...technology concern

First Indigenous Prepaid Meter Manufacturing Company

ELECTRICTY METERS

CORPORATE BROCHURE

Momas Single Phase PLC Meter
MMX-110 NG-P-<PLC>

The Single Phase PLC Meter is one of our single phase meters, designed to provide a highly accurate energy reading and metering system.
It is developed solely for easy communication for end users as it uses the existing Power line for its communication thus the name, Power line communication (PLC). This meter is a DLMS and STS compliant prepayment meter and it can communicate with a PLC user interface unit.

TYPICAL RESULT DISPLAYED ON LCD

DISPLAY	DESCRIPTION
SUCCESS	Input ofFirst 20 digits of the key change token(KCT)
ACCEPT	Input of second 20 digits of the key change token(KCT) or successful input of any 20 digits token
ACCEPT	865 to activate meter after installation
E-07	Recharge amount plus credit is over the treshold, token is refused but this token can be used again when recharge condition is met.
E-01	Bad token
E-03	Expired token, if the input token is older than the oldest in log, that means the token is expired
E-04	Used token
E-05	Key expired for SGC
E-06	DDTK Error

SHORT CODE DESCRIPTION

Short Code	Function	Short-Cut Code	Function
800	Cummulative Energy	801	Credit balance
802	Current Date	803	Current Time
804	Meter number	805	SGC Number
806	Relay Operation Reason	807	Meter State
808	Total Instantaneous Power	809	Tariff Index
810	Over Draft Value	811	Emergency Credit
812	Cancel Audible Alarm	813	Last Day of forward active energy
814	Forward active energy of current month	815	Date of last recharge

SHORT CODE DESCRIPTION

For Dual Tarrif

Short Code	Function	Short-Cut Code	Function
817	Total Active Energy (Tariff 1)	824	Last Recharge Amount (Tariff 2)
818	Total Active Energy(Tariff 2)	825	Last Recharge Date (Tariff 1)
819	SGC (Tariff 2)	826	Last Recharge Date (Tariff 2)
820	TI (Tariff 2)		
821	Total Credit (Tariff 2)		
822	Total Credit (Tariff 1)		
823	Last Recharge Amount (Tariff 1)		

Meter Specification

DESCRIPTION	SINGLE PHASE VALUE	DIN RAIL VALUE
Accuracy	CLASS 1	
Voltage		
Reference voltage	240 V	
Operating voltage range	70%-120%Reference voltage	
Current	5(80A)	
Frequency	50Hz	
Temperature		
Operation range	-25°C to 60°C	
Limit range for storage and transport	40°C to 75°C	
Humidity	U p to 95%	
Power consumption		
Power consumption in voltage circuit (active)	2W	
Power consumption in voltage circuit(apparent)	10 VA	
Power consumption in current circuit	1VA	
Insulation strength		
AC voltage test	4kV during 1m in1.2/50μs mains connections 6kV	
I mpulse voltage test		
EMC	8kV	
Electrostatic discharges (Contact discharges)	15kV	
Electrostatic discharges (Air discharges) Surge	4kV	
immunity test Fast transient burst test	4kV	
Electromagnetic RF fields (80MHz to 2000MHz)	10V/m(with current), 30V/m(without current)	
Connection Terminals	¢ 10mm	
Housing		
Protection degree	I P51	
Meter cover	Opaque PC+ fiber glass with a transparent window	
Meter base	Opaque PC+ fiber glass	
Terminal cover	Transparent PC	
Communication Interface	IR	
Optical communication	DLMS / COSEM Compliance	
Other	RF(RF UIU, SOFT MMX ANDROID APP available on google playstore)	
	GPRS (SOFT GX Android /IOS available on google playstore/Applestore)	
Weight	Approx. 0.8-9.6Kg	Approx. 0.530Kg
Dimension	203x130x85mm	154x42x108mm
Optional features	Dual Tariff support	

Momas Single Phase Wi-Fi Meter
MMX-110 NGG/NGW

The Single Phase Wi-Fi Meter is one of our single phase meters, designed to provide a highly accurate energy reading and metering system.
It is developed solely for smart communication system for end users as it uses wireless technology for its communication and is a user friendly technology. This meter is a DLMS and STS compliant prepayment meter and it can communicate with a Wi-Fi user interface unit and Mobile App, where communication can be done with the meter from Far and near.

TYPICAL RESULT DISPLAYED ON LCD

DISPLAY	DESCRIPTION
SUCCESS	Input ofFirst 20 digits of the key change token(KCT)
ACCEPT	Input of second 20 digits of the key change token(KCT) or successful input of any 20 digits token
ACCEPT	865 to activate meter after installation
E-07	Recharge amount plus credit is over the treshold, token is refused but this token can be used again when recharge condition is met.
E-01	Bad token
E-03	Expired token, if the input token is older than the oldest in log, that means the token is expired
E-04	Used token
E-05	Key expired for SGC
E-06	DDTK Error

SHORT CODE DESCRIPTION

Short Code	Function	Short-Cut Code	Function
800	Cummulative Energy	801	Credit balance
802	Current Date	803	Current Time
804	Meter number	805	SGC Number
806	Relay Operation Reason	807	Meter State
808	Total Instantaneous Power	809	Tariff Index
810	Over Draft Value	811	Emergency Credit
812	Cancel Audible Alarm	813	Last Day of forward active energy
814	Forward active energy of current month	815	Date of last recharge

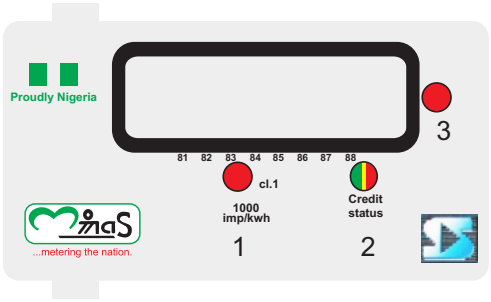
SHORT CODE DESCRIPTION

For Dual Tarrif

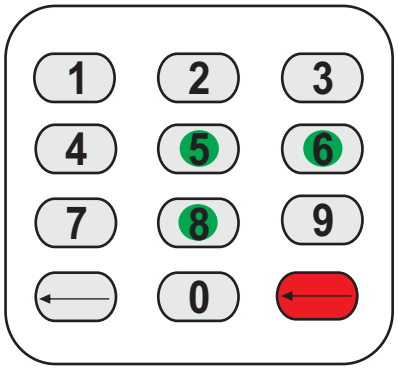
Short Code	Function	Short-Cut Code	Function
817	Total Active Energy (Tariff 1)	824	Last Recharge Amount (Tariff 2)
818	Total Active Energy(Tariff 2)	825	Last Recharge Date (Tariff 1)
819	SGC (Tariff 2)	826	Last Recharge Date (Tariff 2)
820	TI (Tariff 2)		
821	Total Credit (Tariff 2)		
822	Total Credit (Tariff 1)		
823	Last Recharge Amount (Tariff 1)		

LED indicator from left to right

1	Active pulse output indicator	LED (red)
2	Credit Indicator	Bi-color LED (red) Green LED light on when credit is less than the threshold of energy level 1 Red LED light on when credit is less than the threshold of energy level 2 Red LED blinks when credit is less than the threshold of energy level 3
3	Alarm indicator	The indicator blinks when event happen, such as meter cover open, terminal cover happen, magnetic in uence, overload.

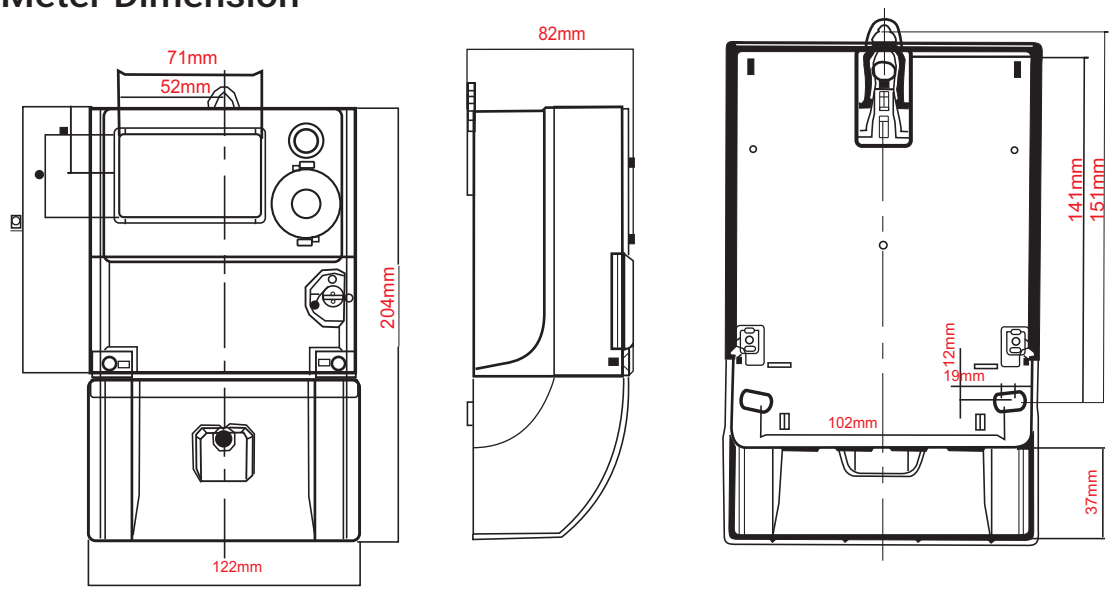


- Follow terminal block/installation diagram for wiring connection
- After wiring connection, cover and screw down meter terminal cover firmly
- Power meter then press 865 to activate meter for use

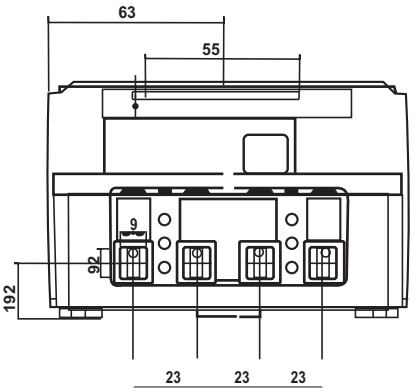


Note: Red Button Indicates enter

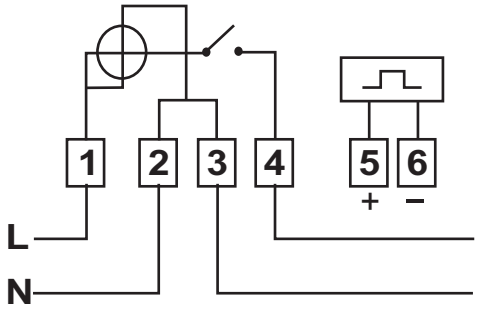
Meter Dimension



Terminal Block



Wiring Diagram

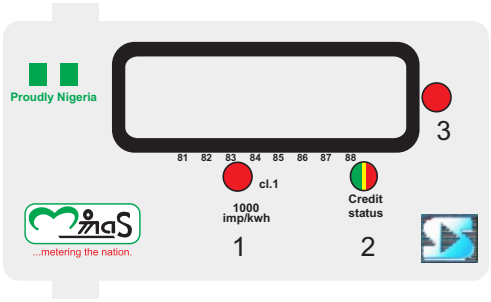


Meter Specification

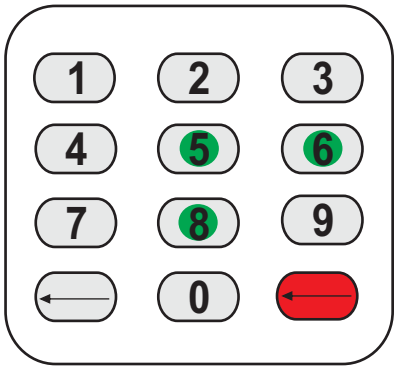
DESCRIPTION	SINGLE PHASE VALUE	DIN RAIL VALUE
Accuracy	CLASS 1	
Voltage		
Reference voltage	240 V	
Operating voltage range	70%-120%Reference voltage	
Current	5(80A)	
Frequency	50Hz	
Temperature		
Operation range	-25°C to 60°C	
Limit range for storage and transport	40°C to 75°C	
Humidity	U p to 95%	
Power consumption		
Power consumption in voltage circuit (active)	2W	
Power consumption in voltage circuit(apparent)	10 VA	
Power consumption in current circuit	1VA	
Insulation strength		
AC voltage test	4kV during 1m in1.2/50μs mains connections 6kV	
I mpulse voltage test		
EMC	8kV	
Electrostatic discharges (Contact discharges)	15kV	
Electrostatic discharges (Air discharges) Surge	4kV	
immunity test Fast transient burst test	4kV	
Electromagnetic RF fields (80MHz to 2000MHz)	10V/m(with current), 30V/m(without current)	
Connection Terminals	¢ 10mm	
Housing		
Protection degree	I P51	
Meter cover	Opaque PC+ fiber glass with a transparent window	
Meter base	Opaque PC+ fiber glass	
Terminal cover	Transparent PC	
Communication Interface	IR	
Optical communication	DLMS / COSEM Compliance	
Other	RF(RF UIU, SOFT MMX ANDROID APP available on google playstore)	
	GPRS (SOFT GX Android /IOS available on google playstore/Applestore)	
Weight	Approx. 0.8-9.6Kg	Approx. 0.530Kg
Dimension	203x130x85mm	154x42x108mm
Optional features	Dual Tariff support	

LED indicator from left to right

1	Active pulse output indicator	LED (red)
2	Credit Indicator	Bi-color LED (red) Green LED light on when credit is less than the threshold of energy level 1 Red LED light on when credit is less than the threshold of energy level 2 Red LED blinks when credit is less than the threshold of energy level 3
3	Alarm indicator	The indicator blinks when event happen, such as meter cover open, terminal cover happen, magnetic in uence, overload.

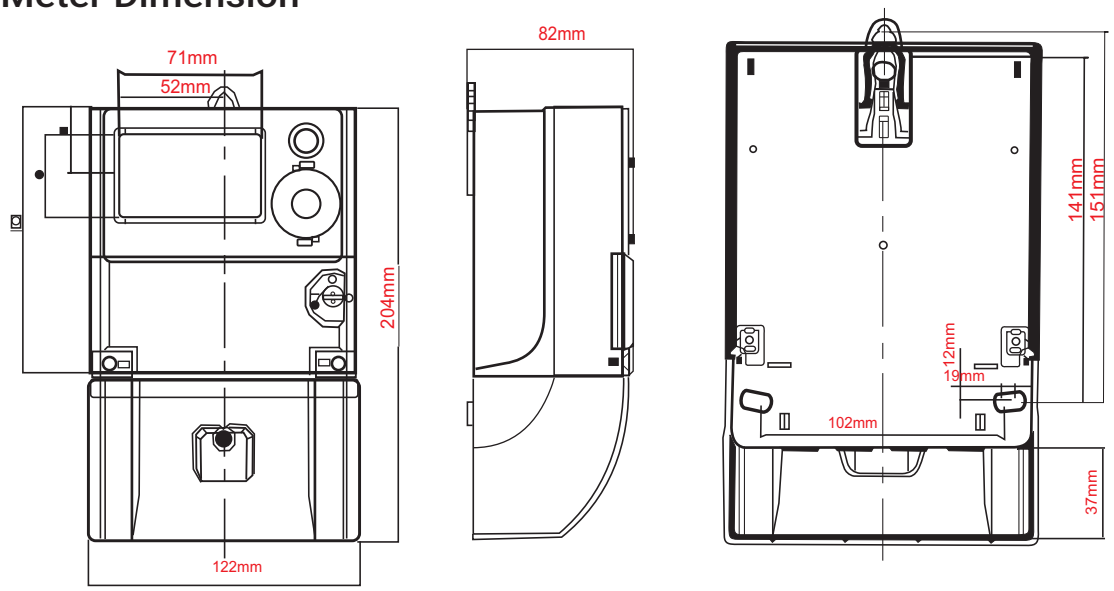


- Follow terminal block/installation diagram for wiring connection
- After wiring connection, cover and screw down meter terminal cover firmly
- Power meter then press 865 to activate meter for use

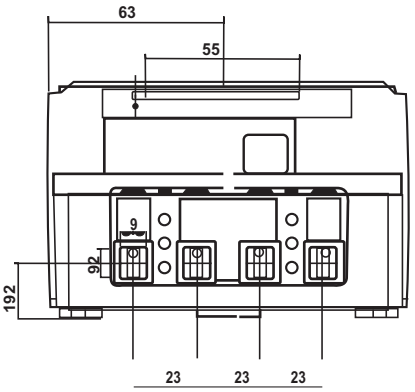


Note: Red Button Indicates enter

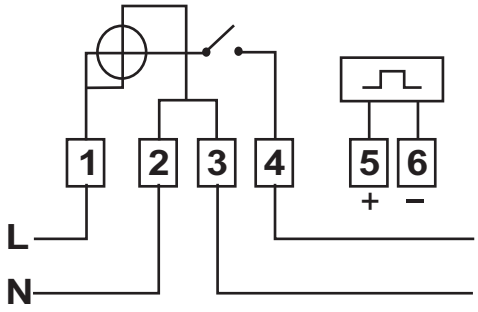
Meter Dimension



Terminal Block



Wiring Diagram



Momas Single PhaseSplit Meter
MMX-110NG

The Single Phase Split Meter is one of our single phase meters, designed to provide a highly accurate energy reading and metering system. It simply means the system allows the use of meter along side a user interface. It is a DLMS and STS compliant prepayment meter. The meter can communicate with either Wi-Fi/ PLC/ RS-485 user interface unit or Mobile Apps but has no onboard Keyboard.

TYPICAL RESULT DISPLAYED ON LCD

DISPLAY	DESCRIPTION
SUCCESS	Input ofFirst 20 digits of the key change token(KCT)
ACCEPT	Input of second 20 digits of the key change token(KCT) or successful input of any 20 digits token
ACCEPT	865 to activate meter after installation
E-07	Recharge amount plus credit is over the treshold, token is refused but this token can be used again when recharge condition is met.
E-01	Bad token
E-03	Expired token, if the input token is older than the oldest in log, that means the token is expired
E-04	Used token
E-05	Key expired for SGC
E-06	DDTK Error

SHORT CODE DESCRIPTION

Short Code	Function	Short-Cut Code	Function
800	Cummulative Energy	801	Credit balance
802	Current Date	803	Current Time
804	Meter number	805	SGC Number
806	Relay Operation Reason	807	Meter State
808	Total Instantaneous Power	809	Tariff Index
810	Over Draft Value	811	Emergency Credit
812	Cancel Audible Alarm	813	Last Day of forward active energy
814	Forward active energy of current month	815	Date of last recharge

SHORT CODE DESCRIPTION

For Dual Tarrif

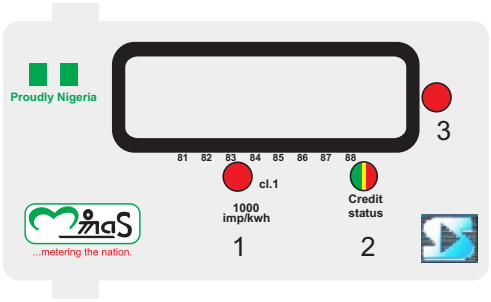
Short Code	Function	Short-Cut Code	Function
817	Total Active Energy (Tariff 1)	824	Last Recharge Amount (Tariff 2)
818	Total Active Energy(Tariff 2)	825	Last Recharge Date (Tariff 1)
819	SGC (Tariff 2)	826	Last Recharge Date (Tariff 2)
820	TI (Tariff 2)		
821	Total Credit (Tariff 2)		
822	Total Credit (Tariff 1)		
823	Last Recharge Amount (Tariff 1)		

Meter Specification

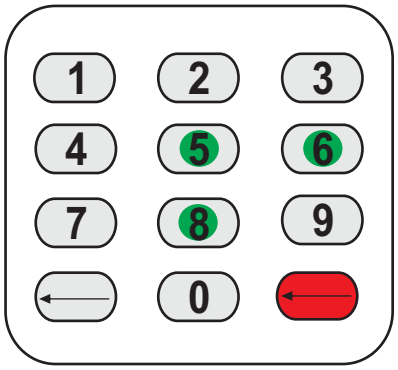
DESCRIPTION	SINGLE PHASE VALUE	DIN RAIL VALUE
Accuracy	CLASS 1	
Voltage		
Reference voltage	240 V	
Operating voltage range	70%-120%Reference voltage	
Current	5(80A)	
Frequency	50Hz	
Temperature		
Operation range	-25°C to 60°C	
Limit range for storage and transport	40°C to 75°C	
Humidity	U p to 95%	
Power consumption		
Power consumption in voltage circuit (active)	2W	
Power consumption in voltage circuit(apparent)	10 VA	
Power consumption in current circuit	1VA	
Insulation strength		
AC voltage test	4kV during 1m in1.2/50μs mains connections 6kV	
I mpulse voltage test		
EMC	8kV	
Electrostatic discharges (Contact discharges)	15kV	
Electrostatic discharges (Air discharges) Surge	4kV	
immunity test Fast transient burst test	4kV	
Electromagnetic RF fields (80MHz to 2000MHz)	10V/m(with current), 30V/m(without current)	
Connection Terminals	¢ 10mm	
Housing		
Protection degree	I P51	
Meter cover	Opaque PC+ fiber glass with a transparent window	
Meter base	Opaque PC+ fiber glass	
Terminal cover	Transparent PC	
Communication Interface	IR	
Optical communication	DLMS / COSEM Compliance	
Other	RF(RF UIU, SOFT MMX ANDROID APP available on google playstore)	
	GPRS (SOFT GX Android /IOS available on google playstore/Applestore)	
Weight	Approx. 0.8-9.6Kg	Approx. 0.530Kg
Dimension	203x130x85mm	154x42x108mm
Optional features	Dual Tariff support	

LED indicator from left to right

1	Active pulse output indicator	LED (red)
2	Credit Indicator	Bi-color LED (red) Green LED light on when credit is less than the threshold of energy level 1 Red LED light on when credit is less than the threshold of energy level 2 Red LED blinks when credit is less than the threshold of energy level 3
3	Alarm indicator	The indicator blinks when event happen, such as meter cover open, terminal cover happen, magnetic in uence, overload.

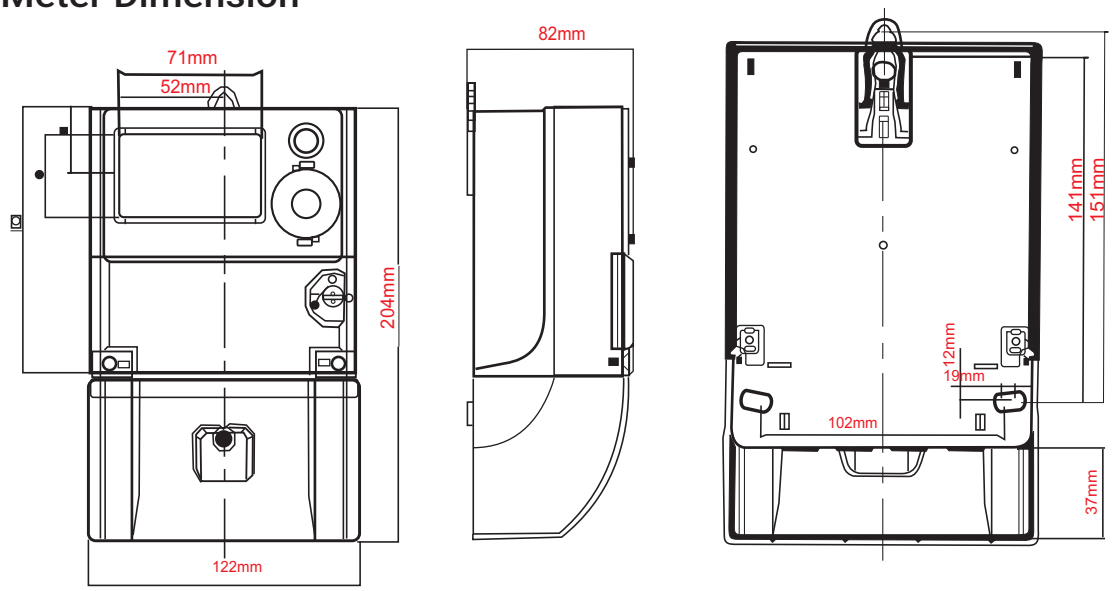


- Follow terminal block/installation diagram for wiring connection
- After wiring connection, cover and screw down meter terminal cover firmly
- Power meter then press 865 to activate meter for use

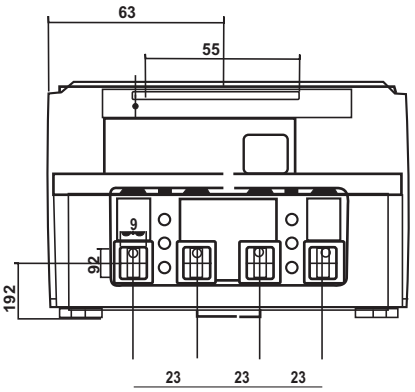


Note: Red Button Indicates enter

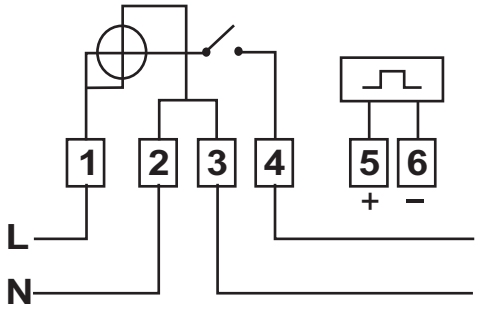
Meter Dimension



Terminal Block



Wiring Diagram



Momas Single Phase Compact Meter
MMX-110-NGC

The Single Phase Compact Meter is one of our single phase meters, designed to provide a highly accurate energy reading and metering system. It is a DLMS and STS compliant prepayment meter. The meter does not communicate with user interface unit and Mobile Apps but has an onboard keyboard attached to it.

TYPICAL RESULT DISPLAYED ON LCD

DISPLAY	DESCRIPTION
SUCCESS	Input ofFirst 20 digits of the key change token(KCT)
ACCEPT	Input of second 20 digits of the key change token(KCT) or successful input of any 20 digits token
ACCEPT	865 to activate meter after installation
E-07	Recharge amount plus credit is over the treshold, token is refused but this token can be used again when recharge condition is met.
E-01	Bad token
E-03	Expired token, if the input token is older than the oldest in log, that means the token is expired
E-04	Used token
E-05	Key expired for SGC
E-06	DDTK Error

SHORT CODE DESCRIPTION

Short Code	Function	Short-Cut Code	Function
800	Cummulative Energy	801	Credit balance
802	Current Date	803	Current Time
804	Meter number	805	SGC Number
806	Relay Operation Reason	807	Meter State
808	Total Instantaneous Power	809	Tariff Index
810	Over Draft Value	811	Emergency Credit
812	Cancel Audible Alarm	813	Last Day of forward active energy
814	Forward active energy of current month	815	Date of last recharge

SHORT CODE DESCRIPTION

For Dual Tarrif

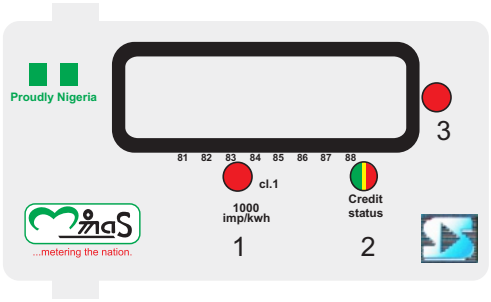
Short Code	Function	Short-Cut Code	Function
817	Total Active Energy (Tariff 1)	824	Last Recharge Amount (Tariff 2)
818	Total Active Energy(Tariff 2)	825	Last Recharge Date (Tariff 1)
819	SGC (Tariff 2)	826	Last Recharge Date (Tariff 2)
820	TI (Tariff 2)		
821	Total Credit (Tariff 2)		
822	Total Credit (Tariff 1)		
823	Last Recharge Amount (Tariff 1)		

Meter Specification

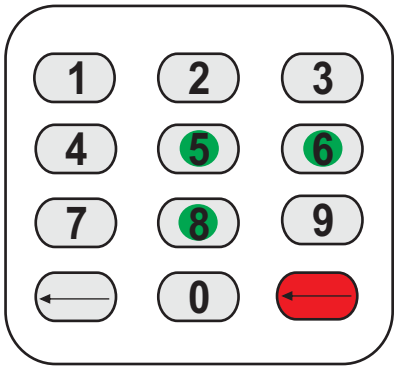
DESCRIPTION	SINGLE PHASE VALUE	DIN RAIL VALUE
Accuracy	CLASS 1	
Voltage		
Reference voltage	240 V	
Operating voltage range	70%-120%Reference voltage	
Current	5(80A)	
Frequency	50Hz	
Temperature		
Operation range	-25°C to 60°C	
Limit range for storage and transport	40°C to 75°C	
Humidity	U p to 95%	
Power consumption		
Power consumption in voltage circuit (active)	2W	
Power consumption in voltage circuit(apparent)	10 VA	
Power consumption in current circuit	1VA	
Insulation strength		
AC voltage test	4kV during 1m in1.2/50μs mains connections 6kV	
I mpulse voltage test		
EMC	8kV	
Electrostatic discharges (Contact discharges)	15kV	
Electrostatic discharges (Air discharges) Surge	4kV	
immunity test Fast transient burst test	4kV	
Electromagnetic RF fields (80MHz to 2000MHz)	10V/m(with current), 30V/m(without current)	
Connection Terminals	¢ 10mm	
Housing		
Protection degree	I P51	
Meter cover	Opaque PC+ fiber glass with a transparent window	
Meter base	Opaque PC+ fiber glass	
Terminal cover	Transparent PC	
Communication Interface	IR	
Optical communication	DLMS / COSEM Compliance	
Other	RF(RF UIU, SOFT MMX ANDROID APP available on google playstore)	
	GPRS (SOFT GX Android /IOS available on google playstore/Applestore)	
Weight	Approx. 0.8-9.6Kg	Approx. 0.530Kg
Dimension	203x130x85mm	154x42x108mm
Optional features	Dual Tariff support	

LED indicator from left to right

1	Active pulse output indicator	LED (red)
2	Credit Indicator	Bi-color LED (red) Green LED light on when credit is less than the threshold of energy level 1 Red LED light on when credit is less than the threshold of energy level 2 Red LED blinks when credit is less than the threshold of energy level 3
3	Alarm indicator	The indicator blinks when event happen, such as meter cover open, terminal cover happen, magnetic in uence, overload.

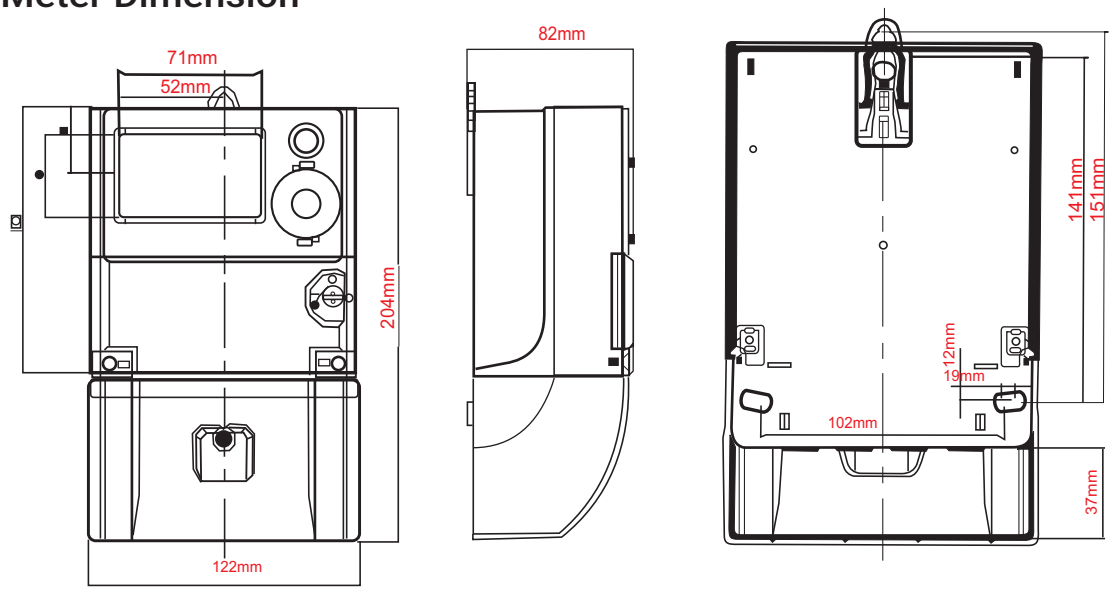


- Follow terminal block/installation diagram for wiring connection
- After wiring connection, cover and screw down meter terminal cover firmly
- Power meter then press 865 to activate meter for use

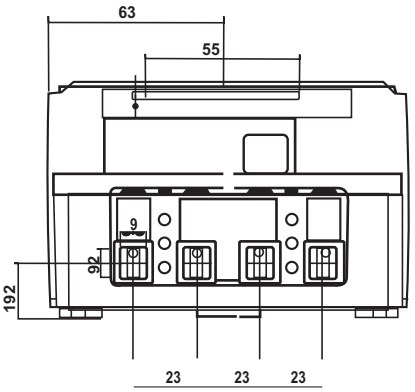


Note: Red Button Indicates enter

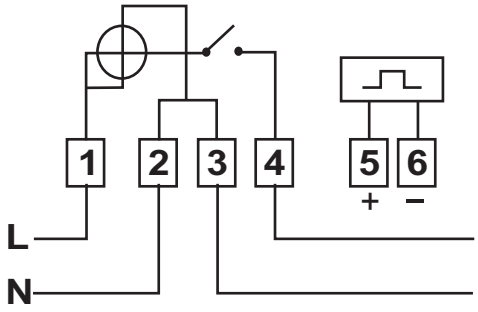
Meter Dimension



Terminal Block



Wiring Diagram



Momas Single Phase Dual Tariff Meter
MMX-110 DT

The Single Phase Dual Tariff Meter is one of our single phase meters, designed to provide a highly accurate energy reading and metering system.
This type of metering solution is developed to work with environment that regulate both grid and off-grid such as Estate that supply both grid and off-grid facility with different tariff rate. It can be wireless and wired, it is developed solely as smart communication system for end users and clients as it uses a switching sensor technology. It is DLMS and STS compliant prepayment meter. The meter can also communicate over GPRS and Mobile App.

TYPICAL RESULT DISPLAYED ON LCD

DISPLAY	DESCRIPTION
SUCCESS	Input ofFirst 20 digits of the key change token(KCT)
ACCEPT	Input of second 20 digits of the key change token(KCT) or successful input of any 20 digits token
ACCEPT	865 to activate meter after installation
E-07	Recharge amount plus credit is over the treshold, token is refused but this token can be used again when recharge condition is met.
E-01	Bad token
E-03	Expired token, if the input token is older than the oldest in log, that means the token is expired
E-04	Used token
E-05	Key expired for SGC
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SHORT CODE DESCRIPTION

Short Code	Function	Short-Cut Code	Function
800	Cummulative Energy	801	Credit balance
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806	Relay Operation Reason	807	Meter State
808	Total Instantaneous Power	809	Tariff Index
810	Over Draft Value	811	Emergency Credit
812	Cancel Audible Alarm	813	Last Day of forward active energy
814	Forward active energy of current month	815	Date of last recharge

SHORT CODE DESCRIPTION — For Dual Tarrif

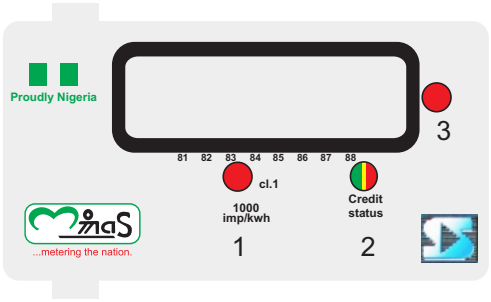
Short Code	Function	Short-Cut Code	Function
817	Total Active Energy (Tariff 1)	824	Last Recharge Amount (Tariff 2)
818	Total Active Energy(Tariff 2)	825	Last Recharge Date (Tariff 1)
819	SGC (Tariff 2)	826	Last Recharge Date (Tariff 2)
820	TI (Tariff 2)		
821	Total Credit (Tariff 2)		
822	Total Credit (Tariff 1)		
823	Last Recharge Amount (Tariff 1)		

Meter Specification

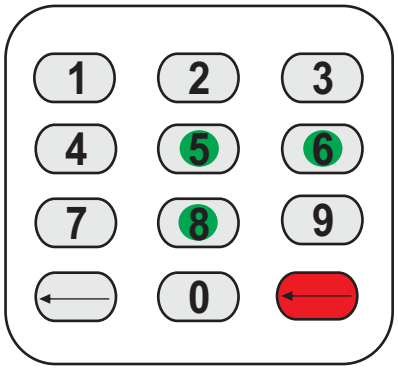
DESCRIPTION	SINGLE PHASE VALUE	DIN RAIL VALUE
Accuracy	CLASS 1	
Voltage		
Reference voltage	240 V	
Operating voltage range	70%-120%Reference voltage	
Current	5(80A)	
Frequency	50Hz	
Temperature		
Operation range	-25°C to 60°C	
Limit range for storage and transport	40°C to 75°C	
Humidity	U p to 95%	
Power consumption		
Power consumption in voltage circuit (active)	2W	
Power consumption in voltage circuit(apparent)	10 VA	
Power consumption in current circuit	1VA	
Insulation strength		
AC voltage test	4kV during 1m in1.2/50μs mains connections 6kV	
I mpulse voltage test		
EMC	8kV	
Electrostatic discharges (Contact discharges)	15kV	
Electrostatic discharges (Air discharges) Surge	4kV	
immunity test Fast transient burst test	4kV	
Electromagnetic RF fields (80MHz to 2000MHz)	10V/m(with current), 30V/m(without current)	
Connection Terminals	¢ 10mm	
Housing		
Protection degree	I P51	
Meter cover	Opaque PC+ fiber glass with a transparent window	
Meter base	Opaque PC+ fiber glass	
Terminal cover	Transparent PC	
Communication Interface	IR	
Optical communication	DLMS / COSEM Compliance	
Other	RF(RF UIU, SOFT MMX ANDROID APP available on google playstore)	
	GPRS (SOFT GX Android /IOS available on google playstore/Applestore)	
Weight	Approx. 0.8-9.6Kg	Approx. 0.530Kg
Dimension	203x130x85mm	154x42x108mm
Optional features	Dual Tariff support	

LED indicator from left to right

1	Active pulse output indicator	LED (red)
2	Credit Indicator	Bi-color LED (red) Green LED light on when credit is less than the threshold of energy level 1 Red LED light on when credit is less than the threshold of energy level 2 Red LED blinks when credit is less than the threshold of energy level 3
3	Alarm indicator	The indicator blinks when event happen, such as meter cover open, terminal cover happen, magnetic in uence, overload.

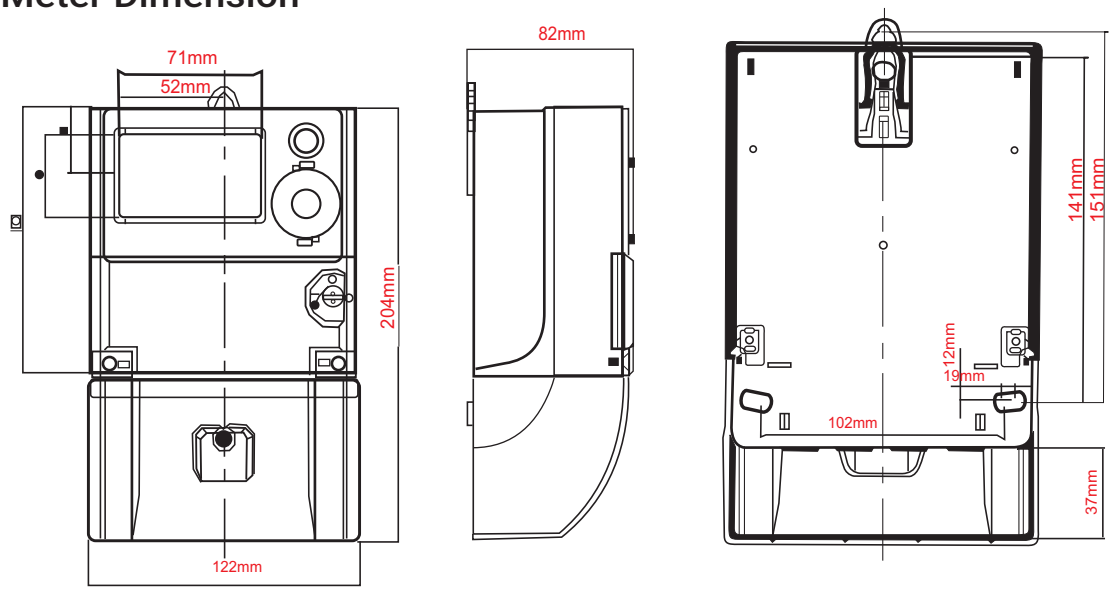


- Follow terminal block/installation diagram for wiring connection
- After wiring connection, cover and screw down meter terminal cover firmly
- Power meter then press 865 to activate meter for use

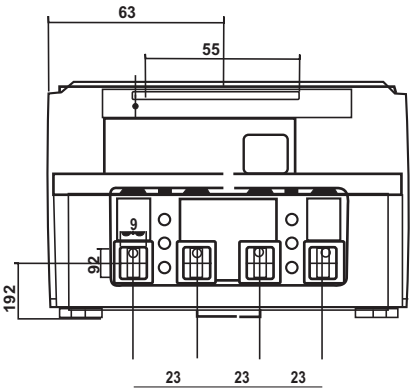


Note: Red Button Indicates enter

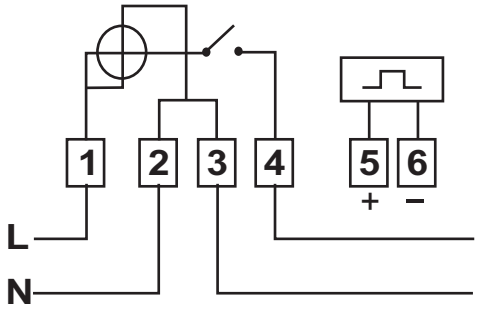
Meter Dimension



Terminal Block



Wiring Diagram



SINGLE PHASE TWO WIRE RAIL MOUNT METER MMX110 DIN -

INTRODUCTION

MEMMCOL MMX 110-DIN meter is designed to provide a highly accurate energy and demand metering system. MMX 110DIN is an advanced type of Single-phase standard prepayment meter. It is a STS compliant prepayment meter.

METER DESIGN OVERVIEW

MMX 110 DIN is new generation of single-phase smart din rail meter with modular design. For residential, industry and commercial application. With different communication module (GPRS, PLC & RS-485) that suit both the customer and the utility, the meter is design to work in complex environment by selecting suitable communication module. The metering arrangement eliminates direct meter reading thereby enhancing operational efficiency and cost minimization for the utilities and conveniences for the customers. MMX 110-DIN provides increased cost-effective for you with its excellent measuring succinct design and reliability.

TYPICAL RESULT DISPLAYED ON USER INTERFACE UNIT

DISPLAY	DESCRIPTION
ACCEPT	Input of first 20 digit for SGC token.
SUCCESS	Input of second 20 digit for SGC token.
ACCEPT	865 to activate meter after installation.
REJECT	Invalid Token or Unacceptable Command.
E-XX	Recharge amount plus credit is over hoard threshold, token is refused but this token can be used again when meet recharge condition.
E-01	Bad token.
E-03	Expired token, if the input token is older than the oldest in log, that means the token is expired.
E-04	Used token.
E-05	Key expired for SGC.
E-06	DDTK Error.

SHORT CODES DESCRIPTIONS

Short codes	Functions	Short codes	Functions
800	Forward active Power	801	Balance Credit
802	Current Date	803	Current Time
804	Meter number	805	SGC Number
806	Relay Operation Reason	807	Meter State
808	Total Instantaneous Power	809	Tariff Index
810	Over Draft Value	811	Emergency Credit
812	Cancel Audible Alarm	813	Last Day of forward active energy
814	Total Energy Consumed in past month	815	Date of Last Recharge
816	Firmware Version	865	Enable Tamper
867	Update Relay State	868	Disable Terminal Tamper (Authentication Token required)
869	Disable Case Tamper (Authentication Token required)	863	Disable Battery Cover Tamper (Authentication Token required)
890	Turn off Load	891	Turn on Load
839	DLMS Physical Address	401	Test Relay
402	Test LEDs	403	Test EEPROM
404	Refresh UIU pulse	405	Show event status icons
406	Clear event status icons	407	Meter battery voltage
505	Disable Authenticated(Factory) Mode		

LED INDICATOR ON USER INTERFACE UNIT

1.	Active pulse output indicator	LED (red)
2.	Credit Indicator Bi-color	Bi-color LED (red) Green LED light on when credit is less than the threshold of energy level 1 Red LED light on when credit is less than the threshold of energy level 2 Red LED blinks when credit is less than the threshold of energy level 3
3.	Alarm indicator	The indicator blinks when event happen, such as meter cover open, terminal cover happen, magnetic influence, overload.

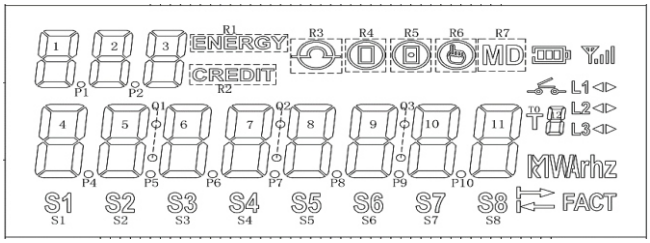
LED INDICATOR FOR GPRS

S/N	LED	MEANING
1.	Green LED is blinking slowly	Module has not paired with meter.
2.	Green LED is blinking fast	Module has paired with meter.
3.	Red LED is stable	Module has connected to internet.
4.	Red LED is blinking	Module has not connected to internet.
5.	Yellow LED is stable	Meter has connected to server.
6.	Yellow LED is blinking	Meter has not connected to server.

Installation Procedures

- Follow terminal block/installation diagram for wiring connection.
- After wiring connection, cover and screw down meter terminal cover firmly.
- Power meter then press 865 to activate meter for use.

USER INTERFACE UNIT LCD

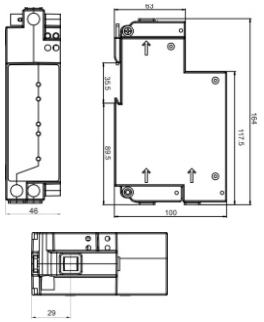


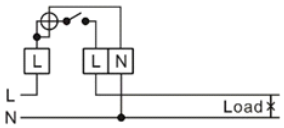
Symbol	Label	Name	Function
	1, 2, 3	OBIS Segment/Key Counter	No key pressed: Displays the OBIS or proprietary index value of the parameter currently being displayed. 01-20: Indicates the number of keys that has been pressed.
OFF-GRID	-	Source Indicator (Optional)	**GRID:** Indicates that the meter is operating on grid supply. **OFF-GRID:** Indicates that the meter is operating on off-grid supply.
ENERGY	R1	Energy Indicator	Indicates that the current parameter being displayed is an energy parameter.
CREDIT	R2	Credit Indicator	Indicates that the current parameter being displayed is credit balance.
	R3	Terminal Cover Status Indicator	Indicates that the meter terminal cover is removed when showing.
	R4	Face Cover Status Indicator	Indicates that the meter face cover is removed when showing.
	R5	Battery Cover Status Indicator	Indicates that the meter battery cover is open when showing.

	R6	Panel Cover Status Indicator (Optional)	Indicates that the meter panel box is open when showing.
MD	R7	Maximum Demand Indicator	Indicates that the current parameter being displayed is a maximum demand value when showing.
	-	Battery Indicator	Indicates the strength of the meter battery.
	-	Network Indicator (Optional)	-
	-	Relay Status Indicator	Indicates the state of the meter relay whether open or closed.
L1 L2 L3	-	Voltage and Current Indicator	L1, L2, L3 indicates that voltage is present on phase 1, 2 and 3 of the meter respectively (Three –phase meter only) when showing. For single phase, only L1 is applicable. < indicates negative current when showing. > indicates positive current when showing.
T0 T12	T0, 12	Tariff Indicator	Indicates the current operating tariff of the meter for dual-tariff meters.
kWArhz	-	Unit Indicator	Indicates the unit of the parameter currently being displayed: V/A/VA/W/kW/KWh/kVAr/kVArh/Hz.
	-	Data Display Area	Displays response/data such as Voltage, Current, Energy, etc.
S1	S1	Electrical Tamper Indicator	Indicates that an electrical tamper has occurred on the meter when the meter is in factory mode or event display mode.
S2	S2	Case Tamper Indicator	Indicates that a case tamper has occurred on the meter when the meter is in factory mode or event display mode.
S3	S3	Terminal Tamper Indicator	Indicates that a terminal tamper has occurred on the meter when the meter is in factory mode or event display mode.
S4	S4	Overload Indicator	Indicates that an overload event has occurred on the meter when the meter is in factory mode or event display mode.
S5	S5	Tamper Detection Disabled Indicator	Indicates that tamper detection has been disabled on the meter when the meter is in factory mode or event display mode.
S6	S6	Panel Tamper Indicator (Optional)	Indicates that a panel tamper has occurred on the meter when the meter is in factory mode or event display mode.
S7	S7	EEPROM Error Indicator	Indicates that an EEPROM error has occurred on the meter when the meter is in factory mode or event display mode.
S8	S8	Three-Phase Mode Indicator	Indicates that the meter is enabled for three-phase operation when the meter is in factory mode or event display mode.
	-	Transmit Indicator	Indicates that the meter has transmitted a data packet out.
	-	Receive Indicator	Indicates that the meter has received a valid data packet.
FACT	-	Factory Mode Indicator	Indicates that the meter is in Factory Mode when the meter is in factory mode or event display mode.

Meter Specifications

DESCRIPTION	SINGLE PHASE VALUE	DIN RAIL VALUE
Accuracy	CLASS 1	
Voltage		
Reference voltage	240 V	
Operating voltage range	70% - 120% Reference voltage	
Current	5 (80A)	
Frequency	50Hz	
Temperature		
Operation range	-25°C to 60 °C	
Limit range for storage and transport	-40°C to 75 °C	
Humidity	Up to 95%	
Power consumption		
Power consumption in voltage circuit(active)	2W	
Power consumption in voltage circuit(apparent)	10VA	
Power consumption in current circuit	1VA	
Insulation strength		
AC voltage test	4kV during 1min	
Impulse voltage test	1.2/50μs mains connections 6kV	
EMC	8kV	
Electrostatic discharges (Contact discharges)	15kV	
Electrostatic discharges (Air discharges) Surge	4kV	
immunity test Fast transient burst test	4kV	
Electromagnetic RF fields (80MHz to 2000MHz)	10V/m(with current), 30V/m(without current)	
Connection Terminals	¢ 10mm	
Housing		
Protection degree	IP51	
Meter cover	Opaque PC+ fiber glass with a transparent window	
Meter base	Opaque PC+ fiber glass	
Terminal cover	Transparent PC	
Communication Interface		
Optical communication	IR	
Other	DLMS / COSEM Compliance RF (RF UIU, SOFT MMX ANDROID APP available google playstore) GPRS (SOFT GX Android / iOS App available in google /Applestore)	
Weight	Approx. 0.896Kg	Approx. 0.530Kg
Dimension	203x130x85mm	154x42x108mm
Optional features	Dual Tariff support	





Momas Three Phase Wi-Fi Meter
MMX-310 NGG/NGW

The Single Phase Wi-Fi Meter is one of our single phase meters, designed to provide a highly accurate energy reading and metering system.
It is developed solely for smart communication system for end users as it uses wireless technology for its communication and is a user friendly technology. This meter is a DLMS and STS compliant prepayment meter and it can communicate with a Wi-Fi user interface unit and Mobile App, where communication can be done with the meter from Far and near.

TYPICAL RESULT DISPLAYED ON LCD

DISPLAY	DESCRIPTION
SUCCESS	Input ofFirst 20 digits of the key change token(KCT)
ACCEPT	Input of second 20 digits of the key change token(KCT) or successful input of any 20 digits token
ACCEPT	865 to activate meter after installation
E-07	Recharge amount plus credit is over the treshold, token is refused but this token can be used again when recharge condition is met.
E-01	Bad token
E-03	Expired token, if the input token is older than the oldest in log, that means the token is expired
E-04	Used token
E-05	Key expired for SGC
E-06	DDTK Error

SHORT CODE DESCRIPTION

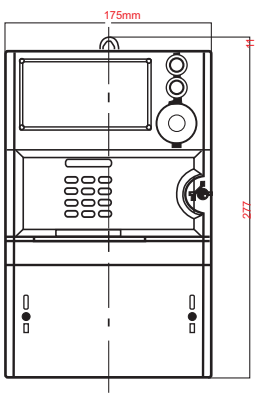
Short Code	Function	Short-Cut Code	Function
800	Cummulative Energy	801	Credit balance
802	Current Date	803	Current Time
804	Meter number	805	SGC Number
806	Relay Operation Reason	807	Meter State
808	Total Instantaneous Power	809	Tariff Index
810	Over Draft Value	811	Emergency Credit
812	Cancel Audible Alarm	813	Last Day of forward active energy
814	Forward active energy of current month	815	Date of last recharge

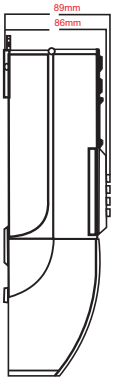
SHORT CODE DESCRIPTION

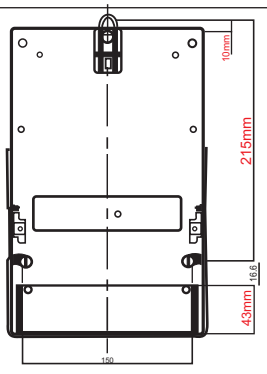
For Dual Tarrif

Short Code	Function	Short-Cut Code	Function
817	Total Active Energy (Tariff 1)	824	Last Recharge Amount (Tariff 2)
818	Total Active Energy(Tariff 2)	825	Last Recharge Date (Tariff 1)
819	SGC (Tariff 2)	826	Last Recharge Date (Tariff 2)
820	TI (Tariff 2)		
821	Total Credit (Tariff 2)		
822	Total Credit (Tariff 1)		
823	Last Recharge Amount (Tariff 1)		

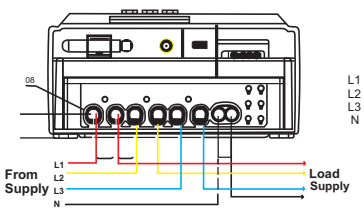
DESCRIPTION	VALUE
Accuracy	CLASS 1
Voltage	
Reference voltage	240/415 V
Operating voltage range	70% - 120% Reference voltage
Current	5 (100A)
Frequency	50Hz
Temperature	
Operation range	-25℃ to 60 ℃
Limit range for storage and transport	-40℃ to 75 ℃
Humidity	Up to 95%
Power consumption	
Power consumption in voltage circuit(active)	2W
Power consumption in voltage circuit(apparent)	10VA
Power consumption in current circuit	1VA
Insulation strength	
AC voltage test	4kV during 1min
Impulse voltage test	1.2/50μs mains connections 6kV
EMC	8kV
Electrostatic discharges (Contact discharges)	15kV
Electrostatic discharges (Air discharges) Surge	4kV
immunity test Fast transient burst test	4kV
Electromagnetic RF fields (80MHz to 2000MHz)	10V/m(with current), 30V/m(without current)
Connection Terminals	¢ 10mm
Housing	
Protection degree	IP51
Meter cover	Opaque PC+ fiber glass with a transparent window
Meter base	Opaque PC+ fiber glass
Terminal cover	Transparent PC
Communication Interface	
Optical communication	IR, PLC
Other	DLMS / COSEM Compliance RF (RF UIU, SOFT MMX ANDROID APP available in google playstore) GPRS (SOFT GX Android / iOS App available in google /Applestore)
Weight	Approx. 1.730Kg
Dimension	273x174x85mm
Optional features	Dual Tariff support



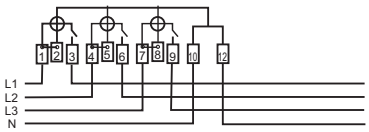




Terminal Block/Installation



Wiring Diagram (Check terminal cover)



Momas Three Phase PLC Meter
MMX-310 NG-P-<PLC>

The Three Phase PLC Meter is one of our three phase meters, designed to provide a highly accurate energy reading and metering system. It is developed solely for easy communication for end users as it uses the existing Power line for its communication thus the name, Power line communication (PLC). The meter is a DLMS and STS compliant prepayment meter. The meter can communicate with a PLC user interface unit.

TYPICAL RESULT DISPLAYED ON LCD

DISPLAY	DESCRIPTION
SUCCESS	Input ofFirst 20 digits of the key change token(KCT)
ACCEPT	Input of second 20 digits of the key change token(KCT) or successful input of any 20 digits token
ACCEPT	865 to activate meter after installation
E-07	Recharge amount plus credit is over the treshold, token is refused but this token can be used again when recharge condition is met.
E-01	Bad token
E-03	Expired token, if the input token is older than the oldest in log, that means the token is expired
E-04	Used token
E-05	Key expired for SGC
E-06	DDTK Error

SHORT CODE DESCRIPTION

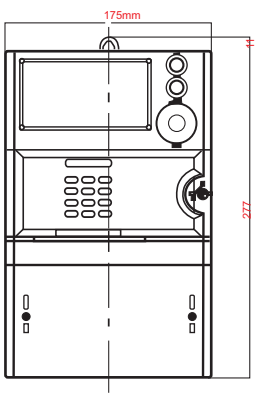
Short Code	Function	Short-Cut Code	Function
800	Cummulative Energy	801	Credit balance
802	Current Date	803	Current Time
804	Meter number	805	SGC Number
806	Relay Operation Reason	807	Meter State
808	Total Instantaneous Power	809	Tariff Index
810	Over Draft Value	811	Emergency Credit
812	Cancel Audible Alarm	813	Last Day of forward active energy
814	Forward active energy of current month	815	Date of last recharge

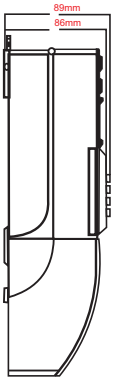
SHORT CODE DESCRIPTION

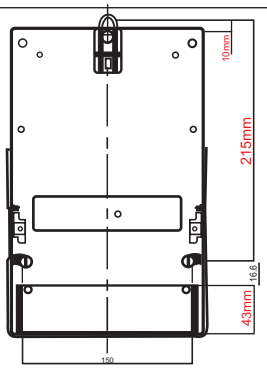
For Dual Tarrif

Short Code	Function	Short-Cut Code	Function
817	Total Active Energy (Tariff 1)	824	Last Recharge Amount (Tariff 2)
818	Total Active Energy(Tariff 2)	825	Last Recharge Date (Tariff 1)
819	SGC (Tariff 2)	826	Last Recharge Date (Tariff 2)
820	TI (Tariff 2)		
821	Total Credit (Tariff 2)		
822	Total Credit (Tariff 1)		
823	Last Recharge Amount (Tariff 1)		

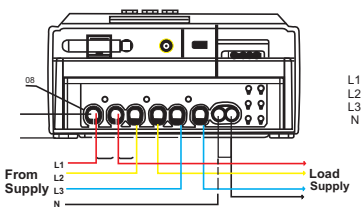
DESCRIPTION	VALUE
Accuracy	CLASS 1
Voltage	
Reference voltage	240/415 V
Operating voltage range	70% - 120% Reference voltage
Current	5 (100A)
Frequency	50Hz
Temperature	
Operation range	-25℃ to 60 ℃
Limit range for storage and transport	-40℃ to 75 ℃
Humidity	Up to 95%
Power consumption	
Power consumption in voltage circuit(active)	2W
Power consumption in voltage circuit(apparent)	10VA
Power consumption in current circuit	1VA
Insulation strength	
AC voltage test	4kV during 1min
Impulse voltage test	1.2/50μs mains connections 6kV
EMC	8kV
Electrostatic discharges (Contact discharges)	15kV
Electrostatic discharges (Air discharges) Surge	4kV
immunity test Fast transient burst test	4kV
Electromagnetic RF fields (80MHz to 2000MHz)	10V/m(with current), 30V/m(without current)
Connection Terminals	¢ 10mm
Housing	
Protection degree	IP51
Meter cover	Opaque PC+ fiber glass with a transparent window
Meter base	Opaque PC+ fiber glass
Terminal cover	Transparent PC
Communication Interface	
Optical communication	IR, PLC
Other	DLMS / COSEM Compliance RF (RF UIU, SOFT MMX ANDROID APP available in google playstore) GPRS (SOFT GX Android / iOS App available in google /Applestore)
Weight	Approx. 1.730Kg
Dimension	273x174x85mm
Optional features	Dual Tariff support



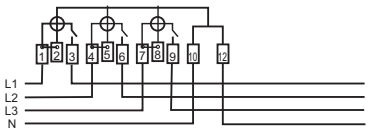




Terminal Block/Installation



Wiring Diagram (Check terminal cover)



Momas Three Phase Split Meter
MMX-310 NG-

The Three Phase Dual Tariff Meter is one of our single phase meters, designed to provide a highly accurate energy reading and metering system.
This type of metering solution is developed to work with environment that regulate both grid and off-grid such as Estate that supply both grid and off-grid facility with different tariff rate. It can be wireless and wired, it is developed solely as smart communication system for end users and clients as it uses a switching sensor technology. It is DLMS and STS compliant prepayment meter. The meter can also communicate over GPRS and Mobile App.

TYPICAL RESULT DISPLAYED ON LCD

DISPLAY	DESCRIPTION
SUCCESS	Input ofFirst 20 digits of the key change token(KCT)
ACCEPT	Input of second 20 digits of the key change token(KCT) or successful input of any 20 digits token
ACCEPT	865 to activate meter after installation
E-07	Recharge amount plus credit is over the treshold, token is refused but this token can be used again when recharge condition is met.
E-01	Bad token
E-03	Expired token, if the input token is older than the oldest in log, that means the token is expired
E-04	Used token
E-05	Key expired for SGC
E-06	DDTK Error

SHORT CODE DESCRIPTION

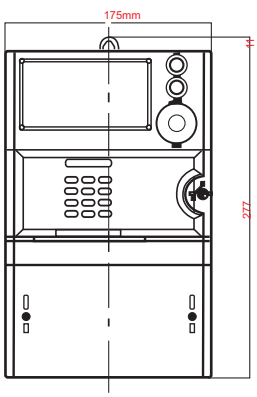
Short Code	Function	Short-Cut Code	Function
800	Cummulative Energy	801	Credit balance
802	Current Date	803	Current Time
804	Meter number	805	SGC Number
806	Relay Operation Reason	807	Meter State
808	Total Instantaneous Power	809	Tariff Index
810	Over Draft Value	811	Emergency Credit
812	Cancel Audible Alarm	813	Last Day of forward active energy
814	Forward active energy of current month	815	Date of last recharge

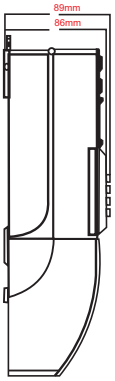
SHORT CODE DESCRIPTION

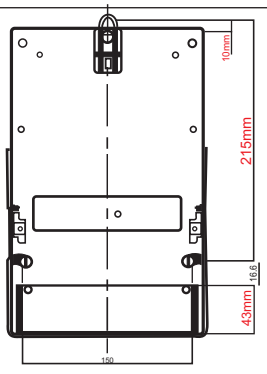
For Dual Tarrif

Short Code	Function	Short-Cut Code	Function
817	Total Active Energy (Tariff 1)	824	Last Recharge Amount (Tariff 2)
818	Total Active Energy(Tariff 2)	825	Last Recharge Date (Tariff 1)
819	SGC (Tariff 2)	826	Last Recharge Date (Tariff 2)
820	TI (Tariff 2)		
821	Total Credit (Tariff 2)		
822	Total Credit (Tariff 1)		
823	Last Recharge Amount (Tariff 1)		

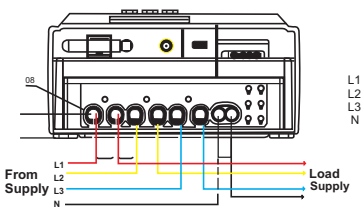
DESCRIPTION	VALUE
Accuracy	CLASS 1
Voltage	
Reference voltage	240/415 V
Operating voltage range	70% - 120% Reference voltage
Current	5 (100A)
Frequency	50Hz
Temperature	
Operation range	-25℃ to 60 ℃
Limit range for storage and transport	-40℃ to 75 ℃
Humidity	Up to 95%
Power consumption	
Power consumption in voltage circuit(active)	2W
Power consumption in voltage circuit(apparent)	10VA
Power consumption in current circuit	1VA
Insulation strength	
AC voltage test	4kV during 1min
Impulse voltage test	1.2/50μs mains connections 6kV
EMC	8kV
Electrostatic discharges (Contact discharges)	15kV
Electrostatic discharges (Air discharges) Surge	4kV
immunity test Fast transient burst test	4kV
Electromagnetic RF fields (80MHz to 2000MHz)	10V/m(with current), 30V/m(without current)
Connection Terminals	¢ 10mm
Housing	
Protection degree	IP51
Meter cover	Opaque PC+ fiber glass with a transparent window
Meter base	Opaque PC+ fiber glass
Terminal cover	Transparent PC
Communication Interface	
Optical communication	IR, PLC
Other	DLMS / COSEM Compliance RF (RF UIU, SOFT MMX ANDROID APP available in google playstore) GPRS (SOFT GX Android / iOS App available in google /Applestore)
Weight	Approx. 1.730Kg
Dimension	273x174x85mm
Optional features	Dual Tariff support



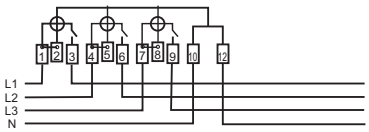




Terminal Block/Installation



Wiring Diagram (Check terminal cover)



Momas Three Phase Compact Meter
MMX-110-NGC

TheThree Phase Compact Meter is one of our single phase meters, designed to provide a highly accurate energy reading and metering system. It is a DLMS and STS compliant prepayment meter. The meter does not communicate with user interface unit and Mobile Apps but has an onboard keyboard attached to it.

TYPICAL RESULT DISPLAYED ON LCD

DISPLAY	DESCRIPTION
SUCCESS	Input ofFirst 20 digits of the key change token(KCT)
ACCEPT	Input of second 20 digits of the key change token(KCT) or successful input of any 20 digits token
ACCEPT	865 to activate meter after installation
E-07	Recharge amount plus credit is over the treshold, token is refused but this token can be used again when recharge condition is met.
E-01	Bad token
E-03	Expired token, if the input token is older than the oldest in log, that means the token is expired
E-04	Used token
E-05	Key expired for SGC
E-06	DDTK Error

SHORT CODE DESCRIPTION

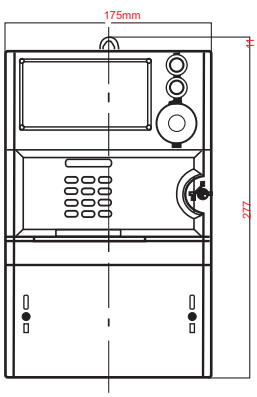
Short Code	Function	Short-Cut Code	Function
800	Cummulative Energy	801	Credit balance
802	Current Date	803	Current Time
804	Meter number	805	SGC Number
806	Relay Operation Reason	807	Meter State
808	Total Instantaneous Power	809	Tariff Index
810	Over Draft Value	811	Emergency Credit
812	Cancel Audible Alarm	813	Last Day of forward active energy
814	Forward active energy of current month	815	Date of last recharge

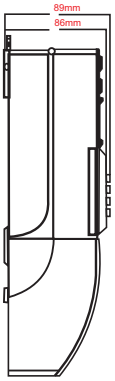
SHORT CODE DESCRIPTION

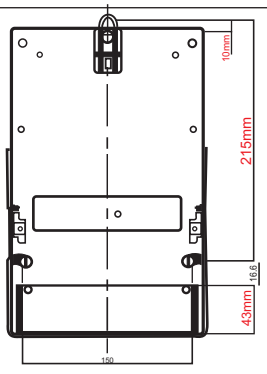
For Dual Tarrif

Short Code	Function	Short-Cut Code	Function
817	Total Active Energy (Tariff 1)	824	Last Recharge Amount (Tariff 2)
818	Total Active Energy(Tariff 2)	825	Last Recharge Date (Tariff 1)
819	SGC (Tariff 2)	826	Last Recharge Date (Tariff 2)
820	TI (Tariff 2)		
821	Total Credit (Tariff 2)		
822	Total Credit (Tariff 1)		
823	Last Recharge Amount (Tariff 1)		

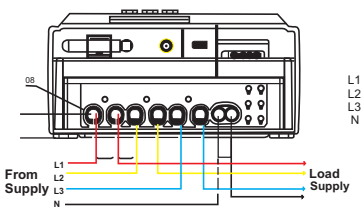
DESCRIPTION	VALUE
Accuracy	CLASS 1
Voltage	
Reference voltage	240/415 V
Operating voltage range	70% - 120% Reference voltage
Current	5 (100A)
Frequency	50Hz
Temperature	
Operation range	-25℃ to 60 ℃
Limit range for storage and transport	-40℃ to 75 ℃
Humidity	Up to 95%
Power consumption	
Power consumption in voltage circuit(active)	2W
Power consumption in voltage circuit(apparent)	10VA
Power consumption in current circuit	1VA
Insulation strength	
AC voltage test	4kV during 1min
Impulse voltage test	1.2/50μs mains connections 6kV
EMC	8kV
Electrostatic discharges (Contact discharges)	15kV
Electrostatic discharges (Air discharges) Surge	4kV
immunity test Fast transient burst test	4kV
Electromagnetic RF fields (80MHz to 2000MHz)	10V/m(with current), 30V/m(without current)
Connection Terminals	¢ 10mm
Housing	
Protection degree	IP51
Meter cover	Opaque PC+ fiber glass with a transparent window
Meter base	Opaque PC+ fiber glass
Terminal cover	Transparent PC
Communication Interface	
Optical communication	IR, PLC
Other	DLMS / COSEM Compliance RF (RF UIU, SOFT MMX ANDROID APP available in google playstore) GPRS (SOFT GX Android / iOS App available in google /Applestore)
Weight	Approx. 1.730Kg
Dimension	273x174x85mm
Optional features	Dual Tariff support



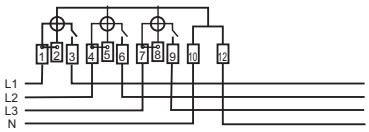




Terminal Block/Installation



Wiring Diagram (Check terminal cover)



Momas Three Phase Dual Tariff Meter
MMX-310NG-DT

The Three Phase Dual Tariff Meter is one of our three phase meters, designed to provide a highly accurate energy reading and metering system. It is developed solely for easy communication for end users as it uses the existing Power line for its communication thus the name, Power line communication (PLC). The meter is a DLMS and STS compliant prepayment meter. The meter can communicate with a PLC user interface unit.

TYPICAL RESULT DISPLAYED ON LCD

DISPLAY	DESCRIPTION
SUCCESS	Input ofFirst 20 digits of the key change token(KCT)
ACCEPT	Input of second 20 digits of the key change token(KCT) or successful input of any 20 digits token
ACCEPT	865 to activate meter after installation
E-07	Recharge amount plus credit is over the treshold, token is refused but this token can be used again when recharge condition is met.
E-01	Bad token
E-03	Expired token, if the input token is older than the oldest in log, that means the token is expired
E-04	Used token
E-05	Key expired for SGC
E-06	DDTK Error

SHORT CODE DESCRIPTION

Short Code	Function	Short-Cut Code	Function
800	Cummulative Energy	801	Credit balance
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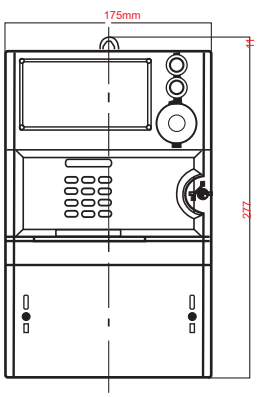
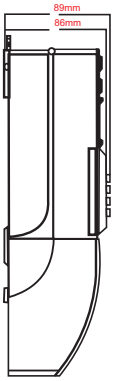
804	Meter number	805	SGC Number
806	Relay Operation Reason	807	Meter State
808	Total Instantaneous Power	809	Tariff Index
810	Over Draft Value	811	Emergency Credit
812	Cancel Audible Alarm	813	Last Day of forward active energy
814	Forward active energy of current month	815	Date of last recharge

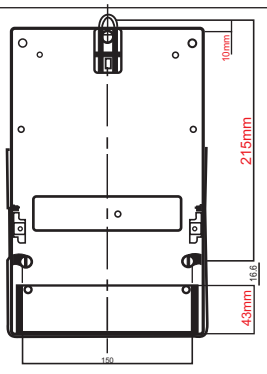
SHORT CODE DESCRIPTION — For Dual Tarrif

Short Code	Function	Short-Cut Code	Function
817	Total Active Energy (Tariff 1)	824	Last Recharge Amount (Tariff 2)
818	Total Active Energy(Tariff 2)	825	Last Recharge Date (Tariff 1)
819	SGC (Tariff 2)	826	Last Recharge Date (Tariff 2)
820	TI (Tariff 2)		
821	Total Credit (Tariff 2)		
822	Total Credit (Tariff 1)		
823	Last Recharge Amount (Tariff 1)		

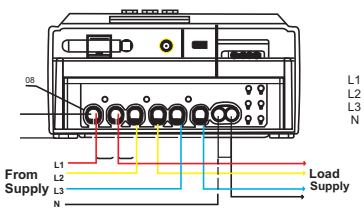
DESCRIPTION	VALUE
Accuracy	CLASS 1
Voltage	
Reference voltage	240/415 V
Operating voltage range	70% - 120% Reference voltage
Current	5 (100A)
Frequency	50Hz
Temperature	
Operation range	-25℃ to 60 ℃
Limit range for storage and transport	-40℃ to 75 ℃
Humidity	Up to 95%
Power consumption	
Power consumption in voltage circuit(active)	2W
Power consumption in voltage circuit(apparent)	10VA
Power consumption in current circuit	1VA
Insulation strength	
AC voltage test	4kV during 1min
Impulse voltage test	1.2/50μs mains connections 6kV
EMC	8kV
Electrostatic discharges (Contact discharges)	15kV
Electrostatic discharges (Air discharges) Surge	4kV
immunity test Fast transient burst test	4kV
Electromagnetic RF fields (80MHz to 2000MHz)	10V/m(with current), 30V/m(without current)
Connection Terminals	¢ 10mm
Housing	
Protection degree	IP51
Meter cover	Opaque PC+ fiber glass with a transparent window
Meter base	Opaque PC+ fiber glass
Terminal cover	Transparent PC
Communication Interface	
Optical communication	IR, PLC
Other	DLMS / COSEM Compliance RF (RF UIU, SOFT MMX ANDROID APP available in google playstore) GPRS (SOFT GX Android / iOS App available in google /Applestore)
Weight	Approx. 1.730Kg
Dimension	273x174x85mm
Optional features	Dual Tariff support



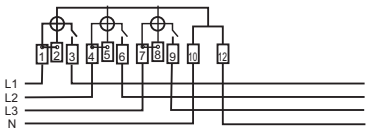




Terminal Block/Installation



Wiring Diagram (Check terminal cover)



Maximum Demand Meter
MMX-313NG-CT

MMX 310 CT
MAXIMUM DEMAND METER

This Low-Voltage Current Transformer meter addresses the needs for utilities to measure the consumption of Small and Medium Commercial and Industrial Consumers (above 36kVA) and to monitor the Distribution Transformers. It is by default a communicating terminal, including a built-in modem for AMM and Smart Grid applications, and can operate on all modern telecommunication network carriers such as GPRS, CDMA, CSD, SMS, PSTN. This meter is based on IEC PL3223 and multi-function metering SoC (System on Chip) PL3201 design of which MEMMCOL possess the Intellectual Property Rights. This meter operates ideally in conjunction with MEMMCOL's AMR software suite.

Specifications

Description	Value
Accuracy	Class 1 or 2 (IEC), Class A or B (MID)
Voltage Reference voltage Operating voltage range	 3×240/415V 70%-120%Un
Current Basic current Maximum current Starting current	 1A, 10A 0.4%Ib
Frequency	50Hz or 60Hz
Temperature Operation range Limit range for storage and transport	 -25^{0}C to +60^{0}C -40^{0}C to +75^{0}C
Humidity	Up to 95%
Power Consumption Power consumption in voltage circuit (active) Power consumption in voltage circuit (apparent) Power consumption in current circuit	 =2 W =10 VA =1 VA
Insulation Strength AC voltage test Impulse voltage test	 4kV during 1min 1.2/50ìs mains connections 6kV
EMC Electrostatic discharges(Contact discharges) Electrostatic discharges(Air discharges) Surge immunity test Fast transient burst test Electromagnetic RF fields (80MHz to 2000MHz)	 8kV 15kV 4kV 4kV 10V/m(with current), 30V/m(without current)
Connection Terminals	8mm
Housing Protection degree Meter cover Meter base Terminal cover	IP54 (with long terminal cover) Opaque PC+ fiber glass with a transparent window Opaque PC+ fiber glass Opaque PC+ fiber glass
Display Digit Size Number of digits	 8.8mm x 4.5mm 8
Communication Interface Optical communication RS485 Plug-and-play communication module	 DLMS/COSEM DLMS/COSEM
Weight Net weight Package	 Extended terminal cover: Approx.1.62kg(+GPRS communication module)
Dimension	277mm×175mm×89mm (Extended terminal cover)

CT Rating

- 100/5
- 200/5
- 300/5
- 500/5
- 800/5

Main Functionalities

Measurement
- Unidirectional or Bi-directional Measurement
- Record active energy in tariffs
- Instantaneous value measurement
- 6-month billing data and other frozen data for inquiry
- Prepayment is made via a numeric token with extended ways of recharging

LCD Display
- Balance display configurable
- Large digit LCD display, easy for reading
- LCD backlights to increase readability in low light conditions(optional)
- Scrolling display configurable for instant information enquiry
- Display readable without main power (RWP)
- LCD backlights to increase readability in low light conditions
- 6-month billing data (active energy) displayable

RTC
- Clock accuracy (daily deviation): ¡Ü 0.5s

Tampering Proof
- Meter Cover open detection and record
- Meter terminal detection and record
- Bypass (optional)
- Large magnetic event(optional)
- Auxiliary Terminal for Energy Pulse Output(optional)

Demand
- Demand Interval configurable
- Block or slide mode configurable

Influence parameters
The meter will work satisfactorily with guaranteed accuracy limit under the presence of the following quantities:
- External magnetic fields
- Electromagnetic field induction
- Radio frequency interference
- Vibration etc
- Waveform 10% of 3rd harmonics
- Electromagnetic H.F. Fields
- DC Immunity test (23)
- Day light saving configurable

Event Record
- Fraud protection function. The relay will be disconnected for fraud protection once detects the cover open and terminal cover open events
- Multiple event detections and records with categories of operation, power grid and tampering
- RS485 Communication with interface in accordance to DLMS standard (optional)
- Emergency Credit for a certain sum of energy supply depending on User's credit level
- User-friendly mode for energy supply for low credit during weekends or holidays (optional)
- Forward and reverse active MD with time stamp

Tariff
- TOU
- Step configurable.

Load profile
- Channel quantity customized before leaving the factory; Up to 8 channels
- Data for load profile record configuration