

# MODULAR INVERTER MODULE

POWER 1.5 kVA INPUT 48 Vdc **OUTPUT 230 Vac** 



230 VAC

## **DESCRIPTION**

MEDIA is a compact and scalable modular inverter providing a pure sine wave AC supply. In conjunction with a DC Power system, it provides an excellent AC backup solution. It uses the latest inverter technology, providing superior energy efficiency in a compact size.

The "Twin Sine Innovation" (TSI) technology eliminates all single points of failure with full scalability; up to 32 modules in parallel and high efficiency of up to 95% reducing operating costs.

## **APPLICATIONS**

All business critical applications and all types of AC loads. The design is modular and scalable with hot-swappable inverter modules which ensures low Mean Time to Repair (MTTR), reduction in service costs and meets the changing needs for future expansion.

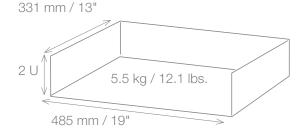
## MAIN FEATURES

- >>> Dual input sources (AC & DC) with wide AC input range 150 Vac to 265 Vac
- >>> Compact design
- >>> High efficiency
- >>> Transfer time reduced to 0



EMC (immunity)		48 / 230
EMC (emission) (class)	GENERAL	
Safety	EMC (immunity)	EN 61000-4-2 / EN 61000-4-3 / EN 61000-4-4 / EN 61000-4-5 / EN 61000-4-6 / EN 61000-4-8
Section   Forced / Doubled   Forced / Doubled   Section   Sectio	EMC (emission) (class)	EN 55022 (B)
Settlement   Set	Safety	EN 62040-1
Efficiency (Typical): Enhanced power conversion / on line   95% / 19%	Cooling / Isolation	Forced / Doubled
Delectric strength DC/AC True Redundant Systems – compliant RolfS A disconnection levels on AC Dut and TC in power ports A disconnection levels on AC Dut and TC in power ports A disconnection levels on AC Dut and TC in power ports CRIST of Compliant CRIST of Compliant CRIST of Compliant CRIST of Compliant CRIST of CR	MTBF	> 200 000 hrs (MIL-217-F)
True Redundant Systems - compliant  A disconnection levels on AC out and ID G in power ports A disconnection levels on AC out and ID G in power ports A disconnection levels on AC out and ID G in power ports A disconnection levels on AC out and ID G in power ports A disconnection levels on AC out and ID G in power ports A disconnection levels on AC out and ID G in power ports A disconnection levels on AC out and ID G in power ports A disconnection levels on AC out and ID G in power ports A disconnection levels on AC out and ID G in power ports Altitude above sea without de-rating Altitude above sea without within Through Specific Altitude Altitude above sea without sea	Efficiency (Typical): Enhanced power conversion / on line	95% / 91%
A disconnection levels on AC in port	Dielectric strength DC/AC	******
Vibration   GR83 office vibration 10 to 10 to 2.0 ft 2.0 ft 2.0 ft 2.0 ft 5.0 ft Drop test	True Redundant Systems – compliant	
Designed for installation in an IP20 or IP21 environment.  Altitude above sea without de-rating above sea viole above sea without de-rating above sea viole above sea without de-rating above sea viole above	RoHS	Compliant
When installed in a dusty of humid environment, appropriate measurs (air filtering) must be taken.   Altitude above sea without de-rating   <   St00 m   Ceating 1 St00 m   Ceati	Vibration	GR63 office vibration 0 to 100 hz-0.1 g / transport vibration 5-100 Hz 0.5 g 100 to 500 hz-1.5 g / Drop test
Ambient / storage temperature / relative humidity	Operating conditions	
	Altitude above sea without de-rating	< 1500 m / derating > 1500 m - 0.8 % per 100 m
Nominal Output power (VA / (W)   1500 VA / 1200 W	Ambient / storage temperature / relative humidity	-20 to 50 $^{\circ}$ C / -40 to 70 $^{\circ}$ C / 95 %, non-condensing
Nominal Output power (VA) / (W)	Material (casing)	Coated steel-ALU ZINC
Short time overload capacity  Short time overload capacity  Admissible load power factor  Internal temperature management and switch off  PVS  DC INPUT SPECIFICATIONS  Nominal voltage (DC)  Voltage range (AC)  Voltage range (A		
Admissible load power factor Internal temperature management and switch off Yes  Col INPUT SPECIFICATIONS  Nominal voltage (DC)  Voltage range (DC)  Voltage range (DC)  Voltage range (DC)  Voltage range (DC)  AB A  Maximum input current (for 15 second) / Voltage ripple (resistive load 54 Vice) Input voltage boundaries  AC INPUT SPECIFICATIONS  Nominal voltage (AC)  Voltage range (AC)	Nominal Output power (VA) / (W)	1500 VA / 1200 W
Internal temperature management and switch off DC INPUT SPECIFICATIONS Nominal voltage (DC) Voltage range (D	Short time overload capacity	150 % (15 seconds) 110 % permanent within T° range
DC INPUT SPECIFICATIONS   48 V	Admissible load power factor	Full power rating from 0 inductive to 0 capacitive
Nominal voltage (DC)	Internal temperature management and switch off	Yes
Voltage range (DC)	DC INPUT SPECIFICATIONS	
Nominal current (at 48 Vdc and 1200 W output)  All As A / < 2 mV  Nominal current (for 15 second) / Voltage ripide (resistive load 54 Vdc)  Input voltage boundaries  AC INPUT SPECIFICATIONS  Nominal voltage (AC)  Brownout  Conformity range before transfer to DC  Adjustable  Power factor  Frequency range (selectable) / synchronization range  AC OUTPUT SPECIFICATIONS  Nominal voltage (ac)  Nominal voltage (selectable) / synchronization range  AC OUTPUT SPECIFICATIONS  Nominal voltage (AC')  Frequency range (selectable) / synchronization range  AC OUTPUT SPECIFICATIONS  Nominal voltage (AC')  Frequency / frequency accuracy  Total harmonic distortion (resistive load)  Load impact recovery time  10.4 ms  Turn on delay  Nominal current. Protected against reverse current  Crest factor at nominal power  With short circuit management and protection  Short circuit clear up capacity  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Dry contacts on shelf / Standard USB port and MODBUS on TzS, optional : Candis Display / Candis TCP-IP  Alarms output / supervision  Dry contacts on shelf / Standard USB port and MODBUS on TzS, optional : Candis Display / Candis TCP-IP	Nominal voltage (DC)	48 V
Maximum input current (for 15 second) / Voltage ripple (resistive load 54 Vdc)   User selectable   Input voltage prople (resistive load 54 Vdc)   User selectable    AC INPUT SPECIFICATIONS   220/230/240 V 1P or 3P (min 3 shelves for 3P)   Voltage range (AC)   150 to 185 V   Insurance of the property o	Voltage range (DC)	40 - 60 V
Voltage ripple (resistive load 54 Vdc)   Input voltage boundaries   User selectable	Nominal current (at 48 Vdc and 1200 W output)	28 A
AC INPUT SPECIFICATIONS Nominal voltage (AC) Voltage range (AC) Voltage range (AC)  Brownout  150 to 185 V  150 to 185 V  1056 W @ 150 V  Conformity range before transfer to DC Adjustable Power factor Frequency range (selectable) / synchronization range AC OUTPUT SPECIFICATIONS Nominal voltage (AC') Frequency / frequency accuracy Total harmonic distortion (resistive load) Load impact recovery time 10,4 ms Turn on delay AU S  Nominal current. Protected against reverse current Crest factor at nominal power With short circuit clear up capacity Nort circuit clear up capacity Not RANSFER PERFORMANCE Max. voltage interruption / total transient voltage duration (max) SIGNALING & SUPERVISION Display Alarms output / supervision Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	, ,	48 A / < 2 mV
Nominal voltage (AC)   220/230/240 V 1P or 3P (min 3 shelves for 3P)		User selectable User selectable
Voltage range (AC)	AC INPUT SPECIFICATIONS	
Brownout  150 to 185 V  Conformity range before transfer to DC  Adjustable  Power factor  Power factor  Frequency range (selectable) / synchronization range  AC OUTPUT SPECIFICATIONS  Nominal voltage (AC*)  Frequency / frequency accuracy  Total harmonic distortion (resistive load)  Load impact recovery time  10.4 ms  Turn on delay  Nominal current. Protected against reverse current  Crest factor at nominal power  With short circuit current after clear up capacity  Short circuit current after clear up capacity  IN TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	Nominal voltage (AC)	220/230/240 V 1P or 3P (min 3 shelves for 3P)
Conformity range before transfer to DC	Voltage range (AC)	150 - 256 V
Conformity range before transfer to DC Adjustable Power factor > 99% Frequency range (selectable) / synchronization range 50 - 60 Hz / range 47 - 53 Hz / 57 - 63 Hz  AC OUTPUT SPECIFICATIONS Nominal voltage (AC*) Frequency / frequency accuracy 50 - 60 Hz / 0.03 %  Total harmonic distortion (resistive load) Load impact recovery time 0.4 ms Turn on delay Nominal current. Protected against reverse current 6.6 A  Crest factor at nominal power With short circuit management and protection Short circuit clear up capacity 10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present Short circuit current after clear up capacity 11 x RANSFER PERFORMANCE Max. voltage interruption / total transient voltage duration (max) SIGNALING & SUPERVISION Display Dry contacts on shelf / Standard USB port and MODBUS on TZS, optional : Candis Display / Candis TCP-IP	5 .	150 to 185 V
Power factor > 99%  Frequency range (selectable) / synchronization range 50 – 60 Hz / range 47 – 53 Hz / 57 – 63 Hz  AC OUTPUT SPECIFICATIONS  Nominal voltage (AC*) 220/230/240 V  Frequency / frequency accuracy 50 - 60 Hz / 0.03 %  Total harmonic distortion (resistive load) < 3 %  Load impact recovery time 0.4 ms  Turn on delay 40 s  Nominal current. Protected against reverse current 6.6 A  Crest factor at nominal power  With short circuit management and protection  Short circuit clear up capacity 2.8 : 1  With short circuit current after clear up capacity 2.1 In  TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display Synoptic LED  Alarms output / supervision  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	Brownout	1056 W @ 150 V
Frequency range (selectable) / synchronization range  AC OUTPUT SPECIFICATIONS  Nominal voltage (AC*)  Frequency / frequency accuracy  Frequency / frequency accuracy  Total harmonic distortion (resistive load)  Load impact recovery time  Turn on delay  Nominal current. Protected against reverse current  Crest factor at nominal power  With short circuit management and protection  Short circuit clear up capacity  Total harmonic distortion (resistive load)  Load impact recovery time  10.4 ms  Turn on delay  Nominal current. Protected against reverse current  6.6 A  Crest factor at nominal power  2.8 : 1  With short circuit anagement and protection  Short circuit clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  2.1 I <sub>n</sub> IN TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Display  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	Conformity range before transfer to DC	Adjustable
AC OUTPUT SPECIFICATIONS  Nominal voltage (AC*)  Frequency / frequency accuracy  50 - 60 Hz / 0.03 %  Total harmonic distortion (resistive load)  Load impact recovery time  0.4 ms  Turn on delay  Nominal current. Protected against reverse current  6.6 A  Crest factor at nominal power  With short circuit management and protection  Short circuit clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  IN TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	Power factor	> 99%
Nominal voltage (AC*)  Frequency / frequency accuracy  Total harmonic distortion (resistive load)  Load impact recovery time  O.4 ms  Turn on delay  Nominal current. Protected against reverse current  Crest factor at nominal power  With short circuit management and protection  Short circuit clear up capacity  Total harmonic distortion (resistive load)  A 0 s  Nominal current. Protected against reverse current  6.6 A  Crest factor at nominal power  With short circuit management and protection  Short circuit clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  2.1 I <sub>n</sub> N TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Synoptic LED  Alarms output / supervision  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	Frequency range (selectable) / synchronization range	50 – 60 Hz / range 4 <mark>7 – 53 Hz / 57 –</mark> 63 Hz
Frequency / frequency accuracy  Total harmonic distortion (resistive load)  Load impact recovery time  O.4 ms  Turn on delay  Nominal current. Protected against reverse current  Crest factor at nominal power  With short circuit management and protection  Short circuit clear up capacity  Short circuit clear up capacity  TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Alarms output / supervision  Disy contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	AC OUTPUT SPECIFICATIONS	
Total harmonic distortion (resistive load)  Load impact recovery time  0.4 ms  Turn on delay  Nominal current. Protected against reverse current  6.6 A  Crest factor at nominal power  With short circuit management and protection  Short circuit clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  Short circuit current after clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  Short circuit cu	Nominal voltage (AC*)	220/230/240 V
Load impact recovery time  Turn on delay  Nominal current. Protected against reverse current  6.6 A  Crest factor at nominal power  With short circuit management and protection  Short circuit clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  2.1 I <sub>n</sub> IN TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Synoptic LED  Alarms output / supervision  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional: Candis Display / Candis TCP-IP	Frequency / frequency accuracy	50 - 60 Hz / 0.03 %
Turn on delay  Nominal current. Protected against reverse current  6.6 A  Crest factor at nominal power  With short circuit management and protection  Short circuit clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  2.1 I <sub>n</sub> IN TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Synoptic LED  Alarms output / supervision  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional: Candis Display / Candis TCP-IP	Total harmonic distortion (resistive load)	< 3 %
Nominal current. Protected against reverse current  Crest factor at nominal power  With short circuit management and protection  Short circuit clear up capacity  Short circuit current after clear up capacity  IN TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Alarms output / supervision  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional: Candis Display / Candis TCP-IP	Load impact recovery time	0.4 ms
Crest factor at nominal power  With short circuit management and protection  Short circuit clear up capacity  Short circuit clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  2.1 I <sub>n</sub> IN TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Synoptic LED  Alarms output / supervision  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	Turn on delay	40 s
With short circuit management and protection  Short circuit clear up capacity  Short circuit clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  2.1 I <sub>n</sub> IN TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Alarms output / supervision  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	Nominal current. Protected against reverse current	6.6 A
With short circuit management and protection  Short circuit clear up capacity  10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present  Short circuit current after clear up capacity  2.1 I <sub>n</sub> IN TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Synoptic LED  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	Crest factor at nominal power	28.1
Short circuit current after clear up capacity  IN TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Alarms output / supervision  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional: Candis Display / Candis TCP-IP	With short circuit management and protection	2.0:1
IN TRANSFER PERFORMANCE  Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Alarms output / supervision  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional: Candis Display / Candis TCP-IP	Short circuit clear up capacity	10 x I <sub>n</sub> for 20 msec - Available when AC input connected and present
Max. voltage interruption / total transient voltage duration (max)  SIGNALING & SUPERVISION  Display  Synoptic LED  Alarms output / supervision  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	Short circuit current after clear up capacity	2.1 I <sub>n</sub>
SIGNALING & SUPERVISION  Display  Synoptic LED  Alarms output / supervision  Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	IN TRANSFER PERFORMANCE	
Display Synoptic LED  Alarms output / supervision Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	Max. voltage interruption / total transient voltage duration (max)	0s/0s
Alarms output / supervision Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP	SIGNALING & SUPERVISION	
	Display	, 1
Remote on / off on rear terminal of the shelf via T2S	Alarms output / supervision	Dry contacts on shelf / Standard USB port and MODBUS on T2S, optional : Candis Display / Candis TCP-IP
	Remote on / off	on rear terminal of the shelf via T2S

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\*Operation within lower voltage networks leads to de-rating of power performances.



lustrations are non-binding and may include customized fittings.





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