# ISKRAEMECO

**Metering is our Business**

# SMART

## Mx382
Electricity meter with
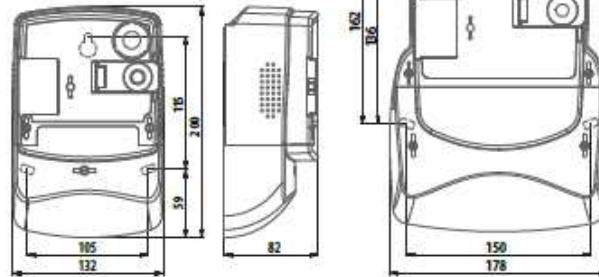GSM/GPRS/UMTS communication

IDIS

| | |
|---|---|
| 4 Quadrant measurement | |
| BS / DIN housing | |
| Multiple connection types | |
| Direct or current transformer connection | |
| Ingress protection | |
| Load profile | |
| Optical port | |
| Real-time clock | |
| Event logs | |
| DLMS – COSEM compliance | |
| Multi-rate registration | |
| Accuracy class | |
| Remote connection/disconnection | |
| Photovoltaic ready | |
| M-Bus communication | |
| GSM/GPRS communication | |
| Alarming | |
| IDIS interoperability | |

Single and Polyphase smart electricity meter, based on GSM/GPRS/UMTS communication provides the most reliable data transmission in smart residential and mid-size commercial environments. This future-proof investment includes:

- IDIS interoperability
- Remote connection/disconnection
- Multi-Energy management (gas, water, heat)

- Extensive anti-tampering features
- Customer port for in-house display (RJ11)
- Secure communication with encryption and authentication
- Photovoltaic friendly design
- Integrated demand/response functions
- DLMS protocol for easy integration
- Import/export energy measurement

## Meter dimensions

# SMART Mx382 Electricity meter with GSM/GPRS/UMTS communication

## Type overview

| | | ME382-D3 BS | ME382-D1 DIN | MT382-D1 DIN | MT382-D2 DIN | MT382-T1 CT – DIN |
|---|---|:---:|:---:|:---:|:---:|:---:|
| Network | Low voltage | ● | ● | ● | ● | ● |
| Connection type | 1P2W | ● | ● | | | |
| | 3P4W | | | ● | ● | ● |
| Communication | Optical port | ● | ● | ● | ● | ● |
| | RJ11 port | ● | ● | ● | ● | ● |
| | M-Bus | ● | ● | ● | ● | ● |
| | GSM/GPRS/UMTS | ● | ● | ● | ● | ● |
| Input – output options | Output 6 A/230 V relay | ● | ● | ● | ● | ● |
| | Output OPTOMOS 0.1 A | ● | ● | ● | ● | ● |
| | Input alarm | ● | ● | ● | ● | ● |
| | External key input | ● | ● | ● | ● | ● |

## Technical specifications

| | | ME382-D3 BS | ME382-D1 DIN | MT382-D1 DIN | MT382-D2 DIN | MT382-T1 CT – DIN |
|---|---|:---:|:---:|:---:|:---:|:---:|
| Nominal voltage | Un | 240 V | | 3 x 240/415 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 (IEC 62052-11, IEC 62053-21   A or B (EN 50470 - 3, EN 50470 - 1) | | | | |
| | Reactive energy | Class 3 or Class 2 (IEC 62053-23) | | | | |
| | Apparent energy | Calibrated up to 3% | | | | |
| Real-time clock | Accuracy | < 5ppm or  < ±3 min/year | | | | |
| | Back-up power supply | Super-Cap: > 7 days; Li battery : 10 years, life time up to 20 years | | | | |
| Switching device | | Integrated | | External | | – |
| 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 8 tariffs, 12 seasons, 12 weekly programs, 16 masks, 16 switches)

### Load profiles
- Two Load profiles with different daily and hourly registration periods with up to 32 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)
  - GSM/GPRS/UMTS

### Power quality
- Voltage sag, swell and cut, Daily peak and minimum, Voltage and current asymmetry, Power failure

### Specifics
- Backlit LCD display
- Detection of opening main and terminal cover
- External magnetic field detector
- Detection of meter wiring
- Prepayment
- In-house display support
- Power quality supervision
- Photovoltaic ready
- Secured communication channels
- Switching device up to 3x100A (UC3)
- Remote FW upgrade
- RTC (Super-Cap)

### Optional
- RTC (Li battery)
- M-Bus (wireless with external dongle)
- ZigBee (wireless with external dongle)

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