Technical Specifications

P52

Voltage Quality Analyzer

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Presentation

The **Voltage Quality Analyzer P52** is designed to perform measurements in electrical power distribution systems. It is the second generation of analyzers developed by **PRIMATA ELETRÔNICA**, aiming to meet the demands of the energy concessionaires and permissionaires and other users in accordance with **PRODIST – Module 8 of ANEEL (Class S)**.

Weatherproof, portable, intelligent and modern, the **Analyzer P52** has a removable data storage unit in **Pendrive**, supplied with **32GB memory**, in addition to communication via USB ports, display and keyboard that allow programming directly in the equipment.

Because it has a high memory capacity, the **Analyzer P52** calculates and records all electrical quantities instantly every 1 second, and the **SMD Software** allows the user to analyze and filter only the data needed and with different intervals. Thus, there is no need to pre-program or restrict the electrical quantities to be recorded in the field.

Applications

✓ Analysis and measurement of voltage quality;
✓ Attendance to PRODIST – Module 8 of ANEEL (Class S);
✓ DRP/DRC reports;
✓ Use in measurement campaigns carried out by the energy concessionaires and permissionaires;

Registered/Calculated Electrical Parameters

✓ RMS Voltage;
  ▪ Neutral-Phase and Phase-Phase (A, B and C);
  ▪ Instantaneous, Maximum, Minimum and Medium;
  ▪ Ground neutral voltage (*optional);
✓ Frequency (A, B and C);
✓ Total harmonic distortion rate;
✓ Fundamental harmonic;
✓ Individual harmonic distortion rate (up to 50th harmonic);
✓ Negative sequence voltage unbalance (%) (IEC Standard 61000-4-7);
✓ Voltage fluctuation severity (IEC 61000-4-15);
✓ Short Term Voltage Variation Event Record – STVV (IEC Standard 61000-4-30 – with RMS value calculated every 1 cycle) with CBEMA curve graphic;

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Main Information Displayed

- ✓ Active program in the analyzer;
- ✓ Instantaneous voltage values (Phase-Neutral and Phase-Phase);
- ✓ Harmonic distortion rate per phase;
- ✓ Frequency;
- ✓ Number of valid measurements collected in real time to calculate the DRP/DRC reports;
- ✓ Verification of the correct installation of the analyzer and indication of any errors;
- ✓ Available memory in the Pendrive (in days, hours or minutes);
- ✓ Battery status of the clock-calendar;
- ✓ Date / Time;

Electrical Characteristics

Power supply	
Supply voltage	Maximum: 520 Vac (Phase-Phase) Minimum: 70 Vac (Neutral-Phase)
Power phase	Any of the phases
Consumption (fed by the 3 phases)	3.5 Wh in 127 V or 4.5 Wh in 220 V
Clock-calendar	With rechargeable NiCd battery (200 days autonomy without power)
Communication	
Port	USB
Speed	115 kbps (high speed direct connection with computer)
Scale background (voltage)	520 Vac (Phase-Phase)
Resolution	0.1 V
Accuracy	± 0.5%
Measurement of ground neutral voltage	Optional
Types of connection	Single-phase, 2-phase, 3-phase (Star), Delta (open and closed) and Indirect Measuring (using VTs)
Environmental operating conditions	
Level of protection	IP 659
Temperature	-10 to 60 °C
Humidity	0 to 100% without condensation
Isolation of connectors	600 V
MTBF (Mean Time Between Failures)	68400
Recording of absences	Yes
Electromagnetic shielding	Yes

Mechanical Characteristics

Dimensions (H x W x D)	220 x 146 x 107 mm
Weight (with cables and clips)	2510 g
Cable length (voltage signals)	2.0 m
Display with backlight	2 lines x 16 columns
Portable	Yes
Box	
Material	Thermoplastic with UV protection, high impact resistance and self-extinguishable
Level of protection	IP 659
Connectors for signals	Circular panel connectors (at the bottom)
Device for pole fixing	Yes (at the top)

Internal Control Program (Firmware)

Minimum interval for events record	16 milliseconds
Memory type	Removable (Pendrive)
Memory capacity	32GB (equivalent to 250 uninterrupted days of acquisition with records every 1 second, without the need to restrict the electrical parameters to be recorded)
Data storage	Independent programming for each acquisition
Programming of internal parameters	Date and time (automatic during connection to PC)
	Transformation ratios (voltage)

Programmable parameters via SMD software

- ✓ Name and description of the acquisition;
- ✓ Type of trigger: immediate or by time (programmed);
- ✓ Type of termination: by date/time, by measures (number of valid measures for DRP/DRC reports) or undetermined;
- ✓ Start date and time (enabled for programmed trigger);
- ✓ End date and time (enabled for closure by date/time);
- ✓ Type of connection: star, open delta or closed delta;
- ✓ PTs transformation ratio;
- ✓ No need to pre-program or restrict the electrical parameters to be recorded.

Items Supplied with the Product

- ✓ Voltage clips **P10 – Dolphin Clip – CAT III 1000V / 32A** (4 clips*****):
    - ▪ Neutral;
    - ▪ Phase A;
    - ▪ Phase B;
    - ▪ Phase C;
- ✓ Pendrive with 32GB memory for data storage;
- ✓ USB cable for communication with computer;
- ✓ Connection cable for voltage signals;
- ✓ Bag for transport and storage of equipment and accessories;
- ✓ SMD Software – Data Manipulation System;

* An additional voltage clamp (optional) is provided for measuring ground neutral voltage;

Optional Accessory – Personalized Hardcase [1]

[1] The bag is not provided when the hardcase is purchased.

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