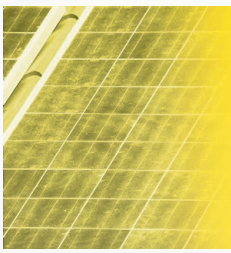
FOTO CONTROL 1f 230/48 DC



The aim of VONSCH developers was to produce highly reliable, true sine wave inverter with high efficiency and a long durability.

FOTO CONTROL 1f 230/48 DC is an inverter for small systems designed to cover own household consumption.

FOTO CONTROL 1f 230/48 DC is designed to convert the DC voltage from the energy accumulator to the single-phase sine wave voltage in the own distribution grid.

FOTO CONTROL 1f 230/48 DC is designed as an HF transformer inverter with power rating of 2000 VA.

Inverter is designed to produce single-phase voltage with an amplitude of 230 V AC and frequency of 50 Hz in off-grid operation.

FOTO CONTROL 1f 230/48 DC is able to work in a wide range of input voltage - voltage of battery, while ensuring the required quality of output voltage.

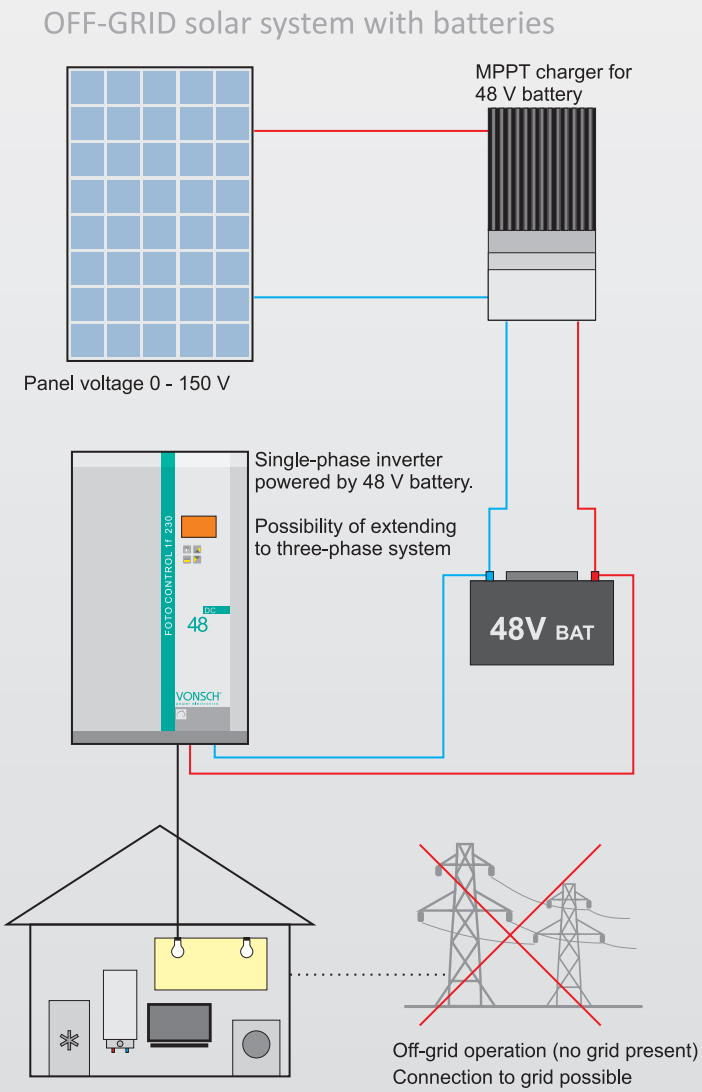
The advantages of FOTO CONTROL 1f 230/48 DC are low noise, high efficiency, the possibility of extending to three-phase system (operation of multiple inverters) and the possibility of integrating new perspective features. Software required for seamless connectivity to computer is freely available for download in the „support“ section at www.vonsch.sk.

The main advantages of using FOTO CONTROL 1f 230/48 DC:

- High efficiency of 95% is achieved by using the modern SiC FET switching elements and by minimization the self-consumption
- switch off by fault in less than 10 ms
- inbuilt AC cut-off switch for disconnection of the device
- indication of operation parameters
- true sine wave voltage output
- meets the quality requirements of generated voltage and current, meets all required safety requirements
- design with focus on high reliability and efficiency
- simple parallel coupling of inverters in order to increase power generation
- inbuilt AC output fusing
- possibility of operation in the distribution grid – optional
- possibility of extending the standard warranty

Communication possibilities:

- communication interface RS485, communication protocol MODBUS RTU, for connecting the control system
- user friendly graphical display
- communication module RM-WEB for on-line visualization



TECHNICAL DATA - FOTO CONTROL 1f 230/48 DC

Rated permanent power	P_N = 2000 VA at ambient temperature T_A = 25 °C
Output power derating behaviour *	Power P_N is reduced with increasing ambient temperature
Peak power	1.5 x P_N for duration of 2 s, 3 x P_N for duration of 1 ms at T_A = 25 °C
Output voltage	1 x 230V AC ±10%
Output voltage waveform	sine wave
Total harmonic distortion of the output current (THDi)	Max. 3 % at rated AC current
Output frequency	50 Hz ± 2%
Rated battery voltage V_{BAT}	48 V DC
Operating DC voltage range	42 - 64 V DC
Rated input DC current	44.8 A
Rated output current AC	8.7 A
RFI filter	Inbuilt input DC RFI filter and output AC RFI filter
Control system	DSP Texas Instruments
Communication	Modbus RTU – RS485
Output power relay	YES
Time of switch off at fault	≤ 10 ms
Inverter dimensions w x h x d, weight	254 x 500 x 145 mm, 9.6 kg
Display	graphical, monochromatic
Peak / Euro efficiency	95% / 94,4%
Protections	Current overloading, Protections undervoltage, overvoltage, short circuit on the AC side, overheating of the inverter
Cooling	Natural air cooling
Absolute altitude of the permitted usage	≤ 1000 m above the sea, 1% reduction of power for every 100 m above 1000 m. The installation site altitude in operation is from 0 to 2500 m.
Relative humidity of the air	≤ 95 % without corrosive and explosive gases, without water vapor and condensates
Ambient working temperature T_A	+ 2 °C to + 55 °C * (+25 °C –> 2000 VA, +40 °C –> 1500 VA , +55 °C –> 700 VA)
Cover	IP23 (OPTION IP43)
Storage ambient temperature	- 20 °C ~ + 70 °C
Standards compliance	Safety: EN 50178, EMC emissions: EN 61000-6-3 Harmonic distortion: EN 61000–3–11, EN 61000–3–12, EMC immunity: EN 61000-6-1
Instructions EEC	2004/108/EEC, 2006/ 95/EEC