



«Value Pack Programme»

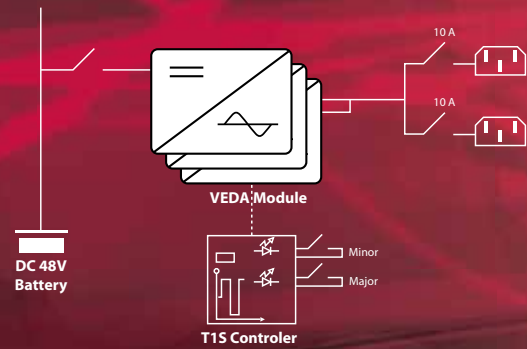
Off the Shelf solutions from 0,5kVA to 15kVA
AC backup power for critical load in telecom,
ICT, or industrial applications

All in one :

- » AC/AC and DC/AC conversion in one module
- » Static Switch Function in each module
- » η^+ High efficiency up to 96% in normal operation
- » Wide AC input voltage range
- » Bulk output breaker included



» VEDA



» **VEDA** is a DC/AC modular inverter 500VA offering AC Backup Solution up to 4000VA.

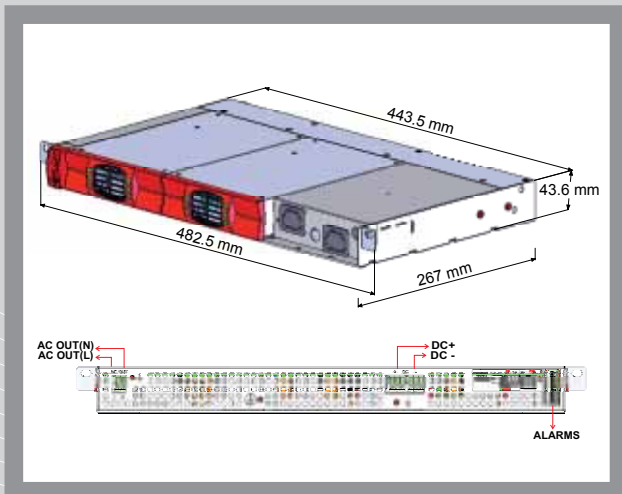
- » Easy integration in 300, 400 and 600mm depth cabinet.
- » High operation T° range (up to 65°C)
- » 500VA module offering up to 4000VA Solution
- » AC distribution included 2 x IEC sockets with 10 Amps Fuse protection
- » High power density
- » IP 20 protection front and rear.

Typical application :

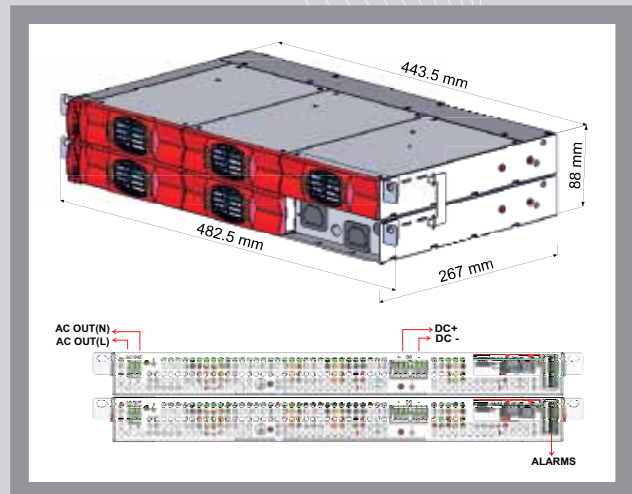
- » Telecom 48V server rack with a few devices needing 230Vac and battery back up.
- » Capacity : typically between 0,5kVA and 2kVA

Specific Technical Characteristics

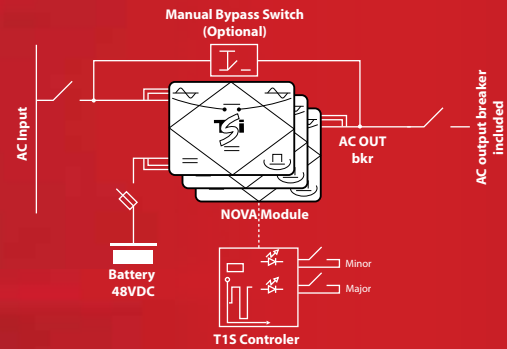
Nominal output power / current :	$n \times 500VA / 400W - 2,2A @ 230V_{AC}$ per module (n max=8)
AC output distribution :	2xIEC sockets on the front with 10A fuse protection
DC input current :	15A max per module located on the rear
Operating T° :	-40°C to +65°C full power
Alarm signaling :	Minor & Major alarm dry contact + LEDs
Efficiency DC/AC :	89%
Supervision :	T1S alarm card (LED + dry contacts). T2S optional



VEDA-REG-48V-230Vac-Pack 2



VEDA-REG-48V-230Vac-Pack 3



» **NOVA** the ideal solution for ICT rack integration, 230V_{ac} and 48V_{dc} inputs are converted to provide reliable and stabilized 230V_{ac} full sinus from the 2 sources.

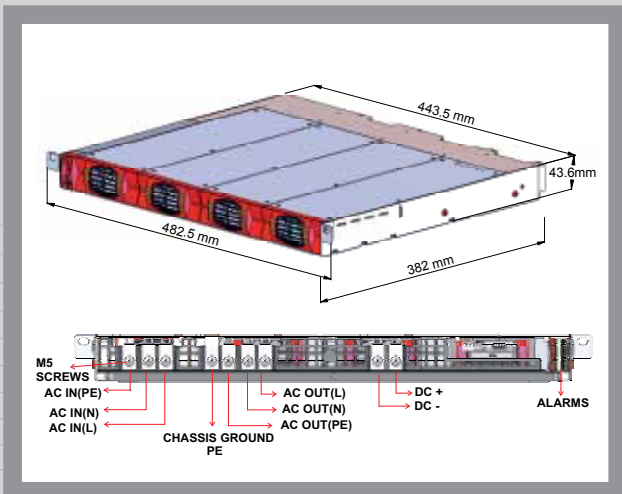
- » Wide AC input voltage range : 150V_{ac} – 265V_{ac}
- » Up to 4500VA (6x750VA) output power in 2U
- » No need of external static Switch (all STS functions included in each module)
- » High power density
- » 93% efficiency in EPC mode (AC to AC double conversion)
- » No transfer time between AC and DC sources
- » Unity Power Factor on AC input

Typical application :

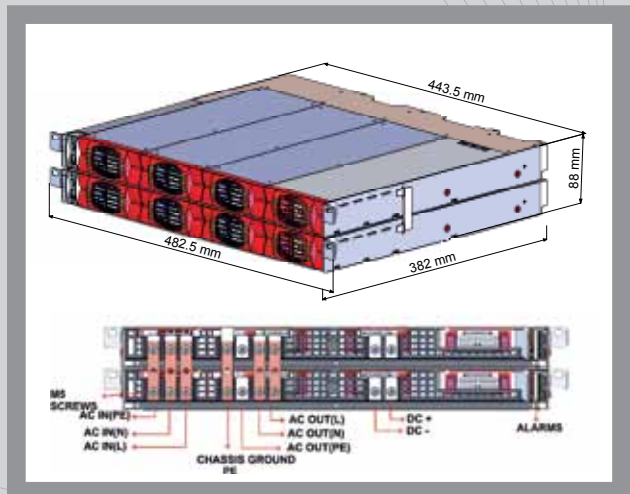
- » Low power ICT rack with limited space available and long power backup time required.
- » Capacity 1 to 4,5kVA

Specific Technical Characteristics

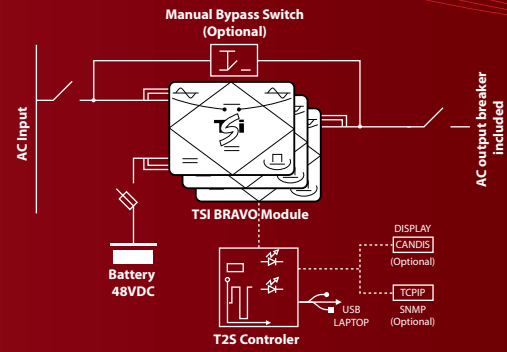
Nominal output power / current :	nx750VA/nx3,3A (n max=6)
AC output breaker included :	10A for Pack 20, 30 / 20A for Pack 25, 35, 40, 50, 60
DC input current max per module	nx17A
DC input connection :	51A per shelf max 2 shelves in parallel
Efficiency in EPC mode (AC to AC)	93%
Efficiency DC/AC on battery :	90%
AC input range / Power factor :	150V _{ac} to 265V _{ac} / >0,99
Operating T° :	-20°C / +50°C (derating up to 65°C)
Supervision :	T1S alarm card (LED + dry contacts). T2S optional



NOVA-EPC-48V-230V_{ac}-Pack-20



NOVA-EPC-48V-230V_{ac}-Pack-60



» BRAVO

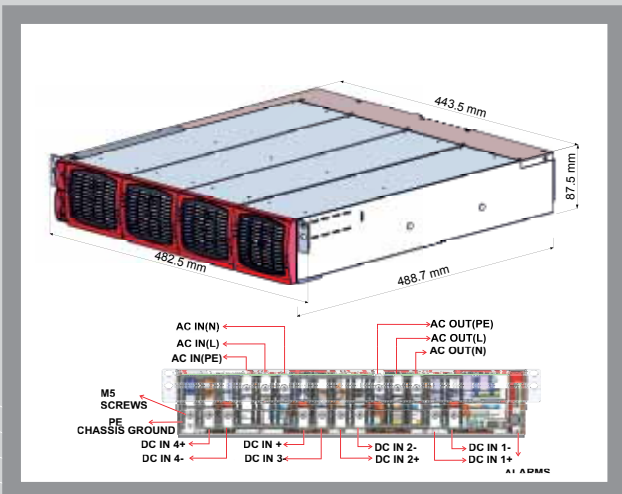
- » Wide AC input 150V_{AC}-265V_{AC}
- » No need of external static Switch (all STS functions included in each module)
- » Up to 15kVA in 4U rack
- » 96% efficiency in EPC mode (AC to AC double conversion)
- » No transfer time from AC to DC sources
- » Unity power factor on AC input

Typical Application :

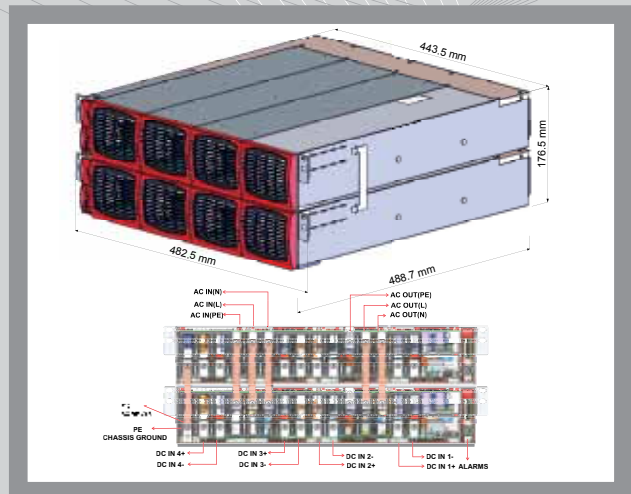
- » Telecom, IT rack server for 230V_{AC} datacom cabinet where the 230V_{AC} equipment needs battery back up
- » Output power Capacity : 5kVA up to 15kVA

Specific Technical Characteristics

Nominal output power / current :	nx2500VA / nx10,9A (n max=6)
AC output breaker included :	40A for pack 250, 300 / 80A for pack 350, 400, 500, 600
DC input current max per Module :	nx56A (n max=6)
Efficiency in EPC mode (AC to AC) :	96%
Efficiency DC/AC on battery :	91%
AC input range :	150V _{AC} – 265V _{AC}
Operating T° :	-20°C / +50°C (derating up to 65°C)
Supervision :	T2S controller as standard



BRAVO-EPC-48V-230V_{AC}-Pack 300



BRAVO-EPC-48V-230V_{AC}-Pack 600

» AC Power Backup without Single Point of Failure

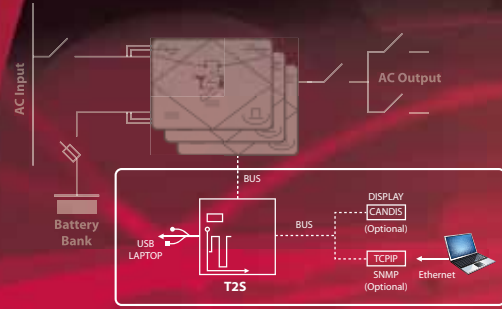
VEDA, NOVA, BRAVO Comprehensive Technical Characteristics

GENERAL	
EMC Immunity	EN 61000 – 4 IEC 1000 – 4
EMC Emission	EN55022 - EN 61000-4
EMC Safety	EN 60950
ROHS	Compliant
Cooling	Forced cooling
Dielectric strength DC/AC	4000Vdc
AC OUTPUT	
Nominal output voltage	220 / 230 / 240Vac
Load power factor	Full power rating from 0 inductive – 0 capacitive
Overload	110% T° controlled permanent
Internal temperature management and switch off	
DC INPUT SPECIFICATIONS	
Nominal	48V (40-60Vdc)
Voltage ripple	< 2mV Psopho

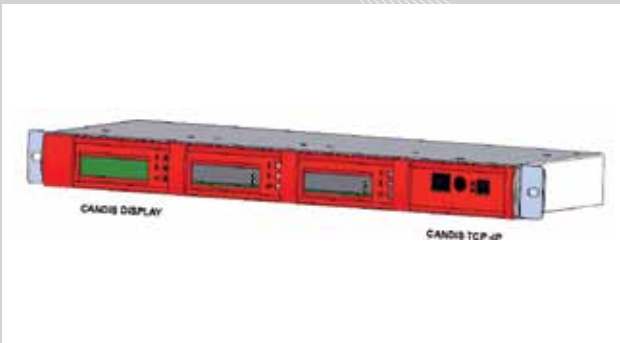
AC INPUT SPECIFICATIONS (only NOVA & BRAVO)	
AC input voltage	185 – 265Vac full power 150 – 185Vac derated
AC input Power Factor	> 0,99
Frequency	50 – 60Hz
Synchronisation range	47 – 53Hz / 57 – 63Hz
Nominal Voltage	220 / 230 / 240Vac
AC input terminal	3 wires L, N, PE
AC OUTPUT SPECIFICATIONS	
Voltage range	200 – 240V adjustable
Voltage accuracy	2%
Frequency	50 – 60Hz (0,03%)
Total harmonic distortion	< 3%
Load impact recovery time	< 0,4ms
ENVIRONMENT	
Relative humidity	95% non condensing
Altitude above sea	< 1500m without derating
Storage T°	-40°C +80°C
SIGNALING & SUPERVISION	
Display	LED Synoptic on each module LED Minor / Major alarm on T1S and T2S controller LCD optional « CANDIS display »
Alarms of supervision	Dry contact on shelf TCP/IP – SNMP (optional)



»» OPTIONAL



»» CANDIS MONITORING



- » CANDIS DISPLAY
 - Provides all system input and output measurements
 - Single phase or three phases
 - Up to 3 CANDIS display per system
- » CANDIS TCP/IP-SNMP
 - Remote access through Ethernet, Web-explorer and SNMP

Technical Characteristics

Dimensions	1 Shelf can receive up to 3 CANDIS displays and 1 CANDIS TCP/IP 1Ux19"x250mm (HxWxD)
T1S	Basic alarm card providing minor & major alarm on LED and dry contact
T2S	Provides LEDs, 3 alarms dry contacts, USB port com for parameter setting, systems status. T2S is mandatory for CANDIS display and CANDIS TCP-IP, SNMP agent

»» TERMINATION BOX 10kVA – 20 kVA Single Phase



- » Termination Box is the interface providing
 - DC input connection : individual or common on terminal
 - AC input connection : 3 wires L, N, PE on terminal
 - AC output bulk or breaker on terminal
 - AC output distribution on IEC socket protected with breaker
- » All connections available from the front allowing easy integration
- » Manual by Pass for service and Maintenance included

Technical Characteristics

T-Box 10kVA/50A	220 / 230 / 240V _{ac}	Bulk output
	50A	4 outputs protected by 16A breakers
T-Box 20kVA/100A	220 / 230 / 240V _{ac}	Bulk output
	100A	4 outputs protected by 16A breakers

»» OPTIONAL

» COMPLETE SOLUTION



- » Cabinet integration 600x600mm footprint
- » Ready made solution completely tested in factory
- » Drop shipment on site ready to be connected and commissioned
- » Save time and money, ask CE+T Power to deliver a ready made solution

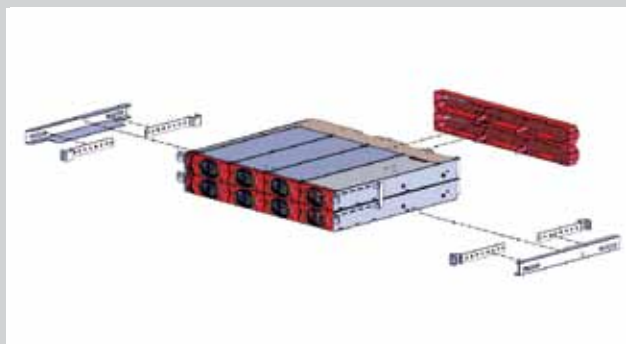
Technical Characteristics

Cabinet Dimensions (HxWxD mm)	1100x600x600mm	1800x600x600mm	2130x600x600mm

Technical Characteristics

Cabinet type (DEPTH)	VEDA	NOVA	BRAVO
Cabinet 19"	300mm, 400mm	600mm, 800mm	600mm, 800mm
ETSI	300mm, 600mm	600mm, 800mm	600mm, 800mm
Cabinet 23"	NA	NA	600mm, 800mm

» FIXING & ACCESSORIES



- » Allow Packs to be integrated in any standard cabinet, server rack...
- » 19", 23" and ETSI rack compatible
- » Optional rear protection panel offer IP20 protection level for NOVA and BRAVO (included in VEDA model)



»» How to order?

Please consult the CE+T Power sales team for more information.



			Part # for ordering separately	Maximum Power (VA)	Initial Power (VA)	Possible expansion
VEDA Pack	DC/AC inverter	TSI-REG-48V-230VAC-Pack-2	S34P73R0202X	1 000	2 x 500VA	0
		TSI-REG-48V-230VAC-Pack-3	S34P73R0205X	2 500	2 x 500VA	3 x 500VA
		TSI-REG-48V-230VAC-Pack-4	S34P73R0208X	4 000	2 x 500VA	6 x 500VA
VEDA Packs are fitted by default with alarm card T1S. Change «P» to «Q» to order T2S monitoring.						
NOVA Pack	with EPC feature	TSI-EPC-48V-230VAC-Pack-20	S31P73E0203X	2 250	2 x 750VA	750VA
		TSI-EPC-48V-230VAC-Pack-25	S31P73E0206X	4 500	2 x 750VA	4 x 750VA
		TSI-EPC-48V-230VAC-Pack-30	S31P73E0303X	2 250	3 x 750VA	0
		TSI-EPC-48V-230VAC-Pack-35	S31P73E0306X	4 500	3 x 750VA	3 x 750VA
		TSI-EPC-48V-230VAC-Pack-40	S31P73E0406X	4 500	4 x 750VA	2 x 750VA
		TSI-EPC-48V-230VAC-Pack-50	S31P73E0506X	4 500	5 x 750VA	750VA
		TSI-EPC-48V-230VAC-Pack-60	S31P73E0506X	4 500	6 x 750VA	0
NOVA Packs are fitted by default with alarm card T1S. Change «P» to «Q» to order T2S monitoring.						
BRAVO Pack	with EPC feature	TSI-EPC-48V-230VAC-Pack-250	S32P73E0206X	15kVA	2 x 2,5kVA	4 x 2,5kVA
		TSI-EPC-48V-230VAC-Pack-300	S32P73E0303X	7,5kVA	3 x 2,5kVA	0
		TSI-EPC-48V-230VAC-Pack-350	S32P73E0306X	15kVA	3 x 2,5kVA	3 x 2,5kVA
		TSI-EPC-48V-230VAC-Pack-400	S32P73E0406X	15kVA	4 x 2,5kVA	2 x 2,5kVA
		TSI-EPC-48V-230VAC-Pack-500	S32P73E0506X	15kVA	5 x 2,5kVA	1 x 2,5kVA
		TSI-EPC-48V-230VAC-Pack-600	S32P73E0606X	15kVA	6 x 2,5kVA	0
BRAVO PACKS are fitted by default with T2S monitoring.						
Spares & Accessories	Monitoring	TSI-T2S-VEDA	T342001000			
		TSI-T2S-NOVA	T312001000			
		TSI-T2S-BRAVO	T322001000			
		CANDIS shelf	T302002000			
		CANDIS display	T302003000			
		TCP IP Interface	T302007000			
	Modules & System Integration	TSI-REG-48V-230VAC-Module VEDA	T341730211			
		TSI-EPC-48V-230VAC-Module 10	T311730102			
		TSI-EPC-48V-230VAC-Module 100	T321730101			
		TSI Blank Module VEDA	T341030000			
		TSI Blank Module NOVA	T311030000			
		TSI Blank Module BRAVO	T321030000			
		TSI-EPC Termination Box 20KVA-1PH				
		Enclosure 1100mm (H) x 600 (W) 600 (D)				
Enclosure 1800mm (H)x 600 (W) 600 (D)						
Enclosure 2130mm (H)x 600 (W) 600 (D)						

X =

For mounting in CE+T Power Enclosures

X = C

19" Enclosures

Depth
 400mm X = U
 600mm X = S
 800mm X = V

ET SI Enclosures

Depth
 300mm X = T
 600mm X = S
 800mm X = V

Other versions are available on request

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