

Ultra UL1741

Inverter/Charger



Your Best Partner for Power

Pure sine, high surge, automatic voltage regulator and full feature, the Ultra UL1741 is the state of the art. The heart of your power system!



The Ultra UL1741 certificated low frequency sine wave inverter charger represents highly sophisticated and advanced inverter. The Ultra features premium sine wave output with high surge capability and temperature compensated, power factor corrected, multi-stage charging, line-interactive AVR to meet power needs of demanding loads including motor loads. All range of Ultra UL1741 inverter chargers are compatible with optional system remote control panel, automatic generator start and battery temperature sensor. All of models are approved to UL1741, CSA requirements.

Product Features

- Designed to operate under harsh environment
- Automatic voltage regulator (AVR) when working in charger mode and line mode.
- DC start & automatic self-diagnostic function
- True sine wave output (THD<3%) to operate sensitive electronic and electrical equipment.
- Automatic Generator start function
- Easy to install & easy to operate & easy to solve
- Low DC voltage supports home and office appliances
- Charge rate selectable from 0%-100%
- High efficiency design.
- 13Vdc battery recovery point, dedicated for renewable energy systems.
- 8 pre-set battery type selector plus De-sulphation for totally flat batteries.
- Power factor corrected multi-stage charger for fast, efficient charging, minimizing charging time.
- 10ms max transfer time between utility and battery, guarantees power continuity.
- 15s delay before transfer when AC resumes, protection for load when used with generator.
- Conformal coated circuit boards for humid environments.
- Battery temperature sensing to enhance battery lifecycle.
- LCD and LED display to indicate the status of the inverter charger
- UL & c-UL listed to CSA standard C22.2 No.107.1 and UL1741
- Surge capacity to start difficult loads like refrigerators or A/C compressors.
- Power save mode to reduce idle consume.

Protection Features

- AC input over voltage protection
- AC input low voltage protection
- Over temperature protection
- Over load protection
- Short circuit protection (1s after fault)
- Back feeding protection to avoids presenting an AC voltage on the AC input terminal in inverter mode.

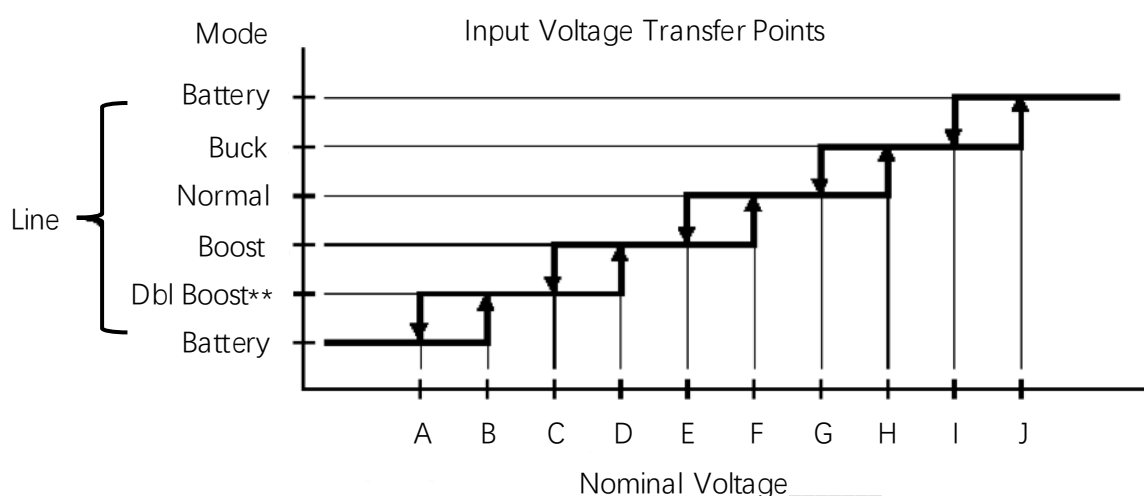
Automatic Voltage Regulator (AVR)

The automatic voltage regulator function is available for the full series of Foxpower Ultra UL1741 pure sine wave inverter charger models. Instead of simply bypassing the input AC to power the loads, the Ultra UL1741 series inverter stabilizes the input AC voltage to a range of 120V±10%.

AVR function Ultra UL1741 Inverter charger

Acceptable input voltage range (Vac)	0-160		
Nominal input voltage (Vac)	100	110	120
(A) Line low loss N/W (on battery)	75/65	84/72	92/78
(B) Line low comeback N/W(on boost)	80/70	89/77	97/83
(C) Line 2nd boost threshold (on boost)	**	**	**
(D) Line 2nd boost comeback(on normal)	**	**	**
(E) Line 1st boost threshold (on boost)	90	99	108
(F) Line 1stboost comeback (on normal)	93	103	112
(G) Line buck comeback (on normal)	106	118	128
(H) Line buck threshold (on buck)	110	121	132
(I) Line high comeback (on buck)	115	127	139
(J) Line high loss (on battery)	120	132	144

** Only if applicable



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Electrical - Inverter	FULAGDA1512A	FULAGDA2524A	FULAGDA3524A	FULAGDA4524A	FULAGDA3548A	FULAGDA4548A	FULAGDA6048D
Continuous output power	1500W	2500W	3500W	4500W	3500W	4500W	6000W
Surge Rating	4500W	7500W	10500W	13500W	10500W	13500W	18000W
Capable of starting electric motor	1HP	2HP	3HP	4HP	3HP	4HP	6HP
Output waveform	Pure sine wave/same as input(bypass mode)						
Nominal efficiency	>88% (peak)						
Line mode efficiency	>95%						
Power factor	0.9-1.0						
Nominal output voltage	100Vac-110Vac-120Vac						120Vac/240Vac
Output voltage regulation	±10% RMS						
Output frequency	50/60Hz±0.3Hz						
Power consumption-inverting (no load)	3.5A	3.5A	4.0A	4.0A	2.0A	2.0A	3.5A
Power consumption-searching mode	<1.4A	<1.4A	<1.6A	<1.6A	<0.5A	<0.5A	<1.05A
Transfer time	10ms (max)						
Total harmonic distortion (THD)	<3%						
Electrical - DC Input	FULAGDA1512A	FULAGDA2524A	FULAGDA3524A	FULAGDA4524A	FULAGDA3548A	FULAGDA4548A	FULAGDA6048D
Nominal input voltage	12.0Vdc	24.0Vdc	24.0Vdc	24.0Vdc	48.0Vdc	48.0Vdc	48.0Vdc
Minimum start voltage	10.5/11.0/11.5/12.5Vdc	21.0/22.0/23.0/25.0Vdc			42.0/44.0/46.0/50.0Vdc		
Low battery alarm	10.5/11.0/11.5/12.5Vdc	21.0/22.0/23.0/25.0Vdc			42.0/44.0/46.0/50.0Vdc		
Low battery trip	10.0/10.5/11.0/12.0Vdc	20.0/21.0/22.0/24.0Vdc			40.0/42.0/44.0/48.0Vdc		
High voltage alarm & fault	16.0Vdc	32.0Vdc			64.0Vdc		
High DC input recovery	15.5Vdc	31.0Vdc			62.0Vdc		
Low battery voltage recovery	13.0Vdc	26.0Vdc			52.0Vdc		
Electrical - Charger	FULAGDA1512A	FULAGDA2524A	FULAGDA3524A	FULAGDA4524A	FULAGDA3548A	FULAGDA4548A	FULAGDA6048D
Input voltage range	Narrow: 100-135Vac; Wide: 90-135Vac						200-254Vac/150-260Vac
Input frequency range	Narrow:47-55±0.3Hz for 50Hz, 57-65±0.3Hz for 60Hz						
Input frequency range	Wide: 43±0.3Hz plus for 50Hz/60Hz						
Max charge current	50A	40A	50A	60A	25A	30A	55A
Charger efficiency	80%	80%	80%	80%	80%	80%	80%
Over charge current shutdown	15.7V	31.4V	31.4V	31.4V	62.8V	62.8V	62.8V
Output voltage	Depends on battery type *for 12V (*2 for 24V)						
Battery Type				*Absorption mode (Vdc)		*Float mode (Vdc)	
Gel U.S.A				14		13.7	
A.G.M 1				14.1		13.4	
A.G.M 2				14.6		13.7	
Sealed lead acid				14.4		13.6	
Gel Euro				14.4		13.8	
Open lead acid				14.8		13.3	
Calcium				15.1		13.6	
De-sulphation	15.5 for 4hrs (12v model)			31 for 4hrs (24v model)		62 for 4hrs (48v model)	

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Electrical - Bypass & protection	FULAGDA1512A	FULAGDA2524A	FULAGDA3524A	FULAGDA4524A	FULAGDA3548A	FULAGDA4548A	FULAGDA6048D
Input voltage waveform	Sine wave (grid or generator)						
Nominal voltage	120Vac						240Vac
Low voltage trip (Wide/Narrow)	78V/92V±4%						140V/190V±4%
Low voltage re-engage (Wide/Narrow)	83V/97V±4%						150V/200V±4%
High voltage trip	140V±4%						270V/264V±4%
High voltage re-engage	135V±4%						260V/254V±4%
Max AC input voltage	150Vac						300Vac
Nominal input frequency	50Hz or 60Hz (auto detect)						
Low frequency trip	Narrow: 47±0.3Hz for 50Hz, 57±0.3Hz for 60Hz						
Low frequency trip	Wide: 40±0.3Hz for 50Hz/60Hz						
Low frequency re-engage	Narrow: 48±0.3Hz for 50Hz, 58±0.3Hz for 60Hz						
Low frequency re-engage	Wide: 45±0.3Hz for 50Hz/60Hz						
High frequency trip	Narrow: 55±0.3Hz for 50Hz, 65±0.3Hz for 60Hz						
High frequency trip	Wide: 70±0.3Hz for 50Hz/60Hz						
High frequency re-engage	Narrow: 54±0.3Hz for 50Hz, 64±0.3Hz for 60Hz						
High frequency re-engage	Wide: 65±0.3Hz for 50Hz/60Hz						
Output short circuit protection	Breaker	Breaker	Breaker	Breaker	Breaker	Breaker	Breaker
Electrical - General	FULAGDA1512A	FULAGDA2524A	FULAGDA3524A	FULAGDA4524A	FULAGDA3548A	FULAGDA4548A	FULAGDA6048D
Mounting method	Versatile mounting						
Display	LCD+LED status display						
Warranty	2 Years	2 Years	2 Years	2 Years	2 Years	2 Years	2 Years
Automatic Generator Start (AGS)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Battery temperature sensor	Option	Option	Option	Option	Option	Option	Option
Remote control panel	Option	Option	Option	Option	Option	Option	Option
Regulatory and environment compliance	ETL & c-ETL certificated to CSA 107.1, UL1741						
Inverter dimensions (L*W*H)	540mm*360mm*190mm (including AC conver and flange)						
Inverter weight (kg)	23	25.5	26.5	28.5	26.5	28.5	31.5
Shipping dimensions (L*W*H)	580mm*450mm*285mm						
Shipping weight (kg)	25	28	29	31	29	31	36.5
Working temperature	0-40C°	0-40C°	0-40C°	0-40C°	0-40C°	0-40C°	0-40C°
Storage temperature	0-70C°	0-70C°	0-70C°	0-70C°	0-70C°	0-70C°	0-70C°

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Electrical - Inverter	FULAGDA3524D	FULAGDA4524D	FULAGDA3548D	FULAGDA4548D
Continuous output power	3500W	4500W	3500W	4500W
Surge Rating	7500W	13500W	10500W	13500W
Capable of starting electric motor	3HP	4HP	3HP	4HP
Output waveform	Pure sine wave/same as input(bypass mode)			
Nominal efficiency	>88% (peak)			
Line mode efficiency	>95%			
Power factor	0.9-1.0			
Nominal output voltage	120Vac/240Vac			
Output voltage regulation	±10% RMS			
Output frequency	50/60Hz±0.3Hz			
Power consumption-inverting (no load)	4.0A _{dc}	4.0A _{dc}	2.0A _{dc}	2.0A _{dc}
Power consumption-searching mode	<1.6A _{dc}	<1.6A _{dc}	<0.5A _{dc}	<0.5A _{dc}
Transfer time	10ms (max)			
Total harmonic distortion (THD)	<3%			
Electrical - DC Input	FULAGDA3524D	FULAGDA4524D	FULAGDA3548D	FULAGDA4548D
Nominal input voltage	24.0V _{dc}		48.0V _{dc}	
Minimum start voltage	21.0/22.0/23.0/25.0V _{dc}		42.0/44.0/46.0/50.0V _{dc}	
Low battery alarm	21.0/22.0/23.0/25.0V _{dc}		42.0/44.0/46.0/50.0V _{dc}	
Low battery trip	20.0/21.0/22.0/24.0V _{dc}		40.0/42.0/44.0/48.0V _{dc}	
High voltage alarm & fault	32.0V _{dc}		64.0V _{dc}	
High DC input recovery	31.0V _{dc}		62.0V _{dc}	
Low battery voltage recovery	26.0V _{dc}		52.0V _{dc}	
Electrical - Charger	FULAGDA3524D	FULAGDA4524D	FULAGDA3548D	FULAGDA4548D
Input voltage range	200-254Vac/150-260Vac			
Input frequency range	Narrow:47-55±0.3Hz for 50Hz, 57-65±0.3Hz for 60Hz			
Input frequency range	Wide: 43±0.3Hz plus for 50Hz/60Hz			
Max charge current	50A	60A	25A	30A
Charger efficiency	80%			
Over charge current shutdown	31.4V	31.4V	62.8V	62.8V
Battery Type	Absorption mode (V _{dc})	Float mode (V _{dc})	Absorption mode (V _{dc})	Float mode (V _{dc})
Gel U.S.A	28	27.4	56	54.8
A.G.M 1	28.2	26.8	56.4	53.6
A.G.M 2	29.2	27.4	58.4	54.8
Sealed lead acid	28.8	27.2	57.6	54.4
Gel Euro	28.8	27.6	57.6	55.2
Open lead acid	29.6	26.6	59.2	53.2
Calcium	30.2	27.2	60.4	54.4
De-sulphation	31 for 4hrs	31 for 4hrs	62 for 4hrs	62 for 4hrs

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Electrical - Bypass & protection	FULAGDA3524D		FULAGDA4524D		FULAGDA3548D		FULAGDA4548D
Input voltage waveform	Sine wave (grid or generator)						
Nominal voltage	240Vac						
Low voltage trip (Wide/Narrow)	140V/190V±4%						
Low voltage re-engage (Wide/Narrow)	150V/200V±4%						
High voltage trip	270V/264V±4%						
High voltage re-engage	260V/254V±4%						
Max AC input voltage	300Vac						
Nominal input frequency	50Hz or 60Hz (auto detect)						
Low frequency trip	Narrow: 47±0.3Hz for 50Hz, 57±0.3Hz for 60Hz						
Low frequency trip	Wide: 40±0.3Hz for 50Hz/60Hz						
Low frequency re-engage	Narrow: 48±0.3Hz for 50Hz, 58±0.3Hz for 60Hz						
Low frequency re-engage	Wide: 45±0.3Hz for 50Hz/60Hz						
High frequency trip	Narrow: 55±0.3Hz for 50Hz, 65±0.3Hz for 60Hz						
High frequency trip	Wide: 70±0.3Hz for 50Hz/60Hz						
High frequency re-engage	Narrow: 54±0.3Hz for 50Hz, 64±0.3Hz for 60Hz						
High frequency re-engage	Wide: 65±0.3Hz for 50Hz/60Hz						
Output short circuit protection	Breaker	Breaker	Breaker	Breaker	Breaker	Breaker	Breaker
Electrical - General	FULAGDA3524D		FULAGDA4524D		FULAGDA3548D		FULAGDA4548D
Mounting method	Versatile mounting						
Display	LCD+LED status display						
Warranty	2 Years	2 Years	2 Years	2 Years	2 Years	2 Years	2 Years
Automatic Generator Start (AGS)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Battery temperature sensor	Option	Option	Option	Option	Option	Option	Option
Remote control panel	Option	Option	Option	Option	Option	Option	Option
Regulatory and environment compliance	ETL & c-ETL certificated to CSA 107.1, UL1741						
Inverter dimensions (L*W*H)	540mm*360mm*190mm (including AC conver and flange)						
Inverter weight (kg)	23	25.5	26.5	28.5	26.5	28.5	31.5
Shipping dimensions (L*W*H)	580mm*450mm*285mm						
Shipping weight (kg)	25	28	29	31	29	31	36.5
Working temperature	0-40C°	0-40C°	0-40C°	0-40C°	0-40C°	0-40C°	0-40C°
Storage temperature	0-70C°	0-70C°	0-70C°	0-70C°	0-70C°	0-70C°	0-70C°

Specifications are subject to chage without notice