MICROSTAR

P2000-D

Direct Connected

Three-Phase Smart Electricity Meter

Class 1.0, Class 0.5

Certified by dlms COSEM Compliant

FEATURES

- Bidirectional measurement and registration
- Accurate measurement of kWh, kvarh & kVAh
- Maximum demand registration of kW, kvarh & kVA
- Instrumentation of voltage, current, power, frequency & power factor
- Time of Use (TOU) control with 4 tariffs and flexible programming
- 2 configurable load profiles with recording of 366 days at 30' interval and 8 energy items
- Event logs of more than 1000 power quality or tampering events with configurable 8 data channels record at the event time
- High quality 9-digit LCD display with large characters & backlight
- Configurable LCD display items
- Internal real-time clock (RTC) with super capacitor and backup battery
- Supports DLMS, MODBUS or IEC 62056-21 communication protocols
- Encapsulation type meter casing design for reliability and security
- Super Capacitor for meter reading without power
- Local or remote firmware upgrade

OPTIONS

- AMR ready with hot-pluggable GPRS/3G/4G, Wi-Fi, or Ethernet module
- Local communication options: Optical port, RS485, RS232, RF, BLE
- Dual source measurement and registration
- Remote, scheduled, on-demand or event-triggered load control
- STS certified prepayment feature with up-to 100A internal contactor
- Energy dispenser with configurable daily consumption limit

APPLICATION

- Direct connected (Whole Current)
- Industrial, commercial or residential billing
- Credit or prepayment meters
- 3-phase 4-wire

BENEFITS

- High accuracy measurement of energy and maximum demand
- Instrumentation and power quality data for monitoring & diagnostics
- AMR ready with hot-pluggable communication modules
- Supports DLMS protocol (Certified)
- Flexible software configurations for measurement, billing, TOU, display, load profile and event logs
- Patented IP54 whole case design with multiple sealing provisions
- Anti-tampering features & event log
- Large contact area between wire and terminal & increased distance between phases
- Sealable wiring cover to protect wiring and isolate signal terminals

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MICROSTAR®

Technical Specifications
C2000

ELECTRICAL

Connection Type	Direct connected (Whole current)
Measurement Modes	3-phase 4-wire 3-element 3-phase 3-wire 2-element
Accuracy Class	Class 1.0, Class 0.5
Rated Voltage	90/155 to 240/415 V
Rated Current	5 (100) A, 5 (80) A, 5 (120) A
Starting Current	< 0.4% I_n
Rated Frequency	50 or 60 Hz
Power Consumption	
Voltage Circuit	< 1.5W, < 3VA per Phase
Current Circuit	< 0.1VA

MECHANICAL

Dimensions	280 mm x 175 mm x 109.8 mm
Weight	2 kg (approximately)
Insulation	Protective Class II
Ingress Protection	IP54
Case / Terminal Cover	High Quality Polycarbonate
Terminal Block	Flame-Retardant Polycarbonate + Glass Fiber

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, 9-digit LCD display
Display Mode	Automatic, Push Button, High Precision & Low Precision
Display Item	200 configurable display items

COMMUNICATION OPTIONS

Local Communication	Optical, RS232, RS485, RF (433/868/915MHz), BLE
Remote Communication	GPRS, 3G, 4G, Wi-Fi, Ethernet
Communication Protocol	DLMS/COSEM, MODBUS, IEC62056-21

INPUT & OUTPUT

Test Pulse Output	400 - 8000 imp/kWh
LED Pulse Output	400 - 8000 imp/kWh

MEASUREMENT & INSTRUMENT

Energy	Total & per phase import/export kWh, kvarh, kVAh; Bi-directional or Absolute or Net metering
Maximum Demand	Total & per phase import/export kW, kvar, kVA
Automatic Billing Data Recording / MD Reset	Date & Time Programmable
Instantaneous Values	Current, Voltage, Power, Average Demand, Power factor, Phase Angles & Frequency

LOAD PROFILE

Load Profile	2 configurable load profiles
Channels	32 configurable channels
Available Data	All energy, demand, & instrumentation data (see above for details)
Integration Period	1 to 60 minutes configurable
Memory Space	366 days with 30' interval & 8 energy items
Data Retention	25 Years

EVENT REGISTRATION

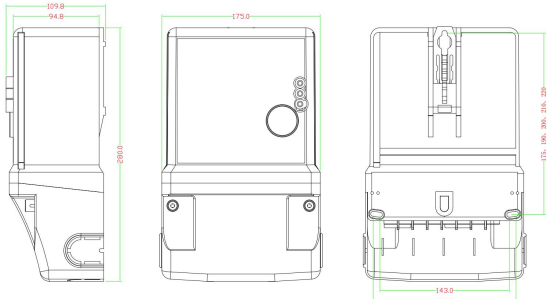
Event Log	Trigger conditions are configurable, more than 1000
Trigger Events	Voltage loss, voltage over, voltage under, current loss, current over, low power factor, current reverse, overload, terminal cover open, meter top cover open, power on & power off, phase failures, current imbalance
Data Record at Event	8 configurable channels
Program Record	Last 64 program records

TIME OF USE (TOU) CONTROL

Number of Tariffs	4 tariffs
Daily Profiles	10 daily profiles, 10 tariff slots
Week Tables/Seasons	8 week tables, 10 seasons
Holidays	Up to 100 special days

PREPAYMENT & LOAD CONTROL (OPTIONAL)

Prepayment Feature	STS certified via token
User-Friendly Prepayment 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



Disclaimer: The content is subject to change without notice. Specifications / functions may not be applicable for ordered SKU.

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