

29.2V, 10A Li-ion Battery Charger



Features

- FCC UL compliant
- LED indicators for charge state
- Over-voltage, under-voltage, short circuit, and battery reverse polarity protection
- Recharge function After battery is full, it will self-discharge when idle for a long time (depend on the battery itself to discharge) and the charger will charge the battery again if the battery voltage reaches a voltage of 28.5V ±0.1V.

Applications

- Robotics
- Drones
- E-bikes



Input Current 3.5 Arms @ 100Vac Frequency 50-60 Hz No Load Input Power 2W max. @ 230Vac Leakage Current 250A Max Power factor 20.95@ 230Vac, Full load CC Mode Voltage 22.8.4V CV Mode Voltage 22.8.4V CV Mode Voltage 300mVp-p @ 25°C, max load Fully Charge Current 10A ±0.4A Ripple 300mVp-p @ 25°C, max load Fully Charged Currant 1.5A ±300mA No Load Voltage 29.2V ±0.1V Fully Charged Currant 1.5A ±300mA No Load Voltage 29.2V ±0.1V Fully Charged Currant 1.5A ±300mA No Load Voltage 29.2V ±0.2V Output power 292 Watt Max Efficiency Max Load Efficiency > 90%@ Vin=230V, CV:29V All Charge Current 2.5V ±1 V trip point; stops charging, flashes red light. Recycle power to restart after fault is removed. When output voltage drops to less than 20V±1V; stops charging, flashes red light. Recycle power to restart after fault is removed. Short-Circuit Protection Stops charging, flashes red light. Recycle power to restart after fault is removed. Attendisonnecting AC power, current flow from battery should less than 2mA. Operating: -10°C to 40°C Non-Operating: -20°C to 85°C Non-Operating: 5% to 90% RH non-condensing Non-Operating: 5% to 90% RH non-condensing Operating Altitude Up to 2000m MBTF MBTF: -100K hours @ Full load, 250C/ MIL-HDBK-217 ENG0335-2-29 ENG0035-2-29 ENG0035-2-29 ENG0035-2-29 ENG0035-1 / ENG0035-2-29, ENG0035-1 / ENG0035-2-29, ENG0335-1 / ENG0035-2-29 ENG0007-26/4/4Ky contact. +/-8kV air)	Model name		DM292U-292A-R		
Input Current 3.5 Arms @ 100Vac Frequency 50-60 Hz No Load Input Power 2 W max. @ 230Vac Leakage Current 250A Max Power factor 20.95@ 230Vac, Full load DC Output Voltage 29.2V±0.1V CC Mode Voltage 228.4V CV Mode Voltage 228.4V CV Mode Voltage 300mVp-p @ 25°C, max load Fully Charged Current 10A ±0.4A Ripple 300mVp-p @ 25°C, max load Fully Charged Currant 1.5A ±300mA No Load Voltage 29.2V±0.1V Fully Charged Currant 2.9V±0.1V Fully Charged Currant 2.9V±0.1V Fully Charged Currant 2.9V±0.1V Output power 29.2 Watt Max Efficiency Max Load Efficiency > 90%@ Vin=230V, CV:29V 31.5V±1V trip point; stops charging, flashes red light. Recycle power to restart after fault is removed. When output voltage drops to less than 20V±1V; stops charging, flashes red light. Recycle power to restart after fault is removed. Short-Circuit Protection Reverse Polarity Protection After disconnecting AC power, current flow from battery should less than 2ma. Operating: -10°C to 40°C Non-Operating: -20°C to 85°C Non-Operating: 5% to 90% R H non-condensing Non-Operating: 5% to 90% R H non-condensing Non-Operating: -20°C to 85°C MBTF MBTF: -100K hours @ Full load, 250C/ MIL-HDBK-217 UL 1012, CAN/CSA C22.2 No.107.2-01, IEC60335-1 / IEC60335-2-29, EN60335-1 / EN60335-2-29 EN 1000-42-2(4-44K) contact. 4-8kV air)	Model name				
Frequency 50-60 Hz	Input				
No Load Input Power 2W max. @ 230Vac		<u> </u>			
Leakage Current 250A Max 25		· · · · · · ·			
Inrush Current 250A Max Power factor > 20.95@ 230Vac, Full load DC Output Voltage 29.2V ± 0.1V CC Mode Voltage 10.4±0.4A at battery voltage 20±1V < V < 28.4V Charge Current 10.4±0.4A Ripple 300mVp-p @ 25°C, max load Fully Charged Voltage 29.2V ± 0.1V Fully Charged Currant 1.5A ±300mA No Load Voltage 29.9 ± 0.2V Output power 292 Watt Max Efficiency Max Load Efficiency > 90%@ Vin=230V, CV:29V Over-Voltage Protection 21.5V±1V trip point; stops charging, flashes red light. Recycle power to restart after fault is removed. When output voltage drops to less than 20V±1V; stops charging, flashes red light. Recycle power to restart after fault is removed. Short-Circuit Protection Stops charging, flashes red light. Recycle power to restart after fault is removed. Reverse Polarity Protection Stops charging, flashes red light. Recycle power to restart after fault is removed. After disconnecting AC power, current flow from battery should less than 2mA. Operating: -10°C to 40°C Non-Operating: -20°C to 85°C Operating: 5% to 90% RH non-condensing Non-Operating: 5% to 90% RH non-conde					
Power factor \$ 20.95\; 230\text{Va.1V}\$ CC Mode Voltage 29.2\text{Va.1V}\$ CV Mode Voltage \$ 28.4\text{Va.4A}\$ CV Mode Voltage \$ 28.4\text{Va.4A}\$ Charge Current \$ 10A \pm 0.4A\$ Ripple \$ 300\text{mV-p} \; \text{@ 25^c} \; \text{max load}\$ Fully Charged Voltage 29.2\text{Va.1V} Fully Charged Voltage 29.2\text{Va.1V} Fully Charged Voltage 29.2\text{Va.1V} Fully Charged Voltage 29.2\text{Va.1V} Output power 292 Watt Max Efficiency Max Load Efficiency > 90\text{@ Vin=230V, CV:29V} Over-Voltage Protection 31.5\text{Virip point; stops charging, flashes red light. Recycle power to restart after fault is removed. When output voltage drops to less than 20\text{V\$\frac{1}{2}V\$; stops charging, flashes red light. Recycle power to restart after fault is removed. Short-Circuit Protection Stop charging, flashes red light. Recycle power to restart after fault is removed. Reverse Polarity Protection Stop charging, flashes red light. Recycle power to restart after fault is removed. After disconnecting AC power, current flow from battery should less than 2mA. Operating: -10\text{ C to 40\text{ C} C} Non-Operating: -20\text{ C to 40\text{ C} C} Non-Operating: 5\text{ to 90\text{ RH non-condensing}} Non-Operating: 5\text{ to 90\text{ RH non-condensing}} Operating Altitude Up to 2000m MBTF MBTF: >100K hours @ Full load, 250C/ MIL-HDBK-217 UL 1012, CAN/CSA C22.2 No.107.2-01, IEC60335-1 / IEC60335-2-29, EN60335-1 / EN60335-2-29 EN 51000-4-2 (r 4/4\text{ Wontact. } +/-8\text{ Wairi}					
Output Output CC Mode Voltage 29.2V ±0.1V CV Mode Voltage >28.4V Charge Current 10A ±0.4A Ripple 300mVp-p @ 25°C, max load Fully Charged Voltage 29.2V ±0.1V Fully Charged Current 1.5A ±300mA No Load Voltage 29V ±0.2V Output power 292 Watt Max Efficiency Max Load Efficiency >90%@ Vin=230V, CV:29V Over-Voltage Protection 21.5V±1V trip point; stops charging, flashes red light. Recycle power to restart after fault is removed. When output voltage drops to less than 20V±1V; stops charging, flashes red light. Recycle power to restart after fault is removed. Short-Circuit Protection Stops charging, flashes red light. Recycle power to restart after fault is removed. Stop charging, flashes red light. Recycle power to restart after fault is removed. After disconnecting AC power, current flow from battery should less than 2mA. Operating: -10°C to 40°C Non-Operating: -20°C to 85°C Operating: 5% to 90% RH non-condensing Non-Operating: 5% to 90% RH non-condensing Operating Altitude Up to 2000m MBTF MBTF: >100K hours @ Full load, 250C/ MIL-HDBK-217 LT 1010C-4-2 (4/4k/ contact. +/-8k/ air)					
Output CC Mode Voltage CV Mode Voltage 228.4V Charge Current 10A ±0.4A Ripple 300mVp-p @ 25°C, max load Fully Charged Voltage 29.2V ±0.1V Fully Charged Currant 1.5A ±300mA No load Voltage 29V ±0.2V Output power 292 Watt Max Efficiency Max Load Efficiency > 90%@ Vin=230V, CV:29V 31.5V±1V trip point; stops charging, flashes red light. Recycle power to restart after fault is removed. Under Voltage Protection Short-Circuit Protection Short-Circuit Protection Reverse Polarity Protection Battery Reserve Protection Fundative After disconnecting AC power, current flow from battery should less than 2mA. Operating: -10°C to 40°C Non-Operating: 5% to 90% RH non-condensing Non-Operating: 5% to 90% RH non-condensing Operating Altitude Up to 2000m MBTF MBTF: >100K hours @ Full load, 250C/ MIL-HDBK-217 Ut 1012, CAN/CSA C22.2 No.107.2-01, IEC60335-1 / IEC60335-2-29, EN60335-1 / EN60335-2-29 EN 61000-4-2 (H/4KV contact: +/-8KV air)					
Output CV Mode Voltage 228.4V					
Output Ripple 300mVp-p @ 25°C, max load		_			
Protection Ripple 300mVp-p @ 25°C, max load					
Fully Charged Voltage Protection Stoy Charge Protection Short-Circuit Protection Reverse Polarity Protection Battery Reserve Protection Battery Reserve Protection Prot	Output				
Fully Charged Currant No Load Voltage 29V ±0.2V Output power 292 Watt Max Efficiency Max Load Efficiency > 90%@ Vin=230V, CV:29V 31.5V±1V trip point; stops charging, flashes red light. Recycle power to restart after fault is removed. Under Voltage Protection When output voltage drops to less than 20V±1V; stops charging, flashes red light. Recycle power to restart after fault is removed. Short-Circuit Protection Reverse Polarity Protection Battery Reserve Protection Battery Reserve Protection Temperature Operating: -10°C to 40°C Non-Operating: -20°C to 85°C Operating: 5% to 90% RH non-condensing Non-Operating: 5% to 90% RH non-condensing Non-Operating: 5% to 90% RH non-condensing Up to 2000m MBTF Standards UL 1012, CAN/CSA C22.2 No.107.2-01, IEC60335-1 / IEC60335-2-29, EN60335-1 / EN60335-2-29 EN 61000-4-2 (+/-4kV contact. +/-8kV air)			300mVp-p @ 25°C, max load		
Protection Protec					
Protection Protection Cover-Voltage Protection Cover-Voltage Protection Stops charging, flashes red light. Recycle power to restart after fault is removed.			1.5A ±300mA		
Protection Protec			29V ±0.2V		
Protection Over-Voltage Protection Inder Voltage Protection Over-Voltage Protection Under Voltage Protection Short-Circuit Protection Reverse Polarity Protection Battery Reserve Protection Environmental Environmental Operating Altitude Operating: -20°C to 85°C Operating: 5% to 90% RH non-condensing Non-Operating: 5% to 90% RH non-condensing Operating: 5% to 90% RH non-condensing Operating: 5% to 90% RH non-condensing Operating: -10°C knours @ Full load, 250C/ MIL-HDBK-217 Standards UL 1012, CAN/CSA C22.2 No.107.2-01, IEC60335-1 / IEC60335-2-29, EN60335-1 / EN60335-2-29 EN 61000-4-2 (+/-4kV contact. +/-8kV air)					
Protection Under Voltage Protection When output voltage drops to less than 20V±1V; stops charging, flashes red light. Recycle power to restart after fault is removed. Short-Circuit Protection Reverse Polarity Protection Battery Reserve Protection Temperature Temperature Protection After disconnecting AC power, current flow from battery should less than 2mA. Operating: -10°C to 40°C Non-Operating: -20°C to 85°C Humidity Operating: 5% to 90% RH non-condensing Non-Operating: 5% to 90% RH non-condensing Operating Altitude Operating: 5% to 90% RH non-condensing Up to 2000m MBTF MBTF: >100K hours @ Full load, 250C/ MIL-HDBK-217 UL 1012, CAN/CSA C22.2 No.107.2-01, IEC60335-1 / IEC60335-2-29, EN60335-1 / EN60335-2-29 EN 61000-4-2 (+/-4kV contact. +/-8kV air)		Efficiency	Max Load Efficiency > 90%@ Vin=230V, CV:29V		
Under Voltage Protection When Output voltage drops to less than 20117, stops charging, flashes red light. Recycle power to restart after fault is removed. Short-Circuit Protection Stops charging, flashes red light. Recycle power to restart after fault is removed. Reverse Polarity Protection Stop charging, flashes red light. Recycle power to restart after fault is removed. Battery Reserve Protection After disconnecting AC power, current flow from battery should less than 2mA. Operating: -10°C to 40°C Non-Operating: -20°C to 85°C Operating: 5% to 90% RH non-condensing Non-Operating: 5% to 90% RH non-condensing Operating Altitude Up to 2000m MBTF MBTF: >100K hours @ Full load, 250C/ MIL-HDBK-217 Standards UL 1012, CAN/CSA C22.2 No.107.2-01, IEC60335-1 / IEC60335-2-29, EN60335-1 / EN60335-2-29 EN 61000-4-2 (+/-4kV contact. +/-8kV air)	Protection	Over-Voltage Protection			
Reverse Polarity Protection Battery Reserve Protection After disconnecting AC power, current flow from battery should less than 2mA. Operating: -10°C to 40°C Non-Operating: -20°C to 85°C Humidity Operating: 5% to 90% RH non-condensing Non-Operating: 5% to 90% RH non-condensing Operating Altitude Up to 2000m MBTF MBTF: >100K hours @ Full load, 250C/ MIL-HDBK-217 Standards UL 1012, CAN/CSA C22.2 No.107.2-01, IEC60335-1 / IEC60335-2-29, EN60335-1 / EN60335-2-29 EN 61000-4-2 (+/-4kV contact. +/-8kV air)		Under Voltage Protection			
Battery Reserve Protection After disconnecting AC power, current flow from battery should less than 2mA. Operating: -10°C to 40°C Non-Operating: -20°C to 85°C Humidity Operating: 5% to 90% RH non-condensing Non-Operating: 5% to 90% RH non-condensing Operating Altitude Up to 2000m MBTF MBTF: >100K hours @ Full load, 250C/ MIL-HDBK-217 Standards UL 1012, CAN/CSA C22.2 No.107.2-01, IEC60335-1 / IEC60335-2-29, EN60335-1 / EN60335-2-29 EN 61000-4-2 (+/-4kV contact, +/-8kV air)		Short-Circuit Protection	Stops charging, flashes red light. Recycle power to restart after fault is removed.		
Temperature Operating: -10°C to 40°C Non-Operating: -20°C to 85°C Humidity Operating: 5% to 90% RH non-condensing Non-Operating: 5% to 90% RH non-condensing Operating Altitude Up to 2000m MBTF MBTF: >100K hours @ Full load, 250C/ MIL-HDBK-217 UL 1012, CAN/CSA C22.2 No.107.2-01, IEC60335-1 / IEC60335-2-29, EN60335-1 / EN60335-2-29 EN 61000-4-2 (+/-4kV contact, +/-8kV air)		Reverse Polarity Protection	Stop charging, flashes red light. Recycle power to restart after fault is removed.		
Temperature Non-Operating: -20°C to 85°C Humidity Operating: 5% to 90% RH non-condensing Non-Operating: 5% to 90% RH non-condensing Operating Altitude Up to 2000m MBTF MBTF: >100K hours @ Full load, 250C/ MIL-HDBK-217 UL 1012, CAN/CSA C22.2 No.107.2-01, IEC60335-1 / IEC60335-2-29, EN60335-1 / EN60335-2-29 EN 61000-4-2 (+/-4kV contact, +/-8kV air)		Battery Reserve Protection	After disconnecting AC power, current flow from battery should less than 2mA.		
Non-Operating: -20°C to 85°C		Temperature	Operating: -10°C to 40°C		
Humidity Non-Operating: 5% to 90% RH non-condensing	Environmental		Non-Operating: -20°C to 85°C		
Non-Operating: 5% to 90% RH non-condensing		Humidity	Operating: 5% to 90% RH non-condensing		
MBTF: >100K hours @ Full load, 250C/ MIL-HDBK-217 UL 1012, CAN/CSA C22.2 No.107.2-01, IEC60335-1 / IEC60335-2-29, EN60335-1 / EN60335-2-29 EN 61000-4-2 (+/-4kV contact, +/-8kV air)		Humburty	Non-Operating: 5% to 90% RH non-condensing		
Standards UL 1012, CAN/CSA C22.2 No.107.2-01, IEC60335-1 / IEC60335-2-29, EN60335-1 / EN60335-2-29 EN 61000-4-2 (+/-4kV contact, +/-8kV air)		Operating Altitude	Up to 2000m		
EN 61000-4-2 (+/-4kV contact, +/-8kV air)		MBTF	MBTF: >100K hours @ Full load, 250C/ MIL-HDBK-217		
EN 61000-4-2 (+/-4kV contact, +/-8kV air)	Safety and	Standards			
I no nouse its.		Immunity			
			EN 61000-4-5 (1kV L-L, 2kV L-PE/N-PE)		
EMC Emissions EN55032, FCC part 15 Class B, CISPR 32		Emissions	EN55032, FCC part 15 Class B, CISPR 32		
Standards Harmonic Current EN61000-3-2		Harmonic Current	EN61000-3-2		
Flicker EN61000-3-3	Stanuarus	Flicker			
Insulation Resistance >100M Ohm minimum, 500VDC		Insulation Resistance	>100M Ohm minimum, 500VDC		
Hi-Pot Test Input to output:>10mA, 3000VAC for 1min, Input to Ground: <10mA, 2000VAC for 1min		Hi-Pot Test	Input to output:>10mA, 3000VAC for 1min, Input to Ground: <10mA, 2000VAC for 1min		

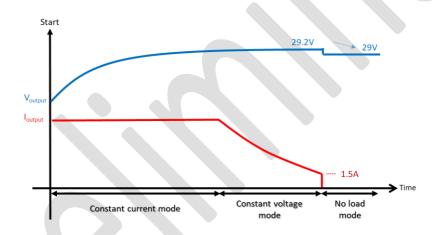
Notes:

(1): Measurements shall be made with an oscilloscope with 20MHz Bandwidth. Outputs should be bypassed at a connector with a 0.1uF ceramic capacitor and a 10uF electrolytic capacitor (Low ESR).



Model name		DM292U-292A-R		
	LED Indicator	Stop AC	LED off	
		No load mode	Green On	
		Charging Mode	Orange On	
		Fully Charged Mode	Green On	
			Red Flash (Under Voltage Protection; Over Voltage Protection;	
		Error Mode	 Short Circuit Protection; Inside Over Temperature Protection; 	
			Reverse Battery Connection)	
Mechanical	Dimensions (L x W x H)	180mm (7.09in) x 86mm (3.39in) x 35mm (1.38in)		
	Weight	1000g (35.274oz)		
	AC Input Connector	C14 inlet		
	DC Output Cable	TBD		
	DC Output Connector	TBD		

Charging Curve: 2 stages





DM292U-292A-R Outline Drawing

