NGENIC

APATOR

Three-phase electricity meter
smartESOX pro

Application

High-precision, multi-tariff, four-quadrant active and reactive electricity meter, used in three-phase three- or four-wire networks. Dedicated to HV-, MV- or LV-powered users. Features extended capabilities for measuring and logging electrical quantities and energy quality parameters. The optimal solution for high-precision measurements, also in Smart Grid networks. Designed for durability.

smart

Functionality

- Measurement of active, reactive and apparent energy
- Measurement of instantaneous, maximum, redundant and cumulative power
- Measurement of transformer losses: OLA, NLA, OLR, NLR, I^2t, U^2t
- Measurement of network parameters, including: voltages, currents, voltage and current harmonics, frequencies, THD, assymetry factor and neutral wire current
- Monitoring of power grid parameters: voltage dips and swells; long power outages; current and voltage asymmetry; current flow with no applied voltage; no current flow; exceeded current limit
- Direct, semi-direct and indirect connection through current transformers, optionally also through voltage transformers
- Recording of energy in six tariff zones, switched by a built-in real time clock
- Wide range of recording capabilities for measured parameters:
  - independently configurable profiles with different recording intervals
  - ability to configure a different set of recorded data for each profile
- Enhanced event logging
  - 7 groups of events, recorded in independent logs
  - Sending immediate event notifications to the host device/system
- Wide range of recording capabilities for measured parameters in reference periods
  - Up to 50 parameters recorded in reference periods
- DLMS/COSEM communication protocol, possibility to read measurement data through the PN-EN 62056-21 (IEC1107) protocol
- Three built-in communication ports: one optical, two serial
- Interchangeable communication module: 3G/GPRS or Ethernet
- Built-in emergency power supply connected to an external power source
- Ability to read energy registers on the display in case of power outage - powered by a replaceable AA battery.
- Ability to read profiles and reference periods on the LCD

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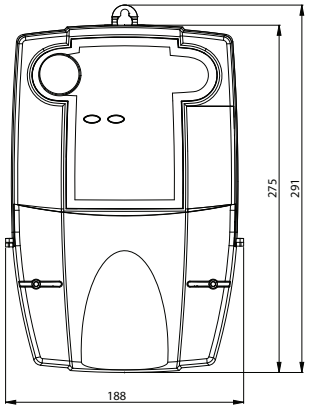
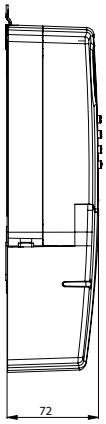
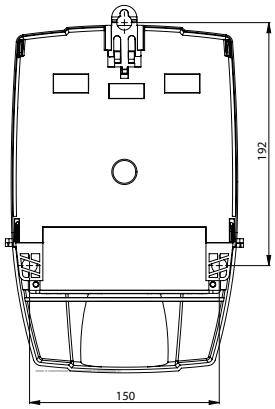
Basic technical parameters

Model		smartESOX pro
Connection method		CT or CT/VT connected
Rated voltage U_n	[V]	3 x 58/100...3x230/400
Reference current I_{ref}	[A]	1 r 5
Maximum current I_{max}	[A]	6
Measurement accuracy of active energy		class 0.2 S (EN 62053-22), class C (EN 50470-3)
Measurement accuracy of reactive energy		class 2 (EN 62053-23), class 0.5%
Electric strength	[kV]	4 (AC 50 Hz), 6 or 8 - optional (surges 1,2/50 µs)
Pulse frequency	[imp/kWh] [imp/kvarh]	20 000
Clock		Internal, accuracy of at least 0.5 s/24 h at 23°C, synchronised by an external signal or communication port
Communication		DLMS/COSEM (PN-EN 62056-5-3, PN-EN 62056-6-2) protocol support Reading of data through serial ports with PN-EN 62056-21 (IEC1107) protocol Ports: • Optical port (PN-EN 62056-21), speed up to 19200 Bd. • Two independent serial ports (2x RS-485 lub 1x RS-485 i 1xRS-232), speed from 300 Bd to 57600 Bd. • Interchangeable communication module: 3G/GPRS or Ethernet
Inputs		Two optically isolated inputs (features: recording, tariff and real time clock synchronisation control; alarm input; impulse).
Outputs		Up to six impulse outputs (for measured energy). Two programmable relay outputs.
Event logging		Logging of events related to illegal power consumption, the contractor, change of firmware, energy quality, functioning of interfaces, clock management, power outages along with time and date of the event.
Display		Segment display compliant with VDEW requirements
Operating temperature		from –40°C to 70°C
Housing		IP 54, II protection class
Standards		PN-EN 50470-1 PN-EN 50470-3 PN-EN 62053-22 PN-EN 62053-23 PN-EN 62053-11







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Tillverkaren har rätt att ändra och förbättra produkterna utan föregående meddelande.
Denna publikation är endast avsedd för informationsändamål.

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