



WFET1600U

Data Concentrator

Designed for residential and small commercial consumers

Providing a strong foundation for your Smart Grid initiatives

WFET1600U is a smart data concentrator for the high demands of global AMI markets.

Hardware and firmware of WFET1600U follows the modular design concept. It can work together with Meters and HES from different manufacturers base on various communication module and standard protocol.

WFET1600U provides increased cost effective for you with its strong specifications and functionalists.



■ Technical Data

| Description | Value |
|---------------------------------------|---|
| Voltage | |
| Reference voltage | 220V AC |
| operating voltage range | 70%-130%Un |
| Frequency | |
| Rated frequency (fn) | 50Hz |
| Frequency range | 47.5Hz to 52.5Hz |
| Electromagnetic Compatibility | |
| Fast Instantaneous Pulse Group | 4kV |
| Fast transient burst main circuits | 4kV |
| Immunity to Impulse Voltage | 6kV |
| Electrostatic Discharge | Contact discharge, 8kV, 10 cycles Air discharge, 15kV, 10 cycles |
| Output | |
| Output voltage | 12V DC |
| Output power | 12W |
| Temperature | |
| Normal Operation range | -25°C to +55°C |
| Limit operation range | -40°C to +70°C |
| Limit range for storage and transport | -45°C to +85°C |
| Humidity | Up to 95% non-condensing |
| Protection degree | IP54 with cover |
| Lifetime | |
| Product lifetime | ≥ 15 years |
| Battery lifetime | 10 years |

| | |
|------------------------------|------------------------------|
| LCD Display | |
| LCD size | 160mm ×160mm |
| LCD type | Dot matrix monochromatic LCD |
| Dimension (W × H × D) | 290 mm ×180 mm ×95mm |
| Weight | 2kg |

■ Main Functionalities

➤ Communication interface

- 3 RS485 interfaces, Baud rate up to 115200bps
- 1 RJ45 interface with ethernet 100/1000 base
- 1 RS232 interface for maintenance, Baud rate up to 115200bps
- 1 optical interface for maintenance
- 1 USB(host) interface for firmware upgrade
- 3G or 4G modem support
- Power line communications (PLC) support

➤ LCD display

- Large digit LCD display, easy for reading
- Multifunctional menu support
 - 3G/4G signal strength indication
 - DCU essential information display
 - DCU parameters configuration
 - Meters parameters configuration

➤ Keypad operation

- 6 buttons available for menu items switch

➤ RTC

- Clock accuracy (daily deviation): $\leq 0.5s$

- RTC Battery lifetime up to 10 years

➤ Applicable standards

- Based on Plug-in library structure and supports variety of protocols
- DSMR P3.2, IEC62056-47, IEC62056-53, IEC62056-61, IEC62056-62, IEC61107, ANSI C12.18, ANSI C12.22 standards support

➤ Meters data storage

- 1 GB non-volatile Flash support
- Memory scalable and upgradable

➤ DCU and Meters parameters configuration

- Three ways(RS232, webserver, HES) to support DCU and Meters parameters configuration

➤ Auto discovery of new meters

- DCU can automatically detect the new meters installed in the grid

➤ On-Demand reading

- On-Demand reading meters data support
- On-Demand reading DC data support

➤ Scheduled reading

- Reading data configurable support
- Scheduled reading task interval and date configurable support

- List of reading meters configurable support

➤ **Event management**

- Events enable setting support
- Alarm automatic push such as tamper alarm
- Meters events record support
- DC events record support

➤ **Firmware upgrading**

- DCU firmware can be upgraded via USB interface and HES from remote side.
- DCU firmware support formatting or parameters reserved upgrade
- Meters firmware can be upgraded through DCU by HES from remote side.

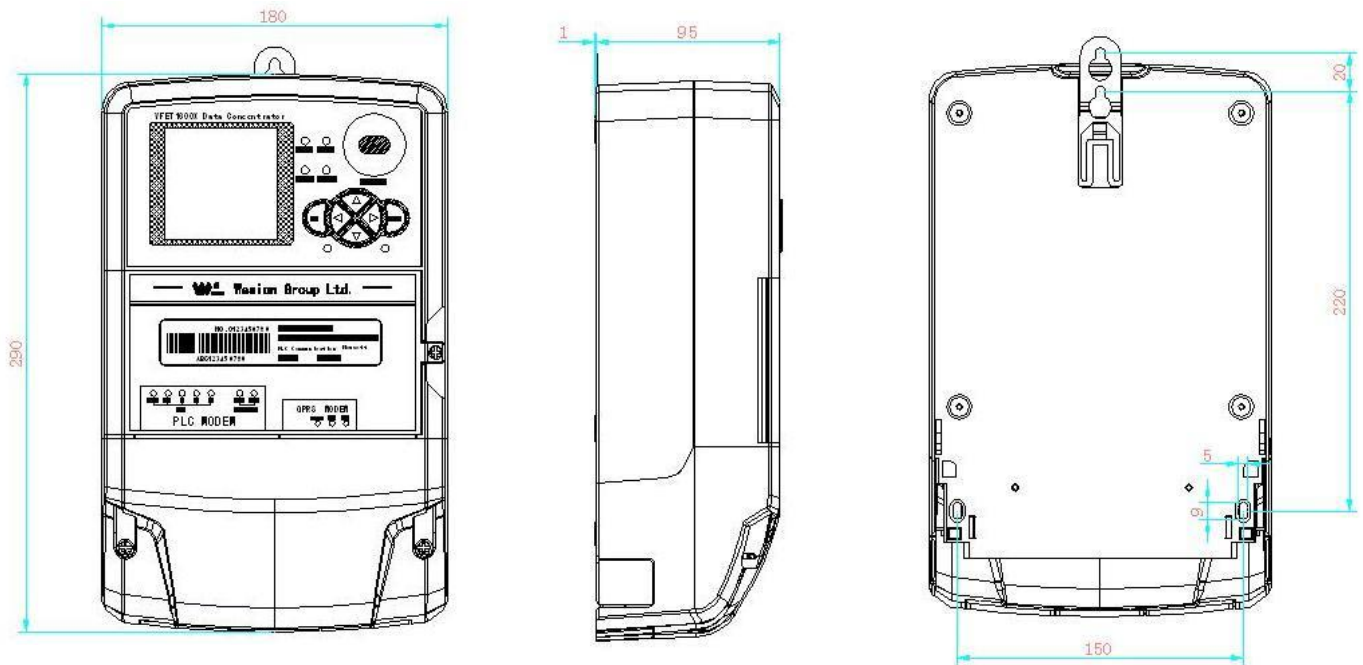
➤ **Web server maintenance interface**

- DCU has an internal web user interface that can be accessed through ethernet/3G connection
- Users can use the web interface for change configuration, troubleshooting and check events, statistics and log data in DCU
- Support for displaying PLC/RF topological graph, Meter connectivity Status, Ping test result of LAN

➤ **Security**

- AES256 encryption algorithm for measurement data stored support
- Symmetric encryption algorithm (AES-128) for WAN and LAN communication encryption support

■ Dimensions



■ Connection Diagram

