



MANUAL

SMART 7KT

Discrete Panel Meter

7KT0210 (3 phase energy meter)

SMART 7KT power monitoring devices

SIEMENS

Index

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Discrete Panel Meter

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Manual

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Introduction

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1.1 Purpose of this document

This present manual describes the SMART 7KT multifunction meter.

It is intended for the use of:

- Planners
- Plant operators
- Commissioning engineers
- Service and maintenance personnel

1.2 Required basic knowledge

A general knowledge of the field of electrical engineering is required to understand this manual.

Knowledge of the relevant safety regulations and standards is required for installing and connecting the device.

1.3 Components of the product

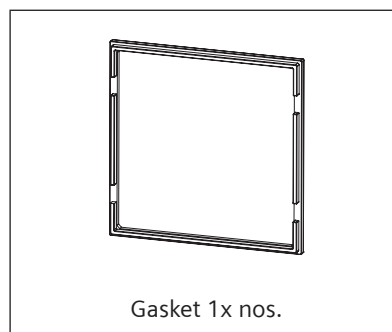
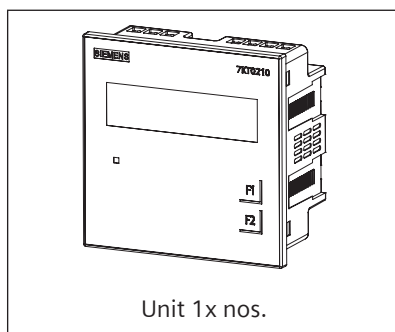
The carton for the products contain

1 SMART 7KT meter

1 set of clamps (4 clamps) for mounting the meter on the panel door




1 Gasket

1 Operating instruction



Safety precautions

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	DANGER	
	<p>Hazardous voltage will cause death or serious injury. Turn off and lock out all power supply before working on this device.</p>	
	NOTICE	
	<p>Installation and maintenance must be carried out by qualified personnel.</p> <p>This product has been designed for environment A. Use of this product in environment B may cause unwanted electromagnetic disturbances in which case the user may require to take adequate mitigation measures.</p> <p>Risk of damage: Please ensure the proper isolation of meter during the IR (Meggering) test.</p>	

All safety related codifications, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument. If the equipment is not used in a manner specified by the manufacturer it might impair the protection provided by the equipment.

Do not use the equipment if there is any mechanical damage.

Ensure that the equipment is supplied with correct voltage.

<p>NOTICE:</p> <p>This product has been designed for environment A. Use of this product in environment B may cause unwanted electromagnetic disturbances in which case the user may require to take adequate mitigation measures.</p> <p>Risk of damage: Please ensure the proper isolation of meter during the IR (Meggering) test.</p>

<p> CAUTION:</p> <ol style="list-style-type: none"> 1. Read complete instructions prior to installation and operation of the unit. 2. Risk of electric shock. 3. The equipment in its installed state must not come in close proximity to any heating sources, oils, steam, caustic vapors or other unwanted process by products.
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Security information

In order to protect plants, systems, machines, and network against cyber threats it is necessary to implement and continuously maintain a holistic state of the art industrial security concept. Siemens product and solutions constitute one element of such concept.

For more information about industrial security please visit <https://www.siemens.com/industrial security>

Technical specification

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7KT0210(3 Phase Energy Class 1)	
Power Monitoring Device Panel instrument for std electrical values Protocol: Modbus RTU, Single line LCD Display Vaux: 95V to 240V AC x/1 or 5 A, Class 1	
Measurements	
measuring procedure	True RMS
• for voltage measurement	True RMS
• for current measurement	True RMS
type of measured value detection	complete
voltage curve	Sinusoidal or distorted
measurable line frequency	
• initial value	45 Hz
• full-scale value	65 Hz
operating mode for measured value detection automatic line frequency detection	Yes
Supply voltage	
design of the power supply	SMPS power supply
type of voltage of the supply voltage	AC
Degree of protection class	
protection class IP on the front	IP54
protection class IP of the terminal	IP20
Suitability	
suitability for operation	Installation in stationary panels in closed rooms
Product Functions	
• voltage measurement	Yes
• current measurement	Yes
• active power measurement	Yes
• reactive power measurement	Yes
• apparent power measurement	Yes
• power factor measurement	Yes
• frequency measurement	Yes
• apparent energy/active energy/reactive energy	Yes
Display and operation	
design of the display	LCD
height of the display	19 mm
width of the display	75 mm
color of the background of the display	White
National language on the display screen is supported	EN
number of keys	2
Fault limits	
reference condition for metering accuracy	In accordance with IEC61557-12, IEC62053-21, IEC 62053-23
formula for relative total measurement inaccuracy	
• for measured variable voltage	Class 0.5 as per IEC 61557-12
• for measured variable current	Class 0.5 as per IEC 61557-12
• for measured variable apparent power	Class 1 as per IEC 61557-12
• for measured variable active power	Class 1 as per IEC 61557-12
• for measured variable reactive power	Class 2 as per IEC 61557-12
• for measured variable power factor	Class 1 as per IEC 61557-12
• for measured variable active energy	Class 1 as per IEC 62053-21 and IEC 61557-12
• for measured variable reactive energy	Class 2 as per IEC 61557-12 and IEC 62053-23

7KT0210(3 Phase Energy Class 1)	
Inputs Outputs	
number of digital inputs	1
type of electrical connection at the digital inputs	screw-type terminals
operating conditions for digital inputs external voltage supply	Yes
input voltage at digital input at DC maximum	30 V
input current at digital input initial value for signal<1>-recognition	10 mA
Measuring inputs	
measurable supply voltage between L and N at AC maximum rated value	240 V
measurable supply voltage between L and N at AC	
• minimum	11 V
• maximum	300 V
measurable supply voltage between the line conductors at AC maximum rated value	415 V
measurable supply voltage between the line conductors at AC	
• minimum	19 V
• maximum	519 V
voltage measuring range extension with external voltage transformers	up to 500kV
line conductors and neutral conductors internal resistance for voltage measurement	1.12 MΩ
measuring category for voltage measurement	CAT III
measurable current	1A / 5A
relative measurable current at AC	
• minimum	1%
• maximum	120%
current measuring range extension with external current transformers	up to 10kA
measuring category for current measurement	CAT III
Connections	
type of electrical connection	
• at the measurement inputs for voltage	screw-type terminals
• at the measurement inputs for current	screw-type terminals
Mechanical Design	
mounting	flush panel-door mounted
size of Power Monitoring Device	size 96
height	99 mm
width	99 mm
cut-out	91.5 mm x 91.5 mm
depth	56.9 mm
installation depth	51.6 mm
net weight	234g
mounting position	Vertical
Environmental conditions	
ambient temperature during operation	
• minimum	-10 °C
• maximum	55 °C
ambient temperature during storage	
• minimum	-20 °C
• maximum	75 °C
relative humidity at 25 °C without condensation during operation maximum	85%
installation altitude at height above sea level maximum	2 000 m
degree of pollution	2

IEC Standards

Description	Standard
Accuracy	IEC 61557-12; IEC 62053-21 Active Energy
EMC requirements	IEC 61326-1
Degree of protection test (IP)	IEC 60529
Safety requirements	IEC 61010-1 and IEC 61010-2-030

Certifications


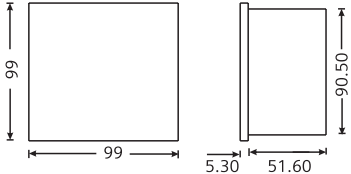
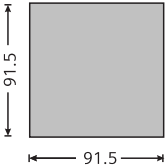
SMART 7KT multifunction meter conforms to IEC standards, IPC electronics assembly standard and 

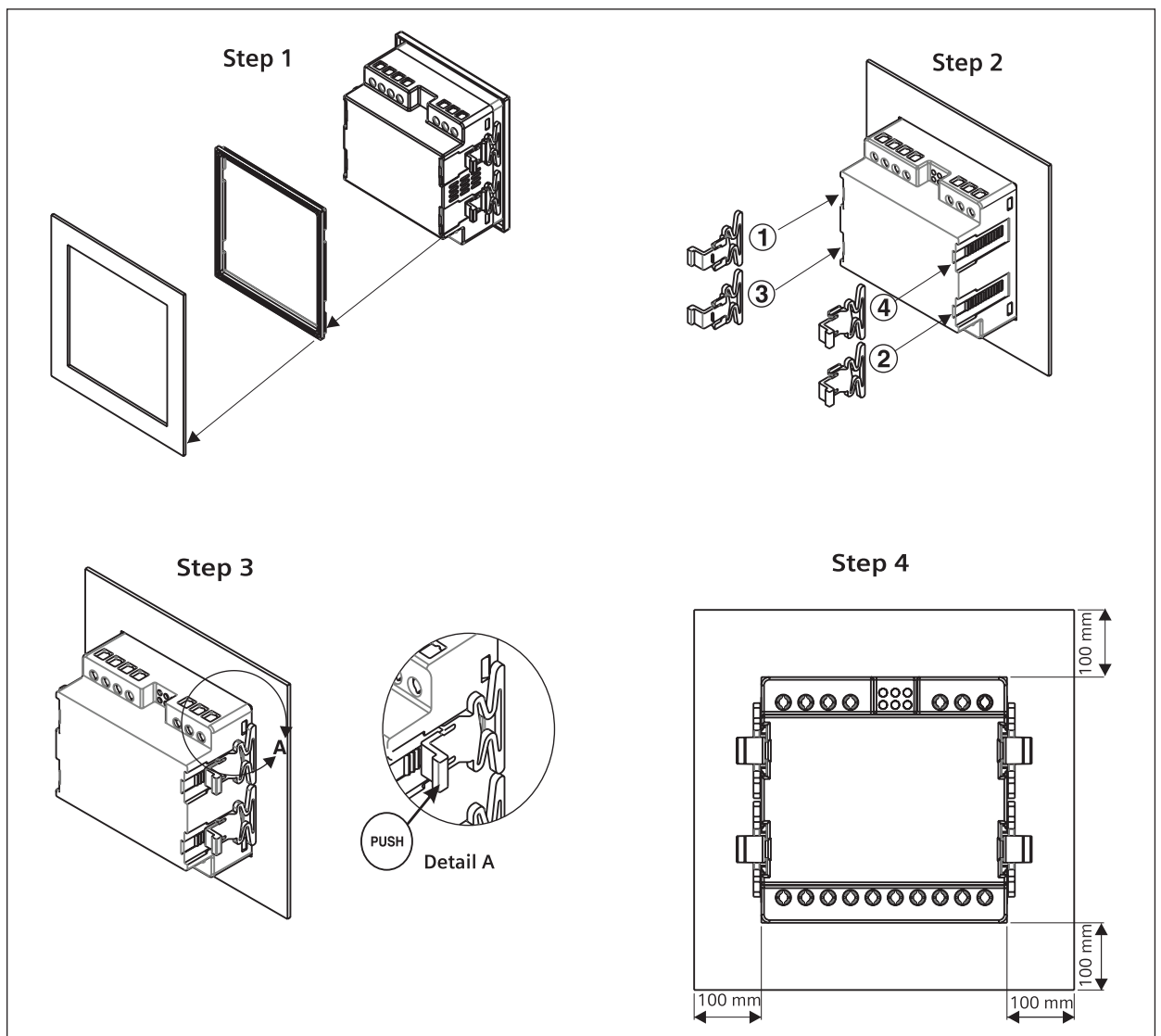
Assembly

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Installation

For installing the meter
Prepare the panel cutout with proper dimensions as shown below.

FRONT PANEL DESCRIPTION	OUTLINE Dimensions (in mm)	PANEL CUTOUT Dimensions (in mm)
		



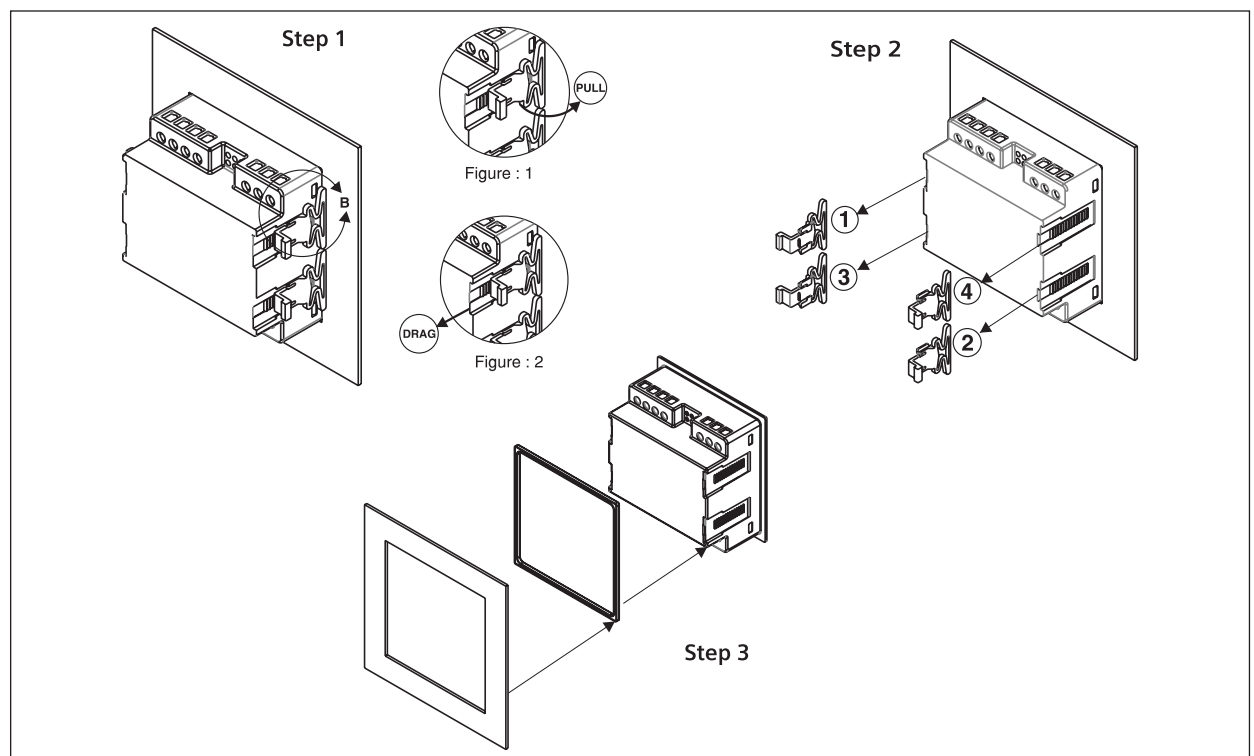
Installation Guidelines

1. This equipment, being built-in-type, normally becomes a part of main control panel and in such case the terminals do not remain accessible to the end user after installation and internal wiring.
2. Conductors must not come in contact with the internal circuitry of the equipment or else it may lead to a safety hazard that may in turn endanger life or cause electrical shock to the operator.
3. Circuit breaker or mains switch must be installed between power source and supply terminals to facilitate power 'ON' or 'OFF' function. However this switch or breaker must be installed in a convenient position normally accessible to the operator.
4. Before disconnecting the secondary of the external current transformer from the equipment, make sure that the current transformer is short circuited to avoid risk of electrical shock and injury.
5. The equipment shall not be installed in environmental conditions other than those mentioned in this manual.
6. The equipment does not have a built-in-type fuse. Installation of external fuse of 0.5 A, Class Gg type for electrical circuitry is highly recommended.
7. Remove the scratch-guard from the meter display during commissioning of the panel.

Wiring Guidelines

1. To prevent the risk of electric shock, power supply to the equipment must be kept OFF while doing the wiring arrangement.
2. Wiring shall be done strictly according to the terminal layout. Confirm that all connections are correct.
3. Use lugged terminals.
4. To reduce electromagnetic interference use of wires with adequate ratings and twists of the same in equal size shall be made with shortest connections.
5. Layout of connecting cables shall be away from any internal EMI source.
6. Cable used for connection to power source, must have a cross-section of 1mm² to 2.5mm². These wires shall have current carrying capacity of 6A.
7. Copper cable should be used (Stranded or Single core cable).

For demounting the meter



Connection

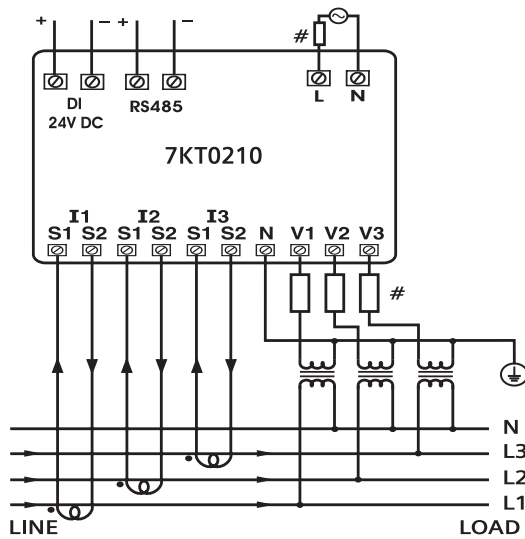
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Typical Wiring Diagram

3 Phase - 4 Wire

3 Ø - 4 Wire, 3 CT's and 3 PT's

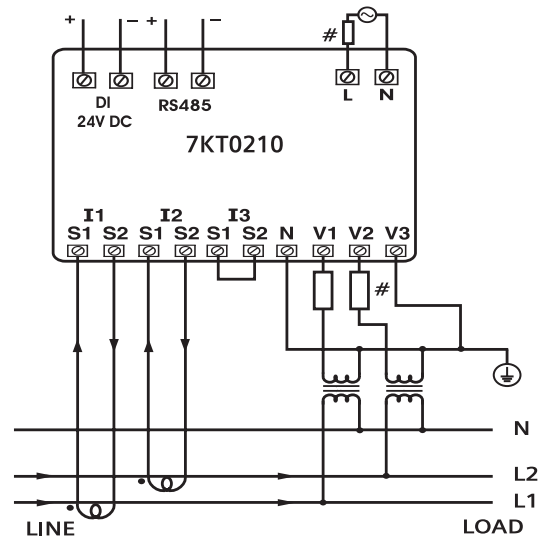
Network selection: 3P4W



2 Phase - 3 Wire

2 Ø - 3 Wire, 2 CT's and 2 PT's

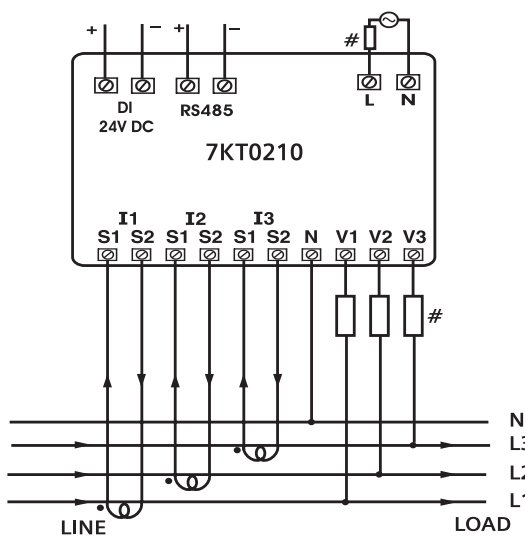
Network selection: 3P4W



3 Phase - 4 Wire (commonly used)

3 Ø - 4 Wire, 3 CT's

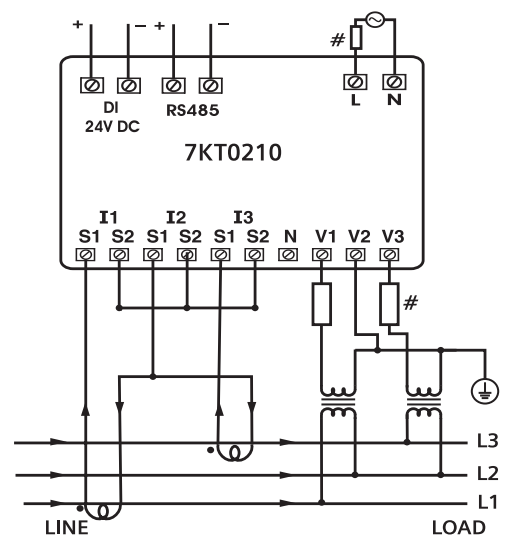
Network selection: 3P4W



3 Phase - 3 Wire

3 Ø - 3 Wire, 2 CT's and 2 PT's

Network selection: 3P3W

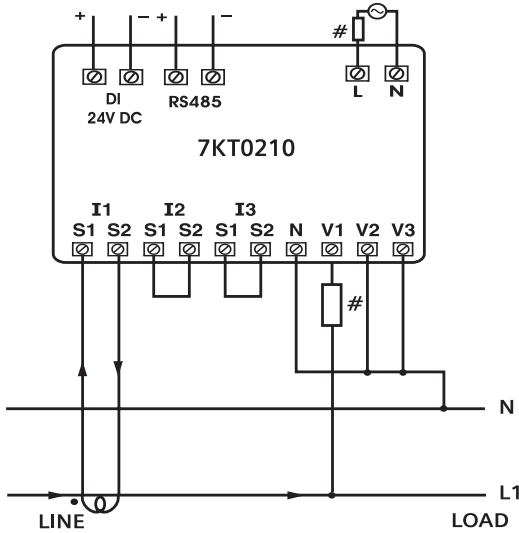


Typical Wiring Diagram (Continued)

1 Phase - 2 Wire

1 Ø - 2 Wire, 1 CT

Network selection: 1P2W



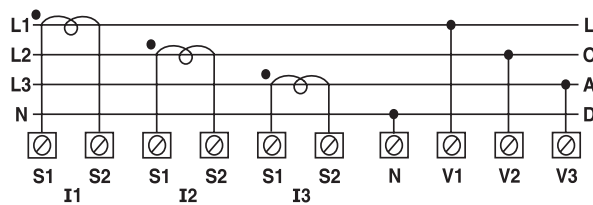
Note:

1. # All fuse type: 0.5A, Class gG.
2. Grounding of current transformer is optional*.

Terminal Connections



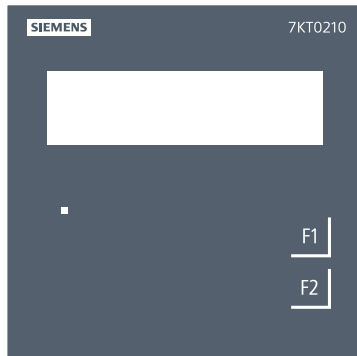
CONNECTIONS DIAGRAM



* The transformers must always be connected and therefore always grounded the secondary side according to the applicable regulations. Grounding of current transformer on the secondary side is not necessary for use in low voltage switchboards for performing measuring tasks.

Configuration

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There are two dedicated keys “F1” and “F2”.

Keys have multiple assignments. Function assignments and key labelling change according to the context of operator input.

For reading serial number

Touch F1 key for 3 sec. to display 8-digit serial number only for 5 sec.

Eg.: For serial number 11220002, the display will be:

11220002

Automatic / manual mode

Auto / Manual mode can be set in configuration setting.

By default, unit operates in automatic mode.

In automatic mode online pages scroll automatically at the rate of 5 seconds per page.

In automatic mode when any key is pressed, unit temporarily switches to manual mode and the appropriate page is displayed. If any key is not pressed for 5 sec, unit resumes automatic mode.

In manual mode, unit shows the last set page after power on.

Password to start configuration

When the meter is set to configuration mode by touching keys F1 + F2, the password page will display which shows the password 0000.

Enter the password 1000, which is the default password, by touching the F1 and F2 keys. The F2 key is to be used to shift into edit mode & move cursor right by one digit at a time; while the F1 key is to be used to increment the values.

To save the password touch and hold F2 for 2 sec.

Use F1 to enter and go to the next page

For the configuration setting mode

Touch and hold F1 + F2 key for 3 sec to enter and exit from configuration menu.

Use F2 key to shift the parameter in edit mode

Use F1 key to increment the parameter

Touch and hold F2 key for 2 sec to save the parameter value

Use 'F1' for enter & go to next page

Parameterization with function keys

Sequence	Function	Range or Selection	Factory Setting
1	Password	0000 to 9998	1000
1.1	Change password	No / Yes	No
2	New password	0000 to 9998	1000
3	Network selection	3P4W / 3P3W / 1P2W-R/ 1P2W-Y/ 1P2W-B	3P4W
4	CT secondary	1 OR 5	5
5	CT primary	5 to 10000 , If CT SEC is 5A 1 to 10000, If CT SEC is 1A	5
6	PT secondary	100 to 500	350
7	PT primary	100 to 500K	350
8	Slave ID	1 to 255	1
9	Baud Rate	300, 600, 1200, 2400, 4800, 9600, 19200	9600
10	Parity	None/EVEN/ODD	none
11	Stop Bit	1 or 2	1
12	Backlight off time	0000 to 7200	0000
13	Demand Interval method	Sliding / Fixed	Sliding
14	Demand Interval duration	1 to 30 min	15 min
15	Demand Interval length	1 to 30 min	1 min
16	ScrollPage	Auto/Manual	Auto
17	Factory default	Yes / No	No
18	Reset energy	Yes / No	No
18.1	Password	0001 to 9998	1001
18.2	Source Selection	Main/DG	Main
18.2.1	Reset kWh	Yes / No	No
18.2.2	Reset kVAh	Yes / No	No
18.2.3	Reset kVAh	Yes / No	No
19	Reset ON Hour	Yes / No	No

Reading of parameters

Reading of parameters_1st source (Main source)

Touch Key		Online Page Description	Touch Key		Online Page Description	Touch Key		Online Page Description
3P4W			3P3W			1P2W-2nd		
After Power ON	–	Displays 1st phase line-neutral voltage	After Power ON	–	Displays 1st-2nd phase line-line voltage	After Power ON	–	Displays 1st phase line-neutral voltage
	Touch F2 1st time	Displays 2nd phase line-neutral voltage		Touch F2 1st time	Displays 2nd-3rd phase line-line voltage	Touch F1 Key 1st time	–	Displays 1st phase current
	Touch F2 2nd time	Displays 3rd phase line-neutral voltage		Touch F2 2nd time	Displays 3rd-1st phase line-line voltage	Touch F1 Key 2nd time	–	Displays 1st phase power factor
	Touch F2 3rd time	Displays average of three phase line to neutral voltage		Touch F2 3rd time	Displays average of three phase line to line voltage	Touch F1 Key 3rd time	–	Displays frequency
Touch F1 Key 1st time	–	Displays 1st-2nd phase line-line voltage	Touch F1 Key 1st time	–	Displays 1st phase current	Touch F1 Key 4th time	–	Displays 1st phase active power
	Touch F2 1st time	Displays 2nd-3rd phase line-line voltage		Touch F2 1st time	Displays 2nd phase current	Touch F1 Key 5th time	–	Displays 1st phase reactive power
	Touch F2 2nd time	Displays 3rd-1st phase line-line voltage		Touch F2 2nd time	Displays 3rd phase current	Touch F1 Key 6th time	–	Displays 1st phase apparent power
	Touch F2 3rd time	Displays average of three phase line to line voltage		Touch F2 3rd time	Displays all 3 phase average current	Touch F1 Key 7th time	–	Displays IMP active energy of 1st phase
Touch F1 Key 2nd time	–	Displays 1st phase current	Touch F1 Key 2nd time	–	Displays average of all 3 phase power factor		Touch F2 1st time	Displays EXP active energy of 1st phase
	Touch F2 1st time	Displays 2nd phase current	Touch F1 Key 3rd time	–	Displays frequency		Touch F2 2nd time	Displays total active energy (IMP & EXP)
	Touch F2 2nd time	Displays 3rd phase current	Touch F1 Key 4th time	–	Displays total active power of all three phases	Touch F1 Key 8th time	–	Displays IMP reactive energy of 1st phase
	Touch F2 3rd time	Displays all 3 phase average current	Touch F1 Key 5th time	–	Displays total reactive power of all three phases		Touch F2 1st time	Displays EXP reactive energy of 1st phase
Touch F1 Key 3rd time	–	Displays 1st phase power factor	Touch F1 Key 6th time	–	Displays total apparent power of all three phases	Touch F1 Key 09th time	Touch F2 2nd time	Displays total reactive energy (IMP + EXP)
	Touch F2 1st time	Displays 2nd phase power factor	Touch F1 Key 7th time	–	Displays total active energy (IMP & EXP)	Touch F1 Key 10th time	–	Displays 1st phase Apparent energy
	Touch F2 2nd time	Displays 3rd phase power factor	Touch F1 Key 8th time	–	Displays total reactive energy (IMP & EXP)	Touch F1 Key 11th time	–	On hr

Reading of parameters (Continued)

Touch Key		Online Page Description	Touch Key		Online Page Description	Touch Key		Online Page Description
3P4W			3P3W			1P2W-2nd		
	Touch F2 3rd time	Displays average of all 3 phase power factor	Touch F1 Key 9th time	–	Displays total Apparent energy of three phase			
Touch F1 Key 4th time	–	Displays frequency	Touch F1 Key 10th time		On hr			
Touch F1 Key 5th time	–	Displays 1st phase active power						
	Touch F2 1st time	Displays 2nd phase active power						
	Touch F2 2nd time	Displays 3rd phase active power						
	Touch F2 3rd time	Displays total active power of all three phases						
Touch F1 Key 6th time	–	Displays 1st phase reactive power						
	Touch F2 1st time	Displays 2nd phase reactive power						
	Touch F2 2nd time	Displays 3rd phase reactive power						
	Touch F2 3rd time	Displays total reactive power of all three phases						
Touch F1 Key 7th time	–	Displays 1st phase apparent power						
	Touch F2 1st time	Displays 2nd phase apparent power						
	Touch F2 2nd time	Displays 3rd phase apparent power						
	Touch F2 3rd time	Displays total apparent power of all three phases						
Touch F1 Key 8th time	–	Displays IMP active energy of 1st phase						
	Touch F2 1st time	Displays IMP active energy of 2nd phase						
	Touch F2 2nd time	Displays IMP active energy of 3rd phase						
	Touch F2 3rd time	Displays EXP active energy of 1st phase						

Reading of parameters (Continued)

Touch Key		Online Page Description	Touch Key		Online Page Description	Touch Key		Online Page Description
3P4W			3P3W			1P2W-2nd		
	Touch F2 4th time	Displays EXP active energy of 2nd phase						
	Touch F2 5th time	Displays EXP active energy of 3rd phase						
	Touch F2 6th time	Displays total IMP active energy						
	Touch F2 7th time	Displays total EXP active energy						
	Touch F2 8th time	Displays total active energy (IMP & EXP)						
Touch F1 Key 9th time	–	Displays IMP reactive energy of 1st phase						
	Touch F2 1st time	Displays IMP reactive energy of 2nd phase						
	Touch F2 2nd time	Displays IMP reactive energy of 3rd phase						
	Touch F2 3rd time	Displays EXP reactive energy of 1st phase						
	Touch F2 4th time	Displays EXP reactive energy of 2nd phase						
	Touch F2 5th time	Displays EXP reactive energy of 3rd phase						
	Touch F2 6th time	Displays total IMP reactive energy						
	Touch F2 7th time	Displays total EXP reactive energy						
	Touch F2 8th time	Displays total reactive energy (IMP + EXP)						
Touch F1 Key 10th time	–	Displays 1st phase Apparent energy						
	Touch F2 1st time	Displays 2nd phase Apparent energy						
	Touch F2 2nd time	Displays 3rd phase Apparent energy						
	Touch F2 3rd time	Displays total Apparent energy of three phase						
Touch F1 Key 11th time	–	On hr						

Reading of parameters (Continued)

Reading of parameters_2nd source (e.g. DG)

Touch Key		Online Page Description	Touch Key		Online Page Description	Touch Key		Online Page Description
3P4W (DG)			3P3W (DG)			1P2W-1st (DG)		
After Power ON	–	Displays 1st phase line-neutral voltage	After Power ON	–	Displays 1st-2nd phase line-line voltage	After Power ON	–	Displays 1st phase line-neutral voltage
	Touch F2 1st time	Displays 2nd phase line-neutral voltage		Touch F2 1st time	Displays 2nd-3rd phase line-line voltage	Touch F1 Key 1st time	–	Displays 1st phase current
	Touch F2 2nd time	Displays 3rd phase line-neutral voltage		Touch F2 2nd time	Displays 3rd-1st phase line-line voltage	Touch F1 Key 2nd time	–	Displays 1st phase power factor
	Touch F2 3rd time	Displays average of three phase line to neutral voltage		Touch F2 3rd time	Displays average of three phase line to line voltage	Touch F1 Key 3rd time	–	Displays frequency
Touch F1 Key 1st time	–	Displays 1st-2nd phase line-line voltage	Touch F1 Key 1st time	–	Displays 1st phase current	Touch F1 Key 4th time	–	Displays 1st phase active power
	Touch F2 1st time	Displays 2nd-3rd phase line-line voltage		Touch F2 1st time	Displays 2nd phase current	Touch F1 Key 5th time	–	Displays 1st phase reactive power
	Touch F2 2nd time	Displays 3rd-1st phase line-line voltage		Touch F2 2nd time	Displays 3rd phase current	Touch F1 Key 6th time	–	Displays 1st phase apparent power
	Touch F2 3rd time	Displays average of three phase line to line voltage		Touch F2 3rd time	Displays all 3 phase average current	Touch F1 Key 7th time	–	Displays total active energy (IMP & EXP)
Touch F1 Key 2nd time	–	Displays 1st phase current	Touch F1 Key 2nd time	–	Displays average of all 3 phase power factor		Touch F2 1st time	Displays total active energy of 3 phase (IMP & EXP) DG
	Touch F2 1st time	Displays 2nd phase current	Touch F1 Key 3rd time	–	Displays frequency	Touch F1 Key 8th time	–	Displays total reactive energy (IMP & EXP)
	Touch F2 2nd time	Displays 3rd phase current	Touch F1 Key 4th time	–	Displays total active power of all three phases		Touch F2 1st time	Displays total reactive energy (IMP + EXP) DG
	Touch F2 3rd time	Displays all 3 phase average current	Touch F1 Key 5th time	–	Displays total reactive power of all three phases	Touch F1 Key 09th time	–	Displays total Apparent energy of three phase
Touch F1 Key 3rd time	–	Displays 1st phase power factor	Touch F1 Key 6th time	–	Displays total apparent power of all three phases		Touch F2 1st time	Displays total Apparent energy of three phase (DG)
	Touch F2 1st time	Displays 2nd phase power factor	Touch F1 Key 7th time	–	Displays total active energy (IMP & EXP)	Touch F1 Key 10th time	–	On hr

Reading of parameters (Continued)

Touch Key		Online Page Description	Touch Key		Online Page Description	Touch Key		Online Page Description
3P4W (DG)			3P3W (DG)			1P2W-1st (DG)		
	Touch F2 2nd time	Displays 3rd phase power factor		Touch F2 1st time	Displays total active energy (IMP & EXP) DG			
	Touch F2 3rd time	Displays average of all 3 phase power factor	Touch F1 Key 8th time	–	Displays total reactive energy (IMP + EXP)			
Touch F1 Key 4th time	–	Displays frequency		Touch F2 1st time	Displays total reactive energy (IMP + EXP) DG			
Touch F1 Key 5th time	–	Displays 1st phase active power	Touch F1 Key 9th time	–	Displays total Apparent energy of three phase			
	Touch F2 1st time	Displays 2nd phase active power		Touch F2 1st time	Displays total Apparent energy of three phase DG			
	Touch F2 2nd time	Displays 3rd phase active power	Touch F1 Key 10th time	F1	On hr			
	Touch F2 3rd time	Displays total active power of all three phases						
Touch F1 Key 6th time	Touch F2 1st time	Displays 2nd phase reactive power						
	Touch F2 2nd time	Displays 3rd phase reactive power						
	Touch F2 3rd time	Displays total reactive power of all three phases						
Touch F1 Key 7th time	–	Displays 1st phase apparent power						
	Touch F2 1st time	Displays 2nd phase apparent power						
	Touch F2 2nd time	Displays 3rd phase apparent power						
	Touch F2 3rd time	Displays total apparent power of all three phases						
Touch F1 Key 8th time	–	Displays total active energy (IMP & EXP)						
	Touch F2 1st time	Displays total active energy (IMP & EXP) DG						
Touch F1 Key 9th time	–	Displays total reactive energy (IMP & EXP)						

Reading of parameters (Continued)

Touch Key		Online Page Description	Touch Key		Online Page Description	Touch Key		Online Page Description
3P4W (DG)			3P3W (DG)			1P2W-1st (DG)		
	Touch F2 1st time	Displays total reactive energy (IMP & EXP) DG						
Touch F1 Key 10th time	–	Displays total Apparent energy of three phase						
	Touch F2 1st time	Displays total Apparent energy of three phase (DG)						
Touch F1 Key 11th time	–	On hr						

Communication

7

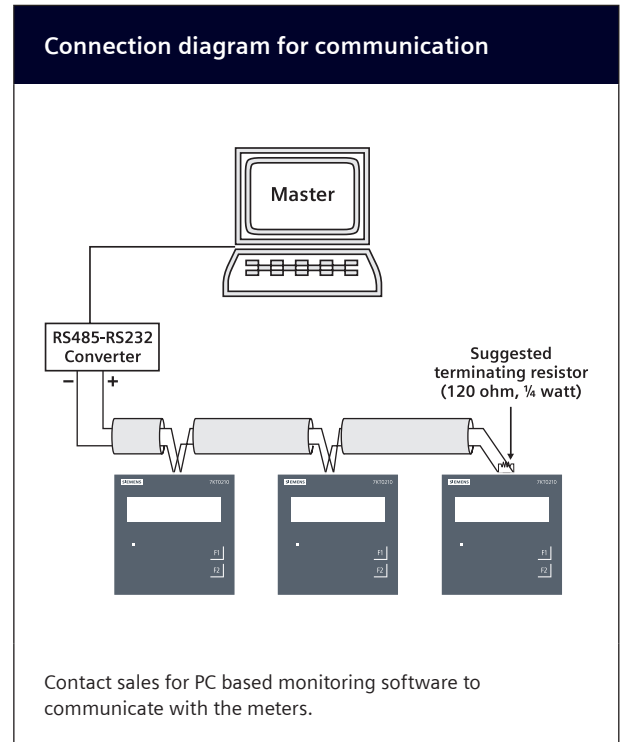
Protocol and interface

Protocol: Modbus RTU

Interface: Integrated RS485 interface

Communication parameters

Communication address	1 to 255
Transmission mode	Half duplex
Data types	Float and Integer
Transmission distance	500m maximum
Transmission Speed	300, 600, 1200, 2400, 4800, 9600, 19200 (in bps)
Parity	None, Odd, Even
Stop bits	1 or 2
Response Time	100ms Max & Independent, at Baud rate



Modbus register addresses list

Readable Parameters: Length Register: 2, Data Structure: Float

Address	HEX Address	Parameter
30000	0x00	Voltage V1N
30002	0x02	Voltage V2N
30004	0x04	Voltage V3N
30006	0x06	Average Vtg L-N
30008	0x08	Voltage V12
30010	0x0A	Voltage V23
30012	0x0C	Voltage V31
30014	0x0E	Average Vtg L-L
30016	0x10	Current I1
30018	0x12	Current I2
30020	0x14	Current I3
30022	0x16	Average Current
30024	0x18	kW1
30026	0x1A	kW2
30028	0x1C	kW3
30030	0x1E	kVA1
30032	0x20	kVA2

Address	HEX Address	Parameter
30034	0x22	kVA3
30036	0x24	kVAr1
30038	0x26	kVAr2
30040	0x28	kVAr3
30042	0x2A	Total kW
30044	0x2C	Total kVA
30046	0x2E	Total kVAr
30048	0x30	PF1
30050	0x32	PF2
30052	0x34	PF3
30054	0x36	Average PF
30056	0x38	Frequency
30058	0x3A	Total kWh
30060	0x3C	Total kVAh
30062	0x3E	Total kVArh
30064	0x40	Active power max demand
30068	0x44	Reactive power max demand

Modbus register addresses list (Continued)

Address	HEX Address	Parameter
30072	0x48	Apparent power max demand
30082	0x50	On hour
30144	0x90	Total Net kWh(DG)
30146	0x92	Total Net kVAh(DG)

Address	HEX Address	Parameter
30148	0x94	Total Net kVArh(DG)
30150	0x96	Total Net kWh(MAIN +DG)
30152	0x98	Total Net kVAh(MAINS +DG)
30154	0x9A	Total Net kVArh(MAINS + DG)

Readable/ Writable Parameter: [Length (Register)]: 1; Data Structure: Integer

Address	Hex Address	Parameter
40000	0x00	PASSWORD
40001	0x01	N/W SELECTION
40002	0x02	CT Secondary
40003	0x03	CT Primary (CT Secondary = 5) CT Primary (CT Secondary = 1)
40004	0x04	PT Secondary
40005	0x05	PT Primary
40007	0x07	Slave Id
40008	0x08	Baud Rate
40009	0x09	Parity
40010	0x0A	Stop Bit
40011	0x0B	Backlight Off
40012	0x0C	Factory Default

Address	Hex Address	Parameter
40013	0x0D	Reset Active Energy
40014	0x0E	Reset Apparent Energy
40015	0x0F	Reset Reactive Energy
40034	0x22	Demand interval Method
40035	0x23	Demand interval length
40036	0x24	Demand interval Duration
40039	0x27	Reser Max Demand
40042	0x2A	Run hour
40043	0x2B	Mode Scroll
40065	0x41	Reset kWh (DG)
40066	0x42	Reset kVArh (DG)
40067	0x43	Reset kVAh (DG)
40070	0x46	Endianness Selection

| Maintenance

8

Guidelines

- The equipment should be cleaned regularly to avoid blockage of ventilating parts.
- Clean the equipment with a clean dry or damp cloth. Do not use any cleaning agent other than water.

Disposal and recycling

Dispose of or recycle the module in accordance with the applicable laws and regulations in your country.

These instructions do not purport to cover all details or variations in equipment, or to provide for every possible contingency in connection with installation, operation, or maintenance. Should additional information be desired, please contact the local Siemens sales office. The contents of this instruction manual shall not become part of or modify any prior or existing agreement, commitment, or relationship. The sales contract contains the entire obligation of Siemens. The warranty contained in the contract between the parties is the sole warranty of

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