

## 2500W Bi-Directional DC-DC Converter

### Features

- ◆ 1U rackmount
- ◆ Battery Side 48VDC
- ◆ Grid Side 320VDC
- ◆ High Efficiency (92%)
- ◆ RS-485 Communications & Control

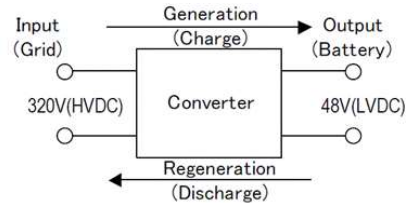


### Key Market Segments & Applications



Renewable

### Basic Operation



Isolated

## Specifications

Model		Low Voltage DC (Battery Side)	High Voltage DC (Grid Side)
Voltage Range (1)(2)	VDC	36 - 60VDC (48V Nominal)	300 - 380VDC (320V Nominal)
Output Current (Maximum)	A	±52A	±7.8A
Constant Current Programming Range (1)(2)	A	2.4 - 56A	0.5 - 8.5A
Maximum Output Power	W	±2,496W	±2,496W
Efficiency	%	92%	92%
Pre-charge Voltage (required)	VDC	> 36V	>300V
Inrush Current (Typical)	A	5.5A	3.6A
Line Regulation (Maximum)	-	240mV	1.52V
Load Regulation (Maximum)	-	480mV	3.04V
Temperature Regulation (Maximum)	-	300mV	1.9V
Output Ripple & Noise (Maximum pk-pk)	-	480mV	3.2V
Sink Current (When applied V > output set V)	mA	300mA	50mA
Overcurrent Protection (Manual reset)	A	60A	9.5A
Overpower Protection	W	2600W (Constant power)	2600W (Constant power)
Input Current Limit (typical)	A	-	56A
Under & Overvoltage Protection (2)	V	32 - 68V	260 - 410V
Overtemperature Protection	-	Yes, Alarm signal is given	
Remote On/Off & Reset (2)	-	Yes	
Parallel Operation	-	Yes (Droop mode, can be set via RS-485)	
Front panel Indicators and Settings	-	Operating mode (Generating, Regenerating & Alarm), Alarm clear & RS-485 address selection	
Operating Temperature	°C	-10 to +40°C, full load	
Storage Temperature	°C	-20 to +70°C	
Humidity (Non condensing)	%RH	Operating: 30 - 90%RH, Storage: 10 - 95%RH	
Cooling	-	Internal fan	
Vibration (Non operating)	-	10-500Hz (1 min sweep), 10.2m/s <sup>2</sup> constant for 1 hour in each direction: X, Y & Z axis	
Shock	-	196.1m/s <sup>2</sup> maximum	
Withstand Voltage	-	Input (HVDC) to Output (LVDC) 3kVAC, Input to Ground 2kVAC, Output/Signals to Ground 500VAC	
Isolation Resistance	MΩ	>100MΩ at 25°C & 70%RH, Output/Signals to Ground 500VDC	
Safety Certification	-	UL60950-1, CSA60950-1, EN60950-1, CE Mark (LVD & RoHS2)	
Size (W x H x D)	mm	422.8 x 43.6 x 400mm	
Weight	g	8000g	
Warranty	Yrs	Five Years	

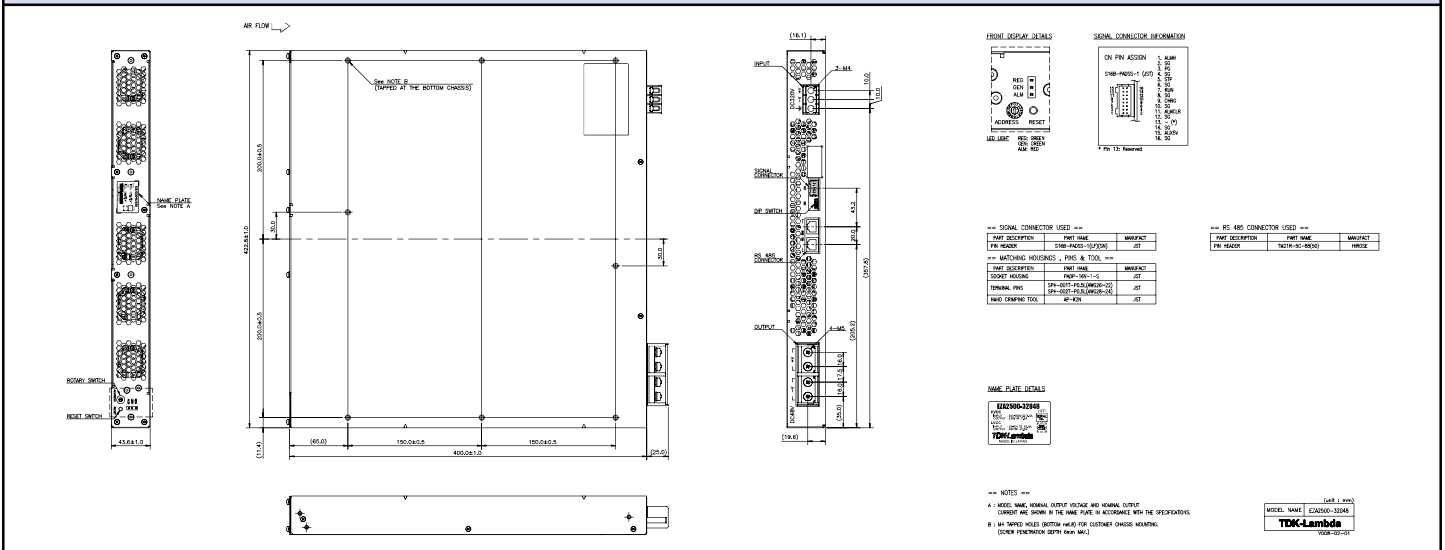
### Notes

- (1) See installation manual for detailed specifications & test methods
- (2) Can be set via RS-485

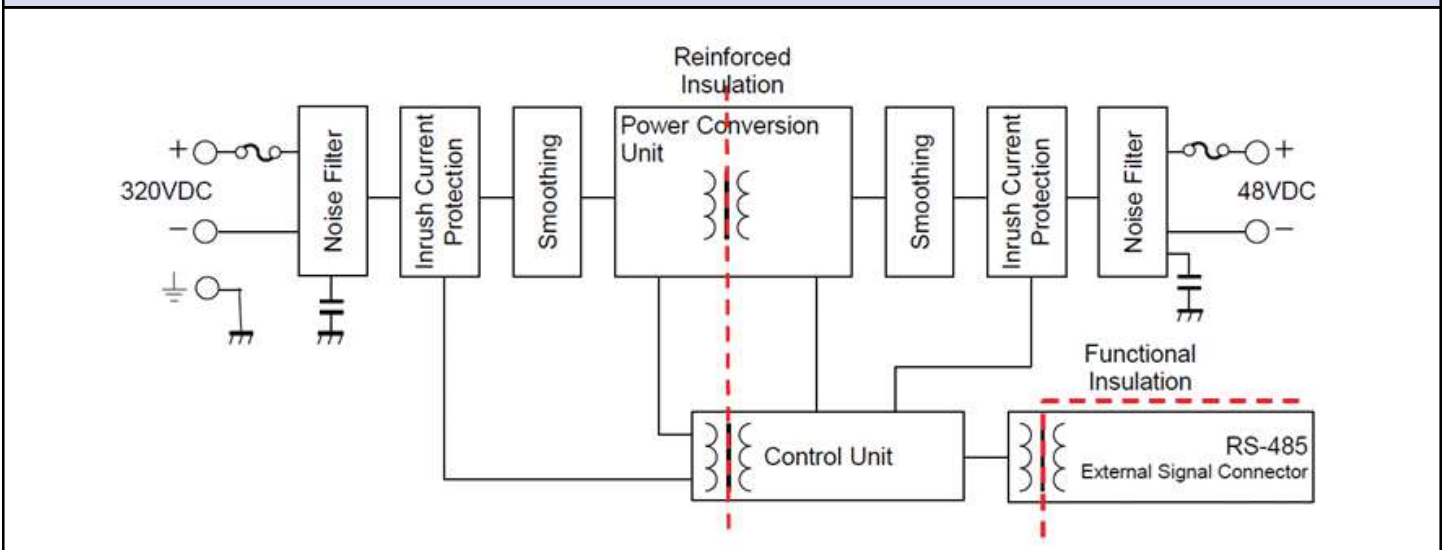
## RS-485 Functions

Model		Low Voltage DC (Battery Side)	High Voltage DC (Grid Side)
Voltage Setting Accuracy	-	< ±0.6V	< ±4V
Current Setting Accuracy	-	< ±0.8A	< +/-0.125A
Voltage Setting Resolution	-	< 60mV	< 0.4V
Current Setting Resolution	-	< 50mA	< 8mA
Voltage Reading Accuracy	-	< ±0.6V	< ±4V
Current Reading Accuracy	-	< ±0.8A	< ±0.125A
Voltage Reading Resolution	-	< 60mV	< 0.4V
Current Reading Resolution	-	< 50mA	< 8mA
RS-485 Baud Rate	-	19.2kbps / 33.6kbps / 57.6kbps (Set by DIP Switch)	
RS-485 Maximum Connection	-	14	

## Outline Drawing



## Block Diagram



For Additional Information, please visit [us.tdk-lambda.com/lp/products/eza-series.htm](http://us.tdk-lambda.com/lp/products/eza-series.htm)

