Alpha Smart AS100

Single-phase Smart Residential Meter
with Wi-Fi communication

A new single-phase Alpha Smart AS100 electricity meter is an integral part of Elster/Honeywell AMR solution that manages data from Smart Electricity meters to meet different utilities requirements in residential segment such as apartment buildings or private homes.

The meter can be used as part of the AMR/AMI system or as a stand-alone metering device.

Metering features

- High accuracy and stability

- Measuring of Import/Export Active/Reactive energy

- Instantaneous measurement Voltage, Current, Line Frequency, Power Factor, Active/Reactive/Apparent power

- Accuracy: 1 (Active), 2 (Reactive)

- Operating temperature condition: –40°C...+70°C

- Large depth of storage:
  - 3 years daily profile
  - 180 days of 12 channels interval data profile (load & instrumental)

- Tariff management:
  - Up to 4 tariffs
  - Up to 12 seasons
  - Up to 30 special days
  - Integrated battery for real time clock (RTC) backup

- Events log:
  - Tariff change
  - DST change
  - Time & date change
  - Power failure & restoration

AS100 designed according to all existing requirements to smart meters and AMI systems including Internet of things (IoT).

Built-in Wi-Fi communication module allows to read data from the AS100 meter directly through your mobile device using a standard browser.

Wide detection features:
- *Cover removal detection*
- *Reverse detection*
- *Four-level password*

Options:
- *Neutral current measurement*
- *Disconnector*

FUNCTIONAL FEATURES

Full functionality of a Smart meter. Part of **Smart Home / Smart Building solutions**, Internet of Things (IoT) and integration with other sensors.

Use smartphone to access meter data via Wi-Fi.

Built-in wireless communication to read meter data & build AMI system.

Mesh-network saves costs and time at meter installation.

Plug-and-play technology. Commissioning does not require special qualification, simplifying and reducing installation cost.
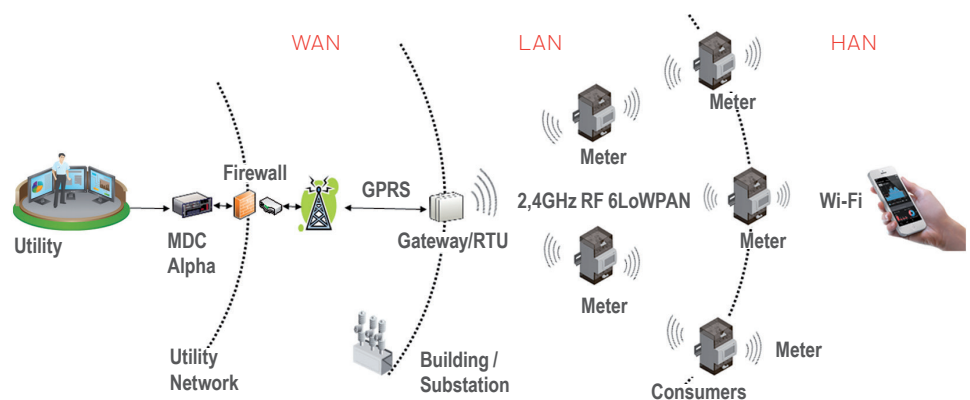
Miniature size (125x65x65mm) allows fitting into any cabinet or a mounting place.

AS100 Technical data

TECHNICAL DATA		
Nominal voltage	2-wire, 1 system Nominal operation voltage	Uн=230V (110V optional) 184 – 276V (100-127V optional)
	Maximum operation range	< 440V
Nominal frequency	Nominal	50 Hz (60Hz optional)
	Operating range	47.5 - 52.5 Hz for 50 Hz nominal 57 - 63 Hz for 60 Hz nominal
Current	Nominal / maximum current	5(60) A
	Starting current	20 mA
Accuracy	Active	1
	Reactive	2
Energy Measuring	Import/Export Active/Reative	kWh, -kWh, kvarh, -kvarh
	Voltage, Current, Line Frequency, Power Factor, Active/Reative/Apparent power	U, I, f, PF, P,Q, S
Power consumption		< 1W, < 5 V·A
Test indicator output (LED)		2 500 pulses/kWh (kvarh)
Interfaces	AMI (meter-to-meter/gateway)	2,4GHz RF 6LoWPAN
	Meter-to-mobile device	Wi-Fi (IEEE 802.11)
Tariff Capabilities		up to 4 tariffs up to 12 seasons up to 30 special days
Temperature condition	Operating temperature	-40°C...+70°C
	Storage temperature	-40°C...+80°C
	Humidity	0 to 95% rel. humidity, non-condensing at t=25°C
EMC compatibility	Surge withstand (1,2/50microseconds)	8 kV, (1,2/50 us), 40 Ohm
	Dielectric test	4 kV, 1min, 50 Hz
Diameter of main terminals		5 mm
Housing	Dimensions	125x65x65mm
	Protection class	Housing: IP51
	Material	ABS, Polycarbonate, non-inflammable, self-extinguishing synthetic material, recyclable
Weight		<0,5 kg
Time backup for RTC	Battery	> 10 years continuous operation at 25°C shelf life of 5 years
	Accuracy	< 5ppm

SYSTEM

AS100 offers a solution with integrated LAN communication infrastructure based on built-in wireless module. It allows to include a meter into AMI system and read meter's data directly using mobile device with a standard browser.

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