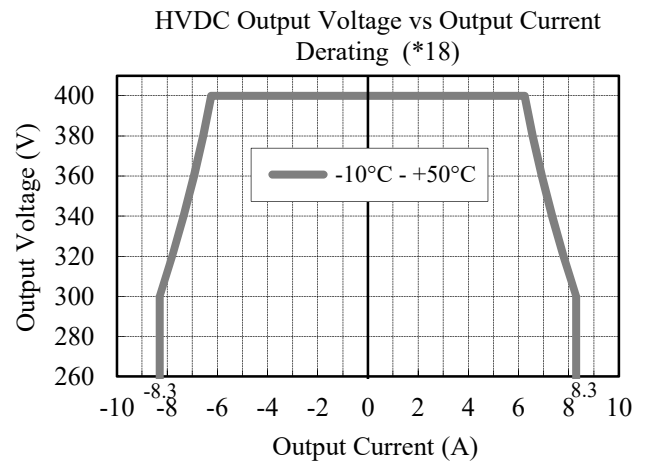


Fig. 2

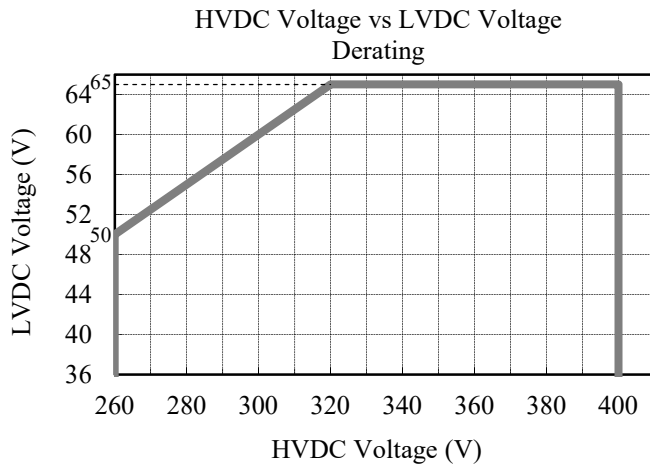


Fig. 3

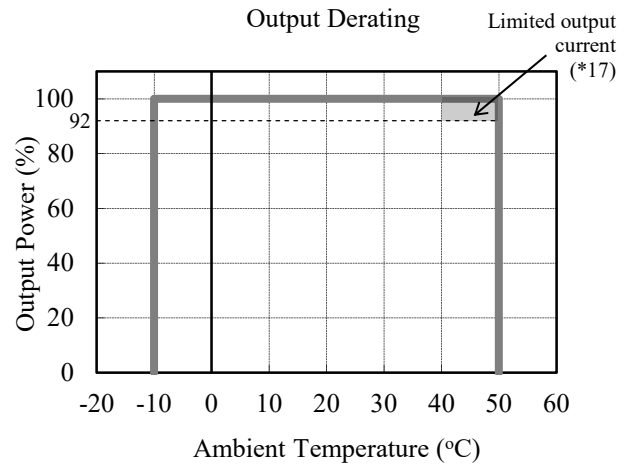


Fig. 4

Please read instruction manual Carefully, before using.

=Note=

*17. $T_a > 40^\circ\text{C}$: Maximum LVDC current is limited to 48A, Therefore, Maximum output power depends on voltage conditions.

*18. When regeneration mode, Maximum LVDC current is limited to 56A.