PMAC202 Branch Circuit Power Meter MODBUS Protocol V1.0

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1. Introduction

This communication protocol describes the input and output of instruction, information and data of PMAC202 with MODBUS communication, which bring convenience for the usage and development of the third party.

1.1 The purpose of the serial communication protocol

The role of communication protocols is to exchange the information and data between the host computer (master) and the PMAC202, which includes:

(1) Allow the master to access and set all the parameters of PMAC202

(2) Allow access to all measurement data and event records of PMAC202

1.2 MODBUS communication protocol version

This communication protocol suits for all versions of PMAC202 of Pilot. Any changes will be specified in the future.

2. Detailed Description of MODBUS Serial Communication

2.1 Basic Rules for PMAC202-MODBUS Protocol

The following rules are used for RS485 or RS232C circuit controller and other equipments with RS485 serial communication circuit:

1) All RS485 circuit communication shall be subject to the master / slave mode. In this manner, the information and data is exchanged between a single master station and up to 32 slave stations (monitoring equipments).

2) The master station will initialize and control all the information in the RS485 communication circuits.

3) Communication can not be started from any slave station.

4) All communication of the RS485 circuits happened with the mode of "package", and one package is a simple to the "package". A parcel is a simple string (each string, 8digits). A package can contain up to 255 bytes. These bytes of the package constitutes a standard asynchronous serial data and transfer in the mode of eight data bits, 1 stop bit, no parity bit. Serial data stream is generated from the similar equipments used by the RS232C.

5) The package sent from master station is named request, and the one from slave station os named response.

6) The slave station can only respond to one request from the master station in any case.

2.2 Transfer Mode

MODBUS protocol can transfer data in ASCII or RTU mode. PMAC 202 supports only the RTU mode, eight data bits, no parity, 1 stop bit.

2.3 MODBUS Package Structure Description

Each the MODBUS parcel consists of the following parts:

- 1) Address field
- 2) Function code field

3) Data field4) Checksum field

2.3.1 Address Field

The length of the Address Field of MODBUS slave station is 1 byte, including the address of slave station sent from the package. The valid slave station address is ranged from 1 - 247. When the slave station received the package information of Address Field in the slave station which can match its own address, it should implement the command in the package. The domain of the package in response in the slave station is its own address.

As the HMI can connect and communicate with the controller of any address, the address of request sent from HMI is specified as 0.

2.3.2 Function Code Field

The length of function field in the package is 1 byte, which is used to inform the slave station what to operate. The package of response of the slave station, should include the same the same function field bytes. The function codes of MAC202 as following:

Function	Definitaion	Functions
Code		
0x03	Register reading	Obtain one or more actual register value inside present PMAC202
0x05	Relay controlling	Control the relays of PMAC202
0x10	Register setting	Write designated value into one or more registers of PMAC202

2.3.3 Data Field

The length of the MODBUS data is not fixed, change as per the specific functions. The data of MODBUS adopts the mode of "BIG INDIAN", i.e. High byte first, low byte second. For example:

Example 2.1

A 16-bit register contains the value 0x12AB, register value sent as per the order of:

High byte = 0x12 Low byte = 0x0AB

2.3.4 Checksum Field

MODBUS-RTU mode with 16-bit CRC checksum, the sending device should carry out CRC16 calculation for each data inside the package, while the receiving device will also carry out CRC16 calculation for each data (except checksum field) of the package. After comparison of the results and the checksum field, only the package with the same data can be accepted. For detailed CRC checksum algorithm please refer to the appendix.

2.4 Network Feedback Time

To transmit the package via RS485 network, the regulations of time should be followed:

1) From ending a request package from master station to starting response of the slave station, the minimum time is 20 milliseconds, and maximum time is 260 milliseconds, with a typical time of 60 milliseconds.

2) From the master station ending a response to the package to the next request, the typical time will be 100 milliseconds.

3) The maximum time between two adjacent bytes in the package differs as per the change of baud rate. In general, the maximum byte time is three times of byte sending time. (Such as with baud rate of 9600, the byte interval is 3 ms; with 4800 baud rate, byte interval is 6 ms).

2.5 Abnormal Response

If the master station sends an illegal package to PMAC202 or the master station requests an invalid register, the abnormal data response will happen. This abnormal data response consists of the address of slave station , function code, the fault code and the checksum field. When the high bit of the function code field is 1, it means the abnormal response of data frame. The following table describes the meaning of the abnormal function code:

Function Code name	Description
01 illegal function code	PMAC202-MODBUS only support function code like 03H, 05H and 10H. The code means the slave station had received illegal function code.
02 illegal data address	PMAC202 received the invalid data address, or the register requested is not in the range of valid registers.
03 illegal data value	Surpass the data scale.

2.6 Broadcast command

PMAC202-MODBUS protocol does not support Broadcast command.

3 Communication Package

PMAC202-MODBUS supports two function code, and standard MODBUS protocol only supports 16-bit data mode, i.e. The maximum of any measured value transmitted is 65535.

- 3.1 Description of the command of relay controlling.
- 3.2 Description of the package format of PMAC202 reading data and responding data.
- 3.3 Description of the package format of PMAC202 writing data packages and responding data.

3.1 Read Registers (Function code 03H)

The request package from master station request PMAC202 to respond all valid registers, to reserve registers, the content is 0.

Format of reading register packages (master →PMAC202)			Format of responding (PMAC202→master)		
Slave station address 1byte			Slave station address	1byte	
Function code 03H	1byte		Function code 03H	1byte	
Starting address 2bytes			bytes (2*register quantity)	1byte	
Register quantity	2bytes		First register data	2bytes	
CRC checksum code	CRC checksum code 2bytes		Second register data	2bytes	
			CRC checksum code	2bytes	

3.2 Control Command Relay (Functional code 05H)

With 05 command, operation can be done to common relay, the address of relay starts from 0. Data fields 0xFF00, the relay is closed; data field 0x0000, disconnect the relay.

Format of reading register package (master→PMAC202)			Format of responding (PMAC202→master)		
Slave station address 1byte			Slave station address	1byte	
Function code 05H 1byte			Function code 05H	1byte	
Starting address 2bytes			Starting address	2bytes	
Data field FF			Data field	FF	
Data field 00			Data field	00	
CRC checksum code	CRC checksum code 2bytes		CRC checksum code	2bytes	

3.3 Write Registers (Function code 10H)

This command permits the main station to configure the working parameters of PMAC202, the data format as follows:

Format of write register pack	age		Format of Responding	
(master→PMAC202)	(master→PMAC202)			
Slave station address	1byte		Slave station address	1byte
Function code 10H	1byte		Function code 10H	1 byte
Starting address	2 bytes		Starting address	2 bytes
Quantity of registers	2bytes		Quantity of Registers	2 bytes
bytes (2*quantity of registers)	1byte		CRC checksum code	2 bytes
Data of the first register	2 bytes			
Data of the second register	2 bytes			
CRC checksum code	2 bytes			

Attention:

The registers assumed to write of PMAC202 is continuous from the first register.

4 CRC-16 Calculation

This part describes CRC-16 calculation process. Bytes in the frame is defined as a string of binary data (0,1). The 16th checksum obtained in this way: the serial data stream to be multiplied by 216, then dividing by the generator polynomial (X16 + X15, + X2 + 1), the process in binary is 110000000000101. Quotient is ignored, the 16bytes remainder is the CRC value. In the calculation of the CRC-16 value, all arithmetic modulo is the modulo two or XOR (X0R) algorithm.

To generate CRC-16 checksum, follow these steps:

1) The most significant bit of omission generator, and reverse the bits order, form a new polynomial, the result is 101000000000001 or hexadecimal A001.

2) Put all 1 or hexadecimal FFFF into 16-bit register.

3) Use 16 medium or low-order byte to carry out XOR calculation of the first data byte, the result to be stored in 16 registers.

4) Move the 16-bit register one bit to the right, If the overflow bit is 1, then turn to Step 5, otherwise turn to Step 6.

5) Use the new generator polynomial to carry out the MOR calculation to the 16-bit registers, and store the result to 16 steps.

6) Repeat step 4, until the shift bit unit is 8 times.

7) Use first order bytes of 16-bit register to implement XOR calculation to the next data bytes, and store the result to 16-bit register.

- 8) Repeat step 4-7, until all the bytes in the package all calculated by 16-bit register.
- 9) The content of 16-bit register is CRC-16.

The following example is CRC calculation for hex bytes 6403.

steps	ps bytes action register		bit#	Bit	
					shift
2		Primary value	1111 1111 1111 1111		
	1	Input the first byte	0000 0000 0110 0100		
3		XOR	1111 1111 1001 1011		
4		Right 1 bit	0111 1111 1100 1101	1	1
5a		XOR polynomial	1101 1111 1100 1100		
4		Right 1 bit	0110 1111 1110 0110	2	0
4		Right 1 bit	0011 0111 1111 0011	3	0
4		Right 1 bit	0001 1011 1111 1001	4	1
5a		XOR polynomial	1011 1011 1111 1000		
4		Right 1 bit	0101 1101 1111 1100	5	0
4		Right 1 bit	0010 1110 1111 1110	6	0
4		Right 1 bit	0001 0111 0111 1111	7	0
4		Right 1 bit	0000 1011 1011 1111	8	1
5a		XOR polynomial	1010 1011 1011 1110		
	2	Put to the second	0000 0000 0000 0011		
		byte			
7		XOR	1010 1011 1011 1101		

4	Right 1 bit	0101 0101 1101 1110	1	1
5a	XOR polynomial	1111 0101 1101 1111		
4	Right 1 bit	0111 1010 1110 1111	2	1
5a	XOR polynomial	1101 1010 1110 1110		
4	Right 1 bit	0110 1101 0111 0111	3	0
4	Right 1 bit	0011 0110 1011 1011	4	1
5a	XOR polynomial	1001 0110 1011 1010		
4	Right 1 bit	0100 1011 0101 1101	5	0
4	Right 1 bit	0010 0101 1010 1110	6	1
5a	XOR polynomial	1000 0101 1010 1111		
4	Right 1 bit	0100 0010 1101 0111	7	1
5a	XOR polynomial	1110 0010 1101 0110		
4	Right 1 bit	0111 0001 0110 1011	8	0
	CRC-16	0111 0001 0110 1011		

5 PMAC202 Register Instruction

All registers of PMAC202 (including real-time register and set register), have the 4XXXX base address of the MODBUS communication protocol. According to the MODBUS protocol, when request a register with address 4XXXX in PMAC202, the master station actually reads XXXX-1, For example, request the 40011 register in PMAC202, the main station actually reads register No. 10.

5.1 Measured Data Registers of Main Circuit

Register address	Access	Definition	Remarks	
40001	RO	Va, Main circuit		
40002	RO	Vb, Main circuit		
40003	RO	Vc, Main circuit		
40004	RO	Ia, Main circuit		
40005	RO	Ib, Main circuit		
40006	RO	Ic, Main circuit		
40007	RO	In (neutral current), Main circuit		
40008	RO	Current Unbalance Rate, Main circuit		
40009	RO	la_max., Main circuit		
40010	RO	Ib_max., Main circuit		
40011	RO	Ic_max., Main circuit		
40012	RO	In_max., Main circuit		
40013	RO	Demand for Ia, Main circuit		
40014	RO	Demand for Ib, Main circuit		
40015	RO	Demand for Ic, Main circuit		
40016	RO	Max. demand for Ia, Main circuit		

40017	RO	Max. demand for Ib, Main circuit	
40018	RO	Max. demand for Ic, Main circuit	
40019	RO	Pa, Main circuit	
40020	RO	Pb, Main circuit	
40021	RO	Pc, Main circuit	
40022	RO	Ptot, (low word), Main circuit	
40023	RO	Ptot, (high word), Main circuit	
40024	RO	Demand for Pa, Main circuit	
40025	RO	Demand for Pb, Main circuit	
40026	RO	Demand for Pc, Main circuit	
40027	RO	Demand for Ptot, (low word), Main circuit	
40028	RO	Demand for Ptot (high word), Main circuit	
40029	RO	Max. demand for Pa, Main circuit	
40030	RO	Max. demand for Pb, Main circuit	
40031	RO	Max. demand for Pc, Main circuit	
40032	RO	Max. demand for Ptot, (low word), Main circuit	
40033	RO	Max. demand for Ptot, (high word), Main circuit	
40034	RO	Phase A power factor, Main circuit	
40035	RO	Phase B power factor, Main circuit	
40036	RO	Phase C power factor, Main circuit	
40037	RO	Total power factor, Main circuit	
40038	RO	Frequency	
40039	RO	Active Energy Low word of Main circuit	
40040	RO	Active Energy high word of Main circuit	
40041	RO	THD for Va, Main circuit	
40042	RO	THD for Vb, Main circuit	
40043	RO	THD for Vc, Main circuit	
40044	RO	THD for Ia, Main circuit	
40045	RO	THD for Ib, Main circuit	
40046	RO	THD for Ic, Main circuit	
40047	RO	Qa, Main circuit	
40048	RO	Qb, Main circuit	
40049	RO	Qc, Main circuit	
40050	RO	Qtot, (low word), Main circuit	
40051	RO	Qtot, (high word), Main circuit	
40052	RO	Reactive energy Low word of Main circuit	
40053	RO	Reactive energy High word of Main circuit	
40054	RO	Leakage current, Main circuit	
40055	RO	Temperature	
40056	RO	Neutral-Earth Voltage	

40057	RO	Hardware configuration	Bit0-Bit2: quantity of CT module (1 means one module, 3 means two modules); Bit3: DI module (0 means no, 1 means yes) Bit4: neutral-earth voltage (0 means no, 1 means yes) Bit5: Temperature (0 means no, 1 means yes); Bit6: Leakage current measurement (0 means no, 1 means yes). 0 means OFF,
40059	RO	DI and relay output status of main module	1 means ON Bit0 DI 1 Status Bit1 DI 2 Status Bit2 DI 3 Status Bit3 DI 4 Status Bit8 Relay 1 Status Bit9 Relay 2 Status
40060	RO	DI status of branch circuit 1 ~16, DI module-A	
40061	RO	DI status of branch circuit 17~21, DI module-A	
40062	RO	DI status of branch circuit 1 ~16, DI module-B	
40063	RO	DI status of branch circuit 17~21, DI module-B	
40064	RO	Reserved	
40065	RO	Reserved	
40066	RO	Reserved	
40067	RO	Reserved	
40068	RO	Reserved	
40069	RO	Reserved	
40070	RO	Reserved	

5.2 Alarm Registers

Register address	Property	Definition	Remarks
40101	RO	Alarm Info of Main circuit	Setting value alarm
40102	RO	Switch off alarm of Main circuit	bit0-bit3: S1-S4。
40103	RO	Alarm info of branch circuit 1	
40104	RO	Alarm info of branch circuit 2	

40105	RO	Alarm info of branch circuit 3	
40106	RO	Alarm info of branch circuit 4	
40100	RO	Alarm info of branch circuit 4	
40108	RO	Alarm info of branch circuit 6	
40108	RO	Alarm info of branch circuit 7	
40110	RO	Alarm info of branch circuit 8	
40111	RO	Alarm info of branch circuit 9	
40112	RO	Alarm info of branch circuit 10	
40113	RO	Alarm info of branch circuit 11	
40114	RO	Alarm info of branch circuit 12	
40115	RO	Alarm info of branch circuit 13	
40116	RO	Alarm info of branch circuit 14	
40117	RO	Alarm info of branch circuit 15	
40118	RO	Alarm info of branch circuit 16	
40119	RO	Alarm info of branch circuit 17	
40120	RO	Alarm info of branch circuit 18	
40121	RO	Alarm info of branch circuit 19	
40122	RO	Alarm info of branch circuit 20	
40123	RO	Alarm info of branch circuit 21	
40124	RO	Alarm info of branch circuit 22	
40125	RO	Alarm info of branch circuit 23	
40126	RO	Alarm info of branch circuit 24	
40127	RO	Alarm info of branch circuit 25	
40128	RO	Alarm info of branch circuit 26	
40129	RO	Alarm info of branch circuit 27	
40130	RO	Alarm info of branch circuit 28	
40131	RO	Alarm info of branch circuit 29	
40132	RO	Alarm info of branch circuit 30	
40133	RO	Alarm info of branch circuit 31	
40134	RO	Alarm info of branch circuit 32	
40135	RO	Alarm info of branch circuit 33	
40136	RO	Alarm info of branch circuit 34	
40137	RO	Alarm info of branch circuit 35	
40138	RO	Alarm info of branch circuit 36	
40139	RO	Alarm info of branch circuit 37	
40140	RO	Alarm info of branch circuit 38	
40141	RO	Alarm info of branch circuit 39	
40142	RO	Alarm info of branch circuit 40	
40143	RO	Alarm info of branch circuit 41	
40144	RO	Alarm info of branch circuit 42	
40145	RO	DI and relay output status of main module	
		DI status of branch circuit 1 ~16, DI	
40146	RO	module-A	
L			l

40147	RO	DI status of branch circuit 17~21, DI module-A	
40148	RO	DI status of branch circuit 1 ~16, DI	
		module-B	
40149	RO	DI status of branch circuit 17~21, DI	
40149	KU	module-B	
40150	RO	Reserved	
40151	RO	Reserved	
40152	RO	Reserved	
Alarm info of main circuit		bit0: current low-low-limit alarm	
		bit1: current low-limit alarm	
		bit2: current high-limit alarm	
		bit3: current high-high-limit alarm	
		bit4: neutral current high-limit alarm	
		bit5: current unbalance alarm	
		bit8: low voltage alarm	
		bit9: high voltage alarm	
		bit10: leakage current high-limit alarm	
		bit11: temperature high-limit alarm	
		bit12: neutral-earth voltage high-limit	
		alarm	
Alarm info			
of branch		bit0: current low-low-limit alarm	
circuit			
		bit1: current low-limit alarm	
		bit2: current high-limit alarm	
		bit3: current high-high-limit alarm	
		bit14: branch circuit switch off alarm	
	1		

5.3 Measured Data Registers of Branch Circuit

Register address	Property	Definition	Remarks
40201	RO	I, Branch circuit 1	
40202	RO	I_max, Branch circuit 1	
40203	RO	Demand for I, Branch circuit 1	
40204	RO	Max. demand for I, Branch circuit 1	
40205	RO	P, Branch circuit 1	
40206	RO	Demand for P, Branch circuit 1	
40207	RO	Max. demand for P, Branch circuit 1	
40208	RO	Power factor, Branch circuit 1	

40209	RO	Q, Branch circuit 1	
40210	RO	THD for I, Branch circuit 1	
40210	RO	kWh (low word), Branch circuit 1	
40211	RO	kWh (high word), Branch circuit 1	
40212	RO	kvarh (low word), Branch circuit 1	
40213	RO	kvarh (high word), Branch circuit 1	
40214	RO	I, Branch circuit 2	
40213	RO	I_max, Branch circuit 2	
40210	RO	Demand for I, Branch circuit 2	
40217	RO		
		Max. demand for I, Branch circuit 2	
40219	RO	P, Branch circuit 2	
40220	RO	Demand for P, Branch circuit 2	
40221	RO	Max. demand for P, Branch circuit 2	
40222	RO	Power factor, Branch circuit 2	
40223	RO	Q, Branch circuit 2	
40224	RO	THD for I, Branch circuit 2	
40225	RO	kWh (low word), Branch circuit 2	
40226	RO	kWh (high word), Branch circuit 2	
40227	RO	kvarh (low word), Branch circuit 2	
40228	RO	kvarh (high word), Branch circuit 2	
40229	RO	I, Branch circuit 3	
40230	RO	I_max, Branch circuit 3	
40231	RO	Demand for I, Branch circuit 3	
40232	RO	Max. demand for I, Branch circuit 3	
40233	RO	P, Branch circuit 3	
40234	RO	Demand for P, Branch circuit 3	
40235	RO	Max. demand for P, Branch circuit 3	
40236	RO	Power factor, Branch circuit 3	
40237	RO	Q, Branch circuit 3	
40238	RO	THD for I, Branch circuit 3	
40239	RO	kWh (low word), Branch circuit 3	
40240	RO	kWh (high word), Branch circuit 3	
40241	RO	kvarh (low word), Branch circuit 3	
40242	RO	kvarh (high word), Branch circuit 3	
40243	RO	I, Branch circuit 4	
40244	RO	I_max, Branch circuit 4	
40245	RO	Demand for I, Branch circuit 4	
40246	RO	Max. demand for I, Branch circuit 4	
40247	RO	P, Branch circuit 4	
40248	RO	Demand for P, Branch circuit 4	
40249	RO	Max. demand for P, Branch circuit 4	
40250	RO	Power factor, Branch circuit 4	
40251	RO	Q, Branch circuit 4	

40252	RO	THD for I, Branch circuit 4	
40252	RO	kWh (low word), Branch circuit 4	
40253	RO		
		kWh (high word), Branch circuit 4	
40255	RO	kvarh (low word), Branch circuit 4	
40256	RO	kvarh (high word), Branch circuit 4	
40257	RO	I, Branch circuit 5	
40258	RO	I_max, Branch circuit 5	
40259	RO	Demand for I, Branch circuit 5	
40260	RO	Max. demand for I, Branch circuit 5	
40261	RO	P, Branch circuit 5	
40262	RO	Demand for P, Branch circuit 5	
40263	RO	Max. demand for P, Branch circuit 5	
40264	RO	Power factor, Branch circuit 5	
40265	RO	Q, Branch circuit 5	
40266	RO	THD for I, Branch circuit 5	
40267	RO	kWh (low word), Branch circuit 5	
40268	RO	kWh (high word), Branch circuit 5	
40269	RO	kvarh (low word), Branch circuit 5	
40270	RO	kvarh (high word), Branch circuit 5	
40271	RO	I, Branch circuit 6	
40272	RO	I_max, Branch circuit 6	
40273	RO	Demand for I, Branch circuit 6	
40274	RO	Max. demand for I, Branch circuit 6	
40275	RO	P, Branch circuit 6	
40276	RO	Demand for P, Branch circuit 6	
40277	RO	Max. demand for P, Branch circuit 6	
40278	RO	Power factor, Branch circuit 6	
40279	RO	Q, Branch circuit 6	
40280	RO	THD for I, Branch circuit 6	
40281	RO	kWh (low word), Branch circuit 6	
40282	RO	kWh (high word), Branch circuit 6	
40283	RO	kvarh (low word), Branch circuit 6	
40284	RO	kvarh (high word), Branch circuit 6	
40285	RO	DI and relay output status of main module	
40286	RO	DI status of branch circuit 1 ~16, DI module-A	
40287	RO	DI status of branch circuit 17~21, DI module-A	
40288	RO	DI status of branch circuit 1 ~16, DI module A	
40289	RO	DI status of branch circuit 17~21, DI module-B	
40290	RO	I, Branch circuit 7	
40290	RO	I max, Branch circuit 7	
40291	RO	Demand for I, Branch circuit 7	
40292	RO	Max. demand for I, Branch circuit 7	
40293	RO	P, Branch circuit 7	
40294	κυ		

40295	RO	Demand for P, Branch circuit 7	
40296	RO	Max. demand for P, Branch circuit 7	
40297	RO	Power factor, Branch circuit 7	
40298	RO	Q, Branch circuit 7	
40299	RO	THD for I, Branch circuit 7	
40300	RO	kWh (low word), Branch circuit 7	
40301	RO	kWh (high word), Branch circuit 7	
40302	RO	kvarh (low word), Branch circuit 7	
40303	RO	kvarh (high word), Branch circuit 7	
40304	RO	I, Branch circuit 8	
40305	RO	I_max, Branch circuit 8	
40306	RO	Demand for I, Branch circuit 8	
40307	RO	Max. demand for I, Branch circuit 8	
40308	RO	P, Branch circuit 8	
40309	RO	Demand for P, Branch circuit 8	
40310	RO	Max. demand for P, Branch circuit 8	
40311	RO	Power factor, Branch circuit 8	
40312	RO	Q, Branch circuit 8	
40313	RO	THD for I, Branch circuit 8	
40314	RO	kWh (low word), Branch circuit 8	
40315	RO	kWh (high word), Branch circuit 8	
40316	RO	kvarh (low word), Branch circuit 8	
40317	RO	kvarh (high word), Branch circuit 8	
40318	RO	I, Branch circuit 9	
40319	RO	I_max, Branch circuit 9	
40320	RO	Demand for I, Branch circuit 9	
40321	RO	Max. demand for I, Branch circuit 9	
40322	RO	P, Branch circuit 9	
40323	RO	Demand for P, Branch circuit 9	
40324	RO	Max. demand for P, Branch circuit 9	
40325	RO	Power factor, Branch circuit 9	
40326	RO	Q, Branch circuit 9	
40327	RO	THD for I, Branch circuit 9	
40328	RO	kWh (low word), Branch circuit 9	
40329	RO	kWh (high word), Branch circuit 9	
40330	RO	kvarh (low word), Branch circuit 9	
40331	RO	kvarh (high word), Branch circuit 9	
40332	RO	I, Branch circuit 10	
40333	RO	I_max, Branch circuit 10	
40334	RO	Demand for I, Branch circuit 10	
40335	RO	Max. demand for I, Branch circuit 10	
40336	RO	P, Branch circuit 10	
40337	RO	Demand for P, Branch circuit 10	

40338	RO	Max. demand for P, Branch circuit 10	
40339	RO	Power factor, Branch circuit 10	
40340	RO	Q, Branch circuit 10	
40341	RO	THD for I, Branch circuit 10	
40342	RO	kWh (low word), Branch circuit 10	
40343	RO	kWh (high word), Branch circuit 10	
40344	RO	kvarh (low word), Branch circuit 10	
40345	RO	kvarh (high word), Branch circuit 10	
40346	RO	I, Branch circuit 11	
40347	RO	I_max, Branch circuit 11	
40348	RO	Demand for I, Branch circuit 11	
40349	RO	Max. demand for I, Branch circuit 11	
40350	RO	P, Branch circuit 11	
40351	RO	Demand for P, Branch circuit 11	
40352	RO	Max. demand for P, Branch circuit 11	
40353	RO	Power factor, Branch circuit 11	
40354	RO	Q, Branch circuit 11	
40355	RO	THD for I, Branch circuit 11	
40356	RO	kWh (low word), Branch circuit 11	
40357	RO	kWh (high word), Branch circuit 11	
40358	RO	kvarh (low word), Branch circuit 11	
40359	RO	kvarh (high word), Branch circuit 11	
40360	RO	I, Branch circuit 12	
40361	RO	I max, Branch circuit 12	
40362	RO	Demand for I, Branch circuit 12	
40363	RO	Max. demand for I, Branch circuit 12	
40364	RO	P, Branch circuit 12	
40365	RO	Demand for P, Branch circuit 12	
40366	RO	Max. demand for P, Branch circuit 12	
40367	RO	Power factor, Branch circuit 12	
40368	RO	Q, Branch circuit 12	
40369	RO	THD for I, Branch circuit 12	
40370	RO	kWh (low word), Branch circuit 12	
40371	RO	kWh (high word), Branch circuit 12	
40372	RO	kvarh (low word), Branch circuit 12	
40373	RO	kvarh (high word), Branch circuit 12	
40374	RO	DI and relay output status of main module	
40375	RO	DI status of branch circuit 1 ~16, DI module-A	
40376	RO	DI status of branch circuit 17~21, DI module-A	
40377	RO	DI status of branch circuit 1 ~16, DI module-B	
40378	RO	DI status of branch circuit 17~21, DI module-B	
40379	RO	I, Branch circuit 13	
40380	RO	I_max, Branch circuit 13	

40381	RO	Demand for I, Branch circuit 13	
40382	RO	Max. demand for I, Branch circuit 13	
40383	RO	P, Branch circuit 13	
40384	RO	Demand for P, Branch circuit 13	
40385	RO	Max. demand for P, Branch circuit 13	
40386	RO	Power factor, Branch circuit 13	
40387	RO	Q, Branch circuit 13	
40388	RO	THD for I, Branch circuit 13	
40389	RO	kWh (low word), Branch circuit 13	
40390	RO	kWh (high word), Branch circuit 13	
40391	RO	kvarh (low word), Branch circuit 13	
40392	RO	kvarh (high word), Branch circuit 13	
40393	RO	I, Branch circuit 14	
40394	RO	I_max, Branch circuit 14	
40395	RO	Demand for I, Branch circuit 14	
40396	RO	Max. demand for I, Branch circuit 14	
40397	RO	P, Branch circuit 14	
40398	RO	Demand for P, Branch circuit 14	
40399	RO	Max. demand for P, Branch circuit 14	
40400	RO	Power factor, Branch circuit 14	
40401	RO	Q, Branch circuit 14	
40402	RO	THD for I, Branch circuit 14	
40403	RO	kWh (low word), Branch circuit 14	
40404	RO	kWh (high word), Branch circuit 14	
40405	RO	kvarh (low word), Branch circuit 14	
40406	RO	kvarh (high word), Branch circuit 14	
40407	RO	I, Branch circuit 15	
40408	RO	I max, Branch circuit 15	
40409	RO	Demand for I, Branch circuit 15	
40410	RO	Max. demand for I, Branch circuit 15	
40411	RO	P, Branch circuit 15	
40412	RO	Demand for P, Branch circuit 15	
40413	RO	Max. demand for P, Branch circuit 15	
40414	RO	Power factor, Branch circuit 15	
40415	RO	Q, Branch circuit 15	
40416	RO	THD for I, Branch circuit 15	
40417	RO	kWh (low word), Branch circuit 15	
40418	RO	kWh (high word), Branch circuit 15	
40419	RO	kvarh (low word), Branch circuit 15	
40420	RO	kvarh (high word), Branch circuit 15	
40421	RO	I, Branch circuit 16	
40422	RO	I_max, Branch circuit 16	
40423	RO	Demand for I, Branch circuit 16	

40424	RO	Max. demand for I, Branch circuit 16	
40425	RO	P, Branch circuit 16	
40426	RO	Demand for P, Branch circuit 16	
40427	RO	Max. demand for P, Branch circuit 16	
40428	RO	Power factor, Branch circuit 16	
40429	RO	Q, Branch circuit 16	
40430	RO	THD for I, Branch circuit 16	
40431	RO	kWh (low word), Branch circuit 16	
40432	RO	kWh (high word), Branch circuit 16	
40433	RO	kvarh (low word), Branch circuit 16	
40434	RO	kvarh (high word), Branch circuit 16	
40435	RO	I, Branch circuit 17	
40436	RO	I max, Branch circuit 17	
40437	RO	Demand for I, Branch circuit 17	
40438	RO	Max. demand for I, Branch circuit 17	
40439	RO	P, Branch circuit 17	
40440	RO	Demand for P, Branch circuit 17	
40441	RO	Max. demand for P, Branch circuit 17	
40442	RO	Power factor, Branch circuit 17	
40443	RO	Q, Branch circuit 17	
40444	RO	THD for I, Branch circuit 17	
40445	RO	kWh (low word), Branch circuit 17	
40446	RO	kWh (high word), Branch circuit 17	
40447	RO	kvarh (low word), Branch circuit 17	
40448	RO	kvarh (high word), Branch circuit 17	
40449	RO	I, Branch circuit 18	
40450	RO	I max, Branch circuit 18	
40451	RO	Demand for I, Branch circuit 18	
40452	RO	Max. demand for I, Branch circuit 18	
40453	RO	P, Branch circuit 18	
40454	RO	Demand for P, Branch circuit 18	
40455	RO	Max. demand for P, Branch circuit 18	
40456	RO	Power factor, Branch circuit 18	
40457	RO	Q, Branch circuit 18	
40458	RO	THD for I, Branch circuit 18	
40459	RO	kWh (low word), Branch circuit 18	
40460	RO	kWh (high word), Branch circuit 18	
40461	RO	kvarh (low word), Branch circuit 18	
40462	RO	kvarh (high word), Branch circuit 18	
40463	RO	DI and relay output status of main module	
40464	RO	DI status of branch circuit 1 ~16, DI module-A	
40465	RO	DI status of branch circuit 17~21, DI module-A	
40466	RO	DI status of branch circuit 1 ~16, DI module-B	

RO RO	DI status of branch circuit 17~21, DI module-B	
	I, Branch circuit 19	
RO	I max, Branch circuit 19	
	RO RO	ROMax. demand for I, Branch circuit 19ROP, Branch circuit 19RODemand for P, Branch circuit 19ROMax. demand for P, Branch circuit 19ROPower factor, Branch circuit 19ROQ, Branch circuit 19ROTHD for I, Branch circuit 19ROKWh (low word), Branch circuit 19ROkvarh (low word), Branch circuit 20ROI, Branch circuit 20RODemand for I, Branch circuit 20ROP, Branch circuit 20RODemand for P, Branch circuit 20ROQ, Branch circuit 20ROKWh (low word), Branch circuit 20ROKWh (low word), Branch circuit 20ROkvarh (low word), Branch circuit 20ROkvarh (low word), Branch circuit 20ROkvarh (low word), Branch circuit 21ROL_max, Branch circuit 21ROkvarh (low word), Branch circuit 21RODemand for I, Branch circuit 21ROMax. demand for I, Branch circuit 21ROMax. demand for I, Branch circuit 21

40510	RO	I, Branch circuit 22	
40511	RO	I max, Branch circuit 22	
40512	RO	Demand for I, Branch circuit 22	
40513	RO	Max. demand for I, Branch circuit 22	
40514	RO	P, Branch circuit 22	
40515	RO	Demand for P, Branch circuit 22	
40516	RO	Max. demand for P, Branch circuit 22	
40517	RO	Power factor, Branch circuit 22	
40518	RO	Q, Branch circuit 22	
40519	RO	THD for I, Branch circuit 22	
40520	RO	kWh (low word), Branch circuit 22	
40521	RO	kWh (high word), Branch circuit 22	
40522	RO	kvarh (low word), Branch circuit 22	
40523	RO	kvarh (high word), Branch circuit 22	
40524	RO	I, Branch circuit 23	
40525	RO	I max, Branch circuit 23	
40526	RO	Demand for I, Branch circuit 23	
40527	RO	Max. demand for I, Branch circuit 23	
40528	RO	P, Branch circuit 23	
40529	RO	Demand for P, Branch circuit 23	
40530	RO	Max. demand for P, Branch circuit 23	
40531	RO	Power factor, Branch circuit 23	
40532	RO	Q, Branch circuit 23	
40533	RO	THD for I, Branch circuit 23	
40534	RO	kWh (low word), Branch circuit 23	
40535	RO	kWh (high word), Branch circuit 23	
40536	RO	kvarh (low word), Branch circuit 23	
40537	RO	kvarh (high word), Branch circuit 23	
40538	RO	I, Branch circuit 24	
40539	RO	I max, Branch circuit 24	
40540	RO	Demand for I, Branch circuit 24	
40541	RO	Max. demand for I, Branch circuit 24	
40542	RO	P, Branch circuit 24	
40543	RO	Demand for P, Branch circuit 24	
40544	RO	Max. demand for P, Branch circuit 24	
40545	RO	Power factor, Branch circuit 24	
40546	RO	Q, Branch circuit 24	
40547	RO	THD for I, Branch circuit 24	
40548	RO	kWh (low word), Branch circuit 24	
40549	RO	kWh (high word), Branch circuit 24	
40550	RO	kvarh (low word), Branch circuit 24	
40551	RO	kvarh (high word), Branch circuit 24	
40552	RO	DI and relay output status of main module	

40553	RO	DI status of branch circuit 1 ~16, DI module-A	
40554	RO	DI status of branch circuit 17~21, DI module-A	
40555	RO	DI status of branch circuit 1 ~16, DI module-B	
40556	RO	DI status of branch circuit 17~21, DI module-B	
40557	RO	I, Branch circuit 25	
40558	RO	I max, Branch circuit 25	
40559	RO	Demand for I, Branch circuit 25	
40560	RO	Max. demand for I, Branch circuit 25	
40561	RO	P, Branch circuit 25	
40562	RO	Demand for P, Branch circuit 25	
40563	RO	Max. demand for P, Branch circuit 25	
40564	RO	Power factor, Branch circuit 25	
40565	RO	Q, Branch circuit 25	
40566	RO	THD for I, Branch circuit 25	
40567	RO	kWh (low word), Branch circuit 25	
40568	RO	kWh (high word), Branch circuit 25	
40569	RO	kvarh (low word), Branch circuit 25	
40570	RO	kvarh (high word), Branch circuit 25	
40571	RO	I, Branch circuit 26	
40572	RO	I_max, Branch circuit 26	
40573	RO	Demand for I, Branch circuit 26	
40574	RO	Max. demand for I, Branch circuit 26	
40575	RO	P, Branch circuit 26	
40576	RO	Demand for P, Branch circuit 26	
40577	RO	Max. demand for P, Branch circuit 26	
40578	RO	Power factor, Branch circuit 26	
40579	RO	Q, Branch circuit 26	
40580	RO	THD for I, Branch circuit 26	
40581	RO	kWh (low word), Branch circuit 26	
40582	RO	kWh (high word), Branch circuit 26	
40583	RO	kvarh (low word), Branch circuit 26	
40584	RO	kvarh (high word), Branch circuit 26	
40585	RO	I, Branch circuit 27	
40586	RO	I max, Branch circuit 27	
40587	RO	Demand for I, Branch circuit 27	
40588	RO	Max. demand for I, Branch circuit 27	
40589	RO	P, Branch circuit 27	
40590	RO	Demand for P, Branch circuit 27	
40591	RO	Max. demand for P, Branch circuit 27	
40592	RO	Power factor, Branch circuit 27	
40593	RO	Q, Branch circuit 27	
40594	RO	THD for I, Branch circuit 27	
40595	RO	kWh (low word), Branch circuit 27	

40596	RO	kWh (high word), Branch circuit 27	
40597	RO	kvarh (low word), Branch circuit 27	
40598	RO	kvarh (high word), Branch circuit 27	
40599	RO	I, Branch circuit 28	
40600	RO	I_max, Branch circuit 28	
40601	RO	Demand for I, Branch circuit 28	
40602	RO	Max. demand for I, Branch circuit 28	
40602	RO	P, Branch circuit 28	
40604	RO	Demand for P, Branch circuit 28	
40605	RO	Max. demand for P, Branch circuit 28	
40606	RO	Power factor, Branch circuit 28	
40607	RO	Q, Branch circuit 28	
40608	RO	THD for I, Branch circuit 28	
40609	RO	kWh (low word), Branch circuit 28	
40610	RO	kWh (high word), Branch circuit 28	
40610	RO	kvarh (low word), Branch circuit 28	
40612	RO	kvarh (high word), Branch circuit 28	
40612	RO	I, Branch circuit 29	
40613	RO	I max, Branch circuit 29	
40615	RO	Demand for I, Branch circuit 29	
40615	RO	Max. demand for I, Branch circuit 29	
40617	RO	P, Branch circuit 29	
40617	RO	Demand for P, Branch circuit 29	
40619	RO	Max. demand for P, Branch circuit 29	
40619	RO	Power factor, Branch circuit 29	
40620	RO	Q, Branch circuit 29	
40621	RO	THD for I, Branch circuit 29	
40622	RO	kWh (low word), Branch circuit 29	
40623	RO		
	RO	kWh (high word), Branch circuit 29	
40625 40626	RO	kvarh (low word), Branch circuit 29	
40620		kvarh (high word), Branch circuit 29	
	RO RO	I, Branch circuit 30	
40628		Demand for I, Branch circuit 30	
40629	RO		
40630	RO	Max. demand for I, Branch circuit 30	
40631	RO	P, Branch circuit 30	
40632	RO	Demand for P, Branch circuit 30	
40633	RO	Max. demand for P, Branch circuit 30	
40634	RO	Power factor, Branch circuit 30	
40635	RO	Q, Branch circuit 30	
40636	RO	THD for I, Branch circuit 30	
40637	RO	kWh (low word), Branch circuit 30	
40638	RO	kWh (high word), Branch circuit 30	

40639	RO	kvarh (low word), Branch circuit 30	
40640	RO	kvarh (high word), Branch circuit 30	
40641	RO	DI and relay output status of main module	
40642	RO	DI status of branch circuit 1 ~16, DI module-A	
40643	RO	DI status of branch circuit 17~21, DI module-A	
40644	RO	DI status of branch circuit 1 ~16, DI module-B	
40645	RO	DI status of branch circuit 17~21, DI module-B	
40646	RO	I, Branch circuit 31	
40647	RO	I max, Branch circuit 31	
40648	RO	Demand for I, Branch circuit 31	
40649	RO	Max. demand for I, Branch circuit 31	
40650	RO	P, Branch circuit 31	
40651	RO	Demand for P, Branch circuit 31	
40652	RO	Max. demand for P, Branch circuit 31	
40653	RO	Power factor, Branch circuit 31	
40654	RO	Q, Branch circuit 31	
40655	RO	THD for I, Branch circuit 31	
40656	RO	kWh (low word), Branch circuit 31	
40657	RO	kWh (high word), Branch circuit 31	
40658	RO	kvarh (low word), Branch circuit 31	
40659	RO	kvarh (high word), Branch circuit 31	
40660	RO	I, Branch circuit 32	
40661	RO	I_max, Branch circuit 32	
40662	RO	Demand for I, Branch circuit 32	
40663	RO	Max. demand for I, Branch circuit 32	
40664	RO	P, Branch circuit 32	
40665	RO	Demand for P, Branch circuit 32	
40666	RO	Max. demand for P, Branch circuit 32	
40667	RO	Power factor, Branch circuit 32	
40668	RO	Q, Branch circuit 32	
40669	RO	THD for I, Branch circuit 32	
40670	RO	kWh (low word), Branch circuit 32	
40671	RO	kWh (high word), Branch circuit 32	
40672	RO	kvarh (low word), Branch circuit 32	
40673	RO	kvarh (high word), Branch circuit 32	
40674	RO	I, Branch circuit 33	
40675	RO	I_max, Branch circuit 33	
40676	RO	Demand for I, Branch circuit 33	
40677	RO	Max. demand for I, Branch circuit 33	
40678	RO	P, Branch circuit 33	
40679	RO	Demand for P, Branch circuit 33	
40680	RO	Max. demand for P, Branch circuit 33	
40681	RO	Power factor, Branch circuit 33	

40682	RO	Q, Branch circuit 33	
40683	RO	THD for I, Branch circuit 33	
40684	RO	kWh (low word), Branch circuit 33	
40685	RO	kWh (high word), Branch circuit 33	
40686	RO	kvarh (low word), Branch circuit 33	
40687	RO	kvarh (high word), Branch circuit 33	
40688	RO	I, Branch circuit 34	
40689	RO	I max, Branch circuit 34	
40690	RO	Demand for I, Branch circuit 34	
40691	RO	Max. demand for I, Branch circuit 34	
40692	RO	P, Branch circuit 34	
40693	RO	Demand for P, Branch circuit 34	
40694	RO	Max. demand for P, Branch circuit 34	
40695	RO	Power factor, Branch circuit 34	
40696	RO	Q, Branch circuit 34	
40697	RO	THD for I, Branch circuit 34	
40698	RO	kWh (low word), Branch circuit 34	
40699	RO	kWh (high word), Branch circuit 34	
40700	RO	kvarh (low word), Branch circuit 34	
40701	RO	kvarh (high word), Branch circuit 34	
40702	RO	I, Branch circuit 35	
40703	RO	I max, Branch circuit 35	
40704	RO	Demand for I, Branch circuit 35	
40705	RO	Max. demand for I, Branch circuit 35	
40706	RO	P, Branch circuit 35	
40707	RO	Demand for P, Branch circuit 35	
40708	RO	Max. demand for P, Branch circuit 35	
40709	RO	Power factor, Branch circuit 35	
40710	RO	Q, Branch circuit 35	
40711	RO	THD for I, Branch circuit 35	
40712	RO	kWh (low word), Branch circuit 35	
40713	RO	kWh (high word), Branch circuit 35	
40714	RO	kvarh (low word), Branch circuit 35	
40715	RO	kvarh (high word), Branch circuit 35	
40716	RO	I, Branch circuit 36	
40717	RO	I_max, Branch circuit 36	
40718	RO	Demand for I, Branch circuit 36	
40719	RO	Max. demand for I, Branch circuit 36	
40720	RO	P, Branch circuit 36	
40721	RO	Demand for P, Branch circuit 36	
40722	RO	Max. demand for P, Branch circuit 36	
40723	RO	Power factor, Branch circuit 36	
40724	RO	Q, Branch circuit 36	

40725	RO	THD for I, Branch circuit 36	
40725			
	RO	kWh (low word), Branch circuit 36	
40727	RO	kWh (high word), Branch circuit 36	
40728	RO	kvarh (low word), Branch circuit 36	
40729	RO	kvarh (high word), Branch circuit 36	
40730	RO	DI and relay output status of main module	
40731	RO	DI status of branch circuit 1 ~16, DI module-A	
40732	RO	DI status of branch circuit 17~21, DI module-A	
40733	RO	DI status of branch circuit 1 ~16, DI module-B	
40734	RO	DI status of branch circuit 17~21, DI module-B	
40735	RO	I, Branch circuit 37	
40736	RO	I_max, Branch circuit 37	
40737	RO	Demand for I, Branch circuit 37	
40738	RO	Max. demand for I, Branch circuit 37	
40739	RO	P, Branch circuit 37	
40740	RO	Demand for P, Branch circuit 37	
40741	RO	Max. demand for P, Branch circuit 37	
40742	RO	Power factor, Branch circuit 37	
40743	RO	Q, Branch circuit 37	
40744	RO	THD for I, Branch circuit 37	
40745	RO	kWh (low word), Branch circuit 37	
40746	RO	kWh (high word), Branch circuit 37	
40747	RO	kvarh (low word), Branch circuit 37	
40748	RO	kvarh (high word), Branch circuit 37	
40749	RO	I, Branch circuit 38	
40750	RO	I_max, Branch circuit 38	
40751	RO	Demand for I, Branch circuit 38	
40752	RO	Max. demand for I, Branch circuit 38	
40753	RO	P, Branch circuit 38	
40754	RO	Demand for P, Branch circuit 38	
40755	RO	Max. demand for P, Branch circuit 38	
40756	RO	Power factor, Branch circuit 38	
40757	RO	Q, Branch circuit 38	
40758	RO	THD for I, Branch circuit 38	
40759	RO	kWh (low word), Branch circuit 38	
40760	RO	kWh (high word), Branch circuit 38	
40761	RO	kvarh (low word), Branch circuit 38	
40762	RO	kvarh (high word), Branch circuit 38	
40762	RO	I, Branch circuit 39	
40764	RO	I_max, Branch circuit 39	
40765	RO	Demand for I, Branch circuit 39	
40766	RO	Max. demand for I, Branch circuit 39	
40767	RO	P, Branch circuit 39	
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40768	RO	Demand for P, Branch circuit 39	
	RO	Max. demand for P, Branch circuit 39	
40769			
40770	RO	Power factor, Branch circuit 39	
40771	RO	Q, Branch circuit 39	
40772	RO	THD for I, Branch circuit 39	
40773	RO	kWh (low word), Branch circuit 39	
40774	RO	kWh (high word), Branch circuit 39	
40775	RO	kvarh (low word), Branch circuit 39	
40776	RO	kvarh (high word), Branch circuit 39	
40777	RO	I, Branch circuit 40	
40778	RO	I_max, Branch circuit 40	
40779	RO	Demand for I, Branch circuit 40	
40780	RO	Max. demand for I, Branch circuit 40	
40781	RO	P, Branch circuit 40	
40782	RO	Demand for P, Branch circuit 40	
40783	RO	Max. demand for P, Branch circuit 40	
40784	RO	Power factor, Branch circuit 40	
40785	RO	Q, Branch circuit 40	
40786	RO	THD for I, Branch circuit 40	
40787	RO	kWh (low word), Branch circuit 40	
40788	RO	kWh (high word), Branch circuit 40	
40789	RO	kvarh (low word), Branch circuit 40	
40790	RO	kvarh (high word), Branch circuit 40	
40791	RO	I, Branch circuit 41	
40792	RO	I max, Branch circuit 41	
40793	RO	Demand for I, Branch circuit 41	
40794	RO	Max. demand for I, Branch circuit 41	
40795	RO	P, Branch circuit 41	
40796	RO	Demand for P, Branch circuit 41	
40797	RO	Max. demand for P, Branch circuit 41	
40798	RO	Power factor, Branch circuit 41	
40799	RO	Q, Branch circuit 41	
40800	RO	THD for I, Branch circuit 41	
40801	RO	kWh (low word), Branch circuit 41	
40802	RO	kWh (high word), Branch circuit 41	
40803	RO	kvarh (low word), Branch circuit 41	
40804	RO	kvarh (high word), Branch circuit 41	
40805	RO	I, Branch circuit 42	
40806	RO	I max, Branch circuit 42	
40807	RO	Demand for I, Branch circuit 42	
40808	RO	Max. demand for I, Branch circuit 42	
40809	RO	P, Branch circuit 42	
40810	RO	Demand for P, Branch circuit 42	

40811	RO	Max. demand for P, Branch circuit 42	
40812	RO	Power factor, Branch circuit 42	
40813	RO	Q, Branch circuit 42	
40814	RO	THD for I, Branch circuit 42	
40815	RO	kWh (low word), Branch circuit 42	
40816	RO	kWh (high word), Branch circuit 42	
40817	RO	kvarh (low word), Branch circuit 42	
40818	RO	kvarh (high word), Branch circuit 42	
40819	RO	DI and relay output status of main module	
40820	RO	DI status of branch circuit 1 ~16, DI module-A	
40821	RO	DI status of branch circuit 17~21, DI module-A	
40822	RO	DI status of branch circuit 1 ~16, DI module-B	
40823	RO	DI status of branch circuit 17~21, DI module-B	
40824	RO	Reserved	
40825	RO	Reserved	

5.4 Current Registers for Fast Tracking

Register address	Property	Definition	Remarks
40901	RO	Phase A Current of Main circuit	
40902	RO	Phase B Current of Main circuit	
40903	RO	Phase C Current of Main circuit	
40904	RO	Current of Branch circuit 1	
40905	RO	Current of Branch circuit 2	
40906	RO	Current of Branch circuit 3	
40907	RO	Current of Branch circuit 4	
40908	RO	Current of Branch circuit 5	
40909	RO	Current of Branch circuit 6	
40910	RO	Current of Branch circuit 7	
40911	RO	Current of Branch circuit 8	
40912	RO	Current of Branch circuit 9	
40913	RO	Current of Branch circuit 10	
40914	RO	Current of Branch circuit 11	
40915	RO	Current of Branch circuit 12	
40916	RO	Current of Branch circuit 13	
40917	RO	Current of Branch circuit 14	
40918	RO	Current of Branch circuit 15	
40919	RO	Current of Branch circuit 16	
40920	RO	Current of Branch circuit 17	
40921	RO	Current of Branch circuit 18	
40922	RO	Current of Branch circuit 19	
40923	RO	Current of Branch circuit 20	
40924	RO	Current of Branch circuit 21	

40925	RO	Current of Branch circuit 22
40926	RO	Current of Branch circuit 23
40927	RO	Current of Branch circuit 24
40928	RO	Current of Branch circuit 25
40929	RO	Current of Branch circuit 26
40930	RO	Current of Branch circuit 27
40931	RO	Current of Branch circuit 28
40932	RO	Current of Branch circuit 29
40933	RO	Current of Branch circuit 30
40934	RO	Current of Branch circuit 31
40935	RO	Current of Branch circuit 32
40936	RO	Current of Branch circuit 33
40937	RO	Current of Branch circuit 34
40938	RO	Current of Branch circuit 35
40939	RO	Current of Branch circuit 36
40940	RO	Current of Branch circuit 37
40941	RO	Current of Branch circuit 38
40942	RO	Current of Branch circuit 39
40943	RO	Current of Branch circuit 40
40944	RO	Current of Branch circuit 41
40945	RO	Current of Branch circuit 42

5.5 Device Configuration Registers

Register address	Property	Definition	Remarks			
42001	RW	Device address				
			0-1200			
			1-2400			
42002	RW	Baud Rate of RS485 Port 3	2-4800			
42002			3-9600			
			4-19200			
			5-38400			
42003	RW	CT ratio of Main circuit				
			0 means universal relay,			
			1 means working indicate,			
			2 means alarm output,			
42004	RW	Relay 1 function	3 means main circuit alarm			
						output,
			4 means branch circuit			
			alarm output			
			0 means universal relay,			
42005	RW	Relay 2 function	1 means working indicate,			
			2 means alarm output,			

			3 means main circuit alarm output,4 means branch circuit alarm output
42006	RW	DI 1 function of main module	0: universal switch signal1: digital input of Maincircuit2: SPD
42007	RW	DI 2 function of main module	0: universal switch signal 1: digital input of Main circuit 2: SPD
42008	RW	DI 3 function of main module	0: universal switch signal 1: digital input of Main circuit 2: SPD
42009	RW	DI 4 function of main module	0: universal switch signal 1: digital input of Main circuit 2: SPD
42010	RW	Energy pulse output circuit selection	0: Main circuit; 1: Branch circuit 1; 2: Branch circuit 2; 3: Branch circuit 3 42: Branch circuit42;
42011	RW	Energy pulse constant	Main circuit set:1000~9999, Branch circuit is fixed: 1000
42012	RW	Energy pulse width	60~100ms
42013	RW	DI alarm	0: NO; 1:Yes
42014	RW	Reserved	
42015	RW	Reserved	
42016	RW	Current low-low-limit value, Main circuit	
42017	RW	Current low-limit value, Main circuit	
42018	RW	Current high-limit value, Main circuit	
42019	RW	Current high-high limit value, Main circuit	
42020	RW	Neutral current high-limit value	
42021	RW	Current unbalance alarm	
10000	RW	Voltage low-limit value, Main circuit	
42022	D14		
42022 42023 42024	RW RW	Voltage high-limit value, Main circuit Leakage current high-limit value	

42026	RW	Neutral-earth voltage high-limit value	
42020	RW		
42027	RW	Current low-low-limit value, Branch circuit 1	
		Current low-limit value, Branch circuit 1	
42029	RW	Current high-limit value, Branch circuit 1	
42030	RW	Current high-high-limit value, Branch circuit 1	
42031	RW	Current low-low-limit value, Branch circuit 2	
42032	RW	Current low-limit value, Branch circuit 2	
42033	RW	Current high-limit value, Branch circuit 2	
42034	RW	Current high-high-limit value, Branch circuit 2	
42035	RW	Current low-low-limit value, Branch circuit 3	
42036	RW	Current low-limit value, Branch circuit 3	
42037	RW	Current high-limit value, Branch circuit 3	
42038	RW	Current high-high-limit value, Branch circuit 3	
42039	RW	Current low-low-limit value, Branch circuit 4	
42040	RW	Current low-limit value, Branch circuit 4	
42041	RW	Current high-limit value, Branch circuit 4	
42042	RW	Current high-high-limit value, Branch circuit 4	
42043	RW	Current low-low-limit value, Branch circuit 5	
42044	RW	Current low-limit value, Branch circuit 5	
42045	RW	Current high-limit value, Branch circuit 5	
42046	RW	Current high-high-limit value, Branch circuit 5	
42047	RW	Current low-low-limit value, Branch circuit 6	
42048	RW	Current low-limit value, Branch circuit 6	
42049	RW	Current high-limit value, Branch circuit 6	
42050	RW	Current high-high-limit value, Branch circuit 6	
42051	RW	Current low-low-limit value, Branch circuit 7	
42052	RW	Current low-limit value, Branch circuit 7	
42053	RW	Current high-limit value, Branch circuit 7	
42054	RW	Current high-high-limit value, Branch circuit 7	
42055	RW	Current low-low-limit value, Branch circuit 8	
42056	RW	Current low-limit value, Branch circuit 8	
42057	RW	Current high-limit value, Branch circuit 8	
42058	RW	Current high-high-limit value, Branch circuit 8	
42059	RW	Current low-low-limit value, Branch circuit 9	
42060	RW	Current low-limit value, Branch circuit 9	
42061	RW	Current high-limit value, Branch circuit 9	
42062	RW	Current high-high-limit value, Branch circuit 9	
42062	RW	Current low-low-limit value, Branch circuit 10	
42064	RW	Current low-limit value, Branch circuit 10	
42065	RW	Current high-limit value, Branch circuit 10	
42065	RW	Current high-high-limit value, Branch circuit 10	
42000	RW	Current low-low-limit value, Branch circuit 11	
42068	RW	Current low-limit value, Branch circuit 11	

42069	RW	Current high-limit value, Branch circuit 11	
42009	RW	Current high-high-limit value, Branch circuit 11	
42070	RW		
42071		Current low-low-limit value, Branch circuit 12 Current low-limit value, Branch circuit 12	
	RW		
42073	RW	Current high-limit value, Branch circuit 12	
42074	RW	Current high-high-limit value, Branch circuit 12	
42075	RW	Current low-low-limit value, Branch circuit 13	
42076	RW	Current low-limit value, Branch circuit 13	
42077	RW	Current high-limit value, Branch circuit 13	
42078	RW	Current high-high-limit value, Branch circuit 13	
42079	RW	Current low-low-limit value, Branch circuit 14	
42080	RW	Current low-limit value, Branch circuit 14	
42081	RW	Current high-limit value, Branch circuit 14	
42082	RW	Current high-high-limit value, Branch circuit 14	
42083	RW	Current low-low-limit value, Branch circuit 15	
42084	RW	Current low-limit value, Branch circuit 15	
42085	RW	Current high-limit value, Branch circuit 15	
42086	RW	Current high-high-limit value, Branch circuit 15	
42087	RW	Current low-low-limit value, Branch circuit 16	
42088	RW	Current low-limit value, Branch circuit 16	
42089	RW	Current high-limit value, Branch circuit 16	
42090	RW	Current high-high-limit value, Branch circuit 16	
42091	RW	Current low-low-limit value, Branch circuit 17	
42092	RW	Current low-limit value, Branch circuit 17	
42093	RW	Current high-limit value, Branch circuit 17	
42094	RW	Current high-high-limit value, Branch circuit 17	
42095	RW	Current low-low-limit value, Branch circuit 18	
42096	RW	Current low-limit value, Branch circuit 18	
42097	RW	Current high-limit value, Branch circuit 18	
42098	RW	Current high-high-limit value, Branch circuit 18	
42099	RW	Current low-low-limit value, Branch circuit 19	
42100	RW	Current low-limit value, Branch circuit 19	
42101	RW	Current high-limit value, Branch circuit 19	
42102	RW	Current high-high-limit value, Branch circuit 19	
42103	RW	Current low-low-limit value, Branch circuit 20	
42104	RW	Current low-limit value, Branch circuit 20	
42105	RW	Current high-limit value, Branch circuit 20	
42106	RW	Current high-high-limit value, Branch circuit 20	
42107	RW	Current low-low-limit value, Branch circuit 21	
42108	RW	Current low-limit value, Branch circuit 21	
42109	RW	Current high-limit value, Branch circuit 21	
42110	RW	Current high-high-limit value, Branch circuit 21	
42111	RW	Current low-low-limit value, Branch circuit 22	

42112	RW	Current low limit value, Branch circuit 22		
42112	RW	Current low-limit value, Branch circuit 22		
42113	RW	Current high-limit value, Branch circuit 22		
42114		Current high-high-limit value, Branch circuit 22		
	RW	Current low-low-limit value, Branch circuit 23		
42116	RW	Current low-limit value, Branch circuit 23		
42117	RW	Current high-limit value, Branch circuit 23		
42118	RW	Current high-high-limit value, Branch circuit 23		
42119	RW	Current low-low-limit value, Branch circuit 24		
42120	RW	Current low-limit value, Branch circuit 24		
42121	RW	Current high-limit value, Branch circuit 24	_	
42122	RW	Current high-high-limit value, Branch circuit 24		
42123	RW	Current low-low-limit value, Branch circuit 25		
42124	RW	Current low-limit value, Branch circuit 25		
42125	RW	Current high-limit value, Branch circuit 25		
42126	RW	Current high-high-limit value, Branch circuit 25		
42127	RW	Current low-low-limit value, Branch circuit 26		
42128	RW	Current low-limit value, Branch circuit 26		
42129	RW	Current high-limit value, Branch circuit 26		
42130	RW	Current high-high-limit value, Branch circuit 26		
42131	RW	Current low-low-limit value, Branch circuit 27		
42132	RW	Current low-limit value, Branch circuit 27		
42133	RW	Current high-limit value, Branch circuit 27		
42134	RW	Current high-high-limit value, Branch circuit 27		
42135	RW	Current low-low-limit value, Branch circuit 28		
42136	RW	Current low-limit value, Branch circuit 28		
42137	RW	Current high-limit value, Branch circuit 28		
42138	RW	Current high-high-limit value, Branch circuit 28		
42139	RW	Current low-low-limit value, Branch circuit 29		
42140	RW	Current low-limit value, Branch circuit 29		
42141	RW	Current high-limit value, Branch circuit 29		
42142	RW	Current high-high-limit value, Branch circuit 29		
42143	RW	Current low-low-limit value, Branch circuit 30		
42144	RW	Current low-limit value, Branch circuit 30		
42145	RW	Current high-limit value, Branch circuit 30		
42146	RW	Current high-high-limit value, Branch circuit 30		
42147	RW	Current low-low-limit value, Branch circuit 31		
42148	RW	Current low-limit value, Branch circuit 31		
42149	RW	Current high-limit value, Branch circuit 31		
42150	RW	Current high-high-limit value, Branch circuit 31		
42151	RW	Current low-low-limit value, Branch circuit 32		
42152	RW	Current low-limit value, Branch circuit 32		
42153	RW	Current high-limit value, Branch circuit 32		
42154	RW	Current high-high-limit value, Branch circuit 32		

42155	RW	Current low-low-limit value, Branch circuit 33			
42156	RW	Current low-limit value, Branch circuit 33			
42157	RW	Current high-limit value, Branch circuit 33			
42158	RW	Current high-high-limit value, Branch circuit 33			
42159	RW	Current low-low-limit value, Branch circuit 34			
42160	RW	Current low-limit value, Branch circuit 34			
42161	RW	Current high-limit value, Branch circuit 34			
42162	RW	Current high-high-limit value, Branch circuit 34			
42163	RW	Current low-low-limit value, Branch circuit 35			
42164	RW	Current low-limit value, Branch circuit 35			
42165	RW	Current high-limit value, Branch circuit 35			
42105	RW	Current high-high-limit value, Branch circuit 35			
42167	RW	Current low-low-limit value, Branch circuit 36			
42168	RW	Current low-limit value, Branch circuit 36			
42169	RW	Current high-limit value, Branch circuit 36			
42170	RW	Current high-high-limit value, Branch circuit 36			
42171	RW	Current low-low-limit value, Branch circuit 37			
42172	RW	Current low-limit value, Branch circuit 37			
42173	RW	Current high-limit value, Branch circuit 37			
42174	RW	Current high-high-limit value, Branch circuit 37			
42175	RW	Current low-low-limit value, Branch circuit 38			
42176	RW	Current low-limit value, Branch circuit 38			
42177	RW	Current high-limit value, Branch circuit 38			
42178	RW	Current high-high-limit value, Branch circuit 38			
42179	RW	Current low-low-limit value, Branch circuit 39			
42180	RW	Current low-limit value, Branch circuit 39			
42181	RW	Current high-limit value, Branch circuit 39			
42182	RW	Current high-high-limit value, Branch circuit 39			
42183	RW	Current low-low-limit value, Branch circuit 40			
42184	RW	Current low-limit value, Branch circuit 40			
42185	RW	Current high-limit value, Branch circuit 40			
42186	RW	Current high-high-limit value, Branch circuit 40			
42187	RW	Current low-low-limit value, Branch circuit 41			
42188	RW	Current low-limit value, Branch circuit 41			
42189	RW	Current high-limit value, Branch circuit 41			
42190	RW	Current high-high-limit value, Branch circuit 41			
42191	RW	Current low-low-limit value, Branch circuit 42			
42192	RW	Current low-limit value, Branch circuit 42			
42193	RW	Current high-limit value, Branch circuit 42			
42194	RW	Current high-high-limit value, Branch circuit 42			
42195	RW	Reserved			
42196	RW	Reserved			
72100					

42198	RW	Reserved			
42199	RW	Reserved			
42200	RW	Reserved			
42201	RW	Reserved			
42202	RW	1 st group CT config	0: 50A 1: 100A 2: 200A		
			CT ratio multiplied by 1, 2,		
			4		
42203	RW	2 nd group CT config			
42204	RW	3 rd group CT config			
42205	RW	4 th group CT config			
42206	RW	5 th group CT config			
42207	RW	6 th group CT config			
42208	RW	7 th group CT config			
42209	RW	8 th group CT config			
42210	RW	9 th group CT config			
42211	RW	10 th group CT config			
42212	RW	11 th group CT config			
42213	RW	12 th group CT config			
42214	RW	13 th group CT config			
42215	RW	14 th group CT config			
42216	RW	1 st group CT phase position config	bit8-bit11, bit4-bit7, bit0-bit3; 0phase A ; 1phase B; 2phase C. For example: 0x012 means ABC sequence, 0x021 means ACB sequence;		
42217	RW	2 nd group CT phase position config			
42218	RW	3 rd group CT phase position config			
42219	RW	4 th group CT phase position config			
42220	RW	5 th group CT phase position config			
42221	RW	6 th group CT phase position config			
42222	RW	7 th group CT phase position config			
42223	RW	8 th group CT phase position config			
42224	RW	9 th group CT phase position config			
42225	RW	10 th group CT phase position config			
42226	RW	11 th group CT phase position config			

42227	RW	12 th group CT phase position config			
42228	RW	12th group CT phase position config 13th group CT phase position config			
42220	RW	13 th group CT phase position config 14 th group CT phase position config			
42229	RW	14 ^{un} group CT phase position config Reserved			
42230	RW				
		Reserved			
42232	RW	Reserved			
42233	RW	Reserved			
42234	RW	Reserved			
42235	RW	Reserved			
42236	RW	Reserved			
42237	RW	Reserved			
42238	RW	Reserved			
42239	RW	Reserved			
42240	RW	Device model No. (low word)	Password: 201		
42241	RW	Device model No. (high word)			
42242	RW	Device S/N No. (low word)			
42243	RW	Device S/N No. (high word)			
42244	RW	Hardward version No.			
42245	RW	Software version No.			
42246	RW	Hardware configuration	Bit0-bit2: quantity of CT module(1 means one module, 3 means two modules);bit3: DI module (0 means No, 1 means Yes);bit4: neutral-earth voltage (0 means No, 1 means Yes);bit5: Temperature (0 means No, 1 means Yes);bit6: Leakage current measurement (0 means No, 1 means Yes);		
42247	RW	Time zone set	0: GMT, 1~12: Eastern Time Zone +1~+12; 13~24: Western Time Zone +1~+12		
42248	RW	Reserved			
42249	RW	Reserved			

42250	RW	Reserved
42251	RW	Reserved
42252	RW	Reserved
42253	RW	Reserved
42254	RW	Reserved
42255	RW	Reserved
42256	RW	Reserved
42257	RW	Reserved
42258	RW	Reserved
42259	RW	Reserved
42260	RW	Reserved

5.6 Control Command Register

Register address	Property	Definition	Remarks
43001	RW	Clear energy	Write 1 to clear, password: 201
43002	RW	Reserved	
43003	RW	Clear max. value	Write 1 to clear current, Clear max. demand use the password: 201
43004	RW	Reserved	
43005	RW	Reserved	
43006	RW	Reserved	
43007	RW	GMT (low word)	//UNIX sytem timing, Write the register43007 and 43008 at the same time
43008	RW	GMT (high word)	
43009	RW	Reserved	
43010	RW	Reserved	
43011	RW	Year set	//year/month/day/minute/second timing, Write register 43011 to 43016 at the same time
43012	RW	Month set	
43013	RW	Day set	
43014	RW	Hour set	
43015	RW	Minute set	
43016	RW	Second set	
43017	RW	Reserved	
43018	RW	Reserved	
43019	RW	Reserved	

5.7 Histrical Yearly kWh Data Register

Register Pr	operty Definition	Remarks
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address			
46001	RO	Last 1 st year	The kWh data of last 1 st year, eg: If now is the year of 2012, then it shows the kWh of the year of 2011,and so on.
46002	RO	Month	12 months
46003	RO	kWh (low word), main circuit, last 1st year	
46004	RO	kWh (high word), main circuit, last 1 st year	
46005	RO	kWh (low word), branch circuit 1, last 1 st year	
46006	RO	kWh (high word), branch circuit 1, last 1 st year	
46007	RO	kWh (low word), branch circuit 2, last 1 st year	
46008	RO	kWh (high word), branch circuit 2, last 1 st year	
46009	RO	kWh (low word), branch circuit 3, last 1 st year	
46010	RO	kWh (high word), branch circuit 3, last 1 st year	
46011	RO	kWh (low word), branch circuit 4, last 1 st year	
46012	RO	kWh (high word), branch circuit 4, last 1 st year	
46013	RO	kWh (low word), branch circuit 5, last 1 st year	
46014	RO	kWh (high word), branch circuit 5, last 1 st year	
46015	RO	kWh (low word), branch circuit 6, last 1 st year	
46016	RO	kWh (high word), branch circuit 6, last 1 st year	
46017	RO	kWh (low word), branch circuit 7, last 1 st year	
46018	RO	kWh (high word), branch circuit 7, last 1 st year	
46019	RO	kWh (low word), branch circuit 8, last 1 st year	
46020	RO	kWh (high word), branch circuit 8, last 1 st year	
46021	RO	kWh (low word), branch circuit 9, last 1 st year	
46022	RO	kWh (high word), branch circuit 9, last 1 st year	
46023	RO	kWh (low word), branch circuit 10, last 1 st year	
46024	RO	kWh (high word), branch circuit 10, last 1 st year	
46025	RO	kWh (low word), branch circuit 11, last 1 st year	
46026	RO	kWh (high word), branch circuit 11, last 1 st year	
46027	RO	kWh (low word), branch circuit 12, last 1 st year	
46028	RO	kWh (high word), branch circuit 12, last 1 st year	
46029	RO	kWh (low word), branch circuit 13, last 1 st year	
46030	RO	kWh (high word), branch circuit 13, last 1 st year	
46031	RO	kWh (low word), branch circuit 14, last 1 st year	
46032	RO	kWh (high word), branch circuit 14, last 1 st year	
46033	RO	kWh (low word), branch circuit 15, last 1 st year	
46034	RO	kWh (high word), branch circuit 15, last 1 st year	
46035	RO	kWh (low word), branch circuit 16, last 1 st year	
46036	RO	kWh (high word), branch circuit 16, last 1 st year	
46037	RO	kWh (low word), branch circuit 17, last 1 st year	

46038	RO	kWh (high word), branch circuit 17, last 1 st year
46039	RO	kWh (low word), branch circuit 18, last 1 st year
46040	RO	kWh (high word), branch circuit 18, last 1 st year
46041	RO	kWh (low word), branch circuit 19, last 1 st year
46042	RO	kWh (high word), branch circuit 19, last 1 st year
46043	RO	kWh (low word), branch circuit 20, last 1 st year
46044	RO	kWh (high word), branch circuit 20, last 1 st year
46045	RO	kWh (low word), branch circuit 21, last 1 st year
46046	RO	kWh (high word), branch circuit 21, last 1 st year
46047	RO	kWh (low word), branch circuit 22, last 1 st year
46048	RO	kWh (high word), branch circuit 22, last 1 st year
46049	RO	kWh (low word), branch circuit 23, last 1 st year
46050	RO	kWh (high word), branch circuit 23, last 1 st year
46051	RO	kWh (low word), branch circuit 24, last 1 st year
46051		kWh (high word), branch circuit 24, last 1 st year
	RO	
46053	RO	kWh (low word), branch circuit 25, last 1 st year kWh (high word), branch circuit 25, last 1 st year
46054	RO	
46055	RO	kWh (low word), branch circuit 26, last 1 st year
46056	RO	kWh (high word), branch circuit 26, last 1 st year
46057	RO	kWh (low word), branch circuit 27, last 1 st year
46058	RO	kWh (high word), branch circuit 27, last 1 st year
46059	RO	kWh (low word), branch circuit 28, last 1 st year
46060	RO	kWh (high word), branch circuit 28, last 1 st year
46061	RO	kWh (low word), branch circuit 29, last 1 st year
46062	RO	kWh (high word), branch circuit 29, last 1 st year
46063	RO	kWh (low word), branch circuit 30, last 1 st year
46064	RO	kWh (high word), branch circuit 30, last 1 st year
46065	RO	kWh (low word), branch circuit 31, last 1 st year
46066	RO	kWh (high word), branch circuit 31, last 1 st year
46067	RO	kWh (low word), branch circuit 32, last 1 st year
46068	RO	kWh (high word), branch circuit 32, last 1 st year
46069	RO	kWh (low word), branch circuit 33, last 1 st year
46070	RO	kWh (high word), branch circuit 33, last 1 st year
46071	RO	kWh (low word), branch circuit 34, last 1 st year
46072	RO	kWh (high word), branch circuit 34, last 1 st year
46073	RO	kWh (low word), branch circuit 35, last 1 st year
46074	RO	kWh (high word), branch circuit 35, last 1 st year
46075	RO	kWh (low word), branch circuit 36, last 1 st year
46076	RO	kWh (high word), branch circuit 36, last 1 st year
46077	RO	kWh (low word), branch circuit 37, last 1 st year
46078	RO	kWh (high word), branch circuit 37, last 1 st year
46079	RO	kWh (low word), branch circuit 38, last 1 st year
46080	RO	kWh (high word), branch circuit 38, last 1 st year

46004	DO	Why (low word) bronch circuit 20 lost 1st year	
46081	RO	kWh (low word), branch circuit 39, last 1 st year	
46082	RO	kWh (high word), branch circuit 39, last 1 st year	
46083	RO	kWh (low word), branch circuit 40, last 1 st year	
46084	RO	kWh (high word), branch circuit 40, last 1 st year	
46085	RO	kWh (low word), branch circuit 41, last 1 st year	
46086	RO	kWh (high word), branch circuit 41, last 1 st year	
46087	RO	kWh (low word), branch circuit 42, last 1 st year	
46088	RO	kWh (high word), branch circuit 42, last 1 st year	
46089	RO	Last 2 nd year	
46090	RO	Month	
46091	RO	kWh (low word), main circuit, last 2 nd year	
46092	RO	kWh (high word), main circuit, last 2 nd year	
46093	RO	kWh (low word), branch circuit 1, last 2 nd year	
46094	RO	kWh (high word), branch circuit 1, last 2 nd year	
46095	RO	kWh (low word), branch circuit 2, last 2 nd year	
46096	RO	kWh (high word), branch circuit 2, last 2 nd year	
46097	RO	kWh (low word), branch circuit 3, last 2 nd year	
46098	RO	kWh (high word), branch circuit 3, last 2 nd year	
46099	RO	kWh (low word), branch circuit 4, last 2 nd year	
46100	RO	kWh (high word), branch circuit 4, last 2 nd year	
46101	RO	kWh (low word), branch circuit 5, last 2 nd year	
46102	RO	kWh (high word), branch circuit 5, last 2 nd year	
46103	RO	kWh (low word), branch circuit 6, last 2 nd year	
46104	RO	kWh (high word), branch circuit 6, last 2 nd year	
46105	RO	kWh (low word), branch circuit 7, last 2 nd year	
46106	RO	kWh (high word), branch circuit 7, last 2 nd year	
46107	RO	kWh (low word), branch circuit 8, last 2 nd year	
46108	RO	kWh (high word), branch circuit 8, last 2 nd year	
46109	RO	kWh (low word), branch circuit 9, last 2 nd year	
46110	RO	kWh (high word), branch circuit 9, last 2 nd year	
46111	RO	kWh (low word), branch circuit 10, last 2 nd year	
46112	RO	kWh (high word), branch circuit 10, last 2 nd year	
46113	RO	kWh (low word), branch circuit 11, last 2 nd year	
46114	RO	kWh (high word), branch circuit 11, last 2 nd year	
46115	RO	kWh (low word), branch circuit 12, last 2 nd year	
46116	RO	kWh (high word), branch circuit 12, last 2 nd year	
46117	RO	kWh (low word), branch circuit 13, last 2 nd year	
46118	RO	kWh (high word), branch circuit 13, last 2 nd year	
46119	RO	kWh (low word), branch circuit 14, last 2 nd year	
46120	RO	kWh (high word), branch circuit 14, last 2 nd year	
46121	RO	kWh (low word), branch circuit 15, last 2 nd year	
46122	RO	kWh (high word), branch circuit 15, last 2 nd year	
46123	RO	kWh (low word), branch circuit 16, last 2 nd year	

46124	RO	kWh (high word), branch circuit 16, last 2 nd year
46125	RO	kWh (low word), branch circuit 17, last 2 nd year
46126	RO	kWh (high word), branch circuit 17, last 2 nd year
46127	RO	kWh (low word), branch circuit 18, last 2 nd year
46128	RO	kWh (high word), branch circuit 18, last 2 nd year
46129	RO	kWh (low word), branch circuit 19, last 2 nd year
46130	RO	kWh (high word), branch circuit 19, last 2 nd year
46131	RO	kWh (low word), branch circuit 20, last 2 nd year
46132	RO	kWh (high word), branch circuit 20, last 2 nd year
46133	RO	kWh (low word), branch circuit 21, last 2 nd year
46134	RO	kWh (high word), branch circuit 21, last 2 nd year
46135	RO	kWh (low word), branch circuit 22, last 2 nd year
46136	RO	kWh (high word), branch circuit 22, last 2 nd year
46137	RO	kWh (low word), branch circuit 23, last 2 nd year
46138	RO	kWh (high word), branch circuit 23, last 2 nd year
46139	RO	kWh (low word), branch circuit 24, last 2 nd year
46140	RO	kWh (high word), branch circuit 24, last 2 nd year
46140	RO	kWh (low word), branch circuit 25, last 2 nd year
46142	RO	kWh (high word), branch circuit 25, last 2 nd year
46143		kWh (low word), branch circuit 26, last 2 nd year
46143	RO RO	kWh (high word), branch circuit 26, last 2 nd year
46145 46146	RO RO	kWh (low word), branch circuit 27, last 2 nd year kWh (high word), branch circuit 27, last 2 nd year
46147	RO	kWh (low word), branch circuit 28, last 2 nd year
46148	RO	kWh (high word), branch circuit 28, last 2 nd year
46149	RO	kWh (low word), branch circuit 29, last 2 nd year
46150 46151	RO	kWh (high word), branch circuit 29, last 2 nd year
46151	RO	kWh (low word), branch circuit 30, last 2 nd year
	RO	kWh (high word), branch circuit 30, last 2 nd year kWh (low word), branch circuit 31, last 2 nd year
46153 46154	RO	
	RO	kWh (high word), branch circuit 31, last 2 nd year
46155	RO	kWh (low word), branch circuit 32, last 2 nd year
46156	RO	kWh (high word), branch circuit 32, last 2 nd year
46157	RO	kWh (low word), branch circuit 33, last 2 nd year
46158	RO	kWh (high word), branch circuit 33, last 2 nd year
46159	RO	kWh (low word), branch circuit 34, last 2 nd year
46160	RO	kWh (high word), branch circuit 34, last 2 nd year
46161	RO	kWh (low word), branch circuit 35, last 2 nd year
46162	RO	kWh (high word), branch circuit 35, last 2 nd year
46163	RO	kWh (low word), branch circuit 36, last 2 nd year
46164	RO	kWh (high word), branch circuit 36, last 2 nd year
46165	RO	kWh (low word), branch circuit 37, last 2 nd year
46166	RO	kWh (high word), branch circuit 37, last 2 nd year

46167	RO	kWh (low word), branch circuit 38, last 2 nd year	
46168	RO	kWh (high word), branch circuit 38, last 2 nd year	
46169	RO	kWh (low word), branch circuit 39, last 2 nd year	
46170	RO	kWh (high word), branch circuit 39, last 2 nd year	
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46172	RO	kWh (high word), branch circuit 40, last 2 nd year	
46173	RO	kWh (low word), branch circuit 41, last 2 nd year	
46174	RO	kWh (high word), branch circuit 41, last 2 nd year	
46175	RO	kWh (low word), branch circuit 42, last 2 nd year	
46176	RO	kWh (high word), branch circuit 42, last 2 nd year	
46177	RO	Last 3 rd year	
46178	RO	Month	
46179	RO	kWh (low word), main circuit, last 3 rd year	
46180	RO	kWh (high word), main circuit, last 3 rd year	
46181	RO	kWh (low word), branch circuit 1, last 3 rd year	
46182	RO	kWh (high word), branch circuit 1, last 3 rd year	
46183	RO	kWh (low word), branch circuit 2, last 3 rd year	
46184	RO	kWh (high word), branch circuit 2, last 3 rd year	
46185	RO	kWh (low word), branch circuit 3, last 3 rd year	
46186	RO	kWh (high word), branch circuit 3, last 3 rd year	
46187	RO	kWh (low word), branch circuit 4, last 3 rd year	
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46192	RO	kWh (high word), branch circuit 6, last 3 rd year	
46193	RO	kWh (low word), branch circuit 7, last 3 rd year	
46194	RO	kWh (high word), branch circuit 7, last 3 rd year	
46195	RO	kWh (low word), branch circuit 8, last 3 rd year	
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46198	RO	kWh (high word), branch circuit 9, last 3 rd year	
46199	RO	kWh (low word), branch circuit 10, last 3 rd year	
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46201	RO	kWh (low word), branch circuit 11, last 3 rd year	
46202	RO	kWh (high word), branch circuit 11, last 3 rd year	
46203	RO	kWh (low word), branch circuit 12, last 3 rd year	
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46205	RO	kWh (low word), branch circuit 13, last 3 rd year	
46206	RO	kWh (high word), branch circuit 13, last 3 rd year	
46207	RO	kWh (low word), branch circuit 14, last 3 rd year	
46208	RO	kWh (high word), branch circuit 14, last 3 rd year	
46209	RO	kWh (low word), branch circuit 15, last 3 rd year	

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46210	RO	kWh (high word), branch circuit 15, last 3 rd year
46211	RO	kWh (low word), branch circuit 16, last 3 rd year
46212	RO	kWh (high word), branch circuit 16, last 3 rd year
46213	RO	kWh (low word), branch circuit 17, last 3 rd year
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46253	RO	kWh (low word), branch circuit 37, last 3 rd year	
46254	RO	kWh (high word), branch circuit 37, last 3 rd year	
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46264	RO	kWh (high word), branch circuit 42, last 3 rd year	
46265	RO	Last 4 th year	
46266	RO	Month	
46267	RO	kWh (low word), main circuit, last 4 th year	
46268	RO	kWh (high word), main circuit, last 4 th year	
46269	RO	kWh (low word), branch circuit 1, last 4 th year	
46270	RO	kWh (high word), branch circuit 1, last 4 th year	
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46351 46352	RO	kWh (low word), branch circuit 42, last 4 th year	
46352	RO RO	kWh (high word), branch circuit 42, last 4 th year Last 5 th year	
46354	RO	Month kWh (low word), main circuit, last 5 th year	
46355	RO		
46356	RO	kWh (high word), main circuit, last 5 th year	
46357	RO	kWh (low word), branch circuit 1, last 5 th year	
46358	RO	kWh (high word), branch circuit 1, last 5 th year	
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46360	RO	kWh (high word), branch circuit 2, last 5 th year	
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46382	RO	kWh (high word), branch circuit 13, last 5 th year
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RO	Last 6 th year	
RO	Month	
RO	kWh (low word), main circuit, last 6 th year	
RO	kWh (high word), main circuit, last 6 th year	
RO	kWh (low word), branch circuit 1, last 6 th year	
RO	kWh (high word), branch circuit 1, last 6 th year	
RO	kWh (low word), branch circuit 2, last 6 th year	
RO	kWh (high word), branch circuit 2, last 6 th year	
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46468	RO	kWh (high word), branch circuit 12, last 6 th year
46469	RO	kWh (low word), branch circuit 13, last 6 th year
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46528	RO	kWh (high word), branch circuit 42, last 6 th year	
46529	RO	Last 7 th year	
46530	RO	Month	
46531	RO	kWh (low word), main circuit, last 7th year	
46532	RO	kWh (high word), main circuit, last 7 th year	
46533	RO	kWh (low word), branch circuit 1, last 7 th year	
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46536	RO	kWh (high word), branch circuit 2, last 7 th year	
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46540	RO	kWh (high word), branch circuit 4, last 7 th year	
46541	RO	kWh (low word), branch circuit 5, last 7 th year	
46542	RO	kWh (high word), branch circuit 5, last 7 th year	
46543	RO	kWh (low word), branch circuit 6, last 7 th year	
46544	RO	kWh (high word), branch circuit 6, last 7 th year	
46545	RO	kWh (low word), branch circuit 7, last 7 th year	
46546	RO	kWh (high word), branch circuit 7, last 7 th year	
46547	RO	kWh (low word), branch circuit 8, last 7 th year	
46548	RO	kWh (high word), branch circuit 8, last 7 th year	
46549	RO	kWh (low word), branch circuit 9, last 7 th year	
46550	RO	kWh (high word), branch circuit 9, last 7 th year	
46551	RO	kWh (low word), branch circuit 10, last 7 th year	
46552	RO	kWh (high word), branch circuit 10, last 7 th year	
46553	RO	kWh (low word), branch circuit 11, last 7 th year	

46554	RO	kWh (high word), branch circuit 11, last 7 th year
46555	RO	kWh (low word), branch circuit 12, last 7 th year
46556	RO	kWh (high word), branch circuit 12, last 7 th year
46557	RO	kWh (low word), branch circuit 13, last 7 th year
46558	RO	kWh (high word), branch circuit 13, last 7 th year
46559	RO	kWh (low word), branch circuit 14, last 7 th year
46560	RO	kWh (high word), branch circuit 14, last 7 th year
46561	RO	kWh (low word), branch circuit 15, last 7 th year
46562	RO	kWh (high word), branch circuit 15, last 7 th year
46563	RO	kWh (low word), branch circuit 16, last 7 th year
46564	RO	kWh (high word), branch circuit 16, last 7 th year
46565	RO	kWh (low word), branch circuit 17, last 7 th year
46566	RO	kWh (high word), branch circuit 17, last 7 th year
46567	RO	kWh (low word), branch circuit 18, last 7 th year
46568	RO	kWh (high word), branch circuit 18, last 7 th year
46569	RO	kWh (low word), branch circuit 19, last 7 th year
46570	RO	kWh (high word), branch circuit 19, last 7 th year
46571	RO	kWh (low word), branch circuit 20, last 7 th year
46572	RO	kWh (high word), branch circuit 20, last 7 th year
46573	RO	kWh (low word), branch circuit 21, last 7 th year
46574	RO	kWh (high word), branch circuit 21, last 7 th year
46575	RO	kWh (low word), branch circuit 22, last 7 th year
46576	RO	kWh (high word), branch circuit 22, last 7 th year
46577	RO	kWh (low word), branch circuit 23, last 7 th year
46578	RO	kWh (high word), branch circuit 23, last 7 th year
46579	RO	kWh (low word), branch circuit 24, last 7 th year
46580	RO	kWh (high word), branch circuit 24, last 7 th year
46581	RO	kWh (low word), branch circuit 25, last 7 th year
46582	RO	kWh (high word), branch circuit 25, last 7 th year
46583	RO	kWh (low word), branch circuit 26, last 7 th year
46584	RO	kWh (high word), branch circuit 26, last 7 th year
46585	RO	kWh (low word), branch circuit 27, last 7 th year
46586	RO	kWh (high word), branch circuit 27, last 7 th year
46587	RO	kWh (low word), branch circuit 28, last 7 th year
46588	RO	kWh (high word), branch circuit 28, last 7 th year
46589	RO	kWh (low word), branch circuit 29, last 7 th year
46590	RO	kWh (high word), branch circuit 29, last 7 th year
46591	RO	kWh (low word), branch circuit 30, last 7 th year
46592	RO	kWh (high word), branch circuit 30, last 7 th year
46593	RO	kWh (low word), branch circuit 31, last 7 th year
46594	RO	kWh (high word), branch circuit 31, last 7 th year
46595	RO	kWh (low word), branch circuit 32, last 7 th year
46596	RO	kWh (high word), branch circuit 32, last 7 th year

46597	RO	kWh (low word), branch circuit 33, last 7 th year
46598	RO	kWh (high word), branch circuit 33, last 7 th year
46599	RO	kWh (low word), branch circuit 34, last 7 th year
46600	RO	kWh (high word), branch circuit 34, last 7 th year
46601	RO	kWh (low word), branch circuit 35, last 7 th year
46602	RO	kWh (high word), branch circuit 35, last 7 th year
46603	RO	kWh (low word), branch circuit 36, last 7 th year
46604	RO	kWh (high word), branch circuit 36, last 7 th year
46605	RO	kWh (low word), branch circuit 37, last 7 th year
46606	RO	kWh (high word), branch circuit 37, last 7 th year
46607	RO	kWh (low word), branch circuit 38, last 7 th year
46608	RO	kWh (high word), branch circuit 38, last 7 th year
46609	RO	kWh (low word), branch circuit 39, last 7 th year
46610	RO	kWh (high word), branch circuit 39, last 7 th year
46611	RO	kWh (low word), branch circuit 40, last 7 th year
46612	RO	kWh (high word), branch circuit 40, last 7 th year
46613	RO	kWh (low word), branch circuit 41, last 7 th year
46614	RO	kWh (high word), branch circuit 41, last 7 th year
46615	RO	kWh (low word), branch circuit 42, last 7 th year
46616	RO	kWh (high word), branch circuit 42, last 7 th year
46617	RO	Last 8 th year
46618	RO	Month
46619	RO	kWh (low word), main circuit, last 8 th year
46620	RO	kWh (high word), main circuit, last 8 th year
46621	RO	kWh (low word), branch circuit 1, last 8 th year
46622	RO	kWh (high word), branch circuit 1, last 8 th year
46623	RO	kWh (low word), branch circuit 2, last 8 th year
46624	RO	kWh (high word), branch circuit 2, last 8 th year
46625	RO	kWh (low word), branch circuit 3, last 8 th year
46626	RO	kWh (high word), branch circuit 3, last 8 th year
46627	RO	kWh (low word), branch circuit 4, last 8 th year
46628	RO	kWh (high word), branch circuit 4, last 8 th year kWh (low word), branch circuit 5, last 8 th year
46629	RO	kWh (high word), branch circuit 5, last 8 th year
46630	RO	
46631	RO	kWh (low word), branch circuit 6, last 8 th year
46632	RO	kWh (high word), branch circuit 6, last 8 th year
46633	RO	kWh (low word), branch circuit 7, last 8 th year
46634	RO	kWh (high word), branch circuit 7, last 8 th year
46635	RO	kWh (low word), branch circuit 8, last 8 th year
46636	RO	kWh (high word), branch circuit 8, last 8 th year
46637	RO	kWh (low word), branch circuit 9, last 8 th year
46638	RO	kWh (high word), branch circuit 9, last 8 th year
46639	RO	kWh (low word), branch circuit 10, last 8 th year

400.10		
46640	RO	kWh (high word), branch circuit 10, last 8 th year
46641	RO	kWh (low word), branch circuit 11, last 8 th year
46642	RO	kWh (high word), branch circuit 11, last 8 th year
46643	RO	kWh (low word), branch circuit 12, last 8 th year
46644	RO	kWh (high word), branch circuit 12, last 8 th year
46645	RO	kWh (low word), branch circuit 13, last 8 th year
46646	RO	kWh (high word), branch circuit 13, last 8 th year
46647	RO	kWh (low word), branch circuit 14, last 8 th year
46648	RO	kWh (high word), branch circuit 14, last 8 th year
46649	RO	kWh (low word), branch circuit 15, last 8 th year
46650	RO	kWh (high word), branch circuit 15, last 8 th year
46651	RO	kWh (low word), branch circuit 16, last 8 th year
46652	RO	kWh (high word), branch circuit 16, last 8 th year
46653	RO	kWh (low word), branch circuit 17, last 8 th year
46654	RO	kWh (high word), branch circuit 17, last 8 th year
46655	RO	kWh (low word), branch circuit 18, last 8 th year
46656	RO	kWh (high word), branch circuit 18, last 8 th year
46657	RO	kWh (low word), branch circuit 19, last 8 th year
46658	RO	kWh (high word), branch circuit 19, last 8 th year
46659	RO	kWh (low word), branch circuit 20, last 8 th year
46660	RO	kWh (high word), branch circuit 20, last 8 th year
46661	RO	kWh (low word), branch circuit 21, last 8 th year
46662	RO	kWh (high word), branch circuit 21, last 8 th year
46663	RO	kWh (low word), branch circuit 22, last 8 th year
46664	RO	kWh (high word), branch circuit 22, last 8 th year
46665	RO	kWh (low word), branch circuit 23, last 8 th year
46666	RO	kWh (high word), branch circuit 23, last 8 th year
46667	RO	kWh (low word), branch circuit 24, last 8 th year
46668	RO	kWh (high word), branch circuit 24, last 8 th year
46669	RO	kWh (low word), branch circuit 25, last 8 th year
46670	RO	kWh (high word), branch circuit 25, last 8 th year
46671	RO	kWh (low word), branch circuit 26, last 8 th year
46672	RO	kWh (high word), branch circuit 26, last 8 th year
46673	RO	kWh (low word), branch circuit 27, last 8 th year
46674	RO	kWh (high word), branch circuit 27, last 8 th year
46675	RO	kWh (low word), branch circuit 28, last 8 th year
46676	RO	kWh (high word), branch circuit 28, last 8 th year
46677	RO	kWh (low word), branch circuit 29, last 8 th year
46678	RO	kWh (high word), branch circuit 29, last 8 th year
46679	RO	kWh (low word), branch circuit 30, last 8 th year
46680	RO	kWh (high word), branch circuit 30, last 8 th year
46681	RO	kWh (low word), branch circuit 31, last 8 th year
46682	RO	kWh (high word), branch circuit 31, last 8 th year

46683	RO	kWh (low word), branch circuit 32, last 8 th year
46684	RO	kWh (high word), branch circuit 32, last 8 th year
46685	RO	kWh (low word), branch circuit 33, last 8 th year
46686	RO	kWh (high word), branch circuit 33, last 8 th year
46687	RO	kWh (low word), branch circuit 34, last 8 th year
46688	RO	kWh (high word), branch circuit 34, last 8 th year
46689	RO	kWh (low word), branch circuit 35, last 8 th year
46690	RO	kWh (high word), branch circuit 35, last 8 th year
46691	RO	kWh (low word), branch circuit 36, last 8 th year
46692	RO	kWh (high word), branch circuit 36, last 8 th year
46693	RO	kWh (low word), branch circuit 37, last 8 th year
46694	RO	kWh (high word), branch circuit 37, last 8 th year
46695	RO	kWh (low word), branch circuit 38, last 8 th year
46696	RO	kWh (high word), branch circuit 38, last 8 th year
46697	RO	kWh (low word), branch circuit 39, last 8 th year
46698	RO	kWh (high word), branch circuit 39, last 8 th year
46699	RO	kWh (low word), branch circuit 40, last 8 th year
46700	RO	kWh (high word), branch circuit 40, last 8 th year
46701	RO	kWh (low word), branch circuit 41, last 8 th year
46702	RO	kWh (high word), branch circuit 41, last 8 th year
46703	RO	kWh (low word), branch circuit 42, last 8 th year
46704	RO	kWh (high word), branch circuit 42, last 8 th year
46705	RO	Last 9 th year
46706	RO	Month
46707	RO	kWh (low word), main circuit, last 9 th year
46708	RO	kWh (high word), main circuit, last 9 th year
46709	RO	kWh (low word), branch circuit 1, last 9 th year
46710	RO	kWh (high word), branch circuit 1, last 9 th year
46711	RO	kWh (low word), branch circuit 2, last 9 th year
46712	RO	kWh (high word), branch circuit 2, last 9 th year
46713	RO	kWh (low word), branch circuit 3, last 9 th year
46714	RO	kWh (high word), branch circuit 3, last 9 th year
46715	RO	kWh (low word), branch circuit 4, last 9 th year
46716	RO	kWh (high word), branch circuit 4, last 9 th year
46717	RO	kWh (low word), branch circuit 5, last 9 th year
46718	RO	kWh (high word), branch circuit 5, last 9 th year
46719	RO	kWh (low word), branch circuit 6, last 9 th year
46720	RO	kWh (high word), branch circuit 6, last 9 th year
46721	RO	kWh (low word), branch circuit 7, last 9 th year
46722	RO	kWh (high word), branch circuit 7, last 9 th year
46723	RO	kWh (low word), branch circuit 8, last 9 th year
46724	RO	kWh (high word), branch circuit 8, last 9 th year
46725	RO	kWh (low word), branch circuit 9, last 9 th year

46726	RO	kWh (high word), branch circuit 9, last 9 th year
46727	RO	kWh (low word), branch circuit 10, last 9 th year
46728	RO	kWh (high word), branch circuit 10, last 9 th year
46729	RO	kWh (low word), branch circuit 11, last 9 th year
46730	RO	kWh (high word), branch circuit 11, last 9 th year
46731	RO	kWh (low word), branch circuit 12, last 9 th year
46732	RO	kWh (high word), branch circuit 12, last 9 th year
46733	RO	kWh (low word), branch circuit 13, last 9 th year
46734	RO	kWh (high word), branch circuit 13, last 9 th year
46735	RO	kWh (low word), branch circuit 14, last 9 th year
46736	RO	kWh (high word), branch circuit 14, last 9 th year
46737	RO	kWh (low word), branch circuit 15, last 9 th year
46738	RO	kWh (high word), branch circuit 15, last 9 th year
46739	RO	kWh (low word), branch circuit 16, last 9 th year
46740	RO	kWh (high word), branch circuit 16, last 9 th year
46741	RO	kWh (low word), branch circuit 17, last 9 th year
46742	RO	kWh (high word), branch circuit 17, last 9 th year
46743	RO	kWh (low word), branch circuit 18, last 9 th year
46744	RO	kWh (high word), branch circuit 18, last 9 th year
46745	RO	kWh (low word), branch circuit 19, last 9 th year
46746	RO	kWh (high word), branch circuit 19, last 9 th year
46747	RO	kWh (low word), branch circuit 20, last 9 th year
46748	RO	kWh (high word), branch circuit 20, last 9 th year
46749	RO	kWh (low word), branch circuit 21, last 9 th year
46750	RO	kWh (high word), branch circuit 21, last 9 th year
46751	RO	kWh (low word), branch circuit 22, last 9 th year
46752	RO	kWh (high word), branch circuit 22, last 9 th year
46753	RO	kWh (low word), branch circuit 23, last 9 th year
46754	RO	kWh (high word), branch circuit 23, last 9 th year
46755	RO	kWh (low word), branch circuit 24, last 9 th year
46756	RO	kWh (high word), branch circuit 24, last 9 th year
46757	RO	kWh (low word), branch circuit 25, last 9 th year
46758	RO	kWh (high word), branch circuit 25, last 9 th year
46759	RO	kWh (low word), branch circuit 26, last 9 th year
46760	RO	kWh (high word), branch circuit 26, last 9 th year
46761	RO	kWh (low word), branch circuit 27, last 9 th year
46762	RO	kWh (high word), branch circuit 27, last 9 th year
46763	RO	kWh (low word), branch circuit 28, last 9 th year
46764	RO	kWh (high word), branch circuit 28, last 9 th year
46765	RO	kWh (low word), branch circuit 29, last 9 th year
46766	RO	kWh (high word), branch circuit 29, last 9 th year
46767	RO	kWh (low word), branch circuit 30, last 9 th year
46768	RO	kWh (high word), branch circuit 30, last 9 th year

46769	RO	kWh (low word), branch circuit 31, last 9 th year	
46770	RO	kWh (high word), branch circuit 31, last 9 th year	
46771	RO	kWh (low word), branch circuit 32, last 9 th year	
46772	RO	kWh (high word), branch circuit 32, last 9 th year	
46773	RO	kWh (low word), branch circuit 33, last 9 th year	
46774	RO	kWh (high word), branch circuit 33, last 9 th year	
46775	RO	kWh (low word), branch circuit 34, last 9 th year	
46776	RO	kWh (high word), branch circuit 34, last 9 th year	
46777	RO	kWh (low word), branch circuit 35, last 9 th year	
46778	RO	kWh (high word), branch circuit 35, last 9 th year	
46779	RO	kWh (low word), branch circuit 36, last 9th year	
46780	RO	kWh (high word), branch circuit 36, last 9 th year	
46781	RO	kWh (low word), branch circuit 37, last 9th year	
46782	RO	kWh (high word), branch circuit 37, last 9th year	
46783	RO	kWh (low word), branch circuit 38, last 9 th year	
46784	RO	kWh (high word), branch circuit 38, last 9 th year	
46785	RO	kWh (low word), branch circuit 39, last 9 th year	
46786	RO	kWh (high word), branch circuit 39, last 9th year	
46787	RO	kWh (low word), branch circuit 40, last 9 th year	
46788	RO	kWh (high word), branch circuit 40, last 9 th year	
46789	RO	kWh (low word), branch circuit 41, last 9 th year	
46790	RO	kWh (high word), branch circuit 41, last 9th year	
46791	RO	kWh (low word), branch circuit 42, last 9 th year	
46792	RO	kWh (high word), branch circuit 42, last 9th year	
46793	RO	Last 10 th year	
46794	RO	Month	
46795	RO	kWh (low word), main circuit, last 10th year	
46796	RO	kWh (high word), main circuit, last 10 th year	
46797	RO	kWh (low word), branch circuit 1, last 10 th year	
46798	RO	kWh (high word), branch circuit 1, last 10 th year	
46799	RO	kWh (low word), branch circuit 2, last 10 th year	
46800	RO	kWh (high word), branch circuit 2, last 10 th year	
46801	RO	kWh (low word), branch circuit 3, last 10 th year	
46802	RO	kWh (high word), branch circuit 3, last 10 th year	
46803	RO	kWh (low word), branch circuit 4, last 10 th year	
46804	RO	kWh (high word), branch circuit 4, last 10 th year	
46805	RO	kWh (low word), branch circuit 5, last 10 th year	
46806	RO	kWh (high word), branch circuit 5, last 10 th year	
46807	RO	kWh (low word), branch circuit 6, last 10 th year	
46808	RO	kWh (high word), branch circuit 6, last 10 th year	
46809	RO	kWh (low word), branch circuit 7, last 10 th year	
46810	RO	kWh (high word), branch circuit 7, last 10 th year	
46811	RO	kWh (low word), branch circuit 8, last 10 th year	

46812	RO	kWh (high word), branch circuit 8, last 10 th year
46813	RO	kWh (low word), branch circuit 9, last 10 th year
46814	RO	kWh (high word), branch circuit 9, last 10 th year
46815	RO	kWh (low word), branch circuit 10, last 10 th year
46816	RO	kWh (high word), branch circuit 10, last 10 th year
46817	RO	kWh (low word), branch circuit 11, last 10 th year
46818	RO	kWh (high word), branch circuit 11, last 10 th year
46819	RO	kWh (low word), branch circuit 12, last 10 th year
46820	RO	kWh (high word), branch circuit 12, last 10 th year
46821	RO	kWh (low word), branch circuit 13, last 10 th year
46822	RO	kWh (high word), branch circuit 13, last 10 th year
46823	RO	kWh (low word), branch circuit 14, last 10 th year
46824	RO	kWh (high word), branch circuit 14, last 10 th year
46825	RO	kWh (low word), branch circuit 15, last 10 th year
46826	RO	kWh (high word), branch circuit 15, last 10 th year
46827	RO	kWh (low word), branch circuit 16, last 10 th year
46828	RO	kWh (high word), branch circuit 16, last 10 th year
46829	RO	kWh (low word), branch circuit 17, last 10 th year
46830	RO	kWh (high word), branch circuit 17, last 10 th year
46831	RO	kWh (low word), branch circuit 18, last 10 th year
46832	RO	kWh (high word), branch circuit 18, last 10 th year
46833	RO	kWh (low word), branch circuit 19, last 10 th year
46834	RO	kWh (high word), branch circuit 19, last 10 th year
46835	RO	kWh (low word), branch circuit 20, last 10 th year
46836	RO	kWh (high word), branch circuit 20, last 10 th year
46837	RO	kWh (low word), branch circuit 21, last 10 th year
46838	RO	kWh (high word), branch circuit 21, last 10 th year
46839	RO	kWh (low word), branch circuit 22, last 10 th year
46840	RO	kWh (high word), branch circuit 22, last 10 th year
46841	RO	kWh (low word), branch circuit 23, last 10 th year
46842	RO	kWh (high word), branch circuit 23, last 10 th year
46843	RO	kWh (low word), branch circuit 24, last 10 th year
46844	RO	kWh (high word), branch circuit 24, last 10 th year
46845	RO	kWh (low word), branch circuit 25, last 10 th year
46846	RO	kWh (high word), branch circuit 25, last 10 th year
46847	RO	kWh (low word), branch circuit 26, last 10 th year
46848	RO	kWh (high word), branch circuit 26, last 10 th year
46849	RO	kWh (low word), branch circuit 27, last 10 th year
46850	RO	kWh (high word), branch circuit 27, last 10 th year
46851	RO	kWh (low word), branch circuit 28, last 10 th year
46852	RO	kWh (high word), branch circuit 28, last 10 th year
46853	RO	kWh (low word), branch circuit 29, last 10 th year
46854	RO	kWh (high word), branch circuit 29, last 10 th year

RO	kWh (low word), branch circuit 30, last 10 th year
RO	kWh (high word), branch circuit 30, last 10 th year
RO	kWh (low word), branch circuit 31, last 10 th year
RO	kWh (high word), branch circuit 31, last 10 th year
RO	kWh (low word), branch circuit 32, last 10 th year
RO	kWh (high word), branch circuit 32, last 10 th year
RO	kWh (low word), branch circuit 33, last 10 th year
RO	kWh (high word), branch circuit 33, last 10 th year
RO	kWh (low word), branch circuit 34, last 10 th year
RO	kWh (high word), branch circuit 34, last 10 th year
RO	kWh (low word), branch circuit 35, last 10 th year
RO	kWh (high word), branch circuit 35, last 10 th year
RO	kWh (low word), branch circuit 36, last 10 th year
RO	kWh (high word), branch circuit 36, last 10 th year
RO	kWh (low word), branch circuit 37, last 10 th year
RO	kWh (high word), branch circuit 37, last 10 th year
RO	kWh (low word), branch circuit 38, last 10 th year
RO	kWh (high word), branch circuit 38, last 10 th year
RO	kWh (low word), branch circuit 39, last 10 th year
RO	kWh (high word), branch circuit 39, last 10 th year
RO	kWh (low word), branch circuit 40, last 10 th year
RO	kWh (high word), branch circuit 40, last 10 th year
RO	kWh (low word), branch circuit 41, last 10 th year
RO	kWh (high word), branch circuit 41, last 10 th year
RO	kWh (low word), branch circuit 42, last 10 th year
RO	kWh (high word), branch circuit 42, last 10 th year
	RO RO

5.8 Histrical Monthly kWh Data Register

Register address	Property	Definition	Remarks
47001	RO	Last 1 st month of the year	The kWh data of last 1 st month of the year: eg:If now is Oct, 2012, then it shows the kWh of Sep. 2012, and so on
47002	RO	Month	
47003	RO	kWh (low word), main circuit, last 1 st month	
47004	RO	kWh (high word), main circuit, last 1 st month	
47005	RO	kWh (low word), branch circuit 1, last 1 st month	
47006	RO	kWh (high word), branch circuit 1, last 1 st month	
47007	RO	kWh (low word), branch circuit 2, last 1 st month	
47008	RO	kWh (high word), branch circuit 2, last 1 st month	
47009	RO	kWh (low word), branch circuit 3, last 1 st month	

47010	RO	kWh (high word), branch circuit 3, last 1 st month
47011	RO	kWh (low word), branch circuit 4, last 1 st month
47012	RO	kWh (high word), branch circuit 4, last 1 st month
47013	RO	kWh (low word), branch circuit 5, last 1 st month
47014	RO	kWh (high word), branch circuit 5, last 1 st month
47015	RO	kWh (low word), branch circuit 6, last 1 st month
47016	RO	kWh (high word), branch circuit 6, last 1 st month
47017	RO	kWh (low word), branch circuit 7, last 1 st month
47018	RO	kWh (high word), branch circuit 7, last 1 st month
47019	RO	kWh (low word), branch circuit 8, last 1 st month
47020	RO	kWh (high word), branch circuit 8, last 1 st month
47021	RO	kWh (low word), branch circuit 9, last 1 st month
47022	RO	kWh (high word), branch circuit 9, last 1 st month
47023	RO	kWh (low word), branch circuit 10, last 1 st month
47024	RO	kWh (high word), branch circuit 10, last 1 st month
47025	RO	kWh (low word), branch circuit 11, last 1 st month
47026	RO	kWh (high word), branch circuit 11, last 1 st month
47027	RO	kWh (low word), branch circuit 12, last 1 st month
47028	RO	kWh (high word), branch circuit 12, last 1 st month
47029	RO	kWh (low word), branch circuit 13, last 1 st month
47030	RO	kWh (high word), branch circuit 13, last 1 st month
47031	RO	kWh (low word), branch circuit 14, last 1 st month
47032	RO	kWh (high word), branch circuit 14, last 1 st month
47033	RO	kWh (low word), branch circuit 15, last 1 st month
47034	RO	kWh (high word), branch circuit 15, last 1 st month
47035	RO	kWh (low word), branch circuit 16, last 1 st month
47036	RO	kWh (high word), branch circuit 16, last 1 st month
47037	RO	kWh (low word), branch circuit 17, last 1 st month
47038	RO	kWh (high word), branch circuit 17, last 1 st month
47039	RO	kWh (low word), branch circuit 18, last 1 st month
47040	RO	kWh (high word), branch circuit 18, last 1 st month
47041	RO	kWh (low word), branch circuit 19, last 1 st month
47042	RO	kWh (high word), branch circuit 19, last 1 st month
47043	RO	kWh (low word), branch circuit 20, last 1 st month
47044	RO	kWh (high word), branch circuit 20, last 1 st month
47045	RO	kWh (low word), branch circuit 21, last 1 st month
47046	RO	kWh (high word), branch circuit 21, last 1 st month
47047	RO	kWh (low word), branch circuit 22, last 1 st month
47048	RO	kWh (high word), branch circuit 22, last 1 st month
47049	RO	kWh (low word), branch circuit 23, last 1 st month
47050	RO	kWh (high word), branch circuit 23, last 1 st month
47051	RO	kWh (low word), branch circuit 24, last 1 st month
47052	RO	kWh (high word), branch circuit 24, last 1 st month

47050			
47053	RO	kWh (low word), branch circuit 25, last 1 st month	
47054	RO	kWh (high word), branch circuit 25, last 1 st month	
47055	RO	kWh (low word), branch circuit 26, last 1 st month	
47056	RO	kWh (high word), branch circuit 26, last 1 st month	
47057	RO	kWh (low word), branch circuit 27, last 1 st month	
47058	RO	kWh (high word), branch circuit 27, last 1 st month	
47059	RO	kWh (low word), branch circuit 28, last 1 st month	
47060	RO	kWh (high word), branch circuit 28, last 1 st month	
47061	RO	kWh (low word), branch circuit 29, last 1 st month	
47062	RO	kWh (high word), branch circuit 29, last 1 st month	
47063	RO	kWh (low word), branch circuit 30, last 1 st month	
47064	RO	kWh (high word), branch circuit 30, last 1 st month	
47065	RO	kWh (low word), branch circuit 31, last 1 st month	
47066	RO	kWh (high word), branch circuit 31, last 1 st month	
47067	RO	kWh (low word), branch circuit 32, last 1 st month	
47068	RO	kWh (high word), branch circuit 32, last 1 st month	
47069	RO	kWh (low word), branch circuit 33, last 1 st month	
47070	RO	kWh (high word), branch circuit 33, last 1 st month	
47071	RO	kWh (low word), branch circuit 34, last 1 st month	
47072	RO	kWh (high word), branch circuit 34, last 1 st month	
47073	RO	kWh (low word), branch circuit 35, last 1 st month	
47074	RO	kWh (high word), branch circuit 35, last 1 st month	
47075	RO	kWh (low word), branch circuit 36, last 1st month	
47076	RO	kWh (high word), branch circuit 36, last 1 st month	
47077	RO	kWh (low word), branch circuit 37, last 1 st month	
47078	RO	kWh (high word), branch circuit 37, last 1 st month	
47079	RO	kWh (low word), branch circuit 38, last 1 st month	
47080	RO	kWh (high word), branch circuit 38, last 1 st month	
47081	RO	kWh (low word), branch circuit 39, last 1 st month	
47082	RO	kWh (high word), branch circuit 39, last 1 st month	
47083	RO	kWh (low word), branch circuit 40, last 1 st month	
47084	RO	kWh (high word), branch circuit 40, last 1 st month	
47085	RO	kWh (low word), branch circuit 41, last 1 st month	
47086	RO	kWh (high word), branch circuit 41, last 1 st month	
47087	RO	kWh (low word), branch circuit 42, last 1 st month	
47088	RO	kWh (high word), branch circuit 42, last 1 st month	
47089	RO	Last 2 nd month of the year	
47090	RO	Month	
47091	RO	kWh (low word), main circuit, last 2 nd month	
47092	RO	kWh (high word), main circuit, last 2 nd month	
47093	RO	kWh (low word), branch circuit 1, last 2 nd month	
47094	RO	kWh (high word), branch circuit 1, last 2 nd month	
47095	RO	kWh (low word), branch circuit 2, last 2 nd month	

D 0	LiAth (birth would) know the size of 0. Is a conditionally
	kWh (high word), branch circuit 2, last 2 nd month
	kWh (low word), branch circuit 3, last 2 nd month
	kWh (high word), branch circuit 3, last 2 nd month
	kWh (low word), branch circuit 4, last 2 nd month
	kWh (high word), branch circuit 4, last 2 nd month
	kWh (low word), branch circuit 5, last 2 nd month
RO	kWh (high word), branch circuit 5, last 2 nd month
RO	kWh (low word), branch circuit 6, last 2 nd month
RO	kWh (high word), branch circuit 6, last 2 nd month
RO	kWh (low word), branch circuit 7, last 2 nd month
RO	kWh (high word), branch circuit 7, last 2 nd month
RO	kWh (low word), branch circuit 8, last 2 nd month
RO	kWh (high word), branch circuit 8, last 2 nd month
RO	kWh (low word), branch circuit 9, last 2 nd month
RO	kWh (high word), branch circuit 9, last 2 nd month
RO	kWh (low word), branch circuit 10, last 2 nd month
RO	kWh (high word), branch circuit 10, last 2 nd month
RO	kWh (low word), branch circuit 11, last 2 nd month
RO	kWh (high word), branch circuit 11, last 2 nd month
RO	kWh (low word), branch circuit 12, last 2 nd month
RO	kWh (high word), branch circuit 12, last 2 nd month
RO	kWh (low word), branch circuit 13, last 2 nd month
RO	kWh (high word), branch circuit 13, last 2 nd month
RO	kWh (low word), branch circuit 14, last 2 nd month
RO	kWh (high word), branch circuit 14, last 2 nd month
RO	kWh (low word), branch circuit 15, last 2 nd month
RO	kWh (high word), branch circuit 15, last 2 nd month
RO	kWh (low word), branch circuit 16, last 2 nd month
RO	kWh (high word), branch circuit 16, last 2 nd month
RO	kWh (low word), branch circuit 17, last 2 nd month
RO	kWh (high word), branch circuit 17, last 2 nd month
RO	kWh (low word), branch circuit 18, last 2 nd month
RO	kWh (high word), branch circuit 18, last 2 nd month
RO	kWh (low word), branch circuit 19, last 2 nd month
RO	kWh (high word), branch circuit 19, last 2 nd month
RO	kWh (low word), branch circuit 20, last 2 nd month
RO	kWh (high word), branch circuit 20, last 2 nd month
RO	kWh (low word), branch circuit 21, last 2 nd month
RO	kWh (high word), branch circuit 21, last 2 nd month
RO	kWh (low word), branch circuit 22, last 2 nd month
RO	kWh (high word), branch circuit 22, last 2 nd month
RO	kWh (low word), branch circuit 23, last 2 nd month
RO	kWh (high word), branch circuit 23, last 2 nd month
	R0 R0

47139	RO	kWh (low word), branch circuit 24, last 2 nd month	
47140	RO	kWh (high word), branch circuit 24, last 2 nd month	
47141	RO	kWh (low word), branch circuit 25, last 2 nd month	
47142	RO	kWh (high word), branch circuit 25, last 2 nd month	
47143	RO	kWh (low word), branch circuit 26, last 2 nd month	
47144	RO	kWh (high word), branch circuit 26, last 2 nd month	
47145	RO	kWh (low word), branch circuit 27, last 2 nd month	
47146	RO	kWh (high word), branch circuit 27, last 2 nd month	
47147	RO	kWh (low word), branch circuit 28, last 2 nd month	
47148	RO	kWh (high word), branch circuit 28, last 2 nd month	
47149	RO	kWh (low word), branch circuit 29, last 2 nd month	
47150	RO	kWh (high word), branch circuit 29, last 2 nd month	
47151	RO	kWh (low word), branch circuit 30, last 2 nd month	
47152	RO	kWh (high word), branch circuit 30, last 2 nd month	
47153	RO	kWh (low word), branch circuit 31, last 2 nd month	
47154	RO	kWh (high word), branch circuit 31, last 2 nd month	
47155	RO	kWh (low word), branch circuit 32, last 2 nd month	
47156	RO	kWh (high word), branch circuit 32, last 2 nd month	
47157	RO	kWh (low word), branch circuit 33, last 2 nd month	
47158	RO	kWh (high word), branch circuit 33, last 2 nd month	
47159	RO	kWh (low word), branch circuit 34, last 2 nd month	
47160	RO	kWh (high word), branch circuit 34, last 2 nd month	
47161	RO	kWh (low word), branch circuit 35, last 2 nd month	
47162	RO	kWh (high word), branch circuit 35, last 2 nd month	
47163	RO	kWh (low word), branch circuit 36, last 2 nd month	
47164	RO	kWh (high word), branch circuit 36, last 2 nd month	
47165	RO	kWh (low word), branch circuit 37, last 2 nd month	
47166	RO	kWh (high word), branch circuit 37, last 2 nd month	
47167	RO	kWh (low word), branch circuit 38, last 2 nd month	
47168	RO	kWh (high word), branch circuit 38, last 2 nd month	
47169	RO	kWh (low word), branch circuit 39, last 2 nd month	
47170	RO	kWh (high word), branch circuit 39, last 2 nd month	
47171	RO	kWh (low word), branch circuit 40, last 2 nd month	
47172	RO	kWh (high word), branch circuit 40, last 2 nd month	
47173	RO	kWh (low word), branch circuit 41, last 2 nd month	
47174	RO	kWh (high word), branch circuit 41, last 2 nd month	
47175	RO	kWh (low word), branch circuit 42, last 2 nd month	
47176	RO	kWh (high word), branch circuit 42, last 2 nd month	
47177	RO	Last 3 rd month of the year	
47178	RO	Month	
47179	RO	kWh (low word), main circuit, last 3rd month	
47180	RO	kWh (high word), main circuit, last 3rd month	
47181	RO	kWh (low word), branch circuit 1, last 3rd month	

47182	RO	kWh (high word), branch circuit 1, last 3 rd month
47183	RO	kWh (low word), branch circuit 2, last 3 rd month
47184	RO	kWh (high word), branch circuit 2, last 3 rd month
47185	RO	kWh (low word), branch circuit 3, last 3 rd month
47186	RO	kWh (high word), branch circuit 3, last 3 rd month
47187	RO	kWh (low word), branch circuit 4, last 3 rd month
47188	RO	kWh (high word), branch circuit 4, last 3 rd month
47189	RO	kWh (low word), branch circuit 5, last 3 rd month
47190	RO	kWh (high word), branch circuit 5, last 3 rd month
47191	RO	kWh (low word), branch circuit 6, last 3 rd month
47192	RO	kWh (high word), branch circuit 6, last 3 rd month
47193	RO	kWh (low word), branch circuit 7, last 3 rd month
47194	RO	kWh (high word), branch circuit 7, last 3 rd month
47195	RO	kWh (low word), branch circuit 8, last 3 rd month
47196	RO	kWh (high word), branch circuit 8, last 3 rd month
47197	RO	kWh (low word), branch circuit 9, last 3 rd month
47198	RO	kWh (high word), branch circuit 9, last 3 rd month
47199	RO	kWh (low word), branch circuit 10, last 3 rd month
47200	RO	kWh (high word), branch circuit 10, last 3 rd month
47201	RO	kWh (low word), branch circuit 11, last 3 rd month
47202	RO	kWh (high word), branch circuit 11, last 3 rd month
47203	RO	kWh (low word), branch circuit 12, last 3 rd month
47204	RO	kWh (high word), branch circuit 12, last 3 rd month
47205	RO	kWh (low word), branch circuit 13, last 3 rd month
47206	RO	kWh (high word), branch circuit 13, last 3 rd month
47207	RO	kWh (low word), branch circuit 14, last 3 rd month
47208	RO	kWh (high word), branch circuit 14, last 3 rd month
47209	RO	kWh (low word), branch circuit 15, last 3 rd month
47210	RO	kWh (high word), branch circuit 15, last 3 rd month
47211	RO	kWh (low word), branch circuit 16, last 3 rd month
47212	RO	kWh (high word), branch circuit 16, last 3 rd month
47213	RO	kWh (low word), branch circuit 17, last 3 rd month
47214	RO	kWh (high word), branch circuit 17, last 3 rd month
47215	RO	kWh (low word), branch circuit 18, last 3 rd month
47216	RO	kWh (high word), branch circuit 18, last 3 rd month
47217	RO	kWh (low word), branch circuit 19, last 3 rd month
47218	RO	kWh (high word), branch circuit 19, last 3 rd month
47219	RO	kWh (low word), branch circuit 20, last 3 rd month
47220	RO	kWh (high word), branch circuit 20, last 3 rd month
47221	RO	kWh (low word), branch circuit 21, last 3rd month
47222	RO	kWh (high word), branch circuit 21, last 3 rd month
47223	RO	kWh (low word), branch circuit 22, last 3 rd month
47224	RO	kWh (high word), branch circuit 22, last 3 rd month

47225	RO	kWh (low word), branch circuit 23, last 3 rd month	
		kWh (high word), branch circuit 23, last 3 rd month	
47226	RO		
47227	RO	kWh (low word), branch circuit 24, last 3 rd month	
47228	RO	kWh (high word), branch circuit 24, last 3 rd month	
47229	RO	kWh (low word), branch circuit 25, last 3 rd month	
47230	RO	kWh (high word), branch circuit 25, last 3 rd month	
47231	RO	kWh (low word), branch circuit 26, last 3 rd month	
47232	RO	kWh (high word), branch circuit 26, last 3 rd month	
47233	RO	kWh (low word), branch circuit 27, last 3 rd month	
47234	RO	kWh (high word), branch circuit 27, last 3 rd month	
47235	RO	kWh (low word), branch circuit 28, last 3 rd month	
47236	RO	kWh (high word), branch circuit 28, last 3 rd month	
47237	RO	kWh (low word), branch circuit 29, last 3rd month	
47238	RO	kWh (high word), branch circuit 29, last 3 rd month	
47239	RO	kWh (low word), branch circuit 30, last 3rd month	
47240	RO	kWh (high word), branch circuit 30, last 3rd month	
47241	RO	kWh (low word), branch circuit 31, last 3rd month	
47242	RO	kWh (high word), branch circuit 31, last 3rd month	
47243	RO	kWh (low word), branch circuit 32, last 3rd month	
47244	RO	kWh (high word), branch circuit 32, last 3rd month	
47245	RO	kWh (low word), branch circuit 33, last 3 rd month	
47246	RO	kWh (high word), branch circuit 33, last 3 rd month	
47247	RO	kWh (low word), branch circuit 34, last 3 rd month	
47248	RO	kWh (high word), branch circuit 34, last 3 rd month	
47249	RO	kWh (low word), branch circuit 35, last 3 rd month	
47250	RO	kWh (high word), branch circuit 35, last 3 rd month	
47251	RO	kWh (low word), branch circuit 36, last 3 rd month	
47252	RO	kWh (high word), branch circuit 36, last 3 rd month	
47253	RO	kWh (low word), branch circuit 37, last 3 rd month	
47254	RO	kWh (high word), branch circuit 37, last 3rd month	
47255	RO	kWh (low word), branch circuit 38, last 3 rd month	
47256	RO	kWh (high word), branch circuit 38, last 3rd month	
47257	RO	kWh (low word), branch circuit 39, last 3 rd month	
47258	RO	kWh (high word), branch circuit 39, last 3 rd month	
47259	RO	kWh (low word), branch circuit 40, last 3 rd month	
47260	RO	kWh (high word), branch circuit 40, last 3 rd month	
47261	RO	kWh (low word), branch circuit 41, last 3 rd month	
47262	RO	kWh (high word), branch circuit 41, last 3 rd month	
47263	RO	kWh (low word), branch circuit 42, last 3 rd month	
47264	RO	kWh (high word), branch circuit 42, last 3 rd month	
47265	RO	Last 4 th month of the year	
47266	RO	Month	
47267	RO	kWh (low word), main circuit, last 4 th month	

	kWh (high word), main circuit, last 4 th month
	kWh (low word), branch circuit 1, last 4 th month
	kWh (high word), branch circuit 1, last 4 th month
	kWh (low word), branch circuit 2, last 4 th month
RO	kWh (high word), branch circuit 2, last 4 th month
RO	kWh (low word), branch circuit 3, last 4 th month
RO	kWh (high word), branch circuit 3, last 4 th month
RO	kWh (low word), branch circuit 4, last 4 th month
RO	kWh (high word), branch circuit 4, last 4 th month
RO	kWh (low word), branch circuit 5, last 4 th month
RO	kWh (high word), branch circuit 5, last 4 th month
RO	kWh (low word), branch circuit 6, last 4 th month
RO	kWh (high word), branch circuit 6, last 4 th month
RO	kWh (low word), branch circuit 7, last 4 th month
RO	kWh (high word), branch circuit 7, last 4 th month
RO	kWh (low word), branch circuit 8, last 4 th month
RO	kWh (high word), branch circuit 8, last 4 th month
RO	kWh (low word), branch circuit 9, last 4 th month
RO	kWh (high word), branch circuit 9, last 4 th month
RO	kWh (low word), branch circuit 10, last 4 th month
RO	kWh (high word), branch circuit 10, last 4 th month
RO	kWh (low word), branch circuit 11, last 4 th month
RO	kWh (high word), branch circuit 11, last 4 th month
RO	kWh (low word), branch circuit 12, last 4 th month
RO	kWh (high word), branch circuit 12, last 4 th month
RO	kWh (low word), branch circuit 13, last 4 th month
RO	kWh (high word), branch circuit 13, last 4 th month
RO	kWh (low word), branch circuit 14, last 4 th month
RO	kWh (high word), branch circuit 14, last 4 th month
RO	kWh (low word), branch circuit 15, last 4 th month
RO	kWh (high word), branch circuit 15, last 4 th month
RO	kWh (low word), branch circuit 16, last 4 th month
RO	kWh (high word), branch circuit 16, last 4 th month
RO	kWh (low word), branch circuit 17, last 4 th month
RO	kWh (high word), branch circuit 17, last 4 th month
RO	kWh (low word), branch circuit 18, last 4 th month
RO	kWh (high word), branch circuit 18, last 4 th month
RO	kWh (low word), branch circuit 19, last 4 th month
RO	kWh (high word), branch circuit 19, last 4 th month
RO	kWh (low word), branch circuit 20, last 4 th month
RO	kWh (high word), branch circuit 20, last 4 th month
RO	kWh (low word), branch circuit 21, last 4 th month
RO	kWh (high word), branch circuit 21, last 4 th month
	R0 R0

47311	RO	kWh (low word), branch circuit 22, last 4 th month	
47312	RO	kWh (high word), branch circuit 22, last 4 th month	
47313	RO	kWh (low word), branch circuit 23, last 4 th month	
47314	RO	kWh (high word), branch circuit 23, last 4 th month	
47315	RO	kWh (low word), branch circuit 24, last 4 th month	
47316	RO	kWh (high word), branch circuit 24, last 4 th month	
47317	RO	kWh (low word), branch circuit 25, last 4 th month	
47318	RO	kWh (high word), branch circuit 25, last 4 th month	
47319	RO	kWh (low word), branch circuit 26, last 4 th month	
47320	RO	kWh (high word), branch circuit 26, last 4 th month	
47321	RO	kWh (low word), branch circuit 27, last 4 th month	
47322	RO	kWh (high word), branch circuit 27, last 4 th month	
47323	RO	kWh (low word), branch circuit 28, last 4 th month	
47324	RO	kWh (high word), branch circuit 28, last 4 th month	
47325	RO	kWh (low word), branch circuit 29, last 4 th month	
47326	RO	kWh (high word), branch circuit 29, last 4 th month	
47327	RO	kWh (low word), branch circuit 30, last 4 th month	
47328	RO	kWh (high word), branch circuit 30, last 4 th month	
47329	RO	kWh (low word), branch circuit 31, last 4 th month	
47330	RO	kWh (high word), branch circuit 31, last 4 th month	
47331	RO	kWh (low word), branch circuit 32, last 4 th month	
47332	RO	kWh (high word), branch circuit 32, last 4 th month	
47333	RO	kWh (low word), branch circuit 33, last 4 th month	
47334	RO	kWh (high word), branch circuit 33, last 4 th month	
47335	RO	kWh (low word), branch circuit 34, last 4 th month	
47336	RO	kWh (high word), branch circuit 34, last 4 th month	
47337	RO	kWh (low word), branch circuit 35, last 4 th month	
47338	RO	kWh (high word), branch circuit 35, last 4 th month	
47339	RO	kWh (low word), branch circuit 36, last 4 th month	
47340	RO	kWh (high word), branch circuit 36, last 4 th month	
47341	RO	kWh (low word), branch circuit 37, last 4 th month	
47342	RO	kWh (high word), branch circuit 37, last 4 th month	
47343	RO	kWh (low word), branch circuit 38, last 4 th month	
47344	RO	kWh (high word), branch circuit 38, last 4 th month	
47345	RO	kWh (low word), branch circuit 39, last 4 th month	
47346	RO	kWh (high word), branch circuit 39, last 4 th month	
47347	RO	kWh (low word), branch circuit 40, last 4 th month	
47348	RO	kWh (high word), branch circuit 40, last 4 th month	
47349	RO	kWh (low word), branch circuit 41, last 4 th month	
47350	RO	kWh (high word), branch circuit 41, last 4 th month	
47351	RO	kWh (low word), branch circuit 42, last 4 th month	
47352	RO	kWh (high word), branch circuit 42, last 4 th month	
47353	RO	Last 5 th month of the year	

47054	D O	Manda	
47354	RO	Month	
47355	RO	kWh (low word), main circuit, last 5 th month	
47356	RO	kWh (high word), main circuit, last 5 th month	
47357	RO	kWh (low word), branch circuit 1, last 5 th month	
47358	RO	kWh (high word), branch circuit 1, last 5 th month	
47359	RO	kWh (low word), branch circuit 2, last 5 th month	
47360	RO	kWh (high word), branch circuit 2, last 5 th month	
47361	RO	kWh (low word), branch circuit 3, last 5 th month	
47362	RO	kWh (high word), branch circuit 3, last 5 th month	
47363	RO	kWh (low word), branch circuit 4, last 5 th month	
47364	RO	kWh (high word), branch circuit 4, last 5 th month	
47365	RO	kWh (low word), branch circuit 5, last 5 th month	
47366	RO	kWh (high word), branch circuit 5, last 5 th month	
47367	RO	kWh (low word), branch circuit 6, last 5 th month	
47368	RO	kWh (high word), branch circuit 6, last 5 th month	
47369	RO	kWh (low word), branch circuit 7, last 5 th month	
47370	RO	kWh (high word), branch circuit 7, last 5 th month	
47371	RO	kWh (low word), branch circuit 8, last 5 th month	
47372	RO	kWh (high word), branch circuit 8, last 5 th month	
47373	RO	kWh (low word), branch circuit 9, last 5 th month	
47374	RO	kWh (high word), branch circuit 9, last 5 th month	
47375	RO	kWh (low word), branch circuit 10, last 5 th month	
47376	RO	kWh (high word), branch circuit 10, last 5 th month	
47377	RO	kWh (low word), branch circuit 11, last 5 th month	
47378	RO	kWh (high word), branch circuit 11, last 5 th month	
47379	RO	kWh (low word), branch circuit 12, last 5 th month	
47380	RO	kWh (high word), branch circuit 12, last 5 th month	
47381	RO	kWh (low word), branch circuit 13, last 5 th month	
47382	RO	kWh (high word), branch circuit 13, last 5 th month	
47383	RO	kWh (low word), branch circuit 14, last 5 th month	
47384	RO	kWh (high word), branch circuit 14, last 5 th month	
47385	RO	kWh (low word), branch circuit 15, last 5 th month	
47386	RO	kWh (high word), branch circuit 15, last 5 th month	
47387	RO	kWh (low word), branch circuit 16, last 5 th month	
47388	RO	kWh (high word), branch circuit 16, last 5 th month	
47389	RO	kWh (low word), branch circuit 17, last 5 th month	
47390	RO	kWh (high word), branch circuit 17, last 5 th month	
47391	RO	kWh (low word), branch circuit 18, last 5 th month	
47392	RO	kWh (high word), branch circuit 18, last 5 th month	
47393	RO	kWh (low word), branch circuit 19, last 5 th month	
47394	RO	kWh (high word), branch circuit 19, last 5 th month	
47395	RO	kWh (low word), branch circuit 20, last 5 th month	
47396	RO	kWh (high word), branch circuit 20, last 5 th month	

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47397	RO	kWh (low word), branch circuit 21, last 5 th month
47398	RO	kWh (high word), branch circuit 21, last 5 th month
47399	RO	kWh (low word), branch circuit 22, last 5 th month
47400	RO	kWh (high word), branch circuit 22, last 5 th month
47401	RO	kWh (low word), branch circuit 23, last 5 th month
47402	RO	kWh (high word), branch circuit 23, last 5 th month
47403	RO	kWh (low word), branch circuit 24, last 5 th month
47404	RO	kWh (high word), branch circuit 24, last 5 th month
47405	RO	kWh (low word), branch circuit 25, last 5 th month
47406	RO	kWh (high word), branch circuit 25, last 5 th month
47407	RO	kWh (low word), branch circuit 26, last 5 th month
47408	RO	kWh (high word), branch circuit 26, last 5 th month
47409	RO	kWh (low word), branch circuit 27, last 5 th month
47410	RO	kWh (high word), branch circuit 27, last 5 th month
47411	RO	kWh (low word), branch circuit 28, last 5 th month
47412	RO	kWh (high word), branch circuit 28, last 5 th month
47413	RO	kWh (low word), branch circuit 29, last 5 th month
47414	RO	kWh (high word), branch circuit 29, last 5 th month
47415	RO	kWh (low word), branch circuit 30, last 5 th month
47416	RO	kWh (high word), branch circuit 30, last 5 th month
47417	RO	kWh (low word), branch circuit 31, last 5 th month
47418	RO	kWh (high word), branch circuit 31, last 5 th month
47419	RO	kWh (low word), branch circuit 32, last 5 th month
47420	RO	kWh (high word), branch circuit 32, last 5 th month
47421	RO	kWh (low word), branch circuit 33, last 5 th month
47422	RO	kWh (high word), branch circuit 33, last 5 th month
47423	RO	kWh (low word), branch circuit 34, last 5 th month
47424	RO	kWh (high word), branch circuit 34, last 5 th month
47425	RO	kWh (low word), branch circuit 35, last 5 th month
47426	RO	kWh (high word), branch circuit 35, last 5 th month
47427	RO	kWh (low word), branch circuit 36, last 5 th month
47428	RO	kWh (high word), branch circuit 36, last 5 th month
47429	RO	kWh (low word), branch circuit 37, last 5 th month
47430	RO	kWh (high word), branch circuit 37, last 5 th month
47431	RO	kWh (low word), branch circuit 38, last 5 th month
47432	RO	kWh (high word), branch circuit 38, last 5 th month
47433	RO	kWh (low word), branch circuit 39, last 5 th month
47434	RO	kWh (high word), branch circuit 39, last 5 th month
47435	RO	kWh (low word), branch circuit 40, last 5 th month
47436	RO	kWh (high word), branch circuit 40, last 5 th month
47437	RO	kWh (low word), branch circuit 41, last 5 th month
47438	RO	kWh (high word), branch circuit 41, last 5 th month
47439	RO	kWh (low word), branch circuit 42, last 5 th month

47440	DO		
47440	RO	kWh (high word), branch circuit 42, last 5 th month	
47441	RO	Last 6 th month of the year	
47442	RO	Month	
47443	RO	kWh (low word), main circuit, last 6 th month	
47444	RO	kWh (high word), main circuit, last 6 th month	
47445	RO	kWh (low word), branch circuit 1, last 6 th month	
47446	RO	kWh (high word), branch circuit 1, last 6 th month	
47447	RO	kWh (low word), branch circuit 2, last 6 th month	
47448	RO	kWh (high word), branch circuit 2, last 6 th month	
47449	RO	kWh (low word), branch circuit 3, last 6th month	
47450	RO	kWh (high word), branch circuit 3, last 6 th month	
47451	RO	kWh (low word), branch circuit 4, last 6 th month	
47452	RO	kWh (high word), branch circuit 4, last 6 th month	
47453	RO	kWh (low word), branch circuit 5, last 6th month	
47454	RO	kWh (high word), branch circuit 5, last 6 th month	
47455	RO	kWh (low word), branch circuit 6, last 6 th month	
47456	RO	kWh (high word), branch circuit 6, last 6 th month	
47457	RO	kWh (low word), branch circuit 7, last 6 th month	
47458	RO	kWh (high word), branch circuit 7, last 6 th month	
47459	RO	kWh (low word), branch circuit 8, last 6 th month	
47460	RO	kWh (high word), branch circuit 8, last 6 th month	
47461	RO	kWh (low word), branch circuit 9, last 6 th month	
47462	RO	kWh (high word), branch circuit 9, last 6 th month	
47463	RO	kWh (low word), branch circuit 10, last 6 th month	
47464	RO	kWh (high word), branch circuit 10, last 6 th month	
47465	RO	kWh (low word), branch circuit 11, last 6 th month	
47466	RO	kWh (high word), branch circuit 11, last 6 th month	
47467	RO	kWh (low word), branch circuit 12, last 6 th month	
47468	RO	kWh (high word), branch circuit 12, last 6 th month	
47469	RO	kWh (low word), branch circuit 13, last 6 th month	
47470	RO	kWh (high word), branch circuit 13, last 6 th month	
47471	RO	kWh (low word), branch circuit 14, last 6 th month	
47472	RO	kWh (high word), branch circuit 14, last 6 th month	
47473	RO	kWh (low word), branch circuit 15, last 6 th month	
47474	RO	kWh (high word), branch circuit 15, last 6 th month	
47475	RO	kWh (low word), branch circuit 16, last 6 th month	
47476	RO	kWh (high word), branch circuit 16, last 6 th month	
47477	RO	kWh (low word), branch circuit 17, last 6 th month	
47478	RO	kWh (high word), branch circuit 17, last 6 th month	
47479	RO	kWh (low word), branch circuit 18, last 6 th month	
47480	RO	kWh (high word), branch circuit 18, last 6 th month	
47481	RO	kWh (low word), branch circuit 19, last 6 th month	
		kWh (high word), branch circuit 19, last 6 th month	
47482	RO	kWh (high word), branch circuit 19, last 6 th month	

47400		
47483	RO	kWh (low word), branch circuit 20, last 6 th month
47484	RO	kWh (high word), branch circuit 20, last 6 th month
47485	RO	kWh (low word), branch circuit 21, last 6 th month
47486	RO	kWh (high word), branch circuit 21, last 6 th month
47487	RO	kWh (low word), branch circuit 22, last 6 th month
47488	RO	kWh (high word), branch circuit 22, last 6 th month
47489	RO	kWh (low word), branch circuit 23, last 6 th month
47490	RO	kWh (high word), branch circuit 23, last 6 th month
47491	RO	kWh (low word), branch circuit 24, last 6 th month
47492	RO	kWh (high word), branch circuit 24, last 6 th month
47493	RO	kWh (low word), branch circuit 25, last 6 th month
47494	RO	kWh (high word), branch circuit 25, last 6 th month
47495	RO	kWh (low word), branch circuit 26, last 6 th month
47496	RO	kWh (high word), branch circuit 26, last 6 th month
47497	RO	kWh (low word), branch circuit 27, last 6 th month
47498	RO	kWh (high word), branch circuit 27, last 6 th month
47499	RO	kWh (low word), branch circuit 28, last 6 th month
47500	RO	kWh (high word), branch circuit 28, last 6 th month
47501	RO	kWh (low word), branch circuit 29, last 6 th month
47502	RO	kWh (high word), branch circuit 29, last 6 th month
47503	RO	kWh (low word), branch circuit 30, last 6 th month
47504	RO	kWh (high word), branch circuit 30, last 6 th month
47505	RO	kWh (low word), branch circuit 31, last 6 th month
47506	RO	kWh (high word), branch circuit 31, last 6 th month
47507	RO	kWh (low word), branch circuit 32, last 6 th month
47508	RO	kWh (high word), branch circuit 32, last 6 th month
47509	RO	kWh (low word), branch circuit 33, last 6 th month
47510	RO	kWh (high word), branch circuit 33, last 6 th month
47511	RO	kWh (low word), branch circuit 34, last 6 th month
47512	RO	kWh (high word), branch circuit 34, last 6 th month
47513	RO	kWh (low word), branch circuit 35, last 6 th month
47514	RO	kWh (high word), branch circuit 35, last 6 th month
47515	RO	kWh (low word), branch circuit 36, last 6 th month
47516	RO	kWh (high word), branch circuit 36, last 6 th month
47517	RO	kWh (low word), branch circuit 37, last 6 th month
47518	RO	kWh (high word), branch circuit 37, last 6 th month
47519	RO	kWh (low word), branch circuit 38, last 6 th month
47520	RO	kWh (high word), branch circuit 38, last 6 th month
47521	RO	kWh (low word), branch circuit 39, last 6 th month
47522	RO	kWh (high word), branch circuit 39, last 6 th month
47523	RO	kWh (low word), branch circuit 40, last 6 th month
47524	RO	kWh (high word), branch circuit 40, last 6 th month
47525	RO	kWh (low word), branch circuit 41, last 6 th month

47526	DO	k/M/h (high word) bronch circuit 41 last 6 th month
47526	RO	kWh (high word), branch circuit 41, last 6 th month
47527	RO	kWh (low word), branch circuit 42, last 6 th month
47528	RO	kWh (high word), branch circuit 42, last 6 th month
47529	RO	Last 7 th month of the year
47530	RO	Month
47531	RO	kWh (low word), main circuit, last 7 th month
47532	RO	kWh (high word), main circuit, last 7 th month
47533	RO	kWh (low word), branch circuit 1, last 7 th month
47534	RO	kWh (high word), branch circuit 1, last 7 th month
47535	RO	kWh (low word), branch circuit 2, last 7 th month
47536	RO	kWh (high word), branch circuit 2, last 7 th month
47537	RO	kWh (low word), branch circuit 3, last 7 th month
47538	RO	kWh (high word), branch circuit 3, last 7 th month
47539	RO	kWh (low word), branch circuit 4, last 7 th month
47540	RO	kWh (high word), branch circuit 4, last 7 th month
47541	RO	kWh (low word), branch circuit 5, last 7 th month
47542	RO	kWh (high word), branch circuit 5, last 7 th month
47543	RO	kWh (low word), branch circuit 6, last 7 th month
47544	RO	kWh (high word), branch circuit 6, last 7 th month
47545	RO	kWh (low word), branch circuit 7, last 7 th month
47546	RO	kWh (high word), branch circuit 7, last 7 th month
47547	RO	kWh (low word), branch circuit 8, last 7 th month
47548	RO	kWh (high word), branch circuit 8, last 7 th month
47549	RO	kWh (low word), branch circuit 9, last 7 th month
47550	RO	kWh (high word), branch circuit 9, last 7 th month
47551	RO	kWh (low word), branch circuit 10, last 7 th month
47552	RO	kWh (high word), branch circuit 10, last 7 th month
47553	RO	kWh (low word), branch circuit 11, last 7 th month
47554	RO	kWh (high word), branch circuit 11, last 7 th month
47555	RO	kWh (low word), branch circuit 12, last 7 th month
47556	RO	kWh (high word), branch circuit 12, last 7 th month
47557	RO	kWh (low word), branch circuit 13, last 7 th month
47558	RO	kWh (high word), branch circuit 13, last 7 th month
47559	RO	kWh (low word), branch circuit 14, last 7 th month
47560	RO	kWh (high word), branch circuit 14, last 7 th month
47561	RO	kWh (low word), branch circuit 15, last 7 th month
47562	RO	kWh (high word), branch circuit 15, last 7 th month
47563	RO	kWh (low word), branch circuit 16, last 7 th month
47564	RO	kWh (high word), branch circuit 16, last 7 th month
47565	RO	kWh (low word), branch circuit 17, last 7 th month
47566	RO	kWh (high word), branch circuit 17, last 7 th month
47567	RO	kWh (low word), branch circuit 18, last 7 th month
47568	RO	kWh (high word), branch circuit 18, last 7 th month

47500	D O	W/// (low word) brough size it 40 lost 7thth
47569	RO	kWh (low word), branch circuit 19, last 7 th month
47570	RO	kWh (high word), branch circuit 19, last 7 th month
47571	RO	kWh (low word), branch circuit 20, last 7 th month
47572	RO	kWh (high word), branch circuit 20, last 7 th month
47573	RO	kWh (low word), branch circuit 21, last 7 th month
47574	RO	kWh (high word), branch circuit 21, last 7 th month
47575	RO	kWh (low word), branch circuit 22, last 7 th month
47576	RO	kWh (high word), branch circuit 22, last 7 th month
47577	RO	kWh (low word), branch circuit 23, last 7 th month
47578	RO	kWh (high word), branch circuit 23, last 7 th month
47579	RO	kWh (low word), branch circuit 24, last 7 th month
47580	RO	kWh (high word), branch circuit 24, last 7 th month
47581	RO	kWh (low word), branch circuit 25, last 7 th month
47582	RO	kWh (high word), branch circuit 25, last 7 th month
47583	RO	kWh (low word), branch circuit 26, last 7 th month
47584	RO	kWh (high word), branch circuit 26, last 7 th month
47585	RO	kWh (low word), branch circuit 27, last 7 th month
47586	RO	kWh (high word), branch circuit 27, last 7 th month
47587	RO	kWh (low word), branch circuit 28, last 7 th month
47588	RO	kWh (high word), branch circuit 28, last 7 th month
47589	RO	kWh (low word), branch circuit 29, last 7 th month
47590	RO	kWh (high word), branch circuit 29, last 7 th month
47591	RO	kWh (low word), branch circuit 30, last 7 th month
47592	RO	kWh (high word), branch circuit 30, last 7 th month
47593	RO	kWh (low word), branch circuit 31, last 7 th month
47594	RO	kWh (high word), branch circuit 31, last 7 th month
47595	RO	kWh (low word), branch circuit 32, last 7 th month
47596	RO	kWh (high word), branch circuit 32, last 7 th month
47597	RO	kWh (low word), branch circuit 33, last 7 th month
47598	RO	kWh (high word), branch circuit 33, last 7 th month
47599	RO	kWh (low word), branch circuit 34, last 7 th month
47600	RO	kWh (high word), branch circuit 34, last 7 th month
47601	RO	kWh (low word), branch circuit 35, last 7 th month
47602	RO	kWh (high word), branch circuit 35, last 7 th month
47603	RO	kWh (low word), branch circuit 36, last 7 th month
47604	RO	kWh (high word), branch circuit 36, last 7 th month
47605	RO	kWh (low word), branch circuit 37, last 7 th month
47606	RO	kWh (high word), branch circuit 37, last 7 th month
47607	RO	kWh (low word), branch circuit 38, last 7 th month
47608	RO	kWh (high word), branch circuit 38, last 7 th month
47609	RO	kWh (low word), branch circuit 39, last 7 th month
47610	RO	kWh (high word), branch circuit 39, last 7 th month
47611	RO	kWh (low word), branch circuit 40, last 7 th month

47040	D O	While (high would) have all singuit 40 hast 7th research
47612	RO	kWh (high word), branch circuit 40, last 7 th month
47613	RO	kWh (low word), branch circuit 41, last 7 th month
47614	RO	kWh (high word), branch circuit 41, last 7 th month
47615	RO	kWh (low word), branch circuit 42, last 7 th month
47616	RO	kWh (high word), branch circuit 42, last 7 th month
47617	RO	Last 8 th month of the year
47618	RO	Month
47619	RO	kWh (low word), main circuit, last 8 th month
47620	RO	kWh (high word), main circuit, last 8 th month
47621	RO	kWh (low word), branch circuit 1, last 8 th month
47622	RO	kWh (high word), branch circuit 1, last 8 th month
47623	RO	kWh (low word), branch circuit 2, last 8 th month
47624	RO	kWh (high word), branch circuit 2, last 8 th month
47625	RO	kWh (low word), branch circuit 3, last 8 th month
47626	RO	kWh (high word), branch circuit 3, last 8 th month
47627	RO	kWh (low word), branch circuit 4, last 8 th month
47628	RO	kWh (high word), branch circuit 4, last 8 th month
47629	RO	kWh (low word), branch circuit 5, last 8 th month
47630	RO	kWh (high word), branch circuit 5, last 8 th month
47631	RO	kWh (low word), branch circuit 6, last 8 th month
47632	RO	kWh (high word), branch circuit 6, last 8 th month
47633	RO	kWh (low word), branch circuit 7, last 8 th month
47634	RO	kWh (high word), branch circuit 7, last 8 th month
47635	RO	kWh (low word), branch circuit 8, last 8 th month
47636	RO	kWh (high word), branch circuit 8, last 8 th month
47637	RO	kWh (low word), branch circuit 9, last 8 th month
47638	RO	kWh (high word), branch circuit 9, last 8 th month
47639	RO	kWh (low word), branch circuit 10, last 8 th month
47640	RO	kWh (high word), branch circuit 10, last 8 th month
47641	RO	kWh (low word), branch circuit 11, last 8 th month
47642	RO	kWh (high word), branch circuit 11, last 8 th month
47643	RO	kWh (low word), branch circuit 12, last 8 th month
47644	RO	kWh (high word), branch circuit 12, last 8 th month
47645	RO	kWh (low word), branch circuit 13, last 8 th month
47646	RO	kWh (high word), branch circuit 13, last 8 th month
47647	RO	kWh (low word), branch circuit 14, last 8 th month
47648	RO	kWh (high word), branch circuit 14, last 8 th month
47649	RO	kWh (low word), branch circuit 15, last 8 th month
47650	RO	kWh (high word), branch circuit 15, last 8 th month
47651	RO	kWh (low word), branch circuit 16, last 8 th month
47652	RO	kWh (high word), branch circuit 16, last 8 th month
47653	RO	kWh (low word), branch circuit 17, last 8 th month
47654	RO	kWh (high word), branch circuit 17, last 8 th month
47004	KU	kwn (nigh word), branch circuit 17, last 8° month

47655	RO	kWh (low word), branch circuit 18, last 8 th month				
47656	RO	kWh (high word), branch circuit 18, last 8 th month				
47657	RO	Wh (low word), branch circuit 19, last 8 th month A/h (bigh word), branch circuit 10, last 8 th month				
47658	RO	kWh (high word), branch circuit 19, last 8 th month				
47659	RO	kWh (low word), branch circuit 20, last 8 th month				
47660	RO	kWh (high word), branch circuit 20, last 8 th month				
47661	RO	kWh (low word), branch circuit 21, last 8 th month				
47662	RO	kWh (high word), branch circuit 21, last 8 th month				
47663	RO	kWh (low word), branch circuit 22, last 8 th month				
47664	RO	kWh (high word), branch circuit 22, last 8 th month				
47665	RO	kWh (low word), branch circuit 23, last 8 th month				
47666	RO	kWh (high word), branch circuit 23, last 8 th month				
47667	RO	kWh (low word), branch circuit 24, last 8 th month				
47668	RO	kWh (high word), branch circuit 24, last 8 th month				
47669	RO	kWh (low word), branch circuit 25, last 8 th month				
47670	RO	kWh (high word), branch circuit 25, last 8 th month				
47671	RO	kWh (low word), branch circuit 26, last 8 th month				
47672	RO	kWh (high word), branch circuit 26, last 8 th month				
47673	RO	kWh (low word), branch circuit 27, last 8 th month				
47674	RO	kWh (high word), branch circuit 27, last 8 th month				
47675	RO	kWh (low word), branch circuit 28, last 8 th month				
47676	RO	kWh (high word), branch circuit 28, last 8 th month				
47677	RO	kWh (low word), branch circuit 29, last 8 th month				
47678	RO	kWh (high word), branch circuit 29, last 8 th month				
47679	RO	kWh (low word), branch circuit 30, last 8 th month				
47680	RO	kWh (high word), branch circuit 30, last 8 th month				
47681	RO	kWh (low word), branch circuit 31, last 8 th month				
47682	RO	kWh (high word), branch circuit 31, last 8 th month				
47683	RO	kWh (low word), branch circuit 32, last 8 th month				
47684	RO	kWh (high word), branch circuit 32, last 8 th month				
47685	RO	kWh (low word), branch circuit 33, last 8 th month				
47686	RO	kWh (high word), branch circuit 33, last 8 th month				
47687	RO	kWh (low word), branch circuit 34, last 8 th month				
47688	RO	kWh (high word), branch circuit 34, last 8 th month				
47689	RO	kWh (low word), branch circuit 35, last 8 th month				
47690	RO	kWh (high word), branch circuit 35, last 8 th month				
47691	RO	kWh (low word), branch circuit 36, last 8 th month				
47692	RO	kWh (high word), branch circuit 36, last 8 th month				
47693	RO	kWh (low word), branch circuit 37, last 8 th month				
47694	RO	kWh (high word), branch circuit 37, last 8 th month				
47695	RO	kWh (low word), branch circuit 38, last 8 th month				
47696	RO	kWh (high word), branch circuit 38, last 8 th month				
47697	RO	kWh (low word), branch circuit 39, last 8 th month				

47000	50					
47698	RO	kWh (high word), branch circuit 39, last 8 th month				
47699	RO	Wh (low word), branch circuit 40, last 8 th month				
47700	RO	Wh (high word), branch circuit 40, last 8 th month				
47701	RO	Wh (low word), branch circuit 41, last 8 th month				
47702	RO	kWh (high word), branch circuit 41, last 8 th month				
47703	RO	kWh (low word), branch circuit 42, last 8 th month				
47704	RO	kWh (high word), branch circuit 42, last 8 th month				
47705	RO	Last 9 th month of the year				
47706	RO	Month				
47707	RO	kWh (low word), main circuit, last 9 th month				
47708	RO	kWh (high word), main circuit, last 9 th month				
47709	RO	kWh (low word), branch circuit 1, last 9 th month				
47710	RO	kWh (high word), branch circuit 1, last 9 th month				
47711	RO	kWh (low word), branch circuit 2, last 9 th month				
47712	RO	kWh (high word), branch circuit 2, last 9 th month				
47713	RO	kWh (low word), branch circuit 3, last 9 th month				
47714	RO	kWh (high word), branch circuit 3, last 9 th month				
47715	RO	kWh (low word), branch circuit 4, last 9 th month				
47716	RO	kWh (high word), branch circuit 4, last 9 th month				
47717	RO	kWh (low word), branch circuit 5, last 9 th month				
47718	RO	kWh (high word), branch circuit 5, last 9 th month				
47719	RO	Vh (low word), branch circuit 6, last 9 th month				
47720	RO	/h (high word), branch circuit 6, last 9 th month				
47721	RO	kWh (low word), branch circuit 7, last 9 th month				
47722	RO	kWh (high word), branch circuit 7, last 9 th month				
47723	RO	kWh (low word), branch circuit 8, last 9 th month				
47724	RO	kWh (high word), branch circuit 8, last 9 th month				
47725	RO	kWh (low word), branch circuit 9, last 9 th month				
47726	RO	kWh (high word), branch circuit 9, last 9 th month				
47727	RO	kWh (low word), branch circuit 10, last 9 th month				
47728	RO	kWh (high word), branch circuit 10, last 9 th month				
47729	RO	kWh (low word), branch circuit 11, last 9 th month				
47730	RO	kWh (high word), branch circuit 11, last 9 th month				
47731	RO	kWh (low word), branch circuit 12, last 9 th month				
47732	RO	kWh (high word), branch circuit 12, last 9 th month				
47733	RO	kWh (low word), branch circuit 13, last 9 th month				
47734	RO	kWh (high word), branch circuit 13, last 9 th month				
47735	RO	kWh (low word), branch circuit 14, last 9 th month				
47736	RO	kWh (high word), branch circuit 14, last 9 th month				
47737	RO	kWh (low word), branch circuit 15, last 9 th month				
47738	RO	kWh (high word), branch circuit 15, last 9 th month				
47739	RO	kWh (low word), branch circuit 16, last 9 th month				
47740	RO	kWh (high word), branch circuit 16, last 9 th month				

47741	RO	kWh (low word), branch circuit 17, last 9 th month				
47742	RO	kWh (high word), branch circuit 17, last 9 th month				
47743	RO	Wh (low word), branch circuit 18, last 9 th month				
47744	RO	kWh (high word), branch circuit 18, last 9 th month				
47745	RO	kWh (low word), branch circuit 19, last 9 th month				
47746	RO	kWh (high word), branch circuit 19, last 9 th month				
47747	RO	kWh (low word), branch circuit 20, last 9 th month				
47748	RO	kWh (high word), branch circuit 20, last 9 th month				
47749	RO	kWh (low word), branch circuit 21, last 9 th month				
47750	RO	kWh (high word), branch circuit 21, last 9 th month				
47751	RO	kWh (low word), branch circuit 22, last 9 th month				
47752	RO	kWh (high word), branch circuit 22, last 9 th month				
47753	RO	kWh (low word), branch circuit 23, last 9 th month				
47754	RO	kWh (high word), branch circuit 23, last 9 th month				
47755	RO	kWh (low word), branch circuit 24, last 9 th month				
47756	RO	kWh (high word), branch circuit 24, last 9 th month				
47757	RO	kWh (low word), branch circuit 25, last 9 th month				
47758	RO	kWh (high word), branch circuit 25, last 9 th month				
47759	RO	kWh (low word), branch circuit 26, last 9 th month				
47760	RO	kWh (high word), branch circuit 26, last 9 th month				
47761	RO	kWh (low word), branch circuit 27, last 9 th month				
47762	RO	kWh (high word), branch circuit 27, last 9 th month				
47763	RO	kWh (low word), branch circuit 28, last 9 th month				
47764	RO	kWh (high word), branch circuit 28, last 9 th month				
47765	RO	kWh (low word), branch circuit 29, last 9 th month				
47766	RO	kWh (high word), branch circuit 29, last 9 th month				
47767	RO	kWh (low word), branch circuit 30, last 9 th month				
47768	RO	kWh (high word), branch circuit 30, last 9 th month				
47769	RO	kWh (low word), branch circuit 31, last 9 th month				
47770	RO	kWh (high word), branch circuit 31, last 9 th month				
47771	RO	kWh (low word), branch circuit 32, last 9 th month				
47772	RO	kWh (high word), branch circuit 32, last 9 th month				
47773	RO	kWh (low word), branch circuit 33, last 9 th month				
47774	RO	kWh (high word), branch circuit 33, last 9 th month				
47775	RO	kWh (low word), branch circuit 34, last 9 th month				
47776	RO	kWh (high word), branch circuit 34, last 9 th month				
47777	RO	kWh (low word), branch circuit 35, last 9 th month				
47778	RO	kWh (high word), branch circuit 35, last 9 th month				
47779	RO	kWh (low word), branch circuit 36, last 9 th month				
47780	RO	kWh (high word), branch circuit 36, last 9 th month				
47781	RO	kWh (low word), branch circuit 37, last 9 th month				
47782	RO	kWh (high word), branch circuit 37, last 9 th month				
47783	RO	kWh (low word), branch circuit 38, last 9 th month				

47784	RO	kWh (high word), branch circuit 38, last 9 th month				
47785	RO	kWh (low word), branch circuit 39, last 9 th month				
47786	RO	Wh (high word), branch circuit 39, last 9 th month				
47787	RO	kWh (low word), branch circuit 40, last 9 th month				
47788	RO	kWh (high word), branch circuit 40, last 9 th month				
47789	RO	kWh (low word), branch circuit 41, last 9 th month				
47790	RO	kWh (high word), branch circuit 41, last 9 th month				
47791	RO	kWh (low word), branch circuit 42, last 9 th month				
47792	RO	kWh (high word), branch circuit 42, last 9 th month				
47793	RO	Last 10 th month of the year				
47794	RO	Month				
47795	RO	kWh (low word), main circuit, last 10 th month				
47796	RO	kWh (high word), main circuit, last 10 th month				
47797	RO	kWh (low word), branch circuit 1, last 10 th month				
47798	RO	kWh (high word), branch circuit 1, last 10 th month				
47799	RO	kWh (low word), branch circuit 2, last 10 th month				
47800	RO	kWh (high word), branch circuit 2, last 10 th month				
47801	RO	kWh (low word), branch circuit 3, last 10 th month				
47802	RO	kWh (high word), branch circuit 3, last 10 th month				
47803	RO	Vh (low word), branch circuit 4, last 10 th month				
47804	RO	Vh (high word), branch circuit 4, last 10 th month				
47805	RO	Wh (low word), branch circuit 5, last 10 th month				
47806	RO	Vh (high word), branch circuit 5, last 10 th month				
47807	RO	Nh (low word), branch circuit 6, last 10 th month				
47808	RO	Nh (high word), branch circuit 6, last 10 th month				
47809	RO	kWh (low word), branch circuit 7, last 10 th month				
47810	RO	kWh (high word), branch circuit 7, last 10 th month				
47811	RO	kWh (low word), branch circuit 8, last 10th month				
47812	RO	kWh (high word), branch circuit 8, last 10 th month				
47813	RO	kWh (low word), branch circuit 9, last 10th month				
47814	RO	kWh (high word), branch circuit 9, last 10 th month				
47815	RO	kWh (low word), branch circuit 10, last 10 th month				
47816	RO	kWh (high word), branch circuit 10, last 10 th month				
47817	RO	kWh (low word), branch circuit 11, last 10 th month				
47818	RO	kWh (high word), branch circuit 11, last 10 th month				
47819	RO	kWh (low word), branch circuit 12, last 10 th month				
47820	RO	kWh (high word), branch circuit 12, last 10 th month				
47821	RO	kWh (low word), branch circuit 13, last 10 th month				
47822	RO	kWh (high word), branch circuit 13, last 10 th month				
47823	RO	kWh (low word), branch circuit 14, last 10 th month				
47824	RO	kWh (high word), branch circuit 14, last 10 th month				
47825	RO	kWh (low word), branch circuit 15, last 10 th month				
47826	RO	kWh (high word), branch circuit 15, last 10 th month				

50					
	kWh (low word), branch circuit 16, last 10 th month				
	Wh (high word), branch circuit 16, last 10 th month				
	kWh (low word), branch circuit 17, last 10 th month				
	kWh (high word), branch circuit 17, last 10 th month				
	kWh (low word), branch circuit 18, last 10 th month				
	kWh (high word), branch circuit 18, last 10 th month				
RO	kWh (low word), branch circuit 19, last 10 th month				
RO	kWh (high word), branch circuit 19, last 10 th month				
RO	kWh (low word), branch circuit 20, last 10 th month				
RO	kWh (high word), branch circuit 20, last 10 th month				
RO	kWh (low word), branch circuit 21, last 10 th month				
RO	kWh (high word), branch circuit 21, last 10 th month				
RO	kWh (low word), branch circuit 22, last 10 th month				
RO	kWh (high word), branch circuit 22, last 10 th month				
RO	kWh (low word), branch circuit 23, last 10 th month				
RO	kWh (high word), branch circuit 23, last 10 th month				
RO	kWh (low word), branch circuit 24, last 10 th month				
RO	kWh (high word), branch circuit 24, last 10 th month				
RO	kWh (low word), branch circuit 25, last 10 th month				
RO	kWh (high word), branch circuit 25, last 10 th month				
RO	kWh (low word), branch circuit 26, last 10 th month				
RO	kWh (high word), branch circuit 26, last 10 th month				
RO	kWh (low word), branch circuit 27, last 10 th month				
RO	kWh (high word), branch circuit 27, last 10 th month				
RO	kWh (low word), branch circuit 28, last 10 th month				
RO	kWh (high word), branch circuit 28, last 10 th month				
RO	kWh (low word), branch circuit 29, last 10 th month				
RO	kWh (high word), branch circuit 29, last 10 th month				
RO	kWh (low word), branch circuit 30, last 10 th month				
RO	kWh (high word), branch circuit 30, last 10 th month				
RO	kWh (low word), branch circuit 31, last 10 th month				
RO	kWh (high word), branch circuit 31, last 10 th month				
RO	kWh (low word), branch circuit 32, last 10 th month				
RO	kWh (high word), branch circuit 32, last 10 th month				
RO	kWh (low word), branch circuit 33, last 10 th month				
RO	kWh (high word), branch circuit 33, last 10 th month				
RO	kWh (low word), branch circuit 34, last 10 th month				
RO	kWh (high word), branch circuit 34, last 10 th month				
RO	kWh (low word), branch circuit 35, last 10 th month				
RO	kWh (high word), branch circuit 35, last 10 th month				
RO	kWh (low word), branch circuit 36, last 10 th month				
RO	kWh (high word), branch circuit 36, last 10 th month				
RO	kWh (low word), branch circuit 37, last 10 th month				
	RO RO				

47870	RO	kWh (high word), branch circuit 37, last 10 th month				
47871	RO	kWh (low word), branch circuit 38, last 10 th month				
47872	RO	Wh (high word), branch circuit 38, last 10 th month				
47873	RO	Wh (low word), branch circuit 39, last 10 th month				
47874	RO	kWh (high word), branch circuit 39, last 10 th month				
47875	RO	kWh (low word), branch circuit 40, last 10 th month				
47876	RO	kWh (high word), branch circuit 40, last 10 th month				
47877	RO	kWh (low word), branch circuit 41, last 10 th month				
47878	RO	kWh (high word), branch circuit 41, last 10 th month				
47879	RO	kWh (low word), branch circuit 42, last 10 th month				
47880	RO	kWh (high word), branch circuit 42, last 10 th month				
47881	RO	Last 11 th month of the year				
47882	RO	Month				
47883	RO	kWh (low word), main circuit, last 11th month				
47884	RO	kWh (high word), main circuit, last 11 th month				
47885	RO	kWh (low word), branch circuit 1, last 11 th month				
47886	RO	kWh (high word), branch circuit 1, last 11 th month				
47887	RO	kWh (low word), branch circuit 2, last 11 th month				
47888	RO	kWh (high word), branch circuit 2, last 11 th month				
47889	RO	Vh (low word), branch circuit 3, last 11 th month				
47890	RO	kWh (high word), branch circuit 3, last 11 th month				
47891	RO	Vh (low word), branch circuit 4, last 11 th month				
47892	RO	Vh (high word), branch circuit 4, last 11 th month				
47893	RO	Wh (low word), branch circuit 5, last 11 th month				
47894	RO	Wh (high word), branch circuit 5, last 11 th month				
47895	RO	kWh (low word), branch circuit 6, last 11 th month				
47896	RO	kWh (high word), branch circuit 6, last 11 th month				
47897	RO	kWh (low word), branch circuit 7, last 11 th month				
47898	RO	kWh (high word), branch circuit 7, last 11 th month				
47899	RO	kWh (low word), branch circuit 8, last 11 th month				
47900	RO	kWh (high word), branch circuit 8, last 11 th month				
47901	RO	kWh (low word), branch circuit 9, last 11 th month				
47902	RO	kWh (high word), branch circuit 9, last 11 th month				
47903	RO	kWh (low word), branch circuit 10, last 11 th month				
47904	RO	kWh (high word), branch circuit 10, last 11 th month				
47905	RO	kWh (low word), branch circuit 11, last 11 th month				
47906	RO	kWh (high word), branch circuit 11, last 11th month				
47907	RO	kWh (low word), branch circuit 12, last 11 th month				
47908	RO	kWh (high word), branch circuit 12, last 11 th month				
47909	RO	kWh (low word), branch circuit 13, last 11 th month				
47910	RO	kWh (high word), branch circuit 13, last 11th month				
47911	RO	kWh (low word), branch circuit 14, last 11 th month				
47912	RO	kWh (high word), branch circuit 14, last 11 th month				

47040		
47913	RO	kWh (low word), branch circuit 15, last 11 th month
47914	RO	kWh (high word), branch circuit 15, last 11 th month
47915	RO	kWh (low word), branch circuit 16, last 11 th month
47916	RO	kWh (high word), branch circuit 16, last 11 th month
47917	RO	kWh (low word), branch circuit 17, last 11 th month
47918	RO	kWh (high word), branch circuit 17, last 11 th month
47919	RO	kWh (low word), branch circuit 18, last 11 th month
47920	RO	kWh (high word), branch circuit 18, last 11 th month
47921	RO	kWh (low word), branch circuit 19, last 11 th month
47922	RO	kWh (high word), branch circuit 19, last 11 th month
47923	RO	kWh (low word), branch circuit 20, last 11 th month
47924	RO	kWh (high word), branch circuit 20, last 11 th month
47925	RO	kWh (low word), branch circuit 21, last 11 th month
47926	RO	kWh (high word), branch circuit 21, last 11 th month
47927	RO	kWh (low word), branch circuit 22, last 11 th month
47928	RO	kWh (high word), branch circuit 22, last 11 th month
47929	RO	kWh (low word), branch circuit 23, last 11 th month
47930	RO	kWh (high word), branch circuit 23, last 11 th month
47931	RO	kWh (low word), branch circuit 24, last 11 th month
47932	RO	kWh (high word), branch circuit 24, last 11 th month
47933	RO	kWh (low word), branch circuit 25, last 11 th month
47934	RO	kWh (high word), branch circuit 25, last 11 th month
47935	RO	kWh (low word), branch circuit 26, last 11 th month
47936	RO	kWh (high word), branch circuit 26, last 11 th month
47937	RO	kWh (low word), branch circuit 27, last 11 th month
47938	RO	kWh (high word), branch circuit 27, last 11 th month
47939	RO	kWh (low word), branch circuit 28, last 11 th month
47940	RO	kWh (high word), branch circuit 28, last 11 th month
47941	RO	kWh (low word), branch circuit 29, last 11 th month
47942	RO	kWh (high word), branch circuit 29, last 11 th month
47943	RO	kWh (low word), branch circuit 30, last 11 th month
47944	RO	kWh (high word), branch circuit 30, last 11 th month
47945	RO	kWh (low word), branch circuit 31, last 11 th month
47946	RO	kWh (high word), branch circuit 31, last 11 th month
47947	RO	kWh (low word), branch circuit 32, last 11 th month
47948	RO	kWh (high word), branch circuit 32, last 11 th month
47949	RO	kWh (low word), branch circuit 33, last 11 th month
47950	RO	kWh (high word), branch circuit 33, last 11 th month
47951	RO	kWh (low word), branch circuit 34, last 11 th month
47952	RO	kWh (high word), branch circuit 34, last 11 th month
47953	RO	kWh (low word), branch circuit 35, last 11 th month
47954	RO	kWh (high word), branch circuit 35, last 11 th month
47955	RO	kWh (low word), branch circuit 36, last 11 th month

RO	kWh (low word), branch circuit 39, last 11 th month				
RO	kWh (high word), branch circuit 39, last 11th month				
RO	kWh (low word), branch circuit 40, last 11 th month				
RO	kWh (high word), branch circuit 40, last 11 th month				
RO	kWh (low word), branch circuit 41, last 11 th month				
RO	kWh (high word), branch circuit 41, last 11 th month				
RO	kWh (low word), branch circuit 42, last 11 th month				
RO	kWh (high word), branch circuit 42, last 11th month				
RO	Last 12 th month of the year				
RO	Month				
RO	kWh (low word), main circuit, last 12 th month				
RO	kWh (high word), main circuit, last 12 th month				
RO	kWh (low word), branch circuit 1, last 12th month				
RO	kWh (high word), branch circuit 1, last 12th month				
RO	Wh (low word), branch circuit 2, last 12 th month				
RO	Wh (high word), branch circuit 2, last 12 th month				
RO	Wh (low word), branch circuit 3, last 12 th month				
RO	Nh (high word), branch circuit 3, last 12 th month				
RO	Wh (low word), branch circuit 4, last 12 th month				
RO	Wh (high word), branch circuit 4, last 12 th month				
RO	kWh (low word), branch circuit 5, last 12 th month				
RO	kWh (high word), branch circuit 5, last 12 th month				
RO	kWh (low word), branch circuit 6, last 12 th month				
RO	kWh (high word), branch circuit 6, last 12 th month				
RO	kWh (low word), branch circuit 7, last 12 th month				
RO	kWh (high word), branch circuit 7, last 12 th month				
RO	kWh (low word), branch circuit 8, last 12 th month				
RO	kWh (high word), branch circuit 8, last 12 th month				
RO	kWh (low word), branch circuit 9, last 12 th month				
RO	kWh (high word), branch circuit 9, last 12 th month				
RO	kWh (low word), branch circuit 10, last 12 th month				
RO	kWh (high word), branch circuit 10, last 12 th month				
RO	kWh (low word), branch circuit 11, last 12 th month				
RO	kWh (high word), branch circuit 11, last 12 th month				
RO	kWh (low word), branch circuit 12, last 12 th month				
RO	kWh (high word), branch circuit 12, last 12 th month				
RO	kWh (low word), branch circuit 13, last 12 th month				
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47000							
47999	RO	kWh (low word), branch circuit 14, last 12 th month					
48000	RO	Wh (high word), branch circuit 14, last 12 th month					
48001	RO	Wh (low word), branch circuit 15, last 12 th month					
48002	RO	kWh (high word), branch circuit 15, last 12 th month					
48003	RO	kWh (low word), branch circuit 16, last 12 th month					
48004	RO	kWh (high word), branch circuit 16, last 12 th month					
48005	RO	kWh (low word), branch circuit 17, last 12 th month					
48006	RO	kWh (high word), branch circuit 17, last 12 th month					
48007	RO	kWh (low word), branch circuit 18, last 12 th month					
48008	RO	kWh (high word), branch circuit 18, last 12 th month					
48009	RO	kWh (low word), branch circuit 19, last 12 th month					
48010	RO	kWh (high word), branch circuit 19, last 12 th month					
48011	RO	kWh (low word), branch circuit 20, last 12 th month					
48012	RO	kWh (high word), branch circuit 20, last 12 th month					
48013	RO	kWh (low word), branch circuit 21, last 12 th month					
48014	RO	kWh (high word), branch circuit 21, last 12 th month					
48015	RO	kWh (low word), branch circuit 22, last 12 th month					
48016	RO	kWh (high word), branch circuit 22, last 12 th month					
48017	RO	kWh (low word), branch circuit 23, last 12 th month					
48018	RO	kWh (high word), branch circuit 23, last 12 th month					
48019	RO	kWh (low word), branch circuit 24, last 12 th month					
48020	RO	kWh (high word), branch circuit 24, last 12 th month					
48021	RO	kWh (low word), branch circuit 25, last 12 th month					
48022	RO	kWh (high word), branch circuit 25, last 12 th month					
48023	RO	kWh (low word), branch circuit 26, last 12 th month					
48024	RO	kWh (high word), branch circuit 26, last 12 th month					
48025	RO	kWh (low word), branch circuit 27, last 12 th month					
48026	RO	kWh (high word), branch circuit 27, last 12 th month					
48027	RO	kWh (low word), branch circuit 28, last 12 th month					
48028	RO	kWh (high word), branch circuit 28, last 12 th month					
48029	RO	kWh (low word), branch circuit 29, last 12 th month					
48030	RO	kWh (high word), branch circuit 29, last 12 th month					
48031	RO	kWh (low word), branch circuit 30, last 12 th month					
48032	RO	kWh (high word), branch circuit 30, last 12 th month					
48033	RO	kWh (low word), branch circuit 31, last 12 th month					
48034	RO	kWh (high word), branch circuit 31, last 12 th month					
48035	RO	kWh (low word), branch circuit 32, last 12 th month					
48036	RO	kWh (high word), branch circuit 32, last 12 th month					
48037	RO	kWh (low word), branch circuit 33, last 12 th month					
48038	RO	kWh (high word), branch circuit 33, last 12 th month					
48039	RO	kWh (low word), branch circuit 34, last 12 th month					
48040	RO	kWh (high word), branch circuit 34, last 12 th month					
48041	RO	kWh (low word), branch circuit 35, last 12 th month					

48042	RO	kWh (high word), branch circuit 35, last 12 th month
48043	RO	kWh (low word), branch circuit 36, last 12 th month
48044	RO	kWh (high word), branch circuit 36, last 12 th month
48045	RO	kWh (low word), branch circuit 37, last 12 th month
48046	RO	kWh (high word), branch circuit 37, last 12 th month
48047	RO	kWh (low word), branch circuit 38, last 12 th month
48048	RO	kWh (high word), branch circuit 38, last 12 th month
48049	RO	kWh (low word), branch circuit 39, last 12 th month
48050	RO	kWh (high word), branch circuit 39, last 12 th month
48051	RO	kWh (low word), branch circuit 40, last 12 th month
48052	RO	kWh (high word), branch circuit 40, last 12 th month
48053	RO	kWh (low word), branch circuit 41, last 12 th month
48054	RO	kWh (high word), branch circuit 41, last 12 th month
48055	RO	kWh (low word), branch circuit 42, last 12 th month
48056	RO	kWh (high word), branch circuit 42, last 12 th month

5.9 Register Instruction

5.9.1 Measured Data Register Instruction

Name	Туре	Coefficient	Unit	Remarks
Voltage of Main circuit	U16	0.01	V	
Current of Main circuit	U16	0.001	A	Secondary Value
Current Unbalance rate	U16	0.1	%	Percentage
Active power of Main circuit	U16	0.1	W	
Total Active power of Main circuit	U32	0.1	W	The first register is low word, the second register is high word.
Reactive power of Main circuit	U16	0.1	Var	
Total Reactive power of Main circuit	U32	0.1	Var	The first register is low word, the second register is high word.
Power Factor	U16	0.001		
Frequency	U16	0.01	Hz	
Active Energy	U32	0.1	kWh	The first register is low word, the second register is high word.
Reactive Energy	U32	0.1	kvarh	The first register is low word, the second register is high word.
Harmonic THD of Main	U16	0.1	%	Percentage

circuit				
Leakage Current	U16	1	mA	
Temperature	U16	0.1	°C	
Neutral-earth Voltage	U16	0.01	V	
Current of Branch circuit	U16	0.01	A	Primary value
Power factor of Branch circuit	U16	0.001	1	
Active Power of Branch circuit	U16	1	W	
Reactive power of Branch circuit	U16	1	Var	
Active Energy of Branch circuit	U32	0.1	kWh	The first register is low word, the second register is high word.
Reactive energy of Branch circuit	U32	0.1	kvarh	The first register is low word, the second register is high word.
Harmonic THD of Branch circuit	U16	0.1	%	Percentage

Attention:

U16, 16 bits integer, no symbol,

S16, 16 bits integer, with symbol;

U32, 32 bits integer, no symbol;

S32, 32 bits integer, with symbol.

5.9.2 Alarm Registers

Name	Туре	Description		
Alarm of Main circuit	U16	0: no alarm, 1: alarm		
		bit0: current low-low-limit alarm;		
		bit1: current low-limit alarm;		
		bit2: current high-limit alarm;		
		bit3: current high-high-limit alarm;		
		bit4: neutral current high-limit alarm;		
		bit5: current unbalance alarm;		
		bit8: low voltage alarm;		
		bit9: high voltage alarm.		
		bit10: leakage current high-limit alarm		
		bit11: temperature high-limit alarm		
		bit12: neutral-earth voltage high-limit alarm		
Alarm of Branch circuit	U16	bit0: current low-low-limit alarm;		
		bit1: current low-limit alarm;		
		bit2: current high-limit alarm;		
		bit3: current high-high limit alarm;		

		bit14: branch circuit switch OFF alarm		
DI and relays of the main module	U16	0: OFF, 1: ON		
		Bit0: DI 1		
		bit1: DI 2		
		Bit2: DI 3		
		Bit3: DI 4		
		bit8: Relay 1		
		bit9: Relay 2		

Attention:

U16, 16 bits integer, no symbol,

S16, 16 bits integer, with symbol;

U32, 32 bits integer, no symbol;

S32, 32 bits integer, with symbol.

Name	Туре	coefficient	Unit	Remarks
Current alarm value of Main circuit	U16	0.01	A	Range: 0~65000, 0: Close.
Current unbalance rate	U16	0.1	%	Range: 0~1000, 0: Close.
Voltage alarm value of Main circuit	U16	0.01	V	Range: 0~30000, 0: Close
Current alarm value of Branch circuit	U16	0.01	A	Range: 0~25000, 0: Close
Leakage current alarm value of Main circuit	U16	1	mA	Range:0~65000, 0: Close
Temperature alarm value	U16	0.1	°C	Range:0~1200, 0: Close
Neutral-earth voltage alarm value	U16	0.01	V	Range:0~30000, 0: Close

5.9.3 Device Configuration Registers

Attention:

U16, 16 bits integer, no symbol,

S16, 16 bits integer, with symbol;

U32, 32 bits integer, no symbol;

S32, 32 bits integer, with symbol.