



MEASURING TERMINAL MT-10SQ

Measurement Program

PM-11129E

Application

Measuring terminal MT-10SQ is used for measurement, monitoring and analyzing electric quantities in low and medium voltage plants, distribution and industrial substations. MT-10SQ can directly substitute more than 50 measuring instruments and measuring transducers. Measuring terminal with designation Q performs also current and voltage distortion analysis (THD measurement, current and voltage harmonic analysis, unbalance measurement and phase angle measurements between currents and voltages). Due to built in FLASH memory 2MB (optional 8GB) MT-10SQ ensures registration of peak and mean values of selected quantities (voltages, currents, powers, harmonics energy etc.). Registered values are stored with time stamp, that provides possibility of daily, weekly, monthly and annual analysis and reporting. Optional MT-10SQ digital inputs can be connected to tariff control system (e.g. Ripple Control System). In this option Measuring terminal can be used for active and reactive energy registration in each tariff, and total energy registration. Read out unit RT-10SQ is used for data read-out from MT-10SQ. Analysis and registration of collected data is performed with PC program MT-DIALOG 3. MT-10SQ can be connected to the host computer (SCADA) via RS485, Ethernet or optical communication link. In this way all data are accessible on line.

Functional description

Measuring terminal MT-10SQ is multifunctional analyser that combines sophisticated RISC processor technology, and advanced signal processing algorithms which ensure high measurement accuracy, analysis and registration of measured quantities. Measurement is based on fast sampling of input currents and voltages, and afterwards calculation of powers, power factors, energies and frequency. The device also calculates THD factors, harmonics (up to 31.), voltage unbalance and phase angles. The device also calculates average values of measured quantities in selected time interval (MD - maximum demand values), and performs data registration with time stamp. By means of graphical LCD and keyboard user can access measured and stored data and also set parameters of the device.

Main features

- measurement of true RMS values of voltages and currents with 0,2% accuracy, and power (P,Q,S) with 0,4% accuracy
- four quadrant power (P, Q, S), power factor ($\cos\phi$) and energy (active and reactive) measurement
- measurement of average values in time intervals (MD - maximum demand values)
- unbalance and phase angle measurement
- THD, voltage and current harmonics measurement (up to 31.)
- registration of peak and mean measuring values with time stamp for all selected quantities. Daily, monthly and annual values available
- active and reactive energy registration for each tariff separately, and total energy registration
- graphical LCD with backlight for displaying measured and stored data and parameters
- data read out using Read out unit RT-SQ or personal computer
- available RS485, optical or ETHERNET communication with host computer
- communication protocols MODBUS RTU(TCP) or PROFIBUS DP
- one input for temperature measurement
- small dimensions, according to DIN 43700 for panel instruments



fig. 1. Measuring terminal series MT type MT10-SQ

