**Tender text CENTRAX CU3000**

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**Transparent power quality and energy consumption monitoring**

The CENTRAX CU3000 combines the functionality of a highly accurate instrument for heavy current applications with the possibilities of a freely programmable Soft-PLC in one housing. The connection of the process environment may be performed by communication interfaces, via digital I/Os, analog outputs or relays.

**PLC functionality**

* Based on Codesys, 3 performance classes
* BASIC: Flexible processing of the data of the measurement device using the complete I/O functionality
* ADVANCED: BASIC + Modbus RTU/TCP master and time-dependent processes
* PROFESSIONAL: ADVANCED + self-defined websites and local visualizations + Codesys data logger

**Condition monitoring**

* Provision of all voltages, currents, powers, power factors
* Variance of system variables with time reference
* Measurements of Modbus slaves

**Energy flow analysis**

* Power mean-values with trend-analysis for preventing load-peaks
* Load profile storage with fluctuation range (min/max) per interval
* Active energy class 0.2S, Reactive energy class 0.5S (HT/LT, demand/delivery), configurable resolution
* Further mean-values and meters with selectable base quantity

**Power quality analysis**

* Harmonic analysis acc. IEC 61000-4-7
* Assessment of voltage and current imbalance
* Phasor and phase sequence display for connection check
* Waveform display
* Optional disturbance recorder for PQ events (voltage dip, swell, interruption) acc. IEC 61000-4-30 Ed.3 with RMS1/2 and waveform recordings

**Hardware options**

Up to 4 modular extensions: Analog outputs ±20mA (2/4), relay outputs (2), digital inputs (4) active / passive, GPS time synchronization, fault-current monitoring (residual or earth current), temperature monitoring (Pt100, PTC), IEC61850

**Communication**

* Ethernet (Modbus/TCP, http/https, NTP, SFTP, SYSLOG)
* Modbus/RTU master or slave
* Optional: IEC61850
* Scheduled data export to SFTP server

**Security**

* Flexible Role Based Access Control
* Encrypted communication via HTTPS
* Audit Log records all security related procedures, support for SYSLOG for transfer to central network monitoring server
* Client whitelist: IP address list for restricting authorized computers
* Digital firmware signature: Prevents that manipulated firmware gets into the device via update

**Further features**

* 4 current and 4 voltage channels with 0.1% accuracy, direct measurement or via transformers
* Measurement category 600V, CAT III (voltage), 300V,CAT III (current)
* Optional UPS (5x3 minutes)
* Data logger with16 GB data memory (option)
* Sampling rate: 18kHz
* Monitoring and alarming via limit values and monitoring functions
* For panel mounting 144x144mm
* Identical operation as devices of the AM/PQ/DM series

**Manufacturer**

Camille Bauer Metrawatt AG

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<https://www.camillebauer.com/>