



DDSD101- KT

Single Phase Smart Prepayment Meter

Designed for residential and small commercial consumers

Providing a strong 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%lb
Accuracy	Class 1.0 for kWh
Frequency	
Rated frequency (fn)	50Hz or 60Hz
Frequency range	±2%
Pulse constant	Default: 1000 imp/kWh
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
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 Indoor
Breaker	Bi-stable relay
Lifetime	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	≥ 15 years

■ Main Functionalities

➤ Measurement

- 2 element, 4 quadrant
- Instantaneous Vrms, Irms, Frequency, PF, kW, kVAr, kVA
- Lots of energy and demand registers (A+, A-, R+, R-, +Ri, +Rc, -Ri, -Rc)

➤ RTC

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

➤ Profile

- Energy and power profiles (30min(default), up to 20 channels, up to 85 days)
- 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(optional)

- 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
- GPRS
- Protocol: DLMS/COSEM

- Communicate with in-home display
- Protocol: DLMS/COSEM

➤ **Optical port**

- Comply with IEC62056-21 standard
- Protocol: DLMS(IEC62056-21 mode E)

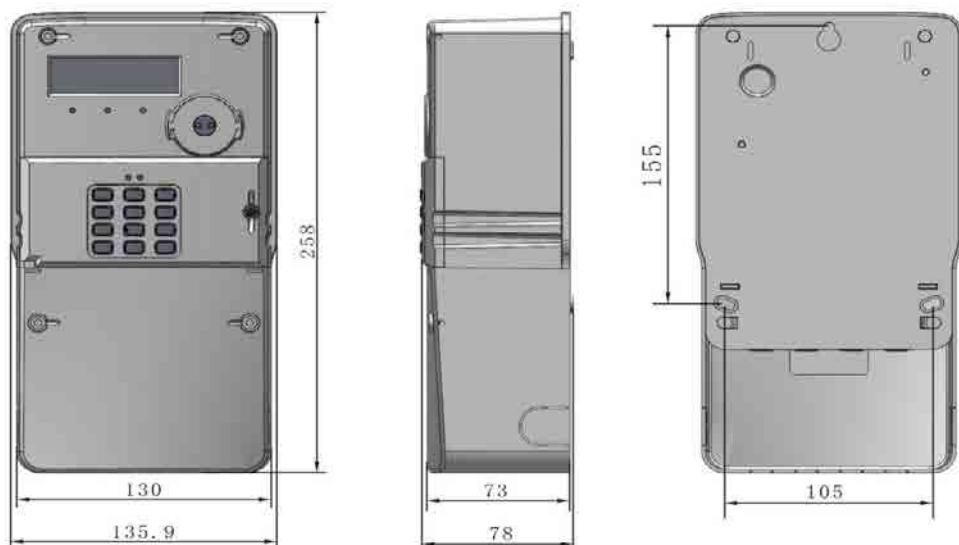
➤ **Security(LLS or HLS)**

- LLS support 3 level passwords for local and remotely communication
- HLS support authentication and encryption for local and remotely communication

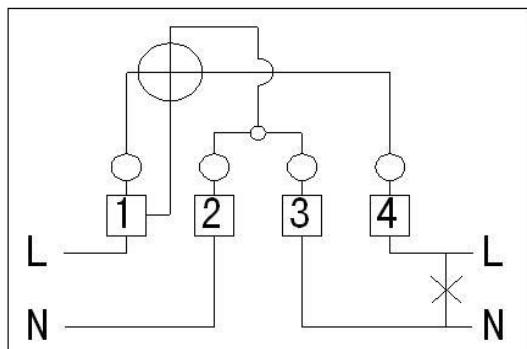
➤ **HAN communication**

- RS485
- Built-in RF module or FSK PLC

➤ **Meter Installation Dimensions**



➤ **Meter Wiring**



➤ **Certificates**





DTSY341-5V6

Three Phase Smart Prepayment Meter

Designed for residential and small commercial consumers

Providing a strong foundation for your Smart Grid initiatives

www.wasion.com

Description	Value
Voltage	
Reference voltage	3×230V/400V
operating voltage range	70%-130%Un
Current	
Basic current	5A
Maximum current	100A
Starting current	0.4%lb
Accuracy	Class 1.0 for kWh, Class 2.0 for kvarh
Frequency	
Rated frequency (fn)	50Hz or 60Hz
Frequency range	±2%
Pulse constant	Default: 1000 imp/kWh, 1000 imp/kvarh
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
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	UC3
Maximum switching Voltage	230VAC
Maximum switching current	120A
Maximum switching power	27.6kVA
Lifetime	≥ 15 years

■ Main Functionalities

➤ Measurement

- 3 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): $\leq 0.5s$
- 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

- Replaceable battery for RTC and open cover tamper detect

➤ 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.

➤ Profile

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

➤ Auxiliary contact

- S0(27V, 27mA Max)

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

- RS485
- Built-in RF module or FSK PLC
- Communicate with in-home display
- Protocol: DLMS/COSEM

➤ **Disconnecter 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

➤ **Optical port**

- Comply with IEC62056-21 standard
- Protocol: DLMS(IEC62056-21 mode E)

➤ **Security(LLS or HLS)**

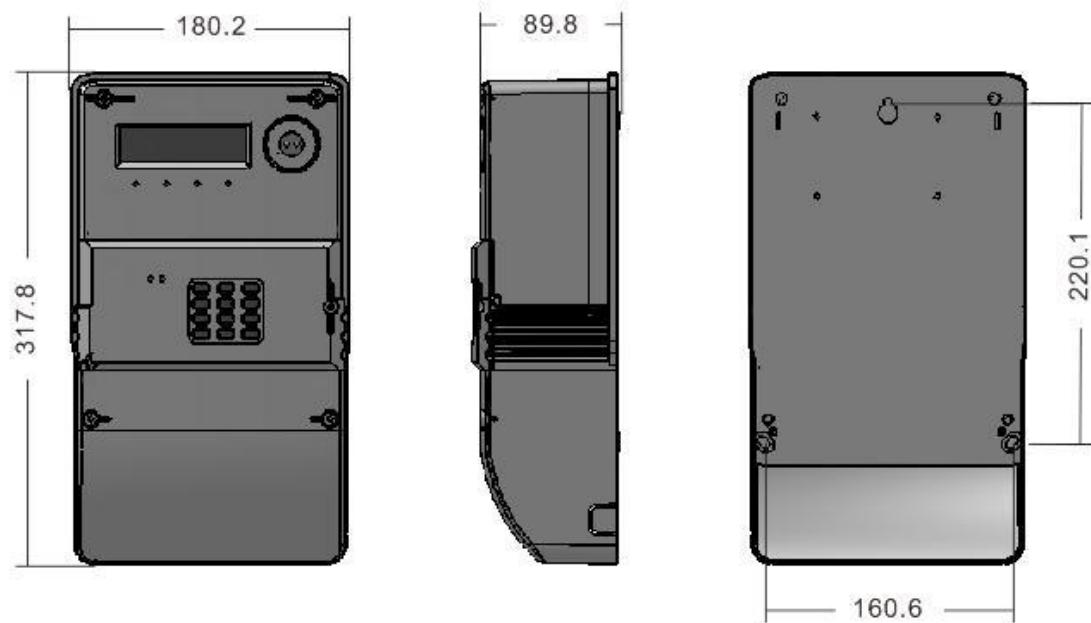
- LLS support 3 level passwords for local and remotely communication
- HLS support authentication and encryption for local and remotely communication

➤ **WAN communication(optional)**

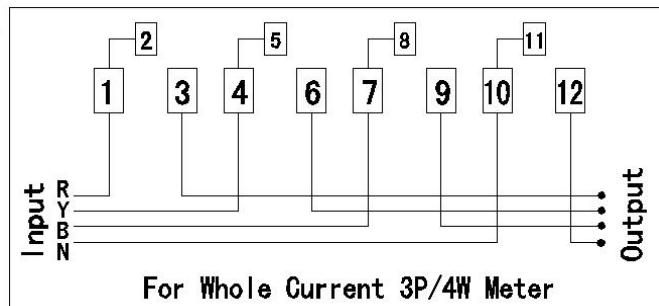
- Plug and play module to support various communication technology
- G3 PLC or BPLC
- GPRS
- Protocol: DLMS/COSEM

➤ **HAN Communication**

➤ **Meter Installation Dimensions**



➤ **Meter Wiring**



➤ **Certificates**



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DDSD101- DT

Single Phase Smart Prepayment Meter

Designed for residential and small commercial consumers

Providing a strong 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%lb
Accuracy	Class 1.0 for kWh
Frequency	
Rated frequency (fn)	50Hz or 60Hz
Frequency range	±2%
Pulse constant	Default: 1000 imp/kWh
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
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	≥ 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): $\leq 0.5s$
- 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

- Communicate with in-home display
- Protocol: DLMS/COSEM

➤ **Optical port**

- Comply with IEC62056-21 standard
- Protocol: DLMS(IEC62056-21 mode E)

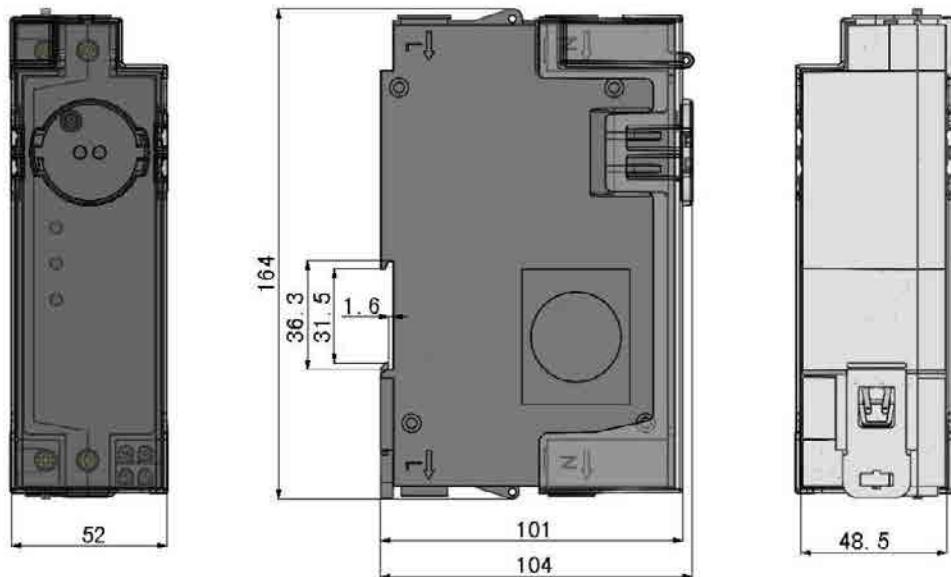
➤ **Security(LLS or HLS)**

- LLS support 3 level passwords for local and remotely communication
- HLS support authentication and encryption for local and remotely communication

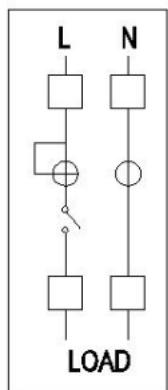
➤ **HAN Communication**

- RS485
- Built-in RF module or FSK PLC

➤ **Meter Installation Dimensions**



➤ **Meter Wiring**



➤ **Certificates**





aMeter300-C

Three Phase Smart Energy Meter

Designed for commercial and industrial energy management

Providing flexible solution for your AMI initiatives

Description	Value
Voltage	Reference voltage 3×57.7/100-240/415V (Indirect) operating voltage range 70% ~ 130%Un
Current	Basic current 1A (Indirect) Maximum current 10A (Indirect) Starting current 0.1%lb (Indirect)
Accuracy	Class 0.2S or Class 0.5S for kWh (Indirect) Class 0.5S or Class 2.0 for kvarh
Frequency	Rated frequency (fn) 50Hz Frequency range ±5%
Pulse constant	Default: 8000 imp/kWh , 8000 imp/kvarh(Indirect)
Temperature	Normal Operation range -25 °C to +55 °C Limit operation range -40 °C to +70 °C Limit range for storage and transport -40 °C to +85 °C
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 ≤1VA
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 8 kV Immunity to electromagnetic RF fields 10V/m at reference current, 30V/m without current

Protection degree

IP54

Lifetime

≥ 15 years

■ Main Functionalities

➤ Measurement

- 4 quadrant measurement
- Instantaneous Vrms, Irma, Frequency,
- Import/export active energy, import/export reactive energy, 4Q reactive energy, apparent energy
- Lots of energy and demand registers (A+, A-, R+, R-, S+,S-)
- THD

➤ RTC

- Clock accuracy (daily deviation): $\leq 0.5s/day$
- Gregorian calendar
- Automatic leap year switch, DST

➤ Tariff

- Up to 8tariff
- Up to 100 exception day/Holiday
- Up to 6 seasons and 6 week tables
- Up to 8 day tables and each table has 10 entries
- Active and passive calendar support

➤ Battery backup

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

➤ Auxiliary contact

- Relay for external load control(240V 5A)

➤ Firmware upgrading

- The firmware can be upgraded via local interface and WAN interface.
- Schedule activity image support

- Roll-back last version image support

➤ Profiles

- Energy and power profiles (15min(default), up to 32 channels, up to 60 days)
- Daily profiles (24h, up to 32 channels, up to 150 days)
- Month billing profiles, Up to 13 billing records and 32 channels
- Configurable interval and capture objects of profiles

➤ Event record

- Fraud detection log (Meter cover, terminal cover, current reverse, magnetic detect etc.)
- Failure detection log (Memory error, relay error, battery low voltage, clock invalid etc.)
- Power quality event log (Under voltage / Over voltage (Sag/Swell), Over current/current imbalance, Power up/down, etc.)
- Security event log (Parameters change, clock adjust, etc.)
- Standard event log (Power up/on, time synchronization, etc)

➤ Prepayment function(optional)

- 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

➤ Disconnect 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

- RS485/P1,Mbus
- RF module or FSK PLC
- Communicate with in-home display
- Protocol: DLMS/COSEM

➤ Optical port

- Comply with IEC62056-21standard
- Protocol: DLMS(IEC62056-21 mode E)

➤ Security(LLS or HLS)

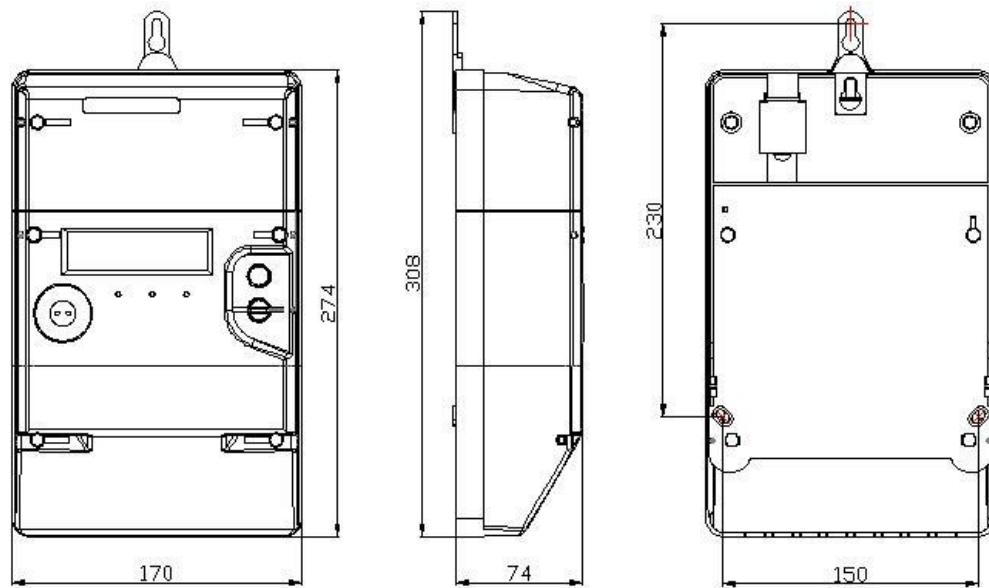
- LLS support 3 level passwords for local and remote communication
- HLS support authentication and encryption for local and remote communication

➤ WAN Communication(optional)

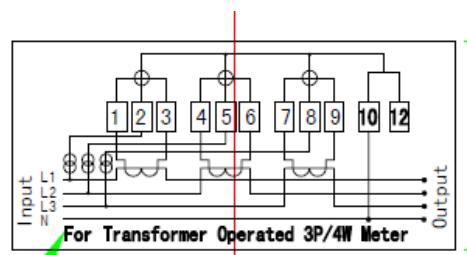
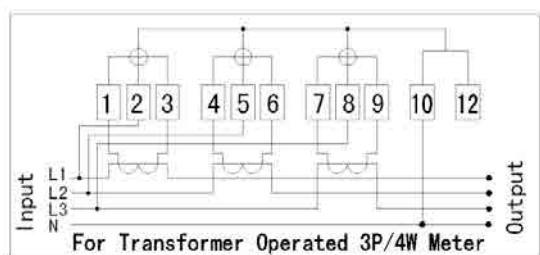
- Plug and play module to support various communication technology
- G3 PLC or BPLC
- GPRS, 3G, 4G
- Third part communication technology(Trilliant OSDI/RPMA, ITRON, HUAWEI, NURI, etc)
- Protocol: DLMS/COSEM

➤ HAN communication(optional)

➤ **Meter Installation Dimensions**



➤ **Meter Wiring**



➤ **Certificates**

MID 

KEMA

dlms
device
language
message
specification





aMeter300

Three Phase Smart Energy Meter

Designed for commercial and industrial energy management

Providing flexible solution for your AMI initiatives

Description	Value
Voltage	
Reference voltage	3×230V (Direct)
operating voltage range	70% ~ 130%Un
Current	
Basic current	5A (Direct),10A (Direct)
Maximum current	60A(Direct),100A (Direct)
Starting current	0.1%lb (Direct)
Accuracy	Class 1 for kWh (Direct) Class 2.0 for kvarh
Frequency	
Rated frequency (fn)	50Hz
Frequency range	±5%
Pulse constant	Default: 1600 imp/kWh ,1600 imp/kvarh(Direct)
Temperature	
Normal Operation range	-25 °C to +55 °C
Limit operation range	-40 °C to +70 °C
Limit range for storage and transport	-40 °C to +85 °C
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	≤1VA
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	8 kV
Immunity to electromagnetic RF fields	10V/m at reference current, 30V/m without current

Protection degree	IP54
Breaker	Optional
Lifetime	Bi-stable relay 10000 cycles at $I_{max}PF=1$ and $PF=0.5L$
Performance	UC3
Maximum switching Voltage	250VAC
Maximum switching current	120A
Maximum switching power	30kVA
Lifetime	≥ 15 years

■ Main Functionalities

➤ Measurement

- 4 quadrant measurement
- Instantaneous Vrms, Irma, Frequency,
- Import/export active energy, import/export reactive energy, 4Q reactive energy, apparent energy
- Lots of energy and demand registers (A+, A-, R+, R-, S+,S-)
- THD

➤ RTC

- Clock accuracy (daily deviation): $\leq 0.5\text{s/day}$
- Gregorian calendar
- Automatic leap year switch, DST

➤ Tariff

- Up to 8tariff
- Up to 100 exception day/Holiday
- Up to 6 seasons and 6 week tables
- Up to 8 day tables and each table has 10 entries
- Active and passive calendar support

➤ **Battery backup**

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

➤ Load control

- Remote control command support
- Over current control support
- Power limit support

➤ Auxiliary contact

- Relay for external load control(240V 5A)

➤ **Firmware upgrading**

- The firmware can be upgraded via local interface and WAN interface.
- Schedule activity image support
- Roll-back last version image support

➤ **Profiles**

- Energy and power profiles (15min(default), up to 32 channels, up to 60 days)
- Daily profiles (24h, up to 32 channels, up to 150 days)
- Month billing profiles, Up to 13 billing records and 32 channels
- Configurable interval and capture objects of profiles

➤ **Event record**

- Fraud detection log (Meter cover, terminal cover, current reverse, magnetic detect etc.)
- Failure detection log (Memory error, relay error, battery low voltage, clock invalid etc.)
- Power quality event log (Under voltage / Over voltage(Sag/Swell) ,Over current/current imbalance, Power up/down, etc.)
- Security event log (Parameters change, clock adjust, etc.)
- Standard event log (Power up/on, time synchronization, etc)

➤ **Prepayment function(optional)**

- 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

➤ **Disconnect 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

- Protocol: DLMS/COSEM

➤ **HAN communication(optional)**

- RS485/P1,Mbus
- RF module or FSK PLC
- Communicate with in-home display
- Protocol: DLMS/COSEM

➤ **Optical port**

- Comply with IEC62056-21standard
- Protocol: DLMS(IEC62056-21 mode E)

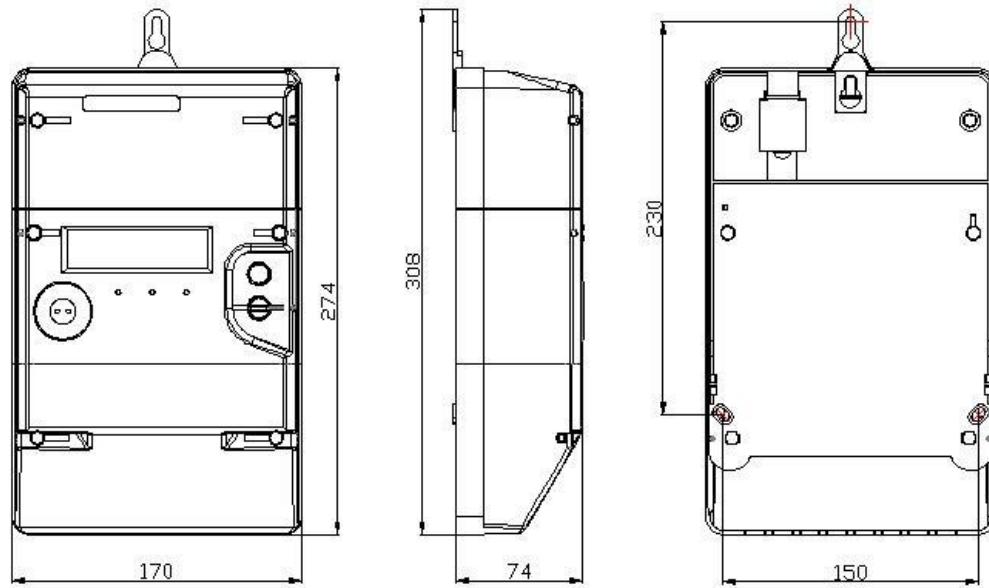
➤ **Security(LLS or HLS)**

- LLS support 3 level passwords for local and remote communication
- HLS support authentication and encryption for local and remote communication

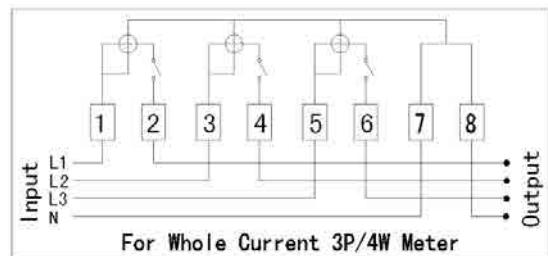
➤ **WAN Communication(optional)**

- Plug and play module to support various communication technology
- G3 PLC or BPLC
- GPRS, 3G, 4G
- Third part communication technology(Trilliant OSDI/RPMA, ITRON, HUAWEI, NURI, etc)

➤ **Meter Installation Dimensions**



➤ **Meter Wiring**



➤ **Certificates**





aMeter100-KT

Single Phase Smart Energy Meter

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Providing a strong 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,100A
Starting current	0.4%lb for class1
Accuracy	Class 1.0for kWh,Class 2.0 for kvarh
Frequency	
Rated frequency (fn)	50Hz or 60Hz
Frequency range	±2%
Pulse constant	Default: 1000 imp/kWh , 1000 imp/kvarh
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
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 Indoor



Breaker	Optional
Lifetime	Bi-stable relay 10000 cycles at $I_{max}PF=1$ and $PF=0.5L$
Performance	UC2
Maximum switching Voltage	250VAC
Maximum switching current	90A, 120A
Maximum switching power	22.5KVA(90A); 30kVA(120A)
Lifetime	≥ 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): $\leq 0.5s$
- 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.

➤ Profile

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

- 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(optional)

- 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
- GPRS
- Protocol: DLMS/COSEM

- Comply with IEC62056-21 standard

- Protocol: DLMS(IEC62056-21 mode E)

➤ **Security(LLS or HLS)**

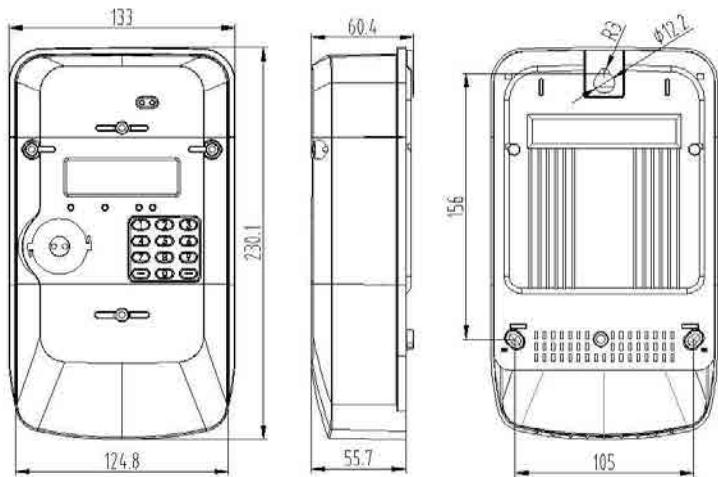
- LLS support 3 level passwords for local and remotely communication
- HLS support authentication and encryption for local and remotely communication

➤ **HAN communication**

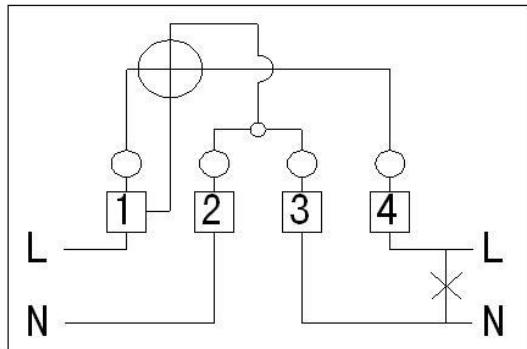
- RS485/MBUS
- Built-in RF module or FSK PLC
- Communicate with in-home display
- Protocol: DLMS/COSEM

➤ **Optical port**

➤ Meter Installation Dimensions



➤ Meter Wiring



➤ Certificates



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<http://www.wasion.com>



aMeter100-GT

Single Phase Smart Energy Meter

Designed for residential and industrial energy management

Providing flexible solution for your AMI initiatives

Description	Value
Voltage	
Reference voltage	230V
operating voltage range	70% ~ 130%Un
Current	
Basic current	5A
Maximum current	80A; 100A
Starting current	0.4%lb for class1
	0.1%lb for class 0.5S
Accuracy	
Class 1.0for kWh,Class 2.0 for kvarh	
	Class 0.5S for kWh,Class 2.0 for kvarh
Frequency	
Rated frequency (fn)	50Hz
Frequency range	±5%
Pulse constant	Default: 1600 imp/kWh , 1600 imp/kvarh
Temperature	
Normal Operation range	-25°C to +55°C
Limit operation range	-40°C to +70°C
Limit range for storage and transport	-40°C to +85°C
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	≤1 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)	8 kV
Immunity to electromagnetic RF fields	10V/m at reference current, 30V/m without current

Protection degree	IP54
Breaker	Optional
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; 120A
Maximum switching power	22.5KVA(90A); 30KVA(120A)
Lifetime	\geq 15 years

■ Main Functionalities

➤ Measurement

- 4 quadrant measurement
- Instantaneous Vrms, Irms, Frequency,
- Import/export active energy, import/export reactive energy, 4Q reactive energy, apparent energy
- Lots of energy and demand registers (A+, A-, R+, R-, +S,-S)

➤ RTC

- Clock accuracy (daily deviation): $\leq 0.5s/day$
- Gregorian calendar
- Automatic leap year switch, DST

➤ Tariff

- Up to 4 tariff
- Up to 100 exception day/Holiday
- Up to 6 seasons and 6 week tables
- Up to 8 day tables and each table has 10 entries
- Active and passive calendar support

➤ Battery backup

- Flexible backup power for RTC, including replaceable battery or inside 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 local interface and WAN interface.

- Schedule activity image support
- Roll-back last version image support

➤ Profiles

- Energy and power profiles (30min(default), up to 32 channels, up to 90 days)
- Daily profiles (24h, up to 32 channels, up to 32 days)
- Month billing profiles, Up to 13 billing records and 32 channels
- Configurable interval and capture objects of profiles

➤ Event record

- Fraud detection log (Meter cover, terminal cover, current reverse, magnetic detect etc.)
- Failure detection log (Memory error, relay error, battery low voltage, clock invalid etc.)
- Power quality event log (Under voltage / Over voltage, (Sag/Swell), Power up/down, etc.)
- Over current/Current imbalance
- Security event log (Parameters change, clock adjust, etc.)
- Standard event log(Power up/down, synchronization, etc.)

➤ Prepayment function(optional)

- 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

➤ **Disconnect 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
- GPRS, 3G, 4G
- Third part communication technology(Trilliant OSDI/RPMA, ITRON, HUAWEI, NURI, etc)
- Protocol: DLMS/COSEM

➤ **HAN communication (optional)**

- RF module or FSK PLC
- Communicate with in-home display
- Protocol: DLMS/COSEM

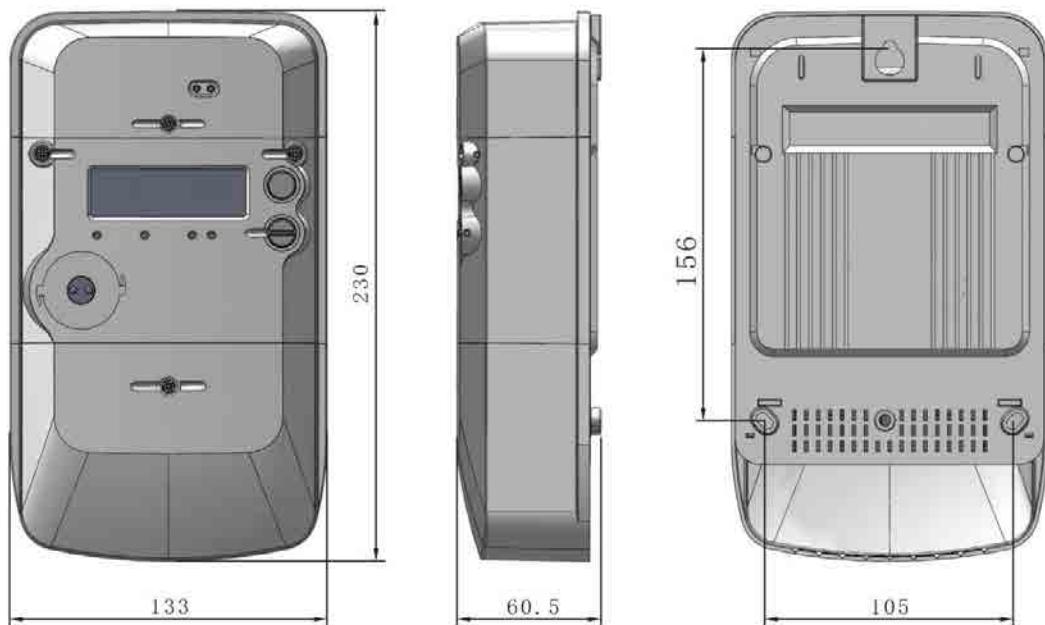
➤ **Optical port**

- Comply with IEC62056-21standard
- Protocol: DLMS(IEC62056-21 mode E)

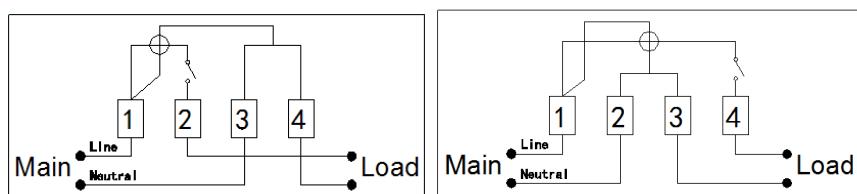
➤ **Security(LLS or HLS)**

- LLS support 3 level passwords for local and remote communication
- HLS support authentication and encryption for local and remote communication

➤ **Meter Installation Dimensions**



➤ **Meter Wiring**



➤ **Certificates**



MID



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DDSD101- J6

Single Phase Smart Prepayment Meter

Designed for residential and small commercial consumers

Providing a strong foundation for your Smart Grid initiatives

Description	Value
Voltage	
Reference voltage	230V
operating voltage range	70%-120%Un
Current	
Basic current	5A
Maximum current	80A
Starting current	0.4%lb
Accuracy	Primary channel : Class 1.0 for kWh Sub-channel : Class 1.0 for kWh
Frequency	
Rated frequency (fn)	50Hz
Frequency range	±2%
Pulse constant	Default: 1000 imp/kWh
Temperature	
Normal Operation range	-25°C to +60°C
Limit operation range	-40°C to +70°C
Limit range for storage and transport	-25°C to +85°C
Humidity	30%~95% non-condensing
Power Consumption	
Power consumption in voltage circuit (active)	≤2 W
Power consumption in voltage circuit (apparent)	≤10 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 Indoor

Breaker

Lifetime	Bi-stable relay
	5000cycles at I_{max} PF=1.0 and PF=0.5L
Performance	UC2
Maximum switching Voltage	250VAC
Maximum switching current	80A
Maximum switching power	20.0kVA

LCD Display

Digit size	8mm x 4mm
Number of digits	8

Lifetime	≥ 10 years
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■ Main Functionalities

➤ Measurement

- 2 element, 4 quadrant
- Instantaneous Vrms, Irma, Frequency, PF, kW, kVA
- Lots of energy and demand registers (A+, A--)

➤ LCD display

- Large digit LCD display, easy for reading
- Display readable without main power
- LCD backlights to increase readability in low light conditions
- Flexible display mode

➤ RTC

- Clock accuracy (daily deviation): $\leq 0.5s$
- Gregorian calendar
- Automatic leap year switch

➤ Tariff

- Up to 4 tariff
- Up to 100 exception special holiday/public holiday
- Up to 12 seasons and 12 week tables
- Up to 8 day tables and each table has 10 entries
- Active and passive calendar support

➤ Battery backup

- Non-replaceable battery for RTC and open cover tamper detect
- The threshold of battery failure detection is configurable

➤ Load control

- Remote control command support
- Power limit support

➤ Power state monitor

- Under voltage / Over voltage
- Power off events

➤ Event record

- Tamper detect (Meter cover open, terminal cover open, current reverse, etc.)
- Failure detect (Memory error, relay error, battery low voltage, clock invalid, etc.)
- Power quality event (Under voltage / Over voltage / Over current, etc.)
- Security event (Parameters change, clock adjust, etc.)

➤ Prepayment function

- Configurable prepayment and post-payment mode
- Three levels for remaining credit alarm
- Emergency credit, friendly time and friendly days support

➤ STS Standard TOKEN

- 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

➤ Relay Control

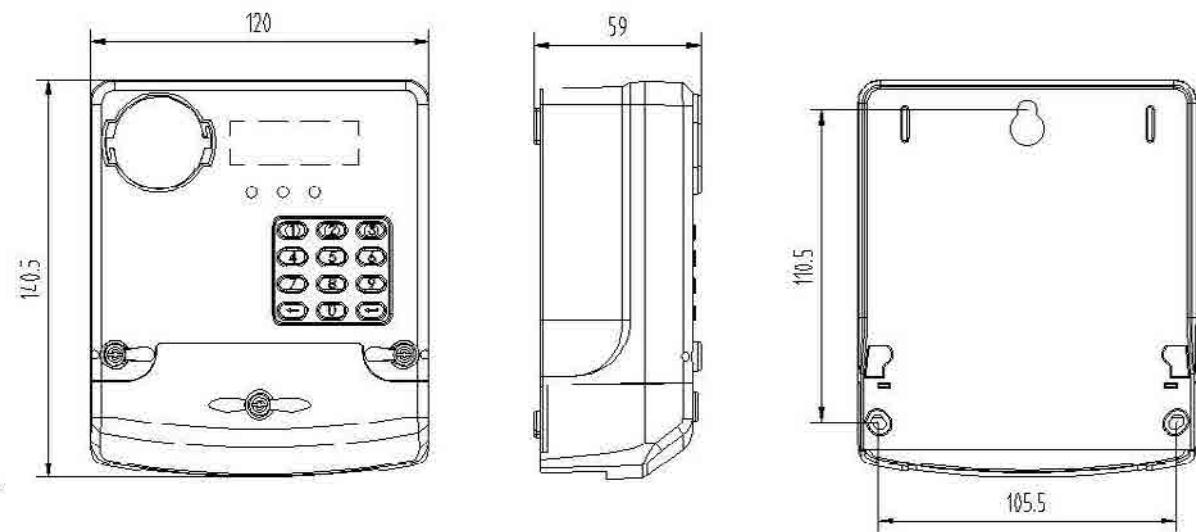
- Over power limit disconnect and reconnect automatically according to configurable delay time
- Tamper disconnect(open meter cover, open terminal cover, magnetic detection), reconnect by TOKEN
- Disconnect in case power imbalance, neutral error, current reverse, reconnect by TOKEN

- No credit disconnect , reconnect by charge
- Disconnect when power off and reconnect when power on
- Special token for relay control
- Using a passwords for remotely communication

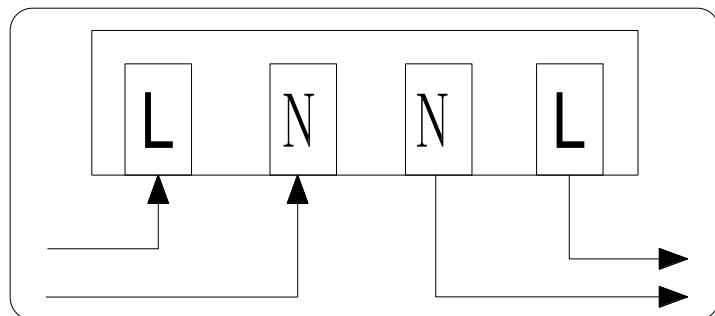
➤ **Optical port**

- Comply with IEC1107 standard

➤ **Meter Installation Dimensions**



➤ **Meter Wiring**



➤ **Certificates**



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aMeter100-DT

Single Phase Smart Energy Meter

Designed for residential and small commercial customers

Providing a strong foundation for your Smart Grid initiatives

Description	Value
Voltage	
Reference voltage	230V
operating voltage range	60%-130%Un
Current	
Basic current	5A
Maximum current	80A; 100A
Starting current	0.4%lb for class1
Accuracy	Class 1.0for kWh,Class 2.0 for kvarh
Frequency	
Rated frequency (fn)	50Hz or 60Hz
Frequency range	±2%
Pulse constant	Default: 1000 imp/kWh , 1000 imp/kvarh
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
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 Indoor
Breaker	Optional
Lifetime	Bi-stable relay 10000 cycles at $I_{max}PF=1$ and $PF=0.5L$
Performance	UC3
Maximum switching Voltage	250VAC
Maximum switching current	90A,120A
Maximum switching power	22.5kVA(90A); 30KVA(120A)
Lifetime	≥ 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): $\leq 0.5s$
- 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.

➤ Profile

- Energy and power profiles (30min(default), up to 20 channels, up to 85 days)
- 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(optional)

- 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

- Communicate with in-home display
- Protocol: DLMS/COSEM

➤ **Optical port**

- Comply with IEC62056-21 standard
- Protocol: DLMS(IEC62056-21 mode E)

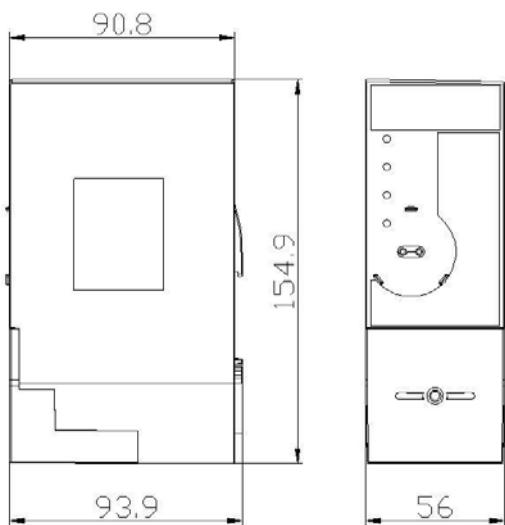
➤ **Security(LLS or HLS)**

- LLS support 3 level passwords for local and remotely communication
- HLS support authentication and encryption for local and remotely communication

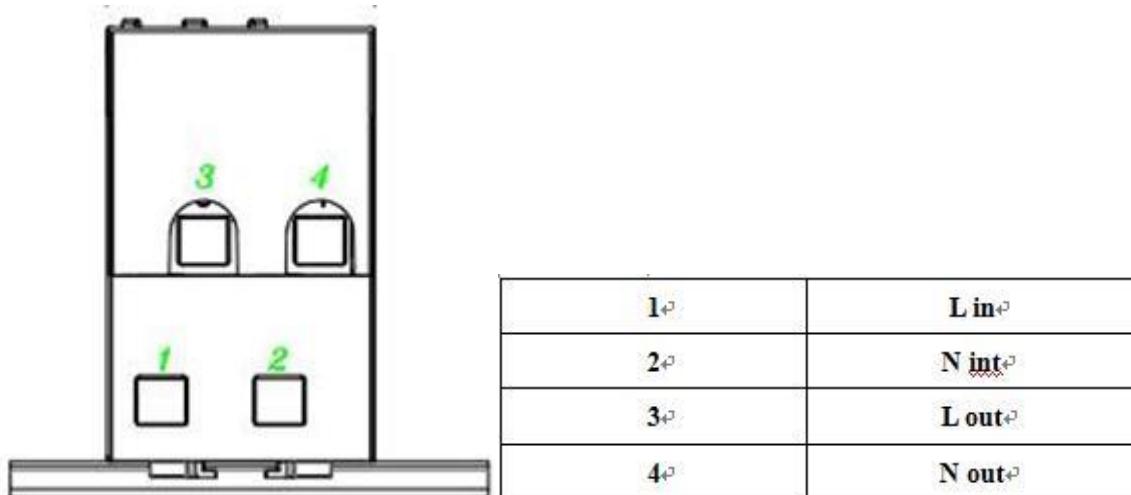
➤ **HAN communication**

- RS485/MBUS
- Built-in RF module or FSK PLC

➤ Meter Installation Dimensions



➤ Meter Wiring



➤ Certificates



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aMeter300-B

Three Phase Smart Energy Meter

Designed for commercial and industrial energy management

Providing flexible solution for your AMI initiatives

Description	Value
Voltage	
Reference voltage	3×230V (Direct)
operating voltage range	70% ~ 130%Un
Current	
Basic current	5A (Direct),10A (Direct)
Maximum current	60A(Direct),100A (Direct)
Starting current	0.4%lb (Direct)
Accuracy	Class 1.0for kWh (Direct) Class 2.0 for kvarh
Frequency	
Rated frequency (fn)	50Hz
Frequency range	±5%
Pulse constant	Default: 1600 imp/kWh ,1600 imp/kvarh(Direct)
Temperature	
Normal Operation range	-25 °C to +55 °C
Limit operation range	-40 °C to +70 °C
Limit range for storage and transport	-40 °C to +85 °C
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	≤1VA
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	8 kV
Immunity to electromagnetic RF fields	10V/m at reference current, 30V/m without current

Protection degree	IP54
Breaker	Optional
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	120A
Maximum switching power	30kVA
Lifetime	≥ 15 years

■ Main Functionalities

➤ Measurement

- 4 quadrant measurement
- Instantaneous Vrms, Irms, Frequency,
- Import/export active energy, import/export reactive energy, 4Q reactive energy, apparent energy
- Lots of energy and demand registers (A+, A-, R+, R-, S+, S-)
- THD

➤ RTC

- Clock accuracy (daily deviation): $\leq 0.5\text{s/day}$
- Gregorian calendar
- Automatic leap year switch, DST

➤ Tariff

- Up to 8 tariff
- Up to 100 exception day/Holiday
- Up to 6 seasons and 6 week tables
- Up to 8 day tables and each table has 10 entries
- Active and passive calendar support

➤ Battery backup

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

➤ Load control

- Remote control command support
- Over current control support
- Power limit support

➤ Auxiliary contact

- Relay for external load control(240V 5A)

➤ Firmware upgrading

- The firmware can be upgraded via local interface and WAN interface.
- Schedule activity image support
- Roll-back last version image support

➤ Profiles

- Energy and power profiles (15min(default), up to 32 channels, up to 60 days)
- Daily profiles (24h, up to 32 channels, up to 150 days)
- Month billing profiles, Up to 13 billing records and 32 channels
- Configurable interval and capture objects of profiles

➤ Event record

- Fraud detection log (Meter cover, terminal cover, current reverse, magnetic detect etc.)
- Failure detection log (Memory error, relay error, battery low voltage, clock invalid etc.)
- Power quality event log (Under voltage / Over voltage(Sag/Swell) ,Over current/current imbalance, Power up/down, etc.)
- Security event log (Parameters change, clock adjust, etc.)
- Standard event log (Power up/on, time synchronization, etc)

➤ Prepayment function(optional)

- 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

➤ **Disconnect 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

- Protocol: DLMS/COSEM

➤ **HAN communication(optional)**

- RS485/P1,Mbus
- RF module or FSK PLC
- Communicate with in-home display
- Protocol: DLMS/COSEM

➤ **Optical port**

- Comply with IEC62056-21standard
- Protocol: DLMS(IEC62056-21 mode E)

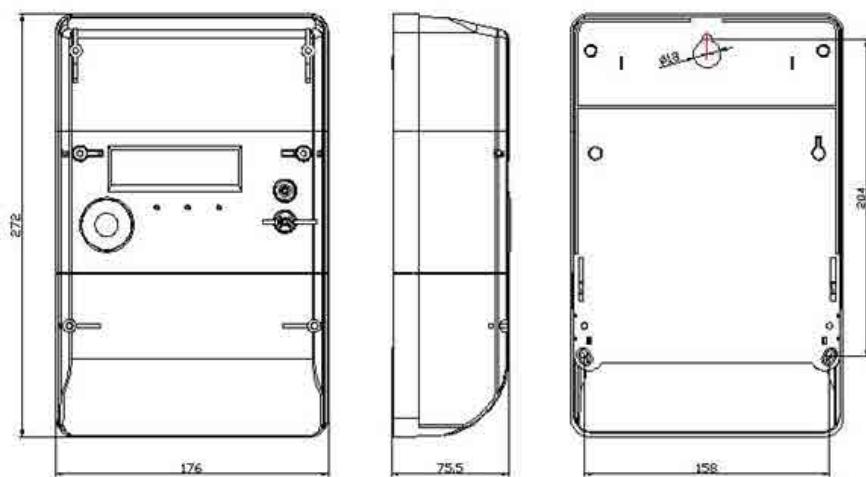
➤ **Security(LLS or HLS)**

- LLS support 3 level passwords for local and remote communication
- HLS support authentication and encryption for local and remote communication

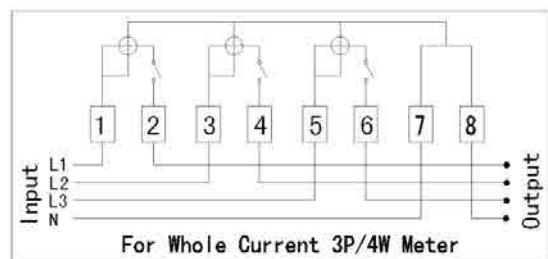
➤ **WAN Communication(optional)**

- Plug and play module to support various communication technology
- G3 PLC or BPLC
- GPRS, 3G, 4G
- Third part communication technology(Trilliant OSDI/RPMA, ITRON, HUAWEI, NURI, etc)

➤ **Meter Installation Dimensions**



➤ **Meter Wiring**



➤ **Certificates**

