

THREE PHASE CURRENT DIRECTLY GENERATED OUT OF SUN LIGHT FOR ELECTRICAL DEVICES AND PUMPING SYSTEMS



**Three Phase
Solar Inverter
type SI3-I**

**Isolated
Operation**

**Application:
Solar
Pumping
Systems**

Function

The Solar Inverter Type SI3-I allows, controlled by microprocessor, usage of freely available sun light as power supply for isolated systems.

SI3-I converts input DC into a three phase output voltage, staggered by 120°. The DC supply can be provided by photovoltaic generators, accumulators and other DC systems.

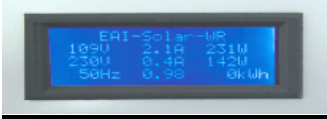
SI3-I generates and monitors a three phase system for operation of motors and other technical devices using three phase current.

There is a complete galvanic isolation between power circuits and all measured and processed signals within the micro processing unit.

As a stand-alone system, the inverter does not need any auxiliary power supply.

Features

- Three phase current (3 x 230 V, 3 x 400V)
- Connection of three phase motors
- Pump load with start up function (V/f- characteristic curve)
- Optional pump operation with variable frequency
- Connection of further technical devices.
- Isolated operation with or without integrated sine filter
- No auxiliary power supply
- Galvanic separation of measured and processed signals
- Microprocessor controlled inverter
- Modular design
- Ergonomic display of nine signals in one level (at once)



- Seriell interface RS232
- Optional integration of additional software for controlling and monitoring functions (customer-specific)
Optional: Energy management

Connection Diagram

Technical Data Type SI3-I-2-230

Rotary system 230 V

Rated Power : 2000W
max. continuously rated load 2300W

Inputs:

Input voltage, rated: 380...500 VDC; (max. 650 VDC)
Input voltage, U/f-range 120...380 VDC
Rated current: 5 ADC

Outputs:

Rated voltage: 3 x 230 VAC \pm 10%
Rated current: 5,03 A
Output frequency: 50Hz, optional: pump operation 30...60 Hz

Over load capability: 15% continuous load, >15% electr. overload protection (load break)

Galvanic separation: power circuitry input/output: no
measured and processed signals: yes

Dimensions: 600 x 300 x 250 (W x H x D)

Weight: app. 20 kg

Protective system: IP54

Ambient temperature: with additional heater/ cooler -20°C...+60°C

Cross-section of cables
inputs 2,5 – 10mm²
outputs 2,5 – 4mm²

O&M Unit:

Display of following data:

- Solar cell voltage in V
- Solar cell current in A
- Solar cell power in W
- Output voltage in V
- Output current in A
- Instantaneous output power in W
- Output frequency in Hz
- Power factor (cosφ) - load
- Generated energy after restart in kWh
- Max./ min daily output in W
- same for day, week, month

Output of error/ fault messages:

- Solar cell voltage too low
- Short circuit of output
- Heat sink temperature too high.
- Over load protection
- Power factor monitoring (cosφ)
- (Dry run protection.)
- Unbalanced load monitoring

Technical Data Type SI3-I-2-400

Rotary system 400 V

Rated Power : 2000W
max. continuously rated load 2300W

Inputs:

Input voltage, rated: 630...700 VDC; (max. 730VDC)
Input voltage, U/f 290...630VDC
Rated current: 3,07 ADC

Outputs:

Rated voltage: 3 x 400 VAC ± 10%
Rated current: 2,89 A
Output frequency: 50 Hz, optional: pump operation 30...60 Hz

Further Solar Inverter:

<u>Type</u>	<u>Rated power</u>
SI3-I-3.5-xxx	3,5 kW
SI3-I-5-xxx	5 kW

EAI Elektro- und Automatisierungstechnik GmbH

*Veckenstedter Weg
38871 Ilsenburg
Germany*

*Tel +49 (0) 39452-964 0
Fax +49 (0) 39452-964 15
mails@eai-net.de
www.eai-net.de*

