## Protection against power failures

Thanks to the device's internal and maintenance-free supercap technology, EPPE RX can withstand supply voltage failures of up to 30 seconds. This ensures that mains faults are reliably recorded under all circumstances and stored in the device's internal data memory for later analysis.

## Cyber Security

### Role-based access control (LDAP, RBAC)

Role-based access control makes it possible to restrict users to activities that correspond to their role in order to protect the system from unauthorized access. Users and access rights can be managed across all systems via central LDAP servers.

### Encrypted data transmission

Highly encrypted data transmission makes a significant contribution to secure operation in critical infrastructure systems (KRITIS).

### Audit logging

All security-relevant processes are logged and, if required, transmitted to a central network monitoring server using the SYSLOG protocol.

### Digitally signed and encrypted firmware updates

To protect against tampering, device firmware and all update files are digitally signed and encrypted.

## Technical data

| Display | 4 status LEDs |
|---|---|
| Operation | Web server<br>Operating software |
| Memory | 32 GB Flash |
| Synchronization | GPS, PPS, NTP/SNTP, IRIG-B, KoCoS Interlink |
| Interfaces | 1 x RS 232, 1 x RS 485,<br>1 x USB<br>2 x Ethernet (RJ45) |
| Supply voltage | 85...265 VAC, 47...63 Hz<br>100...250 VDC<br>+6, -15% of nominal range |
| Analog inputs | 4 x voltage up to 600 V (L-N)<br>4 x current up to 50 A<br>Sampling rate 200 kHz |
| Binary inputs | 4 inputs |
| Binary outputs | 2 x relay changeover contacts |
| Design | Aluminum DIN-Rail housing<br>Protection class IP 20<br>Dimensions 220 x 110 x 80 mm |
| Standards | EN 50160<br>IEC 61000-4-7<br>IEC 61000-4-15<br>IEC 61000-4-30 Class A |

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# EPPE RX

## NEW DIMENSION IN GRID ANALYSIS

**Power Quality Analyzer** ✓

**Digital fault recorder** ✓

**Dynamic RMS fault recorder** ✓

**Energy and power measurement** ✓

**IEC 61850** ✓

SUPERIOR ACCURACY
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## Application

EPPE RX is an extremely compact and very powerful voltage and power quality device meter, data logger and fault recorder for DIN rail mounting. The 8-channel device measures 4 voltages and 4 currents with a sampling rate of 200 kHz and an outstanding precision of 0.05%.

The current measurement is carried out via through-type transformers, which allows the device to be installed in existing circuits without additional terminal points.
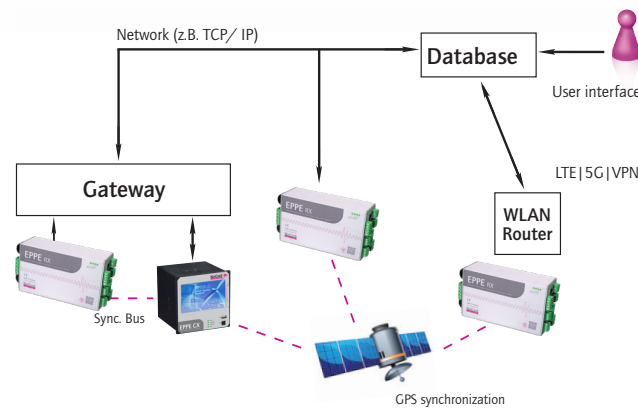
EPPE RX conforms to VDE-AR-N-4110 and VDE-AR-N-4120 and can therefore be used for monitoring EEG systems in medium and high-voltage networks.

- Energy quality monitoring in accordance with EN 50160
- Recording of energy data and load profiles
- Energy consumption optimization
- Transient recorder for detailed fault analyses
- Detection and recording of grid oscillations
- Recording of switch-on and switch-off processes
- Measurement of flicker and harmonics
- Monitoring and analysis of regenerative generation plants
- Grid optimization
- Fault localization
- Monitoring of critical consumers

## Automation

The associated Expert software enables fully automated and database-based metering point operation with automated evaluation and reporting.



Network (z.B. TCP/IP) — Database — User interface — Gateway — Sync. Bus — LTE|5G|VPN — WLAN Router — GPS synchronization

## Measuring functions

The following functions guarantee complete monitoring and analysis of electrical systems:

- Continuous recording of all grid parameters with adjustable interval time (trend analysis, EN 50160, etc.)
- PQ event recording for precise observation of grid faults and statistical evaluations
- RMS fault recorder for detecting and evaluating slow processes such as grid oscillations
- High-resolution fault recorder recordings for detailed fault analysis
- Energy meter for monitoring and optimizing energy consumption

## Analysis

The measurement data is analyzed in detail using powerful analysis software on the PC. Extensive graphics and tables, the automatic generation of reports and numerous analysis tools simplify the precise evaluation of the measurement data. Data export functions to COMTRADE, PQDIF and CSV also allow the use of manufacturer-independent analysis tools.

## Connectivity

The device can be accessed in parallel via two independent Ethernet interfaces. This means that EPPE RX can be accessed via two physically separate networks. This can be, for example, a highly secure internal station network and an external network for remote access. Live measurement data can be viewed in any web browser via the integrated web server.

Third-party applications can be supplied with data via IEC 61850 and MODBUS TCP as well as via the device's internal (S)FTP server.

Support for LTE/5G routers makes the system independent of wired networks.