### THE HAWKE'S BAY

#### MIDNITE CHARGE CONTROLLER

# HAWKE'S BAY MPPT Solar Charge Controller

Full featured 600VDC to 48VDC 6600 watt MPPT charge controller with control panel

#### **PRODUCT FEATURES**

- 90 and 120 amp vented models (MNHAWKE'S BAY 90 and MNHAWKE'S BAY 120)
- Least expensive large output 600VDC MPPT either by itself or when outfitted with options
- Ideal for larger DC coupled battery based on-grid and off-grid installations
- Widest MPPT tracking range 185-585VDC
- Faster and less expensive installation. Typically no combiner needed
- · Battery temp sensor included
- 2 aux input/outputs, the most in the industry
- Add on Hawke's Bay Breaker Box (MNHAWKE'S BAY BB-125) protects against excessive battery voltage excursions
- · Optional plug in arc fault
- Optional plug in NEC2020 compliant ground fault
- Optional plug in Sunspec compliant Rapid Shutdown transmitter (module or string level)
- Canbus communications seamlessly integrate with other MidNite products
- Safety certifications: UL1741 and CE low voltage directive EN50178 (NOT LISTED FOR USE IN CANADA)
- 5 year warranty standard.
- · Die cast and extruded aluminum enclosure rather than sheet metal
- · Quiet and reliable fan cooled
- · Weight: 20 Lbs.
- Breaker box weight: 9 Lbs.

## Designed and Assembled in the USA

using as many American components as feasible!

www.midnitesolar.com 19115 62nd Ave. NE., Arlington, WA. Ph 360-403-7207



Hawke's Bay MPPT Charge Controller (MNHAWKE'S BAY 90 or MNHAWKE'S BAY 120)



Hawke's Bay Charge Controller with Hawke's Bay Breaker box attached

(MNHAWKE'S BAY BB-125)



### HAWKES BAY SPECIFICATIONS

Maximum Output Current PV Open Circuit Voltage VOC 600VDC Power Conversion Efficiency Arc Fault and NEC 2020 Ground Fault Protection Charging Regulation Battery Voltage Regulation Set Points Equalization Charging Battery Over Voltage Battery Over Voltage Battery Short Circuit Battery Short Circuit Battery Femp Compensation Fully protected Battery Temp Compensation Programmable Auxiliary Graphic Display Stacking cables for system networking Communications Remote Display Battery Impure Short Circuit Battery Boy Short Circuit Battery Short Circuit Battery Temp Compensation Automatic when BTS is installed. Adjustable mV per degree C per 2V cell Battery Temp Compensation Automatic when BTS is installed. Adjustable mV per degree C per 2V cell Battery Temp Compensation Auxiliary Brogrammable Auxiliary Graphic Display Stacking cables for system networking Communications Canbus Remote Display MNGP2 - 64 x 122 Standard CAT5 - Canbus Communications Remote Display MNGP2 can be relocated and a second display can be added External Monitoring Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating Toc Data Logging Brogram Shot Applications Requires 2 pole input and output breakers Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating Indoor type 1 Syears Weight & Dimensions Shipping Dimensions Dipting Dimensions Shipping Dimensions Dipting Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)		
PV Open Circuit Voltage VOC Power Conversion Efficiency Power Conversion Power Conversion Power	Nominal Battery Voltage	48V
Power Conversion Efficiency Arc Fault and NEC 2020 Ground Fault and NEC 2020 Ground Charging Regulation Battery Voltage Regulation Set Points Equalization Charging Battery Over Voltage Battery Over Voltage Battery Short Circuit Battery Emp Compensation Fully protected Battery Emp Compensation Fully protected Battery Description Battery Description Battery Description Battery Emp Compensation Fully protected Battery Emp Compensation Automatic when BTS is installed. Adjustable mV per degree C per 2V cell Programmable Auxiliary Fully protected Battery Emp Compensation Automatic when BTS is installed. Adjustable mV per degree C per 2V cell Programmable Auxiliary Fully protected Battery Emp Compensation Fully protected Battery Emp Compensation Automatic when BTS is installed. Adjustable mV per degree C per 2V cell Programmable Auxiliary Fully protected Battery Emp Compensation Fully protected Battery Emp Compensation Fully protected Battery Emp Compensation Automatic when BTS is installed. Adjustable mV per degree C per 2V cell Fully protected	Maximum Output Current	
Arc Fault and NEC 2020 Ground Fault Protection  Charging Regulation Battery Voltage Regulation Set Points  Equalization Charging Battery Over Voltage Battery Over Voltage Battery Short Circuit Battery Femp Compensation  Fully protected (The Hawkes Bay Breaker Box automatically trips PV input breaker if battery exceeds 68VDC) Battery Temp Compensation  Automatic when BTS is installed. Adjustable mV per degree C per 2V cell Battery Desperation  Programmable Auxiliary  Graphic Display  Stacking cables for system networking  Communications  Remote Display  MNGP2 - 64 × 122  Stacking cables for system networking  Communications  Remote Display  MNGP2 can be relocated and a second display can be added  External Monitoring  Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating  75C  Data Logging  Wind and Hydro Applications  Positive Ground Applications  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Indoor type 1  Syears  Weight & Dimensions  17-5/8 x 9 x 8-1/8  23 Lbs (23.43 kgs)  Shipping Dimensions  Options  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-1115 for Battery Side)  Certifications  Listed by ETL for US (NOT LISTED FOR USE)	, ,	
Fault Protection Charging Regulation Battery Voltage Regulation Set Points Equalization Charging Gautery Voltage Regulation Set Points Equalization Charging Adjustable voltage and duration Battery Over Voltage Fully protected (The Hawkes Bay Breaker Box automatically trips PV input breaker if battery exceeds 68VDC) Battery Short Circuit Fully protected Battery Temp Compensation Automatic when BTS is installed. Adjustable mV per degree C per 2V cell Programmable Auxiliary Auxiliary input/outputs Graphic Display MNGP2 - 64 x 122 Stacking cables for system networking Communications Remote Display MNGP2 can be relocated and a second display can be added External Monitoring MNGP2 can be relocated and a second display can be added External Monitoring Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay. Terminal Rating 75C Data Logging 380 days of daily history Wind and Hydro Applications Operating Temperature Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C) Indoor type 1 Warranty Syears Weight & Dimensions 17-5/8 x 9 x 8-1/8 23 Lbs (23.43 kgs) Shipping Dimensions Options Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side) Listed by ETL for US (NOT LISTED FOR USE	Power Conversion Efficiency	* * * *
Charging Regulation Battery Voltage Regulation Set Points Adv to 65v Adjustable voltage and duration Battery Over Voltage Battery Short Circuit Battery Emp Compensation Battery Temp Compensation Programmable Auxiliary Branking Standard CAT5 - Canbus Communications Canbus Remote Display MNGP2 - 64 x 122 Stacking cables for system networking Communications Remote Display MNGP2 can be relocated and a second display can be added External Monitoring Branking Abustory Branking Abustory  Terminal Rating Toc Data Logging Branking Coming soon (firmware upgradeable) Positive Ground Applications Positiv	Arc Fault and NEC 2020 Ground	Optional plugin modules - user installed
Battery Voltage Regulation Set Points Equalization Charging Adjustable voltage and duration Battery Over Voltage Fully protected (The Hawkes Bay Breaker Box automatically trips PV input breaker if battery exceeds 68VDC) Battery Short Circuit Fully protected Battery Temp Compensation Automatic when BTS is installed. Adjustable mV per degree C per 2V cell Battery Display MNGP2 - 64 x 122 Stacking cables for system networking Canbus Remote Display MNGP2 can be relocated and a second display can be added External Monitoring Within normal blue tooth range from Hawkes Bay. Terminal Rating T5C Data Logging Battery Voltage Wind and Hydro Applications Operating Temperature Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C) Indoor type 1 Sears Weight & Dimensions Shipping Dimensions Options  Wind Listed by ETL for US (NOT LISTED FOR USE)	Fault Protection	
Equalization Charging  Battery Over Voltage  Battery Over Voltage  Battery Over Voltage  Battery Short Circuit  Battery Emp Compensation  Automatic when BTS is installed. Adjustable mV per degree C per 2V cell  Programmable Auxiliary  Graphic Display  Standard CAT5 - Canbus  Communications  Remote Display  MNGP2 - 64 x 122  Stacking cables for system networking  Canbus  Remote Display  MNGP2 can be relocated and a second display can be added  External Monitoring  Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating  Toc  Data Logging  Wind and Hydro Applications  Coming soon (firmware upgradeable)  Positive Ground Applications  Requires 2 pole input and output breakers  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Indoor type 1  Warranty  Syears  Weight & Dimensions  Shipping Dimensions  Options  Difficulty  Listed by ETL for US (NOT LISTED FOR USE)	Charging Regulation	Bulk, Absorb, Float as well as Equalization
Battery Over Voltage  Fully protected (The Hawkes Bay Breaker Box automatically trips PV input breaker if battery exceeds 68VDC)  Battery Short Circuit  Battery Temp Compensation  Automatic when BTS is installed. Adjustable mV per degree C per 2V cell  Programmable Auxiliary  Graphic Display  MNGP2 - 64 x 122  Stacking cables for system networking  Communications  Remote Display  MNGP2 can be relocated and a second display can be added  External Monitoring  Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating  75C  Data Logging  380 days of daily history  Wind and Hydro Applications  Coming soon (firmware upgradeable)  Positive Ground Applications  Requires 2 pole input and output breakers  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Indoor type 1  Syears  Weight & Dimensions  17-5/8 x 9 x 8-1/8  23 Lbs (23.43 kgs)  Shipping Dimensions  Options  Barcelona Breaker Box, SPD115 and MNSPD-600 for the PV input side)  Listed by ETL for US (NOT LISTED FOR USE	Battery Voltage Regulation Set Points	40v to 65v
automatically trips PV input breaker if battery exceeds 68VDC)  Battery Short Circuit  Battery Temp Compensation  Automatic when BTS is installed. Adjustable mV per degree C per 2V cell  Programmable Auxiliary  Graphic Display  MNGP2 - 64 x 122  Stacking cables for system networking  Communications  Remote Display  External Monitoring  External Monitoring  MNGP2 can be relocated and a second display can be added  External Monitoring  Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating  75C  Data Logging  Wind and Hydro Applications  Coming soon (firmware upgradeable)  Positive Ground Applications  Requires 2 pole input and output breakers  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Indoor type 1  Warranty  S years  Weight & Dimensions  17-5/8 x 9 x 8-1/8  23 Lbs (23.43 kgs)  Shipping Dimensions  Options  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-6115 for Battery Side and MNSPD-600 for the PV input side)  Listed by ETL for US (NOT LISTED FOR USE	Equalization Charging	Adjustable voltage and duration
exceeds 68VDC)  Battery Short Circuit  Battery Temp Compensation  Automatic when BTS is installed. Adjustable mV per degree C per 2V cell  Programmable Auxiliary  3 auxiliary input/outputs  Graphic Display  Stacking cables for system networking  Communications  Remote Display  MNGP2 - 64 x 122  Stacking cables for system networking  Canbus  Remote Display  MNGP2 can be relocated and a second display can be added  External Monitoring  Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating  75C  Data Logging  380 days of daily history  Wind and Hydro Applications  Positive Ground Applications  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Marranty  5 years  Weight & Dimensions  Shipping Dimensions  Ditical Size of Controller Spatial Spatia	Battery Over Voltage	Fully protected (The Hawkes Bay Breaker Box
Battery Short Circuit Battery Temp Compensation Automatic when BTS is installed. Adjustable mV per degree C per 2V cell Programmable Auxiliary 3 auxiliary input/outputs Graphic Display MNGP2 - 64 x 122 Stacking cables for system networking Communications Remote Display MNGP2 can be relocated and a second display can be added External Monitoring Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating 75C Data Logging 380 days of daily history  Wind and Hydro Applications Coming soon (firmware upgradeable) Positive Ground Applications Requires 2 pole input and output breakers Operating Temperature Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C) Environmental Rating Indoor type 1 Syears Weight & Dimensions 17-5/8 x 9 x 8-1/8 23 Lbs (23.43 kgs) Shipping Dimensions 17-5/8 x 9 x 8-1/105 Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side) Certifications Listed by ETL for US (NOT LISTED FOR USE		automatically trips PV input breaker if battery
Battery Temp Compensation  Automatic when BTS is installed. Adjustable mV per degree C per 2V cell  Programmable Auxiliary  Graphic Display  Standard CAT5 - Canbus  Communications  Remote Display  External Monitoring  External Monitoring  MNGP2 can be relocated and a second display can be added  External Monitoring  Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating  75C  Data Logging  Wind and Hydro Applications  Coming soon (firmware upgradeable)  Positive Ground Applications  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Marranty  Weight & Dimensions  Shipping Dimensions  Options  Picital Rating  MNSPD-600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Listed by ETL for US (NOT LISTED FOR USE		exceeds 68VDC)
mV per degree C per 2V cell Programmable Auxiliary 3 auxiliary input/outputs Graphic Display MNGP2 - 64 x 122 Stacking cables for system networking Standard CAT5 - Canbus Communications Canbus Remote Display MNGP2 can be relocated and a second display can be added External Monitoring Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay. Terminal Rating 75C Data Logging 380 days of daily history Wind and Hydro Applications Coming soon (firmware upgradeable) Positive Ground Applications Requires 2 pole input and output breakers Operating Temperature Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C) Environmental Rating Indoor type 1 Warranty S years Weight & Dimensions Shipping Dimensions 17-5/8 x 9 x 8-1/8 23 Lbs (23.43 kgs) Shipping Dimensions Options Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side) Listed by ETL for US (NOT LISTED FOR USE	Battery Short Circuit	Fully protected
Programmable Auxiliary  Graphic Display  MNGP2 - 64 x 122  Stacking cables for system networking  Communications  Remote Display  MNGP2 can be relocated and a second display can be added  External Monitoring  Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating  75C  Data Logging  Wind and Hydro Applications  Coming soon (firmware upgradeable)  Positive Ground Applications  Requires 2 pole input and output breakers  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Marranty  S years  Weight & Dimensions  17-5/8 x 9 x 8-1/8  23 Lbs (23.43 kgs)  Shipping Dimensions  Options  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Listed by ETL for US (NOT LISTED FOR USE	Battery Temp Compensation	Automatic when BTS is installed. Adjustable
Graphic Display  Stacking cables for system networking  Communications  Remote Display  MNGP2 can be relocated and a second display can be added  External Monitoring  Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating  75C  Data Logging  Wind and Hydro Applications  Positive Ground Applications  Coming soon (firmware upgradeable)  Requires 2 pole input and output breakers  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Indoor type 1  Warranty  Weight & Dimensions  Options  Picializa  Tress and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Listed by ETL for US (NOT LISTED FOR USE		mV per degree C per 2V cell
Stacking cables for system networking Communications Canbus Remote Display MNGP2 can be relocated and a second display can be added External Monitoring Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating 75C Data Logging 380 days of daily history  Wind and Hydro Applications Coming soon (firmware upgradeable) Positive Ground Applications Requires 2 pole input and output breakers Operating Temperature Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C) Environmental Rating Indoor type 1  Warranty S years Weight & Dimensions 17-5/8 x 9 x 8-1/8 23 Lbs (23.43 kgs) Shipping Dimensions Options Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side) Listed by ETL for US (NOT LISTED FOR USE	Programmable Auxiliary	3 auxiliary input/outputs
Communications  Remote Display  MNGP2 can be relocated and a second display can be added  External Monitoring  Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating  75C  Data Logging  380 days of daily history  Wind and Hydro Applications  Coming soon (firmware upgradeable)  Positive Ground Applications  Requires 2 pole input and output breakers  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Indoor type 1  Warranty  5 years  Weight & Dimensions  17-5/8 x 9 x 8-1/8  23 Lbs (23.43 kgs)  Shipping Dimensions  Options  Pacific  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Certifications  Listed by ETL for US (NOT LISTED FOR USE	Graphic Display	MNGP2 - 64 x 122
Remote Display  MNGP2 can be relocated and a second display can be added  External Monitoring  Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating  75C  Data Logging  380 days of daily history  Wind and Hydro Applications  Coming soon (firmware upgradeable)  Requires 2 pole input and output breakers  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Indoor type 1  Syears  Weight & Dimensions  17-5/8 x 9 x 8-1/8  23 Lbs (23.43 kgs)  Shipping Dimensions  Options  Parcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Certifications  Listed by ETL for US (NOT LISTED FOR USE	Stacking cables for system networking	Standard CAT5 - Canbus
can be added  Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating 75C  Data Logging 380 days of daily history  Wind and Hydro Applications Coming soon (firmware upgradeable)  Positive Ground Applications Requires 2 pole input and output breakers  Operating Temperature Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating Indoor type 1  Warranty 5 years  Weight & Dimensions 17-5/8 x 9 x 8-1/8 23 Lbs (23.43 kgs)  Shipping Dimensions 23 x15.05 x 11.05  Options Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Certifications Listed by ETL for US (NOT LISTED FOR USE	Communications	Canbus
External Monitoring  Phone Application software allows monitoring within normal blue tooth range from Hawkes Bay.  Terminal Rating  75C  Data Logging  380 days of daily history  Wind and Hydro Applications  Coming soon (firmware upgradeable)  Positive Ground Applications  Requires 2 pole input and output breakers  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Indoor type 1  Warranty  5 years  Weight & Dimensions  17-5/8 x 9 x 8-1/8 23 Lbs (23.43 kgs)  Shipping Dimensions  23 x15.05 x 11.05  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Certifications  Listed by ETL for US (NOT LISTED FOR USE	Remote Display	MNGP2 can be relocated and a second display
within normal blue tooth range from Hawkes Bay.  Terminal Rating 75C  Data Logging 380 days of daily history  Wind and Hydro Applications Coming soon (firmware upgradeable)  Positive Ground Applications Requires 2 pole input and output breakers  Operating Temperature Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating Indoor type 1  Warranty 5 years  Weight & Dimensions 17-5/8 x 9 x 8-1/8 23 Lbs (23.43 kgs)  Shipping Dimensions 23 x15.05 x 11.05  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Certifications Listed by ETL for US (NOT LISTED FOR USE		can be added
Hawkes Bay.  Terminal Rating 75C Data Logging 380 days of daily history  Wind and Hydro Applications Positive Ground Applications Operating Temperature Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C) Environmental Rating Indoor type 1 Warranty 5 years Weight & Dimensions 17-5/8 x 9 x 8-1/8 23 Lbs (23.43 kgs) Shipping Dimensions Options Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side) Certifications Listed by ETL for US (NOT LISTED FOR USE	External Monitoring	Phone Application software allows monitoring
Terminal Rating Data Logging  380 days of daily history  Wind and Hydro Applications Positive Ground Applications Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C) Environmental Rating Indoor type 1 Warranty S years Weight & Dimensions 17-5/8 x 9 x 8-1/8 Shipping Dimensions Options  Dictagric  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side) Certifications  Listed by ETL for US (NOT LISTED FOR USE		within normal blue tooth range from
Data Logging  380 days of daily history  Coming soon (firmware upgradeable)  Requires 2 pole input and output breakers  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Indoor type 1  Warranty  5 years  Weight & Dimensions  17-5/8 x 9 x 8-1/8 23 Lbs (23.43 kgs)  Shipping Dimensions  Options  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Listed by ETL for US (NOT LISTED FOR USE		Hawkes Bay.
Wind and Hydro Applications  Positive Ground Applications  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Indoor type 1  Warranty  S years  Weight & Dimensions  17-5/8 x 9 x 8-1/8  Options  Dicial:  Options  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Listed by ETL for US (NOT LISTED FOR USE	Terminal Rating	75C
Positive Ground Applications  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Indoor type 1  S years  Weight & Dimensions  Shipping Dimensions  Options  Dictar in  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Certifications  Listed by ETL for US (NOT LISTED FOR USE	Data Logging	380 days of daily history
Positive Ground Applications  Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Indoor type 1  S years  Weight & Dimensions  Shipping Dimensions  Options  Dictar in  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Certifications  Listed by ETL for US (NOT LISTED FOR USE		
Operating Temperature  Minimum of -40C to 50C (controller will auto derate as temperature rises above 25C)  Environmental Rating  Indoor type 1  Syears  Weight & Dimensions  17-5/8 x 9 x 8-1/8 23 Lbs (23.43 kgs)  Shipping Dimensions  Options  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Certifications  Listed by ETL for US (NOT LISTED FOR USE	Wind and Hydro Applications	Coming soon (firmware upgradeable)
derate as temperature rises above 25C)  Environmental Rating  Warranty  5 years  Weight & Dimensions  17-5/8 x 9 x 8-1/8 23 Lbs (23.43 kgs)  23 x15.05 x 11.05  Options  Barcelona Breaker Box, SPD115 and  SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Certifications  Listed by ETL for US (NOT LISTED FOR USE	Positive Ground Applications	Requires 2 pole input and output breakers
Indoor type 1  Warranty  S years  Weight & Dimensions  Shipping Dimensions  Options  Dictar Control  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Certifications  Listed by ETL for US (NOT LISTED FOR USE	Operating Temperature	Minimum of -40C to 50C (controller will auto
Warranty  5 years  17-5/8 x 9 x 8-1/8 23 Lbs (23.43 kgs)  Shipping Dimensions  Options  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Certifications  Listed by ETL for US (NOT LISTED FOR USE		derate as temperature rises above 25C)
Weight & Dimensions  17-5/8 x 9 x 8-1/8  23 Lbs (23.43 kgs)  23 x15.05 x 11.05  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Certifications  Listed by ETL for US (NOT LISTED FOR USE	Environmental Rating	Indoor type 1
Shipping Dimensions  Options  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Listed by ETL for US (NOT LISTED FOR USE	Warranty	5 years
Options  Barcelona Breaker Box, SPD115 and SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Listed by ETL for US (NOT LISTED FOR USE	Weight & Dimensions	17-5/8 x 9 x 8-1/8 23 Lbs (23.43 kgs)
SPD 600 (MNSPD-115 for Battery Side and MNSPD-600 for the PV input side)  Certifications  Listed by ETL for US (NOT LISTED FOR USE	Shipping Dimensions	23 x15.05 x 11.05
MNSPD-600 for the PV input side)  Certifications  Listed by ETL for US (NOT LISTED FOR USE	Options MidNite SOLAR inc	Barcelona Breaker Box, SPD115 and
Certifications Listed by ETL for US (NOT LISTED FOR USE		SPD 600 (MNSPD-115 for Battery Side and
·		MNSPD-600 for the PV input side)
IN CANADA)	Certifications	Listed by ETL for US (NOT LISTED FOR USE
		IN CANADA)