CHAUVIN ARNOUX

Test & Measurement Instruments

Portable and laboratory measuring instruments

FTV500 PHOTOVOLTAIC TESTER

Yesterday , Today and ...

- The increasingly rapid decline of fossil fuels has led to the development of the alternative and renewable energy sector in the last decade with a significant increase in the percentage of global installed power

- In 2021, **renewable energies** set new records in terms of installed systems, **photovoltaic systems** alone accounted **for 60% of installations**.

- Governments around the world have applied measures to fuel the development of solar energy. The production of solar energy has increasingly gained an important role

… Tomorrow

- Over the next decade, the goal is to have 95% of all new global electricity capacity from renewables and more than 50% will be represented by photovoltaics.

- Leading the growth of solar energy will mainly be countries such as China, India, the United States and Europe, and it will above all be the **residential sector** that will ensure its success.

Photovoltaics is a credible and reliable Source of energy, with better performances and returns t than other renewable energy sources

Hardware also changes

The "heart" of the photovoltaic system undergoes new transformations

- More and more performing modules:
  - Predominance of monocrystalline over polycrystalline
  - Size of individual PV cells (higher power / efficiency)
  - Overlapping cell technology
- Inverter significant evolution:
  - More modulable powers (more models available)
  - Type: string / multi-string / central

and maintenance "follows suit“

- New technologies and new problems
- Maintenance necessary and no longer occasional
- Greater technical competence
- Request for performing analysis tools

What are the possibilities?

As for the AMRA photovoltaic instruments, Chauvin Arnoux responded with two well-known instruments FTV100 and FTV200.

Although they arrived much later than the competition, in particular Italian (HT Italy, Eldes, Asita), these two devices have allowed us to meet the needs of the Italian market, and not only.

FTV500
allows to complete the Chauvin Arnoux offer in the electrical sector.

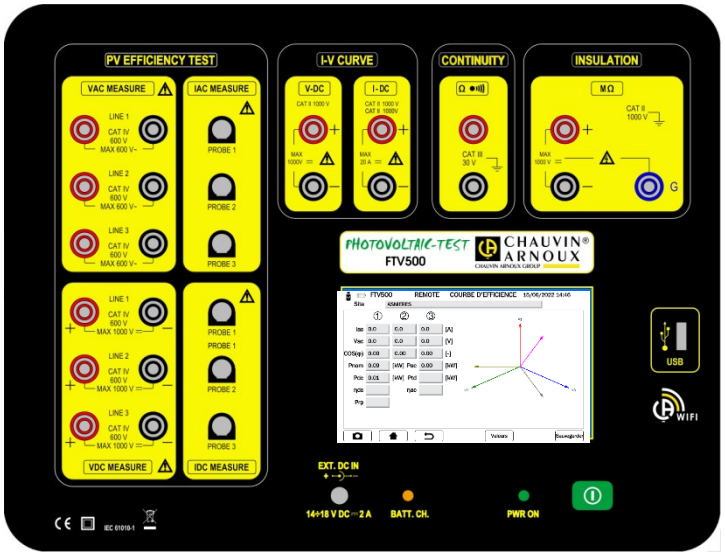
FTV500 photovoltaic tester

PHOTOVOLTAIC-TEST

FTV500

FTV500 photovoltaic tester

The FTV500 device has the following functions:



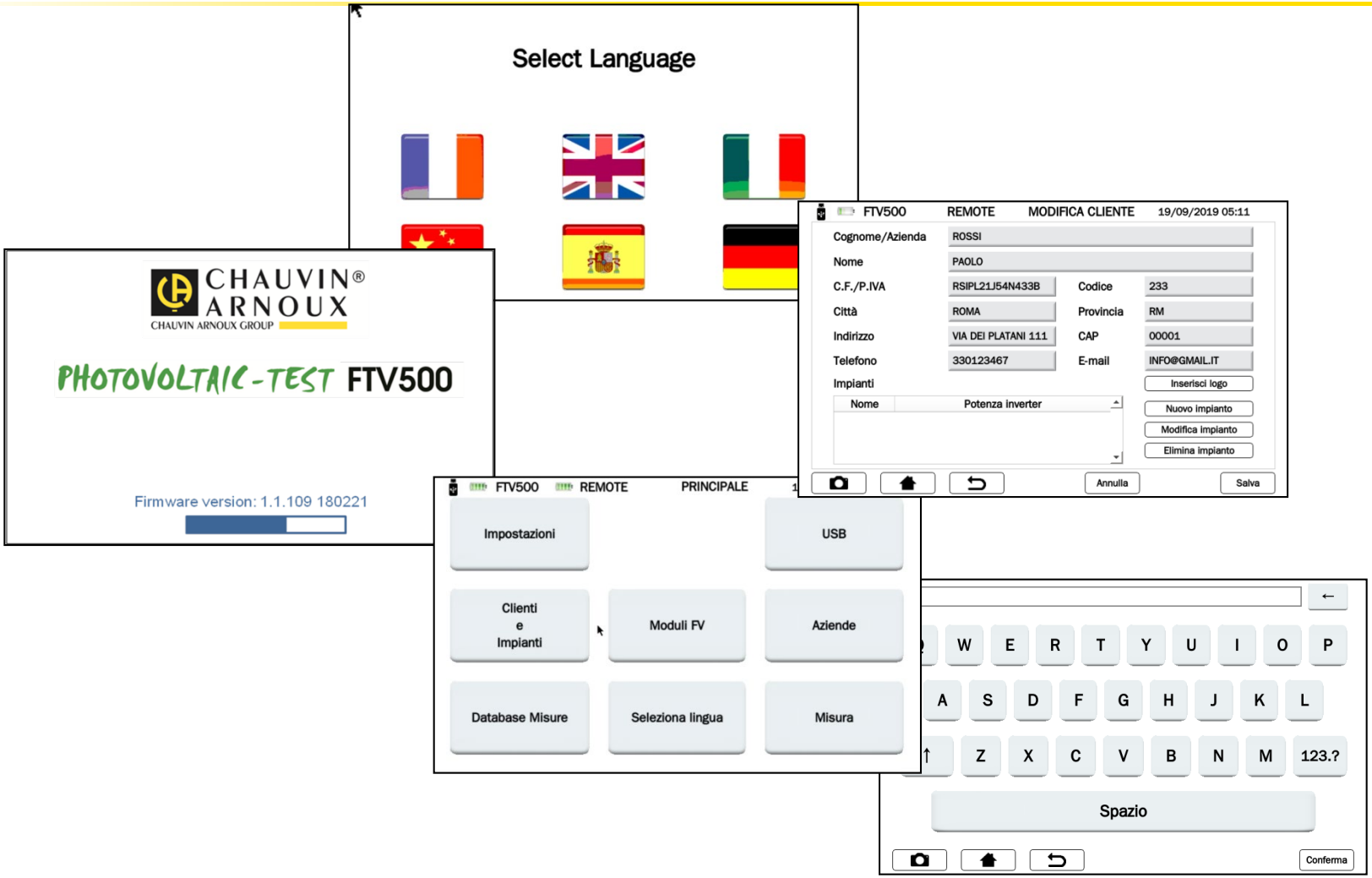
- DC / AC operation and efficiency test
- DC / AC current measurement (3 inputs)
- DC / AC voltage measurement (3 inputs)
- I-V current-voltage curve measurement
- Measurement of the RS resistance of the modules
- Continuity measurement
- **Measurement of cell / module / string insulation resistance with system in operation, without interrupting the power supply**
- Logger function for saving and recording measurements with programmable sampling

Human machine interface

An high quality display

High resolution display
Touch screen
TFT 16.7M colors
anti-reflection display
Size 5 "
Resolution 800x480

Human machine interface



Remote unit« hearth of the instrument »

- The remote unit of the FTV500 PHOTOVOLTAIC TESTER samples the values of the environmental parameters in real time
- Irradiation, ambient / module temperature
- Wi-Fi technology
- Datalogger function in case of communication loss
- Fixing system to ensure the module inclination

Measurement management

REMOTE CONTROL
WI-FI & VNC TECHNOLOGY
MEASUREMENT REPORT

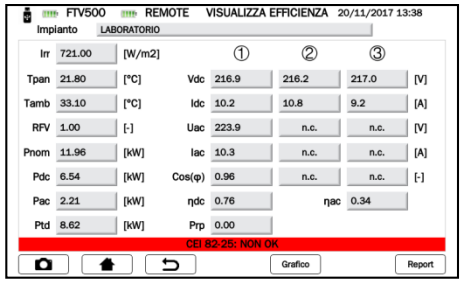
- First portable multifunction instrument with VNC (Virtual Network Computing) technology
- Remote control and management from smartphone / PC / Tablet
- Internal memory of over 10000 measurements
- Immediate creation of reports with a simple click
- USB-key for exporting all values

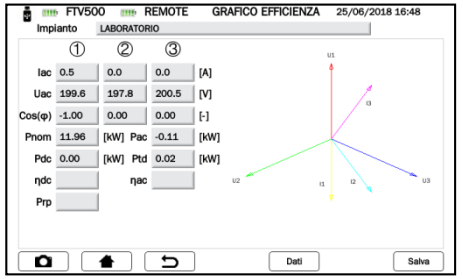
Function description

EFFICIENCY
YIELD
DATALOGGER

(CEI 82-25, IEC 61724, IEC 62446)

- 3 DC inputs and 3 AC voltage and current inputs
- Detailed measurement of the photovoltaic system parameters
- DC / AC yields
- Active and theoretical power available
- Power factor
- Graphic representation
- Irradiation, ambient / module temperature
- Test result compared with the normative references.



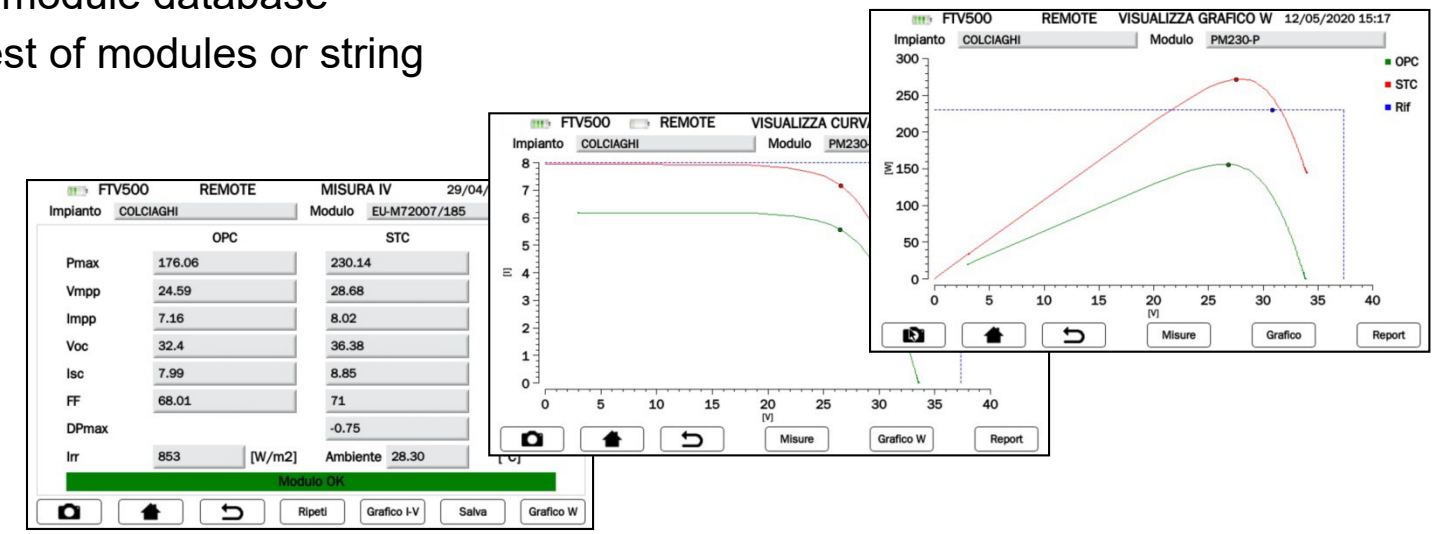


Function description

I-V CURVE
RAPID TEST I-V

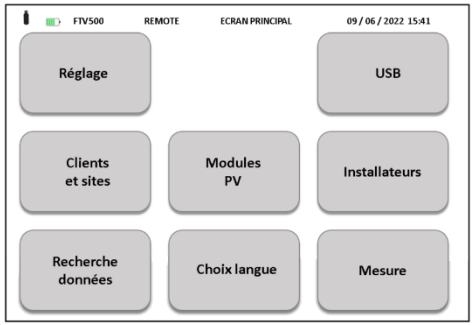
(IEC 62446, IEC 60891)

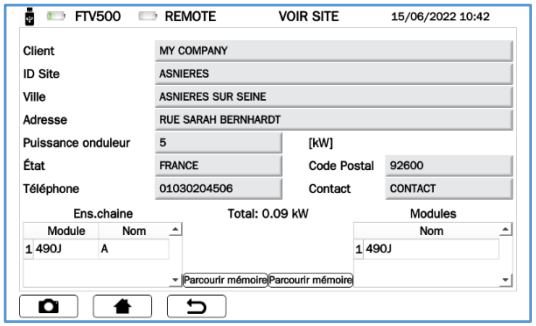
- Analysis of the I-V and Power curve of the modules / strings
- Comparison with the STC reference values of the manufacturer
- Display of the main characteristic parameters and the outcome of the test
- Internal module database
- Quick test of modules or string

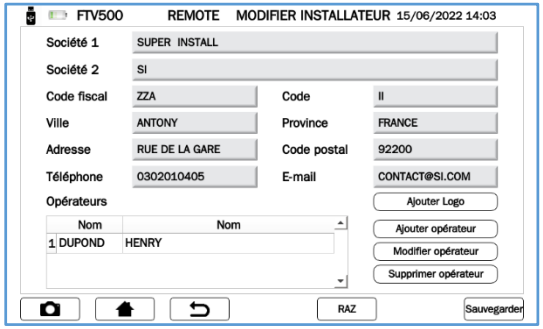


Database

- Location : A company, A site, An actor
- Material : A panel, A site
- Measurements : Real time, recordings, acquisitions





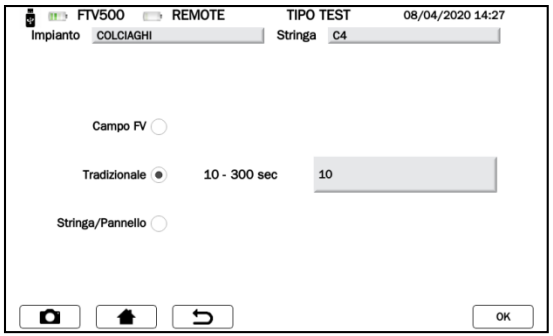


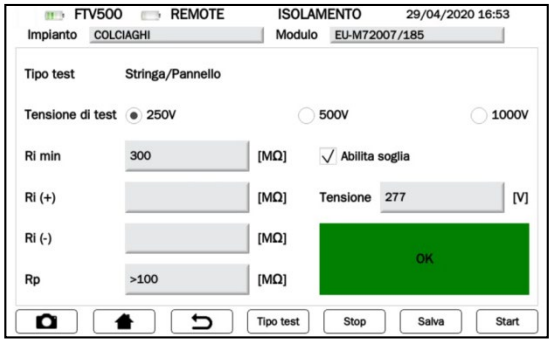
Function description

RESISTANCE INSULATION
CONTINUITY

(IEC 62446, IEC 61557, CEI 64-8, IEC 60364)

- Insulation resistance measurement:
  - Traditional (megohmmeter)
  - With system in operating conditions
- Test voltage selection 250- 500-1.000VDC
- Threshold programming for the immediate outcome of the verification
- Continuity test of protective conductors with 200mA current





FTV500 « single tool »

5 MEASUREMENTS 1 INSTRUMENT

FAULT INVESTIGATION
I-V Courve
Insulation
Continuity

+

ELECTRICAL SAFETY CHECK
Insulation
Continuity

+

SYSTEM PERFORMANCE (PRp)
DC / AC Efficiency
Monitoring

> 12k€

< 10k€

To order

PHOTOVOLTAIC TEST FTV500

P01129600

Instrument supplied with:

- Transport bag
- 2P + T mains power supply / charger
- Remote unit + charging cable / USB charger
- AC MiniFlex MA500 clamp (x3)
- DC PAC500 clamp (x3)
- Cables 3 mt R / N (x6)
- I-V R / N measuring cables
- Crocodile clip R / N (x2)
- R / N flex test point (x6)
- Inclinometer
- Cable-markers kit 12 colors
- Certificate of conformity
- User manual in digital format

Feature accessories

Remote module P01**102184**

- Ambient and contact temperatures
- Sun measurement
- Power on battery
- USB charger

MA500 AC MiniFlex clamp P01**120600**

- Up to 3 000A
- ∅ 110 mm / Length 350 mm

PAC500 DC clamp P01**120480**

- Up to 1 400A

Inclinometer P01**102115**




Other accessories

Flex test leads P01**102184**

FTV500 power adapter P01**120600**

I-V cords Red/Black P01**120480**

Crocodiles clamp P01**102115**

THANKS FOR YOUR ATTENTION