

ULTRA MAX[®]

CHAUMXDC12V3A Battery Charger Specification

ULTRAMAX LIPO4 Charger 3A -12V



● Input Data

ITEM	U	SPECIFICATION	REMARK
Rating Input Voltage	V	100~240Vac 50-60Hz	
Input voltage range	V	90~264Vac	
Rating Input Current	A	0.6A	220Vac
Max. input power	W	60W	

● Output Data

ITEM	U	SPECIFICATION	REMARK
Rating output voltage	V	13.8V	
Output voltage range	V	10VDC~15VDC	
Suit with Battery type		12V 6~30Ah VRLA	
Charging current(stage1) (I)	A	3.0±0.3@12V	
Charging voltage(stage2) (V _{max} , V _o)	V	14.5V+0.2V	
Floating voltage(stage3) (V)	V	13.7V+0.15V	
Cut-off (I _{min})	A	<0.6+0.2A	
Typical charging time	h	8	
Max. output power	W	45W	
Hold-on time	ms	NC	INPUT:220Vac OUTPUT: Full load
Ripple current	mA	200	INPUT:220Vac OUTPUT: Full load
Charge finish condition	A	V>14V +I<0.6A	
LED color		Red: charging Green: finish/idle	
Output protect	-	OCP & OVP & Polarity error protection	
Efficiency	%	75%(min)	At max. load

● Environment

ITEM	U	SPECIFICATION	REMARK
Operate temperature	°C	0~+40	Full load & natural convection
Operate humidity	%	20~90	Relative humidity, non-condensing
Storage temperature	°C	-40~+70	
Storage humidity	%	10~95	Relative humidity, non-condensing
Cooling	-	Natural convection	
Temperature factor	%	--	
Vibration resistance		5MM/50HZ/600S	Non-operating condition.
Impact resistance		1-meter drop test>=3 times	Non-operating condition.

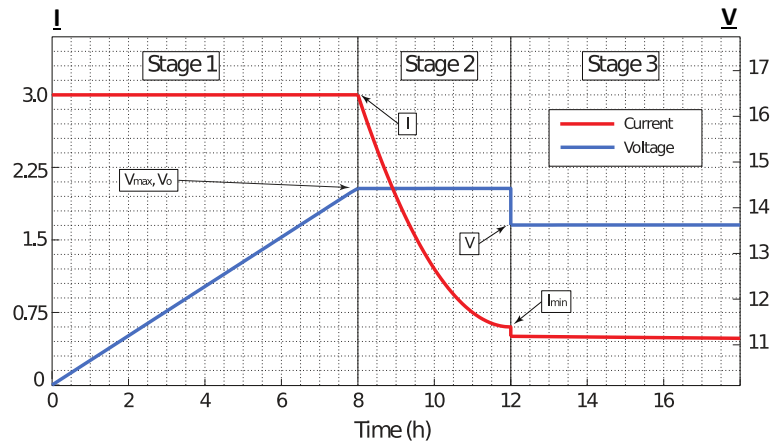
● Mechanical

ITEM	U	SPECIFICATION	REMARK
Weight	g	400g	
Size	mm	120.0x60.0x38.0	Casing only
Connectors	-	Defined when order	

● Safety

ITEM	U	SPECIFICATION	REMARK
Max. temperature rise	°C	<40 on casing	At any line and Max. Load
Safety standards	-	UL1310, EN60335-2-29, SAA	
EMC standard	-	FCC part15, EN55014, C-TICK	
MTBF	hr	40000	
Limited power source	VA	-	
ESD	Kv	8.0	
Hi-Pot Insulation	v	Input to Output:3000Vac (1 min.)	For final unit, cut-off current<10mA

● I_{Vo}V Charging Graph



CHAUMXDC12V5A Battery Charger Specification

ULTRAMAX LiPO4 Charger 5A - 12V



● Input Data

ITEM	U	SPECIFICATION	REMARK
Rating Input Voltage	V	100~240Vac 50-60Hz	
Input voltage range	V	90~264Vac	
Rating Input Current	A	0.6A	220Vac
Max. input power	W	90.0W	

● Output Data

ITEM	U	SPECIFICATION	REMARK
Rating output voltage	V	14.6V	
Output voltage range	V	0VDC~14.6VDC	
Suit with Battery type		12.8V LiFePO4 battery charger only	
Charging current(stage1)	A	5.0±0.5	
Charging voltage(stage2)	V	14.5-14.7V	
Floating voltage(stage3)	V	N/A	
Cut-off current(stage1→2)	A	0.3-0.7A	
Typical charging time	h	Fast charge 2hours Slow Charge 5 hours	
Max. output power	W	73.0W	
Hold-on time	ms	NC	INPUT: 220Vac OUTPUT: Full load
Ripple current	mA	200	INPUT: 220Vac OUTPUT: Full load
Charge finish condition	A	I<0.7A	
LED color		Red: charging Green: finish/idle	
Output protect	-	OCP & OVP & Polarity error protection	
Efficiency	%	80%(Typical)	At max. load

● Environment

ITEM	U	SPECIFICATION	REMARK
Operate temperature	°C	0~+40	Full load & natural convection
Operate humidity	%	20~90	Relative humidity, non-condensing
Storage temperature	°C	-40~+70	
Storage humidity	%	10~95	Relative humidity, non-condensing
Cooling	-	fan force cooling only when charging	
Temperature factor	%	--	
Vibration resistance		5MM/50HZ/600S	Non-operating condition.
Impact resistance		1-meter drop test>=3 times	Non-operating condition.

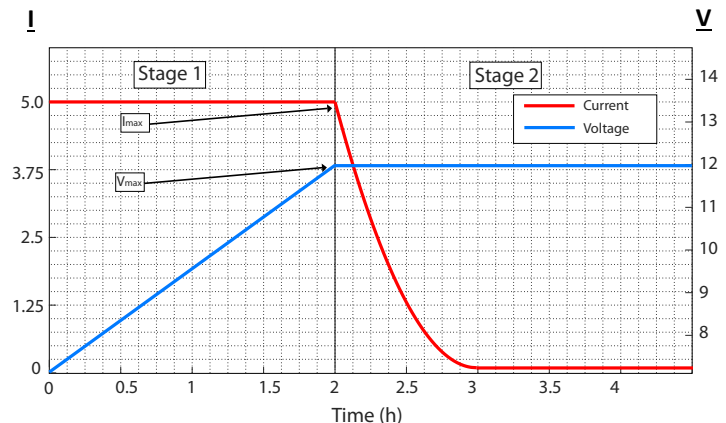
● Mechanical

ITEM	U	SPECIFICATION	REMARK
Weight	g	450	
Size	mm	152.5x63.0x45.0	Casing only
Connectors	-	Defined when order	

● Safety

ITEM	U	SPECIFICATION	REMARK
Max. temperature rise	°C	<30 on casing	At any line and Max. Load
Safety standards	-	CE(EN60335-2-29)	
EMC standard	-	CE(EN55014)	
MTBF	hr	40000	
Limited power source	VA	-	
ESD	K	8.0	
Hi-Pot Insulation	v	Input to Output:3000Vac (1 min.)	For final unit, cut-off

● IVoV Charging Graph



CHAUMXDC12V10A Battery Charger Specification

ULTRAMAX LIPO4 Charger 10A - 12V



● Input Data

ITEM	U	SPECIFICATION	REMARK
Rating Input Voltage	V	100~240Vac 50-60Hz	
Input voltage range	V	90~264Vac	
Rating Input Current	A	1.0A	220Vac
Max. input power	W	170.0W	

● Output Data

ITEM	U	SPECIFICATION	REMARK
Rating output voltage	V	14.6V	
Output voltage range	V	0VDC~14.6VDC	
Suit with Battery type		12.8V LiFePO4 battery charger only	
Charging current(stage 1)	A	10.0A±1.0A	
Charging voltage(stage2)	V	14.4-14.8V	
Floating voltage(stage3)	V	N/A	
Cut-off current(stage1→2)	A	0.8-1.0A	
Typical charging time	h	Fast charge 2hours Slow charge	
Max. output power	W	146.0W	
Hold-on time	ms	NC	INPUT: 220Vac OUTPUT: Full load
Ripple current	mA	200	INPUT: 220Vac OUTPUT: Full load
Charge finish condition	A	<1.2A	
LED color		Red: charging Green: finish/idle	
Output protect	-	OCP & OVP & Polarity error protection	
Efficiency	%	80%(Typical)	At max. load

● Environment

ITEM	U	SPECIFICATION	REMARK
Operate temperature	°C	0~+40	Full load & natural convection
Operate humidity	%	20~90	Relative humidity, non-condensing
Storage temperature	°C	-40~+70	
Storage humidity	%	10~95	Relative humidity, non-condensing
Cooling	-	fan force cooling only when charging	
Temperature factor	%	--	
Vibration resistance		5MM/50HZ/600S	Non-operating condition.
Impact resistance		1-meter drop test>=3 times	Non-operating condition.

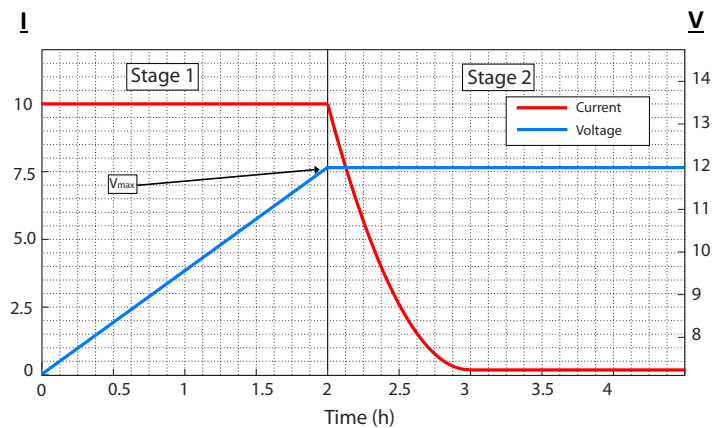
● Mechanical

ITEM	U	SPECIFICATION	REMARK
Weight	g	450g	
Size	m	152.5x63.0x45.0	Casing only
Connectors	-	Defined when order	

● Safety

ITEM	U	SPECIFICATION	REMARK
Max. temperature rise	°C	<30 on casing	At any line and Max. Load
Safety standards	-	CE(EN60335-2-29)	
EMC standard	-	CE(EN55014)	
MTBF	hr	40000	
Limited power source	V	-	
ESD	K	8.0	
Hi-Pot Insulation	V	Input to Output:3000Vac (1 min.)	For final unit, cut-off current=10mA

● IVoV Charging Graph



CHAUMXDC12V20A Battery Charger Specification

ULTRAMAX LiPO4 Charger 20A -12V



● Input Data

ITEM	U	SPECIFICATION	REMARK
Rating Input Voltage	V	200~240Vac 50-60Hz	
Input voltage range	V	180~264Vac	
Rating Input Current	A	2.0A	220Vac
Max. input power	W	450.0W	

● Output Data

ITEM	U	SPECIFICATION	REMARK
Rating output voltage	V	14.6V	
Output voltage range	V	0VDC~14.6VDC	
Suit with Battery type		12.8V LiFePO4 battery charger only	
Charging current(stage1)	A	20.0±2.0	
Charging voltage(stage2)	V	14.4-14.8V	
Cut-off current(stage1→2)	A	1.5-2.5A	
Typical charging time	h	Fast charge 2hours Slow charge 5hours	
Max. output power	W	300.0W	
Hold-on time	ms	NC	INPUT:220Vac OUTPUT: Full load
Ripple current	mA	500	INPUT:220Vac OUTPUT: Full load
Charge finish condition	A	I<2.5A	
LED color		Red: charging Green: finish/idle	
Output protect	-	OCP & OVP & Polarity error protection	
Efficiency	%	80%(Typical)	At max. load

● Environment

ITEM	U	SPECIFICATION	REMARK
Operate temperature	°C	0~+40	Full load & natural convection
Operate humidity	%	20~90	Relative humidity, non-condensing
Storage temperature	°C	-40~+70	
Storage humidity	%	10~95	Relative humidity, non-condensing
Cooling	-	fan force cooling only when charging	
Temperature factor	%	--	
Vibration resistance		5MM/50HZ/600S	Non-operating condition.
Impact resistance		1-meter drop test>=3 times	Non-operating condition.

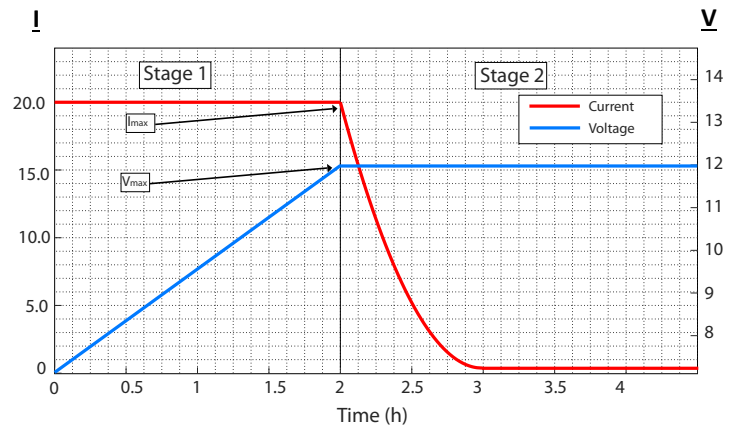
● Mechanical

ITEM	U	SPECIFICATION	REMARK
Weight	g	1200	
Size	mm	160.0x105.0x60.0	Casing only
Connectors	-	Defined when order	

● Safety

ITEM	U	SPECIFICATION	REMARK
Max. temperature rise	°C	<30 on casing	At any line and Max. Load
Safety standards	-	CE(EN60335-2-29)	
EMC standard	-	CE(EN55014)	
MTBF	hr	40000	
Limited power source	VA	-	
ESD	Kv	8.0	
Hi-Pot Insulation	v	Input to Output:3000Vac (1 min.)	For final unit, cut-off current=10mA

● IVoV Charging Graph



CHAUMXDC24V3A Battery Charger Specification

ULTRAMAX LiPO4 Charger 3A - 24V



● Environment

ITEM	U	SPECIFICATION	REMARK
Operate temperature	°C	0~+40	Full load & natural convection
Operate humidity	%	20~90	Relative humidity, non-condensing.
Storage temperature	°C	-40~+70	
Storage humidity	%	10~95	Relative humidity, non-condensing.
Cooling	-	Fan force cooling only when charging	
Temperature factor	%	--	
Vibration resistance		5MM/50HZ/600S	Non-operating condition.
Impact resistance		1-meter drop test>=3 times	Non-operating condition.

● Input Data

ITEM	U	SPECIFICATION	REMARK
Rating Input Voltage	V	100~240Vac 50-60Hz	
Input voltage range	V	90~264Vac	
Rating Input Current	A	1.0A	220Vac
Max. input power	W	108.0W	

● Mechanical

ITEM	U	SPECIFICATION	REMARK
Weight	g	450	
Size	mm	152.5x63.0x45.0	Casing only
Connectors	-	Defined when order	

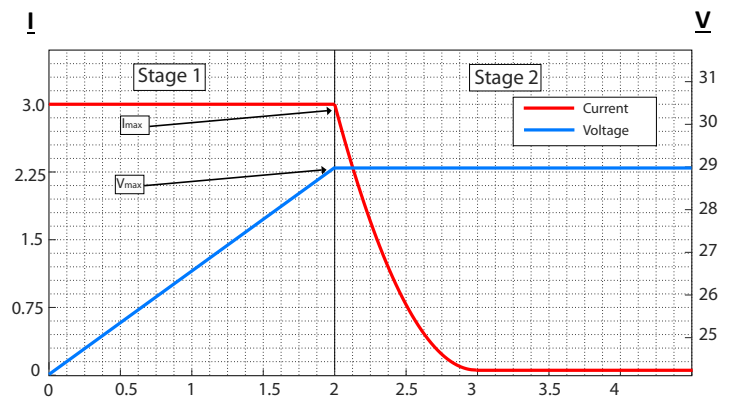
● Output Data

ITEM	U	SPECIFICATION	REMARK
Rating output voltage	V	29.2V	
Output voltage range	V	0VDC~29.2VDC	
Suit with Battery type		25.6V LiFePO4 battery charger and capacity>3500mAh	
Charging current(stage1)	A	3.0±0.30	
Charging voltage(stage2)	V	29.0-29.4V	
Cut-off current(stage1→2)	A	0.15-0.45A	
Typical charging time	h	Fast charge 2hours Slow charge 5hours	
Max. output power	W	87.6W	
Hold-on time	ms	NC	INPUT: 220Vac OUTPUT: Full
Ripple current	mA	300	INPUT: 220Vac OUTPUT: Full
Charge finish condition	A	I<0.45A	
LED color		Red: charging Green: finish/idle	
Output protect	-	OCP & OVP & Polarity error protection	
Efficiency	%	80%(Typical)	At max. load

● Safety

ITEM	U	SPECIFICATION	REMARK
Max. temperature rise	°C	<30 on casing	At any line and Max. Load
Safety standards	-	CE(EN60335-2-29)	
EMC standard	-	CE(EN55014)	
MTBF	hr	40000	
Limited power source	VA	-	
ESD	K	8.0	
Hi-Pot Insulation	v	Input to Output:3000Vac (1 min.)	For final unit, cut-off current=10mA

● I_oV_o Charging Graph



Ultra Max Batteries

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Website:www.ultramaxbatteries.com

25.6V 5.0A LiFePO4 battery charger

SPECIFICATION

PREPARE

CHECK

APPROVE

MODEL:	CHAUMXDC24V-5A	Claudia	
ISSUE DATE:	2011/2/8		
COMMON/UNITE	DOC.NO:	REV: 1.0	PAGE:1 OF 1

Smart 2-Stages LiFePO4 Battery charger

	ITEM	UNIT	SPECIFICATION	REMARK
INPUT				
01	Rating Input Voltage	V ac	110~240Vac 50-60Hz	
02	Input voltage range	V ac	100~264Vac	
03	Rating Input Current	A	1.5Arms	220Vac
04	Max.input power	W	180.0W	
OUTPUT				
05	Rating output voltage	V dc	29.2V	
06	Output voltage range	V dc	0VDC~29.2VDC	
07	Suit with Battery type		25.6V LiFePO4 battery charger and capacity>5000mAh	
08	Charging current(stage1)	A	5.0±0.5	
09	Charging voltage(stage2)	V	28.8-29.4V	
10	Cut-off current(stage1→2)	A	0.3-0.7A	
11	Typical charging time	hour	Fast charge 2hours Slow charge 5hours	
12	Max.output power	W	146.0W	
13	Hold-on time	ms	NC	Input:220Vac Output:Full load
14	Ripple current	mA	400	Input:220Vac Output:Full load
15	Charge finish condition		I<0.7A	
16	LED color		Red:charging Green:finish/idle	
17	Output protect	-	OCP&OVP&Polarity error protection	
18	Efficiency	%	80%(Typical)	At max.load
Environment				
19	Operate temperature	℃	0~+40	Full load&natural convection
20	Operate humidity	%RH	20~90	Relative humidity,non-condensing.
21	Storage temperature	℃	-40~+70	
22	Storage humidity	%RH	10~95	Relative humidity,non-condensing.
23	Cooling	-	Fan cooling	
24	Temperature factor	%	--	
25	Vibration resistance		5MM/50HZ/600S	Non-operating condition.
26	Impact resistance		1 meter drop test>=3 times	Non-operating condition.
Mechanical				
27	Weight	g	500	
28	Size	mm	152.5*63.0*45.0	Casing only
29	Connectors	-	Defined when order	
Safety				
30	Max.temperature rise	℃	<30 on casing	At any line and Max.Load
31	Safety standards	-	CE(EN60335-2-29)	
32	EMC standard	-	CE(EN55014)	
33	MTBF	hrs	40000	
34	Limited power source	VA	-	
35	ESD	Kv	8.0	
36	Hi-Pot Insulation	v	Input to Output:3000Vac(1 min.)	For final nuit,cut-off current=10mA

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Website:www.ultramaxbatteries.com

25.6V 10.0A LiFePO4 battery charger

SPECIFICATION		PREPARE	CHECK	APPROVE
MODEL:	CHAUMXDC24V-10A	Claudia		
ISSUE DATE:	2011-2-8			
COMMON/UNITE	DOC.NO:		REV: 1.0	PAGE:1 OF 1

Smart 2-Stages LiFePO4 Battery charger

	ITEM	UNIT	SPECIFICATION	REMARK
INPUT				
01	Rating Input Voltage	V ac	100~120Vac or 200~240Vac 50-60Hz	
02	Input voltage range	V ac	90~132Vac or 180~264Vac	
03	Rating Input Current	A	2.0Arms	220Vac
04	Max.input power	W	360W	
OUTPUT				
05	Rating output voltage	V dc	29.2V	
06	Output voltage range	V dc	0VDC~29.2VDC	
07	Suit with Battery type		25.6V LiFePO4 battery pack	
08	Charging current(stage1)	A	10.0±1.0	
09	Charging voltage(stage2)	V	28.8-29.4V	
10	Cut-off current(stage1→2)	A	0.8-1.2A	
11	Typical charging time	hour	Fast charge 2hours Slow charge 5hours	
12	Max.output power	W	292.0W	
13	Hold-on time	ms	NC	Input:220Vac Output:Full load
14	Ripple current	mA	400	Input:220Vac Output:Full load
15	Charge finish condition		I<1.2A	
16	LED color		Red:charging Green:finish/idle	
17	Output protect	-	OCP&OVP&Polarity error protection	
18	Efficiency	%	80%(Typical)	At max.load
Environment				
19	Operate temperature	°C	0~+40	Full load&natural convection
20	Operate humidity	%RH	20~90	Relative humidity,non-condensin
21	Storage temperature	°C	-40~+70	
22	Storage humidity	%RH	10~95	Relative humidity,non-condensin
23	Cooling	-	Fan cooling	
24	Temperature factor	%	--	
25	Vibration resistance		5MM/50HZ/600S	Non-operating condition.
26	Impact resistance		1 meter drop test≥3 times	Non-operating condition.
Mechanical				
27	Weight	g	1200	
28	Size	mm	160.0*105.0*63.0	Casing only
29	Connectors	-	Defined when order	
Safety				
30	Max.temperature rise	°C	<30 on casing	At any line and Max.Load
31	Safety standards	-	CE(EN60335-2-29)	
32	EMC standard	-	CE(EN55014)	
33	MTBF	hrs	40000	
34	Limited power source	VA	-	
35	ESD	Kv	8.0	
36	Hi-Pot Insulation	v	Input to Output:3000Vac(1 min.)	For final nuit,cut-off current=10n

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SPECIFICATION

PREPARE

CHECK

APPROVE

MODEL:	CHAUMXDC24V-20A	Claudia		
ISSUE DATE:	2009/5/8			
COMMON/UNITE	DOC.NO:		REV: 1.0	PAGE:1 OF 1

Smart 3-Stages SLA Battery charger

	ITEM	UNIT	SPECIFICATION	REMARK
INPUT				
01	Rating Input Voltage	V ac	100~120Vac or 200~240Vac 50-60Hz	
02	Input voltage range	V ac	90~132Vac or 180~264Vac	
03	Rating Input Current	A	4.0Arms	220Vac
04	Max.input power	W	660W	
OUTPUT				
05	Rating output voltage	V dc	29.2V	
06	Output voltage range	V dc	0VDC~30VDC	
07	Suit with Battery type		24V LiFePO4 battery pack	
08	Charging current(stage1)	A	20.0±2.0@24V	
09	Charging voltage(stage2)	V	29.1V+0.3V	
	Floating voltage(stage3)	V		
10	Cut-off current(stage2→3)	A	<4.0+0.4A	
11	Typical charging time	hour	8	
12	Max.output power	W	600W	
13	Hold-on time	ms	NC	Input:220Vac Output:Full load
14	Ripple current	mA	400	Input:220Vac Output:Full load
15	Charge finish condition		V>29V +I<4.0A	
16	LED color		Red:charging Green:finish/idle	
17	Output protect	-	OCP&OVP&Reverse output protection	
18	Efficiency	%	80%(min)	At max.load
Environment				
19	Operate temperature	℃	0~+40	Full load&natural convection
20	Operate humidity	%RH	20~90	Relative humidity,non-condensing.
21	Storage temperature	℃	-40~+70	
22	Storage humidity	%RH	10~95	Relative humidity,non-condensing.
23	Cooling	-	Fan cooling	
24	Temperature factor	%	--	
25	Vibration resistance		5MM/50HZ/600S	Non-operating condition.
26	Impact resistance		1 meter drop test>=3 times	Non-operating condition.
Mechanical				
27	Weight	g	4000	
28	Size	mm	230.0*130.0*70.0	Casing only
29	Connectors	-	Defined when order	
Safety				
30	Max.temperature rise	℃	<40 on casing	At any line and Max.Load
31	Safety standards	-	CE	
32	EMC standard	-	CE	
33	MTBF	hrs	40000	
34	Limited power source	VA	-	
35	ESD	Kv	8.0	
36	Hi-Pot Insulation	v	Input to Output:1500Vac(1 min.)	For final nit,cut-off current=10mA