








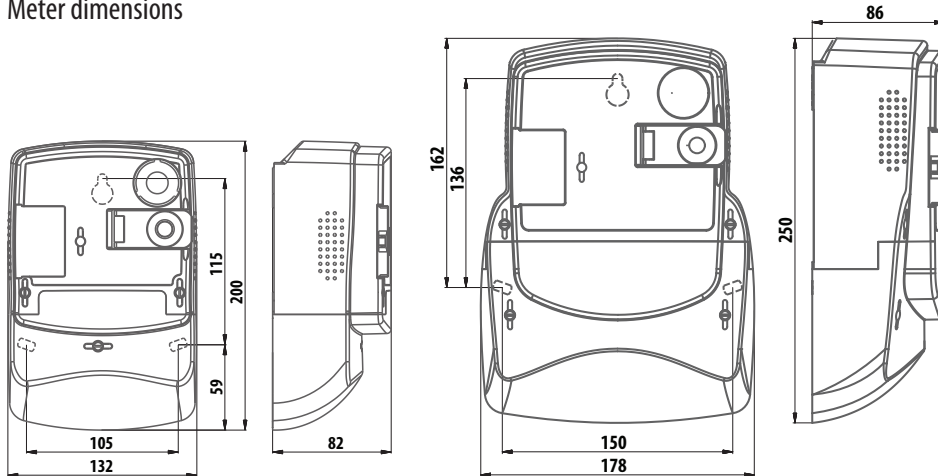
**idis**

-  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 – COSEM compliance
-  tariff 8 Multi-rate registration
-  MID B  IEC 1 Accuracy class
-  Remote connection/disconnection
-  Photo-voltaic ready
-  M-Bus M-Bus communication
-  PLC Power line communication
-  Alarming
-  idis IDIS interoperability

Single and Poly phase smart electricity meter, based on PLC communication is the cost optimal solution for 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
- Secure communication with encryption and authentication
- Photo-voltaic friendly
- Integrated demand/response functions
- DLMS protocol for easy integration
- Import/export energy measurement

### Meter dimensions



## Type overview

		ME381-D3 BS	ME381-D1 DIN	MT381-D1 DIN	MT381-D2 DIN	MT381-T1 CT – DIN
Network	Medium voltage					
	Low voltage	●	●	●	●	●
Connection type	1P2W	●	●			
	3P4W			●	●	●
Communication	Optical port	●	●	●	●	●
	RJ11 port	●	●	●	●	●
	M-Bus	●	●	●	●	●
	PLC	●	●	●	●	●
Input – output options	Output 6 A/230 V relay	●	●	●	●	●
	Output OPTOMOS 0.1 A	●	●	●	●	●
	Input alarm	●	●	●	●	●
	External key input	●	●	●	●	●

## Technical specifications

		ME381-D3 BS	ME381-D1 DIN	MT381-D1 DIN	MT381-D2 DIN	MT381-T1 CT – DIN
Nominal voltage	U <sub>n</sub>	240 V		3 x 240/415 V		
Voltage range		0.8 – 1.15 U <sub>n</sub>				
Reference frequency		50 Hz or 60 Hz				
Current	Nominal current I <sub>n</sub>	–	–	–	–	5 A
	Base current I <sub>b</sub>	5 or 10 A			10 A	–
	Maximal current I <sub>max</sub>	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; 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)
  - PLC

### 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
- Photo-voltaic 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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