ISKRAEMECO

Metering is our Business

SMART
AM550
Modular Electricity meter

IDIS

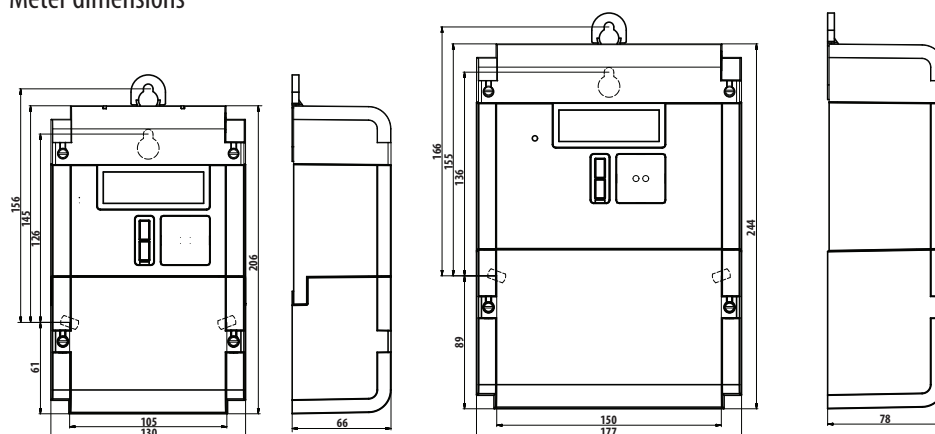| Icon	Feature
Q P	4 Quadrant measurement
BS / DIN	BS / DIN housing
	Multiple connection types
CT	Direct or current transformer connection
IP54	Ingress protection
	Load profile
	Optical port
	Real-time clock
	Event logs
dlms	DLMS – COSEM compliance
tariff 8	Multi-rate registration
MID B / IEC 1	Accuracy class
	Remote connection/disconnection
	Photovoltaic ready
M-Bus	M-Bus communication
	Modular Communication
	Alarming
IDIS	IDIS interoperability

Iskraemeco`s next generation AM550 smart meter, with an innovative platform approach enables seamless integration of next generation smart metering functions into the smart grid. It is optimized for smart residential and mid-size commercial environments and assures maximum flexibility with:

- Universal standardized transparent pass-through communication interface
- Optimized new metrology base with a powerful "Measure Everything" measuring concept
- Modular communication on WAN (P3) and HAN (P1) level

- FW upgradeability of communication modules (P3 port)
- Backward compatible PLC modules
- Flexible memory capacity availability
- Extended set of embedded Smart Grid functions
- Integrated high level security mechanisms supporting future security mechanisms
- Flexible set of input/output options
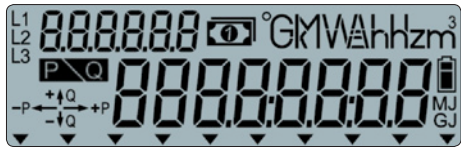- Sub-metering support and data forwarding over various HAN and WAN communication paths

Meter dimensions

Type overview

		AM550-E	AM550-T
Network	Low voltage	●	●
Connection type	1P2W	●	
	3P4W		●
Communication	Optical port	●	●
	RJ11 port (active or passive)	●	●
	M-Bus (wired or wireless)	●	●
	PLC (PLC G2/G3), Point-to-point (2G/3G/4G)	●	●
Input – output options	Output 5A and/or 8A A/230 V relay	●	●
	Output OPTOMOS 0.1 A/230 V	●	●
	Input alarm (universal S0 input)	●	●

Technical specifications

		AM550-E			AM550-T
Nominal voltage	Un	110 V - 240 V		3 x 240/415 V 3 x 110/190 V	
Voltage range		0.8 – 1.15 Un			
Reference frequency		50 Hz or 60 Hz			
Current	Nominal current In	–	–	–	5 A
	Base current Ib	5 or 10 A		10 A	–
	Maximal current Imax	100 A	85 A	120 A	6 A
Accuracy class	Active energy	Class 2 or Class 1 A or B (EN 50470 - 3, EN 50470 - 1)			
	Reactive energy	Class 3 or Class 2			
	Apparent energy	Calibrated up to 3%			
Real-time clock	Accuracy	< 5ppm or <±3 min/year			
	Back-up power supply	Super-Cap: > 7 days; life time 15 years Exchangeable Li battery : 10 years; life time up to 20 years			
Switching device		Integrated			
Temperature ranges (IEC 62052 - 11)	Operation	-25 °C ... +70 °C; extended -40 °C ... +70 °C			
	Storage	-40 °C ... +80 °C			
Ingress protection IEC 60529		IP54			
Liquid Crystal Display					

Basic functionality

Measurement features
- Two way („energy") measurements
- Active energy and power, 4Q Reactive energy & power, Apparent energy & power, Instantaneous value of voltage, Current, Power factor, Frequency and Power
- Absolute measurement of active energy & power

Tariff functions
- Time-of-use (TOU) measurement of active energy and maximum demand (up to 12 tariffs, 12 seasons, 12 weekly programs, 16 switches, 48 special days)

Load profiles
- Two Load profiles with different daily and hourly registration periods with up to 32 different objects
- Four separate profiles for sub-metering (M-bus)
- Seven separate Event logs for different objects

Communication
- Full DLMS-COSEM and IEC 1107 compliance
- Four independent communication interfaces:
  - Optical port
  - RJ11 (for in-house display)
  - M-bus (wired and wireless)
  - WAN/NAN Communication modules
    - PLC G2/G3
    - Point-to-point 2G/3G/4G

Power quality
- Voltage sag, swell and cut, Daily peak and minimum, Voltage and current asymmetry, Power failure, Total harmonic distortion (THD), Flicker, Voltage and Current harmonics

Specifics
- Backlit LCD display
- Detection of opening terminal and communication module cover
- External magnetic field detector and magnetic immunity (sustainable up to 400 mT)
- Detection of meter wiring
- In-house display support
- Power quality supervision
- Photo-voltaic ready
- Secured communication channels
- Integrated switching device up to 3x100A (UC3)
- Remote FW upgrade
- RTC (Super-Cap)

Optional
- RTC (exchangeable Li-battery)
- M-Bus (integrated wireless or wired)
- Flexible I/O options