DC–UPS

Security for Critical Power applications

When down-time is simply not an option

ARIS POWER

OUR MISSION

System integrity and Personal safety

Aris Power is where backup of control and monitoring systems is essential

Aris Power provides secure power supply to systems which simply cannot afford to go down.

Aris Power does so by developing and manufacturing highly reliable power devices, in which we are focused and specialized.

Distinguished by high-end features and uncompromising quality, they combine the Company's extensive know-how in switching technology design with in-depth battery management expertise and the latest advancements in data communication.

The current standard products portfolio is available in the 80W - 1000W power range and is designed to supply DC loads. Product lines include DC-UPS, Battery Chargers, Battery Boxes, Power supplies, DC/DC converters and Transformers.

DCU series

DCU: DC-UPS uninterruptable power supply systems for critical DC applications

- DC-UPS find application anywhere auxiliary circuit backup is critical in safeguarding system integrity and persons safety. They are In-line UPS with Load-first, dynamic Load/Battery power sharing
- Typically, they secure backup power in Industrial Automation, Telecommunication, Fire Protection, public announcement, energy and renewable energy systems, Gensets, Lift systems, Transport, Hospitals, Internet Provider Networks, WISP, Security, Access Control. Not suited for power requirement larger than 1 kW or with AC loads
- They are always used in conjunction with a battery storage unit, also included as a part of the products family.


Telecommunications


Renewable Energy


Security


Industrial Machinery Construction


Transport


Hospital


Wisp and Network Application


Water Treatment


Process Plants

DCU Main Features

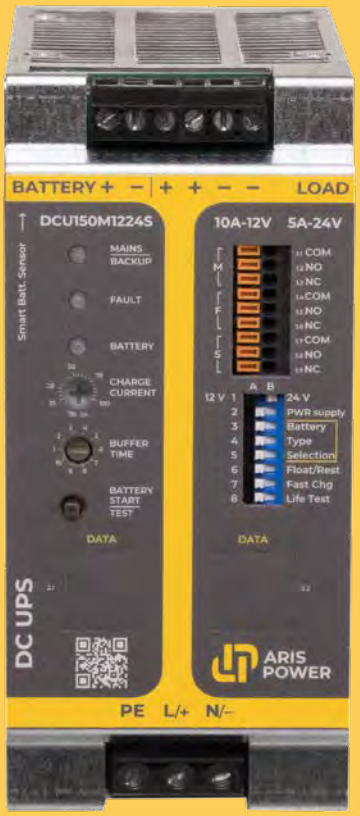
Dedicated Power range

Selectable Output Voltage

Wide input voltage range AC and DC

Load-first, Dynamic Load/Battery power sharing

Overload capability Suitable for backup of high inrush current DC loads



Communication via MODbus Data Link

Adjustable maximum battery charging current

Remote alarms via 3 voltage-free relay contacts

Buffer time setting of load backup

Local monitoring and diagnostics on LEDs

Universal charging output, selectable Battery Type Battery technology

Full set of protection and monitoring functions

External digital sensor for Temperature compensation and battery block equalization

Manual Battery start-up button with no mains

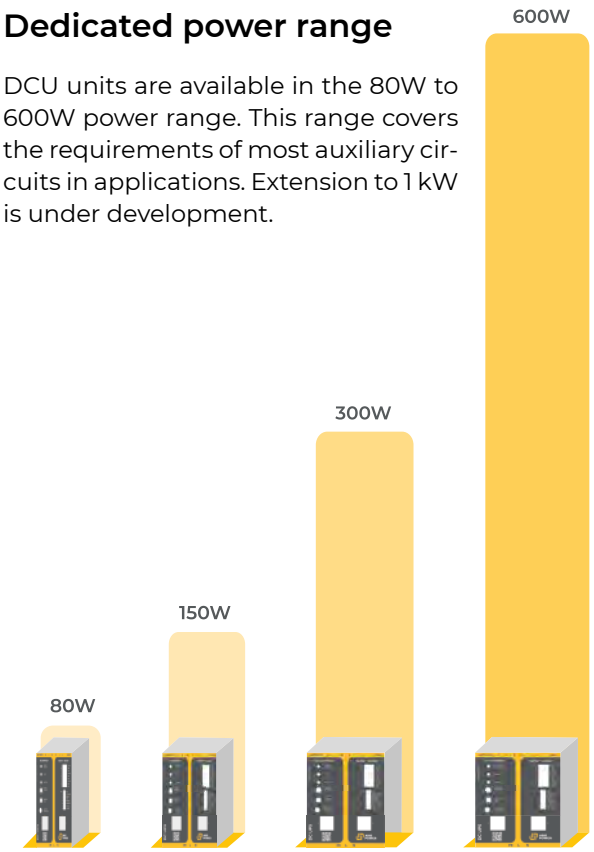
Battery life test, automatic or manual via push button

Extensive BATTSAFE battery management firmware

Power Security

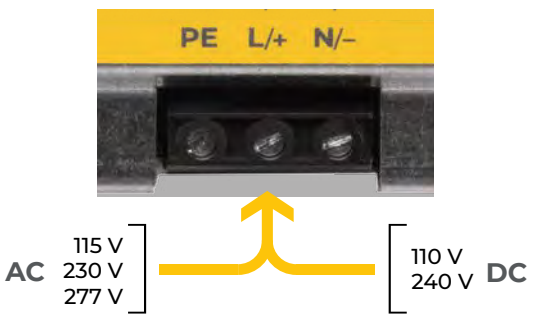
Dedicated power range

DCU units are available in the 80W to 600W power range. This range covers the requirements of most auxiliary circuits in applications. Extension to 1 kW is under development.



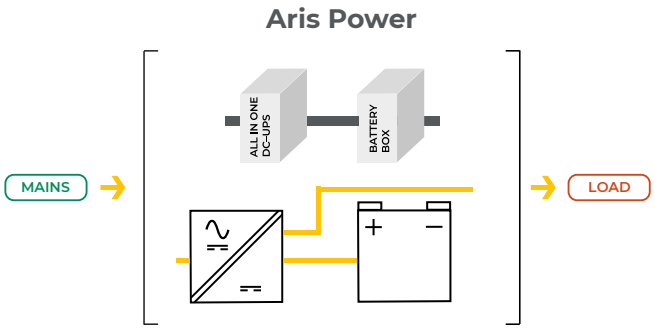
Wide input voltage range

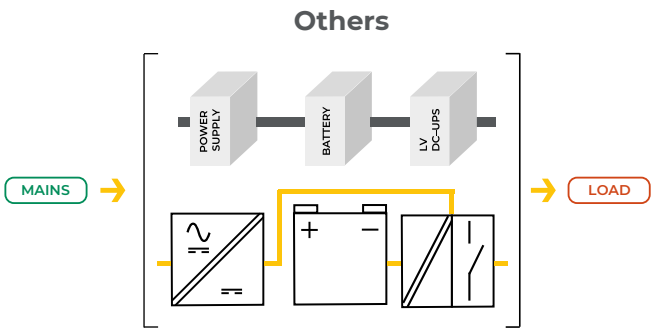
The DCU has a wide input voltage range making it suitable for connection to AC or The DCU mains. DCU is designed to accept AC mains with single-phase voltage rating 115–230-277 Vac, 47/440Hz or DC mains with voltage rating 110-240 Vdc



All-in-One: Power supply + Battery charger + Back-up functions, all packaged in one box

Aris Power DCU series of DC-UPS feature an All-In-One architecture, including Power supply + Battery charger + Back-up functions, all packaged in one casing. The DCU directly takes mains input voltage and manages load and battery requirements. Other market devices instead have low voltage input and must be energized by an external power supply unit. DCU devices are therefore more functional than most others and allow more compact, cost-effective backup solutions





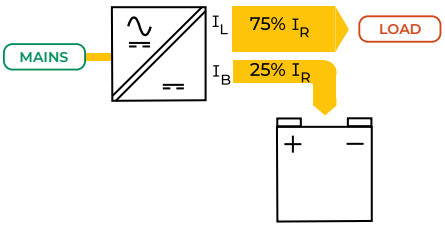
Adjustable battery charging current

It is a key feature of the DCU. It allows to protect the battery from excessive charging currents and enables a safe and extended battery lifetime. The maximum Charging Current selector can be adjusted between 10- 100% of device rated current.

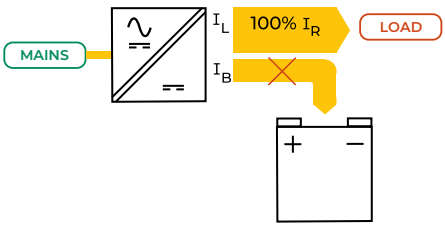
Load-first, Dynamic Load < > Battery power sharing

The sharing of the DCU rated current I_R between Load (I_L) and Battery (I_B) is not fixed. The priority task of the DC-UPS is ensuring the continuity of load power supply, no matter what the setting of battery maximum charging current is. The current delivered to the battery may vary to accommodate load demand first. When load demands more than its designed rated current, if necessary, battery charging will stop or will be limited for the duration of the overload. It will be resumed once the transient is over. See example:

Normal Standby Operation I_L 75% I_R; I_B = 25% I_R

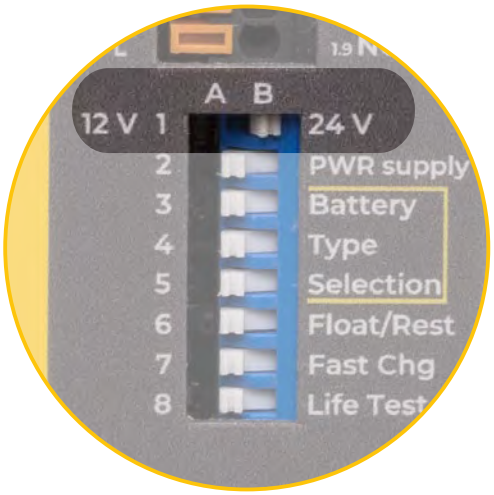


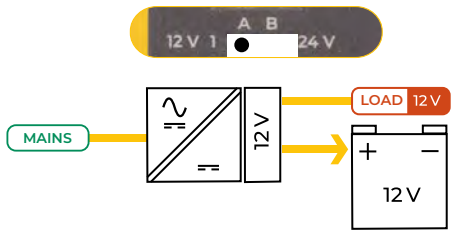
Overload I_L = 100% I_R

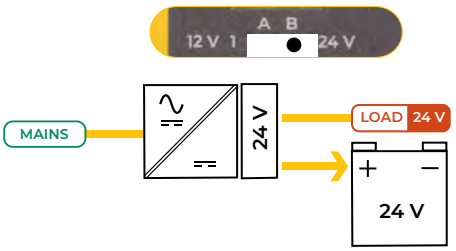


Selectable Output Voltage

One of the main benefits of the DCU DC-UPS device is that it has selectable output voltage, 12 Vdc or 24 Vdc. The same unit can therefore support a wide range of applications. Before powering on the device, select the correct output voltage to match load and battery rated voltage. 12 Vdc or 24 Vdc. Available in the range are also DCU with 48 V output, single set value.







Power Boost

High Overload capability

The DCU architecture allows very high transient overloading capability and is therefore suitable for backup of DC loads with high inrush current.

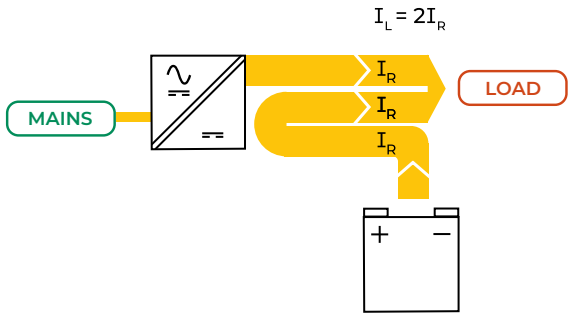
When load demands more than rated, Power Boost is enabled. The battery will start contributing to load power.

During Standby mode, part of the Power Boost will come from the mains via the DCU, part will come from the battery. During Backup mode all Power Boost will come from the battery.

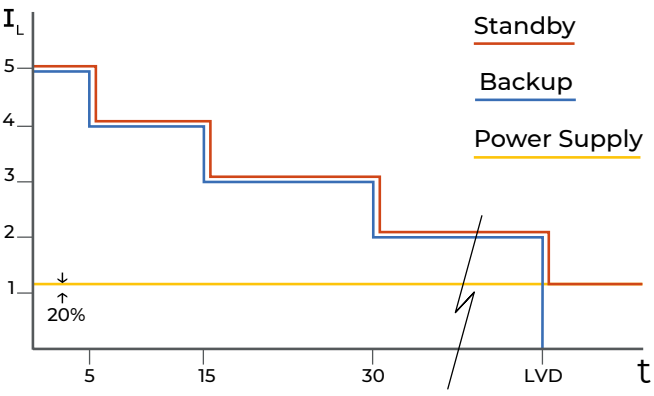
Unless the device is in Power Supply mode (i.e. without battery), when Boost is equal to +20% of IR. During the other modes, if the battery is fully functional, Power Boost will be limited in time according to overload current intensity.

To maximize battery Lifetime, the DCU disconnects the battery when it reaches the Low Voltage Disconnect threshold (LVD), preventing battery damages due to deep discharge.

Below this value, the device will autonomously switch off to prevent unnecessary discharge and consequent battery shorter life.



DCU150M @ 24V



Buffer time setting

By default when in Backup mode, DCU will keep energizing the load until the battery is discharged, that is, LVD threshold is reached.

However, backup time requirement may be shorter than the time needed to reach LVD. To prevent unnecessary battery cycling in such cases, the DCU allows setting shorter backup times via the Buffer Time selector. When the factory default setting is changed, please refer to the table below for the corresponding buffer time selected.

Selection Position	Buffer time (minutes)
1	0.5
2	2
3	5
4	10
5	15
6	20
7	30
8	45
9	60
10	∞

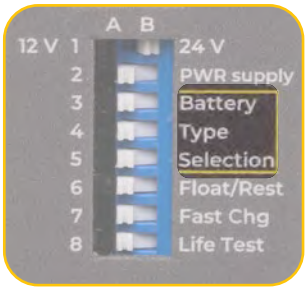
The maximum Buffer Time duration depends on the battery capacity rating and status of charge. Assuming backup occurs when the battery is fully charged, the times given in the table below can be used as reference.

BATTSafe Battery Manager

BATTSafe is a comprehensive battery management firmware for automatic battery charging, monitoring, and diagnostics.

Universal Charger

BATTSafe firmware includes factory-set charging curves for the most common battery types: Vented Lead Acid, AGM and Gel Lead Acid, Ni-Cd, Li-Io.



Battery Type	Charge Voltage (V/Cell)	
	Float	Bulk
Vented Lead	2.23	2.24
VRLA AGM Lead	2.25	2.4
VRLA Gel Lead	2.3	2.4
Li-ion	3.45[1]	3.65[1]
Ni-Cd, Ni-Mh	1.40[2]	1.50[2]

[1] 12V : 4cells, 24V : 8cells;
[2] 12V : 10 cells, 24 V : 20 cells, 48 V : 40 cells

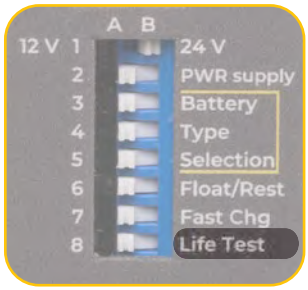
Monitoring

BATTSafe continuously monitors battery and device during operation, minimizes the risk of battery damage and allows a fully safe operation while keeping the battery in permanent connection with the DC-UPS. Optimum battery life is the result.

Recovery	●	2 blink / 1 sec
Bulk	●	1 blink / 1 sec
Absorption	●	1 blink / 2 sec
Float	●	Battery charged

Battery life test

The DCU is also a Battery Tester, automatic or manual via push button.



Automatic
If the function has been enabled on the dipswitch, every two hours, while in Standby- Float charge, the DCU automatically performs battery life test.

Manual
Life test can also be performed on demand by manually pressing the Battery Start/Test push button for 10s. The DCU will run a full life test and negative or positive result will be shown by a blinking code on the LEDs.

Battery start-up

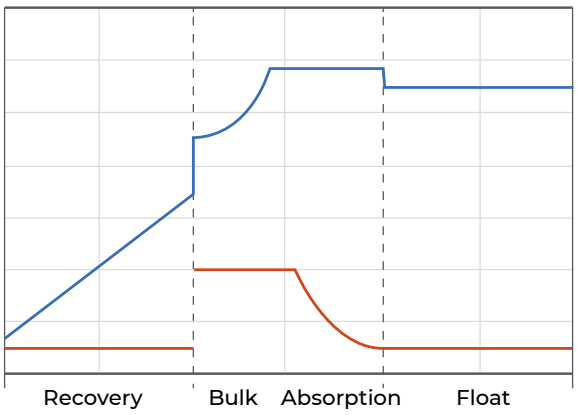
If the load must be powered up when mains is not available, the DC-UPS must be energized from the battery. This is manually enabled by the Battery Start push button.

This facility is particularly useful during commissioning when mains is not available to test load operation.

Automatic multi-stage IUoU Charger

BATTSafe performs automatic multi-stage charging following a stabilized voltages and stabilized current IUoU curve.

Recovery - flat batteries, when not irreversibly damaged, can be recovered. Fast Charge - If fast charging is required and compatible with the application, it can be enabled.



Temperature compensation Smart Battery Sensor SBS

The DCU is designed to perform temperature compensation of battery charging voltage. This feature optimizes battery efficiency and is a requirement often induced by norms such as EN54-4 fire protection norm or other equivalent international norms. This feature is enabled by connecting the Smart Battery Sensor accessory to the dedicated connector on top of the device.

SBS is a built-in feature of Aris Power SBS-B-BX battery boxes range. It also carries out battery block voltage equalization. Use the cable SBS002 to connect DCU and BBX.

In case the DCU is charging a customer provided battery pack, the SBS001 sensor and cable shall be used.

SBS 002

Diagnostics

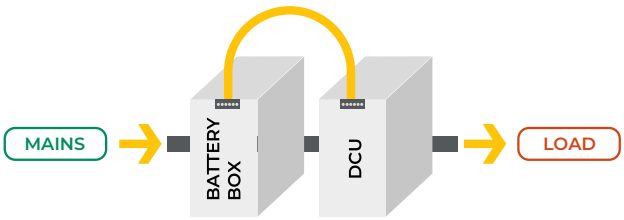
During installation, operation and maintenance, device and system faults are also detected by auto-diagnostic features.

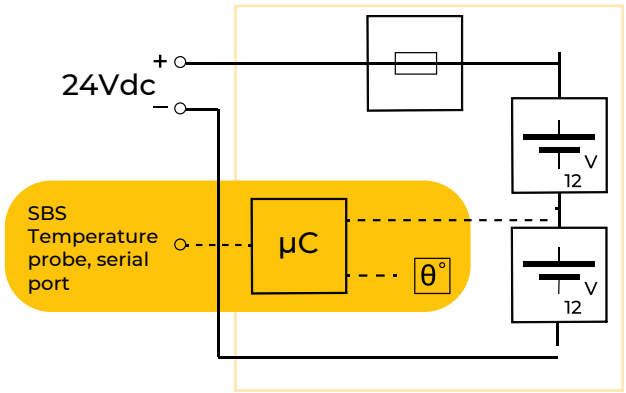
Detected battery faults:

- Reverse Polarity connection
- Disconnected Battery
- Disconnected or missing Battery
- Detection of Wrong Battery Voltage
- Battery Cell in short circuit
- Wiring High impedance
- Life Test failed, replace sulfated battery
- Low Battery Voltage
- Battery almost discharged
- Battery fully discharged

Detected device/system faults:

- Overload or Short circuit on load output, standby
- Overload or Short circuit on load output, backup
- Rectifier failure
- Device internal failure





BBX Battery Box

Connectivity

Data Link MODbus connectivity

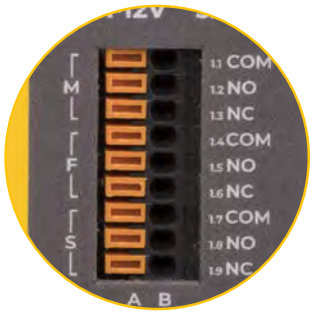
The BATTSafe DC-UPS firmware includes a full connectivity interface to allow remote monitoring and control of the system. The DC-UPS can communicate with a PLC or a higher-level controller ither serial port on the front of the DCU, these are RJ45 connections. The interface is designed for MODBus-RTU communication protocol. The device is ready configured to enable communication. Set of parameters available communication protocol and map of registry are available and open.

Remote alarms via dry relay contacts

The DC-UPS is equipped with built-in alarms contacts, as follows:

- Mains/Backup
- Battery Fault
- Rectifier Failure

The three alarms are on dry change-over relay contacts and are brought to push-in terminals on the front of the device.

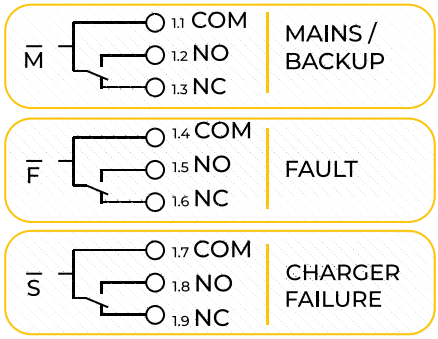


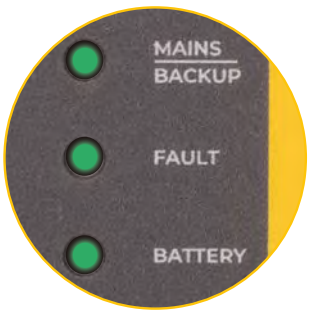
Local monitoring and diagnostics on LEDs

Three, three-colour LED indicators are available for visual monitoring of the DC-UPS on the device front

- Mains/Backup LED
- Fault LED
- Battery LED

With blinking code, they provide a full set of status and diagnostic information, useful during installation and on-site inspection. For LED signaling and the corresponding states.





BBX series

Battery energy storage for DC-UPS systems

- This series of casings is designed to house standard AGM VRLA batteries from 1.2 Ah to 12 Ah. In any energy backup system, batteries are the most critical component. However, the proper installation of batteries in these sizes is often overlooked, resulting in poor or informal fastening and wiring.
- The BBX series is specifically designed designed to provide easy installation, mechanical protection, and safe electric connection to batteries, The BBX series is a professional solution for the practical and safe installation inside electric enclosures.
- They can be installed on a DIN rail. In this way the batteries can be wired like one more in-line component, minimizing wiring length as well. As a selectable option, they can also be installed directly on the mounting plate by means of pre-cut openable flanges.
- When the BBX battery box and a DCU DC UPS are installed, they provide a critical power backup system where system integrity and resilience are required. Such applications as fire protection, remotely located energy or telecommunication systems, safety systems in lifts/elevators or any installation that requires safe, secure and stable backup power for the retention of data and protection of people is provided for.: Industrial Automation, Telecommunication, Fire Protection, Public announcement, Energy and renewable energy systems, Gensets, Lift systems, Transport, Hospitals, Internet Provider Networks, WISP, Security, Access Control. Not suited for power requirement larger than 1 kW or AC loads.

They are available in three versions:

- casing only
- with integrated batteries
- with integrated batteries and SBS temperature compensation.

Features

- Lead-acid AGM, VRLA battery technology
- Quick installation on DIN rail or direct on mounting plate
- Automatic detection and continuous monitoring by DCU Series DC-UPS
- Tool-free battery replacement during operation
- Communication with DCU DC-UPS via signal serial port (SBS version)
- Maintenance-free
- Built-in Temperature compensation probe (SBS version)
- Suitable for backup of high inrush current DC loads and for maximum buffer times.
- Delivered fully charged from warehouse
- Built-in protection fuse plus spare

DCU series

		DCU 080	DCU 150		
					
		DCU080M1224	**DC150M1224S**	**DCU150M1224**	**DCU150M48S**
		115/230/277 Vac (range 85–305 Vac) 110/220 Vdc (range 110–420 Vdc)	115/230/277 Vac (range 85–305 Vac) 110/220 Vdc (range 110–420 Vdc)	115/230/277 Vac (range 85–305 Vac) 110/220 Vdc (range 110–420 Vdc)	115/230/277 Vac (range 85–305 Vac) 110/220 Vdc (range 110–420 Vdc)
Input	Input Current AC/DC @ U_R	1.1 A (115 Vac), 0.4 A (230 Vac) 1.0 (110 Vdc), 0.35 A (220 Vdc)	1.6 A (115 Vac), 0.6 A (230 Vac) 1.4 (110 Vdc), 0.5 A (220 Vdc)	1.6 A (115 Vac), 0.6 A (230 Vac) 1.4 (110 Vdc), 0.5 A (220 Vdc)	1.6 A (115 Vac), 0.6 A (230 Vac) 1.4 (110 Vdc), 0.5 A (220 Vdc)
	Frequency Range	50/60 Hz (range 47–440 Hz)	50/60 Hz (range 47–440 Hz)	50/60 Hz (range 47–440 Hz)	50/60 Hz (range 47–440 Hz)
	Inrush Current (Typ.@ Cold Start)	6 A max	15 A max	15 A max	15 A max
	Setup, Rise Time Max	1 s	1 s	1 s	1 s
	Recommended External Fuse/MCB	4 A, curve C	6 A, curve C	6 A, curve C	6 A, curve C
Load Output Power Supply Mode Mains ON/Battery OFF	Rated Output Voltage, dipswitch selectable	24 Vdc	12 Vdc 24 Vdc	12 Vdc 24 Vdc	48 Vdc
	Rated Current (IR)	3 A	10 A 5 A	10 A 5 A	2,5 A
	Ripple / Noise	100 mV_{pp}	80 mVpp 100 mV_{pp}	80 mVpp 100 mV_{pp}	80 mV_{pp}
	Short Circuit Protection	yes	yes	yes	yes
	Over Load Protection	Constant Current mode < 110% I_R	Constant Current mode < 110% I_R	Constant Current mode < 110% I_R	Constant Current mode > 110% I_R
	Over Voltage Protection	35 Vdc	35 Vdc	35 Vdc	70 Vdc
Load Output Standby Mode Mains ON/ Battery ON	Voltage Range, Automatic Set	24–28.8 Vdc	12–14.4 Vdc 24–28.8 Vdc	12–14.4 Vdc 24–28.8 Vdc	48–57.6 Vdc
	Max Continuous Current (I_R+I_{BATT})	6 A	15 A 10 A	15 A 10 A	5 A
	Max Current for 5 s	< 12 A	< 25 A < 25 A	< 25 A < 25 A	< 13 A
Load Output Backup Mode Mains OFF/ Battery ON	Voltage Range, Automatic Set	18.5–24 Vdc	9.5–12 Vdc 18.5–24 Vdc	9.5–12 Vdc 18.5–24 Vdc	37-48 Vdc
	Max Continuous Current (I_R+I_{BATT})	6 A	15 A 10 A	15 A 10 A	5 A
	Max Current for 5 s	< 12A	< 25 A < 25 A	< 25 A < 25 A	< 13 A
	Quiescent current	< 60 mA	< 90 mA	< 90 mA	< 90 mA
Signals	Standby / Backup relay contact	yes	yes	yes	yes
	Common Fault relay contact	yes	yes	yes	yes
	Charger failure Relay contact	-	yes	-	yes
	Monitoring and alarm on 3, Three-color LEDs	yes	yes	yes	yes
	MODbus / CANbus data link Dual RJ45 port	-	yes	-	yes
Battery management	Rated Voltage	24 Vdc	12 Vdc 24 Vdc	12 Vdc 24 Vdc	48 Vdc
	Charging Current setting (min max)	0.3 A / 3.0 A	1.0 A / 10.0 A 0.5 A / 5.0 A	1.0 A / 10.0 A 0.5 A / 5.0 A	0,25-2,5A
	Voltage max	29.50 Vdc	14.75 Vdc 29.50 Vdc	14.75 Vdc 29.50 Vdc	59 Vdc
	Boost Voltage	28.80 Vdc	14.4 Vdc 28.80 Vdc	14.4 Vdc 28.80 Vdc	57,6 Vdc
	Recovery Charge	2-20 Vdc	2-10 Vdc 2-20 Vdc	2-10 Vdc 2-20 Vdc	4-40 Vdc
	Low Voltage Disconnect (LVD) Threshold	18.5 Vdc	9.3 Vdc 18.5 Vdc	9.3 Vdc 18.5 Vdc	37 Vdc
	Low Voltage Alarm Threshold	22 Vdc	11 Vdc 22 Vdc	11 Vdc 22 Vdc	44 Vdc
Climatic Data	Operating Ambient Temperature (T_A)	–25 up to +70 °C	–25 up to +70 °C	–25 up to +70 °C	–25 up to +70 °C
	Relative Humidity, no condensation@25°C	max 95%	max 95%	max 95%	max 95%
	Storage Temperature	-40 up to +85 °C	-40 up to +85 °C	-40 up to +85 °C	-40 up to +85 °C
	Cooling	Natural Convection	Natural Convection	Natural Convection	Natural Convection
General Data	Efficiency (Typ.)	>90%	>90% >92%	>90% >92%	>92%
	Temperature Derating Factor[1]	2.5 %/°C , T_A > 50°C	2.5 %/°C , T_A > 50°C	2.5 %/°C , T_A > 50°C	2.5 %/°C , T_A > 50°C
	Altitude Derating Factor [1]	0.5°C/100 m, above 2000 m	0.5°C/100 m, above 2000 m	0.5°C/100 m, above 2000 m	0.5°C/100 m, above 2000 m
	Overvoltage category EN61010-1	II	II	II	II
	Protection Class (EN/IEC 60529)	IP 20	IP 20	IP 20	IP 20
	Pollution Degree Environment	2	2	2	2
	Dimensions (W x H x D)	40 x 130 x 126 mm	60 x 130 x 126 mm	60 x 130 x 126 mm	80 x 130 x 126 mm
	Weight	0.45 kg	0.75 kg	0.75 kg	0.75 kg
Approvals	Standards	EN IEC 61010-2-201:2018; EN IEC 61000-6-2:2019; EN IEC 61000-6-4:2019; EN IEC 63000:2018; EN60950-1, (UL60950-1, UL508, C22.2, EN60335-2-29, UL1236); EN IEC 62368-1:2014/AC:2015; EN54-4			
	Declaration	CE, UKCA			

DCU 300			DCU 600		
					
DCU300M1224S	**DCU300M1224**	**DCU300M48S**	**DCU600M1224S**	**DCU600M1224**	**DCU600M48S**
115/230/277 Vac (range 85–305 Vac) 110/220 Vdc (range 110–420 Vdc)	115/230/277 Vac (range 85–305 Vac) 110/220 Vdc (range 110–420 Vdc)	115/230/277 Vac (range 85–305 Vac) 110/220 Vdc (range 110–420 Vdc)	115/230/277 Vac (range 85–305 Vac) 110/220 Vdc (range 110–420 Vdc)	115/230/277 Vac (range 85–305 Vac) 110/220 Vdc (range 110–420 Vdc)	115/230/277 Vac (range 85–305 Vac) 110/220 Vdc (range 110–420 Vdc)
2.8 A (115 Vac), 1.4 A (230 Vac) 3.0 (110 Vdc), 1.5 A (220 Vdc)	2.8 A (115 Vac), 1.4 A (230 Vac) 3.0 (110 Vdc), 1.5 A (220 Vdc)	2.8 A (115 Vac), 1.4 A (230 Vac) 3.0 (110 Vdc), 1.5 A (220 Vdc)	6,2 A (115 Vac), 3,5 A (230 Vac) 5,8 (110 Vdc), 3,,2 A (220 Vdc)	6,2 A (115 Vac), 3,5 A (230 Vac) 5,8 (110 Vdc), 3,,2 A (220 Vdc)	6,2 A (115 Vac), 3,5 A (230 Vac) 5,8 (110 Vdc), 3,,2 A (220 Vdc)
50/60 Hz (range 47- 440 Hz)	50/60 Hz (range 47- 440 Hz)	50/60 Hz (range 47- 440 Hz)	50/60 Hz (range 47–440 Hz)	50/60 Hz (range 47–440 Hz)	50/60 Hz (range 47–440 Hz)
15 A max	15 A max	15 A max	21 A max	21 A max	21 A max
1 s	1 s	1 s	1 s	1 s	1 s
10A, curve B	10A, curve B	10A, curve B	10 A, curve B	10 A, curve B	10 A, curve B
12 Vdc 24 Vdc	12 Vdc 24 Vdc	48 Vdc	12 Vdc 24 Vdc	12 Vdc 24 Vdc	48 Vdc
15 A 10 A	15 A 10 A	5 A	35 A 20 A	35 A 20 A	10 A
80 mV_{pp} 100 mV_{pp}	80 mV_{pp} 100 mV_{pp}	80 mV_{pp}	80 mV_{pp} 100 mV_{pp}	80 mV_{pp} 100 mV_{pp}	100 mV_{pp}
yes	yes	yes	yes	yes	yes
Constant Current mode > 110% I_R	Constant Current mode > 110% I_R	Constant Current mode > 110% I_R	Constant Current mode > 110% IR	Constant Current mode > 110% IR	Constant Current mode > 110% IR
35 Vdc	35 Vdc	70 Vdc	35 Vdc	35 Vdc	35 Vdc
12-14.4 Vdc 24-28.8 Vdc	12-14.4 Vdc 24-28.8 Vdc	48–57.6 Vdc	12-14.4 Vdc 24-28.8 Vdc	12-14.4 Vdc 24-28.8 Vdc	48–57.6 Vdc
20 A 15 A	20 A 15 A	10 A	45 A 40 A	45 A 40 A	20 A
< 35 A < 30 A	< 35 A < 30 A	< 13 A	< 60 A < 55 A	< 60 A < 55 A	< 30 A
9.5-12 Vdc 18.5-24 Vdc	9.5-12 Vdc 18.5-24 Vdc	37-48 Vdc	9.5-12 Vdc 18.5-24 Vdc	9.5-12 Vdc 18.5-24 Vdc	37-48 Vdc
20 A 15 A	20 A 15 A	10 A	45 A 40 A	45 A 40 A	20 A
< 35 A < 30 A	< 35 A < 30 A	< 15 A	< 60 A < 55 A	< 60 A < 55 A	< 30 A
< 90 mA	< 90 mA	< 90 mA	< 100 mA	< 100 mA	< 100 mA
yes	yes	yes	yes	yes	yes
yes	yes	yes	yes	yes	yes
yes	-	yes	yes	-	yes
yes	yes	yes	yes	yes	yes
yes	-	yes	yes	-	yes
12 Vdc 24 Vdc	12 Vdc 24 Vdc	48 Vdc	12 Vdc 24 Vdc	12 Vdc 24 Vdc	48 Vdc
1.5 A / 15.0 A 1,0 A / 10,0 A	1.5 A / 15.0 A 1,0 A / 10,0 A	0,5-5,0 A	3,5 A / 35.0 A 2 A / 20,0 A	3,5 A / 35.0 A 2 A / 20,0 A	1,0-10,0 A
14.75 Vdc 29.50 Vdc	14.75 Vdc 29.50 Vdc	59 Vdc	14.75 Vdc 29.50 Vdc	14.75 Vdc 29.50 Vdc	59 Vdc
14.4 Vdc 28.80 Vdc	14.4 Vdc 28.80 Vdc	57,6 Vdc	14.4 Vdc 28.80 Vdc	14.4 Vdc 28.80 Vdc	57,6 Vdc
2-10 Vdc 2-20 Vdc	2-10 Vdc 2-20 Vdc	4-40 Vdc	2-10 Vdc 2-20 Vdc	2-10 Vdc 2-20 Vdc	4-40 Vdc
9.3 Vdc 18.5 Vdc	9.3 Vdc 18.5 Vdc	37 Vdc	9.3 Vdc 18.5 Vdc	9.3 Vdc 18.5 Vdc	37 Vdc
11 Vdc 22 Vdc	11 Vdc 22 Vdc	44 Vdc	11 Vdc 22 Vdc	11 Vdc 22 Vdc	44 Vdc
–25 up to +70 °C	–25 up to +70 °C	–25 up to +70 °C	–25 up to +70 °C	–25 up to +70 °C	–25 up to +70 °C
max 95%	max 95%	max 95%	max 95%	max 95%	max 95%
-40 up to +85 °C	-40 up to +85 °C	-40 up to +85 °C	-40 up to +85 °C	-40 up to +85 °C	-40 up to +85 °C
Natural Convection	Natural Convection	Natural Convection	Natural Convection	Natural Convection	Natural Convection
>90% >92%	>90%	>92%	>90% >92%	>90% >92%	>92%
2.5 %/°C , T_A > 50°C	2.5 %/°C , T_A > 50°C	2.5 %/°C , T_A > 50°C	2.5 %/°C , T_A > 50°C	2.5 %/°C , T_A > 50°C	2.5 %/°C , T_A > 50°C
0.5°C/100 m, above 2000 m	0.5°C/100 m, above 2000 m	0.5°C/100 m, above 2000 m	0.5°C/100 m, above 2000 m	0.5°C/100 m, above 2000 m	0.5°C/100 m, above 2000 m
II	II	II	II	II	II
IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
2	2	2	2	2	2
80 x 130 x 126 mm	80 x 130 x 126 mm	80 x 130 x 126 mm	100 x 130 x 126 mm	100 x 130 x 126 mm	100 x 130 x 126 mm
0.9 kg	0.9 kg	0.9 kg	1,2 kg	1,2 kg	1,2 kg
EN IEC 61010-2-201:2018; EN IEC 61000-6-2:2019; EN IEC 61000-6-4:2019; EN IEC 63000:2018; EN60950-1, (UL60950-1, UL508, C22.2, EN60335-2-29, UL1236); EN IEC 62368-1:2014/AC:2015; EN54-4					
CE, UKCA					

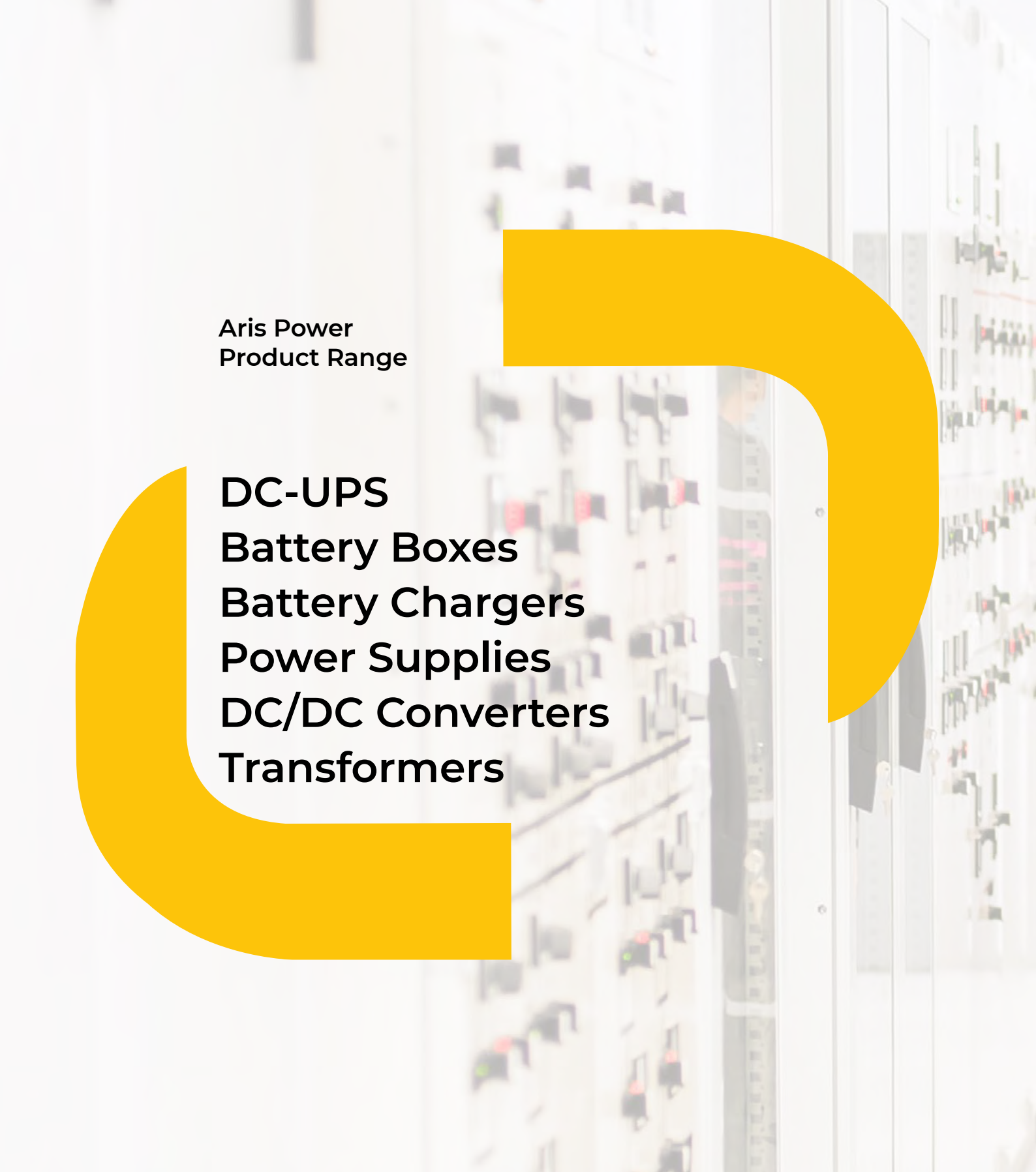
BBX series

		BBX012			BBX034	
						
		BBX012024SBS	**BBX012024**	**BBX012000**	**BBX034024SBS**	**BBX034024**
		Battery Box with SBS temperature probe and signal connection	Basic Battery Box	Casing and inner wiring only	Battery Box with SBS temperature probe and signal connection	Basic Battery Box
Electrical specifications	Rated Voltage	24 Vdc			24 Vdc	
	Nominal Capacity	1.2 Ah / 20 h		(1.2 Ah)	3.4 Ah	
	Battery Type	Lead-acid AGM, VRLA		-	Lead-acid AGM, VRLA	
	Connection in parallel	Yes		-	Yes	
	Connection in series	Yes		-	Yes	
	Max. permissible charging current	0.4 A		-	1,0 A	
	Max permissible discharging current.	18 A		-	25 A	
	Max Charging voltage (Fast Charge)	28.8 V		-	28.8 V	
	Float Charging voltage	27.4 V		-	27.4 V	
	LVD-Low Voltage Disconnection from DCU	< 19 V		-	< 19 V	
	Self discharge rate	≤3%/month		-	≤3%/month	
	Fast Charging	Suitable for Fast Charging		-	Suitable for Fast Charging	
	Number of blocks	2		-	2	
	Number of cells per block	6		-	6	
	Internal Fuse - Flat, type Mini	25 A			25 A	
	Spare Fuse - Flat, type Mini	25 A			25 A	
Signal Output/ Input	Serial Port Communication	UART connector	-	-	UART connector	-
	Temperature compensation	Built-in SBS Temperature probe	-	-	Built-in SBS Temperature probe	-
Ambient Data	Ambient Temperature (operation)	0 °C - +40 °C		-	0 °C - +40 °C	
	Ambient Temperature Storage or transport)	0 °C - +40 °C		-	0 °C - +40 °C	
	Max Relative Humidity (operation)	95% RH		-	95% RH	
Mechanical specifications	Housing material	Aluminium and galvanized steel sheet			Aluminium and galvanized steel sheet	
	Mounting Position	Vertical only			Vertical only	
	Mounting on DIN rail	Yes			Yes	
	Mounting on mounting plate	Yes			Yes	
	Connection Screw type terminals	0.5-16 mm 2 (20-6 AWG)			0.5-16 mm 2 (20-6 AWG)	
	Dimensions (W x H x D) mm	55 x 130 x 135			155 x 172 x 89	
	Weight kg	1,5		0.4	2,9	
Protection Categories	Protection Class (EN/IEC 60529)	IP 20			IP 20	
	Protection Class EN/IEC 61140	III			III	
	Environment Pollution Degree EN/IEC 60947-1	2			2	
Approvals	European Standards	EN IEC 61000-6-2:2005: EN IEC 61000-6-3:2007+A1:2011; EN IEC 50581:2012				
	Declarations	CE; UKCA				

	BBX072			BBX120		
						
BBX034000	**BBX072024SBS**	**BBX072024**	**BBX072000**	**BBX120024SBS**	**BBX120024**	**BBX120000**
Casing and inner wiring only	Battery Box with SBS temperature probe and signal connection	Basic Battery Box	Casing and inner wiring only	Battery Box with SBS temperature probe and signal connection	Basic Battery Box	Casing and inner wiring only
24 Vdc	24 Vdc			24 Vdc		
(3,4 Ah)	7,2 Ah / 20 h		(7,2 Ah)	12 Ah		(12 Ah)
-	Lead-acid AGM, VRLA		-	Lead-acid AGM, VRLA		-
-	Yes		-	Yes		-
-	Yes		-	Yes		-
-	2,1 A		-	3,6 A		-
-	25 A		-	25 A		-
-	28.8 V		-	28.8 V		-
-	27.4 V		-	27.4 V		-
-	< 19 V		-	< 19 V		-
-	≤3%/month		-	≤3%/month		-
-	Suitable for Fast Charging		-	Suitable for Fast Charging		-
-	2		-	2		-
-	6		-	6		-
25 A	25 A			25 A		
25 A	25 A			25 A		
-	UART connector	-	-	UART connector	-	-
-	Built-in SBS Temperature probe	-	-	Built-in SBS Temperature probe	-	-
-	0 °C - +40 °C		-	0 °C - +40 °C		-
-	0 °C - +40 °C		-	0 °C - +40 °C		-
-	95% RH		-	95% RH		-
	Aluminium and galvanized steel sheet			Aluminium and galvanized steel sheet		
	Vertical only			Vertical only		
Yes	No			No		
Yes	Yes			Yes		
0.5-16 mm 2 (20-6 AWG)	0.5-16 mm 2 (20-6 AWG)			0.5-16 mm 2 (20-6 AWG)		
155 x 172 x 89	150 x 220 x 115			219 x 220 x115		
0,5	4,9		0,7	8,5		1,7
IP 20	IP 20			IP 20		
III	III			III		
2	2			2		
	EN IEC 61000-6-2:2005: EN IEC 61000-6-3:2007+A1:2011; EN IEC 50581:2012					
	CE; UKCA					

Aris Power
Product Range

DC-UPS
Battery Boxes
Battery Chargers
Power Supplies
DC/DC Converters
Transformers



ARIS POWER

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