MICROSTAR

D2000

Direct Connected

Two-Phase Smart Electricity Meter

Class 0.5s, Class 1.0

Certified by

dlms
COSEM
Compliant

FEATURES

■ Accurate measurement of kWh & kvarh

■ Maximum demand registration of kW & kvar

■ Instrumentation of voltage, current, power & power factor

■ Time of Use (TOU) control with 4 tariffs and flexible programming

■ Event logs with up-to 200 power quality or tampering events

■ High quality 8-digit LCD display with large characters & backlight

■ Internal real-time clock (RTC) with super capacitor and backup battery

■ Supports DLMS, IEC 62056-21, or MODBUS communication protocols

■ Encapsulation type meter casing design for reliability and security

■ Active energy display on LCD without power supply

OPTIONS

■ AMR ready w/ hot-pluggable internal GPRS, Wi-Fi, or Ethernet module

■ Local communication options: Optical port, RS485, RS232, PLC, RF

■ Configurable load profile with recording of up-to 370 days at 30' interval

■ Replaceable backup battery for meter reading without power

■ STS certified prepayment feature with up-to 100A internal contactor

■ Remote, scheduled, or event triggered load control

■ Energy dispenser with configurable daily consumption limit

■ Dural element measurement for neutral removal or bypass detection

APPLICATION

● Direct connected (Whole current)

● Residential or commercial billing

● Credit or prepayment meters

● 2-phase 3-wire 2-element

BENEFITS

● Compact design with superior strength and anti-tampering features

● Bidirectional active and reactive energy measurement and registration

● TOU control and multi-tariff support

● Configurable LCD display items

● Option of load profile recording

● Anti-tampering features & event log

● AMR ready with hot-pluggable communication modules

● Supports DLMS protocol (Certified)

● Patented one whole case design with multiple sealing provisions

● Large contact area between wire and terminal to reduce resistance

● Sealable wiring cover to protect wiring and isolate signal terminals

ELECTRICAL

Connection Type	Direct connected (Whole current)
Measurement Modes	2-phase 3-wire
Accuracy Class	Class 1.0, Class 0.5
Rated Voltage	110V, 220V, 230V, or 240V
Rated Current	5 (80) A, 10 (100) A
Starting Current	< 0.1% I_n
Rated Frequency	50 or 60 Hz

Power Consumption
    Voltage Circuit
    Current Circuit
	
	< 1W, < 2.5VA per Phase
	< 0.1VA

MECHANICAL

Dimensions	200 mm x 140 mm x 83mm
Weight	1 kg (approximately)
Insulation	Protective Class II
Ingress Protection	IP54
Case / Terminal Cover	High Quality Polycarbonate
Terminal Block	Flame-Retardant Polycarbonate

ENVIRONMENT

Working Temp.	-25°C to +70°C
Storage Temp.	-40°C to +85°C
Humidity	0 - 95% non condensing
Fast Transient Burst	4kV
Static Discharge	8kV Contact / 15kV Air Discharge
Impulse Voltage	6kV, 1.2/50µs pulse
AC Voltage	4kV, 50Hz

REAL-TIME CLOCK

Accuracy	< 0.5 seconds / 24 hours
Backup Battery	Lithium Battery (20 years life)
Backup Time	≥ 15 years without power
Clock Synchronization	Local or remote via AMR

DISPLAY

LCD Display	2 line, 8-digit LCD display
Display Mode	Automatic, Push Button
Display Item	100 configurable display items
Display at Power Off	Active energy or net energy

COMMUNICATION OPTIONS

Local Communication	Optical/Infrared, RS232, RS485, PLC, RF (433/866MHz)
Remote Communication	GPRS/GSM, Wi-Fi, Ethernet
Communication Protocol	DLMS/COSEM, IEC62056-21, MODBUS

MEASUREMENT & INSTRUMENTATION

Energy	Import/export kWh, kvarh; Absolute or net metering
Maximum Demand	Import/export kW, kvar
Automatic Billing Data Recording / MD Reset	Date & Time Programmable
Instantaneous Values	Current, Voltage, Power, Average Demand, Power factor, & Frequency

LOAD PROFILE (OPTIONAL)

Load Profile	Option of configurable load profile
Channels	8 configurable channels
Available Data	All energy, demand, & instrumenta-tion data (see above for details)
Integration Period	15 to 60 minutes configurable
Memory Space	90 days or 370 days with 30' interval
Data Retention	25 Years

EVENT REGISTRATION (OPTIONAL)

Event Log	Configurable event log
Trigger Events	Voltage loss, voltage over, voltage under, current loss, current over, low power factor, current reverse, over-load, terminal cover open, meter top cover open, power on & power off
Program Record	Last 100 program records

TIME OF USE (TOU) CONTROL

Number of Tariffs	4 tariffs
Daily Profiles	4 daily profiles, 10 tariff slots
Week Tables/Seasons	4 week tables, 4 seasons
Holidays	100 special days (up-to 200)

INPUT & OUTPUT

Test Pulse Output	400 - 4000 imp/kWh
LED Pulse Output	400 - 4000 imp/kWh

PREPAYMENT & LOAD CONTROL (OPTIONAL)

User-Friendly Prepay-ment Modes	Friendly hours/days, emergency credit and vital necessity power
Load Control	Scheduled / on-demand or event triggered load control
Internal Contactor	100A internal contactor

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