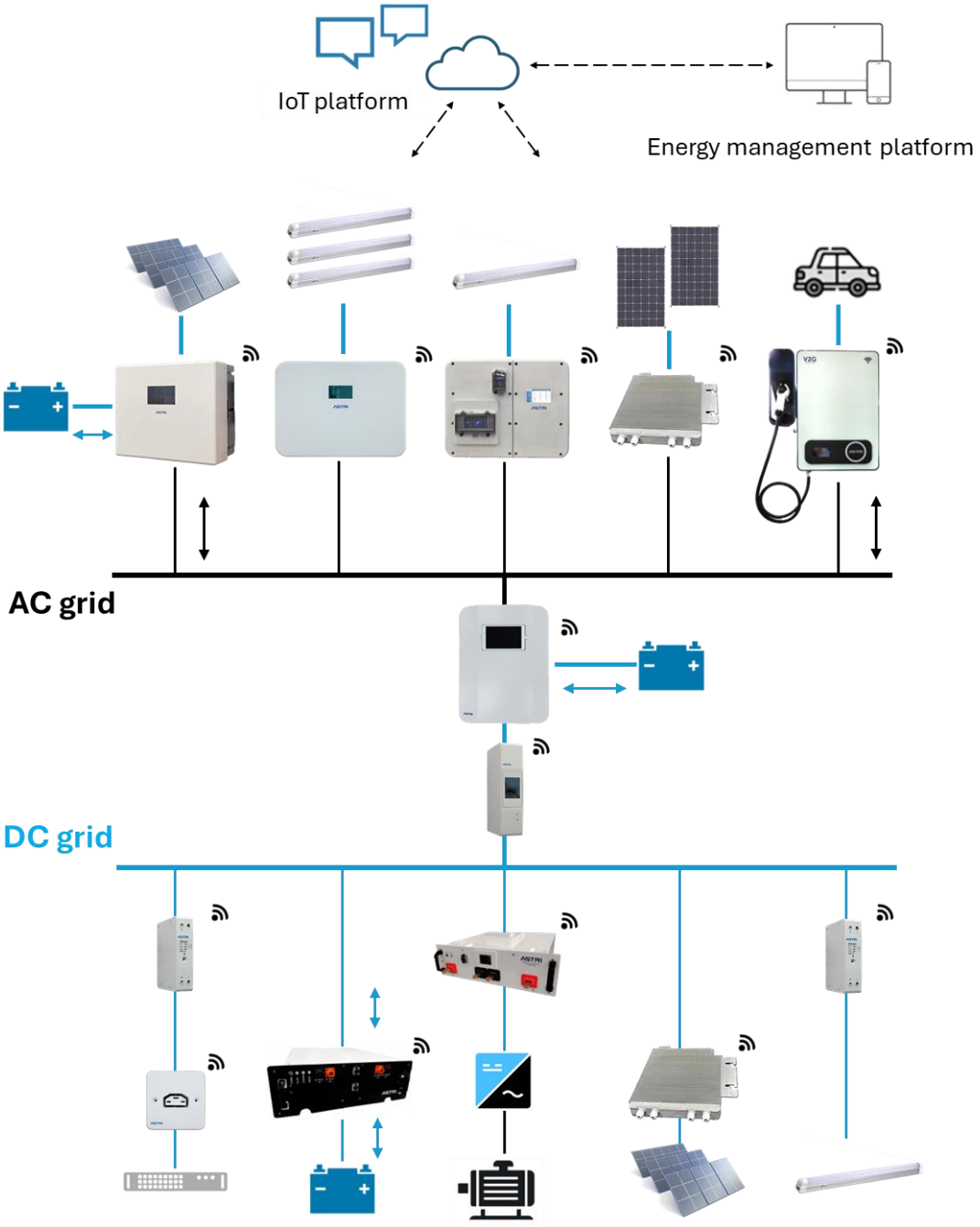
ASTRI green power & energy solutions for DC and AC grids



DS10kW1P DS12kW3P

DS10kW1P is a 1-phase AC to DC platform and DS12kW3P is a 3-phase AC to DC platform with Energy Saving Mode (ESM) control solution to ensure high power efficiency across the wide load range for DC building and related applications.

High efficiency

>98% efficiency from 10 – 100% load

Dual DC output

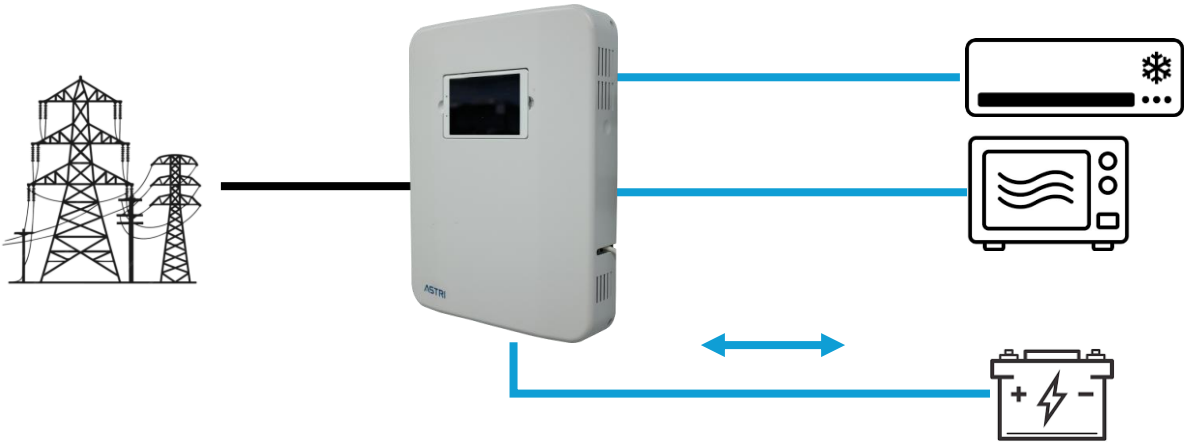
375V and 48V outputs in one unit

UPS function

Battery power back up when power outage

Simple control

Remote & local monitoring & control



Product Specification			
	DS10kW1P		**DS12kW3P**
Input (AC)			
Nominal Voltage	220V AC		220V AC
Voltage Range	198 – 240V AC		198 – 240V AC
Frequency	50Hz		50Hz
Nominal Current	46A		20A
Power Factor @ 50% Load or higher	>0.99		>0.99
Protection	Fuse, Varistor, OCP, OVP, OPP, OTP		Fuse, Varistor, OCP, OVP, OPP, OTP
Output (DC)			
Voltage	375V DC	48V DC	375V DC
Voltage Range (adjustable)	360 – 400V DC	48V DC	360 – 400V DC
Power Continuous	10kW	5kW	12kW
Nominal Current (per phase)	26.7A	104A	10.7A
Voltage Stabilized Accuracy	<1%	<0.5%	-
Current Stabilized Accuracy	-	<0.5%	-
Static Voltage Regulation	5%	2%	5%
Hold-up Time	-	-	20ms @ 100% load
Voltage Ripple	10Vp-p	1Vp-p	12Vp-p
Protection	OCP, OVP, UVP	OCP, OVP, UVP	OCP, OVP, UVP
General Data			
Efficiency (375V Output)	98.1% @ 10% load, 98.5% @ 50% load, 98.6% @100% load		97.3% @ 10% load, 98.5% @ 50% load, 98.3% @100% load
Degree of Protection	IP20		IP21
Audible Noise Level	55dBA		-
Type of Cooling	Fan cooling		Natural cooling
Operating Environment	0 – 50°C / 0 – 95% RH non-condensing, Output power linear derated 10kW @ 40°C, 7kW @50°C, 4kW @ 60°C		0 – 50°C / 0 – 95% RH non-condensing, Output power linear derated12kW @ 40°C, 9kW @50°C, 6kW @ 60°C
Dimension (cm)	46(w) x 59(h) x 12(l)		54(w) x 41(h) x 12(l)
EMC	EN55032 Class A		EN55032 Class A
Communication	Wi-Fi		Wi-Fi
Installation	Wall mount		Wall mount
Installation position	Vertical		Vertical

Battery terminal		
Nominal voltage	48V	-
Battery type	Lead acid, lithium-ion	-
Battery capacity	50Ah	-
Discharge power continuous	5kW	-

DS10kW1P DS12kW3P

DCL4kW1P

DCL4kW1P is a 1-phase AC to DC output embedded with a maximum of 4 solid-state DC breakers, providing high power efficiency and easy installation for DC building and related applications.

High efficiency

4kW DC power with 98.5% peak efficiency

Flexible configuration

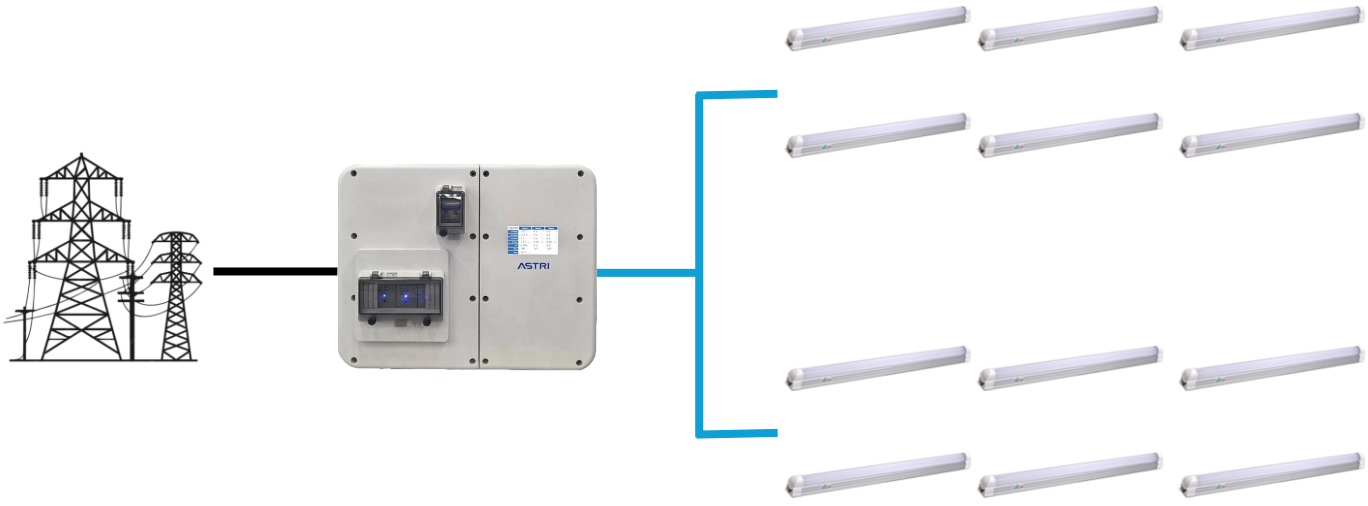
Connect to 1 to 4 DC bus with individually protection

Natural cooling

No acoustic noise & eliminate fan power loss

Real time monitoring

WIFI monitoring & reporting



Product Specification	
	DCL4kW1P
Input (AC)	
Nominal Voltage	220V AC
Voltage Range	198 – 240V AC
Frequency	50Hz
Nominal Current	20A
Power Factor @ 50% Load or higher	>0.99
Protection	MCB, Varistor, OCP, OVP, OPP, OTP
Output (DC)	
Voltage	375V DC
Voltage Range (adjustable)	360 – 400V DC
Power Continuous	4kW
Nominal Current (Total Output)	10.7A
Voltage Stabilized Accuracy	-
Current Stabilized Accuracy	-
Static Voltage Regulation	5%
Hold-up Time	20ms @ 100% load
Voltage Ripple	12Vp-p
Protection	OCP, OVP, UVP
General Data	
Efficiency (375V Output)	97.3% @ 10% load, 98.5% @ 50% load, 98.3% @100% load
Degree of Protection	IP54
Audible Noise Level	-
Type of Cooling	Natural cooling
Operating Environment	0 – 50°C / 0 – 95% RH non-condensing, Output power linear derated 4kW @ 40°C, 3kW @50°C
Dimension (cm)	49.3(w) x 39.0(h) x 16.5(l)
EMC	EN55032 Class A
Communication	Wi-Fi
Installation	Wall mount
Installation position	Vertical

SDB375V /14AU

SDB375V /32AU

SDB375V /50AU

SDB750V /50AB

Solid-state DC Circuit Breaker (SSCB) is an ultra-fast protective device against Short Circuit, Overload and Under/Overvoltage for DC electrical systems.

Ultra-fast & safe

Less than 10μs circuit protection with arcless disconnect

High efficiency

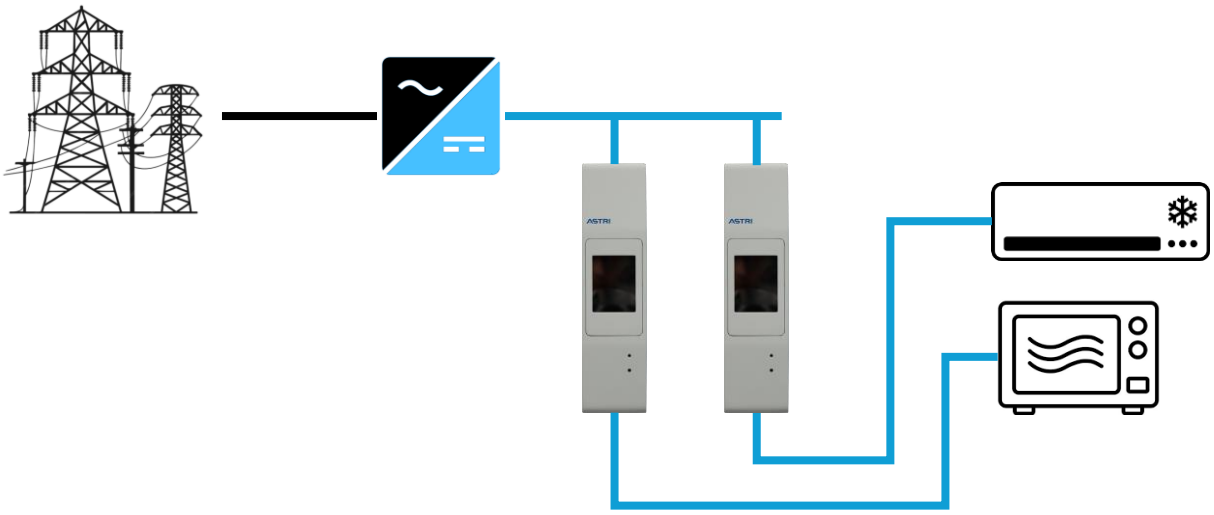
Max. 37.5kW DC power with 98% peak efficiency

Natural cooling

No acoustic noise & eliminate fan power loss

Simple control

Remote & local control & adjust trip curve



Product Specification				
	375V/14AU	**375V/32AU**	**375V/50AU**	**750V/50AB**
Technical Data				
Nominal Voltage	375V DC	375V DC	375V DC	750V DC
Voltage Range	200 – 400V DC	200 – 400V DC	200 – 400V DC	200 – 800V DC
Nominal Current	14A	32A	50A	50A
No. of Poles	2	2	2	2
Power Flow	Unidirectional	Unidirectional	Unidirectional	Bi-directional
Protection	Short circuit, Overload, OVP, UVP	Short circuit, Overload, OVP, UVP	Short circuit, Overload, OVP, UVP	Short circuit, Overload, OVP, UVP
Short-Circuit Capability	-	-	2.8kA	-
Efficiency	>99.9% from 10% to 100% load	>99.9% from 10% to 100% load	>99.9% from 10% to 100% load	>98% from 10% to 100% load
Inrush Limiter	2.5Ω 3W	2.5Ω 3W	2.5Ω 3W	5.0Ω 6W
General Data				
Type of Cooling	Natural cooling	Natural cooling	Natural cooling	Natural cooling
Operating Environment	0 – 40˚C / 0 – 95% RH non-condensing,14A @40˚C	0 – 40˚C / 0 – 95% RH non-condensing,32A @40˚C	0 – 40˚C / 0 – 95% RH non-condensing, 50A @ 40˚C, 40A @ 50˚, 30A @60˚C	0 – 40˚C / 0 – 95% RH non-condensing, 50A @40˚C, 40A @ 50˚C, 30A @60˚C
Dimension (cm)	4.1(w) x 15.6(h) x 11.4(l)	5.5(w) x 32.0(h) x 11.4(l)	5.5(w) x 21.7(h) x 11.4(l)	6.3(w) x 24.2(h) x 15.4(l)
Communication	Wi-Fi	Wi-Fi	Wi-Fi	Wi-Fi
Light Indication	Normal ON – Blue stable Normal OFF / Fault – Blue flash	Normal ON – Blue stable Normal OFF / Fault – No light	Normal ON – Blue stable Normal OFF / Fault – No light	Normal ON – Blue stable Normal OFF / Fault – No light
Installation	Din – rail	Din – rail	Din – rail	Din – rail
Installation Position	Vertical	Vertical	Vertical	Vertical
Configuration Method	Internet remote	Touch panel / Internet remote	Touch panel / Internet remote	Touch panel / Internet remote
Degree of Protection	IP21	IP21	IP21	IP21

	375V/14AU	375V/32AU	375V/50AU	750V/50AB
Option - Integrated MCB				
Part Number		ABB OTDC32F2 375V DC		
No. of Poles		2		
Rated Impulse Withstand Voltage		8kV		
Standards		IEC 60947Din – rail 1, -3		
Option - Leakage Current Protection Module				
DC Earth Leakage Trip Level	-	-		6mA
Response Time	-	-		250ms
Dimension (cm)	-	-		6.3(w) x 5.5(h) x 5.0(l)

SDB800V/850AB

800V/850AB Solid-state DC Circuit Breaker (SSCB) is an ultra-fast protective device against Short Circuit, Overload and Under/Overvoltage for marine application.

Ultra-fast & safe

Less than 10μs circuit protection with arcless disconnect

High efficiency

Max. 680kW DC power with 99.7% peak efficiency

Liquid cooling

Provide high performance thermal management

Simple control

Remote & local control & adjust trip curve

Product Specification

SDB800V/850AB

Technical Data	
Nominal Voltage	800V DC
Voltage Range	200 – 820V DC
Nominal Current	850A
No. of Poles	2
Power Flow	Bidirectional
Protection	Short circuit, Overload, OVP, UVP
Short-Circuit Capability	39kA
Efficiency	>99.5% from 10% to 100% load
Inrush Limiter	-
General Data	
Type of Cooling	Liquid cooling
Operating Environment	0 – 40°C / 0 – 95% RH non-condensing
Dimension (cm)	72(L) X 45(W) x15(H)
Communication	Wi-Fi
Light Indication	Normal ON – Blue stable Normal OFF / Fault – No light
Installation	Rack-mount
Degree of Protection	IP21

V2GWB22kW3P

V2G Wallbox consists of both DC to AC and AC to DC power conversion systems which enables Battery to feed power into the Grid as well as Battery Charging from the Grid, offering High Power Efficiency solution across wide load range for Electric Vehicle (EV) charging and discharging, ready for Virtual Power Plant (VPP) applications.

High efficiency

22kW DC power with 96% peak efficiency

Wide range

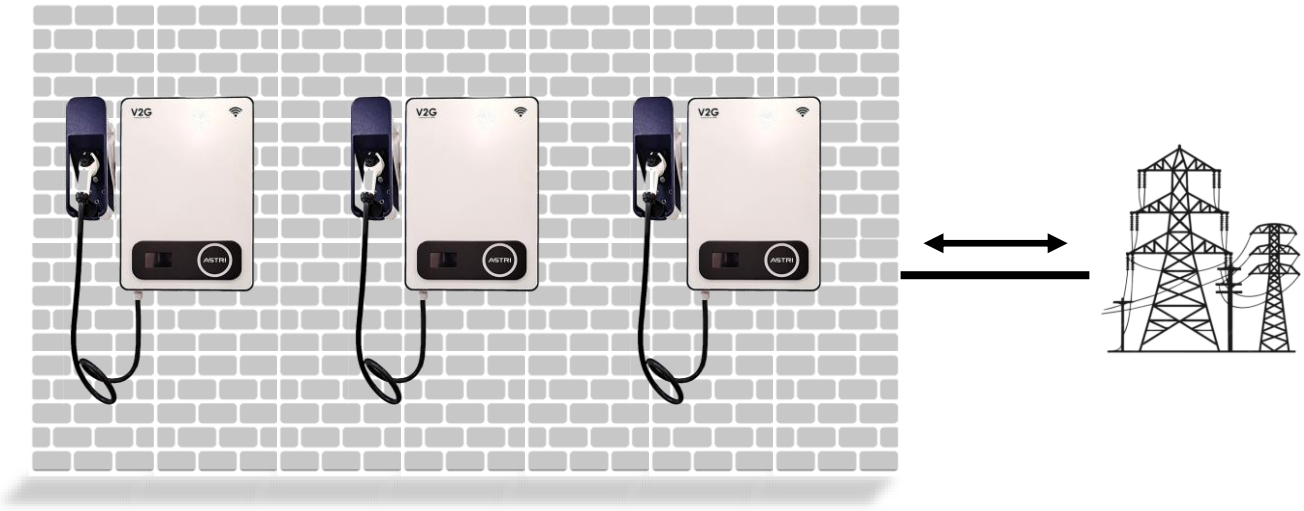
100 – 1000V battery voltage range

VPP ready

VPP interactive charge /discharge operations

Simple control

Remote & local monitoring & control



Product Specification	
	V2GWB22kW3P
Input (AC)	
Nominal Voltage	400V AC, 3-phase
Input Voltage Range	380V ±20% AC, 3-phase
Max. Input Current	60A (charging mode); 60A (discharging mode)
Nominal Output Grid Frequency	50 / 60Hz
Power Factor	> 0.99
Total iTHD	< 3% (from 50% load)
Output (DC)	
Nominal Power	22kW
Max. Output Current	60A
Output Frequency	50 / 60Hz
Battery Voltage Range	100-1000V DC
Voltage Accuracy Load	< ±0.5%
Current Accuracy	< ±1% @20 – 100% load
Efficiency	96.0 % (peak)
Protection	OCP, OVP, UVP, OPP
General Data	
Operating Temperature Range	-30 to +50°C, Derating at 45°C and above
Permissible Ambient Humidity	0 – 100%
Permissible Altitude	2000 m
Ingress Protection (IP) Rating	IP 54
Inverter Topology	Isolated
Remote Monitoring	Mobile Apps
Communication	Wi-Fi, Bluetooth
Cabinet Size (W x H x D)	700 x 480 x 199 mm (Excluding Connectors and Brackets)
Weight	37.5 kg
Type of Cooling	Fan cooling
Mounting Method	Bracket wall mounted
Protocol	GB/T 20234

HI10kW3P

The 10kW hybrid inverter is a 2-in-1 solution combining both solar and battery in one single device with high power, high efficiency and high integration for energy storage application.

Dual MPPT

Dual MPPT controls for two PV strings

Transformerless

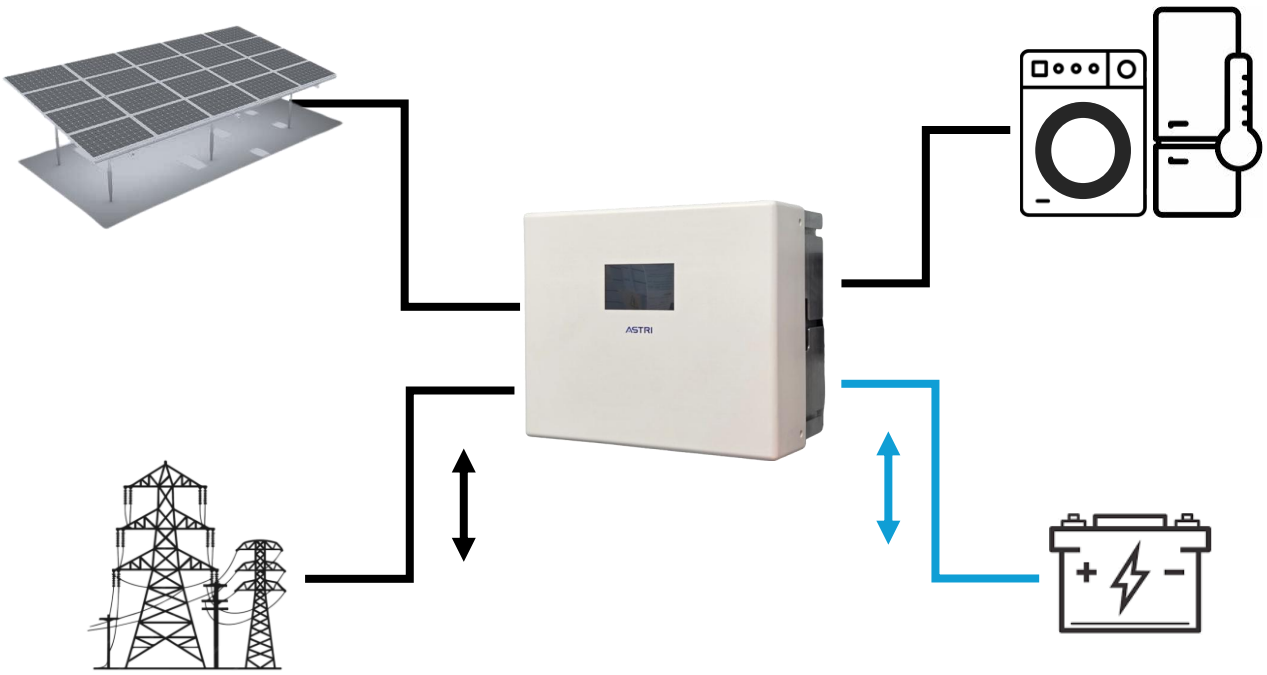
Three-level DC-AC transformerless converter

Natural cooling

No acoustic noise & eliminate fan power loss

Simple control

Remote & local monitoring & control



Product Specification

	HI10kW3P	
PV Input (DC)		
Max. Input Power	7500W per string	
No. of PV String / MPPT Trackers	2 / 2	
Max. PV Input Voltage	850V	
Start-up Voltage	100V	
MPPT Voltage Range	200 – 700V	
Nominal PV Input Voltage	500V	
Max. Operating PV Input Current	30A x 2	
Max. Input Short Circuit Current	40A x 2	
Battery Input (DC)		
Battery Type	Li-ion	
Nominal Battery Voltage	400V	
Battery Voltage Range	150 – 600V	
Start-up Voltage	150V	
Max. Continuous Charge / Discharge Current	25A / 25A	
Max. Charge / Discharge Power	10000W / 10000W	
AC Output		
	(On-grid)	(Off-grid)
Nominal AC Output Real Power	10000W	
Max. AC Output Apparent Power	10000VA	10000VA
Max. AC Output Current	17A	17A
Nominal Output Voltage	380V, 3L / N / PE	380V, 3L / N / PE
Output Voltage Range	380V ± 10%	
Grid Connection Form	3L / N / PE	3L / N / PE
Nominal Output Grid Frequency	50Hz / 60Hz	50Hz / 60Hz
Output Grid Frequency Range	45 – 55Hz / 55 – 65Hz	
Power Factor Adjustment Range	0.85 leading - 0.85 lagging	
Max. iTHD	< 5%	
Max. vTHD		< 3% @linear load
Efficiency	98.0% (Peak), 97.5% (Euro), 98.0% (Max. Battery to AC), > 99% (MPPT)	

MI1kW1P

MI1kW1P is a highly efficient single phase microinverter for residential to commercial solar system applications.

High efficiency

96.4% peak efficiency with 600W input power

Dual MPPT

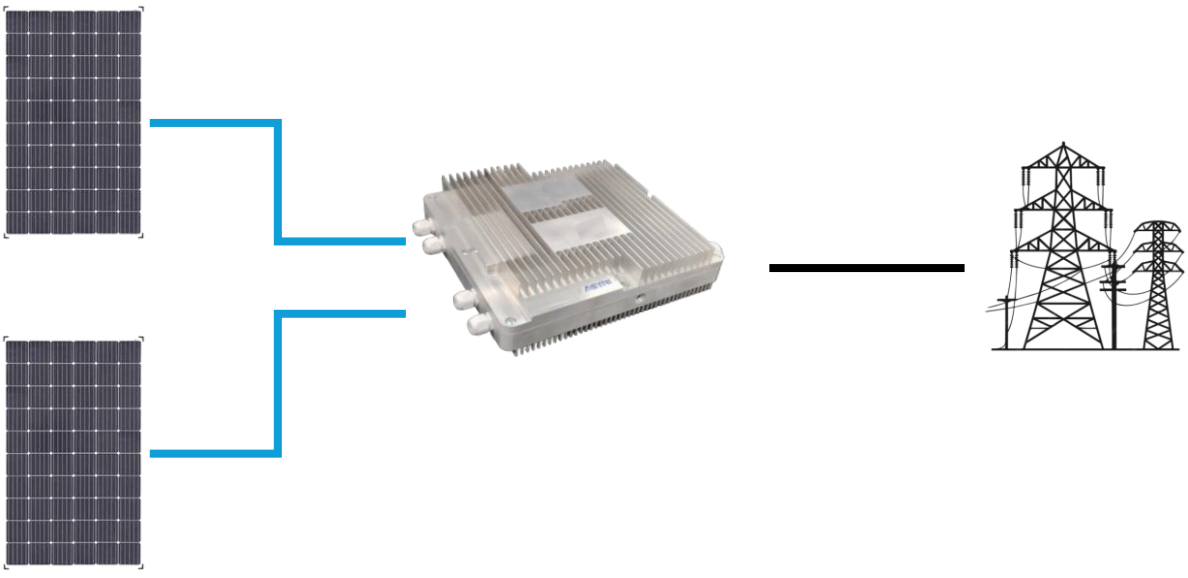
2 MPPT trackers with 20V startup voltage

Natural cooling

No acoustic noise & eliminate fan power loss

Simple control

Remote & local monitoring & control



Product Specification	
	MI1kW1P
PV Input (DC)	
Max. PV Input Power	600W
Nominal / Max. PV Input Voltage	42.5V / 60 V
Start-up Voltage	20V
MPPT Voltage Range	22 – 50V
Max. Operating PV Input Current	16A x 2
Max. Input Short Circuit Current	21A x 2
No. of MPP Trackers	2
Output (AC)	
Nominal AC Output Active Power	1000W
Max. AC Output Apparent Power	1000W
Nominal / Max. AC Output Current	4.5A / 4.5A
Nominal Output Voltage	220V
Output Voltage Range	198 – 242V
Grid Connection Form	L / N / PE
Nominal Output Grid Frequency	50 / 60Hz
Output Grid Frequency Range	45 – 55Hz / 55 – 65Hz
Power Factor Adjustment Range	0.85 leading - 0.85 lagging
Efficiency	96.4% (Peak), 94.4% (Euro), > 99.0% (MPPT)
Total iTHD	< 4% @ Rated input voltage & > 50% Rated output power
Protection	OCP, OVP, OTP, Overvoltage load drop protection
General Data	
Operating Temperature Range	-40 – +65°C, Derating at 45°C and above
Permissible Ambient Humidity	0 – 100%
Noise	≤25dB
Ingress Protection (IP) Rating	IP 67
Inverter Topology	Isolated
Communication	Wi-Fi
Cabinet Size (W x H x D)	224 x 255 x 60.5mm (Excluding connectors and brackets)
Weight	4.2kg
Type of Cooling	Natural cooling
Mounting Method	Bracket mounted

BC50kW1000V

BC50kW1000V is a high-power, bi-directional DC conversion module specifically designed to meet the application of energy storage devices, DC microgrids, and the cascade utilization of retired batteries.

High efficiency

50kW DC power with 98% peak efficiency

Wide range

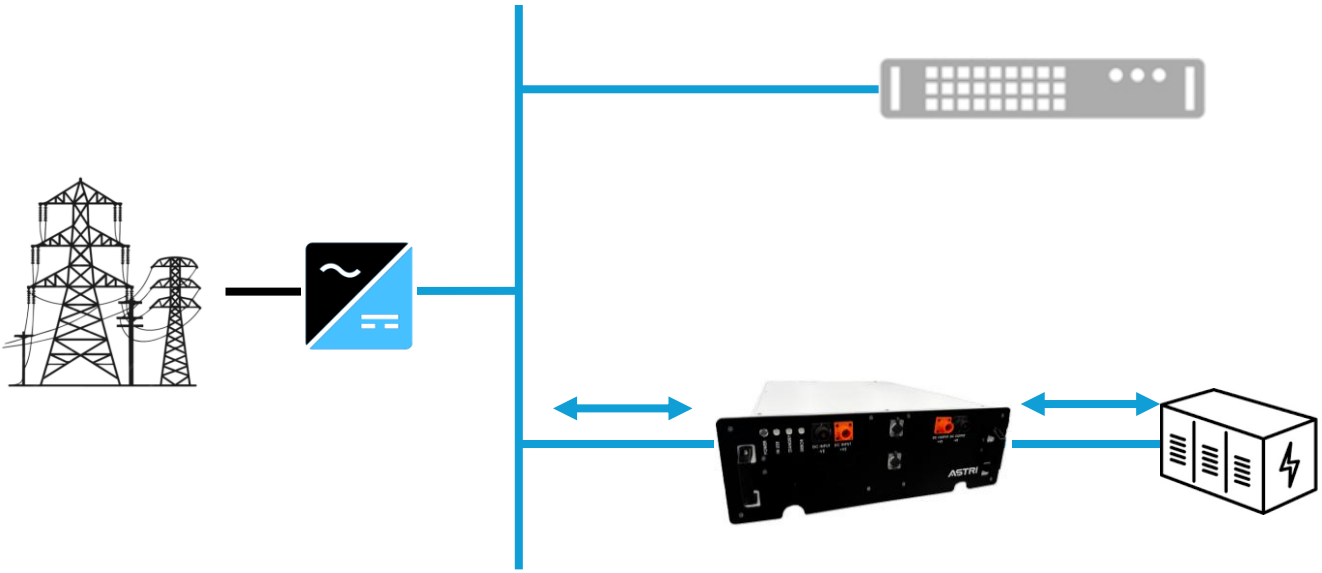
200 – 1000V battery / 400 – 900V bus voltage range

VPP ready

VPP interactive charge / discharge operations

Simple control

Remote & local monitoring & control



Product Specification	
	BC50kW1000V
Input DC (Bus side)	
Nominal Input Power	50kW
Input Voltage Range	400 – 900Vdc
Input Current Range	0 – 100A
Input Voltage Accuracy	< ± 0.5%
Input Current Accuracy	<± 1% (Output loading of 100 – 200%)
Output DC (Battery side)	
Nominal Output Power	50kW
Output Voltage Range	200 – 1000Vdc
Output Current Range	0 – 120A
Output Voltage Accuracy	< ± 0.5%
Output Current Accuracy	<± 1% (Output loading of 100 – 200%)
Efficiency	98.0% (peak)
Equipment Protection	
DC Output Overcurrent Protection	Yes
DC Output Overvoltage Protection	Yes
DC Input Overcurrent Protection	Yes
DC Input Overvoltage Protection	Yes
Thermal Protection	Yes
Output Undervoltage Load Drop Protection	Yes
General Data	
Operating Temperature Range	-40 to +65°C, Derating at 45°C and above
Permissible Ambient Humidity	0 – 100%
Permissible Altitude	2000m
Noise	≤25dB
Inverter Topology	Isolated
Communication	CAN
Cabinet Size (W x H x D)	500 x 203.2 x 598mm (Excluding connectors)
Weight	45kg
Type of Cooling	Liquid cooling

DAS400V20A

The DC Arc-less Socket is a connector designed for distributing DC power in indoor applications. It includes a socket outlet which is integrated with the panel and a PCBA for electric arc prevention. The socket outlet matches the DC plugs specified in IEC TS 62735-1 and supports hot-plug operation under a DC load of up to 400V/20A.

Arcless disconnect

Semiconductor switch without electric arc

Zero standby power

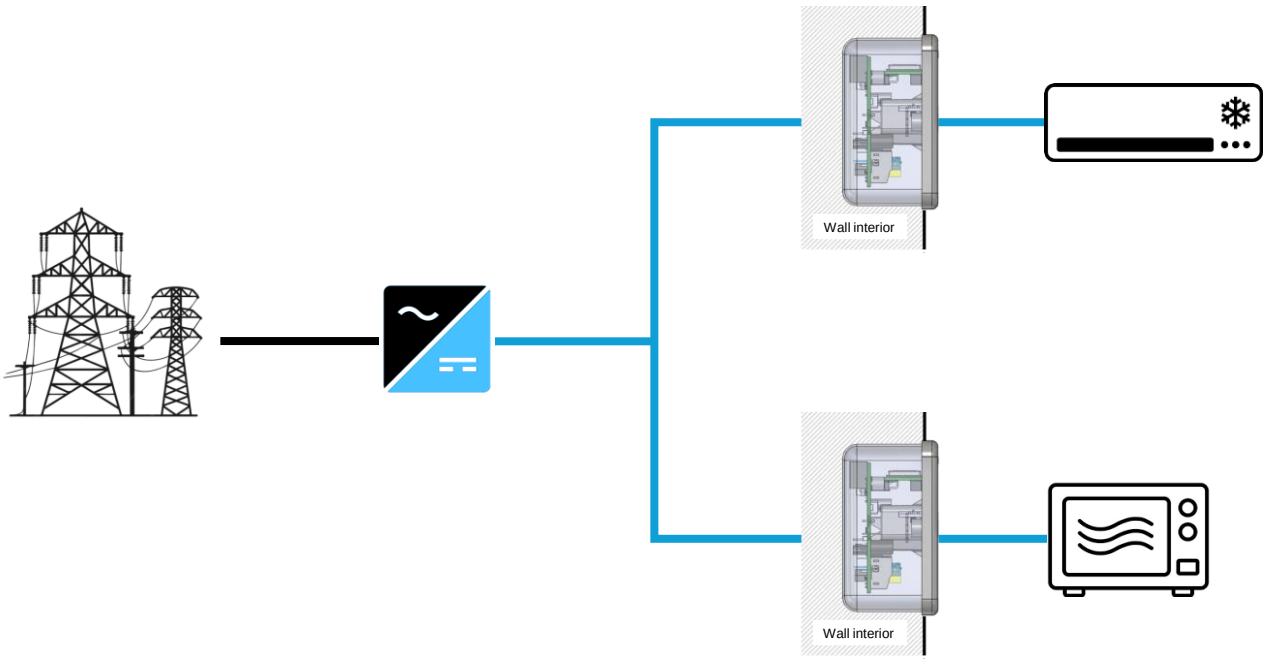
<0.25W operational power & 0W standby power

High reliability

>10,000 cycles without observable derating

Real time monitoring

BLE/ WIFI reporting



Product Specification

	DAS400V20A
Technical	
Nominal Voltage	375V DC
Voltage Range	50 – 400V DC
Current Range	0 – 20A
Nominal Current	20A
No. of Pins	3 (positive, negative, earth)
Protection	Short circuit, Thermal trip, OVP, UVP
Electrical Service Life (400V/10A Hot Plug)	12,000 cycles
General Data	
Power Loss (Unplug / Plug-in)	0 / < 0.25W
Storage Temperature	-20 – 70˚C
Type of Cooling	Natural cooling
Operating Environment	0 – 40˚C / 0 – 95% RH non-condensing, Current linear derated 20A @ 40˚C, 15A @50˚C, 10A @ 60˚C
Dimension (cm)	8.6(w) x 8.6(h) x 4.5(l)
Weight	105g
Communication	Wi-Fi, Bluetooth
Installation	M3.5 screw *2
Installation Position	Vertical
Colour	Light Grey, Black, Customized