

### General description:

Single-phase FAE 48/230-2,5kVA inverters with a rated power output of 2,5kVA are intended for convert direct current to alternating current. FAE inverter is built based on innovative design solutions allowed to achieve very high efficiency at small size.

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, sinusoidal current from mains and zero switching time.

FAE inverter has been especially designed to start air conditioning unit or motor loads wherever the high inrush current is required.

FAE inverter provides high power density up to 5kVA in a 2U package, or up to 10kVA in two racks (4U)

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;
- + industrial automation systems.

### Features:

- + true sine wave output (THD < 1,5%);
- + capable to provide high inrush current: 330% overload for a period of 900ms;
- + wall mountable without additional kits;
- + sinusoidal current consumption from the AC mains;
- + very high efficiency: up to 96% (EPC mode);
- + compact design (2U, 19");
- + wide temperature operating range;
- + parallel operation of single modules - output current share and synchronization (up to 4 modules);
- + 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:

Nominal output power	VA	2500
	W	2000 (resistive load)
Maximum number of modules	pcs	Max two 2,5kVA modules per shelf,
		Max two shelves per system
Overload capacity	-	135% 15s
		330% 900ms
AC voltage	Vac	230
AC voltage range	-	200 ÷ 240 (adjustable)
Voltage accuracy	-	2%
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
Frequency (selectable)	Hz	50/60
Nominal DC voltage	Vdc	48
DC voltage range	Vdc	40 ÷ 60
Nominal DC current	Adc	56A @40V
Efficiency	-	96% (EPC mode)
		91% (on-line mode)
Voltage ripple	mV	2

#### General data:

Range of ambient temperature	°C	20 ÷ 50
Humidity	-	95%, non-condensing
Cooling	-	forced, fan-cooled
EMC (immunity)	-	EN 61000-4-3,6
EMC (emission)	-	EN 55022 (Class a)
Safety	-	IEC 60950/EN 60950-1 EN 62040-1,2
Dimensions (HxWxD)	mm	2U x 483,5 x 510 (single FAE module)
Weight	kg	4,5 (single FAE module)
		7 (shelf w/o modules)
RoHS	-	compliant

#### Signaling & supervision:

Display	-	Synoptic LED
Alarms output	-	Dry contacts in inverter shelf