Inverter FAD 48/230-5

Standalone inverter system

General description:

Single-phase FAD 48/230-5 inverters with a rated power output of 5kVA are intended for convert direct current to alternating current. Inverter is built based on innovative design solutions allowed to achieve very high efficiency at small size. In conjunction with a DC Power system, it provides an excellent and reliable AC backup solution.

The inverter offers EPC (Enhanced Power Conversion) mode, where energy from the AC mains is buffered and then converted to alternating voltage output. This mode is characterized by: very high efficiency, excellent filtering and seamless transfer time.

EPC mode offers one more advantage – lower required power rating of DC power system. DC power system is used only to charge the battery to the capacity necessary to provide requisite back-up time. When AC mains is present loads are supplied from energy coming from AC mains.

FAD inverter provides high power density: 5kVA in a compact enclosure: 2U, 19".

The AC-to-AC conversion isolates the AC output from the AC input and features a double filtering function. The voltage supplied to the critical load is a pure sine despite all the disturbances (harmonics, surges, glitches) usually arising from AC mains.

Application:

+ professional telecommunications systems;
+ transport;
+ energetics;
+ industrial automation systems.

Features:

+ true sine wave output (THD <1,5%);
+ sinusoidal current consumption from the AC mains;
+ very high efficiency: up to 96% (EPC mode);
+ compact design (2U, 19");
+ wide operating temperature range;
+ fully digital controlled (CAN);
+ LED indication of operation status;
+ output voltage regulation;
+ immunity to electromagnetic interferences;
+ seamless transfer between the primary and secondary sources - built-in switching solution (inverter does not require an external switching system).

Basic parameters of the inverter:

Output parameters:		
Output power	VA W	5000 4000 (resistive load)
Maximum number of modules	pcs	2
Overload capacity	-	150% 15s 110% permanent within T° range
AC voltage	Vac	230
AC voltage range	-	220÷ 240 (adjustable)
Frequency	Hz	50 - 60
Frequency accuracy	-	0,03%
Crest factor at nominal power	-	3:1
THD (resistive load)	-	<1,5%
Input parameters:		
Nominal AC voltage	Aac	230
AC voltage range	Aac	150÷265
Power factor	-	>0,99 (EPC)
Frequency (selectable)	Hz	50/60
Nominal DC voltage	Vdc	48
DC voltage range	Vdc	40÷60
Nominal DC current	Adc	46A (2000W) 93A (4000W)
Efficiency	-	96% (EPC mode) 91% (on-line mode)
Voltage ripple	mV	< 200 mV rms
General data:		
Range of ambient temperature	°C	-20 ÷ 50
Humidity	-	95%, non-condensing
Cooling	-	forced, fan-cooled
EMC (immunity)	-	EN 61000-4-2 / EN 61000-4-3 / EN61000-4-4 / EN 61000-4-5 / EN 61000-4-6 / EN 61000-4-8
EMC (emission)	-	EN 55022 (B)
Safety	-	IEC 60950 / EN62040-1 / EN62040-2
Dimensions (HxWxD)	mm	2U x 485 x 515
Weight	kg	4,3 (single inverter module) 8,2 (shelf w/o modules)
RoHS	-	compliant
Signaling & supervision:		
Display	-	Synoptic LED
Alarms output	-	Dry contacts in inverter shelf

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