Itron

Knowledge to Shape Your Future

ACE4000 GSM/GPRS

The smart meter paving the way for the Smart Grid

The ACE4000 meter range is a reliable and cost-effective solution for residential smart metering that combines Itron's metering expertise with high quality communication technologies.

As part of a comprehensive end-to-end smart meter offering, the ACE4000 meter enables multi-dwelling applications, remote management, load disconnection and reduced operating costs. It is designed to optimise investment and operational expenses over the long term. Firmware, security algorithms and HAN applications are upgradeable over the air ensuring secure investments for the future. The communication technologies have also been optimised to guarantee easy field installation and operational efficiency.

Multi-Utility
The ACE4000 meter range is designed to support multi-utility and sub-metering applications. Billing registers from other metering devices, including third party, gas, water and heat meters, can be retrieved with the ACE4000 meter acting as the M-Bus master.

Load Profile & Load Management
Local or remote configuration of utility parameters as well as high resolution load profiling are available with the ACE4000 range. On-demand load management is available by integrated relay to control specific loads or disconnect customers using an integrated or external contactor. Emergency consumption limitations and automatic limiting with time-of-use profiles are also possible.

Revenue Protection
The ACE4000 meter range provides utilities with advanced anti-fraud and security features to ensure efficient revenue protection.
Information on tamper, consumption and customer data are recorded and communicated allowing utilities to take immediate action.
Disconnection/reconnection and consumption limitation
can be activated remotely and alarm signals are sent in case of interference with the
meter (magnetic field detection, open cover detection etc).

Consumer Interaction
The ACE4000 allows interaction between the meter and the end consumer.
An alpha-numeric LCD screen on the meter allows utilities to display any text message.

> Optional wired communication port for connecting a consumer in home device according to the DSMR specification.

Power Quality Monitoring
The ACE4000 provides enhanced power quality monitoring and measurement. Disturbances on the network (voltage cuts, sag & swell events) are automatically logged with programmable thresholds and filtering time.

> **ACE4000 GSM/GPRS**
   - *Plug & Play*
   - *Multi-dwelling capabilities*
   - *Optimised communication*
   - *Flexible configuration options*
   - *Secure data retrieval*
   - *Complete revenue protection & anti-fraud feature set*

The ACE4000 GSM/GPRS range consists of: Standalone (S), GIU (communication Gateway), M-Bus Master (MM) and M-Bus Slave (MS).

Technical Specifications

Single Phase

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Connection type		Direct connection, 1-phase 2-wire
Terminal Connection		DIN 43 857 part 2 (asymmetric connection) or BS 1ph
Voltage operating range		-20% to +15% Un (Un = 230V)
Meter isolation		12 kV
Max current (Imax)		100A 25mm terminals
Dimensions	DIN	130 x 206 x 78mm (w x h x d) with terminal cover
		130 x 160 x 78mm (w x h x d) without terminal cover
	BS	130 x 168 x 78mm (w x h x d) with terminal cover
		130 x 168 x 78mm (w x h x d) without terminal cover

Polyphase

Connection	3-phase 4-wire DC
Terminal Connection	DIN 43 857 part 2 (asymmetric connection)
Voltage operating range	3 x 220-240V
Meter isolation	12 kV
Max current (Imax)	100A (85A with contactor) 25mm terminals
Dimensions	175 x 306 x 97mm (w x h x d) with terminal cover
	170 x 236 x 97mm (w x h x d) without terminal cover

Common

Metrology accuracy	Active Class 1, MID Class B / Reactive Class 2
Frequency	50Hz +/- 10%
Load management	Normally closed and latching relay options
Relay output	(5A)
Output	Pulse output DIN 43864
Serial Bus	M-Bus Master (opt.) conforms to EN 13757-2
Customer port	RJ11 type. 62056-21 mode D. Data rate 9600 bauds
Enclosure	Secure external access to lockable SIM card
Protection degree	Overall IP53
Temperature range	Specified operating range: -40°C* to +60°C
	Limit temperature range of operation: -40°C* to +70°C
	Storage and transport: -40°C to +80°C
	*GPRS communication guaranteed to -30°C
Optical port	IEC 62056-21 optical port, readout (IEC 62056-21)
	Read/write (single data values) according to DLMS/COSEM
Historic registers	10 daily billing registers
	13 monthly billing registers
	10 day hourly recording of water/gas usage (m3)
	Maximum demand
Historic event registers	10 last meter alarms with timestamp
	10 last control commands with timestamp
Range of Current	0.5A-100A

> *Single Phase*

206

> *Polyphase*

306.9

174.4
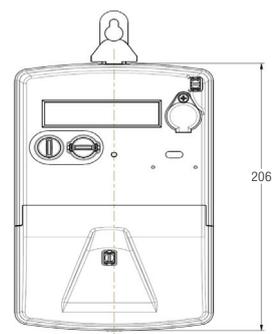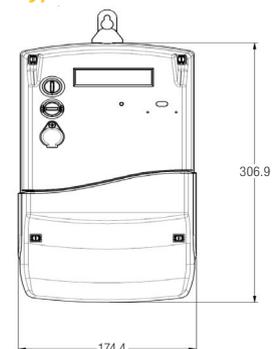
About Itron Inc.

At Itron, we're dedicated to delivering end-to-end smart grid and smart distribution solutions to electric, gas and water utilities around the globe. Our company is the world's leading provider of smart metering, data collection and utility software systems, with nearly 8,000 utilities worldwide relying on our technology to optimize the delivery and use of energy and water. Our offerings include electricity, gas, water and heat meters; network communication technology; collection systems and related software applications; and professional services. To realize your smarter energy and water future, start here: www.itron.com

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