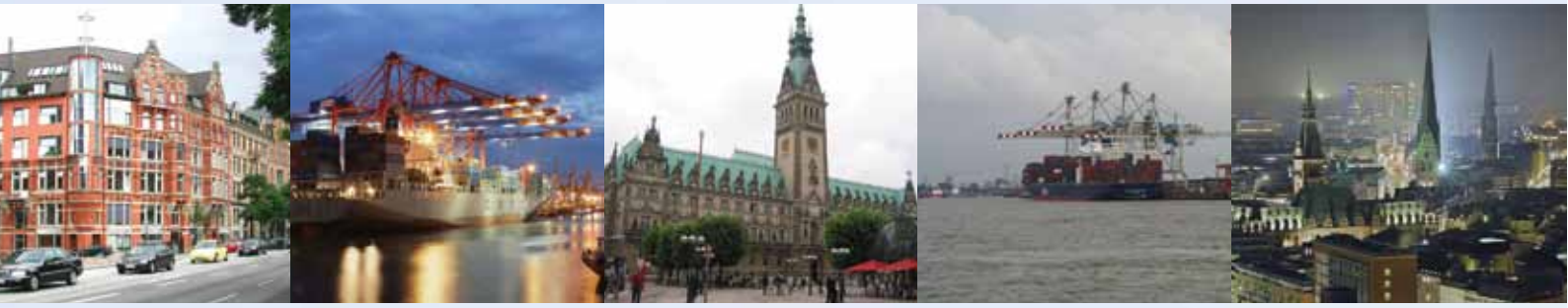


kwh Electric Meters





COMPANY PROFILE

MERKUR UEBERSEEHANDEL GmbH was founded in the Port-City of Hamburg, Germany in 2003 with the purpose of handling the export and import business of the MERKUR brand.

We are specialising in the production and distribution of high quality, state-of-the-art technology light sources, light fixtures and applications, cables and wires, power distribution and electrical installation materials. Our mission objective is the worldwide supply of first class quality materials.

In cooperation with our clients we are constantly expanding our range of products and the markets we supply. Uncompromising warranted quality at competitive price levels is our formula for success.

Our customers are mainly import and whole sale organizations, industries, contractors, power authorities and governmental organizations. Along with favourable prices we have a flexible attitude towards individual needs.

We thank you for your interest in our products and services.



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WATT-HOUR METERS INDUCTIVE

Single-Phase / Three-Phase



DWM 230



DWM 273



DTM 310

APPLICATION

The Watt-Hour-Meters are induction meters which are applicable to measure the power consumption at a rated current and frequency (view tables) in electric wire networks.

CONSTRUCTIONS

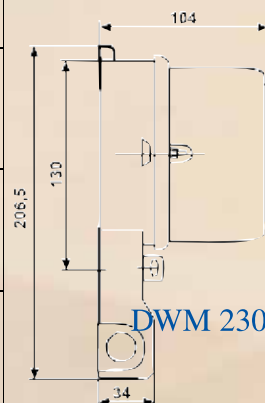
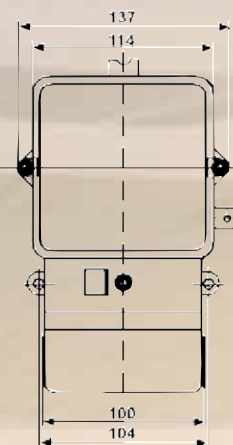
The meters have state of the art design, rational structure and features of high overload and low power loss, long life.

STANDARD IEC 60521

DWM 230 and DWM 273 Single Phase Watt-Hour Meter

A single-phase induction watt-hour meter, applicable to measure the power consumption and power loss in electric wire networks. All technical targets are completely conforming to international standard IEC 60521. The meter has separable electromagnet with three kinds of bearing: single jewel, dual jewel, magnetic thrust and magnetic floating. The case is of steel with aluminium cover – on request non metallic versions are available. The die-cast frame is alloy aluminium with excellent mechanical strength.

Type	Accuracy	Rated Voltage (V)	Rated Current (A)	Overload Capacity	Starting Current	Insulation Performance
DWM 230	Class 2	220/240 V	2(4), 2.5(5) 3(6), 5(10) 10(20), 20(40) 30(60), 40(80)	200%lb	0,5%lb	AC voltage 2KVfor 1 minute impulse voltage 6kV
DWM 230	Class 2	220/240 V	2(6), 3(9) 5(15), 10(30) 15(45), 20(60)	300%lb	0,5%lb	AC voltage 2KVfor 1 minute impulse voltage 6kV
DWM 230	Class 2	220/240 V	5(20), 3(12) 10(40), 15(60) 20(80)	400%lb	0,5%lb	AC voltage 2KVfor 1 minute impulse voltage 6kV
DWM 273	Class 2	220/240 V	1.5(6), 2.5(10) 3(12), 5(20) 10(30), 10(40) 10(60), 15(60) 20(60), 20(80) 30(90), 30(100)	600% lb	0,5%lb	AC voltage 2KVfor 1 minute impulse voltage 6kV



DWM 230



DTM 310

Watt-Hour Inductive Meters

Types DWM 230 – DWM 273
Single-Phase Alternating Current
220/240 V
50/69 Hz

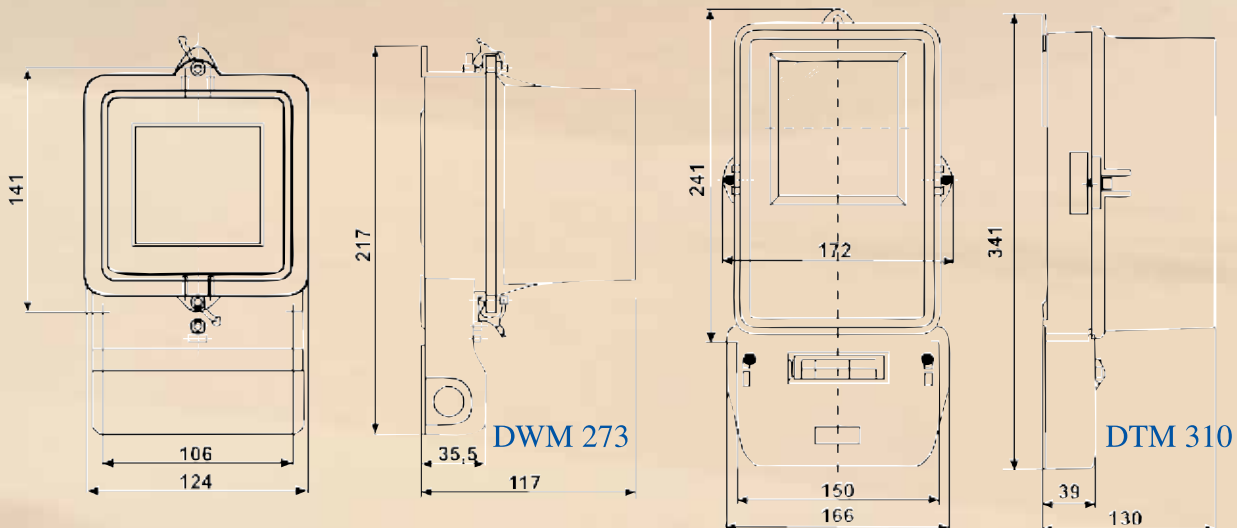
Type DTM 310
Three-Phase Current (photo)

3x220/380 V
3x230/400 V
3x240/415 V
3x57.7/100 V
50/60 Hz

DTM 310 Three Phase four-wire active energyWatt-Hour Meter

A three-phase induction watt-hour meter , applicable to measure the power consumption / power loss in electric networks at a rated current and frequency. All technical targets are completely conforming to international standard IEC 60521. The meter has a sub-closed electromagnetic core, the die-cast frame is made of alloy aluminium, assuring stable and reliable magnetism. The casing is of bakelite. Metallic versions are also available.

Type	Accuracy	Rated Voltage (V)	Rated Current (A)	Connection Mode	Insulation Performance
DTM 310	Class 2	3x57,7/100 V 3x220/380 V 3x230/400 V 3x240/415 V	3x1(2), 3x3(6) 3x1.5(6)	Input through current transformer	AC voltage 3KVfor 1 minute impulse voltage 6kV
			3x5(20), 3x10(40), 3x15(60), 3x20(80), 3x20(100)	Direct input	AC voltage 3KVfor 1 minute impulse voltage 6kV
	Class 1	3x1(2), 3x3(6) 3x1.5(6)	Input through current transformer	AC voltage 3KVfor 1 minute impulse voltage 6kV	



SINGLE PHASE WATT HOUR METERS ELECTROMECHANICAL Front Board Installed Active Energy Meter



DWM 273 RL

DWM 273 RL Single Phase electromechanical Front Board Installed Active Energy Watt-Hour Meter

Application
 Type DWM 273 RL single phase electromechanical front board installed active energy meters are latest technology single phase two wire active energy meters. The kWh meters fully comply to international standards and meet all requirements as stipulated in IEC 62053-11 for single phase active energy meters. They accurately and directly measure 50Hz or 60Hz active energy consumption from single phase AC electricity circuits, displaying the consumption by analogue 6-digit counter. The meters are suitable for indoor installation, outdoor installation requires a separate meter box/cabinet per meter, which we also can supply on request. The DWM 273 RL meters excel in the following categories: Overload, power loss, rated life time, appealing design

- Structure and Features**
- front board installation , the main body as well as the terminal block are made from high quality bakelite material which is moisture-resistant, fire-retardant, high temperature molded. The meter cover is made from high quality bakelite material and has a transparent glass window. It is rated IP51 and thereby has a good protection against climate related hazards and it is fully insulated.
 - aluminium molded meter frame with extreme mechanical and structural strength giving a high impact resistance.
 - voltage and current components being double insulated giving excellent electrical characteristics
 - bottom double jewel bearing, upper bearing of high wear resistance copper alloy bush and stainless steel needle (code -RL) giving the meters: ultra long operational life, minimal friction.
 - Alternatively we can supply meters with lower magnetic thrust bearing (code -RF) or magnetic suspension (code -RR)
 - all adjustment mechanisms on DWM 273 RL meters are applying "no Step" shifting mechanisms. Starting and creeping characteristics do not need to be adjusted.
 - mechanical 6 digits display by drum wheel mechanical register, alternatively also 5 digits counters are available on request
 - reverse running stop available upon request, standard execution without reverse running stop
 - without meter handle, this feature is also available on request
 - standard 1A wiring PNP (code -RL), alternatively we may also supply wiring type 1B PNP (code -RK)

Model	Accuracy	Reference Voltage (V)	Current Specification (A)	Starting Current	Insulation Performance
DWM 273 RL	Class 2	127	5 (20)	0,025	AC Voltage 4kv for 1 minute, 1.2/50us waveform impulse voltage 8kv
		230	10 (40)	0,05	
			20 (80)	0,1	
			30 (100)	0,15	

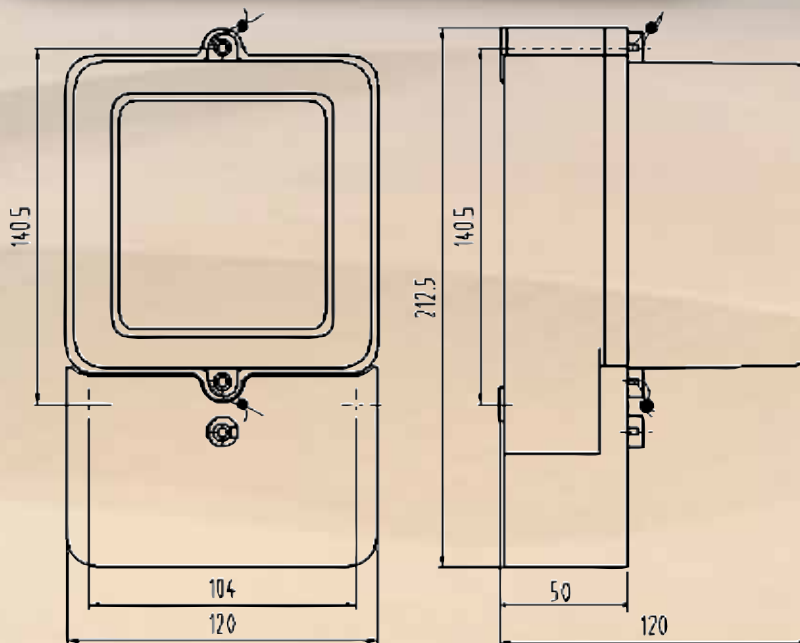
The DWM 273 RL meter is KEMA approved



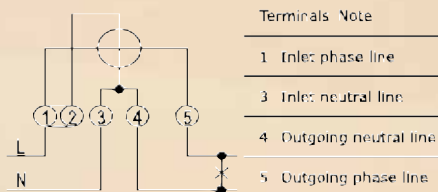
DWM 273 RL

**Watt-Hour Meters Electromechanical
 Front Board Installed
 Active Energy Meter**

**Type DWM 273 RL
 Single-Phase – 2 wire
 127 / 230 V
 measuring 50 or 60 Hz**



Wiring diagram (Type 1A)



Terminals Note

- 1 Inlet: phase line
- 3 Inlet: neutral line
- 4 Outgoing neutral line
- 5 Outgoing phase line

DWM 273 RL

DIGITAL WATT-HOUR METERS MERTRONIC ELECTRONIC Single Phase DSE 013



DSE 013

Type DSE 013 UI MERTRONIC Single Phase Electronic Watt-Hour Meter

Application

Type DSE 013 UI single phase watt hour meter is a new style front board installed active two wire energy meter. It adopts micro electronic technology using high quality integrated circuits and microchips. Advanced digital and SMT technologies apply and the meter complies with the class 1 technical requirements of international standard IEC 62053-21. It can directly measure 50Hz or 60Hz active energy consumption by application of step type motor impulse analogue register. It excels in reliability, high protection class (IP56), simple installation, appealing design, small volume and light weight. As an option a unidirectional register can be ordered for protection against hampering with the wires by the user.

Functions and Features

- pc body with transparent cover, uv stabilized, bottom and terminal are made of fire retardant black glass fibre and enhanced PC material
- front board three point fixed installation
- IP56 extremely good protection against climate effects
- anti impact capability of the housing and terminal cover
- high insulation performance
- housing can be closed either by conventional screws (serviceable) or by ultrasonic welding process (sealed and not serviceable)
- standard configuration 5+1 analogue digit counter display (99999.1kWh) by step type motor impulse register (code UI), 6+1 analogue counter available on request (code UE)
- standard configuration one passive port of pulse output (polarity) , optional additional passive port pulse output (nonpolarity) for communication with all kind of AMR systems in compliance with international standard IEC 62053-31 and DIN 43864 (needs to be specified on ordering)
- red LED indicator for the signal of energy impulse
- uni directional measuring of single phase two wire active energy consumption in compliance with IEC 62053-21
- direct connection standard configuration type 1A, optional type 1B
- standard version with long terminal cover for increased safety, optionally you may order a short terminal cover

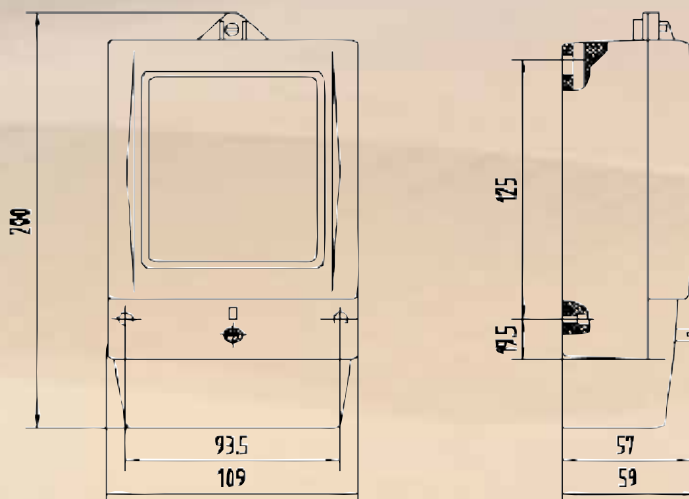
Model	Accuracy	Reference Voltage (V)	Current Specification (A)	Starting Current	Insulation Performance
DSE 013	Class 1	127 230	5 (30) 10 (60) 20 (100)	0,02 0,04 0,08	AC Voltage 4kv for 1 minute, 1.2/50us waveform impulse voltage 6kv



DSE 013

Digital Watt-Hour Meters MERTRONIC
Electronic Single Phase

MERTRONIC Type DSE 013
Single-Phase – 2 wires
127 / 230 V
measuring 50 or 60 Hz



DSE 013

DIGITAL WATT-HOUR METERS DUPROTRONIC

Electronic Three-Phase / Single-Phase



DTE 022

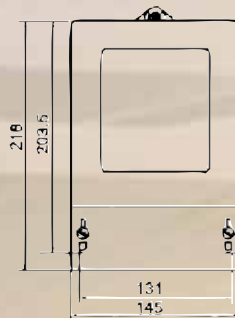


DSE 012

APPLICATION Type DTE 022 DUPROTRONIC Digital Three Phase Electronic Watt-Hour Meter
 Type DTE 022 serial three phase watt-hour meter is a new style three phase electronic watt-hour meter. It is used for measuring active or real time energy power loss in frequency 50 Hz or 60 Hz three phase AC electricity net. The active meter completely accord with relevant technical requirements of National standard GB/T17215-2002 and International Standard IEC 61036.

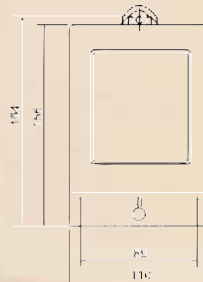
STRUCTURE and FEATURE

1. May select 5+1 digits register by step (analogue) or 6 digits LED (digital) or 7 digits LCD (digital) display.
2. The direction of electric power can be distinguished automatically, can measure unidirectional energy power and has function of anti-stealing electricity.
3. Has indication function when power cuts down and impulse output when no power.
4. Name: Digital three phase four wire active energy electronic watt-hour meter



DTE 22

Type	Accuracy	Rated Voltage (V)	Rated Current (A)	Connection Mode
DTE 022	class 2 class 1	3x380/220	3 x 1.5(6), 3x3(6)	Input through current transformer
			3x5(25), 3x10(50), 3x15(60), 3x20(80), 3x20(100)	Directly input
	3x100/57.5	3x1.5(6), 3x3(6)	Input through current voltage transformer	
DTE 022	class 2 class 1	3x380	3 x 1.5(6), 3x3(6)	Input through current transformer
			3x5(25), 3x10(50), 3x15(60), 3x20(80), 3x20(100)	Directly input
	3x100	3x1.5(6), 3x3(6)	Input through current voltage transformer	
DTE 022	class 2 class 1	3x380	3 x 1.5(6), 3x3(6)	Input through current transformer
			3x5(25), 3x10(50), 3x15(60), 3x20(80), 3x20(100)	Directly input
	3x100	3x1.5(6), 3x3(6)	Input through current voltage transformer	



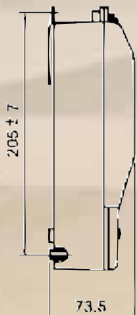
DSE 12



**Digital Watt-Hour Meters
Electronic DUPROTRONIC**

**Type DTE 022
Three-Phase Alternating Current**

**Type DSE 012
Single-Phase Alternative Current**



APPLICATION Type DSE 012 DUPROTRONIC Digital Single Phase Electronic Watt-Hour Meter
Type DSE 012 single phase watt-hour meter is a new style single phase electronic watt-hour meter. It adopts a large scale of integrated circuits and SMT techniques, whole screen and anti-jamming structure. The meter accord with relevant technical requirements of class 1 and class 2 single phase energy meter stipulated in National Standard GB/T17215-2003 and International Standard IEC 61036. It is used for measuring active energy power loss in frequency 50 Hz or 60 Hz single phase AC electricity nets and which is installed in meter boxes indoor or outdoor.

- STRUCTURE and FEATURE**
1. May select 5+1 digits register by step (analogue) or 6 digits LED (digital) or 7 digits LCD (digital) display.
 2. The direction of electric power can be distinguished automatically, can measure unidirectional energy power and has function of anti-stealing electricity.
 3. Impulse output when no power, convenient meter reading.
 4. May select many sorts of outlines

Type	Accuracy	Rated Voltage (V)	Rated Current (A)	Starting Current	Insulation Performance
DSE 012	Class 1	220 V	1.5(6), 1.5(9), 2.5(10), 3(12), 5(20), 5(30)	0.4%Ib	AC voltage 2 KV for 1 minute impulse voltage 6KV
	Class 2		10(40), 15(60), 20(80) 20(100), 30(100)	0.5%Ib	



**SINGLE PHASE ELECTRIC FRONT BOARD INSTALLED
 ACTIVE ENERGYWATT-HOUR METER
 Remote Reading and Programming (AMR)**



DSE015BS

DSE015BS Remote Reading an Programming (AMR)

SINGLE PHASE ELECTRONIC FRONT BOARD INSTALLED ACTIVE WATT-HOUR METER

Application

Model DSE015BS single phase electronic front board installed active energy meter is an electronic single phase two wire active energy meter. It adopts state of the art micro-electronics technology, using large scale integrated circuits, applying advanced digital and SMT technologies. The meter fully complies with the relevant technical requirements of class 1 for single phase active energy meters as per international standard IEC 62053-21. It measures accurately and directly 50Hz or 60Hz active energy consumption from single phase AC electricity networks. The meter has a seven digit unidirectional LCD display displaying the active energy consumption regardless the actual directional flow of the current (wire hampering proof). It has one infrared and one RS485 communication port each, conveniently allowing communication with all kinds of IEC 62053-31 and DIN 43864 AMR systems. The following features excel: outstanding accuracy and reliability, small volume, light weight, convenient installation, wire hampering proof, high protection class.

Functions and Features

- Front board three point fixed installation, cover is made of transparent UV resistant PC material , the body of the meter and the terminal are made of moisture resistant bakelite fire-retardant material with excellent weather resistance, high impact resistance, excellent dielectric strength.
- Optional 6+1 digits display (999999.1kWh, default) or 5+2 digits display, adjustable by users via infrared or RS485 data communication ports
- Standard configuration one pulse output port passive (polarity), optionally an additional pulse output passive (nonpolarity)for convenient communication with all kind of AMR systems complying with standard IEC 62053-31 and DIN 43864.
- One infrared and one RS485 data communication port each for setting and reading the meter. Default setting of communication protocol complying with standard DL/T645-1997, optionally any other communication protocol can be installed.
- Three LED indicators: power supply indicator, energy impulse indicator and communication/data transfer indicator.
- Automatic detection of the current flow direction .(if energy impulse indicator turns yellow, this indicates that the direction of the load current flow is in reverse).
- Unidirectional single component device measuring single phase two wire active energy consumption, unrelated to the actual direction of the load current flow complying with standard IEC 62053-21.
- Direct connection operation. There are two types of wiring you may select: Standard configuration wiring type 1A,optionally you may choose wiring type 1B (product configuration code is GF).
- Standard configuration: terminal block covered by long terminal cover, (optional short terminals cover, product configuration code BR).

Model	Accuracy	Reference Voltage (V)	Current Specification (A)	Starting Current	Insulation Performance
DSE015BS	Class 1	127 220-240	5 (30) 10 (60) 20 (100)	0,02 0,04 0,08	AC Voltage 4kv for 1 minute, 1.2/50us waveform impulse voltage 6kv

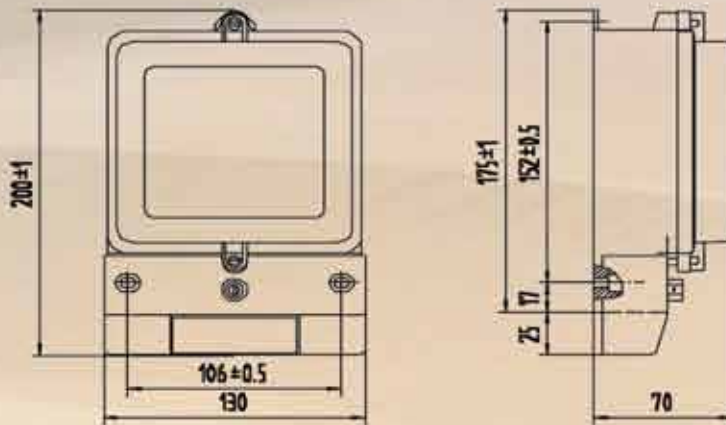


DSE015BS

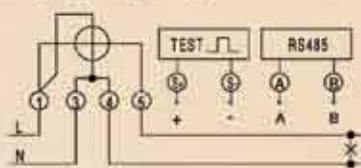
**Watt-Hour Meters Electronic
 Front Board Installed
 Active Energy Meter**

**Type DSE015BS
 Single-Phase
 127 / 220-240 V**

**AMR capable acc.
 IEC62053.31 / DIN 43864**



Wiring diagram (Type 1A)



Terminals	Note
1	Inlet phase line
3	Inlet neutral line
4	Outgoing neutral line
5	Outgoing phase line
S+ and S-	Passive pulse output port
A and B	Port of RS485 data communication

THREE PHASE FOUR WIRE ELECTRONIC MULTI-RATE FRONT BOARD INSTALLED ACTIVE ENERGY WATT HOUR METER



DTE041BM

DTE041BM

THREE PHASE FOUR WIRE ELECTRONIC MULTI-RATE FRONT BOARD INSTALLED ACTIVE WATT-HOUR METER

Application

Model DTE041BM three phase four wire electronic multi-rate front board installed active energy meter is a three phase four wire two tariffs (tariff conversion is controlled by timer outside or similar equipment) active energy meter. The meter fully complies with relevant technical requirements of class 1 three phase active energy meter stipulated in international standard IEC 62053-21. It accurately and directly measures 50Hz or 60Hz active energy consumption from three phase four wire AC electricity network. It should be installed in indoor or out door meter box. This meter has a seven digits unidirectional LCD display showing consumption and other parameter information. It has an infrared and RS485 communication module used for setting and reading the meter conveniently allowing communication with all kind of AMR systems as per IEC 62053-31 and DIN 43864. It excels in the following features: state of the art technology, outstanding accuracy and reliability, light weight, wire hampering proof, convenient installation

Functions and Features

- Front board three point fixed installation, vertical distance of mounting holes center is 198-212 mm, ABS body with polycarbonate window Double tariff, remote control input control voltage 0-90 Vac sets up tariff F1, input control voltage 150-400 Vac sets up tariff F2, the tariff conversion is controlled by timer outside or similar equipment.
- Sequential display (default) or optional push button itemized display. Display programmable (maximum 6 parameters selectable). Decimal can be set single or double digit.
- Safe memory data fully stored after power cut off.
- Two pulse output ports: One polarity port of pulse output ,passive closed and one nonpolarity port of pulse output passive distant, the output rate is 10 or 100 imp/kWh (selectable) fully complying with standard IEC 62053-31 and DIN 43864.
- One infrared and one RS485 data communication port each, for setting and reading the meter. Communication protocol according to standard DL/T645-1997.
- Nine LED indicators respectively state of power supply indicators including: energy impulse indicator, directional load current flow indicator, data communications indicator
- Unidirectional three steps measurement of the three phase four wire active energy consumption. Fully complying with standard IEC 62053-21.
- Standard configuration for direct connect operation, wiring type 16B , other type of wiring optional, CT (Product Configuration code is BO) type operation and PT & CT (Product Configuration code is BQ) type operation under type 48B wiring.
- Standard configuration: terminal block covered by long terminal cover, (optional short terminal cover Product Configuration code is BL).

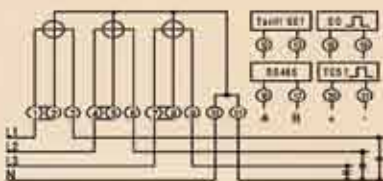
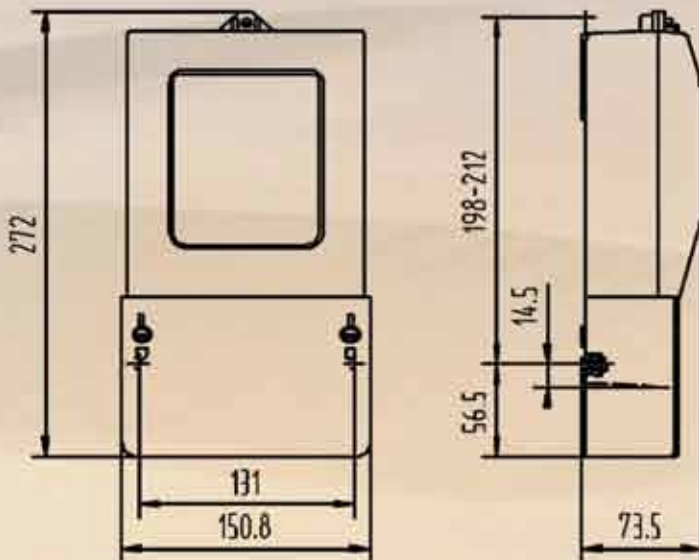
Model	Accuracy	Reference Voltage (V)	Current Specification (A)	Starting Current	Insulation Performance
DTE041BM	Class 1	3x127/220 3x230/400	5 (30) 10 (60) 20 (100)	0,02 0,04 0,08	AC Voltage 4kv for 1 minute, 1.2/50us waveform impulse voltage 6kv



DTE041BM

**Watt-Hour Meter Electronic
Four Wire
Front Board Installed
Active Energy Meter**

**Type DTE041BM
Three-Phase
3x127/220V
3x230/400V**



Terminals	Note	Terminals	Note
1	L1 inlet phase line	10	Inlet neutral line
3	L1 outgoing phase line	11	Outgoing neutral line
4	L2 inlet phase line	12 and 13	Port to set the CT ratio
6	L2 outgoing phase line	16 and 17	Port of RS485 data communication
7	L3 inlet phase line	18 and 19	Remote passive pulse output port
9	L3 outgoing phase line	20 and 21	Pulse output port passive closed

ELECTRONIC PREPAYMENT SINGLE and THREE PHASE FRONT BOARD MOUNTED ACTIVE ENERGY METERS



Vending Machine / Charger

DSE 018 P

DTE 028 P

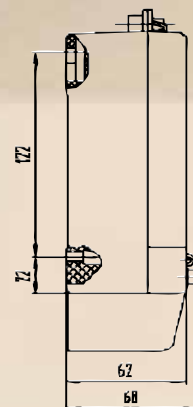
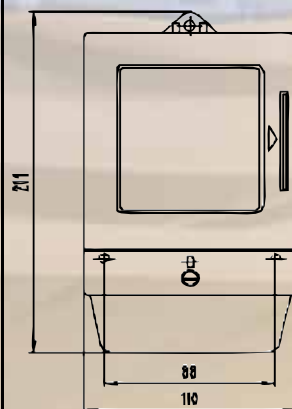
DSE 018 P ELECTRONIC PREPAYMENT SINGLE PHASE FRONT BOARD MOUNTED ACTIVE ENERGY METER

Application

The DSE 018 P MERTRONIC front board mounted kWh meter is an electronic prepayment single phase two wire active energy meter. It is activated by an IC card, which is bearing the prepaid energy amount, stored on the card by means of the vending machine. The meter completely complies with the relevant international technical requirements of class 1 single phase active energy meters stipulated in international standard IEC 62053-21. The instrument accurately and directly measures 50Hz or 60Hz active energy consumption from single phase AC electricity networks. It is suitable for installation indoor or in outdoor meter boxes. This meter has an LED display showing active power. It has following features: extremely high accuracy, high impact resistant PC housing, compact shape needing less mounting space and convenient installation.

Functions and Features

- Standard configuration specifies one prepaid IC card per meter featuring multiple recharge from the vending machine. Alternatively it can also be operated by one-way single use IC cards, which needs to be specified prior to production upon ordering the meters.
- IC card with encrypted code and data as protection against forgery, standard configuration uses storage IC card, alternatively RF cards are also available. (Product Configuration code is RJ)
- Standard configuration stores payment equivalent in kWh. Alternatively this can be changed to equivalent amount in local currency. (Please specified when ordering).
- Standard configuration of the prepayment management system as stand alone meter version, a network version is also available on request. (Please specified when ordering).
- The instrument has a load control function of automatically detects hampering, however the standard configuration comes without function of open terminals cover detection. Optionally you can order automated power cut off function when terminal cover is being opened. (Please specified when ordering).
- 6 LED digits display (5+1 digits display 99999.1kWh),alternatively 7 LED digits display is available (Product Configuration code is RB).
- Pulse output port, passive closed (polarity), complying with standard IEC 62053-31 and standard DIN 43864.
- Two LED indicators: a) energy impulse (red) and b) directional indicator of the flow of the load current (yellow).
- Automatic hampering detection for the hampered flow direction of the load current. When the yellow LED is on, that indicates the reverse running flow of the load current.
- Universal unidirectional single phase two wire active energy consumption measurement, regardless of the actual direction of the load current flow. Fully complying with IEC standard 62053-21.
- Direct connect operation, standard configuration type 1B wiring, alternatively you may select type 1A wiring (Product Configuration code is QC).
- Front board three point installation, standard configuration with long terminals cover, for higher protection and safety, alternatively you may select short terminals cover. (Product Configuration code is QD).



Model	Accuracy	Reference Voltage (V)	Current Specification (A)	Starting Current	Insulation Performance
DSE018P	Class 1	127	5 (30)	0,02	AC Voltage 4kv for 1 minute, 1.2/50us waveform impulse voltage 6kv
		240	15 (60)	0,04	
			20 (100)	0,08	

* if you need different reference voltage or current specification, pls feel free to specify in y/inquiry



**Electronic Prepayment
Active Energy Meter
Front Board Mounted**

**Type DSE 018 P
Single Phase – 2 Wire
127/240 V**

**Type DTE 028 P
Three Phase – 4 Wire
3x127/220V
3x240/415V**

**Complying to:
IEC 62053-31 – DIN 43864
IEC 62053-21**

**DTE 028 P
ELECTRONIC PREPAYMENT THREE PHASE FRONT BOARD MOUNTED ACTIVE ENERGY METER**

Application

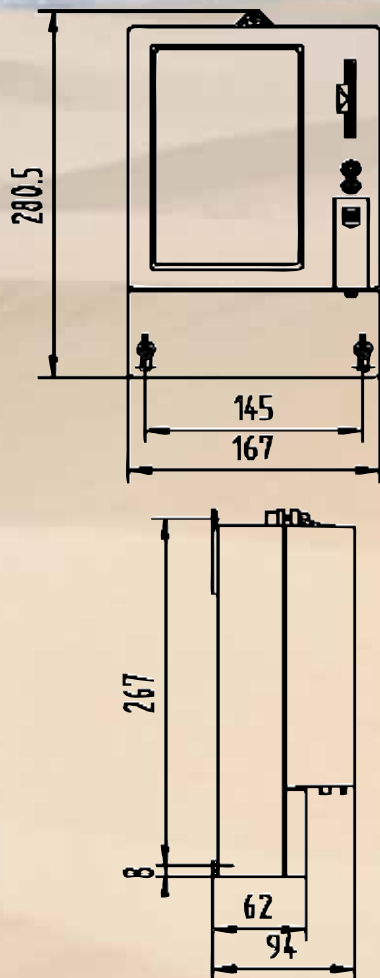
The DTE 028 P METRONIC front board mounted kWh meter is an electronic prepayment three phase four wire active energy meter. It is activated by an IC card, which is bearing the prepaid energy amount, stored on the IC card by means of the vending machine. The meter completely complies with relevant international technical requirements of class 1 three phase active energy meter stipulated in international standard IEC 62053-21. The instrument actively and directly measures 50Hz or 60Hz active energy consumption from three phase four wire AC electricity networks. It is suitable for installation indoor or in outdoor meter boxes. This meter has 5 LED indicators. It has the following features: extremely high accuracy, high impact resistant PC housing, compact shape needing less mounting space and convenient installation.

Functions and Features

- Standard configuration specifies one prepaid IC card per meter featuring multiple recharge from the vending machine. Alternatively it can also be operated by one-way single use IC cards, which needs to be specified prior to production upon ordering the meters.
- IC card with encrypted code and data as protection against forgery, standard configuration uses storage IC card, alternatively RF cards are also available. (Product Configuration code is RJ)
- Standard configuration stores payment equivalent in kWh. Alternatively this can be changed to equivalent amount in local currency. (Please specified when ordering).
- Standard configuration of the prepayment management system as stand alone meter version, a network version is also available on request. (Please specify when ordering)
- The instrument has a load control function which automatically detects hampering, however the standard version comes without function of open terminals cover detection. Optionally you can order automated power cut-off function when terminal cover is being opened. (Please specify when ordering)
- 6 LCD digits display, 5+1 digits display 99999.1kWh), alternatively 7 LCD digits display. (Product Configuration code is QC).
- Pulse output port passive closed (polarity), complying with standard IEC 62053-31 and standard DIN 43864.
- Five LED indicators: a. state of power supply b. energy impulse indicator c. + d. load current flow indicator i. e. reverse running indicator
- Automatic hampering detection of the hampered flow of the load current. i. e. reverse running indication.
- Universal unidirectional three component measuring of three phase four wire active energy consumption. Regardless of the actual load current flow. Fully complying with standard IEC 62053-21.
- Direct connection operation, standard configuration type 16B wiring, alternatively you may select three phase three wire, direct connect operation, type 13B wiring (Product Configuration code is QE).
- Front board three point installation, standard configuration with short terminals cover, alternatively you may select extended terminals cover. (Product Configuration code is QB).

Model	Accuracy	Reference Voltage (V)	Current Specification (A)	Starting Current	Insulation Performance
DTE028P	Class 1	3x127/220 3x240/415	5 (30) 15 (60) 30 (100)	0,02 0,04 0,08	AC Voltage 4kv for 1 minute, 1.2/50us waveform impulse voltage 6kv

* if you need different reference voltage or current specification, pls feel free to specify in y/inquiry



DIGITAL WATT-HOUR METERS DUPROTRONIC

Electronic Single-Phase / Three-Phase



DTD 021



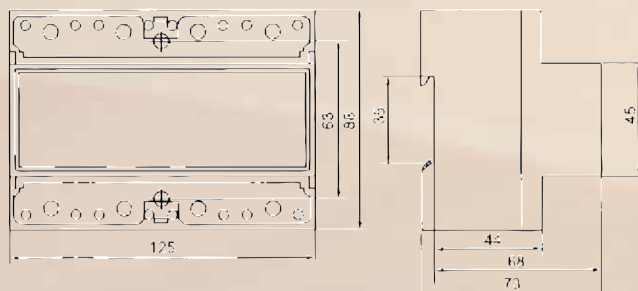
DSD 011

APPLICATION Type DTD 021 DUPROTRONIC Digital Three Phase Electronic Watt-Hour Meter
 Type DTD 021 three phase DIN rail watt-hour meter is a new style three phase electronic watt-hour meter. The meter is in complete accordance with the relevant technical requirements of class 1 and class 2 single phase energy meter stipulated in national standard GB/T17215-2002 and international standard IEC61036. It can accurately and directly measure active energy consumption from three phase AC electricity net, it can display total energy consumption by step type impulse register (analogue) or LCD display (digital). It has following feature: good reliability, small volume, light weight, specious nice appearance, convenient installation, etc.

STRUCTURE and FEATURE

1. May select 35 mm DIN rail installation and installation on the board.
2. May select 5+1 digits register by step (analogue) or 7 digits LCD display (digital).
3. May select infrared carrier wave communication and RS485 serial port communication.
4. Impulse output when no power, complying with standard DIN43864.

Type	Accuracy	Rated Voltage (V)	Rated Current (A)	Name
DTD 021	class 1	3x380/220V	1.5(6), 3(6), 5(30), 10(50), 15(90), 20(100)	Three phase four wire active energy electronic type watt-hour meter
	class 2	3x100/57,5V		
DTD 021	class 1	3x100V	5(40), 5(100)	Three phase active energy electronic type watt-hour meter
	class 2	3x380V		



DTD 021



DTD 021

**Digital Watt-Hour Meters
Electronic DUPROTRONIC**

**Type DTD 021
Three-Phase Alternating Current**

**Type DSD 011
Single-Phase Alternating Current**

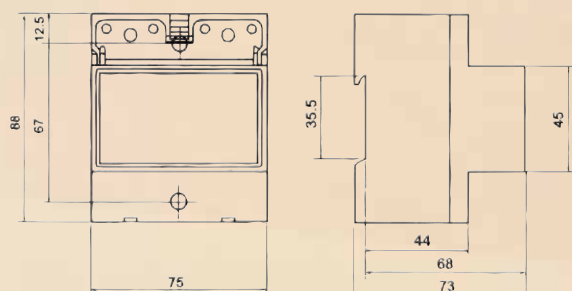
APPLICATION Type DSD 011 DUPROTRONIC Digital Single Phase Electronic Watt-Hour Meter

Type DSD 011 single phase DIN watt-hour meter is a new style three phase electronic watt-hour meter. The meter is in complete accordance with the relevant technical requirements of class 1 and class 2 single phase energy meter stipulated in national standard GB/T17215-2002 and international standard IEC61036. It can accurately and directly measure active energy consumption from single phase AC electricity net, it can display total energy consumption by step type impulse register (analogue) or LCD display (digital). It has following feature: good reliability, small volume, light weight, specious nice appearance, convenient installation, etc.

STRUCTURE and FEATURE

1. 35 mm standard DIN rail installation, complying with standard DIN EN5002.
2. May select 5+1 digits register by step (analogue) or 7 digits LCD display (digital).
3. May select infrared carrier wave communication and RS485 serial port communication.
4. Impulse output when no power, complying with standard DIN43864.
5. May select normal or simple connection.

Type	Accuracy	Rated Voltage (V)	Rated Current (A)	Starting Current	Insulation Performance
DSD 011	class 1	220V	2.5(10), 3(15), 5(30), 10(50), 15(90), 20(100), 5(40), 5(100)	0.4%lb	AC voltage 2KV for 1 minute impulse voltage 6KV
DSD 011	class 2			0.5%lb	



DSD 011

ELECTRONIC WATT-HOUR METERS MERTRONIC analogue or digital Single-Phase



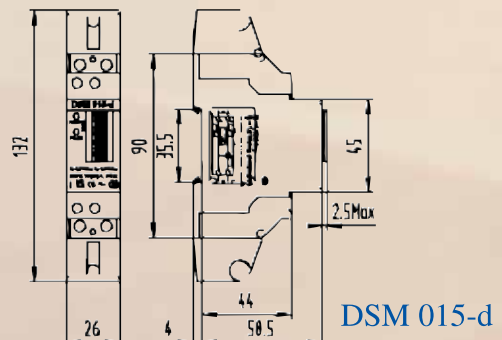
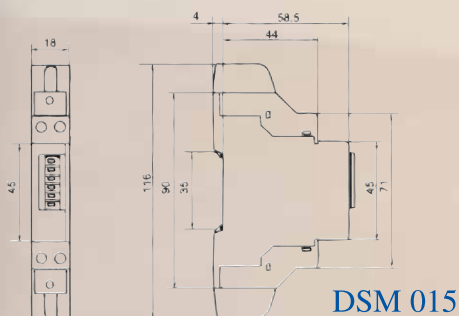
APPLICATION

Type DSM 015 MERTRONIC Electronic Single Phase DIN-RAIL Watt-Hour Meter are latest technology single phase electronic watt-hour meters, adopting integrated circuit micro-electronics technology. The meters are in complete accordance with the relevant technical requirements of class 1 and class 2 single phase energy meter specification, stipulated in international standard IEC 61036 (DSM 015). They can accurately and directly measure consumption from single phase AC electricity net, they can display total energy consumption by step type impulse register (analogue) or LCD display (digital). They have the following features: excellent reliability, small volume, light weight and convenient installation.

STRUCTURE and FEATURE

1. 35 mm standard DIN rail installation, complying with standard DIN EN5002.
2. 18 mm width complying with standard DIN43880.
3. May select 5+1 digits register by step (analogue) (99999,1kWh) or 6+1 digits LCD display (digital) (999999.1 kWh)
4. Impulse output when no power, complying with standard DIN43864.

Type	Accuracy	Rated Voltage (V)	Rated Current (A)	Starting Current	Insulation Performance
DSM 015	class 1	220V	2.5(10, 3(15(5(20), 5(30)	0.4%Ib	AC voltage 2KV for 1 minute impulse voltage 6KV
	class 2			0.5%Ib	



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