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Knowledge to Shape Your Future

ACE6000 DC4

Commercial & Industrial Multifunction Meter

The ACE6000 DC4 meter provides integrated energy measurement in up to four quadrants for commercial and industrial applications. A user-friendly design, excellent metrological characteristics and robustness are the main features of this multifunctional meter.

The ACE6000 DC4 is available for direct connection up to 60A, up to 100 A, as well as for CT and CT/VT connections. The innovative metrology concept of this meter offers accuracy and long-term stability. All transformer connected meters are available with accuracy up to class C (active), while all direct connected versions are class B (active).

Multi-Rate Tariff

The ACE6000 DC4 provides up to eight tariff energy registers per measured value, up to eight maximum demand tariff registers per measured value and up to fifteen registers per tariff for End of Billing (EOB) data. The total number of tariff registers is 32 for energy and 24 for maximum demand. In addition, the meter provides per phase and total instantaneous values such as voltage and current per phase, power and power factor. Load profile data can be stored in up to eight channels.

Advanced I/O Capabilities

Up to six output relays and up to six control inputs are available to control the meter (i.e. tariff control, clock synchronisation) or to give information from the meter to other devices (tariff information, pulse output). The auxiliary terminal is self arresting and without screws for easy installation.

Accurate Time

All time stamp functions are derived from a high precision clock, with supply backup from an integrated battery and/or super capacitor. The battery will power the device clock for up to 15 years and the super capacitor for up to seven days of continuous total supply outage. The typical time deviation is better then nine seconds per month.

Flexible Communication

To reduce the time for data collection the meter can communicate via two interfaces at the same time. High speed communication can be done via the optical port, the electrical CL0 (20mA) interface or a RS232 or RS485 interface. In addition, it is possible to power special modems i.e. Sparklet directly from the meter, if it is connected via the RS232/RS485 RJ45 connector.

Interoperable

The meter has interoperable capabilities and has the advantage of being easy to implement in existing and future reading systems.

> *Key Features*

- *Excellent readable LCD with blue backlight*
- *Tariff switching via integrated time switch or external control inputs*
- *Auxiliary terminal quick connection due to the use of self arresting terminals*
- *Per phase instantaneous values (U, I, P, f,..)*
- *IR-, 20mA and RS-232 or RS-485 interfaces*
- *GPRS / IP management via the RS-interfaces*
- *Sparklet modem power supply via RJ45*

Technical Data

Basic Meter	
Meter Type	Static 3-phase/3-wire or 3-phase/4-wire meter for direct connection or transformer connection
Accuracy	Active energy: Class A, B or C Reactive energy: Class 2 or 3
Nominal voltages	3 x 230/400 V 3 x 58/100 V 3 x 100 V 3 x 58/100....230/40 V (auto ranging)
Nominal frequency	50 Hz
Minimum current Imin	DC: 0,25 A CT: 0,01 A
Rated (maximum) currents	5(60) A ; 5(100) A
CT rated(maximum) currents	5 A 1 A 1(6) A
Operating temperature range	- 25° C to + 55° C
Degree of protection	IP 51
Terminal diameter	DC 60 A: 7,2 mm / DC 100 A: 9,5 mm / CT: 5 mm
Tariff unit and load profile	
Number of energy tariff registers	Up to 32 (plus up to 8 total energy registers)
Number of maximum demand registers	Up to 24
Number Of EOB Data	Up to 15
Load profile channels	0 – 8
Sub-Interval durations	5, 10, 15, 30 or 60 minutes
Instantaneous values	Per phase values for voltage, current; Per phase and total values for power; Power factors, Phase sequences U/U and U/I, frequency aso.
Display	LC Display with 7 digit ID code block, 8 digit data block and additional symbols (energy direction, phase failure, unit and 12 status cursors); backlighted
Inputs/ Outputs	
Auxiliary inputs	Up to 6 (for tariff switching, end of billing, clock synchronization,..)
Photo-MOS-Relay-Outputs	0 - 6 (250 V, 100 mA, 5 W)
Communication interfaces	IR-port (IEC 62056-21) ; Current-loop interface CL 0 (IEC62056-21) ; RS-232 or RS-485 (via RJ45)
Transmission rate	Up to 19200 Baud
Protocol standards	IEC 62056-21 (former IEC 1107; Mode C) and IEC 62056-62 (COSEM/DLMS)
Identification Code	IEC 62056-61 (OBIS)
Device Clock And Time Switch	
Clock base	Crystal
Backup	Super-Cap (> 168 hours) or battery (> 10 years; typically > 15 years / 23° C)
Deviation	<= 9 Seconds / month (typically)
Number of different tariff structures	2 (active tariff structure and future tariff structure); activation of the future tariff structure at programmed due date
Number of day profiles / switching times per day profile / max. number of switching times	Up to 24 / 16 / 100
Miscellaneous	
Auxiliary power supply (APS)	Type 1: 230 V AC (non isolated) ; Type 2: 24 V DC Remark : the availability depends on the basic meter type
Certified logbook	Allows to change the constant pulse output after the certification of the meter
Operational logbook	Acc. VDN specification V2.1 with 256 entries
Modem Power Supply	External modems such as Sparklet could be powered directly from the meter

About Itron Inc.

Itron Inc. is a leading technology provider to the global energy and water industries. Our company is the world's leading provider of metering, data collection and utility software solutions, with nearly 8,000 utilities worldwide relying on our technology to optimize the delivery and use of energy and water. Our products include electricity, gas and water meters, data collection and communication systems, including automated meter reading (AMR) and advanced metering infrastructure (AMI); meter data management and related software applications; as well as project management, installation, and consulting services. To know more, start here: www.itron.com

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