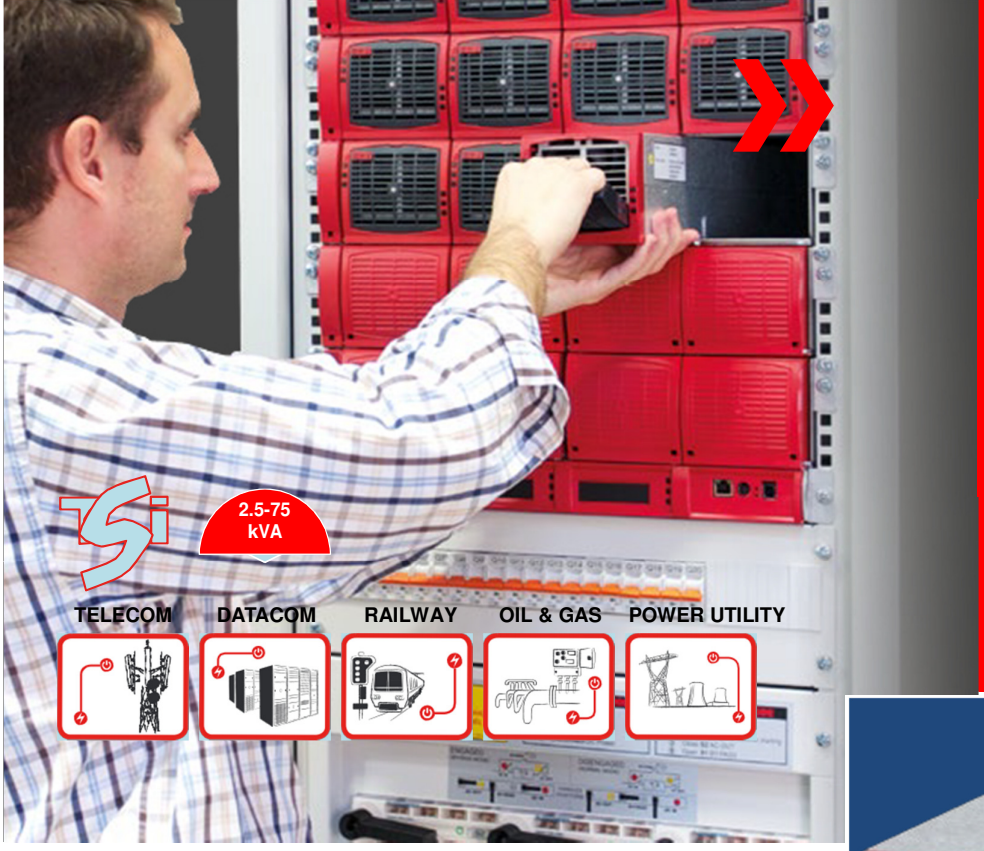

THYTRON

www.thytron.com

VICTOR SERIES 120/240V AC MODULAR INVERTER SYSTEM

MODULAR INVERTER MODULE

POWER 2.5 kVA

INPUT 48 / 125/ 220 Vdc

OUTPUT 120/240 Vac

DESCRIPTION

VICTOR 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 Inverter” (TSI) technology from Belgium Eliminates all single points of failure with full scalability;

Up to 32 modules in parallel and high efficiency of up to 96% 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.

ODERING INFORMATION MODEL :
IEP110-120V-3M2K5-SPS

For Example : IEP(A)-(B)V-(C)M2K5-(D)
- (A) DC Input Voltage : 24/48/110/125/220 Vdc
- (B) AC Output Voltage : 120/240 Vac
- (C) N module : 2 ~ 32
- (D) Single/Three Phase : SPS/TPS

MAIN FEATURES

- Redundant AC & DC sources 150 Vac to 265 Vac
- Compact design, up to 10 kVA in 2 RU
- Great disturbance rejection rate Transfer time reduced to naught
- Permanent AC to AC double conversion
- Up to 75 kVA in cabinet enclosure or open relay rack

	48 / 120	125 / 120	24 / 230	48 / 230	60 / 230	110 / 230	220 / 230
GENERAL							
EMC (immunity)	IEC 1000 - 4		EN 61000-4-2 / EN 61000-4-3 / EN 61000-4-4 / EN 61000-4-5 / EN 61000-4-6 / EN 61000-4-8				
EMC (emission) (class)	FCC part 15		EN 55022 (A)	EN 55022 (B)	EN 55022 (A)	EN 55022 (B)	
Safety	UL 1778 Recognized		IEC 60950 / EN62040-1 / EN62040-2				
Cooling / Isolation	Forced / Doubled						
MTBF	240,000 hrs (MIL-217-F)						
Efficiency (Typical): Enhanced power conversion / on line	95% / 91%		>65.5% / >89.5%	96% / 91%			96.5% / 92.5%
Dielectric strength DC/AC	4300 Vdc						
True Redundant System – compliance	3 disconnection levels on AC out and DC in power ports 4 disconnection levels on AC in port						
RoHS	Compliant						
Vibration	GR 63 office vibration 0 to 100 Hz-0,1g / transport vibration 5-100 Hz 0,5g 100 to 500 Hz-1,5g / Drop test						
Drop test Operating conditions	Self adaptive to wide operating conditions and comprehensive table of troubleshooting codes						
Altitude above sea without de-rating	<1500m / derating >1500m – 0.8% per 100m						
Ambient / storage temperature / relative humidity	-20 to 50°C / -40 to 70°C / 95%, non-condensing						
Material (casing)	Coated steel-ALU ZINC						
AC OUTPUT POWER							
Nominal Output power (VA) (W)	2500 / 2000		1500 / 1200	2500 / 2000			
Short time overload capacity	150% (15s) 110% permanent withing T° range						
Admissible load power factor	Full power rating from 0 inductive to 0 capacitive						
Internal temperature management and switch off	2% / °C derating beyond 50°C with cut off at 65°C		YES				
DC INPUT SPECIFICATIONS							
Nominal voltage (DC)	48 V	125 V	24 V	48 V	60 V	110 V	220 V
Voltage range (DC)	40 – 60 V	90 – 160 V	19-35 V	40 – 60 V	48 – 72 V	90 – 160 V	170 – 300V
Nominal current	56 A (at 40 Vdc and 2000 W output)	25A (at 90 Vdc and 2000 W output)	56 A (at 24 Vdc and 1200 W output)	56 A (at 40 Vdc and 2000 W output)	35 A (at 60 Vdc and 2000 W output)	19 A (at 110 Vdc and 2000 W output)	9.8 A (at 220 Vdc and 2000 W output)
Maximum input current (for 15s) / voltage ripple	84 A / <2 mV Psopho	37 A / <200 mV Psopho	84 A / < 100Mv rms	84 A / < 2mV Psopho	52 A / < 100mV rms	29 A / < 200mV rms	14.9 A / < 200mV rms
Input voltage boundaries	User selectable with T2S interface						
AC INPUT SPECIFICATIONS							
Nominal voltage (AC*)	120 Vac (120/240 V or 120/208 V with combination of shelves)		230 V 1P or 3P (Min 3 shelves for 3P)				220 V
Voltage range (AC)	100 – 138 Vac (without derating) (can be disabled)		150-265 V	150-265 V			
Brownout	80-100 Vac use DC source contribution if need be (can be disabled)		150 TO 185 V linear derating 150 VA/120 Watts per 10 Vac				
	2000 VA/1600 W @ 150 Vac		1200 VA / 960 W @ 150 Vac	2000 VA/1600 W @ 150 Vac			
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)	120 V		230 V				
Frequency / frequency accuracy	50 – 60 Hz / 0.03 %						
% Total harmonic distortion (resistive load)	< 1.5%						
Load impact recovery time	0.4 ms						
Turn on delay	20 s to 40 s depending on the number of module installed						
Nominal current. Protected against reverse current	21 A		6.4 A	10.9 A			
Crest factor at nominal power with short circuit management and protection	3 : 1		2.8 : 1	3 : 1			
Short circuit clear up capacity	10 x in for 20msec – Available while mains is available at AC input port with magnitude control and management						
Short circuit current after clear up capacity	2.1 in during 15s and 1.5 in after 15s						
IN TRANSFER PERFORMANCE							
Max. voltage interruption / total transient voltage duration (max)	0 s / 0 s						
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						
Remote on / off	on rear terminal of the shelf via T2S