

# Fagor solar inverter

Grid connection with top efficiency



# ▶ THREE-PHASE INVERTERS

## General characteristics:

- Consisting of the following subsystems:
  - A three-phase inverter module (400V AC, 3F).
  - Connection system and protections from the inverter to the photovoltaic field.
  - A system for connection/disconnection to/from grid
  - A monitoring, control and protection system.
  - A galvanic isolation transformer connected to the inverter output.
  - Maximum power point tracking (MPPT).
- Easy parameter setting, installation and operation.
- RS485 communication.

### Friendly interface




**FSI - 25**
**FSI - 50**
**FSI - 100**

<b>DC INPUT</b>			
MPPT voltage range	410 - 750 Vdc		
Maximum voltage without load (it must never be exceeded considering low temperatures)	900 Vdc		
Maximum current	55 A	110 A	220 A
Short-circuit and grounding	70 A	130 A	250 A
Connection system and grounding	Yes, automatic		

<b>AC OUTPUT</b>			
Rated output power	25 Kw ac	50 Kw ac	100 Kw ac
Maximum power	26 Kw ac	55 Kw ac	105 Kw ac
Rated voltage	400 V AC, 3F (+10%, -15%)		
Frequency	49 – 51 Hz		
Power factor	Adjustable between 0.9 and 1		
Output harmonic distortion (THD)	< 3% at rated power		
Isolation transformer	Yes		
Efficiency – Including the transformer	> 96%		
European Efficiency including the transformer	> 95%		
Control structure	Control logic and DSP. SVM technology		
Soft start	Yes		
Communications	RS 485 communications port		

<b>GENERAL SYSTEM DATA</b>			
Standards	RD 1663/2000 EMC EN 50081-1 and 50081-2 standards EN 50178 low voltage standard CE seal		
Maneuvers	Start / Stop Grid on / off		
Running temperature	0°C a 45°C		
Relative humidity	0 – 95% non condensing		
Dimensions	1300 x 600 x 600	1900 x 800 x 800	1900 x 800 x 800
Approx.	390 kg.	850 kg.	980 kg.
Degree of protection	IP20		

<b>PROTECTIONS</b>	
Over-voltage Over-current	At input and output
Reversed polarity Over-temperature Maximum and minimum frequency Maximum and minimum voltage	Yes
Anti-islanding	Automatic disconnection from grid
Panels	Short-circuit and grounding

<b>OPTIONS</b>
<ul style="list-style-type: none"> <li>Remote monitoring system, including:               <ul style="list-style-type: none"> <li>Access to corporate portal via internet with user name and password - alarm analysis and evaluation.</li> <li>Analysis by downloading detailed reports.</li> <li>Failure warnings and alarms via e-mail, fax or SMS.</li> <li>Weather stations.</li> <li>GSM communications.</li> </ul> </li> <li>With / Without transformer.</li> <li>Warranty contract extension.</li> <li>Additional preventive maintenance services.</li> <li>Start-up service.</li> </ul>

# ▶ SINGLE-PHASE INVERTERS

**FSI - 2.5**



Indoor IP21

Outdoor IP65

DC INPUT	
MPPT voltage	125 – 420 Vdc.
Maximum input voltage	450 Vdc.
Maximum power of the PV panels	3000 w
Maximum input current	23,1 Amp.

AC OUTPUT	
Rated power	2.500 W
Maximum power	2.750 W
Rated Mains voltage	230 Vac. (195,5 – 253 Vac.)
Frequency	50 Hz (49 – 51 Hz)
Maximum current	12 Amp.
Harmonic distortion (THD)	< 5%
Power factor	~1, meets RD1663/2000
Maximum efficiency	> 96 %

GENERAL SYSTEM DATA	
Degree of isolation	IP21 / IP65
Running temperature	-20°C to +60°C
Its own consumption	< 10 W
Approx.	11,6 Kg
Communication	Standard RS-485

STANDARDS:	
CE seal. Royal decree 1663/2000, on connection of photovoltaic installations to low-voltage mains. EN 61000-6-2 and 3, EN 61000-3-2, EN61000-3-3, EN 50178.	

PROTECTIONS:	
Reverse input polarity. Input over-voltage and over-current. Ground leaks at the input line. Output short-circuit and overload. Maximum and minimum voltage and frequency according to RD 1663/2000. Anti-islanding.	

## With Fagor technology



- Galvanic isolation through high frequency transformer.
- Optimum efficiency through state-of-the-art electronic structure.
- With well-proven reliability of a leader with years of experience in control and power electronics.

## Standard display

The standard display lets you monitor the instant production, system alarm warnings and auto-diagnosis.



## Different connection options



# ▶ MONITORING

## FSI - Monitor-Soft

User-friendly PC application for communication between a PC and FSI 2.5 inverters.

MAIN CHARACTERISTICS:

- RS485 serial communication between the inverters and a PC.
- Up to 247 FSI 2.5 inverters may be connected.
- USB adapter available

FUNCTIONALITY:

- Inverter setup tool.
- Monitoring and history of data, alarms, errors.
- Data log in CSV files.
- Graphic representation of captured data.
- Different access levels.



## FSI - Datalogger

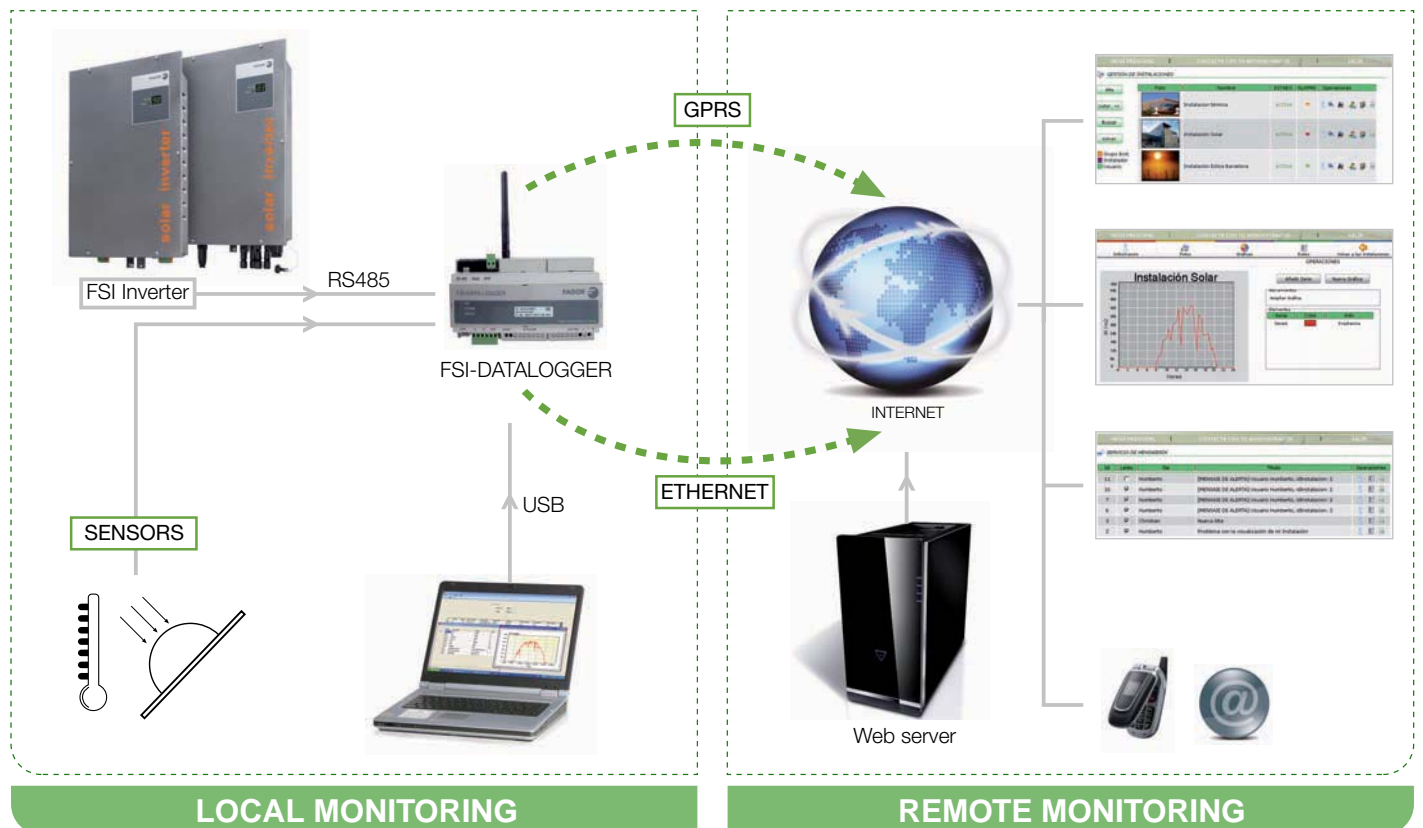
Communication device for capturing and sending data, alarms, etc. of FSI inverters on WEB server.

MAIN CHARACTERISTICS:

- Programmable data capture intervals.
- Automatic sending of data to a WEB server.
- Quick and easy internet access to captured data.

FUNCTIONALITY:

- Reading of the desired variables of FSI inverters through the RS485 serial line.
- Automatic sending of captured data, alarms and errors to the server through ETHERNET or GPRS.
- Analog and digital inputs with the following functionalities:
  - Irradiance measurement.
  - Room temperature and panel temperature measurement.
  - Wind velocity and direction measurement.
  - Counter power and energy reading.
  - Output to activate the sound or visual alarm.
- Quick and safe access to plant data protected by password.
- Programmed transmission of SMS or email with desired data.

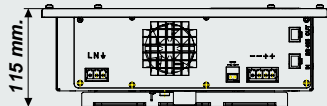


LOCAL MONITORING

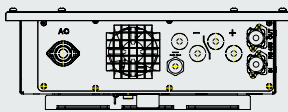
REMOTE MONITORING

# DIMENSIONS

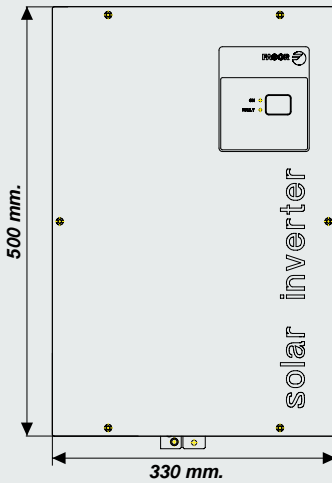
Single-phase inverters



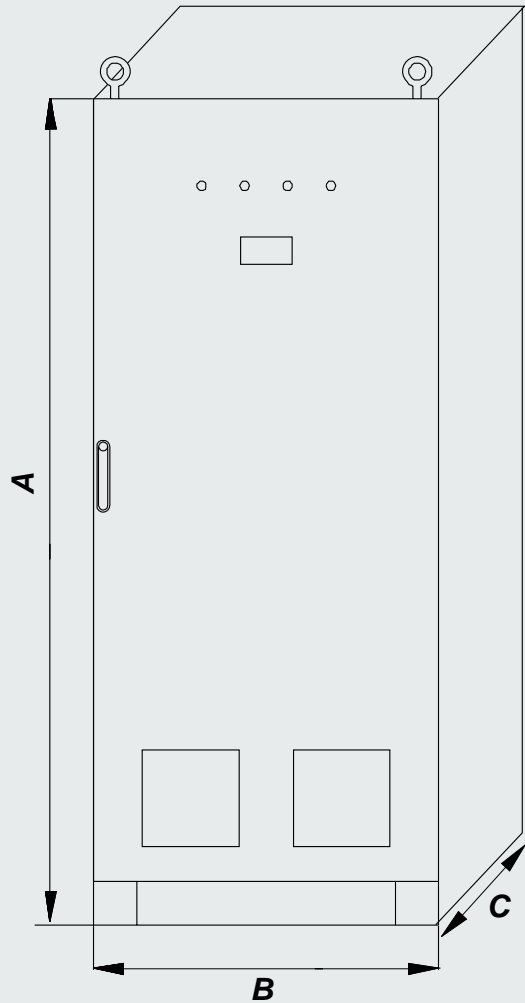
Indoor IP-21



Outdoor IP-65



Three-phase inverters



	<b>A</b>	<b>B</b>	<b>C</b>
FSI-25	1300mm.	600mm.	600mm.
FSI-50	1900mm.	800mm.	800mm.
FSI-100	1900mm.	800mm.	800mm.

Distributor

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