

MT860








High precision multi-function meter 0.2S

MT860 is a high precision multi-function electronic transformer rated electricity meter used for active, reactive and apparent energy/demand measurement and registration.

The meter is intended for large or medium size commercial and industrial customers.

The meter is approved according to IEC 62053-21, IEC 62053-22, IEC 62053-23, ISO 9001 and designed according to even higher internal Iskraemeco standards, based on 60 years of experience of meter manufacturing and more than 55 million meters installed worldwide.



-  Class 0.2
-  Transformer operated
-  Quality of energy
-  Maximum demand
-  Load profile
-  Log-book
-  Real-time clock
-  Multi-rate registration

- Active, reactive and apparent energy/demand measurement
- Modularity, communication and I/O modules
- Voltage, current, frequency measurement
- Voltage dips/sags, power interruptions
- Harmonic components analysis
- Power factor, phase angle
- Anti-tamper features
- Multi-range
- Supply from internal or external power supply with priorities
- Optical-magnetic probe for "no-power" meter reading & setting

Measuring features

- High accuracy and long-term measurement stability,
- Measurement by individual phase or poly-phase,
- Active energy (import, export) IEC 62053-22, class 0.2S,
- Reactive energy (4 quadrants and combined quadrants) IEC 62053-23, class 2 (calibrated up to 0.5%),
- Apparent energy 0.5%,
- Connection via CT or CT/VT in three-phase 3 or 4-wire networks,
- Current average, maximum and cumulative demand measurement,
- Maximum demand can be calculated for all energies measured as tariff rated or cumulative.

Network quality

The following network parameters are monitored and displayed:

- Instantaneous values of phase voltages, currents and frequency,
- rms values of phase voltages and currents,
- Power factor and phase angle by phases,
- Harmonic analysis up to 30 harmonic,
- Short power outages.

Onboard terminals

There are 12 terminals on the meter basic board. They are used for inputs, outputs, communication and external power supply.

Optional modules expand input/output and communication meter capabilities.

Modularity

The meter is modular based. Various types of communication and I/O modules can be chosen. The same module can also be used for other Iskraemeco meter types: MT83x, MT86x.

Exchangeable modules are automatically recognised (plug & play). The module can be exchanged without disconnecting the power supply (hot-swap) or removing the calibration seal.

In case of module break-down 100% safety of other functions is guaranteed.

Communication module

The modules cover a wide range of communication possibilities. In addition to communication towards the centre, the modules also offer the possibility of cascade connection.

Input/output module

The input/output module expands the number of inputs and outputs on the meter. Limit combination is 6 inputs 8 outputs, including terminals on the meter basic board. Function of input and output signals are programmable.

Time of use

The meter enables multiple rate registration separately for energy and demand. The large number of tariff registers enables complex tariff systems.

Logbooks

The meter has two logbooks: for voltage network analysis and for all other events. Meter cover and terminal cover opening sensors are installed for tamper protection. Tamper is registered in the logbook also in case of power failure.

Load profiles

Two independent load profiles (e.g. 15 min., 4 channels, 62 days each) record demand, energy (cumulative or absolute values), network quality parameters, etc.

Display

The display is LCD 4 x 20 dot matrix type.

Mechanical features

The compact plastic casing is made of high quality self-extinguishable materials and is resistant to water and dust.

A sliding hanger enables installation for all fixing dimensions, from 165 to 230 mm. The meter is made of materials that can be recycled and are environment friendly.

Accuracy class

Active energy	.0.2S (IEC 62053-22)
Reactive energy	.class 2 (IEC 62053-23), calib. to 0.5%
Apparent energy	.0.5%

Measuring voltage (V)Multirange, 57-240 V ± 20% (phase to neutral)

Measuring current (A)1(1.2), 1(2), 1(6), 5(6), 5//1(6), 5(1-6), 5(10)

Outputsmax. 8

TypePhoto-MOS potential-free relay, up to 1 km

Permitted load25 VA (100 mA, 250 V AC)

Impulse lengthfrom 10 to 2500 ms

Inputsmax. 6 80 – 230 V AC

Communication

IRmax. 9600 Baud

RS232max. 9600 Baud

RS485max. 9600 Baud

ProtocolsIEC 62056-21

Optical reading LED

Impulse frequency≤ 40 Hz

Impulse lengthapprox. 14 or 30 ms

Real time clock

Accuracy, crystalIEC 61038, 6 ppm = ≤ ±3 min./year

Super-Cap1F for minimal 250 h of back-up

Li-Battery10 year operation reserve. Life span 20 years.

EMC testing

Electrostatic discharge15 kV (IEC 60801-2)

HF Magnetic field10 V/m (IEC 60801-3)

Burst test4 kV (IEC 60801-4)

Dielectric strength4 kVrms, 50 Hz, 1 min

Impulse voltage6 kV, 1.2/50 µs

Temperature rangeIEC 62053-22

Operation-40°C ... +70°C

Storage-40°C ... +80°C

Housing

Half 19" for rack mountingDIN 43862

Surface-mounted versionDIN 43857, 327 x 177 x 90 mm,
1.4 kg, UL94 (94V0), IP53

Power supply

The meter is supplied from an internal multirange or external power supply (50-230 V AC/DC). Power supply priority is software settable.

Opto-magnetic probe

An opto-magnetic probe enables "no-power" meter reading and setting. This probe, by means of magnetic connection, also enables communication and LCD display if the meter is not wired at all.

Software

MeterView for Windows and MeterRead for PDAs software has been designed specifically for meter specialists. It offers intuitive graphical interface for meter programming and reading.

Owing to periodical improvements of our products the supplied products may differ in some details from the data stated in the prospectus material.

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