DSPower avionic frequency converter 400Hz

from 10KVA to 60KVA

FEATURE

DSP and IGBT tecnology

Input active PFC p.f. > 0,99

Low input distorsion < 3%

Wide input voltage range

Full parallel up to 10 unit

RS232, RS485, USB

OTIONAL

SNMP

Parallel kit

Modbus

DSP AVIO frequency converter

a new IGBT Pwm hi-efficiency integrated system converter for top performances on 400Hz ground power supply .
DSP AVIO frequency convert are also available on multiple output system range and different standard size. Custom size are also available on request.

Innovation, affidability, maximum power availability, redundancy,
are some of the exciting features of the new ACS FC.

Wide input power supply range available from 380 V ac to 480 V ac 3ph + G
Multiple output configuration 200/115V 400Hz 3ph+ N + G (adjustable +-10%)
36V 400Hz 1ph + N + G (Available on 5 and 10kva output size) and 28Vdc
(configuration available on 10-25-50 A output)
Standard bottom cable entry – degree of protection Ip21

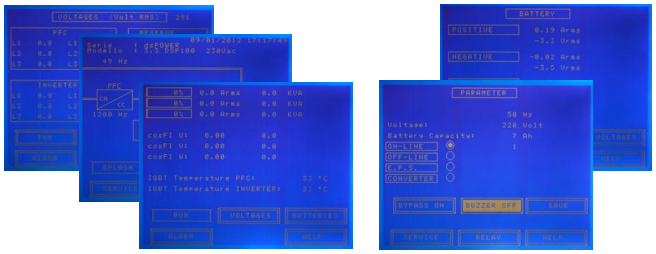
Trailer available on request to allow easy handling of the unit
Top cable entry
Increased degree of protection Ip23 to Ip42
Frame Ral color on request to match the Customer ‘s needs
Increased degree of protection Ip23 to Ip42
Frame Ral color on request to match the Customer ‘s needs

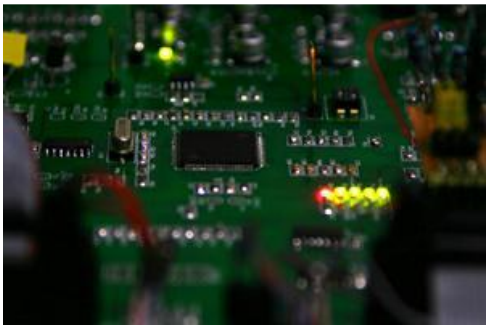
Remote console up to 10 Mt to remote control the system

DSPower avio converter

The large graphical display

allows the display of all operating states of the FC,making it immediately visible the multiple readings of electrical been completed by the flow diagrams
The parameterization is easily managed by a specific menu,so the setting of various communication interfaces. Functional tests can be always controlled and programmed with great simplicity.
The simple and intuitive graphical interface approach simplifies the process of research and programming throughout the system guaranteeing the immediacy of access to information.





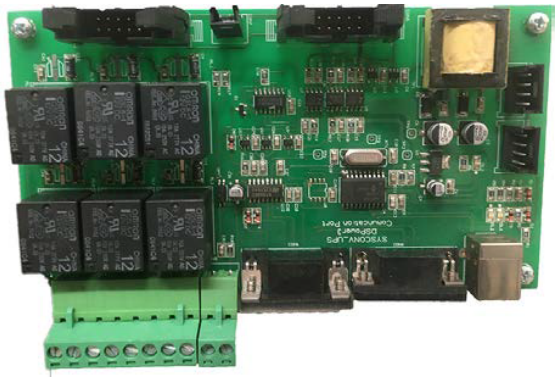
DSP (digital signal processor) at the heart of the system

Five are the microprocessors that run and regulate the operation of the new DSPOWER AVIO CONVERTER, guaranteeing constant control of all parameters of life. From the digital generation of the PWM signal act for the reconstruction of the sine wave output, parallel to the supervision of the unit, is sampled, tested and
corrected via DSP

Complete and versatile communication interface

Three standard comunication are available to the outside, RS23 - RS485 - USB

In addition, the free contact interface can be configured by the end user. Complete the allocation (as an option) the possibility connected to a LAN via an SNMP agent, making so the DSPOWER AVIO CONVERTER series manageable even on wide area network



TECHICAL SPECIFICATION

General Data	10Kva	20Kva	30Kva	40Kva	50Kva	60Kva
Overall Ac/Ac Efficiency at 100% load	90,7%	90,9%	91,1%	91,5%	91,7%	91,9%
Overall Ac/Ac Efficiency at 50% load	88,4%	88,7%	89,7%	90,1%	90,3%	90,6%
Heat Rejection at 100% Load 0,8PF (Btu)	5.598,95	8.199,73	13.336,52	20.290,31	24.712,10	25.832,10
Cooling Air(77F-86F/25°C-30°C) (CMF)	410,14	600,66	976,95	1.486,34	1.810,25	2.627,05
Audible Noise Level(at Five Feet)dB(A)	54	54	57	59	59	60
Fault Current Rating (KA)	25	25	25	25	25	25
Operating Temperature (UPS)	32F-104F(0°C-40°C) **OPTIONAL EXTENDED TEMPERATURE RANGE - 10 ° / + 50° C**					
Storage Temperature Range(UPS)	5F-122F(-15°C+50°C)					
Relative Humidity	0-95% non condensing					
Maximum Altitude(without derating)	3281Ft					
Maximum Altitude(with derating)	4921Ft/-5% 6562Ft/-9% 8202Ft/ -14% 9843Ft/-18%					
Enclosure (type)	Indoor IP21					
Enclosure (safety)	Internal dead front construction					
Enclosure (cooling)	Forced air (redundant Fans)					
Enclosure (colour)	To be defined within the Ral grade					
Installation and Maintenance	Front access required for normal maintenance					
Conduit Access	Bottom standard - top option					
Standards	IEC62040, EN52001					
Electrostatic Discharge Immunity	4KV Contact / 8KV air discharge					
Configuration Standard	Stand alone					

Rectifier

Configuration	PFC DSP CONTROLLED
Input Voltage	380-400-415-440-480 Vac, 3 phase, 3 wire + ground
Frequency	50/60Hz, +/- 10% auto sense
Power Factor	0,99 lagging typical @ 100% load @ 400vac
Inrush Current	Limited by soft-start circuit
Output Voltage Tolerance	+/- 1%

Inverter

Configuration	IGBT pwm controlled	
Nominal Output Voltage (adj +/ -10%)	220-230-240 V ac 400Hz 3 phase, 4 wire + ground	
Nominal Output Voltage	36V ac 1 phase, 2 wire + ground Max 20% unit size	**OPTION [1]**
Nominal Output Voltage	28V DC 2 wire + ground 50 A	**OPTION [2]**
Inverter Bridge	IGBT Technology	
Output Isolation Transformer	yes	**OPTION [3]**
Output Waveform	True sine wave	

Inverter specs

Static	+/- 1%
Load Step 0% - 100% - 0%	+/-6% Recovering within tolerance into 1 cycles
Load Step 0% - 50% - 0%	+/-3% Recovering within tolerance into 1 cycles
100% Unbalanced Load (IEC62040)	+/-3% voltage deviation

General Data	10Kva	20Kva	30Kva	40Kva	50Kva	60Kva
100% Unbalanced Load (IEC62040)	200%					

Output Voltage Distortion

100% Linear Load	2% THD Maximum
80% Non Linear Load (IEC62040)	5% THD Maximum
Crest Factor Compatibility	3:1 with 80% load
Output Neutral Wire Rating	200%

Phase Displacement

100% Balanced Load	120° +/-1%
100% Unbalanced Load (80%-0-80%)	120° +/-2%

Output Frequency

Free Running	400Hz, +/- 0.01%					
Overload Capability (on inverter)	125% at 0.8PF for 10 minutes / 150% at 0.8PF for 60 seconds					
Short Circuit Capability (on inverter)	170% of rated current for 6 sec, followed by current limitation					
Maximum Op Current @ 0,8PF (A) 3ph 220V Ac	27A	53A	79A	106A	132A	158A

General

Alarm Contact (voltage free)	Five programmable relais
Serial Communication Standard	standard 1 x RS232 - 1 x RS485 - 1 x USB
Input Signals	Emergency power off (User supplied N/C Contact) AUX input 1*(default=on generator).