# WASION

# DDSD101- DT

## Single Phase Smart Prepayment Meter

**Designed for residential and small commercial consumers**

**Providing astrong foundation for your Smart Grid initiatives**

www.wasion.com

| Description | Value |
| --- | --- |
| **Voltage** | |
| **Reference voltage** | 230V |
| **operating voltage range** | 60%-130%Un |
| **Current** | |
| **Basic current** | 5A |
| **Maximum current** | 80A |
| **Starting current** | 0.4%Ib |
| **Accuracy** | Class 1.0for kWh |
| **Frequency** | |
| **Rated frequency (fn)** | 50Hz or 60Hz |
| **Frequency range** | $\pm$2% |
| **Pulse constant** | Default: 1000 imp/kWh |
| **Temperature** | |
| **Normal Operation range** | -25℃ to +55℃ |
| **Limit operation range** | -40℃ to +70℃ |
| **Limit range for storage and transport** | -45℃ to +85℃ |
| **Humidity** | Up to 95% non-condensing |
| **Power Consumption** | |
| **Power consumption in voltage circuit (active)** | ≤2 W |
| **Power consumption in voltage circuit (apparent)** | ≤10 VA |
| **Power consumption in current circuit** | ≤2 VA |
| **Insulation Strength** | |
| **AC voltage test** | 4kV |
| **Surge Withstand** | 6kV |
| **Protection class** | Class II |
| **Electromagnetic Compatibility** | |
| **Electrostatic discharges** | Contact 8kV, air 15kV |
| **Fast transient burst** | 4kV |
| **Immunity to Impulse voltage (IEC62052-11)** | 6 kV |
| **Immunity to electromagnetic RF fields** | 10V/m at reference current, 30V/m without current |

| Protection degree | IP54 |
|---|---|

| **Breaker** | |
|---|---|
| Lifetime | Bi-stable relay |
| | 10000 cycles at $I_{max}$PF=1 and PF=0.5L |
| Performance | UC2 or UC3 |
| Maximum switching Voltage | 250VAC |
| Maximum switching current | 90A |
| Maximum switching power | 22.5kVA |

| **Lifetime** | $\geqq$ 15 years |
|---|---|

# ■ Main Functionalities

## ➢ Measurement

- 2 element, 4 quadrant

- Instantaneous Vrms, Irma, Frequency,
   PF,kW,kVAr,kVA

- Lots of energy and demand registers (A+, A-, R+, R-, +Ri,
   +Rc, -Ri, -Rc)

## ➢ RTC

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

- Gregorian calendar

- Automatic leap year switch

## ➢ Tariff

- Up to 8 tariff

- Up to 208 exception day/Holiday

- Up to 14 seasons and 8 week tables

- Up to 8 day tables and each table has 14 entries

- Active and passive calendar support

## ➢ Battery backup

- Flexible backup power for RTC, including replaceable
   battery or super capacitor

## ➢ Load control

- Remote control command support

- Over current control support

- Power limit support

## ➢ Firmware upgrading

- The firmware can be upgraded via optical interface and
   WAN interface.

## ➢ Load profile

- Energy profiles（30min, up to 20 channels, up to 85
   days)

- One daily profiles（24h, up to 4 channels, up to 32
   days）

- Month billing profiles, Up to 13 billing records and 32
   channels

- Configurable interval and capture objects of load
   profile

## ➢ Event record

- Fraud detection (Meter cover, terminal cover, current
   reverse, magnetic detect etc.)

- Failure detect (Memory error, relay error, battery low
   voltage, clock invalid etc.)

- Power quality event (Under voltage /Over voltage
   (Sag/Swell), Power up/down, etc.)

- Over current / current imbalance

- Security event (Parameters change, clock adjust, etc.)

- Standard event log (pay mode switch, firmware
   upgrade, etc.)

## ➢ Prepayment function

- Configurable prepayment and post-payment mode

- Three levels for remaining credit alarm

- Emergency credit, friendly time and friendly days
   support

## ➢ STS token for prepayment (optional)

- 20 digits token for credit and parameters transfer

- Credit token, Key change token, clear balance token,
   clear tamper token, set power limit token, test token
   etc. fully comply STS standard

## ➢ Disconnector control(optional)

- Over power limit disconnect and reconnect automatically according to configurable delay time

- Tamper disconnect(meter cover removed, terminal cover removed, magnetic detection)

- No credit disconnect , reconnect by charge

- Disconnect or reconnect control by remote

➢ **WAN communication(optional)**

- Plug and play module to support various communication technology

- G3 PLC or BPLC

- Protocol:   DLMS/COSEM

➢ **HAN Communication**

- RS485

- Built-in RF module or FSK PLC

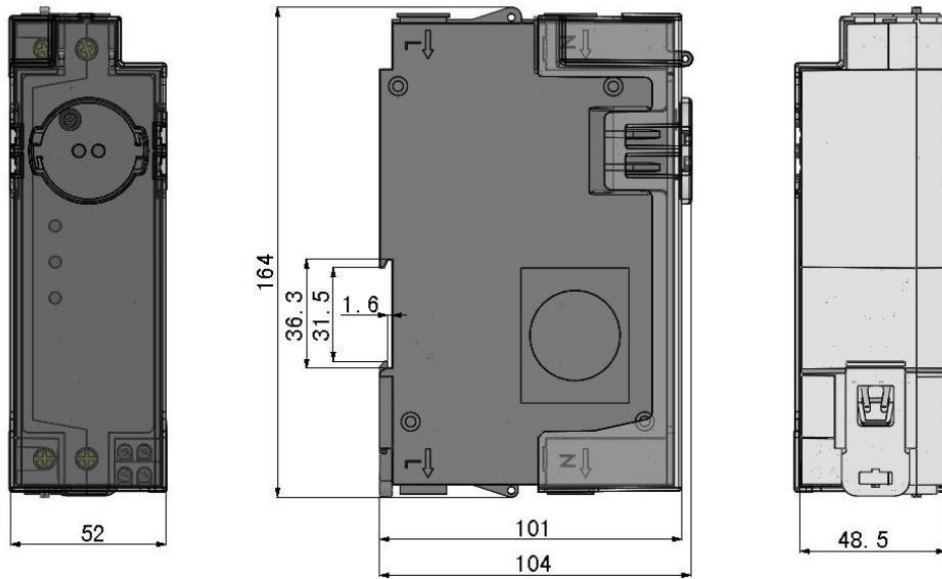- Communicate with in-home display

- Protocol:   DLMS/COSEM

➢ **Optical port**

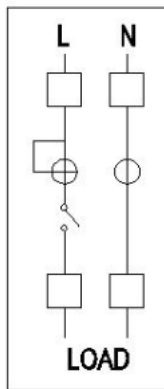- Comply with IEC62056-21 standard

- Protocol: DLMS(IEC62056-21 mode E)

➢ **Security(LLS or HLS)**

- LLS support 3 level passwords for local and remotely communication

- HLS support authentication and encryption for local and remotely communication

➢ **Meter Installztion Dimensions**



➢ **Meter Wiring**



➢ **Certificates**