

MANUAL

SMART 7KT

Multifunction meter 7KT0308 (Multi Line LED Class 1)

SMART 7KT power monitoring devices

SIEMENS

Index

SMART 7KT
Multifunction meter
7KT0308 (Multi Line LED Class 1)

Manual

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09/2022
SME7KT030800

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

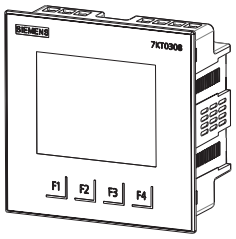
The carton for the products contain

1 SMART 7KT meter

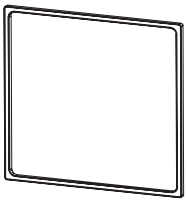
1 set of clamps (4 clamps) for mounting the meter on the panel door

1 Gasket

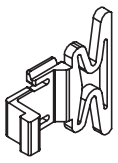
1 Operating instruction



Unit 1x nos.



Gasket 1x nos.



Sliding Clamp 4x nos.

2 Safety precautions

<table>
<tr><td rowspan="3"></td><td colspan="3">DANGER</td></tr>
<tr><td colspan="3">Hazardous voltage will cause death or serious injury. Turn off and lock out all power supply before working on this device.</td></tr>
<tr><td></td><td>NOTICE
Installation and maintenance must be carried out by qualified personnel.
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.
Risk of damage: Please ensure the proper isolation of meter during the IR (Meggering) test.</td><td></td></tr>
</table>

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.

NOTICE:

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.

Risk of damage: Please ensure the proper isolation of meter during the IR (Meggering) test.

CAUTION:

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.

Technical specification

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	7KT0308 (Multi Line LED Class 1)
	Power Monitoring Device Panel instrument for std electrical values Protocol: Modbus RTU, Multi line LED Display Vaux: 95V to 240V AC x/1 or 5 A, Class 1
Measurements	
measuring procedure	
• 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	
product function	
• 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
• %Total Harmonics Distortion (THD)	Yes
• Power demand measurement	Yes
Display and operation	
design of the display	LED
height of the display	48 mm
width of the display	62 mm
color of the background of the display	Black
national language on the display screen is supported	EN
number of keys	4
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 61557-12 and IEC 62053-21
• for measured variable reactive energy	Class 2 as per IEC 61557-12 and IEC 62053-23

	7KT0308 (Multi Line LED 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
cutout dimension	91.5 x 91.5 mm
depth	52 mm
installation depth	49 mm
net weight	247 g
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

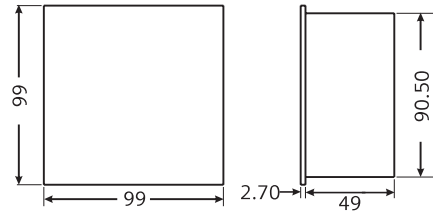
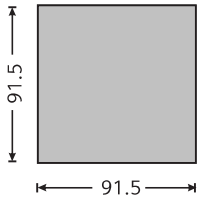
Assembly

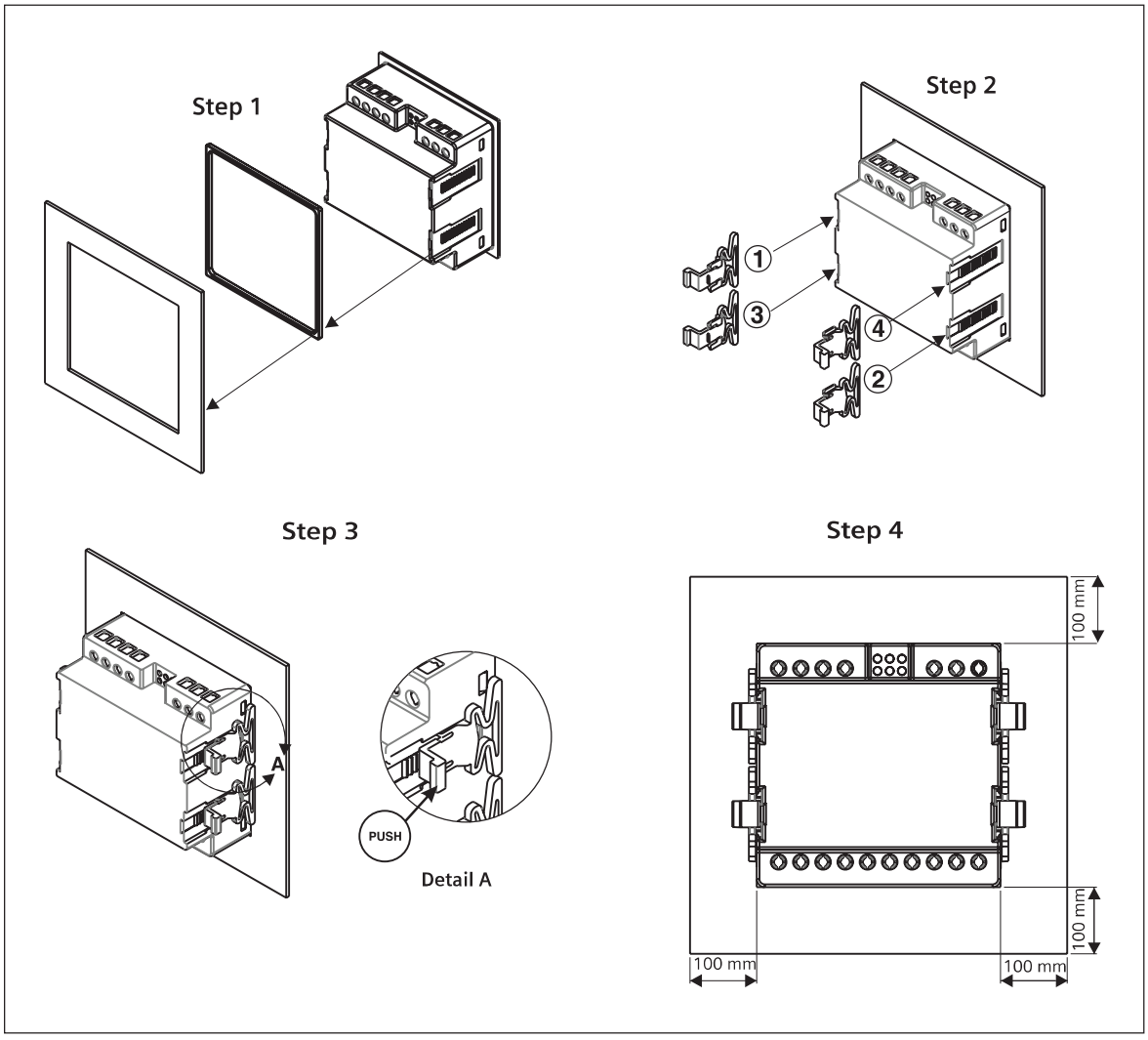
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Installation

For installing the meter

Prepare the panel cutout with proper dimensions as shown below.

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



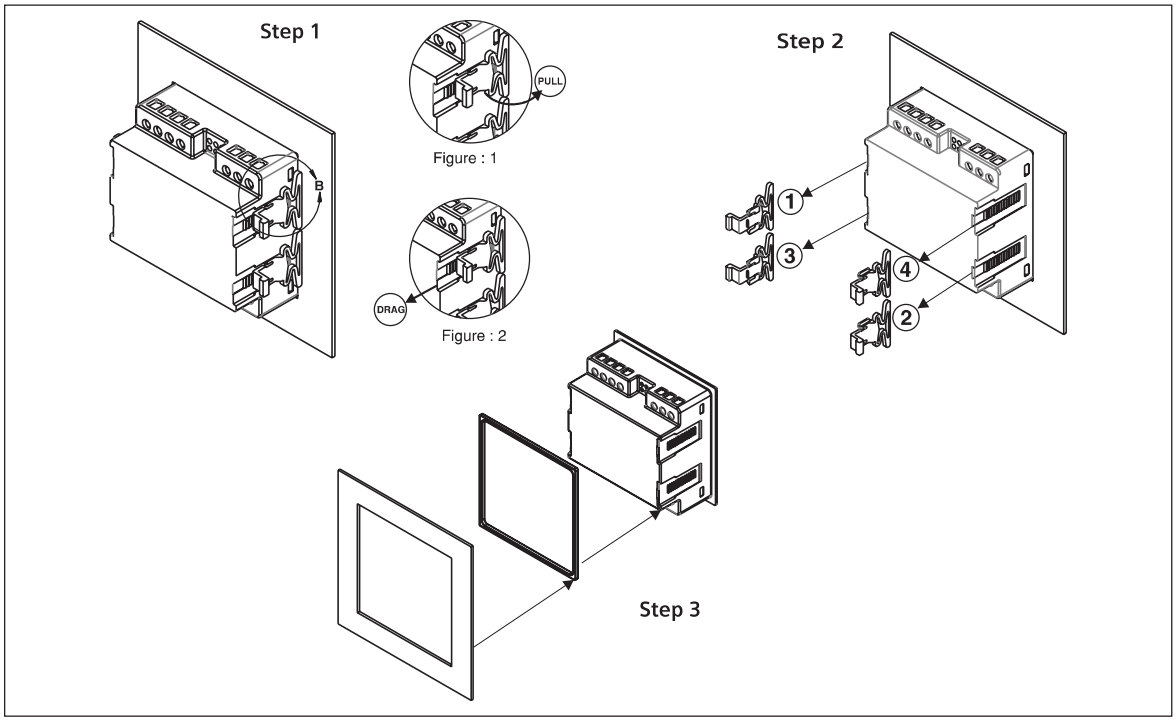
Installation Guidelines

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 1mm^2 to 2.5mm^2. These wires shall have current carrying capacity of 6A.
7. Copper cable should be used (Stranded or Single core cable).

For demounting the meter



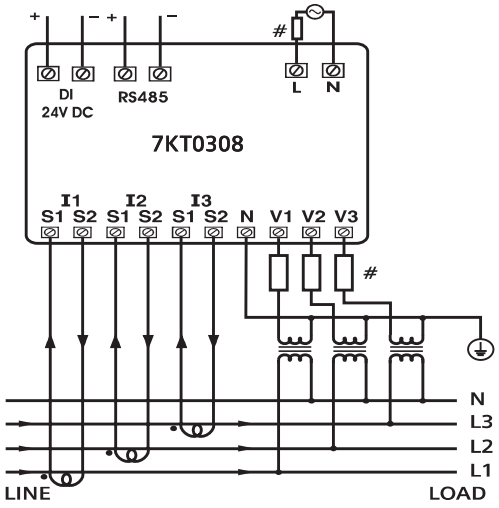
Connection

5

Typical Wiring Diagram

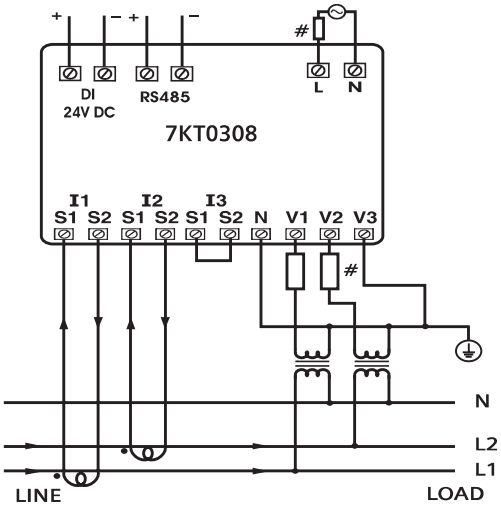
3 Phase - 4 Wire

3 Ø - 4 Wire, 3 CT's and 3 PT's



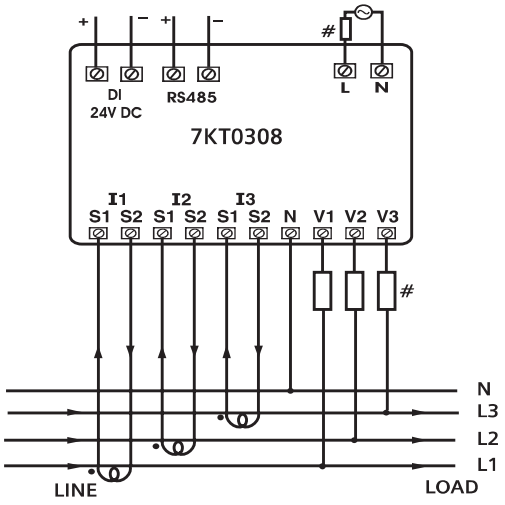
2 Phase - 3 Wire

2 Ø - 3 Wire, 2 CT's and 2 PT's



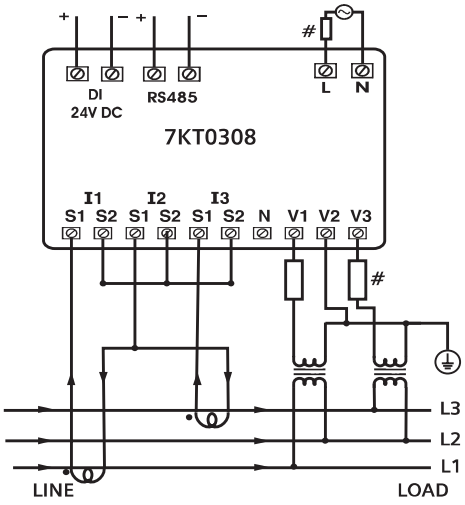
3 Phase - 4 Wire (commonly used)

3 Ø - 4 Wire, 3 CT'S



3 Phase - 3 Wire

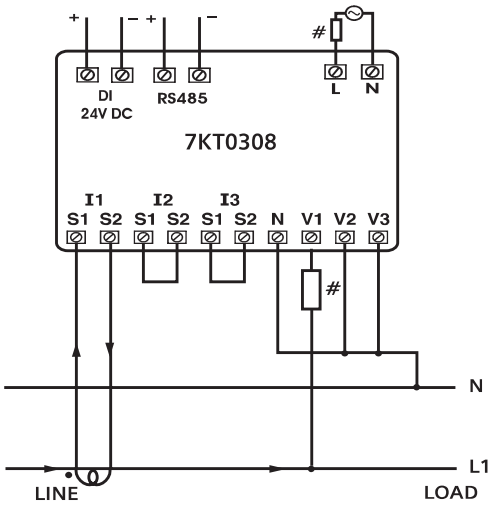
3 Ø - 3 Wire, 2 CT's and 2 PT's



Typical Wiring Diagram (Continued)

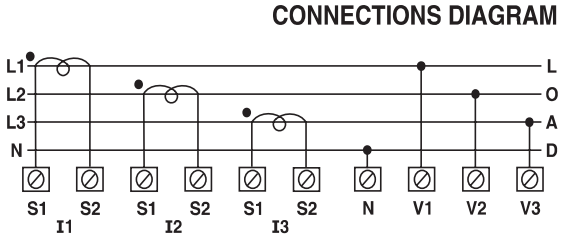
1 Phase - 2 Wire

1 Ø - 2 Wire, 1 CT



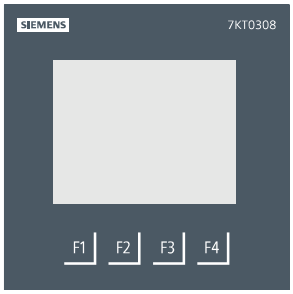
Terminal Connections





Configuration

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There are 4 dedicated keys labelled as F1, F2, F3, F4. Use these 4 soft-touch keys to read meter parameters.

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

A short touch on the key triggers the function once. Holding the key for longer switches on the auto repeat function after approximately 1 s.

The function of the key is triggered repeatedly while the key is touched continuously. Auto repeat is useful, for example, for fast incrementing of values when parameterizing the device.

For reading serial number

Touch and hold F4 key for 10 sec. to display 8-digit serial number only for 5 sec.

Automatic / manual mode

Touch F1 and F2 key to enter in configuration mode. Then change the page mode as automatic or manual as per requirement.

Note: 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 touched, unit temporarily switches to manual mode and the appropriate page is displayed. If any key is not touched for 5 sec, unit resumes automatic mode.

Password to start configuration

When the meter is brought into the configuration mode by touching keys F1+F2, the first page that is displayed is the password page which shows the password 0000.

Enter the password 1000 which is the default factor-set password by pressing the F2 key to move cursor left to right by one digit at a time and F1 key for increasing parameter values. After you enter the password of 1000, use F3 key to go to the next page which is the password change page and continue with parameterization.

For the configuration setting mode

Touch F1 + F2 keys for 5 seconds to enter or exit from the Configuration menu.

Use F2 key to move curser left to right by one digit at a time

Use F1 key for increasing parameter values

Touch F2+F3 key to go back to previous page

Parameterization with function keys

Config. page	Function	Range or Selection	Factory Setting
	Password	0000 to 9998	1000
1	Change Password	No / Yes	No
1.1	New Password	0000 to 9998	1000
2	Network Selection	3P4W	3P4W
		3P3W	
		1P2W-P1	
		1P2W-P2	
		1P2W-P3	
3	CT Secondary	1A or 5A	5
4	CT Primary	1A/5A to 10000A	5
5	PT Secondary	100V to 500V	350
6	PT Primary	100V to 500000V	350
7	Demand Interval Method	Sliding / Fixed	Sliding
8	Demand Interval Duration	1 to 30 min	15
9	Demand Interval Length	1 to 30 min	1
10	Slave ID	1 to 255	1
11	Baud Rate (bps)	300, 600, 1200, 2400, 4800, 9600 & 19200	9600
12	Parity	None, Odd, Even	None
13	Stop Bit	1 or 2	1
14	Display Mode	Manual / Auto	Auto
15	Factory Default	Yes / No	No
16	Reset Energy	Yes / No	No
16.1	Password	0001 to 9999	1001
16.01	Reset Active Energy	Yes / No	No
16.02	Reset Reactive Energy	Yes / No	No
16.03	Reset Apparent Energy	Yes / No	No
16.04	Reset MAX demand	Yes / No	No
16.05	Reset ON hour	Yes / No	No

Network selection and wiring input	
Network selection Configuration mode	**Wiring Input**
3P4W	3P4W
3P3W	3P3W
1P2W (P1/P2/P3)	1P2W (P1/P2/P3)

Note: P1, P2 and P3 are three phase.

For resetting energy parameters user will be prompted to enter the password. If correct password is entered, the user will be able to reset all energy parameters.

This password will be value which will be greater than the configuration password by 1.

Reading of parameters

Touch Key	Screen number	Description
–	1st	Displays Line-Neutral voltage of three phase
Touch F1 key for clockwise scrolling and F2 for anticlockwise scrolling page for Online Page 1	2nd	Displays Line–Line voltage of three phase
	3rd	Displays total percentage harmonics of Line – Neutral voltage of three phase
	4th	Displays total percentage harmonics of Line – Line voltage of three phase
	5th	Displays total percentage harmonics of Average Line-Neutral and Average Line-Line voltage of three phases
	Note: 1) For 3 Ø 3 wire system, only second, fourth, fifth screens will be available. (Only average line-line THD% will be displayed on fifth screen) 2) For 1 Ø 2 wire system, only first and third screens will be available."	
Touch F3 key for Online Page 2	1st	Displays current of three phase
Touch F1 key for clockwise scrolling and F2 for anticlockwise scrolling page for Online Page 2	2nd	Displays neutral current
	3rd	Displays total percentage harmonics of current of three phases
	4th	Displays total percentage harmonics of average current of three phases
	5th	Displays active power, reactive power and apparent power of first phase
	6th	Displays active power, reactive power and apparent power of second phase
	7th	Displays active power, reactive power and apparent power of third phase
	8th	Displays total active power, total reactive power and total apparent power of three phases
	9th	Displays maximum demand of active power, reactive power and apparent power of three phases.
	10th	Displays minimum demand of active power and reactive power of three phases
	Note: 1) For 3 Ø 3 wire system, only first, third, fourth, eighth, ninth and tenth screens will be available. 2) For 1 Ø 2 wire system, only first, third, fifth, ninth and tenth screens will be available. Note: for 1 Ø 2 wire system, respective phase parameters will be displayed on the screen.	
Touch F3 key for Online Page 3	1st	Displays power factor of three phases
Touch F1 key for clockwise and F2 for anticlockwise scrolling page for Online Page 3	2nd	Displays phase angle of three phases
	3rd	Displays three phase Average line -Neutral voltage,Average Current and Average Power factor of three phases.
	4th	Displays three phase Average line - line voltage, Average Current and frequency of three phases.
	Note: 1) For 3 Ø 3 wire system, only first, second and fourth screens will be available. Note: For 3 Ø 3 wire system, Average power factor and Average Phase angle will be displayed. 2) For 1 Ø 2 wire system, only first, second and fourth screens will be available. Note: for 1 Ø 2 wire system, respective phase parameters will be displayed on the 1st and 2nd screen. On 4th screen, only frequency will be displayed.	
Touch F3 key for Online Page 4	1st	Displays three phase maximum demand of three phase current

Reading of parameters (Continued)

Touch Key	Screen number	Description
Touch F1 key for clockwise and F2 for anticlockwise scrolling page for Online Page 4	2nd	Displays three phase maximum demand of average current
	3rd	Displays ON hour
	Note: 1) 1) For 3 Ø 3 wire system; first, second and third screens will be available. 2) For 1 Ø 2 wire system, only first and third screens will be available. Note: for 1 Ø 2 wire system, respective phase parameter will be displayed.	
Touch F1 key for clockwise and F2 for anticlockwise scrolling page for Energy Page	1st	Displays import active energy of first phase
	2nd	Displays import active energy of second phase
	3rd	Displays import active energy of third phase
	4th	Displays export active energy of first phase
	5th	Displays export active energy of second phase
	6th	Displays export active energy of third phase
	7th	Displays total import active energy of three phases
	8th	Displays total export active energy of three phases
	9th	Displays total active energy of three phases
	10th	Displays import reactive energy of first phase
	11th	Displays import reactive energy of second phase
	12th	Displays import reactive energy of third phase
	13th	Displays export reactive energy of first phase
	14th	Displays export reactive energy of second phase
	15th	Displays export reactive energy of third phase
	16th	Displays total import reactive energy of three phases
	17th	Displays total export reactive energy of three phases
	18th	Displays total reactive energy of three phases
	19th	Displays apparent energy of first phase
	20th	Displays apparent energy of second phase
	21st	Displays apparent energy of third phase
	22nd	Displays total apparent energy of three phases
	23rd	Displays total old active energy of three phases
	24th	Displays total old reactive energy of three phases
	25th	Displays total old apparent energy of three phases
	Note: 1) For 3 Ø 3 wire system; Only 7th, 8th, 9th, 16th, 17th, 18th, 22nd, 23rd, 24th and 25th screens will be available. 2) For 1 Ø 2 wire system, 1st, 4th, 9th, 10th, 13th, 18th, 22nd, 23rd, 24th and 25th screens will be available. Note: for 1 Ø 2 wire system, respective phase parameter will be displayed.	

Communication 7

Protocol and interface

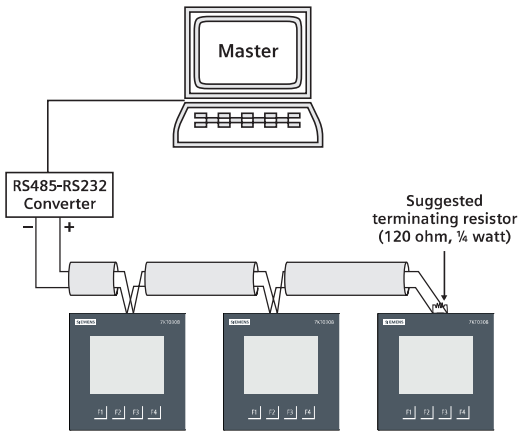
Protocol: Modbus RTU

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

Connection diagram for communication



Contact sales for PC based monitoring software to communicate with the meters.

Modbus register addresses list

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

Address	Hex Address	Parameter
30000	000	Voltage V1N
30002	002	Voltage V2N
30004	004	Voltage V3N
30006	006	Average Voltage LN
30008	008	Voltage V12
30010	00A	Voltage V23
30012	00C	Voltage V31
30014	00E	Average Voltage LL
30016	010	Current I1
30018	012	Current I2
30020	014	Current I3
30022	016	Average Current
30024	018	KW1
30026	01A	KW2
30028	01C	KW3
30030	01E	KVAr1
30032	020	KVAr2
30034	022	KVAr3

Address	Hex Address	Parameter
30036	024	KVA1
30038	026	KVA2
30040	028	KVA3
30042	02A	PF 1
30044	02C	PF 2
30046	02E	PF 3
30048	030	Average PF
30050	032	Frequency
30052	034	Total KW
30054	036	Total KVAr
30056	038	Total KVA
30058	03A	Active Power Max Demand
30060	03C	Active Power Min Demand
30062	03E	Reactive Power Max Demand
30064	040	Reactive Power Min Demand
30066	042	Apparent Power Max Demand
30086	056	Total Import Active energy
30088	058	Total Export Active energy

Modbus register addresses list (Continued)

Address	Hex Address	Parameter
30090	05A	Total Active energy
30092	05C	Total Import Reactive energy
30094	05E	Total Export Reactive energy
30096	060	Total Reactive energy
30098	062	Total Apparent energy
30100	064	ON hour
30124	07C	% THD of Voltage V1N
30126	07E	% THD of Voltage V2N
30128	080	% THD of Voltage V3N
30130	082	% THD of Voltage V12
30132	084	% THD of Voltage V23
30134	086	% THD of Voltage V31
30136	088	% THD of Current I1
30138	08A	% THD of Current I2
30140	08C	% THD of Current I3
30684	2AC	Serial number of unit
30700	2BC	Old kWh
30702	2BE	Old kVArh
30704	2C0	Old kVAh
30142	08E	%THD of Voltage L-N
30144	090	%THD of Voltage L-L
30148	094	Neutral Current
30146	092	% THD of AVG Current
30718	2CE	Phase Angle 1
30720	2D0	Phase Angle 2
30722	2D2	Phase Angle 3
30724	2D4	AVG Phase Angle
30710	2C6	MAX DMD Current 1
30712	2C8	MAX DMD Current 2
30714	2CA	MAX DMD Current 3
30716	2CC	AVG MAX DMD Current
30104	068	IM kWh 1
30106	06A	IM kWh 2
30108	06C	IM kWh 3
30110	06E	EX kWh 1
30112	070	EX kWh 2
30114	072	EX kWh 3
30688	2B0	IM kVArh 1
30690	2B2	IM kVArh 2
30692	2B4	IM kVArh 3
30694	2B6	EX kVArh 1
30696	2B8	EX kVArh 2
30698	2BA	EX kVArh 3
30116	074	KVAh 1
30118	076	KVAh 2
30120	078	KVAh 3
30706	2C2	DI Status
30708	2C4	DI Interrupt
30143	08F	2nd Harmonic of V1N

Address	Hex Address	Parameter
30145	091	3rd Harmonic of V1N
30147	093	4th Harmonic of V1N
30149	095	5th Harmonic of V1N
30151	097	6th Harmonic of V1N
30153	099	7th Harmonic of V1N
30155	09B	8th Harmonic of V1N
30157	09D	9th Harmonic of V1N
30159	09F	10th Harmonic of V1N
30161	0A1	11th Harmonic of V1N
30163	0A3	12th Harmonic of V1N
30165	0A5	13th Harmonic of V1N
30167	0A7	14th Harmonic of V1N
30169	0A9	15th Harmonic of V1N
30171	0AB	16th Harmonic of V1N
30173	0AD	17th Harmonic of V1N
30175	0AF	18th Harmonic of V1N
30177	0B1	19th Harmonic of V1N
30179	0B3	20th Harmonic of V1N
30181	0B5	21st Harmonic of V1N
30183	0B7	22nd Harmonic of V1N
30185	0B9	23rd Harmonic of V1N
30187	0BB	24th Harmonic of V1N
30189	0BD	25th Harmonic of V1N
30191	0BF	26th Harmonic of V1N
30193	0C1	27th Harmonic of V1N
30195	0C3	28th Harmonic of V1N
30197	0C5	29th Harmonic of V1N
30199	0C7	30th Harmonic of V1N
30201	0C9	31st Harmonic of V1N
30203	0CB	2nd Harmonic of V2N
30205	0CD	3rd Harmonic of V2N
30207	0CF	4th Harmonic of V2N
30209	0D1	5th Harmonic of V2N
30211	0D3	6th Harmonic of V2N
30213	0D5	7th Harmonic of V2N
30215	0D7	8th Harmonic of V2N
30217	0D9	9th Harmonic of V2N
30219	0DB	10th Harmonic of V2N
30221	0DD	11th Harmonic of V2N
30223	0DF	12th Harmonic of V2N
30225	0E1	13th Harmonic of V2N
30227	0E3	14th Harmonic of V2N
30229	0E5	15th Harmonic of V2N
30231	0E7	16th Harmonic of V2N
30233	0E9	17th Harmonic of V2N
30235	0EB	18th Harmonic of V2N
30237	0ED	19th Harmonic of V2N
30239	0EF	20th Harmonic of V2N
30241	0F1	21st Harmonic of V2N

Modbus register addresses list (Continued)

Address	Hex Address	Parameter
30243	0F3	22nd Harmonic of V2N
30245	0F5	23rd Harmonic of V2N
30247	0F7	24th Harmonic of V2N
30249	0F9	25th Harmonic of V2N
30251	0FB	26th Harmonic of V2N
30253	0FD	27th Harmonic of V2N
30255	0FF	28th Harmonic of V2N
30257	101	29th Harmonic of V2N
30259	103	30th Harmonic of V2N
30261	105	31st Harmonic of V2N
30263	107	2nd Harmonic of V3N
30265	109	3rd Harmonic of V3N
30267	10B	4th Harmonic of V3N
30269	10D	5th Harmonic of V3N
30271	10F	6th Harmonic of V3N
30273	111	7th Harmonic of V3N
30275	113	8th Harmonic of V3N
30277	115	9th Harmonic of V3N
30279	117	10th Harmonic of V3N
30281	119	11th Harmonic of V3N
30283	11B	12th Harmonic of V3N
30285	11D	13th Harmonic of V3N
30287	11F	14th Harmonic of V3N
30289	121	15th Harmonic of V3N
30291	123	16th Harmonic of V3N
30293	125	17th Harmonic of V3N
30295	127	18th Harmonic of V3N
30297	129	19th Harmonic of V3N
30299	12B	20th Harmonic of V3N
30301	12D	21st Harmonic of V3N
30303	12F	22nd Harmonic of V3N
30305	131	23rd Harmonic of V3N
30307	133	24th Harmonic of V3N
30309	135	25th Harmonic of V3N
30311	137	26th Harmonic of V3N
30313	139	27th Harmonic of V3N
30315	13B	28th Harmonic of V3N
30317	13D	29th Harmonic of V3N
30319	13F	30th Harmonic of V3N
30321	141	31st Harmonic of V3N
30323	143	2nd Harmonic of V12
30325	145	3rd Harmonic of V12
30327	147	4th Harmonic of V12
30329	149	5th Harmonic of V12
30331	14B	6th Harmonic of V12
30333	14D	7th Harmonic of V12
30335	14F	8th Harmonic of V12
30337	151	9th Harmonic of V12
30339	153	10th Harmonic of V12

Address	Hex Address	Parameter
30341	155	11th Harmonic of V12
30343	157	12th Harmonic of V12
30345	159	13th Harmonic of V12
30347	15B	14th Harmonic of V12
30349	15D	15th Harmonic of V12
30351	15F	16th Harmonic of V12
30353	161	17th Harmonic of V12
30355	163	18th Harmonic of V12
30357	165	19th Harmonic of V12
30359	167	20th Harmonic of V12
30361	169	21st Harmonic of V12
30363	16B	22nd Harmonic of V12
30365	16D	23rd Harmonic of V12
30367	16F	24th Harmonic of V12
30369	171	25th Harmonic of V12
30371	173	26th Harmonic of V12
30373	175	27th Harmonic of V12
30375	177	28th Harmonic of V12
30377	179	29th Harmonic of V12
30379	17B	30th Harmonic of V12
30381	17D	31st Harmonic of V12
30383	17F	2nd Harmonic of V23
30385	181	3rd Harmonic of V23
30387	183	4th Harmonic of V23
30389	185	5th Harmonic of V23
30391	187	6th Harmonic of V23
30393	189	7th Harmonic of V23
30395	18B	8th Harmonic of V23
30397	18D	9th Harmonic of V23
30399	18F	10th Harmonic of V23
30401	191	11th Harmonic of V23
30403	193	12th Harmonic of V23
30405	195	13th Harmonic of V23
30407	197	14th Harmonic of V23
30409	199	15th Harmonic of V23
30411	19B	16th Harmonic of V23
30413	19D	17th Harmonic of V23
30415	19F	18th Harmonic of V23
30417	1A1	19th Harmonic of V23
30419	1A3	20th Harmonic of V23
30421	1A5	21st Harmonic of V23
30423	1A7	22nd Harmonic of V23
30425	1A9	23rd Harmonic of V23
30427	1AB	24th Harmonic of V23
30429	1AD	25th Harmonic of V23
30431	1AF	26th Harmonic of V23
30433	1B1	27th Harmonic of V23
30435	1B3	28th Harmonic of V23
30437	1B5	29th Harmonic of V23

Modbus register addresses list (Continued)

Address	Hex Address	Parameter
30439	1B7	30th Harmonic of V23
30441	1B9	31st Harmonic of V23
30503	1F7	2nd Harmonic of I1
30505	1F9	3rd Harmonic of I1
30507	1FB	4th Harmonic of I1
30509	1FD	5th Harmonic of I1
30511	1FF	6th Harmonic of I1
30513	201	7th Harmonic of I1
30515	203	8th Harmonic of I1
30517	205	9th Harmonic of I1
30519	207	10th Harmonic of I1
30521	209	11th Harmonic of I1
30523	20B	12th Harmonic of I1
30525	20D	13th Harmonic of I1
30527	20F	14th Harmonic of I1
30529	211	15th Harmonic of I1
30531	213	16th Harmonic of I1
30533	215	17th Harmonic of I1
30535	217	18th Harmonic of I1
30537	219	19th Harmonic of I1
30539	21B	20th Harmonic of I1
30541	21D	21st Harmonic of I1
30543	21F	22nd Harmonic of I1
30545	221	23rd Harmonic of I1
30547	223	24th Harmonic of I1
30549	225	25th Harmonic of I1
30551	227	26th Harmonic of I1
30553	229	27th Harmonic of I1
30555	22B	28th Harmonic of I1
30557	22D	29th Harmonic of I1
30559	22F	30th Harmonic of I1
30561	231	31st Harmonic of I1
30563	233	2nd Harmonic of I2
30565	235	3rd Harmonic of I2
30567	237	4th Harmonic of I2
30569	239	5th Harmonic of I2
30571	23B	6th Harmonic of I2
30573	23D	7th Harmonic of I2
30575	23F	8th Harmonic of I2
30577	241	9th Harmonic of I2
30579	243	10th Harmonic of I2
30581	245	11th Harmonic of I2
30583	247	12th Harmonic of I2
30585	249	13th Harmonic of I2
30587	24B	14th Harmonic of I2
30589	24D	15th Harmonic of I2
30591	24F	16th Harmonic of I2
30593	251	17th Harmonic of I2
30595	253	18th Harmonic of I2

Address	Hex Address	Parameter
30597	255	19th Harmonic of I2
30599	257	20th Harmonic of I2
30601	259	21st Harmonic of I2
30603	25B	22nd Harmonic of I2
30605	25D	23rd Harmonic of I2
30607	25F	24th Harmonic of I2
30609	261	25th Harmonic of I2
30611	263	26th Harmonic of I2
30613	265	27th Harmonic of I2
30615	267	28th Harmonic of I2
30617	269	29th Harmonic of I2
30619	26B	30th Harmonic of I2
30621	26D	31st Harmonic of I2
30623	26F	2nd Harmonic of I3
30625	271	3rd Harmonic of I3
30627	273	4th Harmonic of I3
30629	275	5th Harmonic of I3
30631	277	6th Harmonic of I3
30633	279	7th Harmonic of I3
30635	27B	8th Harmonic of I3
30637	27D	9th Harmonic of I3
30639	27F	10th Harmonic of I3
30641	281	11th Harmonic of I3
30643	283	12th Harmonic of I3
30645	285	13th Harmonic of I3
30647	287	14th Harmonic of I3
30649	289	15th Harmonic of I3
30651	28B	16th Harmonic of I3
30653	28D	17th Harmonic of I3
30655	28F	18th Harmonic of I3
30657	291	19th Harmonic of I3
30659	293	20th Harmonic of I3
30661	295	21st Harmonic of I3
30663	297	22nd Harmonic of I3
30665	299	23rd Harmonic of I3
30667	29B	24th Harmonic of I3
30669	29D	25th Harmonic of I3
30671	29F	26th Harmonic of I3
30673	2A1	27th Harmonic of I3
30675	2A3	28th Harmonic of I3
30677	2A5	29th Harmonic of I3
30679	2A7	30th Harmonic of I3
30681	2A9	31st Harmonic of I3

Modbus register addresses list (Continued)

Readable Parameters: Data Structure: Integer

Address	Hex Address	Parameter	Range		Length (Register)
40000	0x00	Password	Min Value: 0	Max Value:9998	1
40001	0x01	Network Selection	Value: 0	Meaning: 3P4W	1
			Value: 1	Meaning: 3P3W	1
			Value: 2	Meaning: 1P2W-P1	1
			Value: 3	Meaning: 1P2W-P2	1
			Value: 4	Meaning: 1P2W-P3	1
40002	0x02	CT Secondary	Min Value: 1	Max Value: 5	1
40003	0x03	CT primary	Min Value: 1	Max Value: 10000	1
			Min Value: 5	Max Value: 10000	
40004	0x04	PT Secondary	Min Value: 100	Max Value:500	1
40005	0x05	PT Primary	Min Value: 100	Max Value:500kV	2
40007	0x07	Demand Interval Method	Min Value:0x0000	Meaning: Sliding	1
			Min Value:0x0001	Meaning: Fixed	1
40008	0x08	Demand Interval length	Min Value: 1	Max Value:30	1
40009	0x09	Demand Interval duration	Min Value: 1	Max Value:30	1
40013	0x0D	Slave ID	Min Value: 1	Max Value:255	1
40014	0x0E	Baud Rate	Min Value:0x0000	Meaning: 300	1
			Min Value:0x0001	Meaning: 600	1
			Min Value:0x0002	Meaning: 1200	1
			Min Value:0x0003	Meaning: 2400	1
			Min Value:0x0004	Meaning: 4800	1
			Min Value:0x0005	Meaning: 9600	1
			Min Value:0x0006	Meaning: 19200	1
40015	0x0F	Parity	Min Value:0x0000	Meaning: None	1
			Min Value:0x0001	Meaning: Odd	1
			Min Value:0x0002	Meaning: Even	1
40016	0x10	Stop bit	Min Value:0x0000	Meaning: 1	1
			Min Value:0x0001	Meaning:2	1
40025	0x19	Page mode	Value: 0	0: Auto Mode	1
			Value: 1	1: Manual	1
40017	0x11	Factory Default	Value: 1	Meaning: To set factory setting range	1
40018	0x12	Reset kWh	Min Value: 1	Meaning: Reset Active Energy	1
40019	0x13	Reset kVAh	Min Value: 1	Meaning: Reset Apparent Energy	1
40020	0x14	Reset kVArh	Min Value: 1	Meaning: Reset Reactive Energy	1
40021	0x15	Reset MAX DMD	Min Value: 1	Meaning: Reset Maximum Demand of power and current	1
40022	0x16	Reset ON hour	Min Value: 1	Meaning: Reset ON Hour	1

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 Siemens. Any statements contained herein do not create new warranties or modify the existing warranty.

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