



### FR947-EX/PMU

FR947-PMU is a device that combines the FR947 incident stabilization device and PMU capabilities.

## Features of the PMU device

Thirty-two analog inputs and 16 digital inputs.

Record waveforms of current, voltage, and digital inputs.

Equipped with GPS antenna for synchronizing and sending information

Sending information through Ethernet 10/100 BASE-TX

Computer connection through Ethernet 100 BASE-FX and RS232

Compliance with the international standards IEC61850 and IEC60870-5-104

Simultaneous measurement of phasors

Progress in management, control, and monitoring

Accurate synchronization using 1PPS signal

No need for PDC or a separate synchronizer

Specification according to IEEE C37.118 standard

Setting the number of measured phasors and the information sent (10, 12, and 50 messages per second)

RS232, TCP, UDP communication coverage

Management, comparison, and analysis by Log PMU software

Record and measure up to the 120th harmonic according to IEC 61000-4-7 standard

THD and Power Quality

Memory

## Interface software

IRUS Energy Co. provides SpyFR947 software and FR947 to perform the following settings and configurations.

Telecom settings

Access through username and password

Configurations related to analog inputs

Configurations related to digital channels

Device parameterization

Simultaneous display of digital inputs

Simultaneous display of analog inputs and waveforms

Simultaneous and real-time display of harmonics to the 63rd harmonic

Real-time measurement

Display and measure waveforms

Manual stimulation for CSR and DFR modes

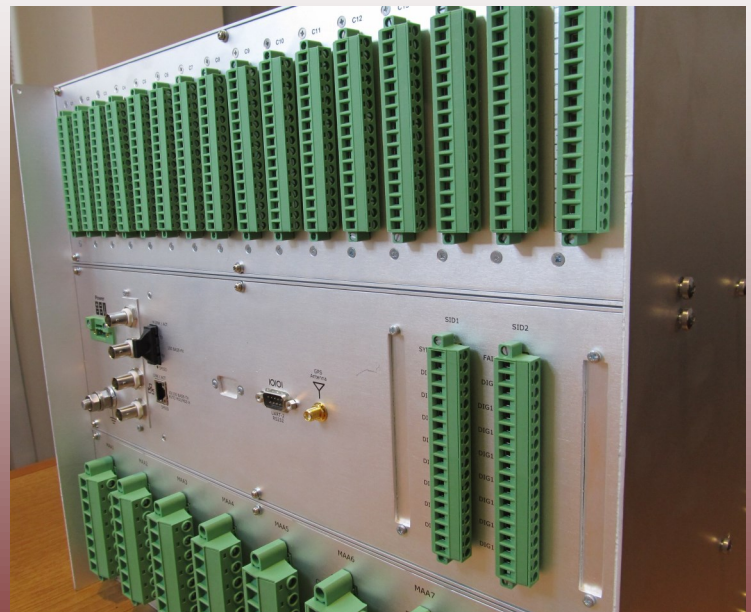
Incident settings and their analysis

Troubleshooting system

Management of records

Offline study tool

Download device firmware





LogOscillo software provided by this company is for analyzing DFR and CSRs. The above software is beneficial and valuable with the device and SpyFR947.

Each recorded DFR value sums all analog and digital inputs. The user can choose the desired color and signal.

Filtering some screens makes the work faster and easier. The user can select only channels with definite stimulation conditions such as edge of stimulations for voltage current.

In each analog signal, the user can use different operators for deep analysis of waveforms. With a right click of the cursors, the user can access the RMS, RMS 50Hz, THD values, and harmonic analysis of the waveform. Also, apart from the momentary values, the user can have the waveform of the changes of the above values simultaneously.

To help the user with further analysis, the following tools are also available in the aforementioned software:

- Recorded searcher

- Horizontal and vertical zoom

- Recorded window zoom

- Overlapping waveforms for simultaneity analysis

- Time cursor

- Time and amplitude values

- Time and amplitude values by moving the cursor on the waveform

- Zero crossing operator

- Search for maximum and minimum points

- Decimation

- Symmetric tool for phase analysis

- Convert the waveform file to jpg, PDF, Comtrade, etc. models

- Print waveforms