

## Passion Profession Perfection



# **PRODUCT CATALOGUE**

**Brilliant Series Industrial DC Power Supply** 

## **Brilliant Series Industrial DC Power Supply**





#### Design and Development in Singapore

Our Universal Rectifier Control cards, Thyristors, Triggering Cards and Alarm Display Cards are designed, developed, and assembled locally in Singapore.

This assures that our products are in the highest quality control.

InputSingle Phase 220/230/240VACOutputRefer to catalogue

## FEATURES

#### ADAPTABILITY

Designed to accept a wide range of input voltages and frequency range, this DC UPS is capable to cope with the worst utility conditions.

#### DIVERSIFICATION

Carefully designed and engineered PCB cards, our DC UPS has the ability to eliminate harmful distortion from utility power and withstand all kinds of severe impacts from various loads. This DC UPS possesses the capability to support heavy duty equipment and production equipment.

#### ROBUST CABINET DESIGN

Considering the various environmental conditions, our cabinet is designed to fit all industries from marine sector to data center

#### FLEXIBLE BATTERY CONFIGURATION

Battery quantity and battery types can be adjusted flexibly according to the various power demands

#### UNIQUE MAN-MACHINE INTERFACE

This DC UPS has an unique panel interface which allows end user to have a better understanding to the current running mode of the live system

#### FRONT ACCESS

User access is made simple by ensuring the accessibility of the operational controls according to individual site's requirements. Electronic cards and power components are easily accessible from the front panel for further maintenance and/or replacements

#### SUITABLE FOR INDUSTRIAL & COMMERCIAL APPLICATIONS



Industrial application such as Process and Control system, Industrial Machinery, Instrument and Measurement, Process monitoring, Control and Security



\*Infrastructures application such as Hospital, Airport, Data Centre, Telecommunication, Semiconductor, Water treatment, Transportation

\*

Energy industry application such as Oil & Gas, Petrochemicals, Power Plant, Power Transmission

\* Military application such as Energy Storage Charger

Model	SPC24-10	SPC24-20	SPC24-40	SPC24-50	SPC24-75	SPC24-100			
Output Capacity	24V/10A	24V/20A	24V/40A	24V/50A	24V/75A	24V/100A			
RECTIFIER INPUT	ECTIFIER INPUT								
Phase	1 Phase, L+N+G								
Input PF		0.3	8 at nominal inpu	it and float voltag	ge				
Input Voltage			220V / 230V /	240V +/- 15%					
Input frequency	50Hz / 60Hz +/- 5%								
RECTIFIER DC OUTPUT	RECTIFIER DC OUTPUT								
Adjustable Range		From 80% to 135	5% of nominal vo	ltage at +/- 15%	of rectifier input	:			
Stability (Static)		+/-	1.5% @ +/- 15%	of rectifier AC in	put				
Stability (Dynamic)	-/+ 5% at	load changed fro	m 0% to 100% ai	nd vice visa @ +/	- 15% of rectifie	r AC input			
Recovery Time			< 250ms to be	in static state					
Ripple Voltage	< 5% a	s standard (0.1%	, 1% & 2% offere	d as option) with	out battery con	nected			
Nominal DC Current		From 10Adc to	100Adc (Higher	ratings are availa	able on request)				
Adjustable Range		0 to 100% bot	h rectifier curren	t limit and batte	ry current limit				
Current Accuracy			+/- 1.5% o	f set point					
DC Overcurrent		110	)% continuous of	nominal DC curr	ent				
Characteristic		Constant curre	nt / constant volt	age according to	IU IEC 60478-1				
High Pot Test			2.0KV	/ 1min					
Megger Test	500Vdc								
MECHANICAL SPECIFICATION									
Degree of Protection	IP 20 according to IEC 60529 & 60144 Standard (Other IP ratings are available on request)								
Equipment Colour	RAL7035 come with powder and anti-rust coating (Other colours are available on request)								
Acoustic Noise Level		≤ 65dB at 1m away typically							
Connection	Top or Bottom Entry as per customer requirement								
ENVIRONMENTAL									
Type Of Cooling		Natural co	oling up to 75A &	k forced cooling	above 75A				
Operating Temperature		0	Degree Celsius to	55 Degree Celsi	us				
Storage Temperature		-20	Degree Celsius t	o 70 Degree Cels	sius				
Humidity			< 95% (Non	Condensing)					
Installation Height		0 to 1000	m, derating @ 1	% per 100m abo	ve 1000m				
Safety		IEC 62040-1-2, Functionality IEC 60146-1-1							
Environment	RoHS								
PHYSICAL									
Approx. Gross Weight (KG)	75	90	110	130	180	200			
Cabinet Model	CUB0612061								
Dimensions (W*D*H) mm	600 * 600 * 1200								

Model	SPC30-06	SPC30-10	SPC30-20	SPC30-40	SPC30-50	SPC30-100		
Output Capacity	30V/06A	30V/10A	30V/20A	30V/40A	30V/50A	30V/100A		
RECTIFIER INPUT								
Phase		1 Phase, L+N+G						
Input PF	0.8 at nominal input and float voltage							
Input Voltage		220V / 230V / 240V +/- 15%						
Input frequency			50Hz / 60	Hz +/- 5%				
<b>RECTIFIER DC OUTPUT</b>								
Adjustable Range		From 80% to 13	5% of nominal vo	ltage at +/- 15%	of rectifier input	:		
Stability (Static)		+/-	1.5% @ +/- 15%	of rectifier AC in	put			
Stability (Dynamic)	-/+ 5% at l	oad changed fro	m 0% to 100% ar	nd vice visa @ +/	- 15% of rectifie	r AC input		
Recovery Time			< 250ms to be	in static state				
Ripple Voltage	< 5% a:	s standard (0.1%	, 1% & 2% offere	d as option) with	nout battery con	nected		
Nominal DC Current		From 6Adc to	100Adc (Higher r	atings are availa	ble on request)			
Adjustable Range		0 to 100% bot	h rectifier curren	t limit and batte	ry current limit			
Current Accuracy			+/- 1.5% o	f set point				
DC Overcurrent		110	)% continuous of	nominal DC curr	rent			
Characteristic		Constant curre	nt / constant volt	age according to	IU IEC 60478-1			
High Pot Test			2.0KV	/ 1min				
Megger Test	500Vdc							
MECHANICAL SPECIFICATION								
Degree of Protection	IP 20 according to IEC 60529 & 60144 Standard (Other IP ratings are available on request)							
Equipment Colour	RAL7035 come with powder and anti-rust coating (Other colours are available on request)							
Acoustic Noise Level		≤ 65dB at 1m away typically						
Connection	Top or Bottom Entry as per customer requirement							
ENVIRONMENTAL								
Type Of Cooling		Natural co	oling up to 75A 8	k forced cooling	above 75A			
Operating Temperature		0	Degree Celsius to	55 Degree Celsi	us			
Storage Temperature		-20	Degree Celsius t	o 70 Degree Cels	sius			
Humidity			< 95% (Non (					
Installation Height		0 to 1000	m, derating @ 19	% per 100m abo	ve 1000m			
Safety	IEC 62040-1-2, Functionality IEC 60146-1-1							
Environment	RoHS							
PHYSICAL								
Approx. Gross Weight (KG)	80	95	118	130	150	200		
Battery Compartment	23 Cells x 1.2V	/ 40Ah ~ 80Ah	40Ah ~ 80Ah 23 Cells x 1.2V 90Ah ~ 120Ah 23 Cells x 1.2V 150Ah ~ 210Ah					
Dimensions (W*D*H) mm	700 * 450 *	1100 ~ 1400	700 * 700 * 1500 1000 * 700 * 1500					

Model	SPC48-10	SPC48-20	SPC48-40	SPC48-50	SPC48-75	SPC48-100		
Output Capacity	48V/10A	48V/20A	48V/40A	48V/50A	48V/75A	48V/100A		
RECTIFIER INPUT								
Phase		1 Phase, L+N+G						
Input PF	0.8 at nominal input and float voltage							
Input Voltage		220V / 230V / 240V +/- 15%						
Input frequency		50Hz / 60Hz +/- 5%						
RECTIFIER DC OUTPUT								
Adjustable Range		From 80% to 135	5% of nominal vo	ltage at +/- 15%	of rectifier input	:		
Stability (Static)		+/-	1.5% @ +/- 15%	of rectifier AC in	put			
Stability (Dynamic)	-/+ 5% at	load changed fro	m 0% to 100% a	nd vice visa @ +/	- 15% of rectifie	r AC input		
Recovery Time			< 250ms to be	in static state				
Ripple Voltage	< 5% a	s standard (0.1%	, 1% & 2% offere	d as option) with	out battery con	nected		
Nominal DC Current		From 10Adc to	100Adc (Higher	ratings are availa	able on request)			
Adjustable Range		0 to 100% bot	h rectifier curren	t limit and batte	ry current limit			
Current Accuracy			+/- 1.5% o	f set point				
DC Overcurrent		110	0% continuous of	nominal DC curr	ent			
Characteristic		Constant curre	nt / constant volt	age according to	IU IEC 60478-1			
High Pot Test			2.0KV	/ 1min				
Megger Test	500Vdc							
MECHANICAL SPECIFICATION								
Degree of Protection	IP 20 according to IEC 60529 & 60144 Standard (Other IP ratings are available on request)							
Equipment Colour	RAL7035 come with powder and anti-rust coating (Other colours are available on request)							
Acoustic Noise Level	≤ 65dB at 1m away typically							
Connection	Top or Bottom Entry as per customer requirement							
ENVIRONMENTAL								
Type Of Cooling		Natural co	oling up to 75A &	& forced cooling	above 75A			
Operating Temperature		0	Degree Celsius to	55 Degree Celsi	us			
Storage Temperature		-20	) Degree Celsius t	o 70 Degree Cels	sius			
Humidity		< 95% (Non Condensing)						
Installation Height		0 to 1000	m, derating @ 1	% per 100m abo	ve 1000m			
Safety		IEC 6	2040-1-2, Functi	onality IEC 6014	6-1-1			
Environment	RoHS							
PHYSICAL								
Approx. Gross Weight (KG)	100	110	130	150	180	220		
Cabinet Model	CUB0612061			CUB0616061				
Dimensions (W*D*H) mm	600 * 600 * 1200   600 * 600 * 1600				)			

Model	SPC48-10	SPC48-20	SPC48-40	SPC48-50	SPC48-75	SPC48-100		
Output Capacity	48V/10A	48V/20A	48V/40A	48V/50A	48V/75A	48V/100A		
RECTIFIER INPUT								
Phase	1 Phase, L+N+G							
Input PF	0.8 at nominal input and float voltage							
Input Voltage	220V / 230V / 240V +/- 15%							
Input frequency			50Hz / 60	Hz +/- 5%				
RECTIFIER DC OUTPUT								
Adjustable Range		From 80% to 135	5% of nominal vo	ltage at +/- 15%	of rectifier input			
Stability (Static)		+/-	1.5% @ +/- 15%	of rectifier AC in	put			
Stability (Dynamic)	-/+ 5% at	load changed fro	m 0% to 100% ar	nd vice visa @ +/	- 15% of rectifie	r AC input		
Recovery Time			< 250ms to be	in static state				
Ripple Voltage	< 5% a	s standard (0.1%	, 1% & 2% offere	d as option) with	out battery conr	nected		
Nominal DC Current		From 10Adc to	100Adc (Higher	ratings are availa	able on request)			
Adjustable Range		0 to 100% bot	h rectifier curren	t limit and batte	ry current limit			
Current Accuracy			+/- 1.5% o	f set point				
DC Overcurrent		110	)% continuous of	nominal DC curr	ent			
Characteristic		Constant curre	nt / constant volt	age according to	IU IEC 60478-1			
High Pot Test			2.0KV	/ 1min				
Megger Test	500Vdc							
MECHANICAL SPECIFICATION								
Degree of Protection	IP 20 according to IEC 60529 & 60144 Standard (Other IP ratings are available on request)							
Equipment Colour	RAL7035 come with powder and anti-rust coating (Other colours are available on request)							
Acoustic Noise Level		≤ 65dB at 1m away typically						
Connection	Top or Bottom Entry as per customer requirement							
ENVIRONMENTAL								
Type Of Cooling		Natural co	oling up to 75A &	k forced cooling	above 75A			
Operating Temperature		0	Degree Celsius to	55 Degree Celsi	us			
Storage Temperature		-20	Degree Celsius t	o 70 Degree Cels	sius			
Humidity			< 95% (Non	Condensing)				
Installation Height		0 to 1000	m, derating @ 19	% per 100m abo	ve 1000m			
Safety		IEC 62040-1-2, Functionality IEC 60146-1-1						
Environment	RoHS							
PHYSICAL								
Approx. Gross Weight (KG)	100	110	130	150	180	220		
Cabinet Model	39 Cells x 1.2V 40Ah ~ 80Ah 39 Cells x 1.2V 90Ah ~ 120Ah 39 Cells x 1.2V 150Ah ~ 210				150Ah ~ 210Ah			
Dimensions (W*D*H) mm	700 * 750 * 1700   900 * 850 * 1600   1350 * 900 * 1700				00 * 1700			

## Brilliant Series Single Phase Input 110Vdc Output Technical Data

Model	SPC110-10	SPC110-20	SPC110-40	SPC110-50	SPC110-60	SPC110-75		
Output Capacity	110V/10A	110V/20A	110V/40A	110V/50A	110V/60A	110V/75A		
RECTIFIER INPUT								
Phase		1 Phase, L+N+G						
Input PF		0.8 at nominal input and float voltage						
Input Voltage		220V / 230V / 240V +/- 15%						
Input frequency			50Hz / 60	Hz +/- 5%				
RECTIFIER DC OUTPUT								
Adjustable Range		From 80% to 135	5% of nominal vo	ltage at +/- 15%	of rectifier input	:		
Stability (Static)		+/-	1.5% @ +/- 15%	of rectifier AC in	put			
Stability (Dynamic)	-/+ 5% at	load changed fro	m 0% to 100% ai	nd vice visa @ +/	- 15% of rectifie	r AC input		
Recovery Time			< 250ms to be	in static state				
Ripple Voltage	< 5% a	s standard (0.1%	, 1% & 2% offere	d as option) with	out battery conr	nected		
Nominal DC Current		From 10Adc to	75Adc (Higher r	atings are availa	ble on request)			
Adjustable Range		0 to 100% bot	h rectifier curren	t limit and batte	ry current limit			
Current Accuracy			+/- 1.5% o	f set point				
DC Overcurrent		110	)% continuous of	nominal DC curr	ent			
Characteristic		Constant curre	nt / constant volt	age according to	IU IEC 60478-1			
High Pot Test			2.0KV	/ 1min				
Megger Test	500Vdc							
MECHANICAL SPECIFICATION								
Degree of Protection	IP 20 accord	IP 20 according to IEC 60529 & 60144 Standard (Other IP ratings are available on request)						
Equipment Colour	RAL7035 come with powder and anti-rust coating (Other colours are available on request)							
Acoustic Noise Level	≤ 65dB at 1m away typically							
Connection	Top or Bottom Entry as per customer requirement							
ENVIRONMENTAL								
Type Of Cooling		Natural co	oling up to 50A &	& forced cooling	above 50A			
Operating Temperature		0	Degree Celsius to	55 Degree Celsi	us			
Storage Temperature		-20	Degree Celsius t	o 70 Degree Cel	sius			
Humidity			< 95% (Non	Condensing)				
Installation Height		0 to 1000m, derating @ 1% per 100m above 1000m						
Safety		IEC 6	2040-1-2, Functi	onality IEC 6014	6-1-1			
Environment	RoHS							
PHYSICAL								
Approx. Gross Weight (KG)	110   130   140   155   180					210		
Cabinet Model	CUB0612061 CUB0616061							
Dimensions (W*D*H) mm	600 * 600 * 1200 600 * 600 * 1600				)			

## Brilliant Series Single Phase Input 220Vdc Output Technical Data

Model	SPC220-10	SPC220-20	SPC220-25	SPC220-35	SPC220-40	SPC220-50		
Output Capacity	220V/10A	220V/20A	220V/25A	220V/35A	220V/40A	220V/50A		
RECTIFIER INPUT	ER INPUT							
Phase		1 Phase, L+N+G						
Input PF	0.8 at nominal input and float voltage							
Input Voltage	220V / 230V / 240V +/- 15%							
Input frequency			50Hz / 60	Hz +/- 5%				
RECTIFIER DC OUTPUT								
Adjustable Range		From 80% to 135	5% of nominal vo	ltage at +/- 15%	of rectifier input	:		
Stability (Static)		+/-	1.5% @ +/- 15%	of rectifier AC in	put			
Stability (Dynamic)	-/+ 5% at	load changed fro	m 0% to 100% a	nd vice visa @ +/	- 15% of rectifie	r AC input		
Recovery Time			< 250ms to be	in static state				
Ripple Voltage	< 5% a	s standard (0.1%	, 1% & 2% offere	d as option) with	out battery con	nected		
Nominal DC Current		From 10Adc to	50Adc (Higher r	atings are availa	ble on request)			
Adjustable Range		0 to 100% bot	h rectifier curren	t limit and batte	ry current limit			
Current Accuracy			+/- 1.5% o	f set point				
DC Overcurrent		110	)% continuous of	nominal DC curr	rent			
Characteristic		Constant curre	nt / constant volt	age according to	IU IEC 60478-1			
High Pot Test		2.0KV / 1min						
Megger Test	500Vdc							
MECHANICAL SPECIFICATION								
Degree of Protection	IP 20 according to IEC 60529 & 60144 Standard (Other IP ratings are available on request)							
Equipment Colour	RAL7035 come with powder and anti-rust coating (Other colours are available on request)							
Acoustic Noise Level	≤ 65dB at 1m away typically							
Connection	Top or Bottom Entry as per customer requirement							
ENVIRONMENTAL								
Type Of Cooling		Natural co	oling up to 50A &	& forced cooling	above 50A			
Operating Temperature		0	Degree Celsius to	55 Degree Celsi	us			
Storage Temperature		-20	Degree Celsius t	o 70 Degree Cels	sius			
Humidity		< 95% (Non Condensing)						
Installation Height		0 to 1000m, derating @ 1% per 100m above 1000m						
Safety	IEC 62040-1-2, Functionality IEC 60146-1-1							
Environment	RoHS							
PHYSICAL					_	_		
Approx. Gross Weight (KG)	130   150   160   170   180   2					200		
Cabinet Model	CUB0612061			CUB0616061				
Dimensions (W*D*H) mm	600 * 600 * 1200 600 * 600 * 1600				0			

## **3P Power** One Stop Solution





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